

# Regional Wastewater Study

For Eastern  
Orange County, Texas

*Prepared for*  
**Sabine River Authority**

*In cooperation with*  
Texas Water Development Board  
City of Bridge City, Texas  
City of Orange, Texas  
City of Pinehurst, Texas

Orange County Water Control and Improvement District  
No. 2

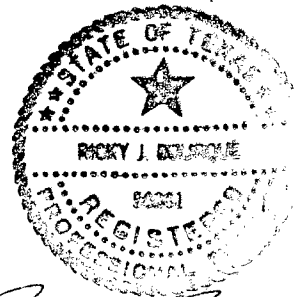
Orangefield Water Supply Corporation

*Prepared by:*  
**SPIX SCHAUMBURG & POLK, INC.**

Firm Registration No. F000520

December 2009

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*Rocky J. Boring*

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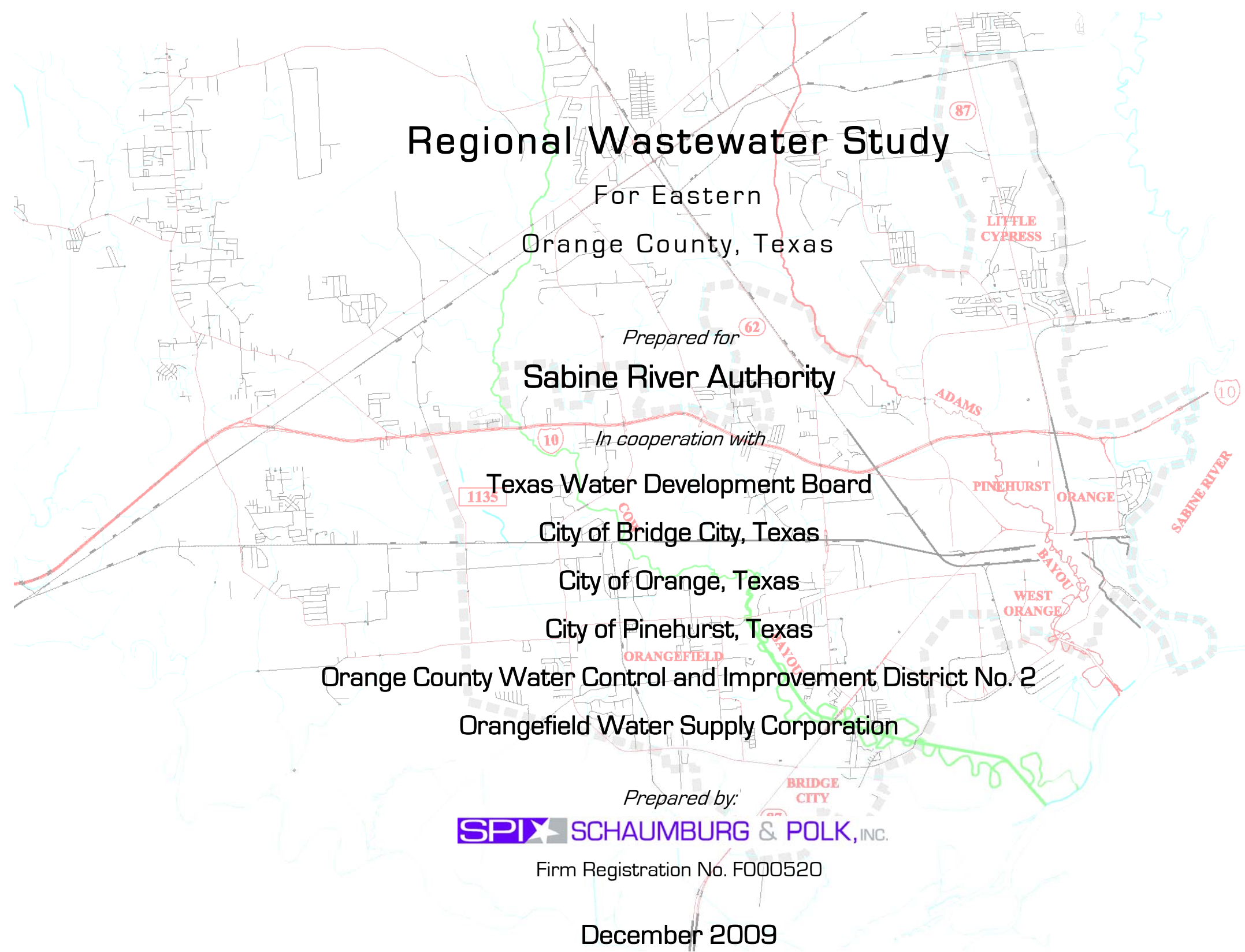
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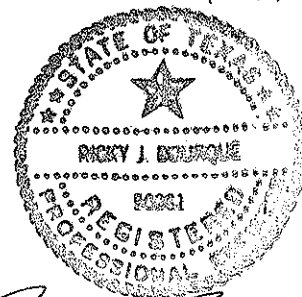
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## EXECUTIVE SUMMARY

The purpose of this study was to evaluate the feasibility and timeliness of implementing a regional wastewater system. There are presently six entities (cities of Bridge City, Orange and Pinehurst; Orange County WCID No. 2; Orangefield WSC; and North Orange WSC), in the study area, that provide or plan to provide centralized wastewater service. There are approximately 2,000 acres of area that are served by on-site systems. Figure ES-1 shows the areas served by centralized wastewater collection.

Economic feasibility was evaluated by comparison of the 30 year capital improvement and operation and maintenance costs for five of the existing centralized wastewater plants (Bridge City, Orange, Orange County WCID No. 2, Pinehurst and Orangefield WSC) to two regional plants (the existing Orange Jackson Street Plant and a new plant in the vicinity of Highway 87 and FM 1006). The 30 year economic evaluation indicated a difference of approximately \$100,000 a year, to implement a regional treatment system as opposed to maintaining separate wastewater plants. Beneficial factors that contribute to the feasibility of implementing a regional system include the following.

- Maintaining certified operators is, in general, more difficult for smaller operations. The regional system also provides more opportunity to have a wider range of operator certification on staff.
- A regional system will remove the entities from direct responsibility to Texas Commission on Environmental Quality (TCEQ) discharge permits. The economic evaluation did not include the costs of upgrades to existing plants as a result of more stringent discharge limits or regulatory enforcement.
- A regional system will provide an area-wide vehicle by which to address failing on-site systems.
- The regional system will assist in meeting the Total Maximum Daily Load (TMDL) goals by removal of existing wasteloads for point and non-point sources.

There are two State Statutes that provide for creation of a local government corporation to aid and act on behalf of one or more local governments to accomplish any governmental purpose of the local governments. These provisions have been successfully used to meet the regional utility needs. At least one case history indicates the creation process can be completed within a one year period.

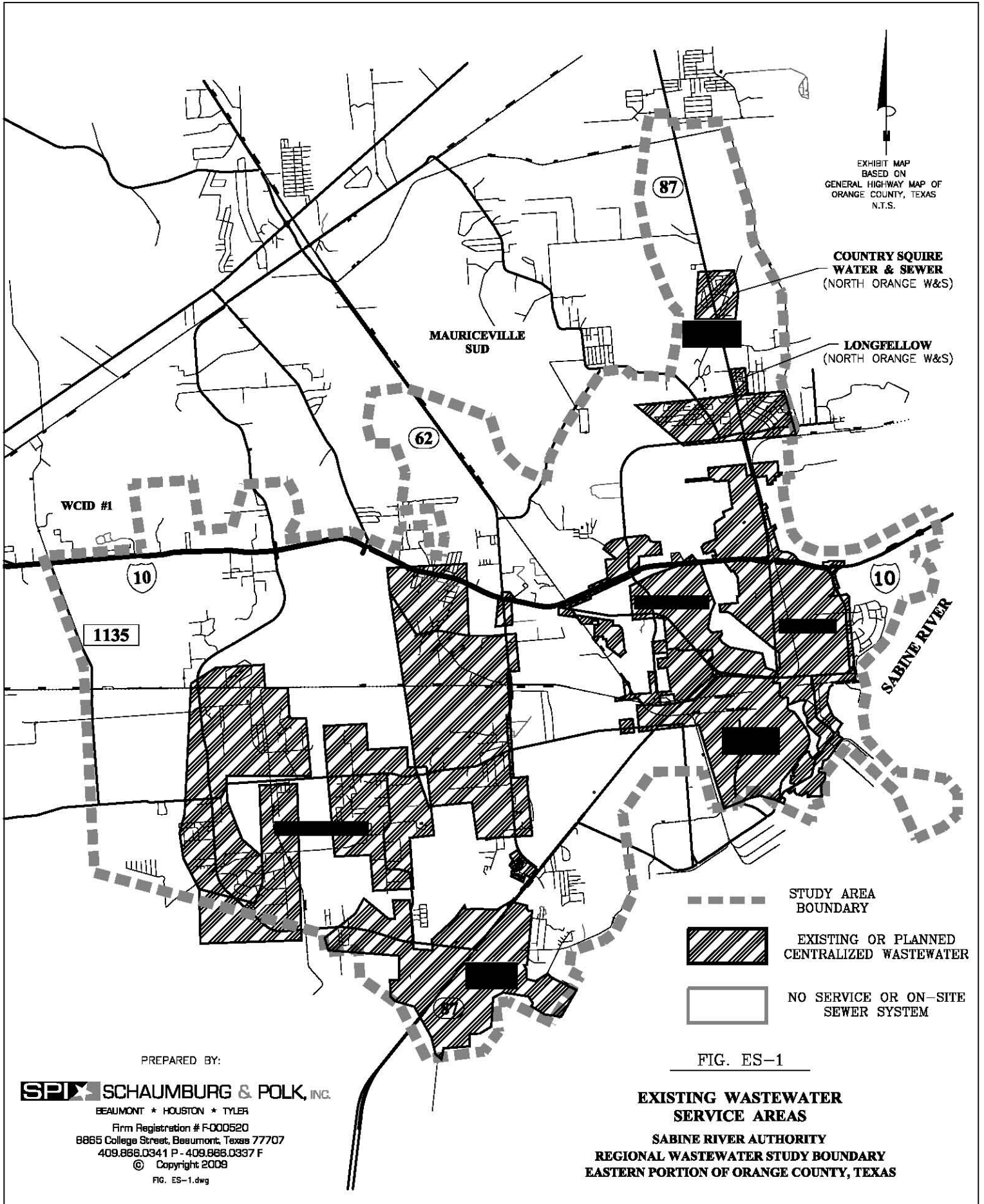
Implementation of a regional wastewater treatment system appears to be timely. Factors to be considered in evaluating the feasibility of a regional system includes an understanding of the current trends and impacts on wastewater treatment, including regulatory compliance and possible other forces outside the control of the participating entities. Three of the participating entities are presently faced with upgrades to the existing facilities. Another participant is currently near the start of construction of a centralized collection system and has awarded a contract for construction of a new treatment plant. The study area is within a TCEQ mandated

TMDL program for Adams Bayou and Cow Bayou which have bacterial load reductions. A goal of the TMDL is to correct failing septic systems.

The results of the study indicate an interest in combining the wastewater treatment facilities. The two plant concept offers the most viable means to accomplish the regionalization. A local government corporation will provide a vehicle to meet the needs while providing all of the participating entities control over the direction and financing of the wastewater treatment.

Immediate and urgent topics to be addressed in the creation of a local government corporation include the following;

- Treatment capacity for each entity, including flows required to meet the future demands as well as increase in transport/treat capacity to assist in mitigating infiltration/inflow.
- Distribution of capital and annual operation costs and the mechanism for collection.
- Identifying industrial facilities that may have an interest in domestic waste treatment.
- Representation on the board of direction for the local government corporation.
- Value of existing facilities to be incorporated into the regional system.
- Staffing requirements.



## CHAPTER 1 - STUDY AREA





This regional wastewater study generally includes the eastern region of Orange County, Texas as depicted in Figure 1.1. The incorporated areas in the study area include the cities of Bridge City, Orange, Pinehurst, and West Orange, and the Orangefield community. Public utility providers that serve the area include Orange County WCID No. 2 (West Orange), Orangefield WSC. Private utility servers include North Orange Water and Sewer, LLC and Aqua Texas, Inc. The Orange County Health Compliance and Code Department is responsible for oversight of the on-site sewer systems. The service boundary for each sewer provider is shown in Figure 1.2. The boundaries were determined by one of the following methods in order of preference; the Certificate of Convenience and Necessity (CCN) maps from the Texas Commission on Environmental Quality (TCEQ) database, city limits or by service areas as established from data provided by the entity. There are approximately 2,000 acres, within the study area, that are serviced by either septic or aerobic on-site systems.

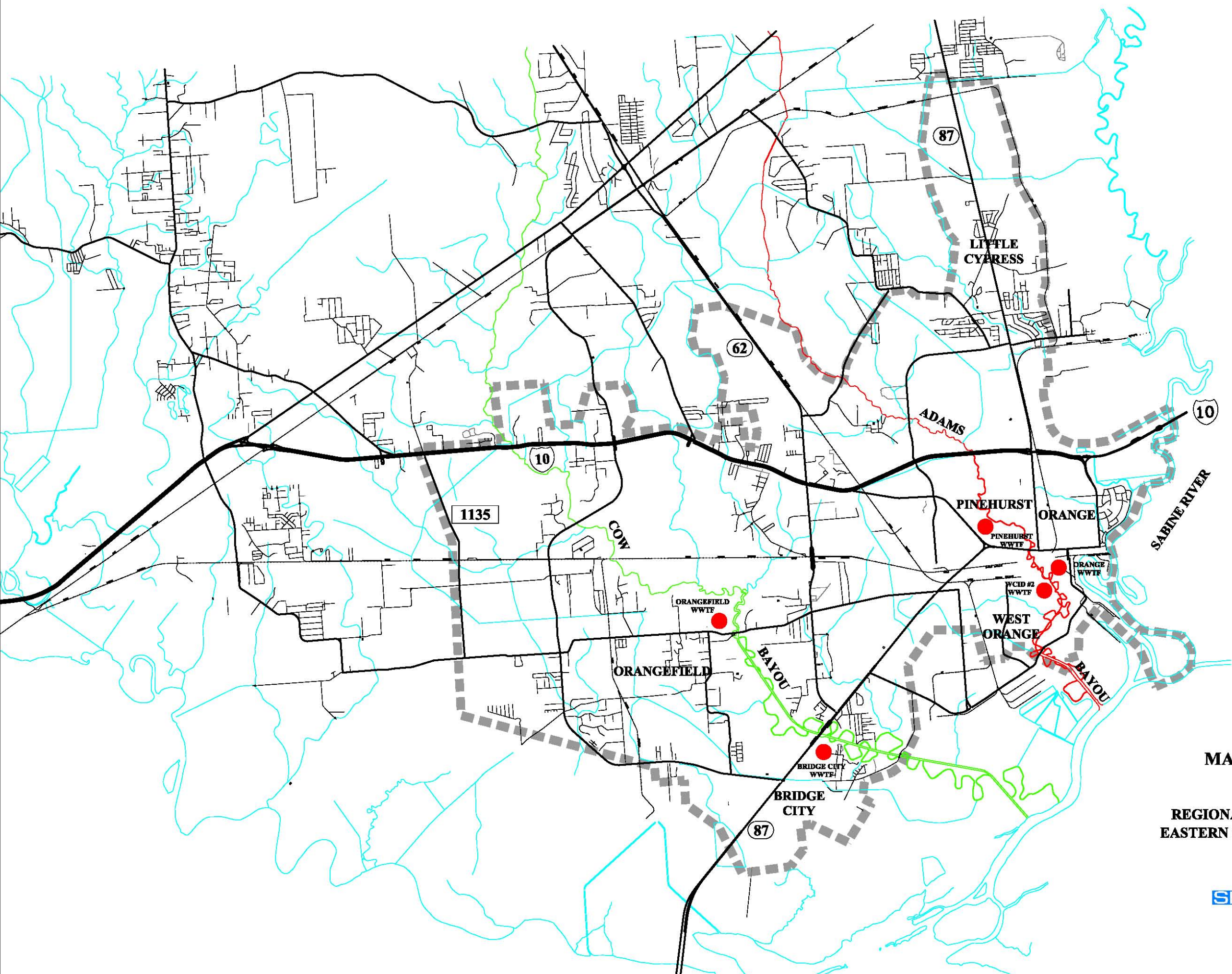
The three main streams receiving direct wastewater flow discharges, either through point source or non-point source discharge, include Adams Bayou, Cow Bayou and Sabine River. The two referenced bayous currently are included in the Total Maximum Daily Load (TMDL) program administered by the TCEQ. Two plants (Pinehurst and WCID No. 2) discharge primarily into Adam's Bayou. Orange primarily discharges into the Sabine River with a permit to discharge high flow during wet-weather to Adams Bayou. Bridge City and the proposed Orangefield WSC will discharge to Cow Bayou. Other privately owned plants that discharge into Cow Bayou include the Sabine River Authority of Texas 1 Plant and the Sunrise East Apartments.





EXHIBIT MAP  
BASED ON  
GENERAL HIGHWAY MAP OF  
ORANGE COUNTY, TEXAS  
N.T.S.

-  STUDY AREA BOUNDARY
-  COW BAYOU
-  ADAMS BAYOU
-  EXISTING WASTEWATER TREATMENT FACILITIES



**FIGURE 1.1**

**STUDY BOUNDARY &  
MAJOR STREAM SEGMENTS**

**SABINE RIVER AUTHORITY  
REGIONAL WASTEWATER STUDY BOUNDARY  
EASTERN PORTION OF ORANGE COUNTY, TEXAS**

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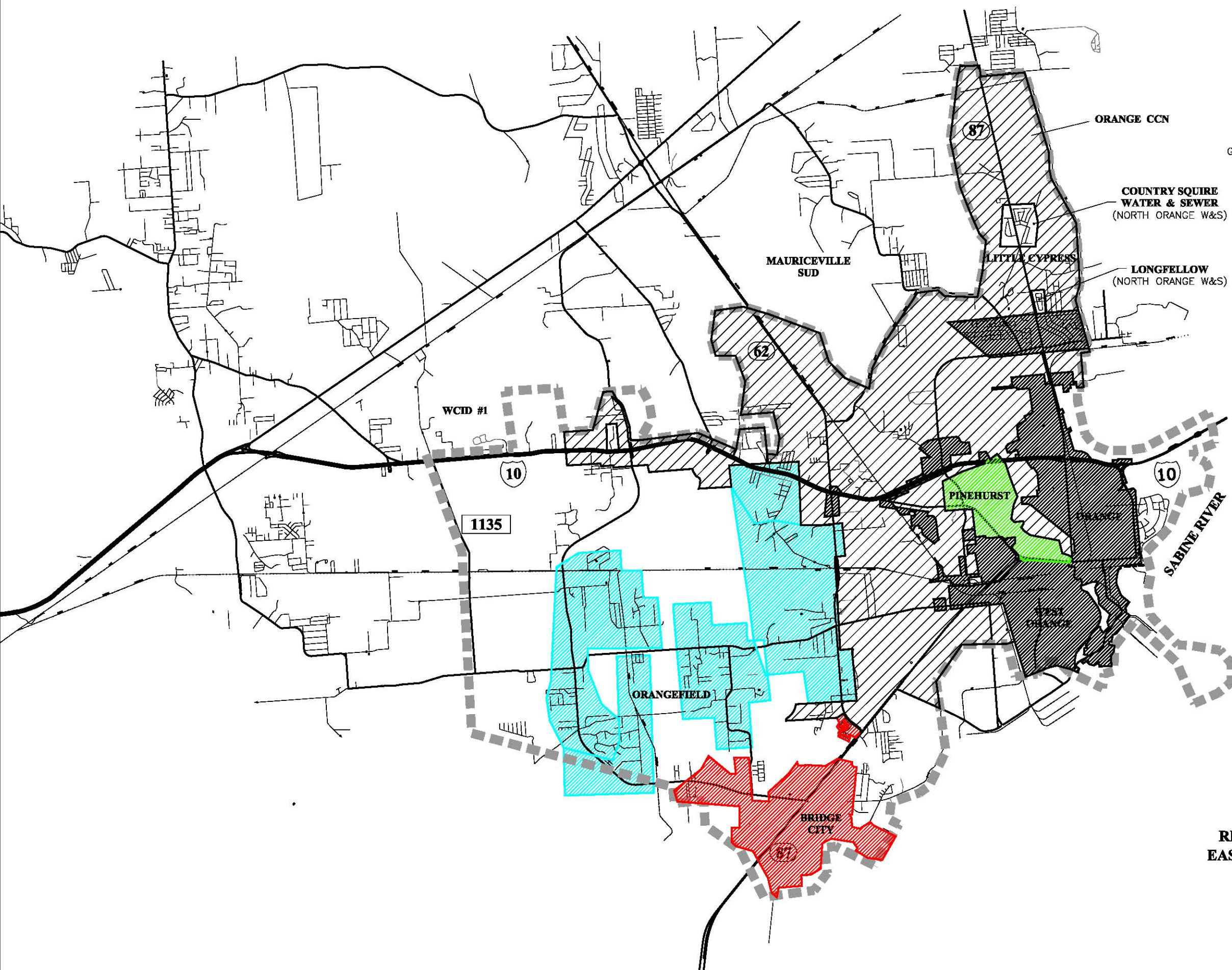









EXHIBIT MAP  
BASED ON  
GENERAL HIGHWAY MAP OF  
ORANGE COUNTY, TEXAS  
N.T.S.



-  STUDY AREA BOUNDARY
-  BRIDGE CITY CITY LIMITS
-  ORANGE CCN (SERVED)
-  ORANGE CCN (UNSERVED)
-  WEST ORANGE CITY LIMITS
-  ORANGEFIELD PROJECT AREA
-  PINEHURST CCN

**FIGURE 1.2**

**SERVICE BOUNDARIES FOR  
WASTEWATER PROVIDERS**  
**SABINE RIVER AUTHORITY**  
**REGIONAL WASTEWATER STUDY BOUNDARY**  
**EASTERN PORTION OF ORANGE COUNTY, TEXAS**

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## CHAPTER 2 - OVERVIEW OF EXISTING SYSTEMS

This section provides a summary of the factors, including both regulatory compliance and financial investment, to evaluate continued investment in the existing wastewater treatment facilities. The initial portion of this section defines the factors and how they are used in the evaluation. An evaluation of each existing plant for the study's participants follows.

### 2.1 FACTORS

Factors used in evaluating the useful life of a wastewater facility include flow capacity, treatment efficiency and the overall age, condition and anticipated capital needs to maintain the facility. The following defines each of the factors and explains their use in the evaluation for the 30 year study period.

#### Treatment Capacity

There are two flow measurements used in the evaluation of design and compliance for wastewater plant capacity; average daily flow (ADF) and peak 2-hour flow (Peak). The definition of the flows is dependent on the permitted flow. The following is a derivation of the plant flows used in evaluating treatment capacity.

Plant with < 1.0 mgd permitted ADF (Pinehurst, Orangefield): Based on the arithmetic average of all determinations of daily flow within a period of one calendar month and referred to as daily average flow.

Plant with  $\geq$  1.0 mgd permitted ADF (Bridge City, Orange, WCID No. 2): Based on arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months and referred to as annual average flow.

Peak 2-hour flow: the maximum flow rate sustained for a two-hour period during the period of daily discharge.

Discharge permits include two conditions related to ADF that require action for compliance, commonly referred to as the 75/90 rule. Flows that exceed 75% of permitted daily average or annual average flow for three consecutive months requires initiation of engineering and financial planning for expansion or upgrade. Whenever 90% of the permitted daily average or annual average flow is exceeded for three consecutive months, authorization is to be obtained from the TCEQ for construction of the necessary additional treatment facilities.

Although there are no direct written regulations related to peak 2-hour flow, other than exceedance of the permitted flow rate, it is the experience in this geographical region that the peak 2-hour flow may extend for periods of 12 hours to 24 hours during periods of wet weather. The prolonged high flows can impact treatment by loss of solids. Experience indicates the means to accomplish a reduction of the peak flow duration of 12 to 24 hours requires an ability to transport higher flows to the plants,



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which also increase the ADF. Rehabilitation of the collection system is the second component to reduce the duration of the peak 2-hour flow.

Flow data for the period of 2002 - 2006 was collected for each plant to evaluate comparison of dry weather flows, average daily flows and flows during wet periods. Only the period of 2004 - 2006 was used in the analysis as prior year data was not reliable for all participants; which included inaccurate data due to errors in flow meter equipment. The data was used to evaluate compliance of existing plants with the 75/90 rule as well as defining the flow requirements for a regional system.

### **Treatment Efficiency**

Treatment efficiency is based on compliance with average and maximum discharge parameters in the discharge permit. The limits vary between users and the quality of the receiving discharge stream. Limits are typically set for biological oxygen demand, total suspended solids, disinfection, ammonia nitrogen and dissolved oxygen concentration. Additional limits may be set for metals and other inorganic constituents. Intermittent excursions may result in the permittee having to identify the source of the problem and taking corrective action although continual excursion may result in more serious actions.

Effluent quality records for 2002 - 2006 were obtained to identify excursions from permit. Although not included as a part of this study, maintaining records of influent quality parameters is important to minimize treatment unit sizes and equipment capacity. If the influent stream concentration is significantly less than default criteria contained in wastewater treatment regulations, the plant can be designed or rerated with lower concentrations based on sufficient documentation.

### **Treatment Plant Condition**

The age of a treatment plant and the associated level of maintenance will have an impact on treatment efficiency, ability to meet more stringent discharge limits and maintenance costs. The above factors are part of the evaluation to determine the return on investing in aging equipment. Treatment plant conditions were evaluated by conducting an on-site evaluation, with the operators of each entity, to gather information related to the age and condition of the various structures and equipment and the general condition of maintenance and to determine any special needs.

The information collected was used to project major capital expenditure costs that may be required at the existing plants for the 30-year study period. The methodology included developing a generalized replacement schedule based on experience. The replacement schedule was developed to reflect life expectancy of concrete structures, steel structures, piping and the various process and mechanical equipment. The maximum life expectancy for the various components was based on providing an optimal maintenance program. The life expectancy curve used for the analysis is provided in Figure 2.1A along with supporting data in Figure 2.1B. Replacement of the components were planned at 25% of the remaining life. The costs for replacement was developed using construction cost data for plants by treatment type and size with increase in cost using the Engineering Cost News Record Index. Comparison of this methodology against plants constructed in the late 1990's and early 2000's found

reasonable results to be produced. The distribution of the overall costs by each separate unit was based on construction cost breakdowns provided by actual project experience. A 30% factor was added as the cost of rehabilitating a single unit is more expensive than the cost of that unit constructed as a part of a new plant. Construction costs data used in the analysis is included in Appendix A. For the purpose of the analysis the annual capital outlay was calculated based on a 20 year, 5% amortization.

### **Operation and Maintenance**

Annual operation and maintenance costs were requested from the four entities that operate wastewater plants. The Cities of Orange and Bridge City provided information. The data is reported in Appendix B.

A 1983 study developed by the United States Environmental Protection Agency was used to project operation and maintenance costs by the type and capacity of the plant. The cost developed from the study was adjusted to account for inflation. Comparison of data developed from the EPA study to information provided by two of the entities found the methodology to yield reasonable results. A copy of the study is included in Appendix B.

Comparison of the two sources indicates the referenced EPA study, adjusted for inflation, to be reliable. This source was used in determining operation and maintenance costs used for this study.





## 2.2. SUMMARY OF COLLECTED FACTORS

Data related to the previously discussed factors was collected and evaluated for four existing plants; City of Bridge City, City of Orange Jackson Street Plant, City of Pinehurst and Orange County WCID No. 2. Information requested included the following items:

- \* Current wastewater discharge permit(s).
- \* Monthly operating records for 2002 through 2006. (includes flow records, water quality tests and rainfall).
- \* Description of wastewater collection and treatment organizations.
- \* Wastewater treatment budgets and expenses for 2005 and 2006.
- \* Description of infiltration/inflow problems including estimates of overflows.
- \* Collection system map, including lift station locations.
- \* Pumping capacity of lift stations.
- \* Estimated age of structures and equipment at the wastewater treatment facility(ies).
- \* Map showing areas not presently served by central wastewater treatment facility.
- \* Projection for growth.
- \* Pretreatment program, if applicable.
- \* Number of water customers by classification (residential, commercial, industrial) receiving wastewater services.
- \* Copy of Texas Commission on Environmental Quality inspection reports and notice of violations for 2005 thru 2007.

Subsequent site visits and interviews were made to make a general assessment of the physical condition of the treatment plant. A summary of the physical assessment and other data is included in Appendix C.

The data collected for each entity was used to project the needs for service, determine the life expectancy for the various process units, and project a 30-year cost to maintain the existing plant.

Table 2.1 summarizes the estimated service population and monthly average permit limits for the current treatment plants and the estimated population served by on-site systems.

Table 2.1 Summary of Existing Treatment Plants

Entity	2000 Service Population	Treatment Plant Permit Limits		
		ADF Flow mgd	Avg. BOD, mg/l	Avg. TSS, mg/l
Bridge City	8651 <sup>(1)</sup>	1.6	10	15
Orange	18643 <sup>(1)</sup>	7	20	20
Pinehurst	2274 <sup>(1)</sup>	0.5	20	20
Orange County WCID No. 2	4111 <sup>(1)</sup>	1.22	10	15
Orangefield	5000 <sup>(2)</sup>	0.75	10	15
North Orange W&S	Data not available			
Other Unincorporated- Not Served	12000 <sup>(2)</sup>	Served by on-site systems		

(1) 2000 Population from 2006 Regional Water Plan

(2) Estimated from 2000 Census Block Data



**City of Bridge City**

The permit discharge parameters, observed flows and noted permit condition excursions are summarized in Table 2.2. The plant was constructed in 1977 with upgrades in 1988. Effluent discharge is to Cow Bayou. Figure 2.2 provides a projection of major capital expenditure for each unit based on the life expectancy curves [Figure 2.1]. The analysis indicates that the present value of the 30 year major capital and 30 year operation and maintenance expenditures to be \$16.6 million .

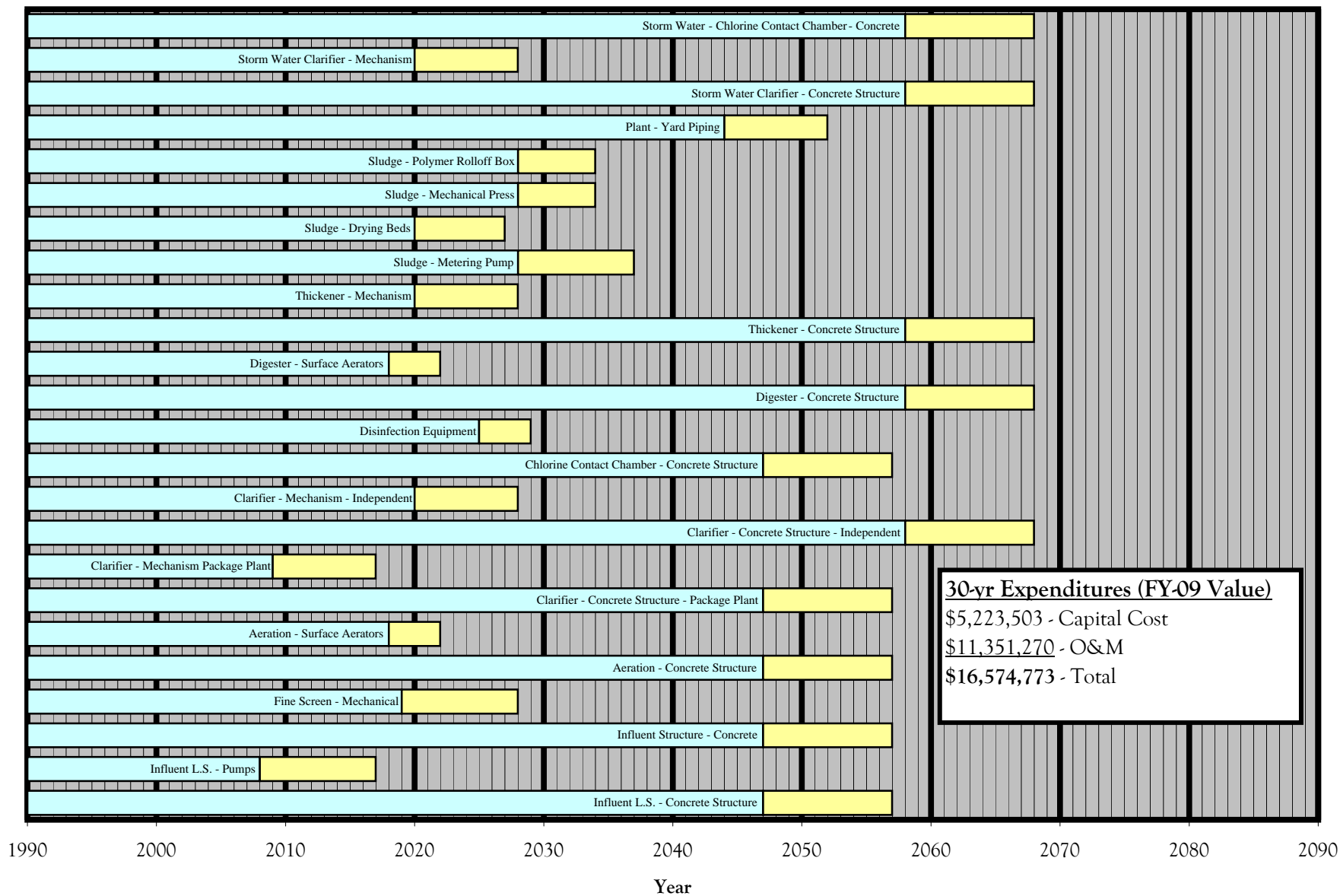
Table 2.2 Summary of Permit, Observed Flows and Permit Excursions

<b>Permit Limits</b>			
Eff. Characteristics	Discharge Units		
	Avg.	Max. day	Daily Max.
ADF, mgd	1.60	7	
BOD, mg/l	10	15	25
TSS, mg/l	15	25	40
Total Copper	Report	N/A	Report
DO, mg/l	4	N/A	N/A
pH	6	N/A	9

<b>Observed Flows</b>			
Average (mgd)	Dry Weather Daily Flow, mgd	Wet Weather Daily Flow, mgd	Peak Wet Weather, mgd
0.776	0.561-1.119	1.627 to 3.589	5.659

<b>Permit Excursions</b>			
Date	Parameter	Results	Comments
1/19/2002	BOD	29	>Daily Max; 0.05 Rain
10/22/2002	TSS	42	>Daily Max; 1.8 Rain
10/28/2002	BOD	32	>Daily Max; 5.6 Rain
12/3/2002	TSS	42	>Daily Max; 3.8 Rain
9/11/2003	BOD	29	>Daily Max; 3.5 Rain
9/11/2003	TSS	72	>Daily Max; 3.5 Rain
1/29-30/2004	TSS	46	>Daily Max; 2.5 Rain
2/2-3/2004	TSS	74	>Daily Max
2/11-12/2004	TSS	42	>Daily Max
3/14-15/2004	TSS	41	>Daily Max
9/24/2004	TSS	50	>Daily Max; 3.5 Rain on 9/23
3/7-8/2005	TSS	49	>Daily Max; 1.0 Rain
7/17/2005	TSS	54	>Daily Max; 0.8 Rain
7/5/2006	TSS	56	>Daily Max; 2.4 Rain
9/21/2006	TSS	106	>Daily Max; 2.4 Rain
10/26-27/2006	BOD	57	>Daily Max; 4.4 Rain
12/21/2006	BOD	53	>Daily Max; 1.0 Rain on 12/20
12/21/2006	TSS	60	>Daily Max; 1.0 Rain on 12/20
12/21-22/2006	BOD	40	>Daily Max; 0 Rain
12/24-25/2006	TSS	62	>Daily Max; 0.7 Rain
12/29-30/2006	TSS	56	>Daily Max; 0.1 Rain
12/30/2006	TSS	48	>Daily Max; 0 Rain

**Figure 2.2**  
**Projected Unit Upgrade Schedule**  
**City of Bridge City WWTP**



**City Orange Jackson Street Plant**

The permit discharge parameters, observed flows and noted permit condition excursions are summarized in Table 2.3. The plant primarily discharges into the Sabine River and therefore the quality discharge limits require secondary treatment. The initial plant was constructed in 1965 with improvements in 1997. Figure 2.3 provides a projection of major capital expenditure for each unit based on the life expectancy curves (Figure 2.1). The analysis indicates that the present value of the 30 year major capital and 30 year operation and maintenance expenditures to be on the order of \$54.1 million .

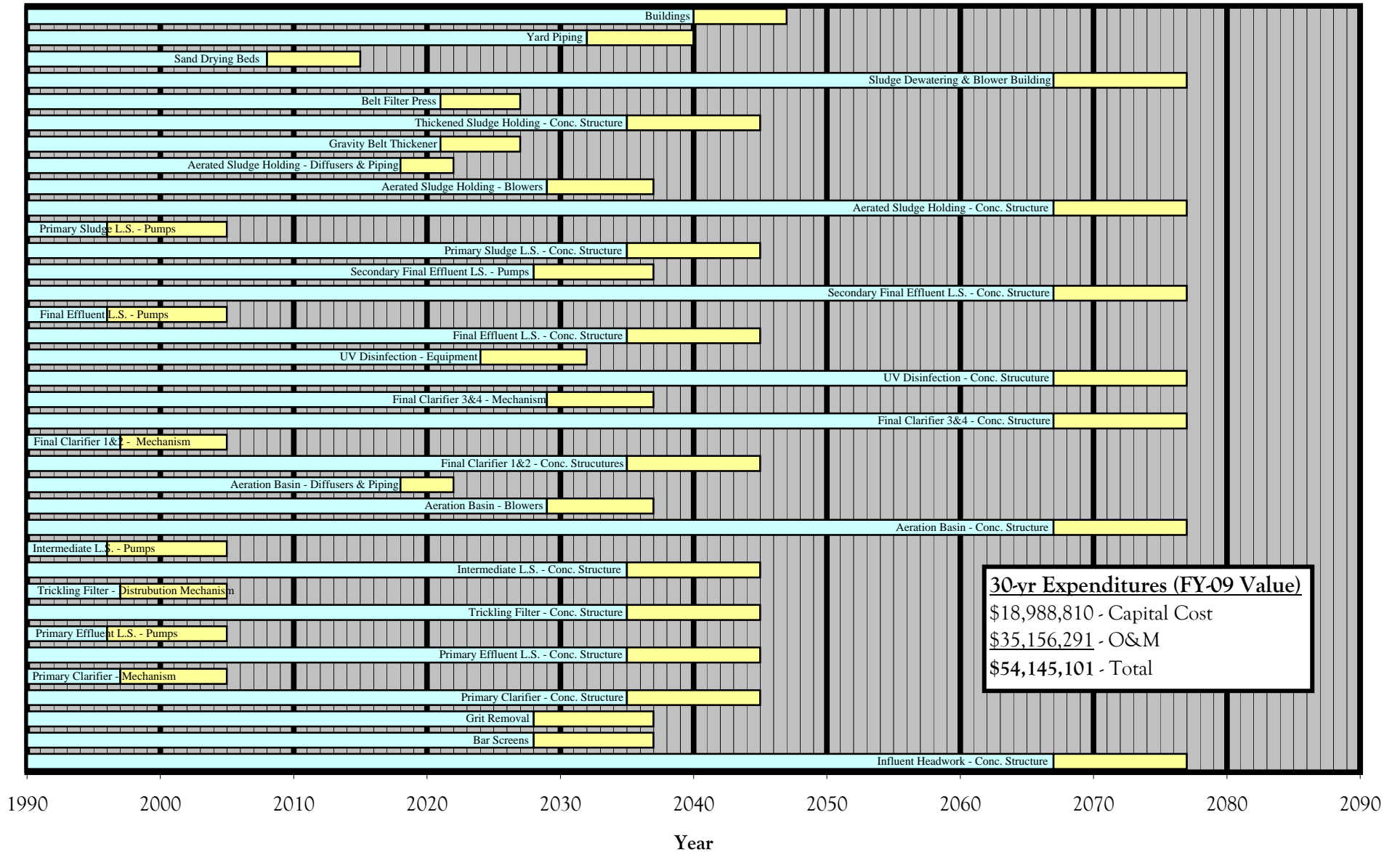
Table 2.3 Summary of Permit, Observed Flows and Permit Excursions

<b>Permit Limits</b>			
Eff. Characteristics	Discharge Units		
	Avg.	Max. 7 day	Max.
ADF, mgd	7		
BOD, mg/l	20	30	45
TSS, mg/l	20	30	45
Total Copper, mg/l	0.285/0.0091	0.0458/0.0146	0.5011/0.1702
Total Zinc, mg/l	0.2369/0.0804	0.3807/0.1293	0.5011/0.1702
DO, mg.l	2	N/A	N/A
Fecal Coliform (colonies/100 ml)	200	N/A	400
pH	6	N/A	9

<b>Observed Flows</b>			
Average [mgd]	Dry Weather Daily Flow, mgd	Wet Weather Daily Flow, mgd	Peak Wet Weather, mgd
2.491	1.743 - 2.242	3.413 to 6.547	9.632

<b>Permit Excursions</b>			
Date	Parameter	Results	Comments
1/8/2004	TSS	58	>Daily Max; 0.65 Rain
2/10/2004	TSS	99	>Daily Max; 0 Rain
11/2/2004	BOD	205	>Daily Max; 6.0 Rain
11/19/2006	Zinc	2.57	>Daily Max; 0 Rain

**Figure 2.3**  
**Projected Unit Upgrade Schedule**  
**City of Orange WWTP**



**City of Pinehurst**

The permit discharge parameters and observed flows are summarized in Table 2.4. Flow data for the plant indicates three consecutive months, May thru July 2004, in which 75% of the ADF was exceeded. There has been one occasion on which the 90% level was exceeded on two consecutive months. The City has entered into a sanitary sewer overflow initiative with the TCEQ in response to the flow violations. Data was not available by which to provide a review of water quality data relative to the permit.

The initial plant was constructed in 1963 with major plant upgrade in 1985 and subsequent improvements in 2004 and 2008. Figure 2.4 provides a projection of major capital expenditure for each unit based on the life expectancy curves (Figure 2.1). The analysis indicates that the present value of the 30 year major capital and 30 year operation and maintenance expenditure to be \$8.4 million.

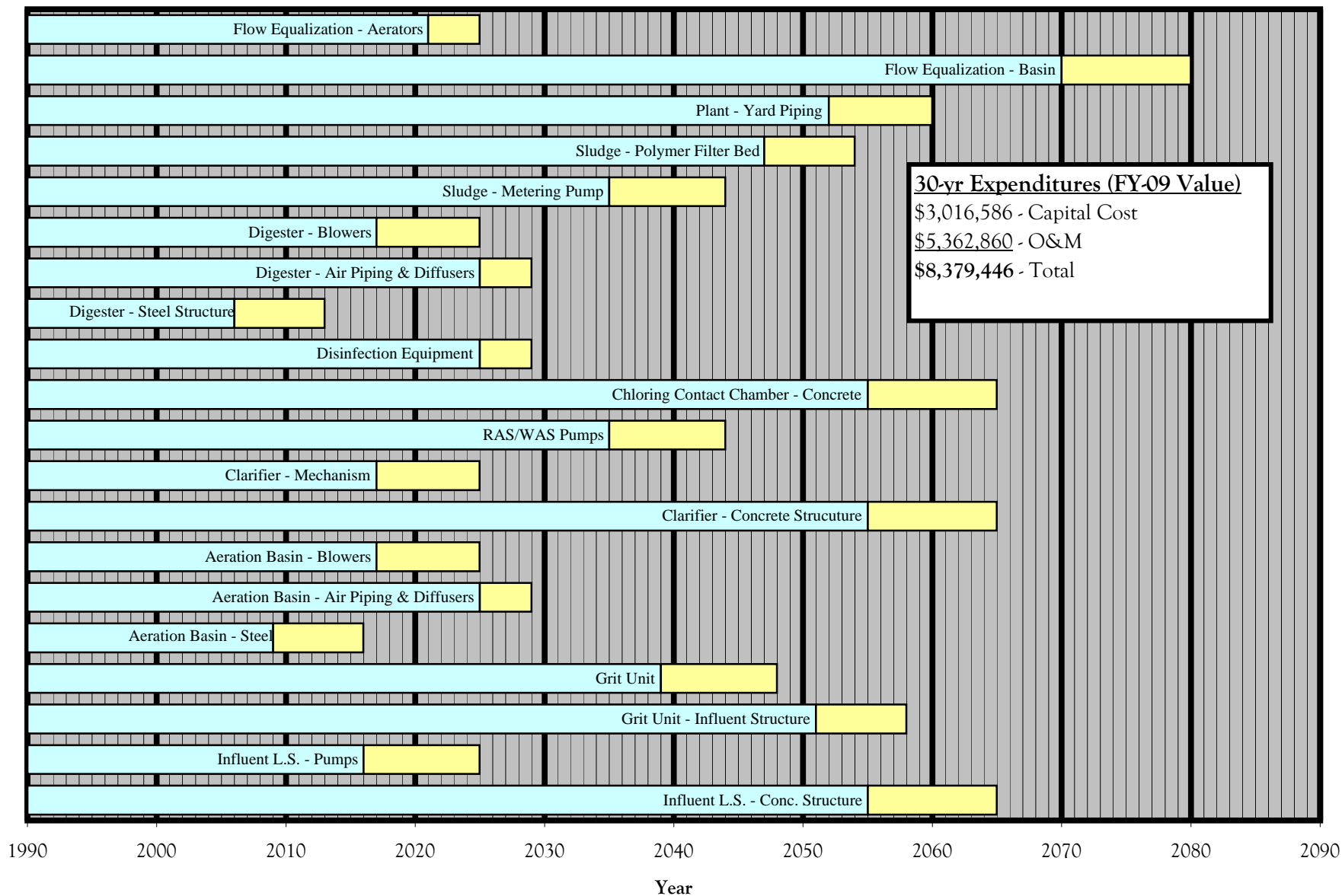
Table 2.4 Summary of Permit and Observed Flows

<b>Permit Limits</b>			
Eff. Characteristics	Discharge Units		
	Avg.	Max. 7 day	Daily Max.
ADF, mgd	0.5		
BOD, mg/l	20	30	45
TSS, mg/l	20	30	45
Ammonia Nitrogen, mg/l	Report	N/A	Report
DO, mg/l	3	N/A	N/A
pH	6	N/A	9

<b>Observed Flows</b>		
Average (mgd)	Dry Weather ADF	Peak Wet Weather, mgd
0.320	0.192 - .307	1.612

<b>Permit Excursions</b>			
Date	Parameter	Results	Comments
None Provided			

**Figure 2.4**  
**Projected Unit Upgrade Schedule**  
**City of Pinehurst WWTP**



**Orange County Water Control and Improvement District No. 2**

The permit discharge parameters and observed flows are summarized in Table 2.5. There have been two occasions during which 75% of the permitted ADF was exceeded for two consecutive months. Data was not available by which to provide a review of water quality data relative to the permit.

The initial plant was constructed in 1963. The plant received a major upgrade in 1985 that replaced most of the original construction. Upgrades were performed in 1997 and 2004. Figure 2.5 provides a projection of major capital expenditure for each unit based on the life expectancy table. The analysis indicates that the present value of the 30 year major capital and 30 year operation and maintenance expenditure to be \$15.1 million.

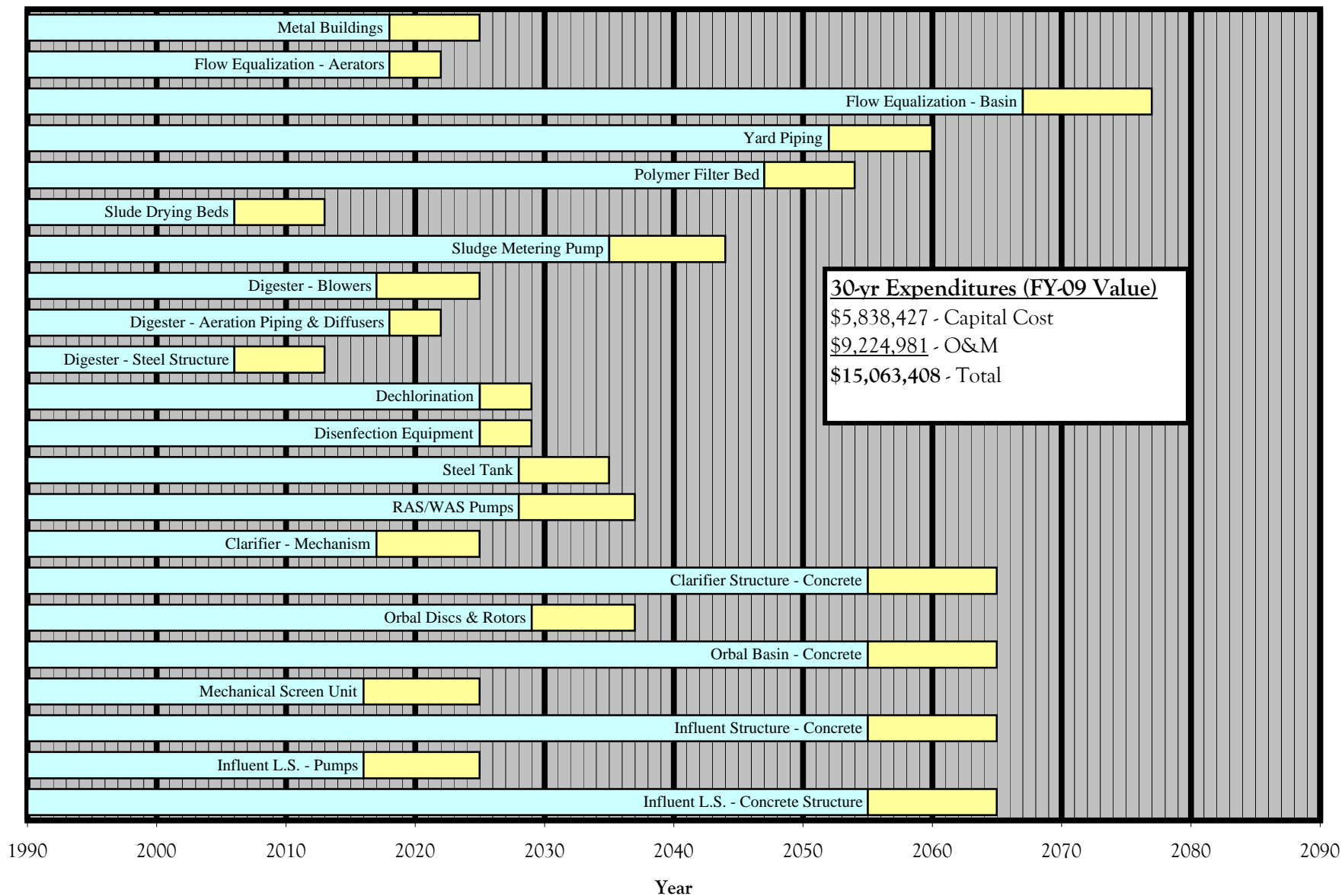
Table 2.5 Summary of Permit and Observed Flows

<b>Permit Limits</b>			
Eff. Characteristics	Discharge Limits		
	Avg.	Max. 7 day	Daily Max.
ADF, mgd	1.22		
BOD, mg/l	10	15	25
TSS, mg/l	15	25	40
Total Copper, mg/l	0.0087	N/A	0.018
Total Zinc, mg/l	0.076	N/A	0.16
DO, mg/l	4	N/A	N/A
pH	6	N/A	9

<b>Observed Flows</b>		
Average (mgd)	Dry Weather ADF	Peak Wet Weather, mgd
0.615	0.352 - 0.484	3.477

<b>Permit Excursions</b>			
Date	Parameter	Results	Comments
None provided			

**Figure 2.5**  
**Projected Unit Upgrade Schedule**  
**Orange County WCID No. 2 WWTP**





### **Orangefield WSC**

The Orangefield WSC is currently undertaking a project to construct a centralized vacuum system to replace on-site systems. The project area is shown in Figure 1.2. The initial project includes construction of a 0.75 million gallon per day wastewater plant. The WSC has obtained a permit for discharge into Cow Bayou.

### **Private Entities**

North Orange Water and Sewer, LLC, and Aqua Texas, Inc. service two subdivisions in the northeastern section of the study area.

### **On-site Systems**

The Orange County Health and Code Compliance Department oversees the permitting and enforcement of on-site systems. The County began the permitting process in the early 1990's. There are some 3800 on-site systems in all of Orange County that have been permitted since the beginning of the program. The County does not have records of septic systems installed prior to commencement of the program. The study area is currently under a Total Maximum Daily Load (TMDL) process as discussed in Chapter 4. The TMDL notes failing septic systems as a source of pollution concern for Adams Bayou and Cow Bayou. One area, Victory Gardens, was identified to be of concern as it relates to failing septic systems.

## CHAPTER 3 - PROJECTION OF SERVICE NEEDS

The scope of the study includes evaluation of wastewater treatment needs for a 30 year period. The evaluation is separated by areas served by existing centralized systems and areas that are presently served by on-site systems or located within undeveloped lands.

### 3.1 EXISTING CENTRALIZED SYSTEMS

Determination of future design flows for the existing service areas are comprised of two considerations; improvement in collection system reliability during wet weather (infiltration/inflow) and growth in the service area. Criteria are required for both average daily flow and peak 2-hour flow.

Both the average daily flow and peak 2-hour flow will be impacted by the additional transport and treat capacity for mitigation of infiltration/inflow. Two wastewater systems, not included in this study but adjacent to the study area, have been upgraded for additional transport and treat. A review of the flow for the two systems, after significant collection system rehabilitation, yields ratio of Average Permitted ADF to Observed Average Daily Flow of 1.94 and 2-hour peak flow to Observed Average Daily Flow of 9.70.

The flows observed for dry and wet weather conditions for the four existing systems are provided in Table 3.1. The observation shows that all of the entities, with the exception of Orange, had peak day flows that equaled or exceeded the permitted peak 2-hour flow.

Table 3.1 Observed Flows

Entity	Current Permit		Observed			
	Average Daily Flow (MGD)	2-HR Peak Flow (MGD)	Dry Weather Flow (MGD)	Wet Weather Flow (MGD)	Peak Day Wet Weather (MGD)	Average Flow (MGD)
Bridge City	1.6	4.17	0.561 to 1.119	1.627 to 3.589	5.659	0.776
Orange (1)	7	24	1.743 to 2.242	3.413 to 6.547	9.632	2.491
OCWCID #2	1.22	3.447	0.352 to 0.484	0.688 to 2.020	3.477	0.615
Pinehurst	0.5	1.5	0.192 to 0.307	0.343 to 0.961	1.612	0.320
<b>Total</b>	<i>10.32</i>	<i>33.117</i>			<i>20.380</i>	<i>4.202</i>

The second component of permitting is to allow for future growth. The 2006 Regional Water Plan showed no increase in population for the study area with the exception of Bridge City, which has a 7.1% increase over the projected 30-year period. The City of Orange, during the course of this study, expanded its service area via annexation. The Orangefield Water Supply Corporation is presently constructing a collection/treatment system. The 20-year design flow of the Orangefield WSC is 0.75 mgd.

Table 3.2 shows the derivation of the projected permitted flows to account for increase in flows associated with improving collection system reliability and future population in the existing service area.

Table 3.2 30-Year Design Flows for Existing Areas

Entity	Collection System Serviceability		Future Population		Total	
	Average Design Flow (MGD) <sup>(1)</sup>	2 Hr. Peak Flow (MGD) <sup>(2)</sup>	Average Design Flow (MGD)	2 Hr. Peak Flow (MGD)	Average Design Flow (MGD)	2 Hr. Peak Flow (MGD)
Bridge City	1.50	7.63	0.1		1.60	7.63
Orange	4.83	15.52			4.83	15.52
<i>Orange Annex</i>			0.49	1.48	0.49	1.48
OCWCID #2	1.22	5.97			1.22	5.97
Orangefield (3)			0.75	2.25	0.75	2.25
Pinehurst	0.62	3.10			0.62	3.10
<b>Total</b>	<b>8.17</b>	<b>32.22</b>	<b>1.34</b>	<b>3.73</b>	<b>9.51</b>	<b>35.95</b>

(1) Observed annual average x 1.94

(2) Observed annual average x 9.70, except Orange based on actual observed.

(3) Not in operation, based on permitted flow.

### 3.2. AREAS NOT SERVED BY CENTRALIZED WASTEWATER SYSTEM

There are locations within the study area in which development has occurred but are presently served by on-site systems. The area between Highway 87 and Interstate 10, mostly within the City of Orange CCN, has been experiencing development. Figures 3.1 and 3.2 were developed to depict the areas both south and north of Interstate 10 that have existing development served by on-site systems or indicates areas under development. The City of Orange CCN covers approximately 50% of the area. A small portion of the area between Highway 87 and FM105 in the Orange CCN area is presently being served by Orange. The total acreage shown in Figure Nos. 3.1 and 3.2 is approximately 6,000 acres.

The existing service areas were evaluated to establish a flow contribution on a per acre basis to serve as a guide to establish flows for unserved areas. The flow was derived from the data in Table 3.3. Depending on the density of the development, the projected average daily flow for un-served areas would be expected to range between 300 to 600 gallons per acre per day. The collection system in newer development

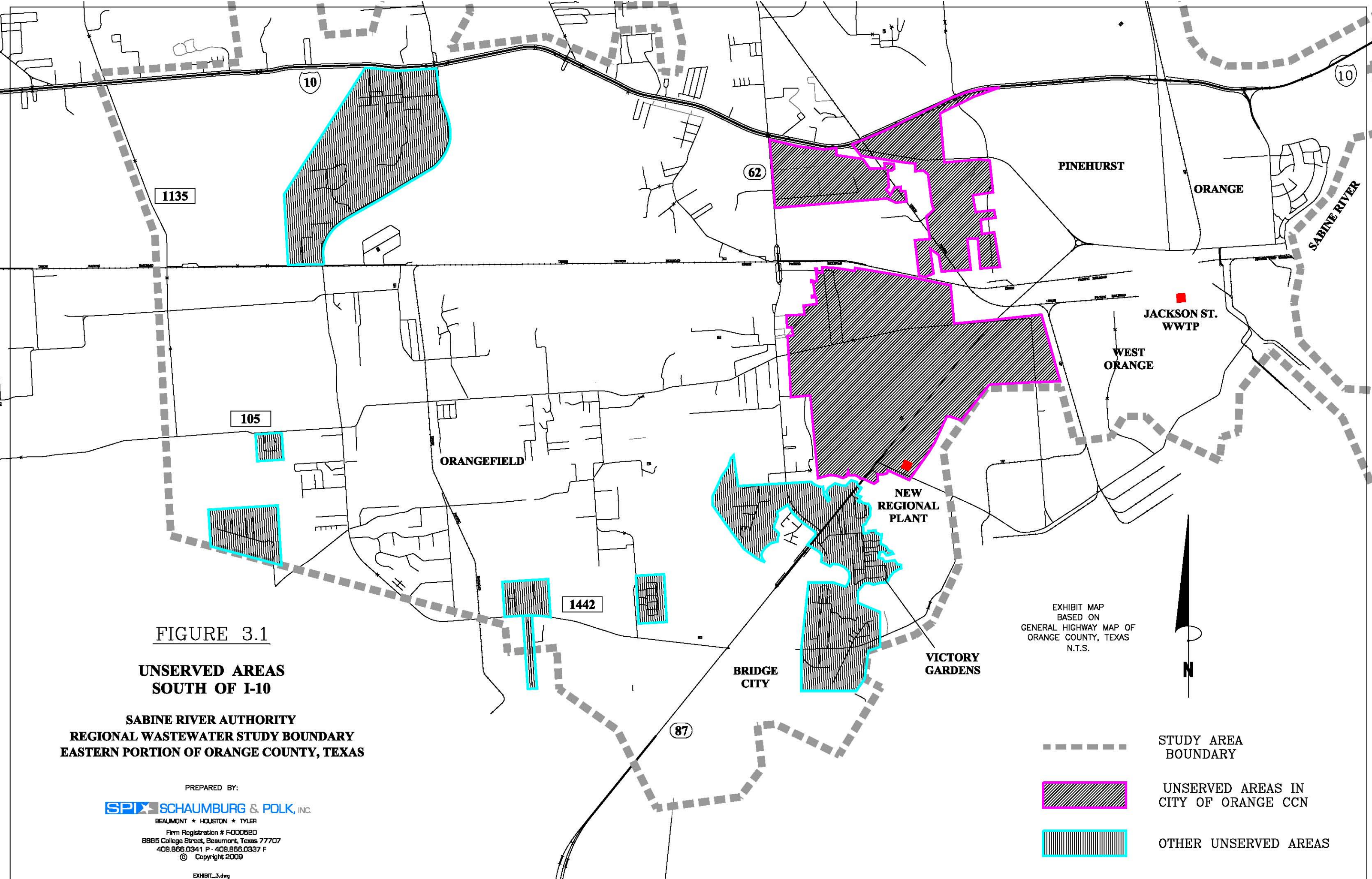
would be expected to have less infiltration/inflow and therefore the peak 2-hour flow would be expected to be in the range of 1,200 to 2,000 gallons per acre per day.

Table 3.3 Flow per Acre Contribution for Existing Centralized Systems

Entity	Area (acre)	Average Daily Flow		Peak Flow	
		ADF (MGD)	GPD/Acre	Peak Flow (MGD)	GPD/Acre
City of Orange	4629	2.491	538	9.632	2080
O.C. WCID No. 2	2056	0.615	299	3.477	1691
Pinehurst	1180	0.320	271	1.612	1366
City of Bridge City	3138	0.776	247	5.659	1803

The Orange County Health Code and Compliance Department has been issuing permits for on-site systems since 1991. An area of major concern, where systems installed prior to this date are failing, is Victory Gardens. There are no known immediate plans to extend collection systems into these areas.





**FIGURE 3.1**

**UNSERVED AREAS  
SOUTH OF I-10**

**SABINE RIVER AUTHORITY  
REGIONAL WASTEWATER STUDY BOUNDARY  
EASTERN PORTION OF ORANGE COUNTY, TEXAS**

PREPARED BY:

**SPI SCHAUMBURG & POLK, INC.**

BEAUMONT \* HOUSTON \* TYLER  
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EXHIBIT\_3.dwg

EXHIBIT MAP  
BASED ON  
GENERAL HIGHWAY MAP OF  
ORANGE COUNTY, TEXAS  
N.T.S.






-  STUDY AREA BOUNDARY
-  UNSERVED AREAS IN CITY OF ORANGE CCN
-  OTHER UNSERVED AREAS



FIGURE 3.2

**UNSERVED AREAS  
NORTH OF I-10**

**SABINE RIVER AUTHORITY  
REGIONAL WASTEWATER STUDY BOUNDARY  
EASTERN PORTION OF ORANGE COUNTY, TEXAS**

PREPARED BY:

**SPI SCHAUMBURG & POLK, INC.**

BEAUMONT \* HOUSTON \* TYLER

Firm Registration # F000520

8865 College Street, Beaumont, Texas 77707

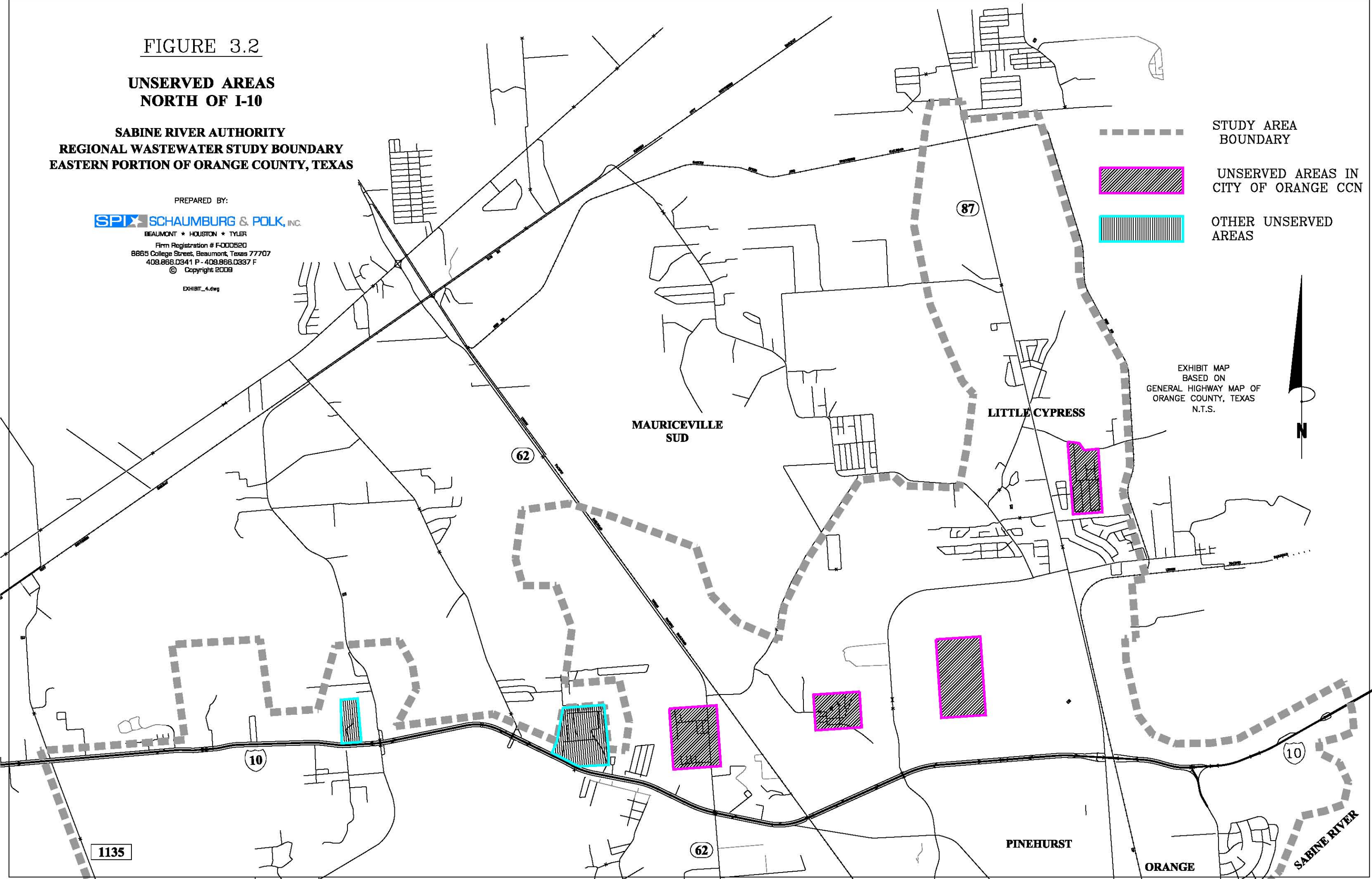
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EXHIBIT\_4.dwg

- STUDY AREA BOUNDARY
- UNSERVED AREAS IN CITY OF ORANGE CCN
- OTHER UNSERVED AREAS

EXHIBIT MAP  
BASED ON  
GENERAL HIGHWAY MAP OF  
ORANGE COUNTY, TEXAS  
N.T.S.



## CHAPTER 4 - TOTAL MAXIMUM DAILY LOADS

A report entitled "Seventeen TMDLs for Adams Bayou, Cow Bayou and Their Tributaries" dated June 13, 2007, was adopted by the Texas Commission on Environmental Quality (TCEQ). The report identifies impaired stream segments, the cause of the impairment and sets goals for removal of certain pollutants. The impact of the goals set forth in the TMDL on the existing treatment plants and the unserved areas are presented in this report.

Adams Bayou and Cow Bayou are within the study area. The TMDL divided the stream into several segments. Figures 4.1 and 4.2 are taken from the TMDL. Table 4.1 summarizes the location of the five existing treatment plants relative to the segments in the TMDL.

Table 4.1 Location of Existing Plants on TMDL Stream Segments

Stream	Plant	Segment No.
Adams Bayou Tidal	Orange	2
	WCID #2	2
	Pinehurst	3
Cow Bayou Tidal	Bridge City	2
	Orangefield	4

The TMDL sets goals for reduction of cBOD and ammonia nitrogen to control dissolved oxygen levels. The sources of the loads are attributed to point source contributions, such as treatment plants, and non-point source contributions such as failing septic systems. The report refers to the load allocations from these two sources as wasteload and load, respectively. The TMDL, Table Nos. 13 thru Table 17 sets forth the percent reduction required in each group by source.

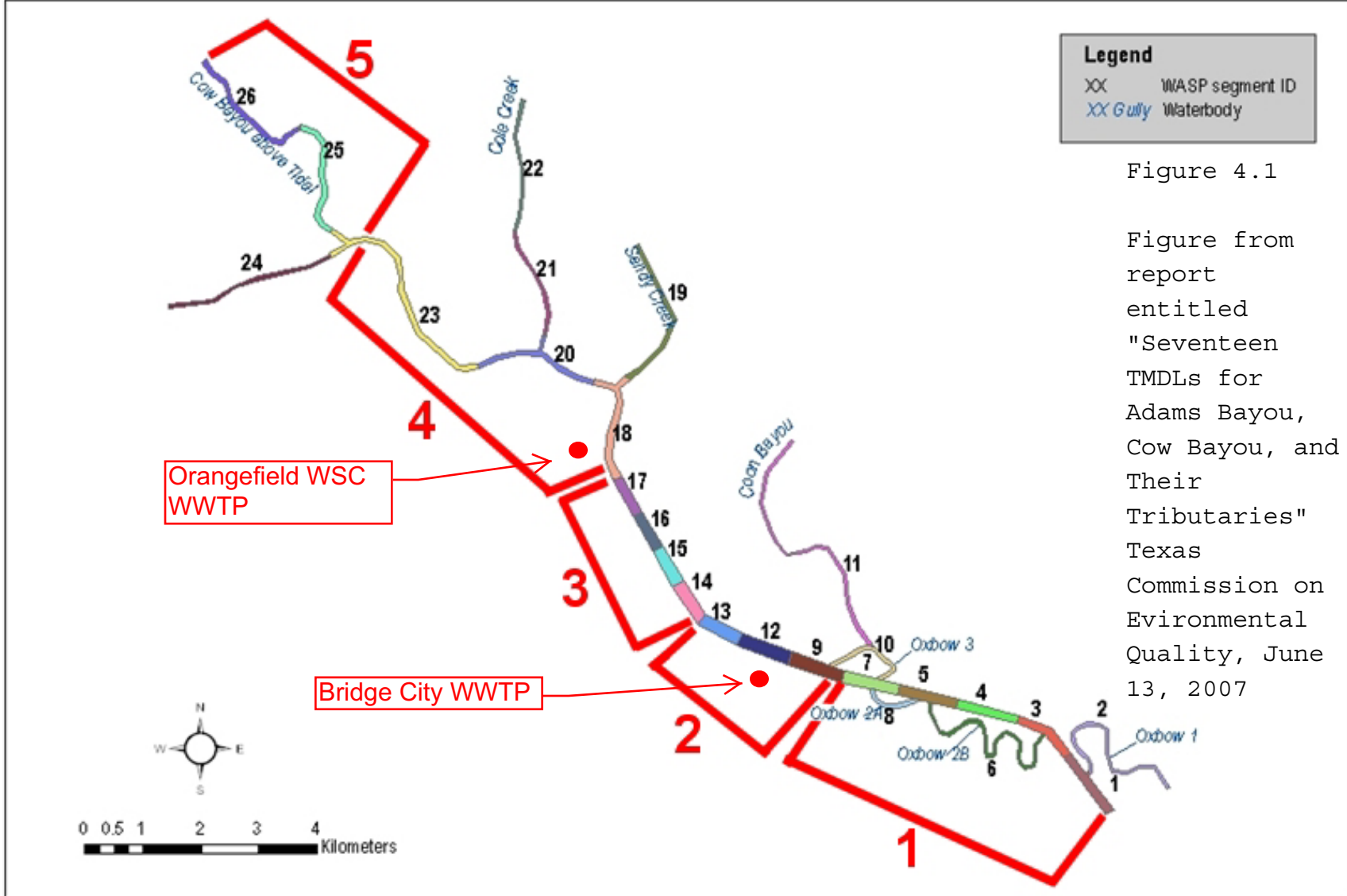
The TMDL sets goals, within the Adams Bayou watershed, of 60% reduction in cBOD and ammonia nitrogen for point sources within the reaches of the City of Orange, WCID #2 and City of Pinehurst. The City of Orange Jackson Street Plant currently discharges to the Sabine River and would not be expected to be significantly impacted. It would be expected that any major amendments to the City of Pinehurst and WCID No. 2 plants would result in more stringent discharge requirements. To meet more stringent discharge requirements, the plants would require construction of major improvements. There are no reduction goals for wasteload located within the reaches of Cow Bayou segments where the City of Bridge City and Orangefield plants are located. However, there is no allowance for growth and therefore restrictions in discharge may be increased as additional wasteload is added.

Bacteria load reductions have been set to meet the contact recreation standards. TMDL Report, Table 12 and 21, do not appear to set forth a reduction for wasteloads. The reduction goal is set mainly for non-point sources, which are largely attributable to failing septic systems. The construction of a centralized collection/treatment system, currently underway in Orangefield, will assist in meeting a portion of the goals. Further work will need to be done in identifying failed septic systems in the unserved areas should a regional system be implemented.

Specific points derived from the TMDL that require consideration in the evaluation of a regional system follow.

- The City of Pinehurst and WCID No. 2 plants are subject to more stringent discharge limitations, especially if an increase in permitted flows is required. There is a high likelihood more stringent discharge limitations will occur on the two plants during the 30 year period. Improvements will be needed at both plants to meet the more stringent limits.
- Alternatives need to be developed for providing collection and treatment of wastes from unserved areas with failing septic systems. The project underway by the Orangefield WSC will address a portion of the unserved areas. Another known area of reported problems include the Victory Gardens subdivision. A regional system would provide an alternative in helping to achieve the reduction goals for load allocation in the TMDL.
- The TMDL shows no allowance for increase from wasteload sources. This would indicate that all flows from future growth would have to be discharged to other streams. A regional plant with a discharge to the Sabine River appears to be the most effective alternative to meet this criteria.





**Legend**  
 XX WASP segment ID  
 XX Gully Waterbody

Figure 4.1

Figure from report entitled "Seventeen TMDLs for Adams Bayou, Cow Bayou, and Their Tributaries" Texas Commission on Environmental Quality, June 13, 2007

Figure 13. Cow Bayou WASP model segmentation

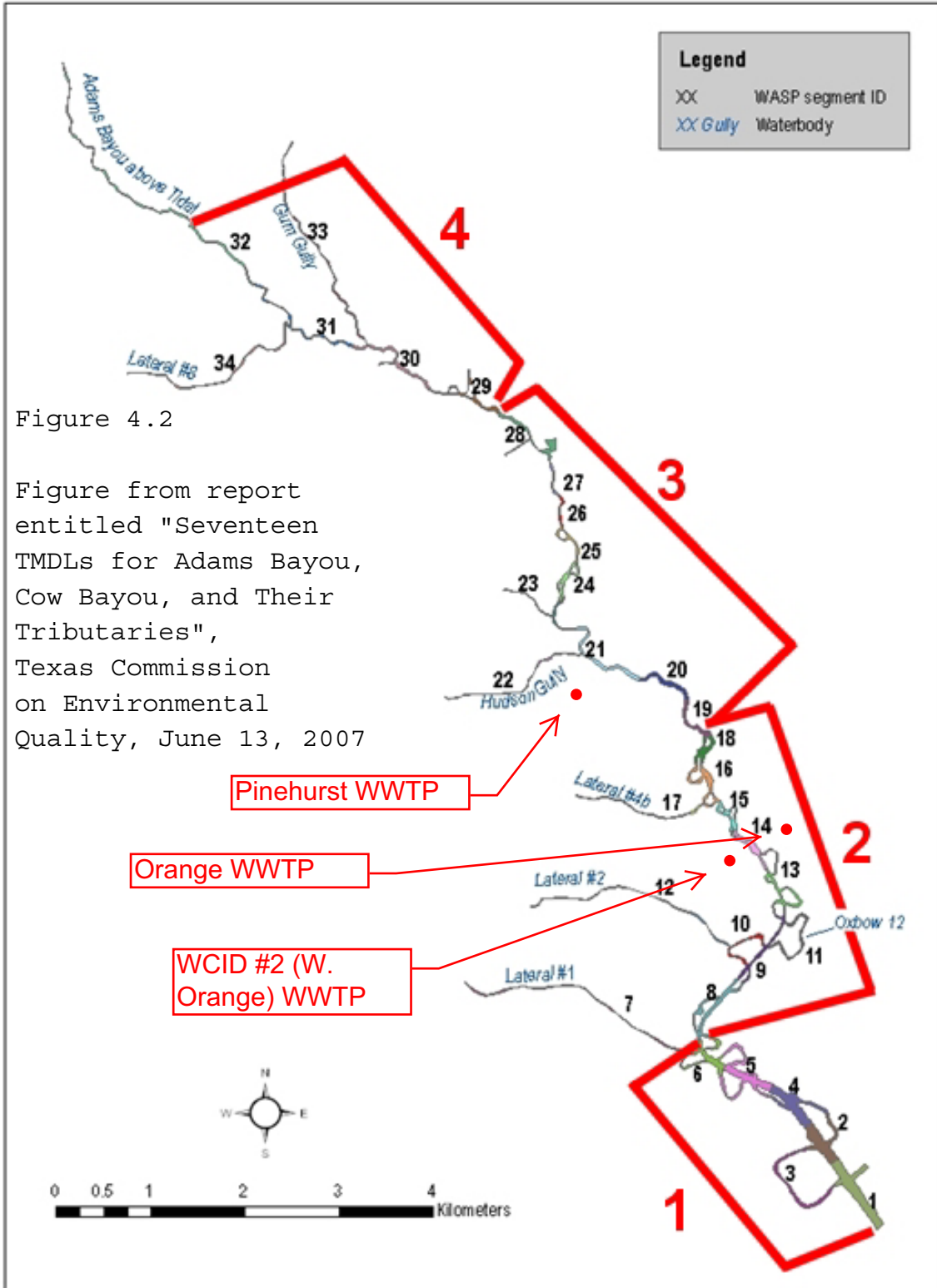


Figure 4.2

Figure from report entitled "Seventeen TMDLs for Adams Bayou, Cow Bayou, and Their Tributaries", Texas Commission on Environmental Quality, June 13, 2007

Figure 14. Adams Bayou WASP model segmentation

## CHAPTER 5 - EVALUATION OF ALTERNATIVES

The alternatives available for wastewater treatment is to maintain separate wastewater treatment facilities or provide for regional wastewater treatment facilities. The previous sections provide an overview of the existing treatment facilities and the projected needs. This section provides each participating entity considerations for maintaining the existing plants versus implementing a regional system to meet current demands. A second alternative (Alternative B) is provided to allow for limited growth throughout the study area.

### 5.1. MAINTAIN SEPARATE PLANTS

#### City of Bridge City

Bridge City should consider increasing the 2-hour peak flow. Increasing the 2-hour peak flow would require increase in the clarifier and disinfection processes. The City is presently looking at major capital improvements. The costs to maintain the existing plant, without consideration of improvements to increase the peak 2-hour flow is given in table 5.1.

Table 5.1 – 30 Year Cost to Maintain Bridge City Plant

Expense Item	Total 30 Year Cost, \$ million, present value
Major Capital Improvements	\$ 5.2
Operation and Maintenance	\$11.4
<b>TOTAL</b>	<b>\$16.6</b>

#### City of Orange Jackson Street Plant

The City of Orange Jackson Street Plant can provide service for the areas presently served by the City, including the recently annexed area. The projected design flow for these areas, as previously reported, is an average daily flow of 5.32 MGD and peak 2-hour flow of 17 mgd. However, the City is shown to hold the CCN for a large portion of the study area not presently served. The Jackson Street Plant could only supply approximately 25% of the capacity to serve the total areas within the Orange CCN.

The projected 30 year cost to maintain and operate the Jackson Street Plant is given in Table 5.2.

Table 5.2. – 30 Year Cost to Maintain Jackson Street Plant

Expense Item	Total 30 Year Cost, \$ million, present value
Major Capital Improvements	\$19.0
Operation and Maintenance	\$35.2
<b>TOTAL</b>	<b>\$54.2</b>

**City of Pinehurst**

The existing plant will most likely require an increase in both average daily flow and 2-hour peak flow due to significant infiltration/inflow in the collection system. The increase in flow would require a new permit most likely resulting in more stringent discharge limits. An analysis was not made of the cost for improvements to meet the more stringent discharge limits. Table 5.3 provides a summary of the cost to maintain the treatment plant at its current level of treatment, without consideration for increase in flow or level of treatment.

Table 5.3 – 30 Year Cost to Maintain City of Pinehurst Plant

Expense Item	Total 30 Year Cost, \$ million, present value
Major Capital Improvements	\$3.0
Operation and Maintenance	\$5.4
TOTAL	\$8.4

**Orange County WCID No. 2**

Analysis of the plant indicates a possible need to increase the 2-hour peak flow. The increase in flow would require a new permit most likely resulting in more stringent discharge limits. An analysis was not made of the cost for improvements to meet the more stringent discharge limits. Table 5.4 provides a summary of the cost to maintain the treatment plant at its current level of treatment, without consideration for increase in flow or level of treatment.

Table 5.4 – 30 Year Cost to Maintain Orange County WCID No. 2 Plant

Expense Item	Total 30 Year Cost, \$ million, present value
Major Capital Improvements	\$5.8
Operation and Maintenance	\$9.2
TOTAL	\$15.0

**Orangefield WSC**

The funding program for the project requires that the entity construct a new 0.75 mgd wastewater treatment facility. The Orangefield WSC anticipates the first phase will meet the demands for 20 years. Based on the methodologies in this report the cost for construction of the treatment improvements is estimated to be on the order of \$5.2 million.

Expense Item	Total 30 Year Cost, \$ million, present value
Capital	\$5.2
Operation and Maintenance	\$6.4
Total	\$11.6

## 5.2. REGIONAL WASTEWATER SYSTEM

Development of a regional system includes defining the number of treatment plants required and the construction of a system to transport flows to the regional plants. The analysis of a regional system was separated into two components. The first component was to evaluate a regional system to only treat flows of the participating entities. This analysis was performed to provide a true comparison of economics in evaluating separate and regional system costs. A second component included an evaluation of a regional system that provides a treatment capacity of 1.15 mgd in addition to the current needs of the existing entities to meet the demand of the unserved/undeveloped areas

### Regional Treatment Plant Selection

The only existing treatment facility that provides sufficient capacity to be considered for a regional system is the Orange Jackson Street Plant. Comparison of combined historical flows for the cities of Orange, Pinehurst, OCWCID#2 and Bridge City indicates the plant capacity would be marginal if all flows were sent to the Jackson Street Plant. The combined historical flows are shown in Table 5.6.

A qualitative analysis was made for expanding the Jackson Street Plant versus a new plant, to receive a portion of the flow. The new plant location was chosen in the area of Highway 87 and FM 1006. Table 5.5 is a comparison of the factors considered in the qualitative analysis.

Table 5.5 – Qualitative Analysis

Factor	Jackson St. Plant Expansion	New Facility & Jackson Street Plant
Construction of New Treatment Units		√ Slightly lower due to new site.
Location		
Distance to Unserved Developed Areas		√
Location to Undeveloped Areas		√
Location to Existing Entities needing service		√
Conflicts for construction of transport facilities		√
Discharge to Sabine River	√	√
Operations	√ - Single site	

Table 5.6 Combined Daily Average Flow for Existing Plants

Month/Year	Orange	Orange Annex	Pinehurst	Bridge City	OCWCID #2	Total
Jan-04	4.664	0.490	0.463	1.168	1.012	(1)
Feb-04	0.000	0.490	0.602	0.000	1.312	(1)
Mar-04	0.000	0.490	0.446	0.000	0.836	(1)
Apr-04	2.905	0.490	0.329	0.000	0.566	(1)
May-04	3.327	0.490	0.405	1.242	0.834	6.297
Jun-04	3.133	0.490	0.395	0.000	0.818	4.837
Jul-04	3.447	0.490	0.467	0.686	0.892	5.982
Aug-04	1.920	0.490	0.233	0.680	0.397	3.720
Sep-04	1.813	0.490	0.233	0.602	0.365	3.502
Oct-04	2.425	0.490	0.298	0.946	0.527	4.687
Nov-04	2.703	0.490	0.362	0.975	0.657	5.186
Dec-04	2.904	0.490	0.396	1.195	0.692	5.677
Jan-05	2.328	0.490	0.300	0.897	0.565	4.580
Feb-05	3.402	0.490	0.460	1.552	0.979	6.884
Mar-05	3.427	0.490	0.538	1.430	0.968	6.853
Apr-05	2.343	0.490	0.291	0.688	0.558	4.370
May-05	1.971	0.490	0.221	0.510	0.429	3.621
Jun-05	2.119	0.490	0.232	0.578	0.461	3.880
Jul-05	2.227	0.490	0.279	0.753	0.632	4.381
Aug-05	2.276	0.490	0.277	0.688	0.558	4.290
Sep-05	2.186	0.490	0.219	0.511	0.399	3.805
Oct-05	1.791	0.490	0.191	0.451	0.391	3.315
Nov-05	2.003	0.490	0.207	0.520	0.446	3.667
Dec-05	2.415	0.490	0.277	0.669	0.566	4.417
Jan-06	2.135	0.490	0.245	0.571	0.504	3.945
Feb-06	2.413	0.490	0.332	0.686	0.572	4.493
Mar-06	2.095	0.490	0.268	0.575	0.513	3.941
Apr-06	1.956	0.490	0.238	0.535	0.463	3.682
May-06	2.020	0.490	0.264	0.000	0.515	3.289
Jun-06	2.248	0.490	0.323	0.938	0.630	4.630
Jul-06	3.076	0.490	0.437	1.258	0.813	6.075
Aug-06	3.028	0.490	0.414	0.963	0.878	5.773
Sep-06	2.203	0.490	0.269	0.749	0.559	4.270
Oct-06	2.847	0.490	0.378	1.160	0.773	5.648
Nov-06	3.390	0.490	0.482	1.183	0.879	6.425
Dec-06	2.143	0.490	0.310	0.649	0.432	4.025
Average	2.491	0.490	0.320	0.776	0.615	4.692

(1) Data excluded due to errors in individual reporting

75% Permitted ADF  
 90% Permitted ADF

The qualitative analysis indicates a new facility to be more desirable than expanding the existing Jackson Street Plant. Criteria for the location of the new plant should include the following.

- Location relative to outfall to Sabine River.
- Centralized location to Bridge City, Orangefield and unserved areas between Bridge City and Orange.
- Size of available tracts.

The location for a new plant, for the purpose of this study was placed in the vicinity of Highway 87 and FM 1006 as shown in Figure 5.1 (located at the end of this section). There are several large one-owner tracts and the possibility of discharge to an industrial outfall that discharges into the Sabine River. It should be noted that the plant location shown in Figure 5.1 is preliminary in nature, selected to meet the three criteria discussed above. Final determination of plant location should be made during implementation of the wastewater treatment regionalization.

### **Costs of Regional Facility to Serve Existing Service Areas (Alternative A)**

Determining the cost to implement a regional facility, limited to serving the needs of the existing service areas, was performed to provide an equitable comparison to maintaining the existing plants. The wastewater treatment components of the regional plant, as previously mentioned, include the existing Jackson Street Plant and a new 2.35 mgd plant located in the vicinity of Highway 87 and FM 1006. The collection component is limited to transport of flows from each entity's existing plant to one of the regional facilities. Details of the cost are included in Appendix D.

#### **Treatment Costs – Alternative A**

Cost associated for regional treatment was based on the following.

Jackson Street Plant: Value of the existing plant, immediate improvements to upgrade for a regional facility, 30-year capital investment costs, 30 year operations and maintenance costs.

New Regional Plant: Costs of a new 2.35 mgd plant, 30-year operations and maintenance.

The value of the existing Jackson Street plant was approximated by estimating the cost of construction in 1965 and 1997 using the EPA Study "Construction Costs for Municipal Wastewater Treatment Plans: 1973-1982" and reducing the initial construction costs by the life remaining. The remaining life was based on the same life expectancy curves used to determine replacement of the equipment, Figure 2.1. The current value based on this analysis is \$9.7 million.<sup>1</sup> Improvements to the sludge handling facility may be required in the near future. A cost of \$2 million was added to provide for initial upgrades. The 30 year capital investment of \$19.0 million to replace

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<sup>1</sup> The current value of the Jackson Street Plant developed in this study is for discussion purpose only. A final determination of purchase value for the Jackson Street Plant is beyond the scope of this study and should be included as a critical topic for discussion during implementation.

aging equipment was presented earlier in Section 5.1. The 30-year operation and maintenance cost of \$35.8 million was developed using the EPA Study "Operation and Maintenance Cost for Municipal Wastewater Facilities" dated 1981, adjusted to present value to account for inflation.

Table 5.7 – 30 Year Cost for Jackson Street Regional Plant

Costs Component	Present Value (millions)
Approximate Current Value	\$9.7
Improvements for Regional Plant	\$2.0
30-Year Capital Improvements	\$19.0
30- Year Operation and Maintenance	\$35.8
TOTAL	\$66.5

The costs for a new regional plant, located in the area of Highway 87 and FM1006, include the construction of the new plant and the operation and maintenance costs. The following is the total 30-year costs for the new regional treatment plant.

Table 5.8 – 30-Year Costs for New Regional Plant

Cost Component	Present Value (millions)
Costs of New Plant	\$14.6
Operation and Maintenance	\$15.2
TOTAL	\$29.8

The present value of the total 30-year costs for both plants is \$96.3 million.

Transportation Cost – Alternative A

The collection system required to deliver flows from each entity is depicted in Figure 5.1. The cost for centralized collection systems within the boundary of each entity (i.e. not transporting directly to a regional treatment facility) is not included in this study. Costs were developed to include capital construction costs, normal operation and maintenance and power costs. Transportation capital construction cost for a regional system is presented in Table 5.9.

Table 5.9 – Transportation Capital Construction Costs for Regional System

Description	Total
Orangefield LS - 2.25 mgd peak flow	\$459,000
Bridge City LS - 7.63 mgd peak flow	\$1,556,520
Regional #2 Influent LS - 9.88 mgd peak flow	\$2,015,520
Line A - 14-Inch force main, 10,200 lf	\$489,600
Line B - 16-inch force main, 11,300 lf	\$678,000
Line C - 20-inch force main, 6,300 lf	\$468,720
Line D - 24-inch force main, 5,400 lf	\$486,000
Line E - Future	-
Line F - 30-inch force main, 8,900 lf	\$854,400
Pinehurst LS - 3.10 mgd peak flow	\$632,400
Pinehurst - 16-inch force main, 12,500 lf	\$750,000
O.C. WCID #2 LS - 5.97 mgd peak flow	\$1,217,880
O.C. WCID #2 - 20-inch force main, 2,500 lf	\$186,000
TOTAL	\$9,794,040



Distribution of Costs - Alternative A

Treatment costs were assigned to each entity by distributing the total 30-year treatment cost for both plants, \$96.3 million, on the percentage of the total average daily flow, 9.51 mgd, required by the participant. Table 5.10 is a summary of the distribution based on apportionment by projected average design flow.

Table 5.10 - Distribution of Treatment Costs

Entity	Average Daily Flow, mgd	% Total ADF	Share of 30-Year Treatment Cost (millions)
Bridge City	1.6	17%	\$16.2
Orange	5.32	56%	\$53.9
Orangefield	0.75	8%	\$7.6
OCWCID#2	1.22	13%	\$12.4
Pinehurst	0.62	7%	\$6.3
<b>TOTAL</b>	<b>9.51</b>	<b>100%</b>	<b>\$96.3</b>

The transportation costs (lift station and force main) was directly born by the entity being served. The main lift station and force main immediately in front of the new plant was apportioned by the projected average design flow. The distribution of costs to each entity is presented in Table 5.11.

Table 5.11 - Distribution of Transportation Cost

Description	Bridge City (1.60 mgd)	Orangefield (0.75 mgd)	Pinehurst (0.62 mgd)	OCWCID #2 (1.22 mgd)	Orange (5.32 mgd)	Regional Authority (9.51 mgd)
Orangefield LS - 2.25 mgd peak flow	-	\$459,000	-	-	-	-
Bridge City LS - 7.63 mgd peak flow	\$1,556,520	-	-	-	-	-
Reg #2 Inf. LS - 9.88 mgd peak flow	-	-	-	-	-	\$2,015,520
Line A - 14-Inch forcemain	-	\$489,600	-	-	-	-
Line B - 16-inch forcemain	-	\$678,000	-	-	-	-
Line C - 20-inch forcemain	\$468,720	-	-	-	-	-
Line D - 24-inch forcemain	\$243,000	\$243,000	-	-	-	-
Line E - Future	-	-	-	-	-	-
Line F - 30-inch forcemain	-	-	-	-	-	\$854,400
Pinehurst LS - 3.10 mgd peak flow	-	-	\$632,400	-	-	-
Pinehurst - 16-inch forcemain	-	-	\$750,000	-	-	-
O.C. WCID #2 LS - 5.97 mgd peak flow	-	-	-	\$1,217,880	-	-
O.C. WCID #2 - 20-inch forcemain	-	-	-	\$186,000	-	-
<b>Capitla Cost by Entity</b>	<b>\$2,268,240</b>	<b>\$1,869,600</b>	<b>\$1,382,400</b>	<b>\$1,403,880</b>	-	<b>\$2,869,920</b>
<b>30-year O&amp;M Cost By Entity</b>	<b>\$700,434</b>	<b>\$206,550</b>	<b>\$284,580</b>	<b>\$548,046</b>	-	<b>\$906,984</b>
<b>Distribution of Regional Authority by ADF</b>	<b>\$635,441</b>	<b>\$297,863</b>	<b>\$246,233</b>	<b>\$484,524</b>	<b>\$2,112,842</b>	-
<b>TOTAL</b>	<b>\$3,604,115</b>	<b>\$2,374,013</b>	<b>\$1,913,213</b>	<b>\$2,436,450</b>	<b>\$2,112,842</b>	-

The total 30-year costs to participate in a regional system is provided in Table 5.12.

Table 5.12 Distribution of 30-Year Costs for Regional System

Entity	30-Year Cost (Present Value, millions)		
	Treatment	Transportation	Total
Bridge City	\$16.2	\$3.6	\$19.8
Orange	\$53.9	\$2.1	\$56.0
Orangefield	\$7.6	\$2.4	\$10.0
OCWCID#2	\$12.4	\$2.4	\$14.8
Pinehurst	\$6.3	\$1.9	\$8.2
TOTAL	\$96.3	\$12.4	\$108.7

*Comparison of Separate and Regional Systems – Alternative A*

A comparison was made of the costs by entity to maintain a separate treatment plant versus participation in a regional system. The comparison for each entity is provided in Table 5.13 indicates a 30-year collective difference of \$2.9 million or approximately \$100,000 a year, to implement a regional treatment system.

Table 5.13 – 30 Year Total Capital Cost for Regional System

Entity	30-Year Cost (Present Value)		
	Separate	Regional	Difference
Bridge City	\$16.6	\$19.8	\$3.2
Orange	\$54.2	\$56.0	\$1.8
Orangefield	\$11.6	\$10.0	-\$1.6
OCWCID#2	\$15.0	\$14.8	-\$0.2
Pinehurst	\$8.4	\$8.2	-\$0.2
TOTAL	\$105.8	\$108.7	\$2.9

**Regional Facility to Serve Limited Unserved Areas/Growth (Alternative B)**

Figure 5.2 (located at the end of this section) shows areas that are not currently served by a centralized collection system. Previous qualitative analysis shows a regional plant in the vicinity of Highway 87 and FM 1006, would be a preferable location to serve these areas. Consideration should be given to purchasing sufficient land with the new regional facility to expand the plant to meet the wastewater needs in the unserved areas.

This section provides discussion for servicing a portion of the currently unserved areas or growth in the existing areas. Alternative B includes sending flows from Pinehurst to the new regional facility. In doing so, the Jackson Street facility would have additional reserve capacity to provide service to areas currently unserved in the north and north-east portions of the study area. Sending Pinehurst flows to the new facility would require constructing a forcemain along Highway 87 between FM 105 and FM 1006. This line could be sized to accommodate additional flows from areas between Interstate 10 and Highway 87 that are currently unserved. The following provides a brief discussion of unserved areas

Immediate Areas of Concern

Victory Gardens was developed prior to current regulations for on-site systems. The majority of the properties in this area are suspected to be septic systems. The expected ADF flow associated with this area is 0.4 mgd. The incremental increase to the treatment 30 year plant capital and operation costs would be on the order of \$3.7 million. Transportation costs would mainly be associated with a lift station to serve the area and connection to the force main from Bridge City. Although the regional system could own and operate the centralized collection system within the area, the costs should be directly billed to the residents served. Due to the limited right-of-way a low pressure or vacuum system may best meet the service needs. The per connection capital costs for the centralized collection system would be expected to be in the range of \$7,000 to \$10,000.

Areas within Orange CCN

The collection system in the Orange CCN would be under the control of the City of Orange and would not be expected to be a regional facility. The undeveloped areas along highway 87 would be more conducive to construction of transport facilities to the new plant as opposed to construction of utilities in congested areas that encumber the route to the Jackson Street Plant. The areas north of Interstate 10 and east of MLK Drive would most likely be directed to the Jackson Street Plant.

Other Undeveloped Areas (South of IH10)

Collection systems in the undeveloped areas, including construction to shared regional facilities, would be borne by the developer or an adjacent public or private utility.

Other Undeveloped Areas (North of IH10)

There are limited areas north of IH10 that lie outside the City of Orange CCN. These areas would most likely be served by the City of Orange as collection infrastructure is expanded.

Treatment Costs – Alternative B

Alternative B provides for extending service to a portion of the currently unserved areas or growth in existing areas. Treatment capacity of the new facility was increased 1.15 mgd, from 2.35 mgd to 3.50 mgd. This includes 0.62 mgd to serve Pinehurst and 0.53 mgd for future growth along the transmission route. The movement of Pinehurst to the new plant provides uncommitted capacity at the Jackson Street plant.

The 30-year cost of \$66.5 million for the Jackson Street plant, would remain the same as in Alternative A. The 30-year cost of the new plant, increased to 3.50 mgd, would increase to \$40.1 million. The 30-year cost for a new 3.50 mgd regional treatment plant is provided in Table 5.14.

Table 5.14 – 30-Year Costs for New Regional Plant (3.50 mgd)

Cost Component	Present Value (millions)
Costs of New Plant	\$19.4
Operation and Maintenance	\$20.7
TOTAL	\$40.1

The present value of the total 30-year costs for both plants is \$106.6 million.

Transportation Cost – Alternative B

Alternative B requires a forcemain to be constructed from the Pinehurst plant, along Highway 87 and FM 1006 to the new regional plant, in-lieu of the force main from Pinehurst to the Jackson Street plant. Figure 5.1 depicts the two alternative routes as well as special crossings identified. Table 5.15 provides an estimated cost for each portion of the transportation cost for alternative B.

Table 5.15 – Transportation Capital Construction Costs for Regional System

Description	Total
Orangefield LS - 2.25 mgd peak flow	\$459,000
Bridge City LS – 7.63 mgd peak flow	\$1,556,520
Regional #2 Influent LS – 12.98 mgd peak flow	\$2,647,920
Line A - 14-Inch force main, 10,200 lf	\$489,600
Line B - 16-inch force main, 11,300 lf	\$678,000
Line C - 20-inch force main, 6,300 lf	\$468,720
Line D - 24-inch force main, 5,400 lf	\$486,000
Line E – 18-inch force main, 10,800 lf	\$756,000
Line F - 30-inch force main, 8,900 lf	\$854,400
Pinehurst LS - 3.10 mgd peak flow	\$632,400
Pinehurst - 16-inch force main, 10,700 lf	\$642,000
O.C. WCID #2 LS - 5.97 mgd peak flow	\$1,217,880
O.C. WCID #2 - 20-inch force main, 2,500 lf	\$186,000
TOTAL	\$11,074,440

Distribution of Costs – Alternative B

Treatment costs were assigned to each entity by distributing the total 30-year treatment cost for both plants, \$106.6 million, by the method developed in Alternative A (Table 5.10) as the entity responsible for the additional 1.15 mgd flow is currently undefined. Table 5.16 is a summary of the distribution based on the above apportionment.

Table 5.16 – Distribution of Treatment Costs

Entity	% Total ADF <sup>1</sup>	Share of 30-Year Treatment Cost (millions)
Bridge City	17%	\$17.9
Orange	56%	\$59.6
Orangefield	8%	\$8.4
OCWCID#2	13%	\$13.7
Pinehurst	7%	\$7.0
TOTAL	100%	\$106.6

<sup>1</sup> From Table 5.10

Transportation costs (lift station and force main) were directly born by the entity being served. The main lift station and force main immediately in front of the new plant was apportioned by the projected average design flow. The distribution of costs to each entity is presented in Table 5.17.

Table 5.17 – Distribution of Transportation Cost

Description	Bridge City (1.60 mgd)	Orangefield (0.75 mgd)	Pinehurst (0.62 mgd)	OCWCID #2 (1.22 mgd)	Orange (5.32 mgd)	Regional Authority (9.51 mgd)
Orangefield LS - 2.25 mgd peak flow	-	\$459,000	-	-	-	-
Bridge City LS - 7.63 mgd peak flow	\$1,556,520	-	-	-	-	-
Reg #2 Inf. LS – 12.98 mgd peak flow	-	-	-	-	-	\$2,647,920
Line A - 14-Inch forcemain	-	\$489,600	-	-	-	-
Line B - 16-inch forcemain	-	\$678,000	-	-	-	-
Line C - 20-inch forcemain	\$468,720	-	-	-	-	-
Line D - 24-inch forcemain	\$243,000	\$243,000	-	-	-	-
Line E* - 18-inch forcemain	-	-	-	-	-	\$756,000
Line F - 30-inch forcemain	-	-	-	-	-	\$854,400
Pinehurst LS - 3.10 mgd peak flow	-	-	\$632,400	-	-	-
Pinehurst - 16-inch forcemain	-	-	\$642,000	-	-	-
O.C. WCID #2 LS - 5.97 mgd peak flow	-	-	-	\$1,217,880	-	-
O.C. WCID #2 - 20-inch forcemain	-	-	-	\$186,000	-	-
<b>Capital Cost by Entity</b>	<b>\$2,268,240</b>	<b>\$1,869,600</b>	<b>\$1,274,880</b>	<b>\$1,403,880</b>	<b>-</b>	<b>\$4,258,320</b>
<b>30-year O&amp;M Cost By Entity</b>	<b>\$700,434</b>	<b>\$206,550</b>	<b>\$284,580</b>	<b>\$548,046</b>	<b>-</b>	<b>\$1,191,564</b>
Distribution of Regional Authority by ADF	\$916,910	\$429,802	\$355,303	\$699,144	\$3,048,726	-
<b>TOTAL</b>	<b>\$3,885,584</b>	<b>\$2,505,952</b>	<b>\$1,914,283</b>	<b>\$2,651,070</b>	<b>\$3,048,726</b>	<b>-</b>

\*Line E is from FM 105 to FM 1006

The total 30-year costs to participate in a regional system for alternative B are provided in Table 5.18.

Table 5.18 Distribution of 30-Year Costs for Regional System

Entity	30-Year Cost (Present Value, millions)		
	Treatment	Transportation	Total
Bridge City	\$17.9	\$3.9	\$21.8
Orange	\$59.6	\$3.0	\$62.6
Orangefield	\$8.4	\$2.5	\$10.9
OCWCID#2	\$13.7	\$2.7	\$16.4
Pinehurst	\$7.0	\$1.9	\$8.9
<b>TOTAL</b>	<b>\$106.6</b>	<b>\$14.0</b>	<b>\$120.6</b>

Comparison of Alternatives A and B - Regional Systems

A comparison was made of the costs by entity between alternatives A and B. The comparison for each entity is provided in Table 5.19 and indicates an additional 30-year cost of \$11.8 million, or \$400,000 annually, for the regional system.

Table 5.19 - 30 Year Capital Cost Comparison for Regional System to provide Reserve Capacity

Entity	30-Year Cost (Present Value)		
	Alternative A	Alternative B	Difference
Bridge City	\$19.8	\$21.8	\$2.0
Orange	\$56.0	\$62.6	\$6.6
Orangefield	\$10.0	\$10.9	\$0.9
OCWCID#2	\$14.8	\$16.4	\$1.6
Pinehurst	\$8.2	\$8.9	\$0.7
<b>TOTAL</b>	<b>\$108.8</b>	<b>\$120.6</b>	<b>\$11.8</b>

Alternative B provides for limited additional capacity at both regional plants. The distribution of cost in Table 5.19 was based on the permitted average daily flow for the participating entities, as information was not sufficient to define specific entities to whom the cost for the 1.15 mgd capacity for unserved areas or future growth should be distributed. A critical topic of discussion in the implementation of a regional authority is establishing capacity for unserved areas or growth and defining the entity responsible for the cost. This alternative is intended to provide information that can act as a starting point for discussion of this topic as the implementation progresses.

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## CHAPTER 6 - IMPLEMENTATION

Implementation of a regional facility requires separate entities to be bound by a common purpose while maximizing the benefits to all parties. The common purpose among the entities participating in this regional plan is to enhance the quality of water in Adams Bayou and Cow Bayou. Quality enhancement is afforded by improving the quality of and/or eliminating the effluent of direct wastewater discharges, eliminating run-off of poor quality effluent from non-compliant on-site sewer systems and minimizing the potential of sanitary sewer overflows due to excessive infiltration/inflow. The benefits of regionalization to the participants include more efficient management of wastewater treatment at costs that are comparable, or less, than maintaining a separate treatment plant.

The above data would indicate that the purpose and economic viability for creation of a regional wastewater treatment entity, under the direct control of the local entities, is feasible. A case history into the development of a regional authority to meet infrastructure needs for multiple communities was researched to provide guidance, including both timeline and costs, for creation.

### 6.1. Case History

We would like to acknowledge the cooperation of the The Brushy Creek Regional Utility Authority (BCRUA) and the cities of Leander, Round Rock and Cedar Park. The research revealed two Texas Statutes related to creation of a local government corporation.

- Transportation Code: Title 6, Chapter 431 – *Texas Transportation Corporation Act*
- Local Government Code: Title 13, Chapter 572 – *Public Utility Agencies for Provision of Water or Sewer Service*

The BCRUA utilized the process under Chapter 431 because of the familiarity by the attorney general and the Texas Water Development Board. Both statutes are similar in nature.

The entities entered into interlocal agreements, approximately six months prior to the decision to begin the process of creating a regional authority (June 2006). The time was devoted to negotiating terms of contracts and setting the framework for the regional authority. The effort was mainly the time expended by city administrative staff (manager, attorney, engineer/project manager). Meetings were held once or twice weekly with approximately thirty percent (30%) of the project manager's time.

The initial step in creating the authority included the hiring of a general manager (January 2007). Articles of Incorporation were submitted to each participating entity and a draft sent to the Secretary of State approximately four (4) months into the process. Other administrative documents to be drafted during the period included Interlocal Agreements for Ancillary Consulting Services, By-laws, Master Contract and Financial Agreement. The documents were drafted and the authority was created in July 2007. The costs of legal fees to draft the required documents is estimated to be

on the order of \$35,000. In addition, consulting firms were hired in January 2007 to conduct preliminary engineering designs.

The first Board of Directors was appointed approximately seven (7) months into the process (August 2007). During the period, preliminary engineering was completed and a presentation of the project was presented to the public in October 2007. An application to the TWDB under the D-Fund program was submitted following creation in July 2007. Funding was approved in January 2008 and bonds issued in December 2008. Details of the research are included in Appendix E.

## **6.2. Regional Authority Considerations**

The process of creating a regional authority will require setting forth the topics of discussion related to policies that provide fair treatment and benefit to the entities served by the regional facility. Entities will need to define their needs and commit to supporting the regional effort to provide for the needs. Topics that will require investigation and discussion follow.

- The method of creating a regional authority; creation under Title 6, Chapter 431, Title 13, Chapter 572 or by special legislative action.
- Treatment capacity for each entity, including flows required to meet the future demands as well as increase in transport/treat capacity to assist in mitigating infiltration/inflow.
- The value of existing facilities used in the regional system will need to be determined. The only existing facility defined as being incorporated into the regional system is the Jackson Street Wastewater Plant. Each entity will need to evaluate how existing debt service on its treatment facility may impact its feasibility to financially participate if no value is given to the existing facilities not used. Consideration will also need to be given to abandonment costs of existing facilities, which is not included in the financial analysis of this report.
- A method to distribute capital costs required to implement the improvements will need to be determined. The costs for the treatment plants and common influent force main and lift stations, for the purpose of this study, were distributed based on the annual average design flow reserved to each entity. Costs of transport facilities from the plants to each entity were borne by the entity served by the improvement. An alternative to distribution by reserved flow capacity could be by the number of connections within the regional system.
- Extension of service to areas not currently served will need to include consideration of the extent to which a regional authority will construct improvements and how the costs will be distributed.



- A rate structure will need to be established. The following is a list of topics to be considered.
  - Billing and Collection: Will billing and collection be to existing entities on wholesale basis? How will billing and collection be done for areas not currently being serviced?
  - Fixed Costs Distribution: Distribution of fixed costs (capital costs, personnel, administration, testing, scheduled maintenance and training, depreciation) can be done based on customer connections or reserved capacity.
  - Variable Costs Distribution: Distribution of variable costs, consumable items and activities related to the quantity of flow treated (electricity, chemicals, fuel, solids disposal), can be distributed on the actual flows treated.
  
- The staffing of the regional facilities will need to be decided. Considerations for staffing of a regional system include the following.
  - Operations directly employed by the regional authority or contracted to one of the participating entities or private company.
  - Operators for the existing plants, while qualified to serve the regional wastewater plants, also operate collection systems. The participating entities will need to define the number of operators that will need to be retained by the entity for collection system operations.
  - Employment of licensed operators, maintenance and administrative personnel.
  - Hauling of sludge for disposal by staff or contract.

### **6.3. Funding Sources**

There are numerous sources available for funding planning, design and construction of wastewater facilities. Tables 6.1. and 6.2. provide a listing of possible loan and grant programs that should be considered. General information on the different programs is available on the internet.

TABLE 6.1: POTENTIAL SOURCES OF FUNDING FOR WASTEWATER PLANNING

Agency	Program Summary
Texas Coastal Nonpoint Source Pollution Program (GLO), Section 6217	Control sources of nonpoint pollution that impact or threaten to impact coastal waters. Project must implement elements of Coastal NPS Program (includes OSSF – 5.2.5.7). Cost reimbursement with 50% match up to \$100,000.
Nonpoint Source Grant Program – TCEQ 319	Identify water quality problems, develop control strategies and implement activities to prevent or abate these problems. Reimbursement program with 40% matching share from non-federal source.

TABLE 6.2: POTENTIAL SOURCES OF FUNDING FOR WASTEWATER CONSTRUCTION

Agency	Program Summary
Texas Water Development Board Clean Water State Revolving Fund	Rates are 0.95% below market rates with origination fee of 1.85%. Maximum repayment period is 20 years Maximum of \$75,000,000. Additional subsidies available for Federal and Disadvantaged Communities.
Colonia & Community Self-Help Program	Limited to qualifying colonia areas and grass roots assistance from local residents in volunteering to construct or donate.
Economically Distressed Areas Program	Special loan and grant program available to areas meeting specific household income levels.
State Participation	Program that allows TWDB to assume a temporary ownership interest in a regional project when local sponsors are unable to assume debt for the optimally sized facility.
Texas Water Development Fund II	State loan fund program available through the Texas Water Development Board
US Department of Agriculture	The Rural Development program provides loans and grants for water and wastewater projects in rural areas, cities and towns with a population of 10,000 or less.
Texas Community Development Block Grant Program	Available through the Office of Rural and Community Affairs. Grants awarded on competitive basis and have restricted to projects in benefitting low to moderate income areas.
Community Development Grants	Depending on the project need there are a series of grants and loans available.
Supplementary Environment Project	Funding available through the Texas Commission on Environmental Quality. A specific project must be applied for and funding is available from regulatory fines.
Nonpoint Source Grant Program – TCEQ 319	Identify water quality problems, develop control strategies and implement activities to prevent or abate these problems.

Many of the above programs have special requirements related to household income.

#### **6.4. Schedule for Implementation**

A schedule of activities to implement the regional wastewater system is provided in Figure 6.1. The schedule was developed using a conservative approach assuming no activities will occur until funding is received through the Texas Water Development Board Clean Water State Revolving Fund (TWDB CWSRF) program. The schedule is based on the following assumptions.

1. The time for creation and implementation of a regional authority is based on the BCRUA Model. The start of the process was assumed to be March 1, 2010.
2. TWDB CWSRF funds are applied for under the 2011 Intended Use Plan by January 22, 2010, and an offer letter for loan received in October 2010. Funds can be applied for by an entity other than the Regional Authority and transferred. The time for creation of regional authority, using the BCRUA Model, will have a more critical time frame than the receipt of the loan. Entities typically have two years, after a CWSRF loan offer, to make application for the loan.
3. The schedule shows no activity to begin on the project until receipt of loan. The schedule reflects the “pre-design” funding option under the CWSRF program.

The entities should consider commencement of the preliminary engineering/environmental and property acquisition tasks should other funds become available and the entities can develop an agreement for the services. Possible sources of funds discussed include the grant applied for by the TCEQ in the summer of 2008, relative to a regional wastewater system as a mechanism of the TMDL program, and like Disaster Recovery funds through the Texas Department of Rural Affairs. Commencement of these activities should be performed in accordance with the requirements of the TWDB CWSRF program. These activities can be performed in advance of receiving the TWDB funds and would provide considerable savings of time in the overall schedule.



## CHAPTER 7 – CONCLUSIONS AND RECOMMENDATIONS

The timing for implementation of a regional system is at a critical stage given the following factors.

- The existing facilities are aged. Table 7.1 provides a summary of the original construction and dates for improvements.

Table 7.1 – Summary of Existing WWTP Facilities

WWTP	Original Construction	Improvements
Bridge City	1977	1988
Orange	1965	1997
Pinehurst	1963	1985, 2004, 2008
OC WCID No. 2	1963	1985, 1997, 2004

- The existing plants will require significant capital investment over the next 30 years to simply maintain the existing condition, without regard to providing an increase in flows to improve reliability in the collection system during wet weather or for increase in growth.
- The Pinehurst plant operates under permit limits that are less stringent than currently being granted for new discharge permits on the same stream segments. The TMDL does not allow for increase in wasteloads which could impact permit limits for Bridge City and Orange County WCID No. 2 for future permit amendments requesting an increase in flows. It is likely that the entities will need to make additional investment in existing plants to meet future permit limits.
- The study area is within a TCEQ Total Maximum Daily Load (TMDL) program. The program has the goal to reduce bacteria, cBOD and ammonia nitrogen. The goals will be achieved by reduction in loads from point sources, such as wastewater treatment plant discharges, and elimination or reduction of non-point sources, such as failing septic systems.
- The regional system would provide an alternative by which to mitigate failing septic systems. This benefit is especially critical to developed areas that do not provide adequate space to replace failing septic systems within the current on-site system regulations.
- The recent experience of flooding due to surge from Hurricane Ike indicates a need to construct new facilities that will mitigate damage from surge.

Financial analysis supports the feasibility of implementing a regional system as compared to continued investment in existing plants. Operations and maintenance of a

regional system result in savings that can help to offset the costs of the higher capital investment in a regional system. The analysis indicates the regional system to be on the order of \$100,000 per year more, for the 30-year study period, than maintaining separate treatment plants. The cost did not account for improvements to the existing plants associated with increasing flows or meeting more stringent discharge permits that might be initiated and cost for abandonment of existing plants.

The process for implementation of regional system can be accomplished in a reasonable time frame, provided all parties cooperate to reach common goals and benefits for area-wide wastewater treatment and share financial responsibility based on the benefits received. There are two State Statutes under which a regional authority can be established in less than a year. A list of immediate considerations that will need to be addressed during the establishment of a regional authority, in addition to decisions concerning the functioning of the authority, includes the immediate capacity needed by each participating entity, reserve future capacity needed for each entity and other areas not under the jurisdiction of any local government offering centralized wastewater services.

Regionalization provides the following indirect benefits.

- Maintaining certified operators is, in general, more difficult for smaller operations. The regional system provides new opportunity to have a wider range of operator certification on staff.
- A regional system removes the entities from direct responsibility of discharge permit compliance by the TCEQ.
- Smaller entities may elect to retain its wastewater treatment staff with more time available to maintain collection system.
- The regional system will provide a treatment plant that is more centrally located to potential areas of development.

The most reasonable approach to implementing a regional treatment system is to incorporate the existing Jackson Street Wastewater Treatment Plant along with a new plant in the area of Highway 87 and FM 1006 area.



# Appendix A

## **APPENDIX A – CONSTRUCTION COST DATA**

The United States Environmental Protection Agency study “Construction Costs for Municipal Wastewater Treatment Plants: 1973-1982” was used in this study to develop estimate of costs for wastewater treatment. The main components of the study utilized were data for non-construction costs and construction costs for a new mechanical advanced secondary treatment plant with ammonia removal and moderate sludge handling. Sections of the report used are included for reference purposes and are as follows.

- Table 3.2
- Figure 3.17
- Section 4.2

The costs developed in the above document were reported in 1982 dollars. Two methods were used to bring the costs to present value. The non-construction costs were adjusted by use of a web based program that tracks costs based on inflation, [www.usinflationcalculator.com](http://www.usinflationcalculator.com). The effective inflation is 119.9%. Construction costs were adjusted using the Engineering News Record (ENR) Construction Cost Index. A summary of the ENR indexes from 1950 to 2009 is included.

The breakdown of the costs by various process components was based on cost data from a new plant constructed in 1997 for the City of Groves, Texas.

ed

Water



# Construction Costs for Municipal Wastewater Treatment Plants: 1973-1982



TECHNICAL REPORT

CONSTRUCTION COSTS FOR  
WASTEWATER TREATMENT PLANTS: 1973-1982

JUNE 1983

Prepared for

U.S. Environmental Protection Agency  
Priority and Needs Assessment Branch  
Facility Requirements Division  
Washington, D. C. 20460

Project Officer: Dr. Wen H. Huang

Contract No. 68-01-4798

U.S. Environmental Protection Agency,  
Region V, Library  
230 South Dearborn Street  
Chicago, Illinois 60604

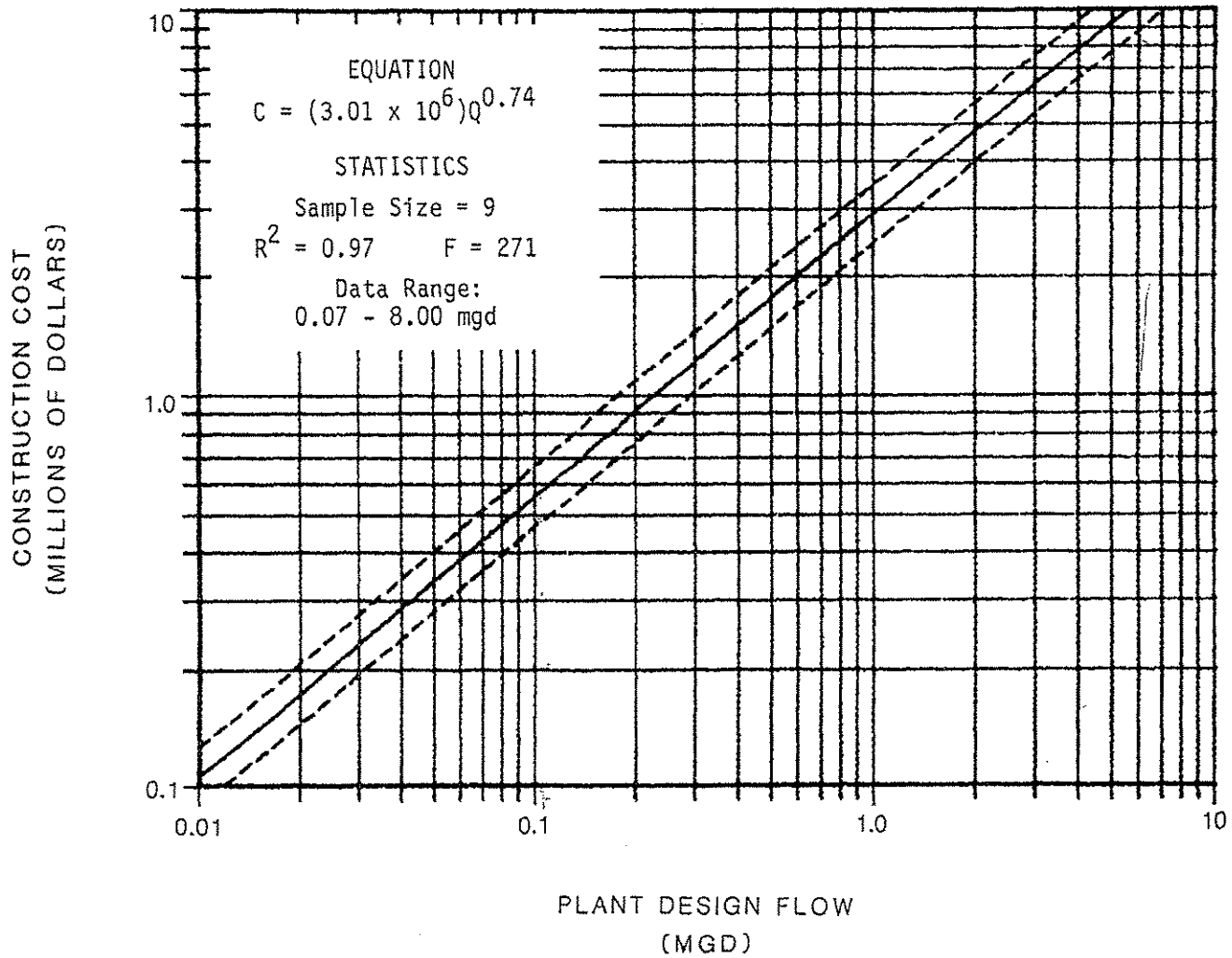
TABLE 3.2

SUMMARY FOR FIGURES 3.1 THROUGH 3.7  
NONCONSTRUCTION COST CURVES

Figure Number	Title	Cost Equation*
3.1	Planning	$NCC = (5.77 \times 10^{-1})C^{0.79}$
3.2	Design	$NCC = (3.45 \times 10^{-1})C^{0.88}$
3.3	Administrative/Legal	$NCC = (9.62 \times 10^{-2})C^{0.80}$
3.4	Architectural/Engineering Basic Fees	$NCC = (1.26 \times 10^{-1})C^{0.93}$
3.5	Other Architectural/Engineering Fees	$NCC = (8.86 \times 10^{-2})C^{0.89}$
3.6	Project Inspection	$NCC = (4.13 \times 10^{-1})C^{0.83}$
3.7	Contingency	$NCC = (6.56 \times 10^{-2})C^{0.98}$

\* NCC = Nonconstruction Cost  
C = Construction Cost

NEW MECHANICAL PLANT  
AST WITH AMMONIA REMOVAL  
MODERATE SLUDGE HANDLING



3-32

FIGURE 3.17



An equation in the above form is shown on each figure, including the numeric values for the constants a and b. While the equation is that of a logarithmic curve, it appears on the plots as a straight line due to the logarithmic scales of both the horizontal and vertical axes. The exponent b in the equation is the slope of the line for each plot. A value of b less than one, which is the typical case, represents an economy of scale as unit costs, or costs per mgd, decrease with the larger design flows.

To obtain a cost from any of the figures, the equation shown may be used to compute the construction cost for a given design flow of a proposed treatment plant or unit process. Alternately, the construction cost can be read directly from the graph by locating the given design flow on the horizontal axis. If the design flow is not known, a rule-of-thumb value of 100 gallons per capita per day may be used in preparing preliminary estimates.

In using first order costs, it is merely necessary to select the figure corresponding to the type of treatment plant for which a cost estimate is desired. The cost can be located from the figure as described above. In using second order costs, it will be necessary to know all unit processes in the proposed treatment plant process train to obtain a complete cost estimate, together with the appropriate second order plant component costs. Costs for individual unit processes and plant components should then be obtained from each corresponding figure and added together. Third order costs, if used, should be computed from the appropriate equation. Several examples are given in this section which help demonstrate these estimating techniques.

#### 4.2 ADJUSTING AND UPDATING COST ESTIMATES

When the complete estimate has been obtained, it will then be necessary to adjust for regional and geographic differences in construction costs. As explained in Appendix A, all data used for the figures in Section 3.0 were normalized to reflect average costs in the Kansas City/St. Joseph, Missouri area. Costs may be adjusted to other geographical areas using the area multipliers given in Table 4.1. To adjust costs to other areas, first

TABLE 4.1  
 AREA MULTIPLIERS  
 WASTEWATER TREATMENT PLANT CONSTRUCTION

Atlanta	0.85
Baltimore	0.99
Birmingham	0.83
Boston	1.14
Charlotte	0.71
Chicago	1.19
Cincinnati	1.04
Cleveland	1.10
Dallas	0.86
Denver	0.93
Detroit	1.11
Houston	0.95
Kansas City	1.00
Los Angeles	1.16
Miami	0.85
Milwaukee	1.03
Minneapolis	0.95
New Orleans	0.99
New York	1.29
Philadelphia	1.13
Pittsburgh	1.07
St. Louis	1.16
San Francisco	1.23
Seattle	1.16
Trenton	1.05

select the city in Table 4.1 which is nearest the treatment plant location, or where the area of influence of the city encompasses the treatment plant location, and multiply the cost estimate by the corresponding area multiplier for that city.

The resulting geographically adjusted cost estimate will be in third quarter 1982 dollars. To update the cost estimate to current dollars, the EPA Large City Advanced Treatment (LCAT) Index or the Small City Conventional Treatment (SCCT) Index can be used as discussed in Appendix A. Costs may be updated by the following procedure:

$$\begin{array}{c} \text{Total} \\ \text{Geographically} \\ \text{Adjusted Project} \\ \text{Cost} \end{array} \times \frac{\begin{array}{c} \text{Latest LCAT or SCCT Index} \\ \text{for Desired Area} \\ \text{3rd Quarter 1982 LCAT} \\ \text{or SCCT Index for Desired Area} \end{array}}{\begin{array}{c} \text{3rd Quarter 1982 LCAT} \\ \text{or SCCT Index for Desired Area} \end{array}} = \text{Updated Cost}$$

The LCAT and SCCT Indexes are now published semi-annually by EPA. Costs for plants at or above 15 mgd design flow should be updated using the LCAT Index, while costs for plants below 15 mgd should be updated using the SCCT Index.

Several examples using the cost curves of Section 3.0 to obtain planning level cost estimates are presented below. For each cost item, the appropriate figure to be used from Section 3.0 is provided for reference.

#### 4.3 COST ESTIMATING EXAMPLES

##### 4.3.1 Example No. 1

Assume it is desired to estimate the cost of a new 10.0 mgd secondary treatment plant in the Boston, Massachusetts area. For this example, the total construction cost of the facility is obtained from Figure 3.8. The appropriate nonconstruction costs from Table 3.1 are then added. For purposes of these examples, the seven most common nonconstruction costs will be used (planning, design, administration/legal, A/E basic fees, other A/E fees, inspection, and contingencies) which together average 32 percent of the construction cost nationally. The reader should use appropriate

ENR Construction Cost Index

Year	ENR - CCI
1950	510
1951	543
1952	569
1953	600
1954	628
1955	660
1956	692
1957	724
1958	759
1959	797
1960	824
1961	847
1962	872
1963	901
1964	936
1965	971
1966	1,019
1967	1,074
1968	1,155
1969	1,269
1970	1,381
1971	1,581
1972	1,753
1973	1,895
1974	2,020
1975	2,212
1976	2,401
1977	2,576
1978	2,776
1979	3,003
1980	3,237
1981	3,535
1982	3,825
1983	4,066
1984	4,146
1985	4,195
1986	4,295
1987	4,406
1988	4,519
1989	4,615
1990	4,732
1991	4,835
1992	4,985
1993	5,210
1994	5,408
1995	5,471
1996	5,620
1997	5,826
1998	5,920
1999	6,059
2000	6,221
2001	6,343
2002	6,538
2003	6,694
2004	7,115
2005	7,446
2006	7,751
2007	7,966
2008	8,310
2009	8,534

# Appendix B

## APPENDIX B – OPERATION AND MAINTENANCE COST DATA

The United States Environmental Protection Agency study “Operation and Maintenance Costs for Municipal Wastewater Facilities” dated September 1981 was used in this study to develop estimate of operation and maintenance costs for wastewater treatment. Consolidation of flows to a single treatment process should result in a savings per unit of wastewater treated. Figure 3.26 was used to develop operation and maintenance costs. The costs developed in the above document were reported in 1<sup>st</sup> quarter 1981 dollars. The costs were adjusted to present value by use of a web based program that tracks costs based on inflation, [www.usinflationcalculator.com](http://www.usinflationcalculator.com). The effective inflation is 132.3%.

Two of the entities provided partial operation and maintenance budgets for the wastewater plant. The plants are rated for 1.60 mgd flow and 7.0 mgd. The data for the various components derived from the submitted data was as follows

### Summary of Operation and Maintenance Costs

	1.60 mgd	7.0 mgd
Personnel	\$144,281	\$372,757
Sludge Disposal	\$48,391	\$35,000
Testing	\$16,193	—
Chemicals	\$34,438	\$75,000
Repairs & Maintenance	\$31,655	\$207,500
Electricity	\$77,119	—
Misc.	\$7,592	\$26,050
<b>Total</b>	<b>\$359,669</b>	<b>\$716,307</b>
Permitted ADF	1.6 MGD	7.0 MGD
Cost/gallon	\$0.2248	\$0.1023

Adjusting the 7.0 mgd flow for unreported testing and electricity, based on a percentage of 25%, would result in a total costs of \$955,000. By comparison, the use of data from the EPA study would reflect an operation cost of \$378,000 and \$1,172,000 for the 1.6 mgd and 7.0 mgd plants.

Table 3.6 and Figure 3.31 are included for future reference in planning.



United States  
Environmental Protection  
Agency

Office of Water  
Program Operations (WH-595)  
Washington D C 20460

September 1981  
430/9-81-004



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# Technical Report

## Operation and Maintenance Costs for Municipal Wastewater Facilities

**OPERATION**

TECHNICAL REPORT

OPERATION & MAINTENANCE COSTS  
FOR MUNICIPAL WASTEWATER FACILITIES

SEPTEMBER 1981

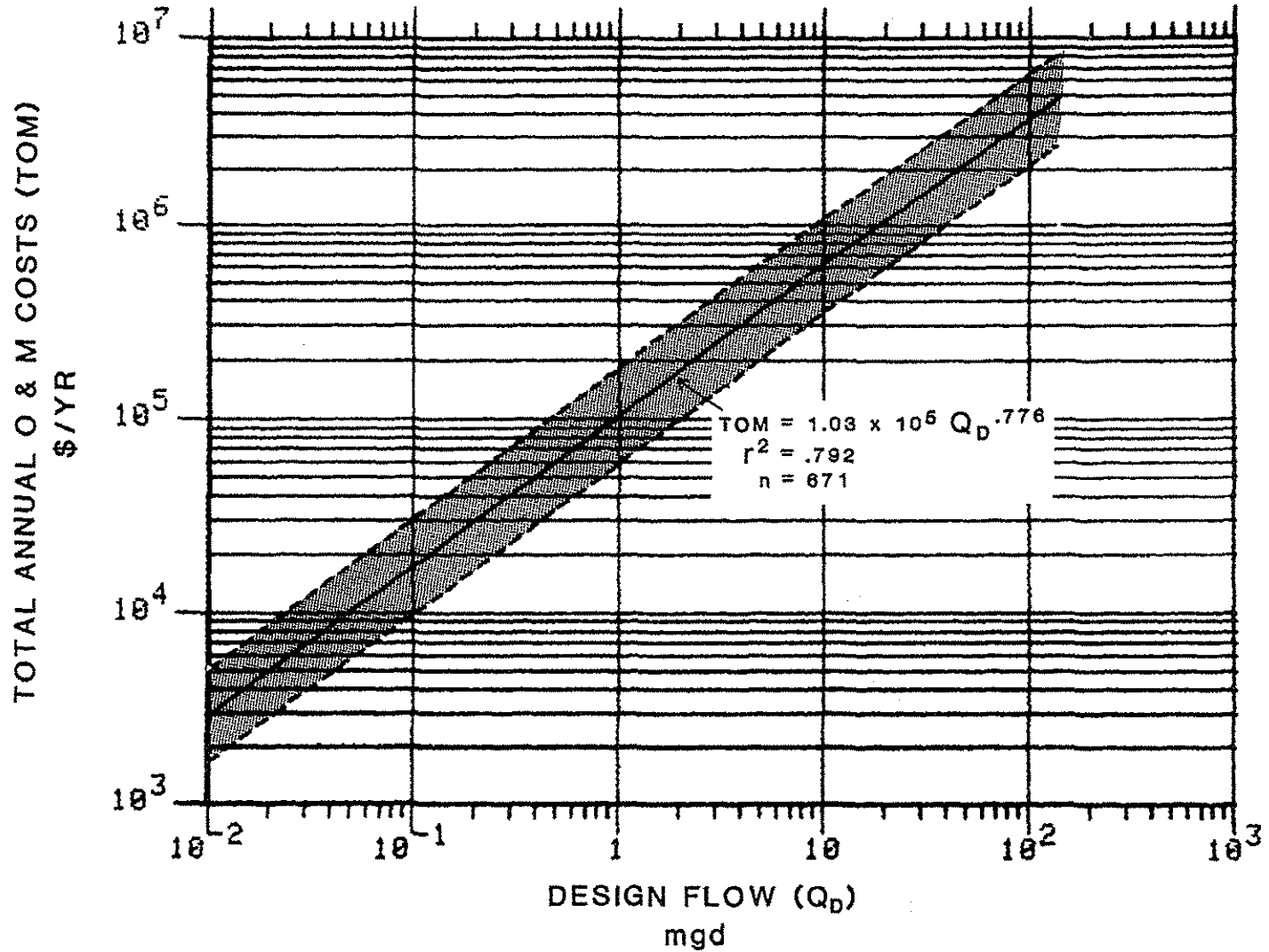
Prepared For

U. S. ENVIRONMENTAL PROTECTION AGENCY  
FACILITY REQUIREMENTS DIVISION  
WASHINGTON, D. C. 20460

Project Officer: Dr. Wen H. Huang

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U.S. Environmental Protection Agency  
Region 5 Library (PL-12J)  
77 West Jackson Blvd., 12th Floor  
Chicago, IL 60604-3590

TOTAL O & M COSTS vs DESIGN FLOW  
ALL TREATMENT LEVEL COMPOSITE  
SECONDARY, ADVANCED SECONDARY, AND  
ADVANCED WASTEWATER TREATMENT PLANTS



3-41

FIGURE 3.26

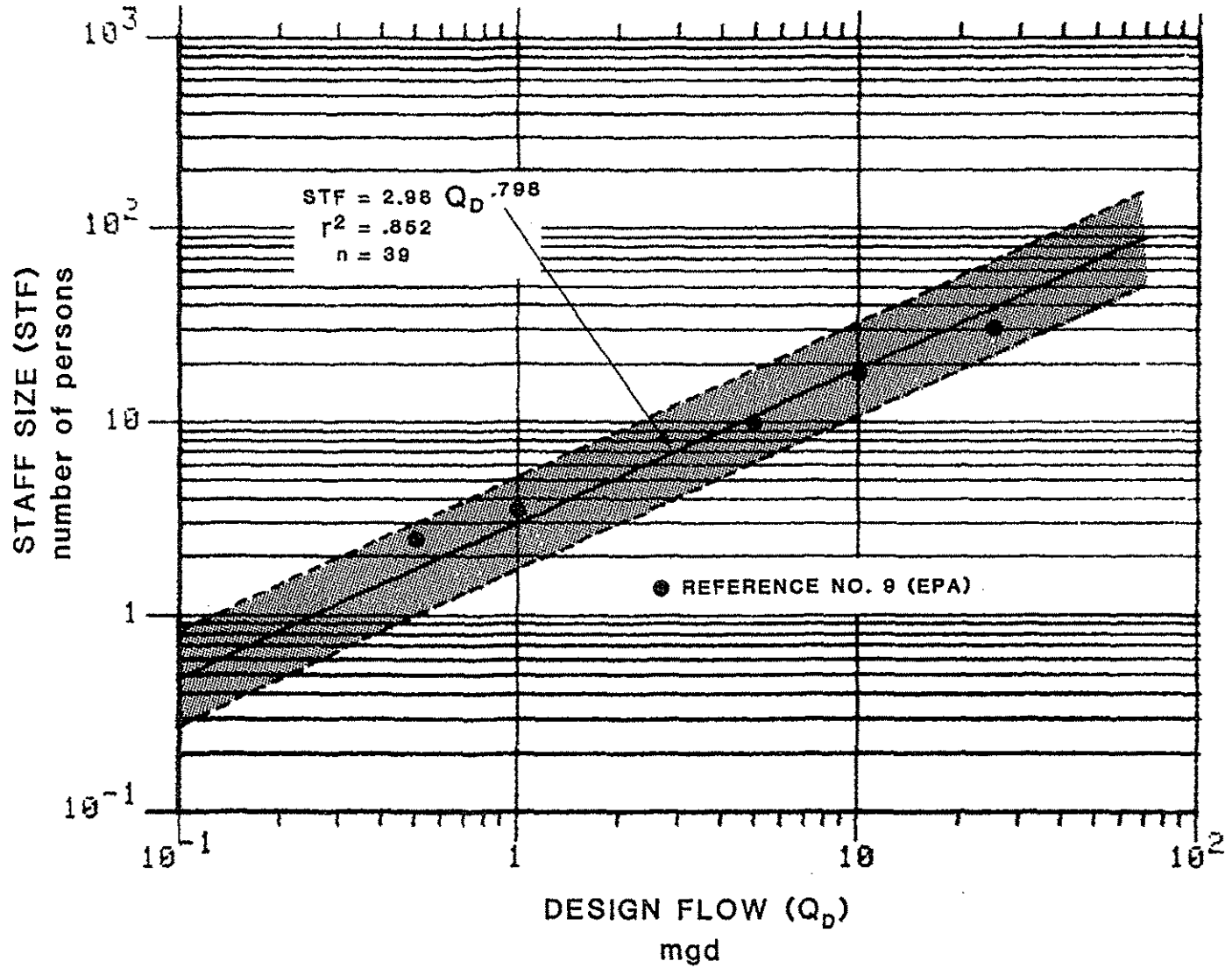
TABLE 3.6

## MAJOR COMPONENT COSTS AS A PERCENTAGE OF TOTAL O&amp;M COSTS

<u>Secondary Treatment</u>	<u>Components</u>				
	<u>Personnel</u>	<u>Utilities</u>	<u>Chemicals</u>	<u>Equipment &amp; Materials</u>	<u>Constructual &amp; Other</u>
This Study	48%	26%	7%	14%	12%
Trickling Filters:					
EPA	55%	28%	8%	12%	7%
AMSA	57%	13%	12%	9%	9%
Activated Sludge:					
EPA	49%	26%	6%	11%	7%
AMSA	41%	26%	19%	8%	7%
<u>Advanced Secondary Treatment</u>					
This Study	48%	26%	7%	7%	11%
<u>Advanced Wastewater Treatment</u>					
This Study	45%	30%	7%	13%	10%
EPA	44%	25%	11%	9%	11%
AMSA	39%	22%	22%	7%	10%

Note: All information for EPA and AMSA percentages obtained from Tables 4.8 and 4.9, respectively, of Reference 2. The associated costs were updated to 1st Quarter 1981.

**STAFF SIZE vs DESIGN FLOW**  
**ADVANCED WASTEWATER TREATMENT PLANTS**  
**WITH LITERATURE COMPARISONS**



3-52

FIGURE 3.31

# Appendix C

## **APPENDIX C – EXISTING WASTEWATER PLANTS**

This appendix provides the data collected and analyzed for the four existing wastewater plants; Bridge City, Orange, Pinehurst and OCWCID No. 2. Capital and operation and maintenance expenses were developed using the methodologies in Appendix A and B. The following is a summary of data included for each plant.

### Bridge City

- Plant Condition Report
- 30-Year Expenditure Schedule
- Flow Data
- Effluent Quality Review
- TPDES Permit

### Orange

- Plant Condition Report
- 30-Year Expenditure Schedule
- Flow Data
- Effluent Quality Review
- TPDES Permit
- Influent Strength vs. Influent Flow

### Pinehurst

- Plant Condition Report
- 30-Year Expenditure Schedule
- Flow Data
- TPDES Permit

### Orange County WCID No. 2

- Plant Condition Report
- 30-Year Expenditure Schedule
- Flow Data
- TPDES Permit



Bridge City

REGIONAL WASTEWATER TREATMENT PLANT EVALUATION

Participant Name: City of Bridge City

PROJECT FLOWS: see attached letter of May 8, 2008

	Peak 2 Hour,
ADF, mgd	mgd

PERMIT LIMITS

	ADF, mgd	Peak 2 -Hour, BOD	TSS	NH3
Max. Day				
7 day avg.				
Month, avg.				

PLANT CONDITION

Structures:	Est. Age	Type	Condition	Anticipated Expenditures		Comments
				5 year	10 year	
Screening		Steel/Conc R/C	Rank 1 - 5 3			
Grit Chamber	1987	R/C	3			
Primary Clarifier		R/C	No			
Trickling Filter		R/C	No			
Aeration Basin	1977	R/C	3			Train unit - minor cracks.
Final Clarifier	1977/1987	RC	3			Train unit - minor cracks.
Disinfection	1987	R/C	3			Minor cracks to concrete.
Chlorine	1987	R/C	3			
De-Chlorination		R/C	3			
UV		R/C	--			
Digesters	1987	R/C	3			Minor cracks with efflorescence.
Mech. Dewatering		STL	3-4			Steel frame - dewater box.
Drying Beds	1977	R/C				Used as secondary.
Buildings		R/C	3			

PLANT CONDITION

	Est. Age	Type Steel/Conc	Condition Rank 1 - 5	5 year	10 year
Mechanical Equipment					
Screening			2		
Grit Removal			3		
Primary Clarifier			No		
Trickling Filter			No		
Aeration Basin			3		
Blowers			No		
Aeration Piping			No		
Aeration Distribution			No		
Final Clarifiers			2		
Disinfection			3		
Digester			2		
Dewatering			3		
Electrical			3		
Power			3		
Controls					
Manual/SCADA					
Influent Stormwater CL	1987	R/C	3		
Stormwater Gritter	1987	R/C	3		

Comments

Fine screens - seals leak, and need rehab.

---

Surface mixers -10yrs. old, only 2 can operate at time to keep floc.

---

Bridge units, one unit out of service for 2 yrs. Other unit minor rust. New unit to be replaced soon

Surface Aerator - not running, gear box down

Single filter box not able to keep up.

---

No sludge drain off.

Not used, Not effective in high flow.

---

**30-year Expenditure Schedule<sup>(3)</sup>**  
**City of Bridge City WWTP**

Description	Present Replacement Value (2009)	Replacement Year Value <sup>(2)</sup>	Replacement Year <sup>(1)</sup>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039		
Influent L.S. - Concrete Structure	\$ 180,800																																			
Influent L.S. - Pumps	\$ 90,400	\$ (106,460)	2009	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705	\$8,705		
Influent Structure - Concrete	\$ 180,800																																			
Fine Screen - Mechanical	\$ 90,400	\$ (145,788)	2019											\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698	\$11,698		
Aeration - Concrete Structure	\$ 904,000																																			
Aeration - Surface Aerator	\$ 723,200	\$ (1,132,334)	2018										\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861	\$90,861		
Clarifier - Concrete Structure - Package Plant	\$ 813,600																																			
Clarifier - Mechanism - Package Plant	\$ 452,000	\$ (542,900)	2009	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	\$45,524	
Clarifier - Concrete Structure - Independent	\$ 452,000																																			
Clarifier - Mechanism - Independent	\$ 361,600	\$ (600,647)	2020											\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197		
Chlorine Contact Chamber - Concrete Structure	\$ 542,400																																			
Disinfection Equipment	\$ 542,400	\$ (1,044,471)	2025																\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	\$83,811	
Digester - Concrete Structure	\$ 452,000																																			
Digester - Surface Aerator	\$ 452,000	\$ (707,709)	2018										\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	\$56,788	
Thickener - Concrete Structure	\$ 180,800																																			
Thickener - Mechanism	\$ 90,400	\$ (150,162)	2020											\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049	\$12,049		
Sludge - Metering Pump	\$ 90,400	\$ (150,220)	2028											\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	\$24,099	
Sludge - Drying Beds	\$ 180,800	\$ (300,135)	2020											\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	
Sludge - Mechanical Press	\$ 180,800	\$ (380,441)	2028											\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	
Sludge - Polymer Roll-off Box	\$ 180,800	\$ (380,441)	2028											\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	\$30,528	
Plant - Yard Piping	\$ 361,600																																			
Storm Water Clarifier - Concrete Structure	\$ 542,400																																			
Storm Water Clarifier - Mechanism	\$ 361,600	\$ (600,647)	2020											\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	\$48,197	
Storm Water - Chlorine Contact Chamber	\$ 632,800																																			
<b>Total Annual Expenditures</b>				\$52,228	\$52,228	\$52,228	\$52,228	\$52,228	\$52,228	\$52,228	\$52,228	\$52,228	\$199,878	\$211,577	\$344,120	\$344,120	\$344,120	\$344,120	\$344,120	\$344,120	\$427,931	\$427,931	\$427,931	\$504,249	\$452,021	\$452,021	\$452,021	\$452,021	\$452,021	\$452,021	\$452,021	\$452,021	\$452,021	\$304,371	\$292,673	
<b>Present Value (FY-2009) of Annual Expenditures</b>				\$52,228	\$50,701	\$49,230	\$47,796	\$46,404	\$45,053	\$43,740	\$42,466	\$41,229	\$153,190	\$157,433	\$248,599	\$241,359	\$234,329	\$227,504	\$220,877	\$214,452	\$208,225	\$202,194	\$196,354	\$190,696	\$185,217	\$179,914	\$174,784	\$169,824	\$165,031	\$160,401	\$155,931	\$151,621	\$147,477	\$143,495	\$139,663	

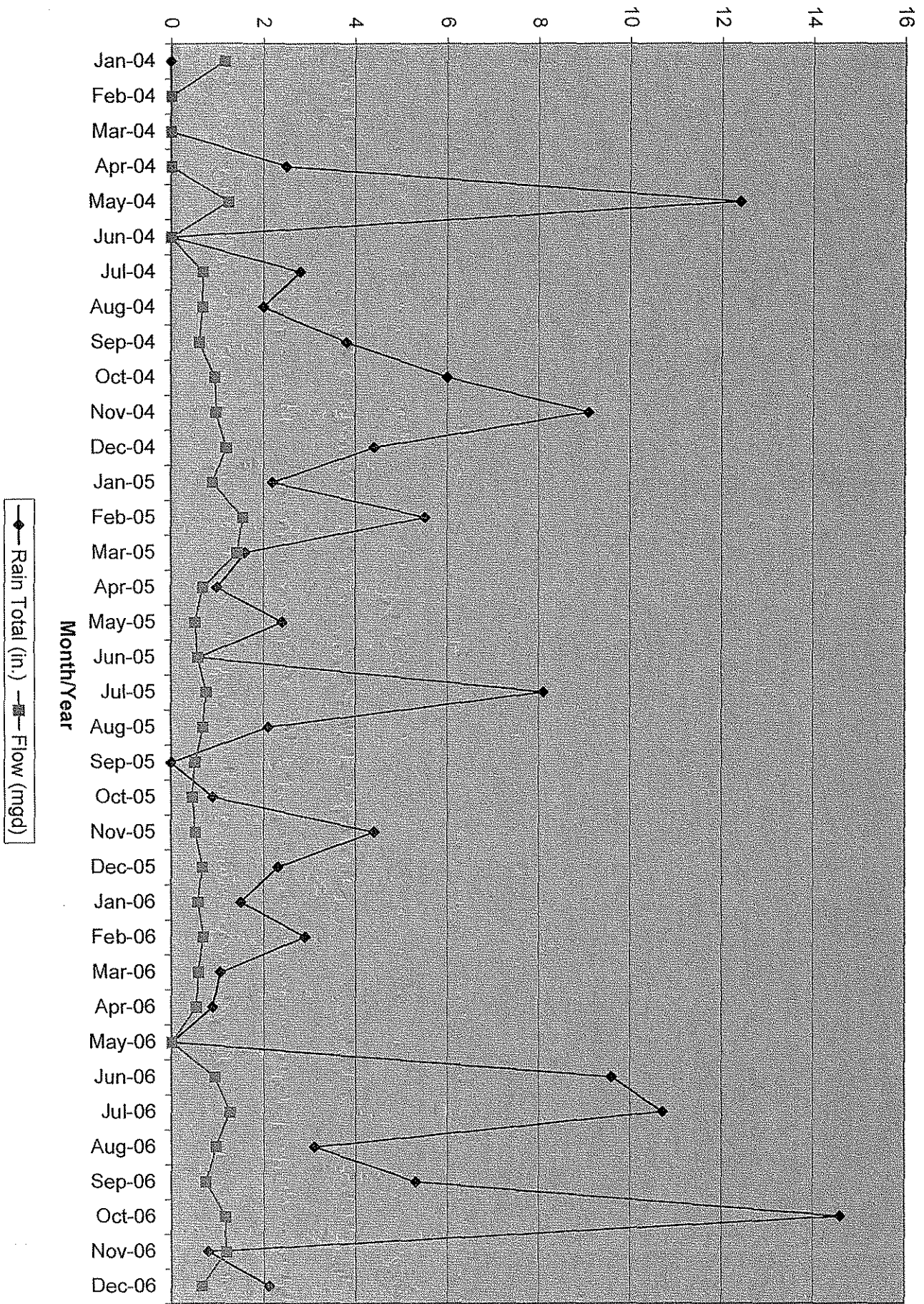
Present Value (FY-2009) of 30-yr Annual Expenditures Total **\$5,223,503**

Note:  
(1) Replacement year based upon a minimum remaining life expectancy of 2.5-percent.  
(2) Replacement year value includes additional 20-percent for unitized construction as well as an annual inflation rate of 3-percent.  
(3) Annual expenditure payments based on a 20-year loan at an interest rate of 5-percent.

WDB Loan Terms  
Rate: 5%  
Term: 20 years

Inflation: 3%

BRIDGE CITY



**Effluent Quality**

**Bridge City**

**TPDES Permit**

<b>Effluent Char.</b>	<b>Daily Avg. (mg/l)</b>	<b>7-Day Avg. (mg/l)</b>	<b>Daily Max (mg/l)</b>	<b>Single Grab (mg/l)</b>
BOD	10	15	25	35
TSS	15	25	40	60
Chlorine Residual (min)	1	N/A	N/A	N/A
pH	6	N/A	9	N/A
DO (min)	4	N/A	N/A	N/A

**Lab Results That Exceeds Permit**

<b>Date</b>	<b>Parameter</b>	<b>Results</b>	<b>Comments</b>
1/19/2002	BOD	29	>Daily Max; 0.05 Rain
10/22/2002	TSS	42	>Daily Max; 1.8 Rain
10/28/2002	BOD	32	>Daily Max; 5.6 Rain
12/3/2002	TSS	42	>Daily Max; 3.8 Rain
9/11/2003	BOD	29	>Daily Max; 3.5 Rain
9/11/2003	TSS	72	>Daily Max; 3.5 Rain
1/29-30/2004	TSS	46	>Daily Max; 2.5 Rain
2/2-3/2004	TSS	74	>Daily Max
2/11-12/2004	TSS	42	>Daily Max
3/14-15/2004	TSS	41	>Daily Max
9/24/2004	TSS	50	>Daily Max; 3.5 Rain on 9/23
3/7-8/2005	TSS	49	>Daily Max; 1.0 Rain
7/17/2005	TSS	54	>Daily Max; 0.8 Rain
7/5/2006	TSS	56	>Daily Max; 2.4 Rain
9/21/2006	TSS	106	>Daily Max; 2.4 Rain
10/26-27/2006	BOD	57	>Daily Max; 4.4 Rain
12/21/2006	BOD	53	>Daily Max; 1.0 Rain on 12/20
12/21/2006	TSS	60	>Daily Max; 1.0 Rain on 12/20
12/21-22/2006	BOD	40	>Daily Max; 0 Rain
12/24-25/2006	TSS	62	>Daily Max; 0.7 Rain
12/29-30/2006	TSS	56	>Daily Max; 0.1 Rain
12/30/2006	TSS	48	>Daily Max; 0 Rain



TEXAS NATURAL RESOURCE CONSERVATION COMMISSION  
P.O. Box 13087  
Austin, Texas 78711-3087

TPDES PERMIT NO. 10051-001  
[For TNRCC Office Use Only:  
EPA ID No. TX0025500]

This is a renewal that replaces  
TNRCC Permit No. 10051-001  
issued November 15, 1996 and  
NPDES Permit No. TX0025500  
issued May 25, 1990.

PERMIT TO DISPOSE OF WASTES  
under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

City of Bridge City

whose mailing address is

P.O. Box 846  
Bridge City, Texas 77611

is authorized to treat and dispose of wastes from the Bridge City Wastewater Treatment Facility, SIC Code 4952

located on Bower Drive, approximately 2,000 feet southeast of the State Highway 87 bridge over Cow Bayou within Bridge City in Orange County, Texas

to an unnamed tributary; thence to Cow Bayou Tidal in Segment No. 0511 of the Sabine River Basin

only according with effluent limitations, monitoring requirements and other conditions set forth in this permit, as well as the rules of the Texas Natural Resource Conservation Commission (TNRCC), the laws of the State of Texas, and other orders of the TNRCC. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, March 1, 2001.

ISSUED DATE: **JAN 07 2000**

A handwritten signature in black ink, appearing to read "Jeffrey A. Sattler".

For the Commission



EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 1.6 million gallons per day (MGD); nor shall the average discharge during any two-hour period (2-hour peak) exceed 2,896\* gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Minimum Self-Monitoring Requirements</u>	
	Daily Avg mg/l(lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing meter
Biochemical Oxygen Demand (5-day)	10 (133)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (200)	25	40	60	Two/week	Composite
Total Copper	Report (Report)	N/A	Report	N/A	One/month	Composite

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

\* See Other Requirement No. 5, Page 26

**DEFINITIONS AND STANDARD PERMIT CONDITIONS**

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC §§ 305.121 - 305.129, Subchapter F, "Permit Characteristics and Conditions" as promulgated under the Texas Water Code §§ 5.103 and 5.105, and the Texas Health and Safety Code §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in Section 26.001 of the Texas Water Code and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some Specific definitions of words or phrases used in this permit are as follows:

**1. Flow Measurements**

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with a 1 million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily discharge within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily discharge, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. Multiple measurements of instantaneous maximum flow within a two-hour period may be compared to the permitted 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

**2. Concentration Measurements**

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements. When four samples are not available in a calendar month, the arithmetic average of the four most recent measurements or the arithmetic average (weighted by flow) of all values taken during the month shall be used as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by composite sample unless otherwise specified elsewhere in this permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day.

The "daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Fecal coliform bacteria concentration - the number of colonies of fecal coliform bacteria per 100 milliliters effluent. The fecal coliform bacteria daily average is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a particular period of time. For example in a month's time, where n equals the number of measurements made; or, computed as the antilogarithm of the sum of the logarithm of each measurement made. For any measurement of fecal coliform bacteria equaling zero, a substituted value of one shall be made for input into either computation method.
3. Sample Type
    - a. Composite sample - for domestic wastewater a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected no closer than two hours apart. For industrial wastewater a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected no closer than one hour apart.
    - b. Grab sample - an individual sample collected in less than 15 minutes.
  4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
  5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids which have not been classified as hazardous waste separated from wastewater by unit processes.
  6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## MONITORING AND REPORTING REQUIREMENTS

### 1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the location(s) specified on the reporting form or the instruction sheet, by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on an approved TPDES self-report form, Discharge Monitoring Report (DMR) Form EPA No. 3320-1, signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act, the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### 2. Test Procedures

Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

### 3. Records of Results

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site and/or shall be readily available for review by a TNRCC representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
  - i. date, time and place of sample or measurement;
  - ii. identity of individual who collected the sample or made the measurement.
  - iii. date and time of analysis;
  - iv. identity of the individual and laboratory who performed the analysis;
  - v. the technique or method of analysis; and
  - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that maybe instituted against the permittee.

#### 4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved TPDES self-report form. Increased frequency of sampling shall be indicated on the self-report form.

#### 5. Calibration of Instruments

All automatic flow measuring and/or recording devices and/or totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TNRCC representative for a period of three years.

#### 6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division.

#### 7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TNRCC. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
- b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
  - i. Unauthorized discharges as defined in Permit Condition 2(g).
  - ii. Any unanticipated bypass which exceeds any effluent limitation in the permit.

- iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
  - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division within 5 working days of becoming aware of the noncompliance.
  - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Water Quality Management Information Systems Team (MC 224) of the Enforcement Division as promptly as possible. This requirement means to report these types of noncompliance on the approved TPDES self-report form.
8. In accordance with the procedures described in 30 TAC §§ 305.21, 305.22 and 305.23 (relating to Emergency Orders, Temporary Orders and Executive Director Authorizations) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. One hundred micrograms per liter (100 µg/L);
  - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TNRCC.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. Five hundred micrograms per liter (500 µg/L);
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TNRCC.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the CWA if it were directly discharging those pollutants;
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. For the purpose of this paragraph, adequate notice shall include information on:
  - i. The quality and quantity of effluent introduced into the POTW; and
  - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

**PERMIT CONDITIONS**

## 1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application in accordance with 30 TAC Chapter 50 and the application process in accordance with 30 TAC Chapter 281, and relying upon the accuracy and completeness of that information and those representations in accordance with 30 TAC Chapter 305. After notice in accordance with 30 TAC Chapter 39 and opportunity for a hearing in accordance with 30 TAC §§ 55.21-55.31, Subchapter B, "Hearing Requests, Public Comment", this permit may be modified, suspended, or revoked, in whole or in part in accordance with 30 TAC Chapter 305 Subchapter D, during its term for cause including but not limited to, the following:
  - i. Violation of any terms or conditions of this permit;
  - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

## 2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or of an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.
- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and the Texas Water Code Section 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to waters in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
- h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded, but only if the diversion is also for essential maintenance to assure efficient operation.

- i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§ 26.136, 26.212, and 26.213 for violations including but not limited to negligently or knowingly violating the federal Clean Water Act, §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).

### 3. Inspections and Entry

- a. Inspection and entry shall be allowed as prescribed in the Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in Texas Water Code Section 7.002.

### 4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
  - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
  - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 8 and as adopted by 30 TAC § 305.531(a) (relating to Establishing and Calculating Additional Conditions and Limitations for TPDES Permits);
  - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions and/or expansions of a permitted facility that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. Authorization to continue such activity will terminate upon the effective denial of said application.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.



- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

#### 5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Wastewater Permits Section Application Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.33 (relating to Executive Director Action on Application for Transfer).

#### 6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal which requires a permit or other authorization pursuant to the Texas Health and Safety Code.

#### 7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to the waters in the state must be specifically authorized in this permit and may require a permit pursuant to Chapter 11 of the Texas Water Code.

#### 8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

#### 9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

### OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control such as the Commission's "Recommendations for Minimum Process Control Tests for Domestic Wastewater Treatment Facilities." Process control records shall be retained at the facility site and/or shall be readily available for review by a TNRCC representative for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all provisions of 30 TAC §§ 312.1 - 312.13 concerning sewage sludge use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Executive Director in care of the Wastewater Permits Section (MC 148) of the Water Quality Division, in writing of any closure activity or facility expansion at least 90 days prior to conducting such activity.

- b. Closure activities include those associated with any pit, tank, pond, lagoon, or surface impoundment regulated by this permit.
  - c. As part of the notification, the permittee shall submit to the Municipal Permits Team (MC 148) of the Wastewater Permits Section of the Water Quality Division, a closure plan which has been developed in accordance with the "Closure Guidance Documents Nos. 4 and 5" available through the Publications Inventory and Distribution Section (MC 195) of the Agency Communications Division.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
  5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
  6. The permittee shall remit an annual waste treatment fee to the Commission as required by 30 TAC Chapter 305 Subchapter M and an annual water quality assessment fee to the Commission as required by 30 TAC Chapter 320. Failure to pay either fee may result in revocation of this permit.
  7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for applications, effluent data, permits, and other data specified in 30 TAC § 305.46, any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice.

8. Facilities which generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
  - a. Whenever flow measurements for any domestic sewage treatment facility reach 75 percent of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever, the flow reaches 90 percent of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75 percent of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgement of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Water Quality Division (MC 148) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission, and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.
- c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide

system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 325.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85 percent, unless otherwise authorized by this permit.
11. Facilities which generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
  - a. Any solid waste generated by the permittee during the management and treatment of wastewater, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid) must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
  - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
  - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.6(g), to the Corrective Action Section (MC 127) of the Industrial and Hazardous Waste Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
  - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Waste Evaluation Section (MC 129) of the Industrial and Hazardous Waste Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.
  - e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
  - f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:
    - i. Volume of waste and date(s) generated from treatment process;
    - ii. Volume of waste disposed of on-site or shipped off-site;
    - iii. Date(s) of disposal;
    - iv. Identity of hauler or transporter;
    - v. Location of disposal site; and
    - vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site and/or shall be readily available for review by authorized representatives of the TNRCC for at least five years.

12. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Health and Safety Code of Texas.

## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Natural Resource Conservation Commission (TNRCC) registered or permitted land application site, commercial land application site or co-disposal landfill. The disposal of sludge by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is permitted or registered with the TNRCC. This provision does not authorize Distribution and Marketing of sludge. This provision does not authorize land application of Class A Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.

### SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

#### A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permits Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

#### B. Testing Requirements

1. Sewage sludge shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method, which receives the prior approval of the TNRCC for the contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TNRCC Registration and Evaluation Division (MC 129) and the Regional Director (MC Region 10) within 7 days after failing the TCLP Test. The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration and Evaluation Division (MC 129), Texas Natural Resource Conservation Commission, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TNRCC Regional Office (MC Region 10) and the Water Quality Management Information Systems Team (MC 224) of the Enforcement Division by September 1 of each year.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration (milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.

- a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. Below are the additional requirements necessary to meet the definition of a Class A sludge.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC Section 312.82(a)(2)(A) for specific information.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC Section 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC Section 312.82(a)(2)(C)(iv-vi) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of shall be treated in one of the processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of shall be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

Alternative 1 -

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;

- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U. S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The executive director will accept from the U. S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition, the following site restrictions must be met if Class B sludge is land applied:

- i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.



- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.
- v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.
- vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.
- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
- ix. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC Section 312.44.

#### 4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives 1 through 10 for Vector Attraction Reduction.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.
- Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.
- Alternative 9 -
- i. Sewage sludge shall be injected below the surface of the land.
  - ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.
  - iii. When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.
- Alternative 10 -
- i. Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
  - ii. When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

Toxicity Characteristic Leaching Procedure (TCLP) Test - annually

PCBs - annually

All metal constituents and Fecal coliform or Salmonella sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC Section 312.46(a)(1):

<u>Amount of sewage sludge (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 ≤ Sludge < 290	Once/Year
290 ≤ Sludge < 1,500	Once/Quarter
1,500 ≤ Sludge < 15,000	Once/Two Months
15,000 ≤ Sludge	Once/Month

(\*) The amount of bulk sewage sludge applied to the land (dry weight basis).

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC Section 312.7.

**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

**A. Pollutant Limits**

Table 2

<u>Pollutant</u>	<u>Cumulative Pollutant Loading Rate (pounds per acre)</u>
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	<u>Monthly Average Concentration (milligrams per kilogram)*</u>
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

\* Dry weight basis

**B. Pathogen Control**

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A or Class B pathogen reduction requirements as defined above in Section I.B.3.

**C. Management Practices**

1. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk sewage sludge not meeting Class A requirements shall be land applied in a manner which complies with the Management Requirements in accordance with 30 TAC Section 312.44.
3. Bulk sewage sludge shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the sewage sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section III below are met.

**D. Notification Requirements**

1. If bulk sewage sludge is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk sewage sludge will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permits Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

**E. Record keeping Requirements**

The sludge documents will be retained at the facility site and/or shall be readily available for review by a TNRCC representative. The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TNRCC representative for a period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC Section 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class B sludges, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

"I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC Section 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC Section 312.83(b) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."
6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained.

The person who applies bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TNRCC representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC Section 312.47 for persons who land apply.

1. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge treatment activities.
2. The location, by street address, and specific latitude and longitude, of each site on which sludge is applied.
3. The number of acres in each site on which bulk sludge is applied.
4. The date and time sludge is applied to each site.
5. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
6. The total amount of sludge applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Natural Resource Conservation Commission upon request.

**F. Reporting Requirements**

The permittee shall report annually to the TNRCC Regional Office (MC Region 10) and Water Quality Management Information Systems Team (MC 224) of the Enforcement Division, by September 1 of each year the following information:

1. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
2. The frequency of monitoring listed in Section I.C. which applies to the permittee.
3. Toxicity Characteristic Leaching Procedure (TCLP) results.
4. Identity of hauler(s) and TNRCC transporter number.
5. PCB concentration in sludge in mg/kg.
6. Date(s) of disposal.
7. Owner of disposal site(s).
8. Texas Natural Resource Conservation Commission registration number, if applicable.
9. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.
10. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
11. Level of pathogen reduction achieved (Class A or Class B).
12. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met.
13. Vector attraction reduction alternative used as listed in Section I.B.4.
14. Annual sludge production in dry tons/year.
15. Amount of sludge land applied in dry tons/year.
16. The certification statement listed in either 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.

17. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk sewage sludge is applied.
  - c. The date and time bulk sewage sludge is applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.
  - e. The amount of sewage sludge (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Natural Resource Conservation Commission upon request.



**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge to the owner or operator of a Municipal Solid Waste Landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permits Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.
- D. Sewage sludge shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TNRCC for contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TNRCC Registration and Evaluation Division (MC 129) and the Regional Director (MC Region 10) of the appropriate TNRCC field office within 7 days after failing the TCLP Test. The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration and Evaluation Division (MC 129), Texas Natural Resource Conservation Commission, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TNRCC Regional Office (MC Region 10) and the Water Quality Management Information Systems Team (MC 224) of the Enforcement Division by September 1 of each year.

- E. Sewage sludge shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.

**F. Record keeping Requirements**

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Natural Resource Conservation Commission upon request.

**G. Reporting Requirements**

The permittee shall report annually to the TNRCC Regional Office (MC Region 10) and Water Quality Management Information Systems Team (MC 224) of the Enforcement Division by September 1 of each year the following information:

1. Toxicity Characteristic Leaching Procedure (TCLP) results.
2. Annual sludge production in dry tons/year.
3. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
4. Amount of sludge transported interstate in dry tons/year.
5. A certification that the sewage sludge meets the requirements of 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
6. Identity of hauler(s) and transporter registration number.
7. Owner of disposal site(s).
8. Location of disposal site(s).
9. Date(s) of disposal.

312.44

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Natural Resource Conservation Commission upon request.

**OTHER REQUIREMENTS**

1. This Category B facility shall be operated and maintained by a chief operator or operator in responsible charge holding a valid Class B certificate of competency or higher issued pursuant to 30 TAC Chapter 325. All shift supervisors and other plant operators shall be certified in accordance with the applicable provisions of Chapter 325. Note, Class D certificates are not renewable at any activated sludge facility, regardless of size, or any trickling filter or RBC facility with a permitted flow greater than 100,000 gallons per day.
2. The Texas Natural Resource Conservation Commission has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the Coastal Coordination Council (CCC) and has determined that the action is consistent with the applicable CMP goals and policies.
3. There is no mixing zone established for this discharge to an intermittent stream. Acute toxic criteria apply at the point of discharge.
4. The permittee is hereby placed on notice that this permit may be reviewed by the Texas Natural Resource Conservation Commission after the completion of any new intensive water quality survey on Segment No. 0511 of the Sabine River Basin and any subsequent updating of the water quality model for Segment No. 0511, in order to determine if the limitations and conditions contained herein are consistent with any such revised model. The permit may be amended, pursuant to 30 TAC Section 305.62, as a result of such review. The permittee is also hereby placed on notice that effluent limits may be made more stringent at renewal based on, for example, any change to modeling protocol approved in the TNRCC Continuing Planning Process.
5. The permittee shall operate the peak flow clarifier (parallel storm water treatment system) in accordance with the following provisions:
  - a) The system shall be operated only when wet weather causes the influent flow rate to the peak flow clarifier to exceed 2,896 gpm.
  - b) The average discharge during any two-hour period (2-hour peak) from the peak flow clarifier shall not exceed 3,494 gpm (5.031 MGD), subsequently, the total 2-hour peak flow from the peak flow clarifier and the treatment plant shall not exceed 6,389 gpm (9.2 MGD).
  - c) The permittee shall report on a monthly basis to the TNRCC Water Quality Management Information Systems Team (MC 224) and Regional Office (MC Region 10) the data from the combined effluent.
  - d) After each use the peak flow clarifier shall be drained and the supernatant and sludge returned to the treatment plant aeration basin.
  - e) Provisions shall be made to allow for both influent and effluent composite sampling.
  - f) A flow measurement device shall be installed and maintained.
  - g) When the peak flow clarifier is operating, the permittee shall monitor total combined effluent (effluent from peak flow clarifier and effluent from treatment plant) for BOD<sub>5</sub> and TSS by composite sample. The composite sample for combined effluent shall include one sample taken within ½ hour after starting to discharge from the peak flow clarifier and one sample taken within ½ hour before ceasing discharge from the peak flow clarifier or one sample taken within ½ hour before the 24 hour holding time for composite sample, whichever occurs first. The combined

effluent concentration shall not exceed the daily maximum concentration limitations for BOD<sub>5</sub> and TSS of 45 mg/l by composite sample and a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes and shall be monitored by a daily grab sample.

- h) Each time the peak flow clarifier is operating, the permittee shall keep records which include the following information:
  - 1) Date(s) of operation and length of time in service.
  - 2) Flow data during operation and total volume treated.

The above records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representative of the Commission for at least three years.

- 6. The permittee shall provide nuisance odor prevention for the wastewater treatment facility in accordance with 30 TAC Section 309.13(e)(2). The permittee shall comply with the requirements of 30 TAC Section 309.13(a) through (d). (See Attachment A.)

**CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit (60 degrees Celsius) using the test methods specified in 40 CFR §261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104 degrees Fahrenheit (40 degrees Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403.
3. The permittee shall provide adequate notification to the TNRCC Municipal Permits Team (MC 148) of the Water Quality Division within 30 days subsequent to the permittee's knowledge of either of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works, and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

**BIOMONITORING REQUIREMENTS****CHRONIC BIOMONITORING REQUIREMENTS: MARINE**

The provisions of this Section apply to Outfall 001 for whole effluent toxicity testing (biomonitoring).

**1. Scope, Frequency and Methodology**

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organism(s). Toxicity is herein defined as a statistically significant difference at the 95% confidence level between the survival, reproduction, or growth of the test organism(s) in a specified effluent dilution compared to the survival, reproduction, or growth of the test organism(s) in the control (0% effluent).
- b. The permittee shall conduct all tests utilizing the test organisms, procedures, and quality assurance requirements specified below and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Second Edition" (EPA-600-4-91-003), or the most recent update thereof:
  - 1) Chronic static renewal 7-day survival and growth test using the mysid shrimp (Mysidopsis bahia) (Method 1007.0 or the most recent update thereof). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per year.
  - 2) Chronic static renewal 7-day larval survival and growth test using the inland silverside (Menidia beryllina) (Method 1006.0 or the most recent update thereof). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per year.

The permittee must perform and submit a valid test for each test species during the required reporting period for that species. A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These additional effluent concentrations are 8%, 10%, 14%, 18%, and 24% effluent. The critical dilution, defined as 18% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, a Chemical Specific (CS) limit, a Best Management Practice (BMP), additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.

**2. Required Toxicity Testing Conditions**

- a. **Test Acceptance** - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fails to meet any of the following criteria:
  - 1) a control mean survival of 80% or greater;

- 2) a control mean dry weight of surviving mysid shrimp of 0.20 mg or greater;
- 3) a control mean dry weight for surviving unpreserved inland silverside of 0.50 mg or greater and 0.43 mg or greater for surviving preserved inland silverside.
- 4) a control Coefficient of Variation percent (CV%) between replicates of 40 or less in the in the growth and survival tests.
- 5) a critical dilution CV% of 40 or less in the growth and survival endpoints for either growth and survival test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test.

b. Statistical Interpretation

- 1) If the conditions of test acceptability are met and mean survival equals or exceeds 80% in the critical dilution and all dilutions below that, the test shall be considered a passing test. The permittee shall report an No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.
- 2) For the mysid shrimp and the inland silverside larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the NOEC as described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Second Edition" (EPA-600-4-91-003), or the most recent update thereof.

c. Dilution Water

- 1) Dilution water used in the toxicity tests shall be the receiving water collected at a point upstream of the discharge as close as possible to the discharge point, but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall;  
(a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial water unaffected by the discharge, or (b) utilize the closest downstream perennial water unaffected by the discharge.
- 2) Where the receiving water proves unsatisfactory as a result of preexisting instream toxicity (i.e. fails to fulfill the test acceptance criteria of item 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
  - a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of item 2.a;
  - b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days);
  - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3 of this Section.

Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.

## d. Samples and Composites

- 1) The permittee shall collect a minimum of three flow-weighted 24-hour composite samples from Outfall 001. The second and third 24-hour composite samples will be used for the renewal of the dilution concentrations for each toxicity test. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportionally to flow, or a sample continuously collected proportionally to flow over a 24-hour operating day.
- 2) The permittee shall collect the 24-hour composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.
- 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first 24-hour composite sample. The holding time for any subsequent 24-hour composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 4 degrees Centigrade during collection, shipping, and storage.
- 4) If flow from the outfall being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time, are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with daily renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Part 3 of this Section.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Water Quality Assessment Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the Report Preparation Section of "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Second Edition" (EPA 600-4-91-003), or the most recent update thereof, for every valid and invalid toxicity test initiated whether carried to completion or not. All full reports shall be retained for 3 years at the plant site and shall be available for inspection by TNRCC personnel.
- b. A full report must be submitted with the first valid biomonitoring test results for each test species and with the first test results any time the permittee subsequently employs a different test laboratory. Full reports need not be submitted for subsequent testing unless specifically requested. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit. All Table 1 reports must include the information specified in the Table 1 form attached to this permit.
  - 1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12 month period.
  - 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6 month period.
  - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th, for biomonitoring conducted during the previous calendar quarter.



- 4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.
- c. Enter the following codes on the DMR for the appropriate parameters for valid tests only:
  - 1) For the mysid shrimp, Parameter TLP3E, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For the mysid shrimp, Parameter TOP3E, report the NOEC for survival.
  - 3) For the mysid shrimp, Parameter TPP3E, report the NOEC for growth.
  - 4) For the inland silverside, Parameter TLP6B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 5) For the inland silverside, Parameter TOP6B, report the NOEC for survival.
  - 6) For the inland silverside, Parameter TPP6B, report the NOEC for growth.

#### 4. Persistent Lethality

The requirements of this Part apply only when a toxicity test demonstrates significant lethality at the critical dilution. Significant lethality is defined as a statistically significant difference, at the 95% confidence level, between the survival of the test organism in a specified effluent dilution when compared to the survival of the test organism in the control.

- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates significant lethality at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If one or both of the two retests specified in item 4.a. demonstrates significant lethality at the critical dilution, the permittee shall initiate the TRE requirements as specified in Part 5.
- c. The provisions of item 4.a. are suspended upon completion of the two retests and submittal of the TRE Action Plan and Schedule defined in Part 5 of this Section.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the last test day of the retest that confirms significant lethal effects at the critical dilution, the permittee shall submit a General Outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the last test day of the retest that confirms significant lethal effects at the critical dilution, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethal effects at the critical dilution for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:

- 1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled, "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003), or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.
- d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and
  - 6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office (6WQ-PM) and the TNRCC Region 10 office.

- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species; testing for the less sensitive species shall continue at the frequency specified in Part 1.b. If the effluent ceases to effect significant lethality (herein as defined below) the permittee may end the TRE. A "cessation of lethality" is defined as no significant lethality at the critical dilution for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision does not apply as a result of corrective actions taken by the permittee. "Corrective actions" are herein defined as proactive efforts which eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, then this permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing the WET limit, in lieu of an alternate toxicity control measure, by identifying and confirming the toxicant and/or an appropriate control measure.

- f. The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall provide information pertaining to the specific control mechanism(s) selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism(s). Copies of the Final Report on the TRE Activities shall also be submitted to the U.S. EPA Region 6 office (6WQ-PM) and the TNRCC Region 10 office.
- g. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify CS limits.

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: MARINE

The provisions of this Section apply individually and separately to Outfall 001 for whole effluent toxicity testing (biomonitoring). No samples or portions of samples from one outfall may be composited with samples or portions of samples from another outfall.

1. Scope, Frequency and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this Section. Such testing will determine compliance with the Surface Water Quality Standard, 30 TAC §307.6(e)(2)(B), of greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition" (EPA 600/4-90/027F), or the most recent update thereof:
  - 1) Acute 24-hour static toxicity test using the mysid shrimp (Mysidopsis bahia). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.
  - 2) Acute 24-hour static toxicity test using the inland silverside (Menidia beryllina). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, then repeat, an invalid test during the same reporting period. The repeat test shall include the control and all effluent dilutions and use the appropriate number of organisms and replicates, as specified above. An invalid test is herein defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in item 2.b., the control and/or dilution water shall consist of a standard, synthetic, reconstituted seawater.
- d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, a Best Management Practice (BMP), a Chemical-Specific (CS) limit, additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.
- e. If the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this Section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in item a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency defined in item b.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.

- b. Dilution Water - In accordance with item 1.c., the control and/or dilution water shall normally consist of a standard, synthetic, reconstituted seawater. If the permittee is utilizing the results of a Chronic test to satisfy the requirements in item 1.e., the permittee may use the receiving water or dilution water that meets the requirements of item 2.a as the control and dilution water.
- c. Samples and Composites
  - 1) The permittee shall collect one flow-weighted 24-hour composite sample from Outfall 001. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow, or a sample continuously collected proportional to flow over a 24-hour operating day.
  - 2) The permittee shall collect the 24-hour composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the 24-hour composite sample. Samples shall be maintained at a temperature of 4 degrees Centigrade during collection, shipping, and storage.
  - 4) If the Outfall ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report required in Part 3 of this Section.
  - 5) The effluent samples shall not be dechlorinated after sample collection.

### 3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Water Quality Assessment Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the Report Preparation Section of "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition" (EPA 600/4-90/027F), or the most recent update thereof, for every valid and invalid toxicity test initiated. All full reports shall be retained for 3 years at the plant site and shall be available for inspection by TNRCC personnel.
- b. A full report must be submitted with the first valid biomonitoring test results for each test species and with the first test results any time the permittee subsequently employs a different test laboratory. Full reports need not be submitted for subsequent testing unless specifically requested. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit. All Table 2 reports must include the information specified in the Table 2 form attached to this permit.
  - 1) Semiannual biomonitoring test results are due on or before January 20th and July 20th for biomonitoring conducted during the previous 6 month period.
  - 2) Quarterly biomonitoring test results are due on or before January 20th, April 20th, July 20th, and October 20th, for biomonitoring conducted during the previous calendar quarter.
- c. Enter the following codes on the DMR for the appropriate parameters for valid tests only:

- 1) For the mysid shrimp, Parameter TIE3E, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."
- 2) For the inland silverside, Parameter TIE6B, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."

#### 4. Persistent Mortality

The requirements of this Part apply when a toxicity test demonstrates significant lethality, here defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration after 24-hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These additional effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5 of this Section.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a General Outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:
  - 1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled, "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003), or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

- 2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.
- d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly TRE Activities Reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
  - 6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office (6WQ-PM) and the TNRCC Region 10 office.

- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species; testing for the less sensitive species shall continue at the frequency specified in Part 1.b. If the effluent ceases to effect significant lethality (herein as defined below) the permittee may end the TRE. A "cessation of lethality" is defined as no significant lethality at the critical dilution for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision does not apply as a result of corrective actions taken by the permittee. "Corrective actions" are herein defined as proactive efforts which eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in

chemical usage, and modifications of influent streams and/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, then this permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing the WET limit, in lieu of an alternate toxicity control measure, by identifying and confirming the toxicant and/or an appropriate control measure.

- f. The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall specify the control mechanism(s) that will, when implemented, reduce effluent toxicity as specified in item 5.g. The report will also specify a corrective action schedule for implementing the selected control mechanism(s). The permittee shall also submit copies of the Final Report on the TRE Activities to the U.S. EPA Region 6 office (6WQ-PM) and the TNRCC Region 10 office.
- g. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC 307.6.(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE.

The requirement to comply with 30 TAC 307.6.(e)(2)(B) may be exempted upon proof that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g. metals) form a salt compound. Following the exemption, the permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

- h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify a CS limit.



TABLE 1 (SHEET 1 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

Dates and Times No. 1 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_ Date Time  
 Composites  
 Collected No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_  
 No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving \_\_\_\_\_ Synthetic Dilution  
 water water

MYSID SHRIMP SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers								Mean Percent Survival			CV%*
	A	B	C	D	E	F	G	H	24h	48h	7 day	
0%												
8%												
10%												
14%												
18%												
24%												

\* coefficient of variation = standard deviation x 100/mean

DATA TABLE FOR GROWTH OF MYSID SHRIMP

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	8%	10%	14%	18%	24%
A						
B						
C						
D						
E						

Table 1 (SHEET 2 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

DATA TABLE FOR GROWTH OF MYSID SHRIMP (Continued)

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	8%	10%	14%	18%	24%
F						
G						
H						
Mean Dry Weight (mg)						
CV%*						

\* coefficient of variation = standard deviation x 100/mean

- Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less ( $p=0.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (18%): \_\_\_\_\_ YES \_\_\_\_\_ NO

- Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less ( $p=0.05$ ) than the control's dry weight (growth) for the % effluent corresponding to non-lethal effects?

CRITICAL DILUTION (18%): \_\_\_\_\_ YES \_\_\_\_\_ NO

- Enter percent effluent corresponding to each NOEC below:

a.) NOEC survival = \_\_\_\_\_ % effluent

b.) NOEC growth = \_\_\_\_\_ % effluent

TABLE 1 (SHEET 3 OF 4)

INLAND SILVERSIDE MINNOW LARVAL SURVIVAL AND GROWTH TEST

Dates and Times No. 1 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_ Date Time  
 Composites  
 Collected No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_  
 No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving \_\_\_\_\_ Synthetic Dilution  
 water water

INLAND SILVERSIDE SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0%									
8%									
10%									
14%									
18%									
24%									

\* coefficient of variation = standard deviation x 100/mean

TABLE 1 (SHEET 4 OF 4)

INLAND SILVERSIDE LARVAL SURVIVAL AND GROWTH TEST

INLAND SILVERSIDE GROWTH

Percent Effluent	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight (mg)	CV%*
	A	B	C	D	E		
0%							
8%							
10%							
14%							
18%							
24%							

\* coefficient of variation = standard deviation x 100/mean

Weights are for: \_\_\_ preserved larvae, or \_\_\_ unpreserved larvae

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less ( $p=0.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (18%): \_\_\_\_\_ YES \_\_\_\_\_ NO

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less ( $p=0.05$ ) than the control's dry weight (growth) for the % effluent corresponding to non-lethal effects?

CRITICAL DILUTION (18%): \_\_\_\_\_ YES \_\_\_\_\_ NO

3. Enter percent effluent corresponding to each NOEC below:

a.) NOEC survival = \_\_\_\_\_ % effluent

b.) NOEC growth = \_\_\_\_\_ % effluent

TABLE 2 (SHEET 1 OF 2)

MYSID SHRIMP SURVIVAL

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Mysidopsis) = \_\_\_\_\_ % effluent

95% confidence limits: \_\_\_\_\_

Method of LC50 calculation: \_\_\_\_\_

Orange

REGIONAL WASTEWATER TREATMENT PLANT EVALUATION

Participant Name: City of Orange

PROJECT FLOWS: see attached letter of May 8, 2008

	Peak 2
ADF, mgd	Hour, mgd

PERMIT LIMITS

	ADF, mgd	Peak 2 -Hou	BOD	TSS	NH3
Max. Day					
7 day avg.					
Month, avg.					

PLANT CONDITION

Structures:	Est. Age	Type	Condition	Anticipated Expenditures	
				Rank 1 - 5	5 year
Screening	93-95	R/C	4		
Grit Chamber	95	R/C	--		
Primary Clarifier	Org.	R/C	3		
Trickling Filter	Org.	R/C	3		
Aeration Basin	95	R/C	4		
Final Clarifier	Org. 95	R/C	3		
Disinfection	95	R/C	4		
Chlorine	No				
De-Chlorination	No				
UV	95 Y	R/C	4		
Digesters	Org.	R/C	3		
Mech. Dewatering	95	R/C	4		
Drying Beds					
Buildings		Block	4		

Comments
Minor cracks with efflorescence stains
Not used
Minor cracks.
Minor cracks
Minor cracks in concrete
Holding tanks not used as digester
Not used.

PLANT CONDITION

	Type	Condition	5 year	10 year	Comments
Est. Age	Steel/Conc	Rank 1 - 5			
<u>Mechanical Equipment</u>					
Screening	95	4			Reworked 6/18/08 -
Grit Removal	None				Mechanism removed.
Primary Clarifier	Org.	3			Minor rust to arms
Trickling Filter	Org.	3			Minor rust - galv.
Aeration Basin	95	3			SS pipe & finebubble diffusers
Blowers	95	3-4			One unit out for service.
Aeration Piping	95	4			SS
Aeration Distribution	95	4			SS - finebubble
Final Clarifiers	Org.	2-3			Minor
Disinfection	95	4			UV -
Digester	No				Holding tanks for belt press.
Dewatering	95	3-4			Ashbrook belt press
Electrical	Org.	3			
Power	95	4			
Controls		3			
Manual/SCADA					

Additional Notes:

The following are alleged TCEQ violations noted in an inspection dated January 2008 related to plant condition

Repair or replace defective components of the grit removal system.

Final clarifiers were exhibiting moderate to severe corrosion.

OUTSTANDING DEBT SERVICE

Current Debt Service	\$
Remaining Principle:	\$
Interest Date:	\$
Maturity Date:	\$
Current Annual Debt Service:	\$



### 30-year Expenditure Schedule <sup>(3)</sup> City of Orange WWTP

Description	Present Replacement Value (2009)	Replacement Year <sup>(2)</sup>	Replacement Year <sup>(1)</sup>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	
Influent Headwork - Conc. Structure	\$ 673,750																																		
Bar Screens	\$ 249,500	\$ (567,034)	2018																				\$45,504	\$45,504	\$45,504	\$45,504	\$45,504	\$45,504	\$45,504	\$45,504	\$45,504	\$45,504	\$45,504	\$45,504	
Grit Removal	\$ 539,000	\$ (1,134,168)	2028																				\$91,000	\$91,000	\$91,000	\$91,000	\$91,000	\$91,000	\$91,000	\$91,000	\$91,000	\$91,000	\$91,000		
Primary Clarifier - Conc. Structure	\$ 1,078,000	\$ (2,789,766)	2035																											\$223,858	\$223,858	\$223,858	\$223,858	\$223,858	
Primary Clarifier - Mechanism	\$ 539,000	\$ (646,900)	2009	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901			
Primary Effluent L.S. - Conc. Structure	\$ 269,500	\$ (697,442)	2035																											\$55,965	\$55,965	\$55,965	\$55,965	\$55,965	
Primary Effluent L.S. - Pumps	\$ 134,750	\$ (161,700)	2009	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975			
Handling Filter - Conc. Structure	\$ 1,617,000	\$ (4,194,650)	2035																											\$335,787	\$335,787	\$335,787	\$335,787	\$335,787	
Trickling Filter - Distribution Mechanism	\$ 1,078,000	\$ (1,293,600)	2009	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802	\$103,802			
Intermediate L.S. - Conc. Structure	\$ 269,500	\$ (697,442)	2035																											\$55,965	\$55,965	\$55,965	\$55,965	\$55,965	
Intermediate L.S. - Pumps	\$ 134,750	\$ (161,700)	2009	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975			
Aeration Basin - Conc. Structure	\$ 808,500																																		
Aeration Basin - Blowers	\$ 539,000	\$ (1,166,193)	2029																					\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	
Aeration Basin - Diffusers & Piping	\$ 404,250	\$ (632,945)	2018										\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789			
Final Clarifier #1,2 - Conc. Structures	\$ 1,347,500	\$ (3,487,208)	2035																											\$279,823	\$279,823	\$279,823	\$279,823	\$279,823	
Final Clarifier #1,2 - Mechanism	\$ 673,750	\$ (808,500)	2009	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876	\$64,876			
Final Clarifier #3,4 - Conc. Structure	\$ 1,347,500																																		
Final Clarifier #3,4 - Mechanism	\$ 673,750	\$ (1,460,241)	2029																					\$117,174	\$117,174	\$117,174	\$117,174	\$117,174	\$117,174	\$117,174	\$117,174	\$117,174	\$117,174	\$117,174	
UV Disinfection - Conc. Structure	\$ 1,347,500																																		
UV Disinfection - Equipment	\$ 2,695,000	\$ (5,038,467)	2024															\$404,300	\$404,300	\$404,300	\$404,300	\$404,300	\$404,300	\$404,300	\$404,300	\$404,300	\$404,300	\$404,300	\$404,300	\$404,300	\$404,300	\$404,300	\$404,300		
Final Effluent L.S. - Conc. Structure	\$ 269,500	\$ (697,442)	2035																												\$55,965	\$55,965	\$55,965	\$55,965	\$55,965
Final Effluent L.S. - Pumps	\$ 134,750	\$ (161,700)	2009	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975			
Secondary Final Effluent L.S. - Conc. Structure	\$ 269,500																																		
Secondary Final Effluent L.S. - Pumps	\$ 134,750	\$ (283,542)	2028																					\$22,752	\$22,752	\$22,752	\$22,752	\$22,752	\$22,752	\$22,752	\$22,752	\$22,752	\$22,752	\$22,752	
Primary Sludge L.S. - Conc. Structure	\$ 269,500	\$ (697,442)	2035																												\$55,965	\$55,965	\$55,965	\$55,965	\$55,965
Primary Sludge L.S. - Pumps	\$ 134,750	\$ (161,700)	2009	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975	\$12,975			
Aerated Sludge Holding - Conc. Structure	\$ 808,500																																		
Aerated Sludge Holding - Blowers	\$ 539,000	\$ (1,166,193)	2029																					\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	\$93,730	
Aerated Sludge Holding - Diffusers & Piping	\$ 404,250	\$ (632,945)	2018										\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789	\$50,789		
Gravity Belt Thickener	\$ 1,078,000	\$ (1,844,364)	2021													\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997		
Thickened Sludge Holding - Conc. Structure	\$ 1,347,500	\$ (3,487,208)	2035																												\$279,823	\$279,823	\$279,823	\$279,823	\$279,823
Belt Filter Press	\$ 1,078,000	\$ (1,844,364)	2021													\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997	\$147,997		
Sludge Dewatering & Blower Building	\$ 1,078,000																																		
Sand Drying Beds	\$ 539,000	\$ (646,800)	2009	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901	\$51,901			
Yard Paving	\$ 1,347,500	\$ (3,191,289)	2032																								\$256,071.32	\$256,071.32	\$256,071.32	\$256,071.32	\$256,071.32	\$256,071.32	\$256,071.32	\$256,071.32	\$256,071.32
Buildings	\$ 1,078,000	\$ (3,234,104)	2040																																
<b>Total Annual Expenditures</b>				\$324,381	\$324,381	\$324,381	\$324,381	\$324,381	\$324,381	\$324,381	\$324,381	\$324,381	\$324,381	\$425,959	\$425,959	\$425,959	\$721,952	\$721,952	\$721,952	\$1,126,252	\$1,126,252	\$1,126,252	\$1,285,517	\$1,265,787	\$1,265,787	\$1,265,787	\$1,521,864	\$1,521,864	\$1,521,864	\$2,865,013	\$2,865,013	\$2,763,435	\$2,763,435		
<b>Present Value (FY-2009) of Annual Expenditures</b>				\$324,381	\$314,933	\$305,760	\$296,854	\$288,208	\$279,814	\$271,664	\$263,751	\$256,069	\$248,602	\$316,954	\$307,722	\$306,363	\$491,614	\$477,295	\$472,898	\$701,843	\$681,401	\$681,354	\$733,112	\$700,836	\$680,423	\$640,605	\$771,116	\$748,650	\$726,851	\$1,328,491	\$1,289,797	\$1,252,231	\$1,172,653	\$1,138,496	

Present Value (FY-2009) of 30-yr Annual Expenditures Total **\$18,998,810**

**Note:**

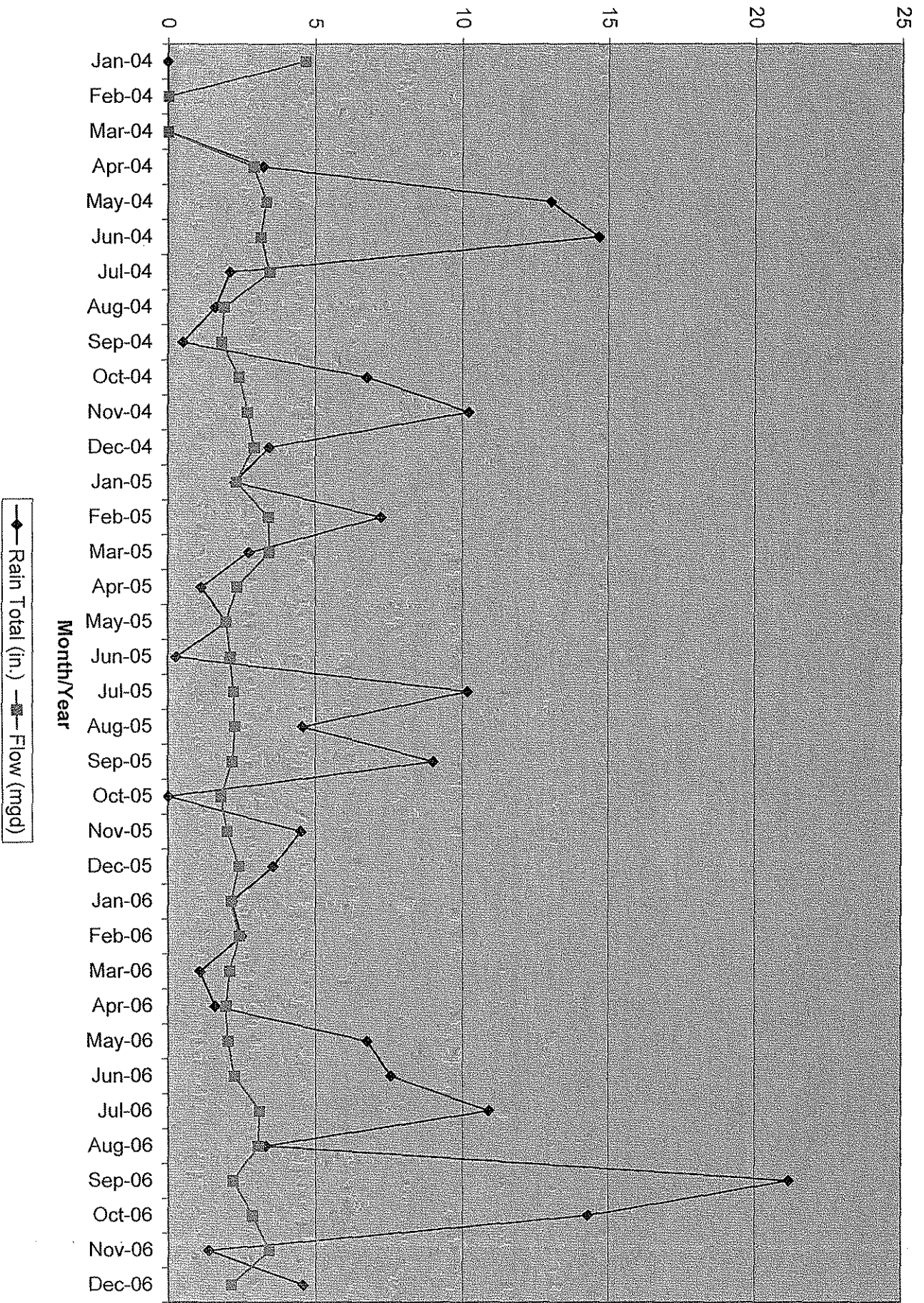
- (1) Replacement year based upon a minimum remaining life expectancy of 25-percent.
- (2) Replacement year value includes additional 20-percent for unitized construction as well as an annual inflation rate of 3-percent.
- (3) Annual expenditure payments based on a 20-year loan at an interest rate of 5-percent.

TWDB Loan Terms: 20 years  
Rate: 5%  
Term: 20 years

Inflation: 3%



# ORANGE



Effluent Quality

Orange

TPDES Permit

Effluent Char.	Daily Avg. (mg/l)	7-Day Avg. (mg/l)	Daily Max (mg/l)
BOD	20	30	45
TSS	20	30	45
Total Copper	0.0285 / 0.0091	0.0458 / 0.0146	0.0603 / 0.0193
Total Zinc	0.2369 / 0.0804	0.3807 / 0.1293	0.5011 / 0.1702
DO (min)	2	N/A	N/A
Fecal Coliform (colonies/100ml)	200	N/A	400
pH	6	N/A	9

Lab Results That Exceeds Permit

Date	Parameter	Results	Comments
1/8/2004	TSS	58	>Daily Max; 0.65 Rain
2/10/2004	TSS	99	>Daily Max; 0 Rain
11/2/2004	BOD	205	>Daily Max; 6.0 Rain
11/19/2006	Zinc	2.57	>Daily Max; 0 Rain

Note: Most on the Fecal Coliform was above 400 colonies/100ml.

3-05  
**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**



**DRAFT**

**NOTICE OF APPLICATION AND PRELIMINARY DECISION  
FOR WATER QUALITY TPDES PERMIT RENEWAL  
FOR MUNICIPAL WASTEWATER**

PERMIT NO. WQ0010626001

**APPLICATION AND PRELIMINARY DECISION.** City of Orange, P.O. Box 520, Orange, Texas 77631-0520, has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of TPDES Permit No. 10626-001, which authorizes the discharge of treated domestic wastewater at an annual average flow not to exceed 7,000,000 gallons per day. This application was submitted to the TCEQ on August 17, 2004.

The facility is located at 402 South 10th Street, between Jackson Street and Polk Avenue and approximately 1,800 feet west of Farm-to-Market Road 1006 (Border Street) in Orange County, Texas. The treated effluent is discharged from Outfall 001 via a 20-inch force main into Sabine River Tidal in Segment No. 0501 of the Sabine River Basin and from Outfall 002 to Adams Bayou Tidal in Segment No. 0508 of the Sabine River Basin. The designated uses for Segment Nos. 0501 and 0508 are high aquatic life uses and contact recreation.

The TCEQ executive director has completed the technical review of the application and prepared a draft permit. The draft permit, if approved, would establish the conditions under which the facility must operate. The executive director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The permit application, fact sheet and draft permit are available for viewing and copying at the Orange City Hall, 803 West Green Street, Orange, Texas.

**PUBLIC COMMENT / PUBLIC MEETING.** You may submit public comments or request a public meeting about this application. The purpose of a public meeting is to provide the opportunity to submit written or oral comment or to ask questions about the application. Generally, the TCEQ will hold a public meeting if the executive director determines that there is a significant degree of public interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing.

Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 within 30 days of the date of newspaper publication of the notice.

**OPPORTUNITY FOR A CONTESTED CASE HEARING.** After the deadline for public comments, the executive director will consider the comments and prepare a response to all relevant and material, or significant public comments. The response to comments, along with the executive director's decision on the application, will be mailed to everyone who submitted public comments or who requested to be on a mailing list for this application. If comments are received, the mailing will also provide instructions for requesting a contested case hearing or reconsideration of the executive director's decision. A contested case hearing is a legal proceeding similar to a civil trial in a state district court.

## FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010626001, (TX0073423) to discharge to waters in the State.

Issuing Office: Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, Texas 78711

Applicant: City of Orange  
P.O. Box 520  
Orange, Texas 77631-0520

Prepared By: Joel P. Klumpp  
Wastewater Permitting Section (MC 148)  
Water Quality Division  
(512) 239-2519

Date: January 19, 2005

Permit Action: Renewal

### 1. EXECUTIVE DIRECTOR RECOMMENDATION

The executive director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The proposed permit includes an expiration date of April 1, 2010.

### 2. APPLICANT ACTIVITY

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of the existing permit that authorizes the discharge of treated domestic wastewater at an annual average flow not to exceed 7.0 million gallons per day.

### 3. FACILITY AND DISCHARGE LOCATION

The plant site is located at 402 South 10th Street, between Jackson Street and Polk Avenue and approximately 1,800 feet west of Farm-to-Market Road 1006 (Border Street) in Orange County, Texas.

The treated effluent is discharged from Outfall 001 via a 20-inch force main into Sabine River Tidal in Segment No. 0501 of the Sabine River Basin and from Outfall 002 to Adams Bayou Tidal in Segment No. 0508 of the Sabine River Basin. The designated uses for Segment Nos. 0501 and 0508 are high aquatic life uses and contact recreation.

### 4. TREATMENT PROCESS DESCRIPTION AND SEWAGE SLUDGE DISPOSAL

The Jackson Street Wastewater Treatment Facility is an activated sludge process plant operated in the extended aeration mode. Treatment units include two bar screens, two primary clarifiers, two trickling filters, two aeration basins, four final clarifiers, two anaerobic sludge digesters, two sludge drying beds, two sludge holding tanks and three ultraviolet (UV) disinfection channels. The facility is in operation.

Sludge generated from the treatment facility is hauled by a registered transporter and disposed of at a TCEQ permitted landfill, the Newton County Regional Waste Complex, Permit No. 2242, in Newton County. The draft permit authorizes the disposal of sludge only at a TCEQ registered or permitted land application site, commercial land application site or co-disposal landfill.

**A. OUTFALL 001 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

The combined annual average flow of effluent shall not exceed 7.0 million gallons per day (MGD) for Outfalls 001 and 002; nor shall the average discharge during any two-hour period (2-hour peak) exceed 16,667 gallons per minute (gpm), (11,111 gpm for Outfall 001 and 5,556 gpm for Outfall 002).

<u>Parameter</u>	<u>30-Day Average</u>		<u>7-Day Average</u>	<u>Daily Maximum</u>
	mg/l	lbs/day	mg/l	mg/l
BOD(5-day)	20	1,168	30	45
TSS	20	1,168	30	45
Total Copper	0.0285	1.66	0.0458	0.0603
Total Zinc	0.2369	13.8	0.3807	0.5011
DO (minimum)	2.0	N/A	N/A	N/A
Fecal Coliform, colonies per 100 ml	200	N/A	400 (*)	N/A

(\*) The 7-day average shall be reported in place of the Daily Max.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

<u>Parameter</u>	<u>Monitoring Requirement</u>
Flow, MGD	Continuous
BOD	five/week
TSS	five/week
Total Copper	two/week
Total Zinc	two/week
DO	five/week
Fecal Coliform	Daily

**B. OUTFALL 002 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

The combined annual average flow of effluent shall not exceed 7.0 million gallons per day (MGD) for Outfalls 001 and 002; nor shall the average discharge during any two-hour period (2-hour peak) exceed 16,667 gallons per minute (gpm), (11,111 gpm for Outfall 001 and 5,556 gpm for Outfall 002).

<u>Parameter</u>	<u>30-Day Average</u>		<u>7-Day Average</u>	<u>Daily Maximum</u>
	mg/l	lbs/day	mg/l	mg/l
BOD(5-day)	20	1,168	30	45
TSS	20	1,168	30	45
NH <sub>3</sub> -N	Report	Report	N/A	Report
Total Copper	0.0091	0.53	0.0146	0.0193

- (a) Chronic static renewal 7-day survival and growth test using the mysid shrimp (Mysidopsis bahia). The frequency of the testing is once per quarter.
  - (b) Chronic static renewal 7-day larval survival and growth test using the inland silverside (Menidia beryllina). The frequency of the testing is once per quarter.
- (2) The draft permit includes the following minimum 24-hour acute saltwater biomonitoring requirements at a frequency of once per six months:
- (a) Acute 24-hour static toxicity test using the mysid shrimp (Mysidopsis bahia).
  - (b) Acute 24-hour static toxicity test using the inland silverside (Menidia beryllina).

#### F. BUFFER ZONE REQUIREMENTS

The permittee shall comply with the requirements of 30 TAC Section 309.13 (a) through (d). In addition, the permittee has complied with the buffer zone requirements of 30 TAC Section 309.13(e) based on the following: The permittee owns the required buffer zone to the north, west and south of the facility. These properties are undeveloped. The property to the east of the facility includes part of an EPA Super Fund Site, a cemetery and City-owned property. The permittee's representative, in their letter dated January 18, 2005, stated that receptors to potential nuisance odors do not exist within the required buffer zone.

#### G. SUMMARY OF CHANGES FROM APPLICATION

There are no changes from the application.

#### H. SUMMARY OF CHANGES FROM EXISTING PERMIT

Effluent limitations and monitoring requirements in the draft permit remain the same as the existing permit requirements.

The Standard Permit Conditions, Sludge Provisions, Other Requirements, and Biomonitoring sections of the draft permit have been updated.

Based on recommendation from TCEQ Water Quality Assessment staff, a monitoring requirement for Ammonia-Nitrogen has been added to the draft permit for Outfall 002. Questions regarding this can be directed to Ms. Karen Holligan, Water Quality Assessment Team, at (512) 239-4589.

The draft permit includes a provision which states that the permittee has complied with the buffer zone requirements of 30 TAC Section 309.13(e) based on the following: The permittee owns the required buffer zone to the north, west and south of the facility. These properties are undeveloped. The property to the east of the facility includes part of an EPA Super Fund Site and a cemetery. The permittee's representative, in their letter dated January 18, 2005, stated that receptors to potential nuisance odors do not exist within the required buffer zone.

Provision No. 11 on page 27 of the existing permit has not been included in the draft permit. This provision requires the permittee to provide documentation to the TCEQ demonstrating that the permittee has explored the possibility of creating a regional wastewater treatment system in cooperation with other municipalities in the area. The permittee provided a letter dated January 11, 2005, which states that the Jackson Street

the bacterial impairment of the segment. This renewal of the intermittent discharge from Outfall 002 during wet weather events does not represent an increase in the oxygen-demanding loads to Adams Bayou and is therefore not expected to further contribute to the DO impairment.

The effluent limitations and/or conditions in the draft permit comply with the Texas Surface Water Quality Standards, 30 TAC Sections 307.1 - 307.10, effective April 30, 1997.

(2) CONVENTIONAL PARAMETERS

Effluent limitations for the conventional effluent parameters (i.e., Biochemical Oxygen Demand or Carbonaceous Biochemical Oxygen Demand, Ammonia Nitrogen, etc.) are based on stream standards and waste load allocations for water quality limited streams as established in the Texas Water Quality Standards and the water quality management plan.

The effluent limitations in the draft permit have been reviewed for consistency with the State of Texas Water Quality Management Plan (WQMP). The proposed effluent limitations are contained in the approved WQMP. A Waste Load Evaluation for Segment No. 0501 has not been prepared. A Waste Load Evaluation for Segment No. 0508 has been prepared; however, the intermittent, wet-weather discharge from Outfall 002 is not included in it.

The effluent limitations in the draft permit meet the requirements for secondary treatment and the requirements for disinfection according to 30 TAC Chapter 309, Subchapter A: Domestic Wastewater Effluent Limitations.

(3) COASTAL MANAGEMENT PLAN

The Executive Director has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the Coastal Coordination Council (CCC) and has determined that the action is consistent with the applicable CMP goals and policies.

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

(1) GENERAL COMMENTS

The Texas Surface Water Quality Standards (30 TAC Chapter 307) state that "surface waters will not be toxic to man, or to terrestrial or aquatic life." The methodology outlined in the "Implementation of the Texas Commission on Environmental Quality Standards via Permitting" is designed to insure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to insure that no source will be allowed to discharge any wastewater which: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

(2) AQUATIC LIFE CRITERIA

(a) SCREENING FOR OUTFALL 001

Water quality-based effluent limitations are calculated from marine aquatic life criteria



(c) SCREENING FOR OUTFALL 002

Water quality-based effluent limitations are calculated from marine aquatic life criteria found in Table 2 of the Texas Surface Water Quality Standards (30 TAC Chapter 307).

Acute marine criteria are applied at the zone of initial dilution (ZID) and chronic marine criteria are applied at the aquatic life mixing zone. The ZID for discharges into bays, estuaries, and wide tidal rivers is defined as 50 feet from the point where the discharge enters Adams Bayou Tidal. The aquatic life mixing zone for discharges into bays, estuaries, and wide tidal rivers is defined as a radius of 200 feet from the point where the discharge enters Adams Bayou Tidal.

TCEQ uses the EPA horizontal jet plume model to estimate dilutions at the ZID and aquatic life mixing zone for discharges into sections of bays, estuaries, and wide tidal rivers where the mixing zone is less than 200 feet. General assumptions used in the horizontal jet plume model are: a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis the following effluent dilutions are calculated based on the permitted flow of 7.0 MGD:

ZID:	95 %	Aquatic Life Mixing Zone:	24%
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Wasteload allocations (WLAs) are calculated using the above estimated effluent dilutions, criteria outlined in the Texas Surface Water Quality Standards, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures). The WLA is the end-of-pipe effluent concentration which can be discharged, when after mixing in the receiving stream, instream numerical criteria will not be exceeded. From the WLA, a long term average (LTA) is calculated using a log normal probability distribution, a given coefficient of variation (0.6), and a 90th percentile confidence level. The LTA is the long term average effluent concentration for which the WLA will never be exceeded using a selected percentile confidence level. The lower of the two LTAs (acute and chronic) is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12). Assumptions used in deriving the effluent limitations include segment values for hardness, chlorides, pH and Total Suspended Solids (TSS) according to the segment-specific values contained in the TCEQ guidance document, "Implementation of the Texas Commission on Environmental Quality Standards via Permitting." The segment values are 20 mg/l CaCO<sub>3</sub> for hardness, 6.3 standard units for pH, and 11 mg/l for TSS. For additional details on the calculation of water quality-based effluent limitations, refer to the TCEQ guidance document.

TCEQ practice for determining significant potential is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application exceeds 85 percent of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

estuaries, or wide tidal rivers that are less than 400 feet wide:

Human Health Mixing Zone: 12%

Water quality-based effluent limitations for human health protection against the consumption of fish tissue are calculated using the same procedure as outlined for calculation of water quality-based effluent limitations for aquatic life protection. A 99th percentile confidence level in the long term average calculation is used with only one long term average value being calculated.

Significant potential is again determined by comparing reported analytical data against 70 percent and 85 percent of the calculated daily average water quality-based effluent limitation.

(d) PERMIT ACTION

Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for human health protection.

(4) DRINKING WATER SUPPLY PROTECTION

(a) SCREENING FOR OUTFALLS 001 AND 002

Water Quality Segment Nos. 0501 and 0508 which receive the discharge from this facility are not designated as a public water supply. Screening reported analytical data of the effluent against water quality-based effluent limitations calculated for the protection of a drinking water supply is not applicable.

(b) PERMIT ACTION

None.

(5) WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA

(a) SCREENING

TCEQ has determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity.

The existing permit includes 7-day chronic saltwater biomonitoring requirements. A summary of the chronic biomonitoring testing for the facility indicates that in the past five years the permittee has performed twenty-nine chronic tests, with no demonstrations of significant toxicity.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment, and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's Response to Comments and Final Decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application contact Joel P. Klumpp at (512) 239-2519.

## **11. ADMINISTRATIVE RECORD**

The following items were considered in developing the proposed permit draft:

### **A. PERMIT(S)**

TPDES Permit No. 10626-001 issued January 9, 2001.

### **B. APPLICATION**

Application received August 17, 2004 and additional information received September 21, 2004, December 8, 2004 and January 18, 2005.

### **C. MEMORANDA**

Interoffice memoranda from the Water Quality Assessment Section of the TCEQ Water Quality Division.  
Interoffice memorandum from the Pretreatment Team of the TCEQ Water Quality Division.

### **D. MISCELLANEOUS**

Federal Clean Water Act, Section 402; Texas Water Code Section 26.027; 30 TAC Chapters 305, 309, 312, 319, 30; Commission policies; and EPA guidelines.



TPDES PERMIT NO. WO0010626001

[For TCEQ Office Use Only:

EPA ID No. TX0073423]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

P.O. Box 13087

Austin, Texas 78711-3087

This is a renewal that replaces TPDES Permit No. 10626-001 issued January 9, 2001.

PERMIT TO DISCHARGE WASTES

under provisions of

Section 402 of the Clean Water Act

and Chapter 26 of the Texas Water Code

**DRAFT**

City of Orange

whose mailing address is

P.O. Box 520

Orange, Texas 77631-0520

is authorized to treat and discharge wastes from the Jackson Street Wastewater Treatment Facility, SIC Code 4952

located at 402 South 10th Street, between Jackson Street and Polk Avenue and approximately 1,800 feet west of Farm-to-Market Road 1006 (Border Street) in Orange County, Texas

from Outfall 001 via a 20-inch force main into Sabine River Tidal in Segment No. 0501 of the Sabine River Basin and from Outfall 002 to Adams Bayou Tidal in Segment No. 0508 of the Sabine River Basin

only according with effluent limitations, monitoring requirements and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, **April 1, 2010**.

ISSUED DATE:

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For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 002

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The combined annual average flow of effluent shall not exceed 7.0 million gallons per day (MGD) for Outfalls 001 and 002; nor shall the average discharge during any two-hour period (2-hour peak) exceed 16,667 gallons per minute (gpm) (11,111 gpm for Outfall 001 and 5,556 gpm for Outfall 002).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Minimum Self-Monitoring Requirements</u>	
	Daily Avg mg/l(lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing meter
Biochemical						
Oxygen Demand (5-day)	20 (1,168)	30	45	65	five/week	Composite
Total Suspended Solids	20 (1,168)	30	45	65	five/week	Composite
Ammonia-Nitrogen	Report (Report)	N/A	Report	Report	five/week	Composite
Total Copper	0.0091 (0.53)	0.0146	0.0193	0.0273	two/week	24-Hr Composite
Total Zinc	0.0804 (4.7)	0.1293	0.1702	0.2412	two/week	24-Hr Composite
Total Mercury	Report (Report)	N/A	Report	Report	one/week	24-Hr Composite
Fecal Coliform Bacteria, colonies per 100 ml	200	400 (*)	N/A	800	Daily	Grab

(\*) The 7-day average shall be reported in place of the Daily Max.

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 2.0 mg/l and shall be monitored five times per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

- e. Fecal coliform bacteria concentration - the number of colonies of fecal coliform bacteria per 100 milliliters effluent. The daily average fecal coliform bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a calendar month, where n equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of fecal coliform bacteria equaling zero, a substituted value of one shall be made for input into either computation method. The 7-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
- f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as ( Flow, MGD x Concentration, mg/l x 8.34).
- g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.

### 3. Sample Type

- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).
  - b. Grab sample - an individual sample collected in less than 15 minutes.
- 4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
  - 5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids which have not been classified as hazardous waste separated from wastewater by unit processes .
  - 6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## MONITORING AND REPORTING REQUIREMENTS

### 1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on an approved self-report form, that is signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act, the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### 2. Test Procedures

Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

- i. Unauthorized discharges as defined in Permit Condition 2(g).
  - ii. Any unanticipated bypass which exceeds any effluent limitation in the permit.
  - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
- c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
  - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. One hundred micrograms per liter (100 µg/L);
  - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. Five hundred micrograms per liter (500 µg/L);
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

11. All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Executive Director of the following:
- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the CWA if it were directly discharging those pollutants;
  - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
  - c. For the purpose of this paragraph, adequate notice shall include information on:
    - i. The quality and quantity of effluent introduced into the POTW; and
    - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

### 3. Inspections and Entry

- a. Inspection and entry shall be allowed as prescribed in the Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in Texas Water Code Section 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

### 4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
  - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
  - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;
  - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit



2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
  - b. The permittee shall submit a closure plan for review and approval to the Agriculture and Sludge Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under Texas Water Code § 7.302(b)(6).

7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC § 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities which generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
  - a. Whenever flow measurements for any domestic sewage treatment facility reach 75 percent of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90 percent of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75 percent of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgement of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 149) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission, and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) registered or permitted land application site, commercial land application site or co-disposal landfill. **The disposal of sludge by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is permitted or registered with the TCEQ. This provision does not authorize Distribution and Marketing of sludge. This provision does not authorize land application of Class A Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.**

### SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

#### A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

#### B. Testing Requirements

1. Sewage sludge shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method, which receives the prior approval of the TCEQ for the contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Registration, Review, and Reporting Division and the Regional Director (MC Region 10) within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration, Review, and Reporting Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 10) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 of each year.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

- b. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

Alternative 1 -

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U. S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The executive director will accept from the U. S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and

- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.
- Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.
- Alternative 9 -
  - i. Sewage sludge shall be injected below the surface of the land.
  - ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.
  - iii. When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.
- Alternative 10-
  - i. Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
  - ii. When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

Toxicity Characteristic Leaching Procedure (TCLP) Test - annually

PCBs - annually

All metal constituents and Fecal coliform or Salmonella sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC Section 312.46(a)(1):

<u>Amount of sewage sludge (*)</u>				<u>Monitoring Frequency</u>
<u>metric tons per 365-day period</u>				
0	≤ Sludge	<	290	Once/Year
290	≤ Sludge	<	1,500	Once/Quarter
1,500	≤ Sludge	<	15,000	Once/Two Months
15,000	≤ Sludge			Once/Month

(\*) The amount of bulk sewage sludge applied to the land (dry weight basis).

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC Section 312.7.

4. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the sewage sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

#### D. Notification Requirements

1. If bulk sewage sludge is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk sewage sludge will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

#### E. Record keeping Requirements

The sludge documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC Section 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class B sludges, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:
 

"I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC Section 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC Section 312.83(b) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."
6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained.

16. The certification statement listed in either 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.
17. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk sewage sludge is applied.
  - c. The date and time bulk sewage sludge is applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.
  - e. The amount of sewage sludge (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

## G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 10) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 of each year the following information:

1. Toxicity Characteristic Leaching Procedure (TCLP) results.
2. Annual sludge production in dry tons/year.
3. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
4. Amount of sludge transported interstate in dry tons/year.
5. A certification that the sewage sludge meets the requirements of 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
6. Identity of hauler(s) and transporter registration number.
7. Owner of disposal site(s).
8. Location of disposal site(s).
9. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

9. Permit compliance/noncompliance determinations will be based on the minimum analytical level (MAL) for toxic organic and inorganic parameters. Effluent concentrations measured as less than the MAL are deemed to be compliant with the permit limitations. When an analysis of an effluent sample for the following parameter(s) results in a measurement of less than the MAL, that parameter shall be reported as "< (MAL value)" and this shall be interpreted as a value of zero (0) for compliance purposes.

<u>Parameter</u>	<u>MAL (mg/l)</u>
Copper	0.0100
Zinc	0.0050
Mercury	0.0002

10. The permittee is authorized to discharge from Outfall 002 only if, as a result of wet weather conditions, the average discharge from the facility exceeds 11,111 gallons per minute.

The date, the average flow and duration of each discharge from Outfall 002 shall be recorded and sent to the Texas Commission on Environmental Quality Region 10 - Beaumont Office and the Enforcement Division of the Commission (MC 149) in Austin during the month of September of each year.



CHRONIC BIOMONITORING REQUIREMENTS: MARINE

The provisions of this Section apply to Outfall 001 for whole effluent toxicity testing (biomonitoring).

1. Scope, Frequency and Methodology

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.
- b. The permittee shall conduct all tests utilizing the test organisms, procedures, and quality assurance requirements specified below and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition" (EPA-821-R-02-014), or the most recent update thereof:
  - 1) Chronic static renewal 7-day survival and growth test using the mysid shrimp (*Mysidopsis bahia*) (Method 1007.0 or the most recent update thereof). A minimum of eight replicates with five organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.
  - 2) Chronic static renewal 7-day larval survival and growth test using the inland silverside (*Menidia beryllina*) (Method 1006.0 or the most recent update thereof). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is herein defined as any test failing to satisfy the test acceptability criteria, including Percent Minimum Significant Difference (PMSD) boundary requirements, procedures, and quality assurance requirements specified in the test methods and permit. All test results, valid or invalid, must be submitted as described below.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These additional effluent concentrations are 3%, 5%, 6%, 8%, and 11% effluent. The critical dilution, defined as 8% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, a Chemical-Specific (CS) limit, a Best Management Practice (BMP), additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.
- e. Testing Frequency Reduction
  - 1) If none of the first four consecutive quarterly tests demonstrates significant lethal or sub-lethal effects, the permittee may submit this information in writing and, upon approval from the Water Quality Standards Team, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.
  - 2) If one or more of the first four consecutive quarterly tests demonstrates significant sub-lethal

- 4) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is herein defined as a statistically significant difference at the 95% confidence level between the survival, reproduction, or growth of the test organism(s) in a specified effluent dilution compared to the survival, reproduction, or growth of the test organism(s) in the control (0% effluent).
- 5) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 3 above and a full report will be submitted to the Water Quality Standards Team
- 6) Pursuant to the responsibility assigned to the permittee in Part 2.b.2), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The above-referenced guidance manual will be used when making a determination of test acceptability
- 7) The Water Quality Standards Team will review test results (i.e., Table 1 and Table 2 forms) for consistency with established TCEQ rules, procedures, and permit requirements.

c. Dilution Water

- 1) Dilution water used in the toxicity tests shall be the receiving water collected as close to the point of discharge as possible but unaffected by the discharge.
- 2) Where the receiving water proves unsatisfactory as a result of preexisting instream toxicity (i.e. fails to fulfill the test acceptance criteria of item 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
  - a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of item 2.a;
  - b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days);
  - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3 of this Section.

Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.

d. Samples and Composites

- 1) The permittee shall collect a minimum of three flow-weighted 24-hour composite samples from Outfall 001. The second and third 24-hour composite samples will be used for the renewal of the dilution concentrations for each toxicity test. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportionally to flow, or a sample continuously collected proportionally to flow over a 24-hour operating day.

sampling.

c. Enter the following codes on the DMR for the appropriate parameters for valid tests only:

- 1) For the mysid shrimp, Parameter TLP3E, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
- 2) For the mysid shrimp, Parameter TOP3E, report the NOEC for survival.
- 3) For the mysid shrimp, Parameter TXP3E, report the LOEC for survival.
- 4) For the mysid shrimp, Parameter TWP3E, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."
- 5) For the mysid shrimp, Parameter TPP3E, report the NOEC for growth.
- 6) For the mysid shrimp, Parameter TYP3E, report the LOEC for growth.
- 7) For the inland silverside, Parameter TLP6B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
- 8) For the inland silverside, Parameter TOP6B, report the NOEC for survival.
- 9) For the inland silverside, Parameter TXP6B, report the LOEC for survival.
- 10) For the inland silverside, Parameter TWP6B, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."
- 11) For the inland silverside, Parameter TPP6B, report the NOEC for growth.
- 12) For the inland silverside, Parameter TYP6B, report the LOEC for growth.

d. Enter the following codes on the DMR for retests only:

- 1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
- 2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

#### 4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. A significant effect is defined as a statistically significant difference, at the 95% confidence level, between a specified endpoint (survival, growth, or reproduction) of the test organism in a specified effluent dilution when compared to the specified endpoint of the test organism in the control. Significant lethality is defined as a statistically significant difference in survival at the critical dilution when compared to the survival of the test organism in the control. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction of the test organism in the control.

in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/60-0/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

- 2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.
- d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and
  - 6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office.

- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive

TABLE 1 (SHEET 1 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

Dates and Times No. 1 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_  
 Composites No. 2 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_  
 Collected No. 3 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic Dilution water

MYSID SHRIMP SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers								Mean Percent Survival			CV%
	A	B	C	D	E	F	G	H	24h	48h	7day	
0%												
3%												
5%												
6%												
8%												
11%												

\* coefficient of variation = standard deviation x 100/mean

DATA TABLE FOR GROWTH OF MYSID SHRIMP

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	3%	5%	6%	8%	11%
A						
B						
C						
D						
E						

TABLE 1 (SHEET 3 OF 4)  
 INLAND SILVERSIDE MINNOW LARVAL SURVIVAL AND GROWTH TEST

Dates and Times      Date   Time                      Date   Time  
 Composites          No. 1 FROM: \_\_\_\_\_ TO: \_\_\_\_\_  
 Collected          No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_  
                           No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water      \_\_\_\_\_ Synthetic Dilution water

INLAND SILVERSIDE SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%
	A	B	C	D	E	24h	48h	7 days	
0%									
2%									
5%									
10%									
18%									
33%									

\* coefficient of variation = standard deviation x 100/mean

## 24-HOUR ACUTE BIOMONITORING REQUIREMENTS: MARINE

The provisions of this Section apply to Outfall 001 for whole effluent toxicity testing (biomonitoring).

### 1. Scope, Frequency and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this Section. Such testing will determine compliance with the Surface Water Quality Standard, 30 TAC §307.6(e)(2)(B), of greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition" (EPA-821-R-02-012), or the most recent update thereof:
  - 1) Acute 24-hour static toxicity test using the mysid shrimp (*Mysidopsis bahia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.
  - 2) Acute 24-hour static toxicity test using the inland silverside (*Menidia beryllina*). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, then repeat, an invalid test during the same reporting period. The repeat test shall include the control and all effluent dilutions and use the appropriate number of organisms and replicates, as specified above. An invalid test is herein defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. The control and/or dilution water shall consist of a standard, synthetic, reconstituted seawater.
- d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, a Best Management Practice (BMP), a Chemical-Specific (CS) limit, additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.

### 2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with item 1.c., the control and/or dilution water shall consist of a standard, synthetic, reconstituted seawater.
- c. Samples and Composites
  - 1) The permittee shall collect one flow-weighted 24-hour composite sample from Outfall 001. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow, or a sample continuously collected proportional to flow over a 24-hour operating day.
  - 2) The permittee shall collect the 24-hour composite samples such that the samples are representative

dilution; otherwise, enter a "0."

- 2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

#### 4. Persistent Mortality

The requirements of this Part apply when a toxicity test demonstrates significant lethality, here defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration after 24-hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These additional effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour. The retests shall also be reported on the DMRs as specified in Part 3.d.
- b. If one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5 of this Section.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a General Outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:
  - 1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled, "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003), or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation



include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and/or effluent treatment.

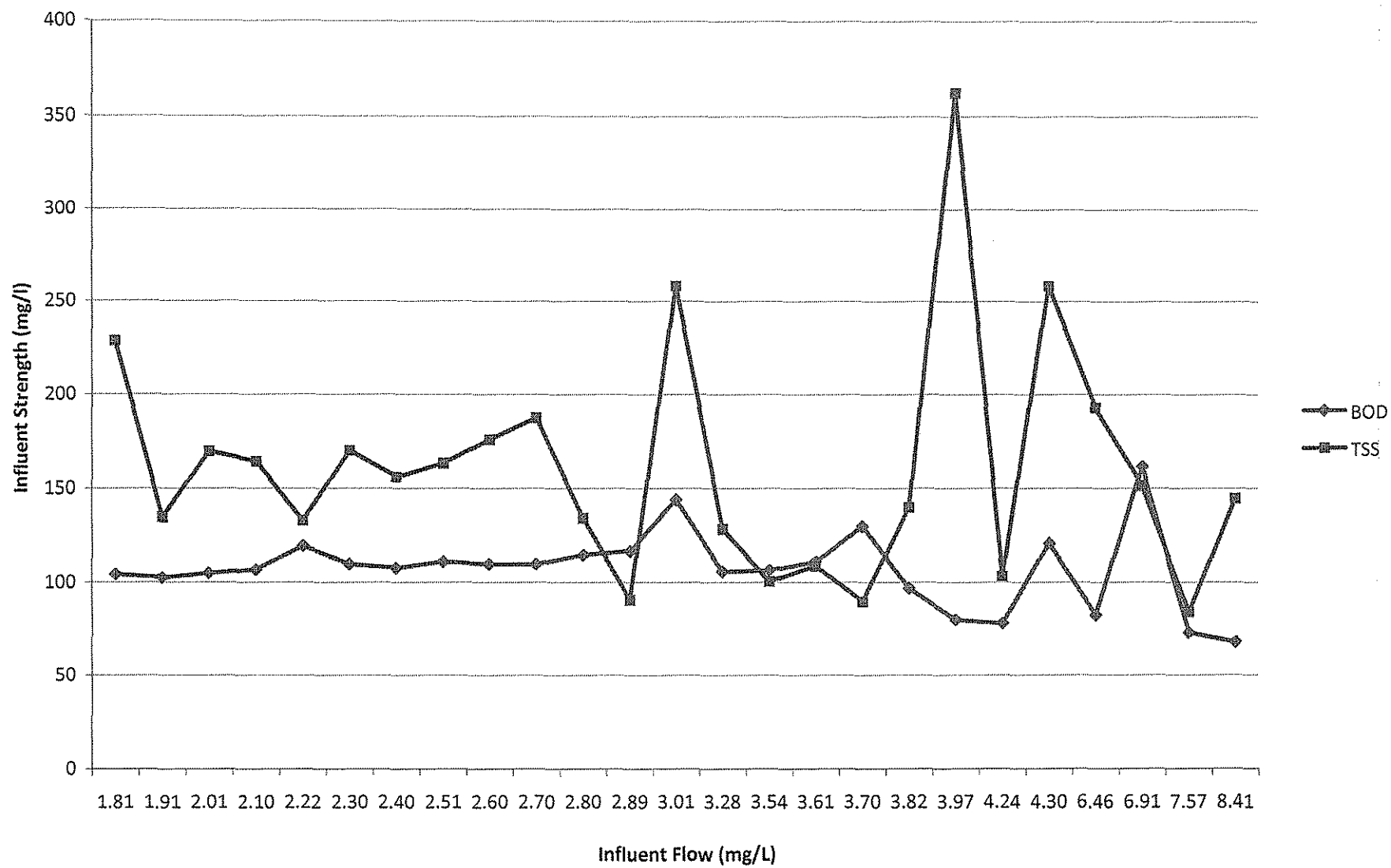
The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and/or an appropriate control measure.

- g. The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall specify the control mechanism(s) that will, when implemented, reduce effluent toxicity as specified in item 5.g. The report will also specify a corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.
- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC 307.6.(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE.

The requirement to comply with 30 TAC 307.6.(e)(2)(B) may be exempted upon proof that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g. metals) form a salt compound. Following the exemption, the permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

- i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify a CS limit.

# Orange BOD and TSS Totals



Pinehurst

REGIONAL WASTEWATER TREATMENT PLANT EVALUATION

Participant Name: City of Pinehurst

PROJECT FLOWS: see attached letter of May 8, 2008

	Peak 2
ADF, mgd	Hour, mgd

PERMIT LIMITS

	ADF, mgd	Peak 2 -Hou BOD	TSS	NH3
Max. Day				
7 day avg.				
Month, avg.				

PLANT CONDITION

	Est. Age	Type	Condition	Anticipated Expenditures	
				5 year	10 year
Structures:					
Screening	2008	Steel	see comments		
Grit Chamber	2008	Steel (SS)	5		
Primary Clarifier	--	--	--	--	--
Trickling Filter	--	--	--	--	--
Aeration Basin	1963/2004	Steel	3		
Final Clarifier	1985	R/C	3		
Disinfection	1985	R/C	3		
Chlorine	1985	Block	3		
De-Chlorination	No				
UV	No				
Digesters	1963/2004	Steel	3		
Mech. Dewatering					
Drying Beds	2004	R/C	3		
Buildings	1985	Brick	2-3		

Comments

@ new gritter 5 - @ old unit 4
Rehab & painted in 2004 - paint is peeling and chalked - minor rust
Minor cracks with efflorescence
Underground pipe chambers
Paint is peeled, Minor deterioration of building trim
Center of old pkg. unit
Polymer bed and sand beds.
Blower & Electrical Building rust & flood @ heavy rain

PLANT CONDITION

	Type	Condition	5 year	10 year
Est. Age	Steel/Conc	Rank 1 - 5		
Mechanical Equipment	2008	SS	5	
Screening	2008	--	--	
Grit Removal	2008	--	--	
Primary Clarifier	--	--	--	
Trickling Filter	--	--	--	
Aeration Basin	2004		4	
Blowers	1985		3-4	
Aeration Piping	1985		2-3	
Aeration Distribution	2004		4	
Final Clarifiers	1985		3	
Disinfection	2004-5		4	
Digester	2004		4	
Dewatering	2004		4	
Electrical				
Power			3	
Controls			3	
Manual/SCADA				
Eq. Basin	2000		3	

Comments

New manual screen, galv. in old structure

Pipe and diffusers replaced in 2004.

Clean & appear to be reworked.

Original pipe from 1985 - Paint is chalked.

Replaced in 2004

Minor rust to weirs and arms.

Replaced 3- 5 years ago.

New pipe and diffuser heads.

Polymer bed - converted on sand bed.

Minor rust to panels.

New computer is good shape for flow monitoring.

Veg. Growth.



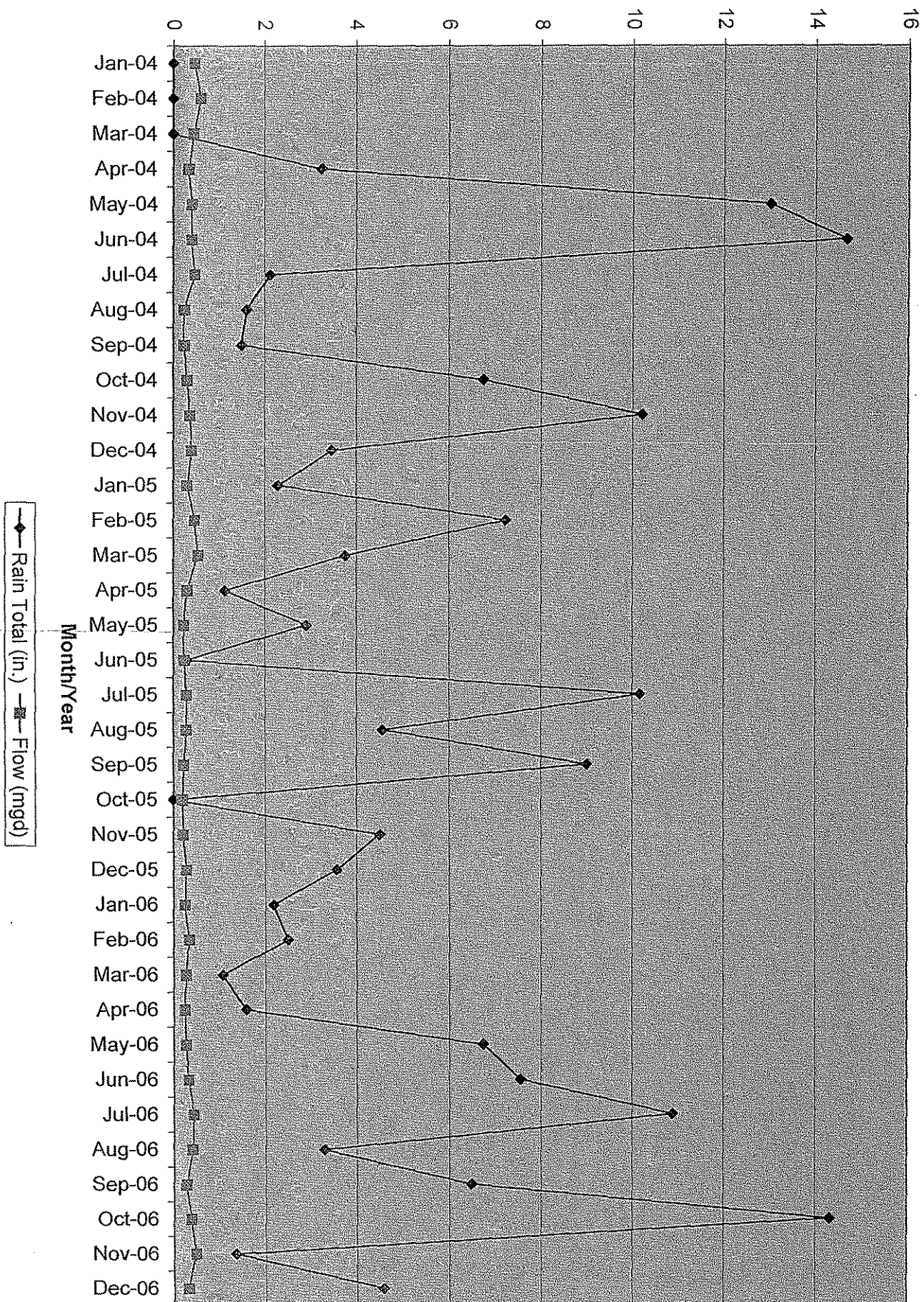
**Table X**  
**30-year Expenditure Schedule <sup>(3)</sup>**  
**City of Pinehurst WWTP**

Description	Present Replacement Value (2009)	Replacement Year Value <sup>(2)</sup>	Replacement Year <sup>(1)</sup>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039		
Influent L.S. - Conc. Structure	\$ 89,528																																			
Influent L.S. - Pump	\$ 44,764	\$ (66,085)	2018								\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	\$5,201	
Grit Unit - Influent Structure	\$ 44,764																																			
Grit Unit	\$ 134,292	\$ (491,154)	2039																																\$31,287	
Aeration Basin - Steel	\$ 447,640	\$ (1,537,160)	2009	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104	\$43,104
Aeration Basin - Air Piping & Diffusers	\$ 313,348	\$ (603,398)	2025																	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418	\$48,418
Aeration Basin - Blowers	\$ 134,292	\$ (204,141)	2017									\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	
Clarifier - Concrete Structure	\$ 671,460		2055																																	
Clarifier - Mechanism	\$ 223,820	\$ (340,236)	2017									\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	\$27,301	
RAS/WAS Pumps	\$ 268,584	\$ (695,071)	2035																																\$55,774	
Chlorine Contact Chamber - Concrete	\$ 268,584		2055																																	
Disinfection Equipment	\$ 368,584	\$ (517,198)	2025																	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	\$41,501	
Digester - Steel Structure	\$ 338,112	\$ (429,734)	2009	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	\$34,483	
Digester - Air Piping & Diffusers	\$ 268,584	\$ (517,198)	2025																																	
Digester - Blowers	\$ 134,292	\$ (204,141)	2017									\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	\$16,381	
Sludge - Metcalf Pump	\$ 44,764	\$ (135,845)	2035																																\$9,296	
Sludge - Polymer Filter Bed	\$ 179,056		2047																																\$9,296	
Plant - Yard Piping	\$ 223,820		2052																																	
Flow Equalization - Basin	\$ 223,820		2070																																	
Flow Equalization - Aeration	\$ 134,292	\$ (229,762)	2021													\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	\$18,427	
<b>Total Annual Expenditures</b>				\$77,587	\$77,587	\$77,587	\$77,587	\$77,587	\$77,587	\$77,587	\$82,888	\$142,951	\$142,951	\$142,951	\$142,951	\$161,387	\$161,387	\$161,387	\$161,387	\$251,307	\$251,307	\$251,307	\$251,307	\$173,720	\$173,720	\$173,720	\$173,720	\$173,720	\$173,720	\$238,790	\$233,489	\$173,426	\$173,426	\$204,813		
<b>Present Value (FY-2009) of Annual Expenditures</b>				\$77,587	\$75,327	\$73,133	\$71,003	\$68,935	\$66,927	\$64,978	\$67,396	\$112,847	\$109,500	\$106,369	\$103,271	\$113,194	\$109,807	\$106,696	\$103,568	\$156,606	\$152,045	\$147,616	\$143,317	\$96,185	\$93,383	\$90,663	\$88,023	\$85,459	\$82,970	\$110,726	\$105,114	\$75,801	\$75,593	\$84,380		

**Present Value (FY-2009) of 30-yr Annual Expenditures Total \$3,016,586**

Note:  
(1) Replacement year based upon a minimum remaining life expectancy of 25-percent.  
(2) Replacement year value includes additional 20-percent for unitized construction as well as an annual inflation rate of 3-percent.  
(3) Annual expenditure payments based on a 20-year loan at an interest rate of 5-percent.

# PINEHURST





*Vanell*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
P.O. Box 13087  
Austin, Texas 78711-3087

TPDES PERMIT NO. W00010597001  
[For TCEQ Office Use Only:  
EPA ID No. TX0024171]

This is a renewal that replaces  
TPDES Permit No. 10597-001 issued  
December 13, 2002.

PERMIT TO DISCHARGE WASTES  
under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

City of Pinehurst

whose mailing address is

3640 Mockingbird Street  
Orange, Texas 77630

is authorized to treat and discharge wastes from the Pinehurst Wastewater Treatment Facility, SIC Code 4952  
located at 3000 Gull Street in the City of Pinehurst in Orange County, Texas

to Adams Bayou Tidal in Segment No. 0508 of the Sabine River Basin

only according with effluent limitations, monitoring requirements and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, **December 1, 2010**.

ISSUED DATE: **DEC 20 2005**

A handwritten signature in black ink, appearing to be "R. [unclear]".

For the Commission

ITEM L

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.5 million gallons per day (MGD); nor shall the average discharge during any two-hour period (2-hour peak) exceed 1,042 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Minimum Self-Monitoring Requirements</u>	
	Daily Avg mg/l(lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing meter
Biochemical Oxygen Demand (5-day)	20 (83)	30	45	65	One/week	Composite
Total Suspended Solids	20 (83)	30	45	65	One/week	Composite
Ammonia Nitrogen	Report (Report)	N/A	Report	N/A	One/week	Composite

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l and shall not exceed a chlorine residual of 4.0 mg/l after a detention time of at least 20 minutes (based on peak flow), and shall be monitored daily by grab sample. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per month by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 3.0 mg/l and shall be monitored once per week by grab sample.

**DEFINITIONS AND STANDARD PERMIT CONDITIONS**

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC §§ 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code §§ 5.103 and 5.105, and the Texas Health and Safety Code §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in Section 26.001 of the Texas Water Code and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

**1. Flow Measurements**

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with a 1 million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

**2. Concentration Measurements**

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
  - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.
  - ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day.

The "daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Fecal coliform bacteria concentration - the number of colonies of fecal coliform bacteria per 100 milliliters effluent. The daily average fecal coliform bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the  $n$ th root of the product of all measurements made in a calendar month, where  $n$  equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of fecal coliform bacteria equaling zero, a substituted value of one shall be made for input into either computation method. The 7-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
  - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as ( Flow, MGD x Concentration, mg/l x 8.34).
  - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).
  - b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids which have not been classified as hazardous waste separated from wastewater by unit processes .
6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## MONITORING AND REPORTING REQUIREMENTS

### 1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on an approved self-report form, that is signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act, the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### 2. Test Procedures

Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

### 3. Records of Results

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.
- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
  - i. date, time and place of sample or measurement;
  - ii. identity of individual who collected the sample or made the measurement.
  - iii. date and time of analysis;
  - iv. identity of the individual and laboratory who performed the analysis;
  - v. the technique or method of analysis; and
  - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that maybe instituted against the permittee.

### 4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

### 5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

### 6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

### 7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
- b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:

- i. Unauthorized discharges as defined in Permit Condition 2(g).
- ii. Any unanticipated bypass which exceeds any effluent limitation in the permit.
- iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.

~~X~~c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.

- d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. One hundred micrograms per liter (100 µg/L);
  - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. Five hundred micrograms per liter (500 µg/L);
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TCEQ.

#### 10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

11. All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Executive Director of the following:
- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the CWA if it were directly discharging those pollutants;
  - b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
  - c. For the purpose of this paragraph, adequate notice shall include information on:
    - i. The quality and quantity of effluent introduced into the POTW; and
    - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

**PERMIT CONDITIONS****1. General**

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
  - i. Violation of any terms or conditions of this permit;
  - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

**2. Compliance**

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.
- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and Texas Water Code Section 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
- h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
- i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal Clean Water Act, §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).

## 3. Inspections and Entry

- a. Inspection and entry shall be allowed as prescribed in the Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 361.
- b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in Texas Water Code Section 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

## 4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
  - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
  - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;
  - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard, or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit



shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Water Quality Applications Team (MC 161) of the Registration, Review, and Reporting Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal which requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to Chapter 11 of the Texas Water Code.

8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy.

- a. Each permittee shall notify the executive director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
  - i. the permittee;
  - ii. an entity (as that term is defined in 11 USC, §101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or
  - iii. an affiliate (as that term is defined in 11 USC, §101(2)) of the permittee.
- b. This notification must indicate:
  - i. the name of the permittee and the permit number(s);
  - ii. the bankruptcy court in which the petition for bankruptcy was filed; and
  - iii. the date of filing of the petition.

## OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.

2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
  - b. The permittee shall submit a closure plan for review and approval to the Agriculture and Sludge Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under Texas Water Code § 7.302(b)(6).
7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC § 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities which generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
  - a. Whenever flow measurements for any domestic sewage treatment facility reach 75 percent of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90 percent of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75 percent of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgement of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 149) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission, and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

- c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.
9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85 percent, unless otherwise authorized by this permit.
11. Facilities which generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
- Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
  - Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
  - The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
  - Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Registration, Review, and Reporting Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.
  - The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
  - The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:
    - Volume of waste and date(s) generated from treatment process;
    - Volume of waste disposed of on-site or shipped off-site;
    - Date(s) of disposal;
    - Identity of hauler or transporter;
    - Location of disposal site; and
    - Method of final disposal.
- The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.
12. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Texas Health and Safety Code.

## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, or co-disposal landfill. The disposal of sludge by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of sludge. This provision does not authorize land application of Class A Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.

### SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

#### A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

#### B. Testing Requirements

1. Sewage sludge shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method, which receives the prior approval of the TCEQ for the contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Registration, Review, and Reporting Division and the Regional Director (MC Region 10) within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration, Review, and Reporting Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 10) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 of each year.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration (milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis

### 3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.

- a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. Below are the additional requirements necessary to meet the definition of a Class A sludge.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC Section 312.82(a)(2)(A) for specific information.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC Section 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC Section 312.82(a)(2)(C)(iv-vi) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of shall be treated in one of the processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of shall be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

Alternative 1 -

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U. S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The executive director will accept from the U. S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and

- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition, the following site restrictions must be met if Class B sludge is land applied:

- i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.
- v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.
- vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.
- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
- ix. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC Section 312.44.

#### 4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives 1 through 10 for Vector Attraction Reduction.

- Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.
- Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance.
- Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance.
- Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.
- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.
- Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.
- Alternative 9 -
  - i. Sewage sludge shall be injected below the surface of the land.
  - ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.
  - iii. When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.
- Alternative 10 -
  - i. Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
  - ii. When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

- Toxicity Characteristic Leaching Procedure (TCLP) Test - once during the term of this permit
- PCBs - once during the term of this permit

All metal constituents and Fecal coliform or Salmonella sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC Section 312.46(a)(1):

<u>Amount of sewage sludge (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(\*) The amount of bulk sewage sludge applied to the land (dry weight basis).

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC Section 312.7.



**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

**A. Pollutant Limits**

Table 2

<u>Pollutant</u>	<u>Cumulative Pollutant Loading Rate (pounds per acre)</u>
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	<u>Monthly Average Concentration (milligrams per kilogram)*</u>
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

\* Dry weight basis

**B. Pathogen Control**

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A or Class B pathogen reduction requirements as defined above in Section I.B.3.

**C. Management Practices**

1. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk sewage sludge not meeting Class A requirements shall be land applied in a manner which complies with the Management Requirements in accordance with 30 TAC Section 312.44.
3. Bulk sewage sludge shall be applied at or below the agronomic rate of the cover crop.

4. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the sewage sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

#### D. Notification Requirements

1. If bulk sewage sludge is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk sewage sludge will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

#### E. Record keeping Requirements

The sludge documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC Section 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class B sludges, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

"I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC Section 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC Section 312.83(b) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained.

The person who applies bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC Section 312.47 for persons who land apply.

1. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge treatment activities.
2. The location, by street address, and specific latitude and longitude, of each site on which sludge is applied.
3. The number of acres in each site on which bulk sludge is applied.
4. The date and time sludge is applied to each site.
5. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
6. The total amount of sludge applied to each site in dry tons:

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

#### F. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 10) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 1 of each year the following information:

1. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
2. The frequency of monitoring listed in Section I.C. which applies to the permittee.
3. Toxicity Characteristic Leaching Procedure (TCLP) results.
4. Identity of hauler(s) and TCEQ transporter number.
5. PCB concentration in sludge in mg/kg.
6. Date(s) of disposal.
7. Owner of disposal site(s).
8. Texas Commission on Environmental Quality registration number, if applicable.
9. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.
10. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
11. Level of pathogen reduction achieved (Class A or Class B).
12. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met.
13. Vector attraction reduction alternative used as listed in Section I.B.4.
14. Annual sludge production in dry tons/year.

15. Amount of sludge land applied in dry tons/year.
16. The certification statement listed in either 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.
17. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk sewage sludge is applied.
  - c. The date and time bulk sewage sludge is applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.
  - e. The amount of sewage sludge (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge to the owner or operator of a Municipal Solid Waste Landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.
- D. Sewage sludge shall be tested once during the term of this permit in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Registration, Review, and Reporting Division and the Regional Director (MC Region 10) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration, Review, and Reporting Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 10) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 of each year.

- E. Sewage sludge shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.
- F. Record keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 10) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 of each year the following information:

1. Toxicity Characteristic Leaching Procedure (TCLP) results.
2. Annual sludge production in dry tons/year.
3. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
4. Amount of sludge transported interstate in dry tons/year.
5. A certification that the sewage sludge meets the requirements of 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
6. Identity of hauler(s) and transporter registration number.
7. Owner of disposal site(s).
8. Location of disposal site(s).
9. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

**OTHER REQUIREMENTS**

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This Category C facility must be operated by a chief operator or an operator holding a Category C license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift which does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The Executive Director has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the Coastal Coordination Council (CCC) and has determined that the action is consistent with the applicable CMP goals and policies.
3. The permittee is hereby placed on notice that this permit may be reviewed by the Texas Commission on Environmental Quality after the completion of any new intensive water quality survey on Segment No. 0508 of the Sabine River Basin and any subsequent updating of the water quality model for Segment No. 0508, in order to determine if the limitations and conditions contained herein are consistent with any such revised model. The permit may be amended, pursuant to 30 TAC Section 305.62, as a result of such review. The permittee is also hereby placed on notice that effluent limits may be made more stringent at renewal based on, for example, any change to modeling protocol approved in the TCEQ Continuing Planning Process.

**CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit (60 degrees Celsius) using the test methods specified in 40 CFR §261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104 degrees Fahrenheit (40 degrees Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403.
3. The permittee shall provide adequate notification to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division within 30 days subsequent to the permittee's knowledge of either of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works, and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.



WCID No. 2

REGIONAL WASTEWATER TREATMENT PLANT EVALUATION

Participant Name: City of West Orange

PROJECT FLOWS: see attached letter of May 8, 2008

	Peak 2
ADF, mgd	Hour, mgd

PERMIT LIMITS

	ADF, mgd	Peak 2 -Hou BOD	TSS	NH3
Max. Day.				
7 day avg.				
Month, avg.				

PLANT CONDITION

	Type	Condition	Anticipated Expenditures	
			5 year	10 year
Structures:	Est. Age	Rank 1 - 5		
Screening	1985	R/C	3	
Grit Chamber	No			
Primary Clarifier	No			
Trickling Filter	No			
Aeration Basin	1985	R/C	3	
Final Clarifier	1985	R/C	2	
Disinfection	1985	R/C	3	
Chlorine	pre. 80's	Steel	2	
De-Chlorination		R/C	3	
UV	No			
Digesters		Steel		
Mech. Dewatering				
Drying Beds	1985	R/C	3	
Buildings		Steel	1	

Comments

Orbal - upgrade 1997
Min. to mod. cracking w/leak @ effl. Trough.
Mod. rust w/deterioration of steel walls.
Mod. rust w/deterioration of steel walls.
Metal building, roof is rusted through with major deterioration of panels on blower building. Wall panels are loose and rusted.

PLANT CONDITION

	Est. Age	Type	Condition Rank 1 - 5	5 year	10 year
Mechanical Equipment					
Screening	97		3		
Grit Removal	No				
Primary Clarifier	No				
Trickling Filter	No				
Aeration Basin	1997		3		
Blowers			2		
Aeration Piping			2		
Aeration Distribution			2		
Final Clarifiers			2		
Disinfection	1997		3		
Digester			2		
Dewatering	1995 , 1997		2-3		
Electrical			3		
Power					
Controls					
Manual/SCADA					
Flow Eq. Basin	1997		3		
RAS/WAS Pumps	1997		3		

Comments

Automatic screen
Orbal upgrade-disc in good shape, none broken
Blower fair condition, one blower broken out of service
Leaks underground
Digester - Diffusers plugged in several locations
Leaks at weirs, need to repair seals, sludge valve broke on CL rain line being used for sludge
See Aeration comments above.
Blocks are installed w/gaps in locations; metal strips loose at entrance ramps.
Earthen Pond; Screw pump @ influent diversion

OUTSTANDING DEBT SERVICE

Current Debt Service	\$
Remaining Principle:	\$
Interest Date:	\$
Maturity Date:	\$
Current Annual Debt Service:	\$

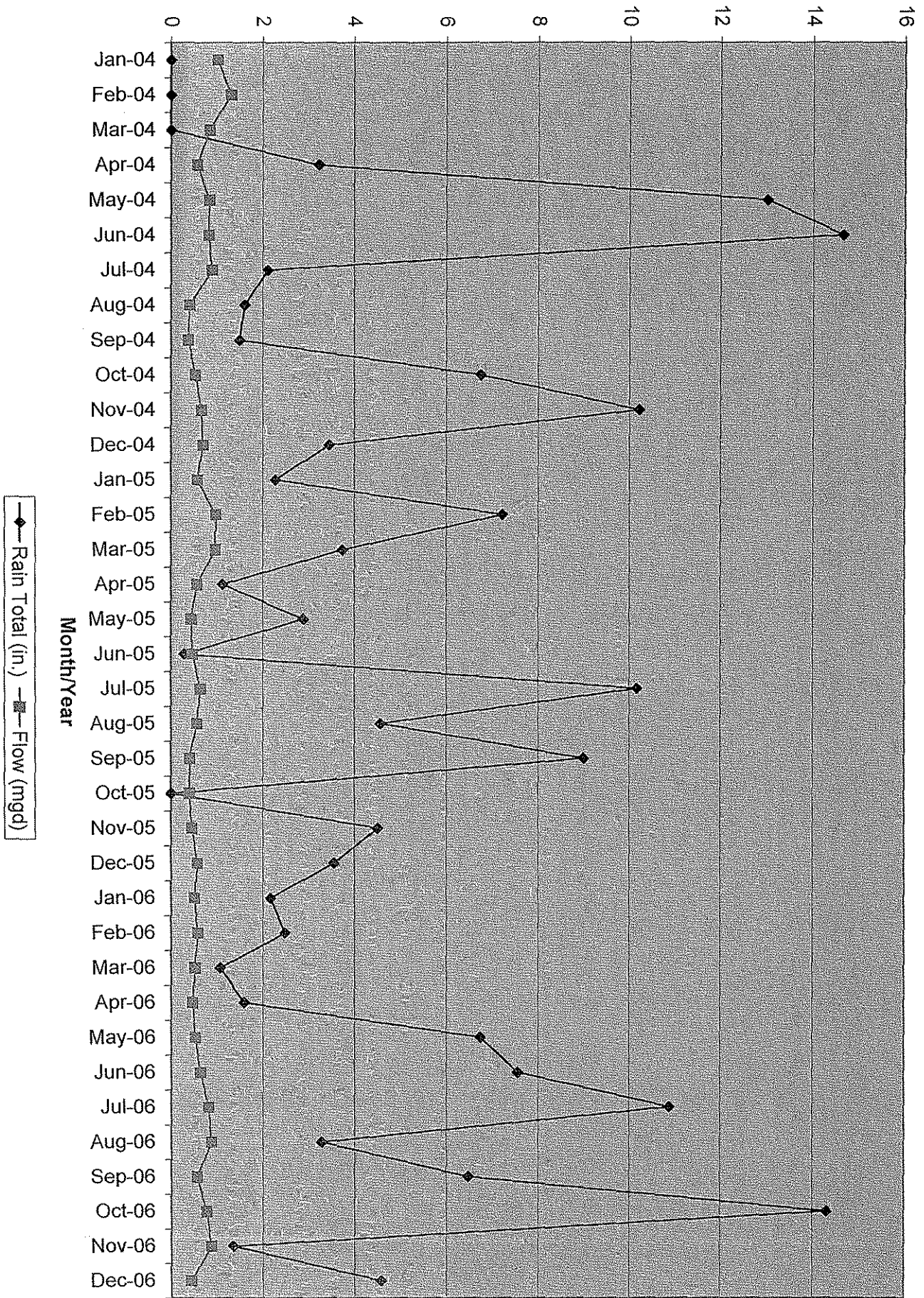
**Table X**  
**30-year Expenditure Schedule <sup>(3)</sup>**  
**Orange County WCID No. 2 WWTP**

Description	Present Replacement Value (2009)	Replacement Year <sup>(1)</sup>	Replacement Value <sup>(2)</sup>	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039		
Influent L.S. - Concrete Structure	\$ 147,864																																			
Influent L.S. - Pumps	\$ 73,932	2016	\$ (169,112)								\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755	\$ 48,755		
Influent Structure - Concrete	\$ 147,864																																			
Mechanical Screen Unit	\$ 147,864	2016	\$ (218,325)								\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511	\$ 117,511		
Orbal Basin - Concrete	\$ 665,388																																			
Orbal Disc & Rows	\$ 591,456	2029	\$ (1,281,862)																				\$ 102,862	\$ 102,862	\$ 102,862	\$ 102,862	\$ 102,862	\$ 102,862	\$ 102,862	\$ 102,862	\$ 102,862	\$ 102,862	\$ 102,862	\$ 102,862		
Clarifier Structure - Concrete	\$ 961,116																																			
Clarifier - Mechanism	\$ 517,524	2017	\$ (766,701)									\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127	\$ 463,127		
RAS/WAS Pumps	\$ 295,728	2028	\$ (622,273)																				\$ 449,933	\$ 449,933	\$ 449,933	\$ 449,933	\$ 449,933	\$ 449,933	\$ 449,933	\$ 449,933	\$ 449,933	\$ 449,933	\$ 449,933	\$ 449,933		
Sed Tank	\$ 147,864	2028	\$ (311,137)																				\$ 224,966	\$ 224,966	\$ 224,966	\$ 224,966	\$ 224,966	\$ 224,966	\$ 224,966	\$ 224,966	\$ 224,966	\$ 224,966	\$ 224,966	\$ 224,966		
Disinfection Equipment	\$ 221,796	2025	\$ (427,101)																			\$ 334,272	\$ 334,272	\$ 334,272	\$ 334,272	\$ 334,272	\$ 334,272	\$ 334,272	\$ 334,272	\$ 334,272	\$ 334,272	\$ 334,272	\$ 334,272	\$ 334,272		
Dechlorination	\$ 443,592	2025	\$ (854,202)																			\$ 608,543	\$ 608,543	\$ 608,543	\$ 608,543	\$ 608,543	\$ 608,543	\$ 608,543	\$ 608,543	\$ 608,543	\$ 608,543	\$ 608,543	\$ 608,543	\$ 608,543		
Digester - Steel Structure	\$ 591,456	2009	\$ (709,747)	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952	\$ 556,952		
Digester Activation Piping & Diffusers	\$ 443,592	2018	\$ (694,544)										\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732	\$ 555,732		
Digester - Blowers	\$ 221,796	2017	\$ (337,157)									\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054	\$ 227,054		
Sludge Metering Pump	\$ 73,932	2035	\$ (191,529)																														\$ 115,253	\$ 115,253	\$ 115,253	
Sludge Drying Beds	\$ 221,796	2009	\$ (256,355)	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357	\$ 221,357		
Polymer Filter Bed	\$ 295,728																																			
Yard Piping	\$ 369,660																																			
Flow Equalization - Basin	\$ 295,728																																			
Flow Equalization - Aerator	\$ 295,728	2018	\$ (463,030)									\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	\$ 327,155	
Metal Buildings	\$ 221,796	2010	\$ (341,272)									\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	\$ 227,866	
<b>Total Annual Expenditures</b>				\$ 78,309	\$ 78,309	\$ 78,309	\$ 78,309	\$ 78,309	\$ 78,309	\$ 78,309	\$ 104,575	\$ 194,757	\$ 315,509	\$ 315,509	\$ 315,509	\$ 315,509	\$ 315,509	\$ 315,509	\$ 315,509	\$ 315,509	\$ 315,509	\$ 418,324	\$ 418,324	\$ 418,324	\$ 493,224	\$ 517,776	\$ 517,776	\$ 517,776	\$ 517,776	\$ 517,776	\$ 533,129	\$ 506,863	\$ 416,681	\$ 295,929	\$ 295,929	
<b>Present Value (FY-2009) of Annual Expenditures</b>				\$ 78,309	\$ 76,028	\$ 73,814	\$ 71,664	\$ 69,576	\$ 67,550	\$ 65,582	\$ 85,029	\$ 153,743	\$ 241,812	\$ 234,769	\$ 227,931	\$ 221,292	\$ 214,847	\$ 208,589	\$ 202,513	\$ 196,686	\$ 191,093	\$ 245,122	\$ 245,122	\$ 245,122	\$ 281,219	\$ 286,680	\$ 278,330	\$ 270,224	\$ 262,353	\$ 254,712	\$ 247,293	\$ 247,209	\$ 228,184	\$ 182,122	\$ 125,576	\$ 121,919

**Present Value (FY-2009) of 30-yr Annual Expenditures Total \$5,838,427**

Note:  
(1) Replacement year based upon a minimum remaining life expectancy of 2.5 percent.  
(2) Replacement year value includes additional 20-percent for unitized construction as well as an annual inflation rate of 3-percent.  
(3) Annual expenditure payments based on a 20-year loan at an interest rate of 5-percent.

ORANGE COUNTY WCID #2



**Effluent Quality**

**OC WCID #2**

**TPDES Permit**

Effluent Char.	Daily Avg. (mg/l)	7-Day Avg. (mg/l)	Daily Max (mg/l)	Single Grab (mg/l)
BOD	15	25	25	35
TSS	25	40	40	60
Total Copper	0.0087	N/A	0.018	0.0261
Total Zinc	0.076	N/A	0.16	0.2318
Chlorine Residual (min)	1	N/A	N/A	N/A
pH	6	N/A	9	N/A
DO (min)	4	N/A	N/A	N/A

**Lab Results That Exceeds Permit**

Date	Parameter	Results	Comments
Note: Only have lab result for 1994 to compare.			

**TCEQ Permit**

Effluent Char.	Avg.	Max
BOD (mg/l)	<2	<2
TSS (mg/l)	<3	<3
Ammonia-Nitrogen (mg/l)	0.103	0.103
Nitrate-Nitrogen (mg/l)	10	10
Total Kjeldahl Nitrogen (mg/l)	<0.2	<0.2
Sulfate (mg/l)	49	49
Chloride (mg/l)	245	245
Total Phosphorus (mg/l)	3.12	3.12
pH	7.22	7.22
DO (mg/l)	7.18	7.18
Chlorine Residual (mg/l)	3.82	3.82
Fecal Coliform (colonies/100ml)	<2	<2
TDS (mg/l)	692	692





**DRAFT**

TPDES PERMIT NO. 10240-001  
[For TNRCC Office Use Only:  
EPA ID No. TX0054810]

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION  
P.O. Box 13087  
Austin, Texas 78711-3087

This is a renewal that replaces  
TNRCC Permit No. 10240-001  
issued March 14, 1997 and NPDES  
Permit No. TX0054810 issued July  
29, 1991.

PERMIT TO DISPOSE OF WASTES

under provisions of  
Section 402 of the Clean Water Act  
and Chapter 26 of the Texas Water Code

Orange County Water Control and Improvement District No. 2

whose mailing address is

P.O. Box 278  
Orange, Texas 77631-0278

is authorized to treat and dispose of wastes from the West Orange Wastewater Treatment Facility, SIC Code 4952

located in West Orange at 1600 Western Avenue, approximately 450 feet east-northeast of the intersection of  
Western Avenue and Albany Street in Orange County, Texas

to Adams Bayou Tidal in Segment No. 0508 of the Sabine River Basin

only according with effluent limitations, monitoring requirements and other conditions set forth in this permit, as well as the rules of the Texas Natural Resource Conservation Commission (TNRCC), the laws of the State of Texas, and other orders of the TNRCC. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, March 1, 2001.

ISSUED DATE:

ATTEST: \_\_\_\_\_

\_\_\_\_\_  
For the Commission

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 1.22 million gallons per day (MGD); nor shall the average discharge during any two-hour period (2-hour peak) exceed 2,394 gallons per minute (gpm).

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Minimum Self-Monitoring Requirements</u>	
	Daily Avg mg/l(lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing meter
Biochemical Oxygen Demand (5-day)	10 (102)	15	25	35	Two/week	Composite
Total Suspended Solids	15 (153)	25	40	60	Two/week	Composite
Total Copper*	0.0087(0.089)	N/A	0.018	0.0261	One/week	24-Hr. Composite

2. The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.



## DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC §§ 305.121 - 305.129, Subchapter F, "Permit Characteristics and Conditions" as promulgated under the Texas Water Code §§ 5.103 and 5.105, and the Texas Health and Safety Code §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in Section 26.001 of the Texas Water Code and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some Specific definitions of words or phrases used in this permit are as follows:

### 1. Flow Measurements

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with a 1 million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily discharge within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily discharge, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. Multiple measurements of instantaneous maximum flow within a two-hour period may be compared to the permitted 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

### 2. Concentration Measurements

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements. When four samples are not available in a calendar month, the arithmetic average of the four most recent measurements or the arithmetic average (weighted by flow) of all values taken during the month shall be used as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by composite sample unless otherwise specified elsewhere in this permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day.

The "daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Fecal coliform bacteria concentration - the number of colonies of fecal coliform bacteria per 100 milliliters effluent. The fecal coliform bacteria daily average is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a particular period of time. For example in a month's time, where n equals the number of measurements made; or, computed as the antilogarithm of the sum of the logarithm of each measurement made. For any measurement of fecal coliform bacteria equaling zero, a substituted value of one shall be made for input into either computation method.

### 3. Sample Type

- a. Composite sample - for domestic wastewater a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected no closer than two hours apart. For industrial wastewater a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected no closer than one hour apart.
  - b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
  5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids which have not been classified as hazardous waste separated from wastewater by unit processes.
  6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

## MONITORING AND REPORTING REQUIREMENTS

### 1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the location(s) specified on the reporting form or the instruction sheet, by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on an approved TPDES self-report form, Discharge Monitoring Report (DMR) Form EPA No. 3320-1, signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act, the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

### 2. Test Procedures

Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

### 3. Records of Results

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site and/or shall be readily available for review by a TNRCC representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
  - i. date, time and place of sample or measurement;
  - ii. identity of individual who collected the sample or made the measurement.
  - iii. date and time of analysis;
  - iv. identity of the individual and laboratory who performed the analysis;
  - v. the technique or method of analysis; and
  - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that maybe instituted against the permittee.

#### 4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved TPDES self-report form. Increased frequency of sampling shall be indicated on the self-report form.

#### 5. Calibration of Instruments

All automatic flow measuring and/or recording devices and/or totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TNRCC representative for a period of three years.

#### 6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division.

#### 7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TNRCC. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
- b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
  - iii. Unauthorized discharges as defined in Permit Condition 2(g).
  - ii. Any unanticipated bypass which exceeds any effluent limitation in the permit.

- iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
  - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division within 5 working days of becoming aware of the noncompliance.
  - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Water Quality Management Information Systems Team (MC 224) of the Enforcement Division as promptly as possible. This requirement means to report these types of noncompliance on the approved TPDES self-report form.
8. In accordance with the procedures described in 30 TAC §§ 305.21, 305.22 and 305.23 (relating to Emergency Orders, Temporary Orders and Executive Director Authorizations) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.
9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. One hundred micrograms per liter (100  $\mu\text{g/L}$ );
  - ii. Two hundred micrograms per liter (200  $\mu\text{g/L}$ ) for acrolein and acrylonitrile; five hundred micrograms per liter (500  $\mu\text{g/L}$ ) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TNRCC.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. Five hundred micrograms per liter (500  $\mu\text{g/L}$ );
  - ii. One milligram per liter (1 mg/L) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
  - iv. The level established by the TNRCC.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the CWA if it were directly discharging those pollutants;
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. For the purpose of this paragraph, adequate notice shall include information on:
  - i. The quality and quantity of effluent introduced into the POTW; and
  - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

**PERMIT CONDITIONS**

## 1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application in accordance with 30 TAC Chapter 50 and the application process in accordance with 30 TAC Chapter 281, and relying upon the accuracy and completeness of that information and those representations in accordance with 30 TAC Chapter 305. After notice in accordance with 30 TAC Chapter 39 and opportunity for a hearing in accordance with 30 TAC §§ 55.21-55.31, Subchapter B, "Hearing Requests, Public Comment", this permit may be modified, suspended, or revoked, in whole or in part in accordance with 30 TAC Chapter 305 Subchapter D, during its term for cause including but not limited to, the following:
  - i. Violation of any terms or conditions of this permit;
  - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
  - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

## 2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or of an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.
- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and the Texas Water Code Section 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to waters in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
- h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded, but only if the diversion is also for essential maintenance to assure efficient operation.

- i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§ 26.136, 26.212, and 26.213 for violations including but not limited to negligently or knowingly violating the federal Clean Water Act, §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).
3. Inspections and Entry
    - a. Inspection and entry shall be allowed as prescribed in the Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 361.
    - b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in Texas Water Code Section 7.002.
  4. Permit Amendment and/or Renewal
    - a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
      - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
      - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 8 and as adopted by 30 TAC § 305.531(a) (relating to Establishing and Calculating Additional Conditions and Limitations for TPDES Permits);
      - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
    - b. Prior to any facility modifications, additions and/or expansions of a permitted facility that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
    - c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. Authorization to continue such activity will terminate upon the effective denial of said application.
    - d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
    - e. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.

- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

#### 5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Wastewater Permits Section Application Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.33 (relating to Executive Director Action on Application for Transfer).

#### 6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal which requires a permit or other authorization pursuant to the Texas Health and Safety Code.

#### 7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to the waters in the state must be specifically authorized in this permit and may require a permit pursuant to Chapter 11 of the Texas Water Code.

#### 8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

#### 9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

### OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control such as the Commission's "Recommendations for Minimum Process Control Tests for Domestic Wastewater Treatment Facilities." Process control records shall be retained at the facility site and/or shall be readily available for review by a TNRCC representative for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all provisions of 30 TAC §§ 312.1 - 312.13 concerning sewage sludge use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
  - a. The permittee shall notify the Executive Director in care of the Wastewater Permits Section (MC 148) of the Water Quality Division, in writing of any closure activity or facility expansion at least 90 days prior to conducting such activity.

- b. Closure activities include those associated with any pit, tank, pond, lagoon, or surface impoundment regulated by this permit.
  - c. As part of the notification, the permittee shall submit to the Municipal Permits Team (MC 148) of the Wastewater Permits Section of the Water Quality Division, a closure plan which has been developed in accordance with the "Closure Guidance Documents Nos. 4 and 5" available through the Publications Inventory and Distribution Section (MC 195) of the Agency Communications Division.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
  5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.
  6. The permittee shall remit an annual waste treatment fee to the Commission as required by 30 TAC Chapter 305 Subchapter M and an annual water quality assessment fee to the Commission as required by 30 TAC Chapter 320. Failure to pay either fee may result in revocation of this permit.
  7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for applications, effluent data, permits, and other data specified in 30 TAC § 305.46, any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice.

8. Facilities which generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
  - a. Whenever flow measurements for any domestic sewage treatment facility reach 75 percent of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90 percent of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75 percent of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgement of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Water Quality Division (MC 148) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission, and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.
- c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments



may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 325.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85 percent, unless otherwise authorized by this permit.
11. Facilities which generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
  - a. Any solid waste generated by the permittee during the management and treatment of wastewater, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid) must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
  - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
  - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.6(g), to the Corrective Action Section (MC 127) of the Industrial and Hazardous Waste Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
  - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Waste Evaluation Section (MC 129) of the Industrial and Hazardous Waste Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.
  - e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
  - f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:
    - i. Volume of waste and date(s) generated from treatment process;
    - ii. Volume of waste disposed of on-site or shipped off-site;
    - iii. Date(s) of disposal;
    - iv. Identity of hauler or transporter;
    - v. Location of disposal site; and
    - vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site and/or shall be readily available for review by authorized representatives of the TNRCC for at least five years.

12. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Health and Safety Code of Texas.

## SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Natural Resource Conservation Commission (TNRCC) registered or permitted land application site, commercial land application site or co-disposal landfill. The disposal of sludge by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is permitted or registered with the TNRCC. This provision does not authorize Distribution and Marketing of sludge. This provision does not authorize land application of Class A Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.

### SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

#### A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permits Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

#### B. Testing Requirements

1. Sewage sludge shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method, which receives the prior approval of the TNRCC for the contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TNRCC Registration and Evaluation Division (MC 129) and the Regional Director (MC Region 10) within 7 days after failing the TCLP Test. The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration and Evaluation Division (MC 129), Texas Natural Resource Conservation Commission, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TNRCC Regional Office (MC Region 10) and the Water Quality Management Information Systems Team (MC 224) of the Enforcement Division by September 1 of each year.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration (milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

\* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.

- a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. Below are the additional requirements necessary to meet the definition of a Class A sludge.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC Section 312.82(a)(2)(A) for specific information.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC Section 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC Section 312.82(a)(2)(C)(iv-vi) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of shall be treated in one of the processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of shall be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

Alternative 1 -

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;

- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U. S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The executive director will accept from the U. S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition, the following site restrictions must be met if Class B sludge is land applied:

- i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.
- v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.
- vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.
- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
- ix. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC Section 312.44.

#### 4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives 1 through 10 for Vector Attraction Reduction.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.
- Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.
- Alternative 9 -
- i. Sewage sludge shall be injected below the surface of the land.
  - ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.
  - iii. When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.
- Alternative 10 -
- i. Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
  - ii. When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

**C. Monitoring Requirements**

- Toxicity Characteristic Leaching Procedure (TCLP) Test - annually
- PCBs - annually

All metal constituents and Fecal coliform or Salmonella sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC Section 312.46(a)(1):

<u>Amount of sewage sludge (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 ≤ Sludge < 290	Once/Year
290 ≤ Sludge < 1,500	Once/Quarter
1,500 ≤ Sludge < 15,000	Once/Two Months
15,000 ≤ Sludge	Once/Month

(\*) The amount of bulk sewage sludge applied to the land (dry weight basis).

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC Section 312.7.



**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3**

For those permittees meeting Class A or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

**A. Pollutant Limits**

Table 2

<u>Pollutant</u>	<u>Cumulative Pollutant Loading Rate (pounds per acre)</u>
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	<u>Monthly Average Concentration (milligrams per kilogram)*</u>
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

\* Dry weight basis

**B. Pathogen Control**

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A or Class B pathogen reduction requirements as defined above in Section I.B.3.

**C. Management Practices**

1. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk sewage sludge not meeting Class A requirements shall be land applied in a manner which complies with the Management Requirements in accordance with 30 TAC Section 312.44.
3. Bulk sewage sludge shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:
  - a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
  - b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instruction on the label or information sheet.
  - c. The annual whole sludge application rate for the sewage sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section III below are met.

**D. Notification Requirements**

1. If bulk sewage sludge is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:
  - a. The location, by street address, and specific latitude and longitude, of each land application site.
  - b. The approximate time period bulk sewage sludge will be applied to the site.
  - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permits Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.

**E. Record keeping Requirements**

The sludge documents will be retained at the facility site and/or shall be readily available for review by a TNRCC representative. The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TNRCC representative for a period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC Section 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class B sludges, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

"I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC Section 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC Section 312.83(b) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."
6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained.

The person who applies bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TNRCC representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC Section 312.47 for persons who land apply.

1. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge treatment activities.
2. The location, by street address, and specific latitude and longitude, of each site on which sludge is applied.
3. The number of acres in each site on which bulk sludge is applied.
4. The date and time sludge is applied to each site.
5. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
6. The total amount of sludge applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Natural Resource Conservation Commission upon request.

**F. Reporting Requirements**

The permittee shall report annually to the TNRCC Regional Office (MC Region 10) and Water Quality Management Information Systems Team (MC 224) of the Enforcement Division, by September 1 of each year the following information:

1. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
2. The frequency of monitoring listed in Section I.C. which applies to the permittee.
3. Toxicity Characteristic Leaching Procedure (TCLP) results.
4. Identity of hauler(s) and TNRCC transporter number.
5. PCB concentration in sludge in mg/kg.
6. Date(s) of disposal.
7. Owner of disposal site(s).
8. Texas Natural Resource Conservation Commission registration number, if applicable.
9. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.
10. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
11. Level of pathogen reduction achieved (Class A or Class B).
12. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met.
13. Vector attraction reduction alternative used as listed in Section I.B.4.
14. Annual sludge production in dry tons/year.
15. Amount of sludge land applied in dry tons/year.
16. The certification statement listed in either 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.

17. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
  - a. The location, by street address, and specific latitude and longitude.
  - b. The number of acres in each site on which bulk sewage sludge is applied.
  - c. The date and time bulk sewage sludge is applied to each site.
  - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.
  - e. The amount of sewage sludge (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Natural Resource Conservation Commission upon request.

**SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge to the owner or operator of a Municipal Solid Waste Landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permits Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge disposal practice.
- D. Sewage sludge shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TNRCC for contaminants listed in Table 1 of 40 CFR Section 261.24. Sewage sludge failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TNRCC Registration and Evaluation Division (MC 129) and the Regional Director (MC Region 10) of the appropriate TNRCC field office within 7 days after failing the TCLP Test. The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Registration and Evaluation Division (MC 129), Texas Natural Resource Conservation Commission, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TNRCC Regional Office (MC Region 10) and the Water Quality Management Information Systems Team (MC 224) of the Enforcement Division by September 1 of each year.

- E. Sewage sludge shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.

**F. Record keeping Requirements**

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Natural Resource Conservation Commission upon request.

**G. Reporting Requirements**

The permittee shall report annually to the TNRCC Regional Office (MC Region 10) and Water Quality Management Information Systems Team (MC 224) of the Enforcement Division by September 1 of each year the following information:

1. Toxicity Characteristic Leaching Procedure (TCLP) results.
2. Annual sludge production in dry tons/year.
3. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
4. Amount of sludge transported interstate in dry tons/year.
5. A certification that the sewage sludge meets the requirements of 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
6. Identity of hauler(s) and transporter registration number.
7. Owner of disposal site(s).
8. Location of disposal site(s).
9. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Natural Resource Conservation Commission upon request.

**OTHER REQUIREMENTS**

1. This Category B facility shall be operated and maintained by a chief operator or operator in responsible charge holding a valid Class B certificate of competency or higher issued pursuant to 30 TAC Chapter 325. All shift supervisors and other plant operators shall be certified in accordance with the applicable provisions of Chapter 325. Note, Class D certificates are not renewable at any activated sludge facility, regardless of size, or any trickling filter or RBC facility with a permitted flow greater than 100,000 gallons per day.
2. The Texas Natural Resource Conservation Commission has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the Coastal Coordination Council (CCC) and has determined that the action is consistent with the applicable CMP goals and policies.
3. Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone is defined as a volume within a radius of 55 feet from the point of discharge.
4. The permittee shall maintain sufficient evidence of legal restrictions prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC Section 309.13(e)(3). The permittee shall comply with the requirements of 30 TAC Section 309.13(a) through (d). (See Attachment A.)
5. The permittee is hereby placed on notice that this permit may be reviewed by the Texas Natural Resource Conservation Commission after the completion of any new intensive water quality survey on Segment No. 0508 of the Sabine River Basin and any subsequent updating of the water quality model for Segment No. 0508, in order to determine if the limitations and conditions contained herein are consistent with any such revised model. The permit may be amended, pursuant to 30 TAC Section 305.62, as a result of such review. The permittee is also hereby placed on notice that effluent limits may be made more stringent at renewal based on, for example, any change to modeling protocol approved in the TNRCC Continuing Planning Process.
6. The permittee shall provide facilities for the protection of its wastewater treatment facilities from a 100-year flood.
7. Permit compliance/noncompliance determinations will be based on the minimum analytical level (MAL) for toxic organic and inorganic parameters. Effluent concentrations measured as less than the MAL are deemed to be compliant with the permit limitations. When an analysis of an effluent sample for the following parameter(s) results in a measurement of less than the MAL, that parameter shall be reported as "< (MAL value)" and this shall be interpreted as a value of zero (0) for compliance purposes:

<u>Parameter</u>	<u>MAL (mg/l)</u>
Total Copper	0.01



**CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS**

1. The following pollutants may not be introduced into the treatment facility:
  - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit (60 degrees Celsius) using the test methods specified in 40 CFR §261.21;
  - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
  - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
  - d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
  - e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104 degrees Fahrenheit (40 degrees Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
  - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
  - h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403.
3. The permittee shall provide adequate notification to the TNRCC Municipal Permits Team (MC 148) of the Water Quality Division within 30 days subsequent to the permittee's knowledge of either of the following:
  - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on the quality and quantity of effluent to be introduced into the treatment works, and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

## BIOMONITORING REQUIREMENTS

### CHRONIC BIOMONITORING REQUIREMENTS: MARINE

The provisions of this Section apply to Outfall 001 for whole effluent toxicity testing (biomonitoring).

#### 1. Scope, Frequency and Methodology

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organism(s). Toxicity is herein defined as a statistically significant difference at the 95% confidence level between the survival, reproduction, or growth of the test organism(s) in a specified effluent dilution compared to the survival, reproduction, or growth of the test organism(s) in the control (0% effluent).
- b. The permittee shall conduct all tests utilizing the test organisms, procedures, and quality assurance requirements specified below and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Second Edition" (EPA-600-4-91-003), or the most recent update thereof:
  - 1) Chronic static renewal 7-day survival and growth test using the mysid shrimp (Mysidopsis bahia) (Method 1007.0 or the most recent update thereof). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per six months.
  - 2) Chronic static renewal 7-day larval survival and growth test using the inland silverside (Menidia beryllina) (Method 1006.0 or the most recent update thereof). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per year.

The permittee must perform and submit a valid test for each test species during the required reporting period for that species. A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These additional effluent concentrations are 11%, 15%, 20%, 27%, and 36% effluent. The critical dilution, defined as 27% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, a Chemical-Specific (CS) limit, a Best Management Practice (BMP), additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.

#### 2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fails to meet any of the following criteria:
  - 1) a control mean survival of 80% or greater;

- 2) a control mean dry weight of surviving mysid shrimp of 0.20 mg or greater;
  - 3) a control mean dry weight for surviving unpreserved inland silverside of 0.50 mg or greater and 0.43 mg or greater for surviving preserved inland silverside.
  - 4) a control Coefficient of Variation percent (CV %) between replicates of 40 or less in the in the growth and survival tests.
  - 5) a critical dilution CV % of 40 or less in the growth and survival endpoints for either growth and survival test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV % greater than 40 shall not invalidate the test.
- b. Statistical Interpretation
- 1) If the conditions of test acceptability are met and mean survival equals or exceeds 80% in the critical dilution and all dilutions below that, the test shall be considered a passing test. The permittee shall report an No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.
  - 2) For the mysid shrimp and the inland silverside larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the NOEC as described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Second Edition" (EPA-600-4-91-003), or the most recent update thereof.
- c. Dilution Water
- 1) Dilution water used in the toxicity tests shall be the receiving water collected at a point upstream of the discharge as close as possible to the discharge point, but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall; (a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial water unaffected by the discharge, or (b) utilize the closest downstream perennial water unaffected by the discharge.
  - 2) Where the receiving water proves unsatisfactory as a result of preexisting instream toxicity (i.e. fails to fulfill the test acceptance criteria of item 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
    - a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of item 2.a;
    - b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days);
    - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3 of this Section.

Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.

## d. Samples and Composites

- 1) The permittee shall collect a minimum of three flow-weighted 24-hour composite samples from Outfall 001. The second and third 24-hour composite samples will be used for the renewal of the dilution concentrations for each toxicity test. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportionally to flow, or a sample continuously collected proportionally to flow over a 24-hour operating day.
- 2) The permittee shall collect the 24-hour composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.
- 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first 24-hour composite sample. The holding time for any subsequent 24-hour composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 4 degrees Centigrade during collection, shipping, and storage.
- 4) If Outfall 001 ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time, are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with daily renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Part 3 of this Section.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Water Quality Assessment Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the Report Preparation Section of "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Second Edition" (EPA 600-4-91-003), or the most recent update thereof, for every valid and invalid toxicity test initiated whether carried to completion or not. All full reports shall be retained for 3 years at the plant site and shall be available for inspection by TNRCC personnel.
- b. A full report must be submitted with the first valid biomonitoring test results for each test species and with the first test results any time the permittee subsequently employs a different test laboratory. Full reports need not be submitted for subsequent testing unless specifically requested. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit. All Table 1 reports must include the information specified in the Table 1 form attached to this permit.
  - 1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12 month period.
  - 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6 month period.
  - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th, for biomonitoring conducted during the previous calendar quarter.

- c. Enter the following codes on the DMR for the appropriate parameters for valid tests only:
  - 1). For the mysid shrimp (*Mysidopsis bahia*), Parameter TLP3E, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 2). For the mysid shrimp (*Mysidopsis bahia*), Parameter TOP3E, report the NOEC for survival.
  - 3). For the mysid shrimp (*Mysidopsis bahia*), Parameter TPP3E, report the NOEC for growth.
  - 4). For the inland silverside (*Menidia beryllina*), Parameter TLP6B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 5). For the inland silverside (*Menidia beryllina*), Parameter TOP6B, report the NOEC for survival.
  - 6). For the inland silverside (*Menidia beryllina*), Parameter TPP6B, report the NOEC for growth.

#### 4. Persistent Lethality

The requirements of this Part apply only when a toxicity test demonstrates significant lethality at the critical dilution. Significant lethality is defined as a statistically significant difference, at the 95% confidence level, between the survival of the test organism in a specified effluent dilution when compared to the survival of the test organism in the control.

- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates significant lethality at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If one or both of the two retests specified in item 4.a. demonstrates significant lethality at the critical dilution, the permittee shall initiate the TRE requirements as specified in Part 5.
- c. The provisions of item 4.a. are suspended upon completion of the two retests and submittal of the TRE Action Plan and Schedule defined in Part 5 of this Section.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the last test day of the retest that confirms significant lethal effects at the critical dilution, the permittee shall submit a General Outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the last test day of the retest that confirms significant lethal effects at the critical dilution, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethal effects at the critical dilution for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:
  - 1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications,

confirmations, source evaluations, treatability studies, and/or alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled, "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003), or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

- 2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect artifactual toxicity; and
  - 4) Project Organization - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.
- d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and
  - 6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office (6WQ-PI) and the TNRCC Region 10 office.

- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species; testing for the less sensitive species shall continue at the frequency specified in Part 1.b. If the effluent ceases to effect significant lethality (herein as defined below) the permittee may end the TRE. A "cessation of lethality" is defined as no significant lethality at the critical dilution for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision does not apply as a result of corrective actions taken by the permittee. "Corrective actions" are herein defined as proactive efforts which eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, then this permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing the WET limit, in lieu of an alternate toxicity control measure, by identifying and confirming the toxicant and/or an appropriate control measure.

- f. The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall provide information pertaining to the specific control mechanism(s) selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism(s). Copies of the Final Report on the TRE Activities shall also be submitted to the U.S. EPA Region 6 office (6WQ-PI) and the TNRCC Region 10 office.
- g. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify CS limits.

TABLE 1 (SHEET 1 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

Dates and Times Composites Collected

No. 1 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_ Date Time

No. 2 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_ Date Time

No. 3 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_ Date Time

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic Dilution water

MYSID SHRIMP SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers								Mean Percent Survival			CV%*
	A	B	C	D	E	F	G	H	24h	48h	7 day	
0%												
11%												
15%												
20%												
27%												
36%												

\* coefficient of variation = standard deviation x 100/mean

DATA TABLE FOR GROWTH OF MYSID SHRIMP

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	11%	15%	20%	27%	36%
A						
B						
C						
D						
E						



Table 1 (SHEET 2 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

DATA TABLE FOR GROWTH OF MYSID SHRIMP (Continued)

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	11%	15%	20%	27%	36%
F						
G						
H						
Mean Dry Weight (mg)						
CV%*						

\* coefficient of variation = standard deviation x 100/mean

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less ( $p=0.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (27%): \_\_\_\_\_ YES \_\_\_\_\_ NO

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less ( $p=0.05$ ) than the control's dry weight (growth) for the % effluent corresponding to non-lethal effects?

CRITICAL DILUTION (27%): \_\_\_\_\_ YES \_\_\_\_\_ NO

3. Enter percent effluent corresponding to each NOEC below:

a.) NOEC survival = \_\_\_\_\_ % effluent

b.) NOEC growth = \_\_\_\_\_ % effluent

TABLE 1 (SHEET 3 OF 4)

INLAND SILVERSIDE MINNOW LARVAL SURVIVAL AND GROWTH TEST

Dates and Times . . . No. 1 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_ Date Time  
 Composites  
 Collected . . . No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_  
 No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic Dilution water

INLAND SILVERSIDE SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0%									
11%									
15%									
20%									
27%									
36%									

\* coefficient of variation = standard deviation x 100/mean

TABLE 1 (SHEET 4 OF 4)

INLAND SILVERSIDE LARVAL SURVIVAL AND GROWTH TEST

INLAND SILVERSIDE GROWTH

Percent Effluent	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight (mg)	CV%*
	A	B	C	D	E		
0%							
11%							
15%							
20%							
27%							
36%							

\* coefficient of variation = standard deviation x 100/mean

Weights are for: \_\_\_ preserved larvae, or \_\_\_ unpreserved larvae

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7-days significantly less ( $p=0.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (27%): \_\_\_\_\_ YES \_\_\_\_\_ NO

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less ( $p=0.05$ ) than the control's dry weight (growth) for the % effluent corresponding to non-lethal effects?

CRITICAL DILUTION (27%): \_\_\_\_\_ YES \_\_\_\_\_ NO

3. Enter percent effluent corresponding to each NOEC below:

a.) NOEC survival = \_\_\_\_\_ % effluent

b.) NOEC growth = \_\_\_\_\_ % effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: MARINE

The provisions of this Section apply to Outfall 001 for whole effluent toxicity testing (biomonitoring).

1. Scope, Frequency and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this Section. Such testing will determine compliance with the Surface Water Quality Standard, 30 TAC §307.6(e)(2)(B), of greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition" (EPA 600/4-90/027F), or the most recent update thereof:
  - 1) Acute 24-hour static toxicity test using the mysid shrimp (Mysidopsis bahia). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.
  - 2) Acute 24-hour static toxicity test using the inland silverside (Menidia beryllina). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, then repeat, an invalid test during the same reporting period. The repeat test shall include the control and all effluent dilutions and use the appropriate number of organisms and replicates, as specified above. An invalid test is herein defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. The control and/or dilution water shall consist of a standard, synthetic, reconstituted seawater.
- d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, a Best Management Practice (BMP), a Chemical-Specific (CS) limit, additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with item 1.c., the control and/or dilution water shall consist of a standard, synthetic, reconstituted seawater.
- c. Samples and Composites
  - 1) The permittee shall collect one flow-weighted 24-hour composite sample from Outfall 001. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow, or a sample continuously collected proportional to flow over a 24-hour operating day.

- 2) The permittee shall collect the 24-hour composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.
- 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the 24-hour composite sample. Samples shall be maintained at a temperature of 4 degrees Centigrade during collection, shipping, and storage.
- 4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report required in Part 3 of this Section.
- 5) The effluent samples shall not be dechlorinated after sample collection.

### 3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Water Quality Assessment Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the Report Preparation Section of "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition" (EPA 600/4-90/027F), or the most recent update thereof, for every valid and invalid toxicity test initiated. All full reports shall be retained for 3 years at the plant site and shall be available for inspection by TNRCC personnel.
- b. A full report must be submitted with the first valid biomonitoring test results for each test species and with the first test results any time the permittee subsequently employs a different test laboratory. Full reports need not be submitted for subsequent testing unless specifically requested. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit. All Table 2 reports must include the information specified in the Table 2 form attached to this permit.
  - 1) Semiannual biomonitoring test results are due on or before January 20th and July 20th for biomonitoring conducted during the previous 6 month period.
  - 2) Quarterly biomonitoring test results are due on or before January 20th, April 20th, July 20th, and October 20th, for biomonitoring conducted during the previous calendar quarter.
- c. Enter the following codes on the DMR for the appropriate parameters for valid tests only:
  - 1) For the mysid shrimp (*Mysidopsis bahia*), Parameter TIE3E, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."
  - 2) For the inland silverside (*Menidia beryllina*), Parameter TIE6B, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."

### 4. Persistent Mortality

The requirements of this Part apply when a toxicity test demonstrates significant lethality, here defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration after 24-

hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These additional effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5 of this Section.

#### 5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a General Outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:
  - 1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled, "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003), or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
  - 2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;
  - 3) Quality Assurance Plan - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as

well as mechanisms to detect artifactual toxicity; and

- 4) Project Organization - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.
  - d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly TRE Activities Reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
    - 1) results and interpretation of any chemical-specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;
    - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
    - 3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
    - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
    - 5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
    - 6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office (6WQ-PM) and the TNRCC Region 10 office.

- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species; testing for the less sensitive species shall continue at the frequency specified in Part 1.b. If the effluent ceases to effect significant lethality (herein as defined below) the permittee may end the TRE. A "cessation of lethality" is defined as no significant lethality at the critical dilution for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision does not apply as a result of corrective actions taken by the permittee. "Corrective actions" are herein defined as proactive efforts which eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, then this permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing the WET limit, in lieu of an alternate toxicity control measure, by identifying and confirming the toxicant and/or an appropriate control measure.

- f. The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee

may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall specify the control mechanism(s) that will, when implemented, reduce effluent toxicity as specified in item 5.g. The report will also specify a corrective action schedule for implementing the selected control mechanism(s). The permittee shall also submit copies of the Final Report on the TRE Activities to the U.S. EPA Region 6 office (6WQ-PM) and the TNRCC Region 10 office.

- g. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC 307.6.(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE.

The requirement to comply with 30 TAC 307.6.(e)(2)(B) may be exempted upon proof that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g. metals) form a salt compound. Following the exemption, the permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

- h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify a CS limit.



TABLE 2 (SHEET 1 OF 2)

MYSID SHRIMP SURVIVAL

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

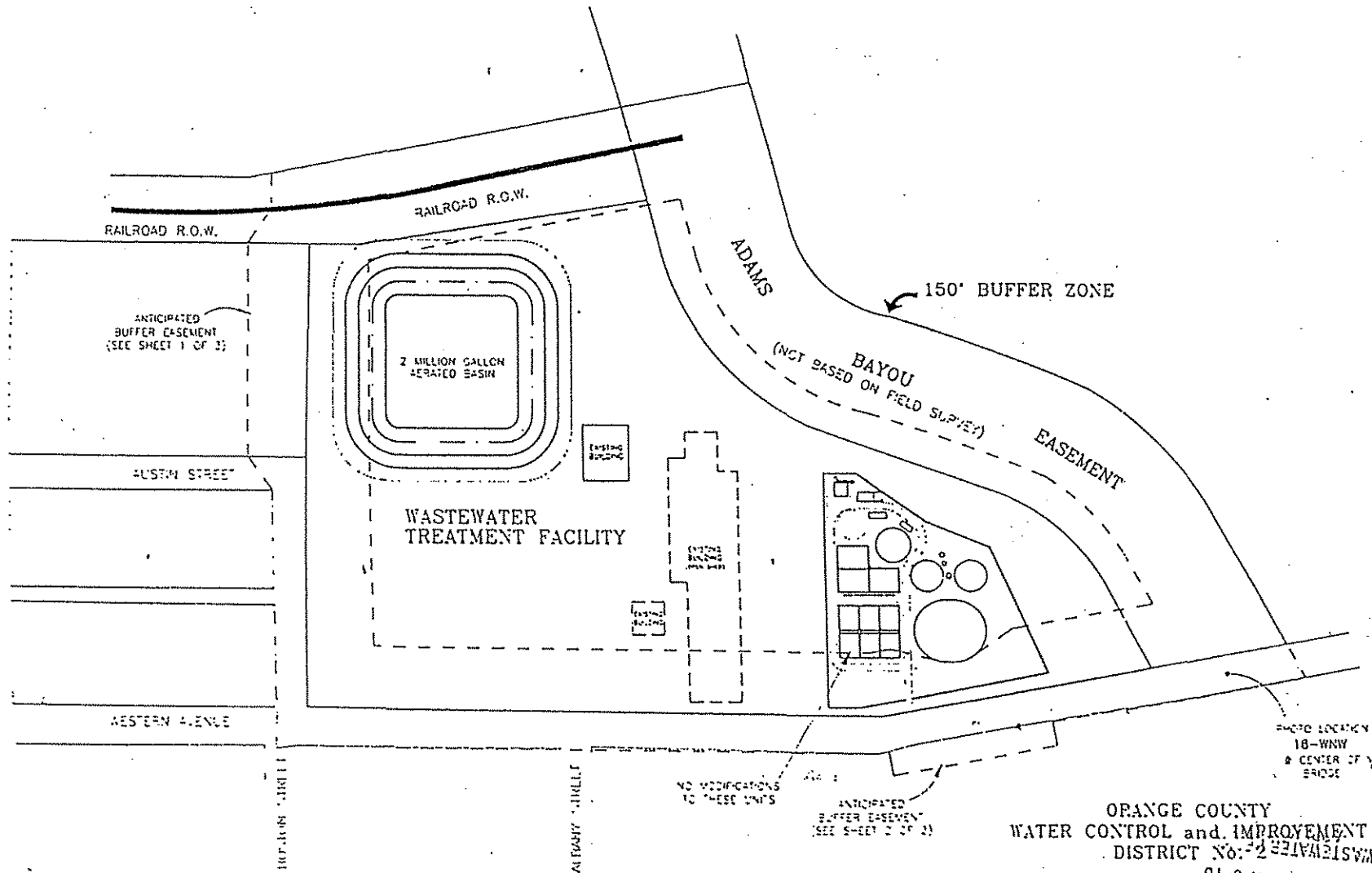
Time	Rep	Percent effluent (%)					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Mysidopsis) = \_\_\_\_\_ % effluent

95% confidence limits: \_\_\_\_\_

Method of LC50 calculation: \_\_\_\_\_



Prepared by  
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 Pasadena, Texas 77207  
 409 866-6244



**EXISTING  
 SITE PLAN  
 WITH PROPOSED  
 IMPROVEMENTS**  
 SCALE 1" = 100'

ORANGE COUNTY  
 WATER CONTROL and IMPROVEMENT  
 DISTRICT No. 2  
 01317-1-011

**ATTACHMENT "A"**  
 ORANGE CO. WCID No. 2, Permit No. 10240-001

SCHAUMBURG & POLK, INC. <small>INCORPORATED IN TEXAS    CAPITAL STOCK \$100,000.00    OCTOBER 1968</small>	
ORANGE COUNTY W.C.I.D. No. 2 ORANGE COUNTY, TEXAS SANITARY SEWER SYSTEM IMPROVEMENTS WWT 100' BUFFER ZONE	
PRELIMINARY NOT FOR CONSTRUCTION	
DATE	01-17-11
BY	AS SHOWN
CHECKED BY	
DATE	
BY	3-3
DATE	02-17-11

# Appendix D

## APPENDIX D – REGIONAL COST DEVELOPMENT

The details for development of the Regional Wastewater System costs are included in this Appendix. Costs were developed from information contained in Appendix A and B of this study as well as unit cost data from local projects. Included in this Appendix are the following tables and data.

- Approximated Value for City of Orange (Jackson Street) Wastewater Plant

### Alternative A

- Regional WWTP #2 (2.35 mgd) Construction Cost
- Regional Transportation Cost Distribution (capital and O&M)
- Regional Operations & Maintenance Cost
  - Treatment
  - Transportation
- 30-Year Regional WWTP Expenditure (capital and O&M)
- 30-Year Regional WWTP Expenditure Distribution Analysis
  - Cost Distribution Analysis
  - Non-Regional vs. Regional Analysis

### Alternative B

- Regional WWTP #2 (3.50 mgd) Construction Cost
- Regional Transportation Cost Distribution (capital and O&M)
- Regional Operations & Maintenance Cost
  - Treatment
  - Transportation
- 30-Year Regional WWTP Expenditure (capital and O&M)
- 30-Year Regional WWTP Expenditure Distribution Analysis
  - Cost Distribution Analysis
  - Non-Regional vs. Regional Analysis

Approximated Value  
City of Orange WWTP

Item No.	Description	Replacement Value <sup>(1)</sup> - 2009	Year of Installation	Year of Installation Value <sup>(2)</sup>	Life Remaining	Current Estimated Value
1	Influent Headwork - Conc. Structure	\$ 673,750	1997	\$ 459,956	99%	\$ 455,357
2	Bar Screens	\$ 269,500	1997	\$ 183,983	76%	\$ 139,827
3	Grit Removal	\$ 539,000	1997	\$ 367,965	76%	\$ 279,653
4	Primary Clarifier - Conc. Structure	\$ 1,078,000	1965	\$ 122,655	70%	\$ 85,859
5	Primary Clarifier - Mechanism	\$ 539,000	1965	\$ 61,328	0%	\$ -
6	Primary Effluent L.S. - Conc. Structure	\$ 269,500	1965	\$ 30,664	70%	\$ 21,465
7	Primary Effluent L.S. - Pumps	\$ 134,750	1965	\$ 15,332	0%	\$ -
8	Trickling Filter - Conc. Structure	\$ 1,617,000	1965	\$ 183,983	70%	\$ 128,788
9	Trickling Filter - Distribution Mechanism	\$ 1,078,000	1965	\$ 122,655	0%	\$ -
10	Intermediate L.S. - Conc. Structure	\$ 269,500	1965	\$ 30,664	70%	\$ 21,465
11	Intermediate L.S. - Pumps	\$ 134,750	1965	\$ 15,332	0%	\$ -
12	Aeration Basin - Conc. Structure	\$ 808,500	1997	\$ 551,948	99%	\$ 546,428
13	Aeration Basin - Blowers	\$ 539,000	1997	\$ 367,965	76%	\$ 279,653
14	Aeration Basin - Diffusers & Piping	\$ 404,250	1997	\$ 275,974	65%	\$ 179,383
15	Final Clarifier 1&2 - Conc. Structures	\$ 1,347,500	1965	\$ 153,319	70%	\$ 107,323
16	Final Clarifier 1&2 - Mechanism	\$ 673,750	1965	\$ 76,659	0%	\$ -
17	Final Clarifier 3&4 - Conc. Structure	\$ 1,347,500	1997	\$ 919,913	99%	\$ 910,714
18	Final Clarifier 3&4 - Mechanism	\$ 673,750	1997	\$ 459,956	76%	\$ 349,567
19	UV Disinfection - Conc. Structure	\$ 1,347,500	1997	\$ 919,913	99%	\$ 910,714
20	UV Disinfection - Equipment	\$ 2,695,000	1997	\$ 1,839,825	72%	\$ 1,324,674
21	Final Effluent L.S. - Conc. Structure	\$ 269,500	1965	\$ 30,664	70%	\$ 21,465
22	Final Effluent L.S. - Pumps	\$ 134,750	1965	\$ 15,332	0%	\$ -
23	Secondary Final Effluent L.S. - Conc. Structure	\$ 269,500	1997	\$ 183,983	99%	\$ 182,143
24	Secondary Final Effluent L.S. - Pumps	\$ 134,750	1997	\$ 91,991	76%	\$ 69,913
25	Primary Sludge L.S. - Conc. Structure	\$ 269,500	1965	\$ 30,664	70%	\$ 21,465
26	Primary Sludge L.S. - Pumps	\$ 134,750	1965	\$ 15,332	0%	\$ -
27	Aerated Sludge Holding - Conc. Structure	\$ 808,500	1997	\$ 551,948	99%	\$ 546,428
28	Aerated Sludge Holding - Blowers	\$ 539,000	1997	\$ 367,965	76%	\$ 279,653
29	Aerated Sludge Holding - Diffusers & Piping	\$ 404,250	1997	\$ 275,974	65%	\$ 179,383
30	Gravity Belt Thickener	\$ 1,078,000	1997	\$ 735,930	72%	\$ 529,870
31	Thickened Sludge Holding - Conc. Structure	\$ 1,347,500	1965	\$ 153,319	70%	\$ 107,323
32	Belt Filter Press	\$ 1,078,000	1997	\$ 735,930	72%	\$ 529,870
33	Sludge Dewatering & Blower Building	\$ 1,078,000	1997	\$ 735,930	99%	\$ 728,571
34	Sand Drying Beds	\$ 539,000	1965	\$ 61,328	19%	\$ 11,652
35	Yard Piping	\$ 1,347,500	1965	\$ 153,319	61%	\$ 93,524
36	Buildings	\$ 1,078,000	1997	\$ 735,930	86%	\$ 632,900
<b>Total</b>		<b>\$ 26,950,000</b>				<b>\$ 9,675,029</b>

Note:

(1) - Replacement Value developed using EPA 430/9-83-004, "Construction Cost for Municipal Wastewater Treatment Plants: 1973 - 1982".

(2) - Year of Installation Value developed using ENR Construction Cost Index.

# ALTERNATIVE A

## Regional WWTP #2 Construction Cost<sup>(1)</sup>

Regional WWTP #2 - 2.35 MGD				
With-out Other Areas				
	EPA Equation <sup>(1)</sup>	1982 Cost <sup>(1)</sup>	1982 Geographically Adjusted Cost	2009 Cost <sup>(2),(3)</sup>
<b>Non-Construction Cost</b>				
Planning eqn. 3.1	$=(5.77 \times 10^{10})C^{0.79}$	\$124,787	\$118,548	\$260,686
Design eqn. 3.2	$=(3.45 \times 10^{11})C^{0.88}$	\$302,411	\$287,296	\$631,751
Administrative/Legal eqn. 3.3	$=(9.62 \times 10^{10})C^{0.80}$	\$24,305	\$23,090	\$50,775
Engr. Basic Fees eqn. 3.4	$=(1.26 \times 10^{11})C^{0.93}$	\$240,329	\$228,313	\$502,059
Engr. Other Fees eqn. 3.5	$=(8.86 \times 10^{10})C^{0.89}$	\$90,728	\$86,192	\$189,536
Project Inspection eqn. 3.6	$=(4.13 \times 10^{10})C^{0.83}$	\$166,368	\$158,050	\$347,551
Contingency eqn. 3.7	$=(6.56 \times 10^{10})C^{0.98}$	\$272,249	\$258,655	\$568,783
<b>Total Non-construction Cost</b>		<b>\$1,221,197</b>	<b>\$1,160,137</b>	<b>\$2,551,142</b>
<b>Construction Cost - AST w/ Ammonia Removal - Moderate Sludge Handling eqn. 3.17</b>	$=(3.01 \times 10^{16})Q^{0.74}$	<b>\$5,664,437</b>	<b>\$5,381,215</b>	<b>\$12,006,088</b>
<b>Total Cost</b>		<b>\$6,885,634</b>	<b>\$6,541,352</b>	<b>\$14,557,230</b>
<b>Cost per gallon</b>		<b>\$2.93</b>	<b>\$2.78</b>	<b>\$6.19</b>

**Notes:**

- (1) Capital cost developed using EPA430/9-83-004, *Construction Cost for Municipal Wastewater Treatment Plants: 1973 - 1982*.
- (2) Non-construction cost were updated using actual inflation rate from 1982 to 2009 of 119.9%.
- (3) Construction cost were updated using ENR Construction Cost Index from 1982 to 2009 ( $8534/3825 = 2.2311$ ).

## Regional Transportation Cost Distribution

Description	Bridge City (1.60 mgd)	Orangefield (0.75 mgd)	Pinehurst (0.62 mgd)	OCWCID #2 (1.22 mgd)	Orange (5.32 mgd)	Regional Authority (9.51 mgd)
Orangefield LS - 2.25 mgd peak flow	-	\$459,000	-	-	-	-
Bridge City LS - 7.63 mgd peak flow	\$1,556,520	-	-	-	-	-
Reg #2 Inf. LS - 9.88 mgd peak flow	-	-	-	-	-	\$2,015,520
Line A - 14-Inch forcemain	-	\$489,600	-	-	-	-
Line B - 16-inch forcemain	-	\$678,000	-	-	-	-
Line C - 20-inch forcemain	\$468,720	-	-	-	-	-
Line D - 24-inch forcemain	\$243,000	\$243,000	-	-	-	-
Line E - Future	-	-	-	-	-	-
Line F - 30-inch forcemain	-	-	-	-	-	\$854,400
Pinehurst LS - 3.10 mgd peak flow	-	-	\$632,400	-	-	-
Pinehurst - 16-inch forcemain	-	-	\$750,000	-	-	-
OCWCID #2 LS - 5.97 mgd peak flow	-	-	-	\$1,217,880	-	-
OCWCID #2 - 20-inch forcemain	-	-	-	\$186,000	-	-
Capitla Cost by Entity	\$2,268,240	\$1,869,600	\$1,382,400	\$1,403,880	\$0	\$2,869,920
30-year O&M Cost By Entity	\$700,434	\$206,550	\$284,580	\$548,046	\$0	\$906,984
Distribution of Regional Authority by ADF	\$635,441	\$297,863	\$246,233	\$484,524	\$2,112,842	-
TOTAL	\$3,604,115	\$2,374,013	\$1,913,213	\$2,436,450	\$2,112,842	-



## Regional Operations & Maintenance Cost<sup>(1)</sup>

<b>Treatment</b>						
1981 O&M Cost (eqn. 3.26)	= $1.03 \times 10^5 \times Q^{0.776}$					
1981 Administrative Cost (eqn. 3.2)	= $0.107 \times 10^5 \times Q^{0.654}$					
1981 to 2009 % Inflation:	132.30%					
	ADF (mgd)	1981 O&M Costs <sup>(1)</sup>	1981 Admin. Costs	1981 Total Cost (O&M + Admin)	2009 O&M Costs <sup>(2)</sup>	30-yr. O&M Costs
Regional #1 (Jackson)	7.16	\$474,515	\$38,770	\$513,285	\$1,192,361	\$35,770,822
Regional #2	2.35	\$199,888	\$18,709	\$218,597	\$507,801	\$15,234,033

<b>Transportation</b>			
	Capital Cost	2009 Annual O&M Costs <sup>(4)</sup>	30-yr O&M Costs
Orangefield LS - 2.25 mgd peak flow	\$459,000	\$6,885	\$206,550
Bridge City LS - 7.63 mgd peak flow	\$1,556,520	\$23,348	\$700,434
Regional #2 Influent LS - 9.88 mgd peak flow	\$2,015,520	\$30,233	\$906,984
Pinehurst LS - 3.10 mgd peak flow	\$632,400	\$9,486	\$284,580
OCWCID #2 LS - 5.97 mgd peak flow	\$1,217,880	\$18,268	\$548,046

**Notes:**

- (1) O&M cost developed using EPA430/9-81-004, *Operations and Maintenance Cost for Municipal Wastewater Facilities*.
- (2) O&M cost were updated using actual inflation rate from 1981 to 2009 of 132.30%.
- (3) Area #1 includes Orange, WCID #2, and Pinehurst. Area #2 includes Bridge City and Orangefield.
- (4) 2009 Annual O&M costs developed based on 1.5% of lift station capital cost.

## 30-yr Regional WWTP Expenditures

<b>Regional WWTP's</b>			
	30-yr Capital Expenditure (2009 value)	30-yr O&M Expense (2009 values)	Expenditure Totals
Regional WWTP #1 - 7.16 MGD	\$30,663,839 *	\$35,770,822	\$66,434,661
Regional WWTP #2 - 2.35 MGD	\$14,557,230	\$15,234,033	\$29,791,262
Total	\$45,221,069	\$51,004,855	\$96,225,923

\* Includes purchase of Orange Plant for \$9.675 million and \$2.0 million to upgrade sludge handling.

## 30-yr Regional WWTP Distribution Analysis.

<b>Cost Distribution Analysis</b>			
	WWTP 9.51 MGD Total	Transportation Cost & 30-yr O&M Cost	Total 30-yr Cost
Orange - 5.32 MGD	\$53,829,854	\$2,112,842	\$55,942,696
Bridge City - 1.60 MGD	\$16,189,430	\$3,604,115	\$19,793,545
OCWCID #2 - 1.22 MGD	\$12,344,440	\$2,436,450	\$14,780,890
Orangefield - 0.75 MGD	\$7,588,795	\$2,374,013	\$9,962,808
Pinehurst - 0.62 MGD	\$6,273,404	\$1,913,213	\$8,186,618
	\$96,225,923	\$12,440,634	\$108,666,557

<b>Non-Regional vs Regional Analysis</b>			
	Non-Regional	Regional	Difference
Orange - 5.32 MGD	\$54,145,101	\$55,942,696	\$1,797,595
Bridge City - 1.60 MGD	\$16,574,773	\$19,793,545	\$3,218,772
OCWCID #2 - 1.22 MGD	\$15,063,408	\$14,780,890	(\$282,518)
Orangefield - 0.75 MGD	\$11,516,209	\$9,962,808	(\$1,553,400)
Pinehurst - 0.62 MGD	\$8,379,446	\$8,186,618	(\$192,829)
	\$105,678,937	\$108,666,557	\$2,987,620

ALTERNATIVE B

# Regional WWTP #2 Construction Cost<sup>(1)</sup>

## Regional WWTP #2 - 3.50 MGD With-out Other Areas

	EPA Equation <sup>(1)</sup>	1982 Cost <sup>(1)</sup>	1982 Geographically Adjusted Cost	2009 Cost <sup>(2),(3)</sup>
<b>Non-Construction Cost</b>				
Planning eqn. 3.1	$=(5.77 \times 10^{-4})C^{0.79}$	\$157,509	\$149,634	\$329,044
Design eqn. 3.2	$=(3.45 \times 10^{-5})C^{0.88}$	\$391,972	\$372,375	\$818,848
Administrative/Legal eqn. 3.3	$=(9.62 \times 10^{-4})C^{0.80}$	\$30,769	\$29,231	\$64,278
Engr. Basic Fees eqn. 3.4	$=(1.26 \times 10^{-4})C^{0.93}$	\$316,129	\$300,323	\$660,410
Engr. Other Fees eqn. 3.5	$=(8.86 \times 10^{-4})C^{0.89}$	\$117,945	\$112,048	\$246,394
Project Inspection eqn. 3.6	$=(4.13 \times 10^{-4})C^{0.83}$	\$212,484	\$201,860	\$443,890
Contingency eqn. 3.7	$=(6.56 \times 10^{-4})C^{0.98}$	\$363,460	\$345,287	\$759,287
<b>Total Non-construction Cost</b>		<b>\$1,590,270</b>	<b>\$1,510,756</b>	<b>\$3,322,153</b>
<b>Construction Cost - AST w/ Ammonia Removal - Moderate Sludge Handling eqn. 3.17</b>	$=(3.01 \times 10^{-6})Q^{0.74}$	\$7,606,360	\$7,226,042	\$16,122,102
<b>Total Cost</b>		<b>\$9,196,629</b>	<b>\$8,736,798</b>	<b>\$19,444,254</b>
<b>Cost per gallon</b>		<b>\$2.63</b>	<b>\$2.50</b>	<b>\$5.56</b>

Notes:

- (1) Capital cost developed using EPA430/9-83-004, *Construction Cost for Municipal Wastewater Treatment Plants: 1973 - 1982*.
- (2) Non-construction cost were updated using actual inflation rate from 1982 to 2009 of 119.9%.
- (3) Construction cost were updated using ENR Construction Cost Index from 1982 to 2009 ( $8534/3825 = 2.2311$ ).
- (4) Plant size of 3.5 mgd includes 0.53 mgd for future growth.

## Regional Transportation Cost Distribution

Description	Bridge City (1.60 mgd)	Orangefield (0.75 mgd)	Pinehurst (0.62 mgd)	OCWCID #2 (1.22 mgd)	Orange (5.32 mgd)	Regional Authority (9.51 mgd)
Orangefield LS - 2.25 mgd peak flow	-	\$459,000	-	-	-	-
Bridge City LS - 7.63 mgd peak flow	\$1,556,520	-	-	-	-	-
Reg #2 Inf. LS - 12.98 mgd peak flow	-	-	-	-	-	\$2,647,920
Line A - 14-Inch forcemain	-	\$489,600	-	-	-	-
Line B - 16-inch forcemain	-	\$678,000	-	-	-	-
Line C - 20-inch forcemain	\$468,720	-	-	-	-	-
Line D - 24-inch forcemain	\$243,000	\$243,000	-	-	-	-
Line E - 18-inch forcemain	-	-	-	-	-	\$756,000
Line F - 30-inch forcemain	-	-	-	-	-	\$854,400
Pinehurst LS - 3.10 mgd peak flow	-	-	\$632,400	-	-	-
Pinehurst - 16-inch forcemain	-	-	\$642,000	-	-	-
OCWCID #2 LS - 5.97 mgd peak flow	-	-	-	\$1,217,880	-	-
OCWCID #2 - 20-inch forcemain	-	-	-	\$186,000	-	-
Capitla Cost by Entity	\$2,268,240	\$1,869,600	\$1,274,400	\$1,403,880	\$0	\$4,258,320
30-year O&M Cost By Entity	\$700,434	\$206,550	\$284,580	\$548,046	\$0	\$1,191,564
Distribution of Regional Authority by ADF	\$916,910	\$429,802	\$355,303	\$699,144	\$3,048,726	-
TOTAL	\$3,885,584	\$2,505,952	\$1,914,283	\$2,651,070	\$3,048,726	-

## Regional Operations & Maintenance Cost<sup>(1)</sup>

### Treatment

1981 O&M Cost (eqn. 3.26)	$=1.03 \times 10^5 \times Q^{0.776}$					
1981 Administrative Cost (eqn. 3.2)	$=0.107 \times 10^5 \times Q^{0.654}$					
1981 to 2009 % Inflation:	132.30%					
	ADF (mgd)	1981 O&M Costs <sup>(1)</sup>	1981 Admin. Costs	1981 Total Cost (O&M + Admin)	2009 O&M Costs <sup>(2)</sup>	30-yr O&M Costs
Regional #1 (Jackson)	7.16	\$474,515	\$38,770	\$513,285	\$1,192,361	\$35,770,822
Regional #2	3.50	\$272,291	\$24,278	\$296,569	\$688,930	\$20,667,892

### Transportation

	Capital Cost	2009 Annual O&M Costs <sup>(4)</sup>	30-yr O&M Costs
Orangefield LS - 2.25 mgd peak flow	\$459,000	\$6,885	\$206,550
Bridge City LS - 7.63 mgd peak flow	\$1,556,520	\$23,348	\$700,434
Regional #2 Influent LS - 12.98 mgd peak flow	\$2,647,920	\$39,719	\$1,191,564
Pinehurst LS - 3.10 mgd peak flow	\$632,400	\$9,486	\$284,580
OCWCID #2 LS - 5.97 mgd peak flow	\$1,217,880	\$18,268	\$548,046

**Notes:**

- (1) O&M cost developed using EPA430/9-81-004, *Operations and Maintenance Cost for Municipal Wastewater Facilities*.
- (2) O&M cost were updated using actual inflation rate from 1981 to 2009 of 132.30%.
- (3) Area #1 includes Orange, WCID #2, and Pinehurst. Area #2 includes Bridge City and Orangefield.
- (4) 2009 Annual O&M costs developed based on 1.5% of lift station capital cost.

## 30-yr Regional WWTP Expenditures

Regional WWTP's			
	30-yr Capital Expenditure (2009 value)	30-yr O&M Expense (2009 values)	Expenditure Totals
Regional WWTP #1 - 7.16 MGD	\$30,663,839 *	\$35,770,822	\$66,434,661
Regional WWTP #2 - 3.50 MGD	\$19,444,254	\$20,667,892	\$40,112,147
Total	\$50,108,093	\$56,438,714	\$106,546,808

\* Includes purchase of Orange Plant for \$9.675 million and \$2.0 million to upgrade sludge handling.

## 30-yr Regional WWTP Distribution Analysis.

Cost Distribution Analysis			
	WWTP 9.51 MGD Total	Transportation Cost & 30-yr O&M Cost	Total 30-yr Cost
Orange - 5.32 MGD	\$59,603,472	\$3,048,726	\$62,652,198
Bridge City - 1.60 MGD	\$17,925,856	\$3,885,584	\$21,811,440
OCWCID #2 - 1.22 MGD	\$13,668,465	\$2,651,070	\$16,319,535
Orangefield - 0.75 MGD	\$8,402,745	\$2,505,952	\$10,908,697
Pinehurst - 0.62 MGD	\$6,946,269	\$1,914,283	\$8,860,552
	\$106,546,808	\$14,005,614	\$120,552,422

Non-Regional vs Regional Analysis			
	Non-Regional	Regional	Difference
Orange - 5.32 MGD	\$54,145,101	\$62,652,198	\$8,507,096
Bridge City - 1.60 MGD	\$16,574,773	\$21,811,440	\$5,236,667
OCWCID #2 - 1.22 MGD	\$15,063,408	\$16,319,535	\$1,256,127
Orangefield - 0.75 MGD	\$11,516,209	\$10,908,697	(\$607,512)
Pinehurst - 0.62 MGD	\$8,379,446	\$8,860,552	\$481,106
	\$105,678,937	\$120,552,422	\$14,873,485

# Appendix E



## Memorandum

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### Orange County Regional Wastewater Study: Creating a Regional Entity

**TO:** Rick Bourque, P.E. (Schaumburg & Polk)  
Bill Hughes, P.E. (Sabine River Authority)

**FROM:** Susan K. Roth, P.E.

**DATE:** November 19, 2008

For the Orange County Regional Wastewater Study, the participants are interested in the possibility of creating a regional entity similar to the Brushy Creek Regional Utility Authority (BCRUA) in Williamson County, Texas. The BCRUA is a partnership of the Cities of Round Rock, Cedar Park and Leander to develop a new regional water system. This 105.8 million gallon per day regional water system will cost an estimated \$350 million dollars and will be completed in three phases, with the first phase operational by 2012. The BCRUA will be responsible for owning and operating this system.

Research activities were conducted, including interviews with Chris Lippe (BCRUA General Manager), Steve Sheets (BCRUA attorney), Texas Water Development Board (TWDB) and each of the three partner cities, to respond to the questions listed below from Schaumburg & Polk, Inc. In addition, supporting documentation is provided in the appendices of this memorandum.

#### **(1) Verify the authority under which the BCRUA was created.**

One year prior to the formation of the BCRUA, each of the three cities created a partnership and drafted interlocal agreements between each other to address major issues of constructing and owning a regional water treatment system. This action resulted from the findings in the preliminary engineering study conducted for the Cedar Park-Round Rock-LCRA/Leander Regional Water Supply Project by HDR Engineering.

Since each of the cities had an immediate need for additional water supplies and treatment, they were motivated to work together after determining that developing a joint regional water system was the most cost-effective solution. In order to apply for TWDB funding, a new single entity needed to be created to make the request.

After researching the various options for a regional system in early 2007, the cities agreed to create a local government corporation. Based on the Texas Statutes, the authority to create a regional water/wastewater entity is outlined in the following:

- Transportation Code: Title 6, Chapter 431 – *Texas Transportation Corporation Act*
- Local Government Code: Title 13, Chapter 422 – *Public Utility Agencies for Provision of Water or Sewer Service*
- Local Government Code: Title 13, Chapter 572 – *Public Utility Agencies for Provision of Water or Sewer Service*

The creation processes outlined in Chapters 431 of the Transportation Code and 422 of the Local Government Code are quite similar in both statutes. However, the cities determined the best method would be to create a regional entity pursuant to Subchapter D of Chapter 431. According to this statute, "a local government corporation may be created to aid and act on behalf of one or more local governments to accomplish any governmental purpose of those local governments". This statute applies only to cities, counties and navigation districts for creating a regional entity.

Chapter 431 was primarily referenced for the BCRUA creation process instead of the other statutes due to its familiarity with the attorney general and TWDB for bond applications. Chapter 422 was relatively new at the time of the creation of the BCRUA. Chapter 572 is not active at this time; it will become effective on April 1, 2009 and replace Chapter 422. A copy of Chapter 431 of the Transportation Code is attached in Appendix A for reference.

Articles of Incorporation were drafted by an outside attorney and then submitted to the Secretary of State to receive a Certificate of Formation. BCRUA received their certificate approximately one year before approving the necessary exhibits referenced in the Articles of Incorporation (i.e. bylaws, master contract & financing agreement). Refer to Appendix B for copies of the Articles of Incorporation and Certificate of Formation for BCRUA.

In addition, each of the three City Councils adopted resolutions that approved the Articles of Incorporation prior to its submittal to the State. The resolution also confirmed each city's interest in joining the BCRUA. Adopting an ordinance by each city was not required to create the BCRUA, nor was it necessary to hold an election for approval by public vote. A copy of the City of Round Rock's resolution is provided in Appendix C.

Failure of one city to participate does not void the creation of the regional entity. However, the Board of Directors, with the direction of each of the three City Councils, can dissolve the corporation at any time according to the Articles of Incorporation if the purpose for creating the corporation has been substantially fulfilled. This process involves all three city councils approving a resolution to dissolve the corporation. In addition, all obligations and debt incurred by the regional entity must be fully paid.

## **(2) Describe the revenue source and authorization of the BCRUA.**

According to Chapter 431, regional entities can receive revenue through fees, general fund appropriations or gifts (bequest or grant-in-aid). Revenue sources and authorization for the BCRUA are outlined in the Master Contract and Financing Agreement of the September 2008 BCRUA Board Resolution provided in Appendix D. Since the official creation of the regional entity, BCRUA has not collected any revenue from the cities. The BCRUA has been operating through interlocal agreements until the recent adoption of this Board resolution (reference Appendix D).

The primary source of revenue for the BCRUA will come from monthly payments from each of the cities based on their financial obligations outlined in the Master Contract. In this contract, terms and conditions regarding financing, constructing, acquiring, owning, maintaining and operating the regional water system are outlined. The cities are obligated to

make payments to the BCRUA based on their annual budget, as noted in the Master Contract.

As collateral for payment to the BCRUA, each city pledges their gross revenues from their water system. Ad valorem tax revenues of cities can not be pledged as payment to the BCRUA. The BCRUA has the right at all reasonable times to inspect each city's water system, including records, accounts and data. The cities must furnish the BCRUA with financial statements, reports and other information relating to their water systems.

Following the creation of the BCRUA in July 2007, the entity submitted a funding application to the TWDB for \$309,755,000 to cover engineering design and construction costs of Phase I and II of the regional water system; funding was approved in January 2008. TWDB will issue bonds for BCRUA; three separate series of these bonds (D-Fund II) will be issued, one for each city requesting financing for their share of the total project estimate, including payment of all BCRUA project costs incurred prior to the issuance of bonds and funding a debt service reserve fund and interest on the bonds (during construction and for up to one year after the completion date).

The primary driver for creating the BCRUA was to provide an efficient vehicle for receiving low-interest loans through the TWDB. Each city is responsible for paying debt service on their series of TWDB bonds; they are not required to make debt service payments on any series of bonds issued for another city. For Phase I of the regional water supply project, the following allocation of bonds from the approved amount of TWDB funding (D-Fund II) will be available in January 2009:

- City of Round Rock (\$65,870,000)
- City of Cedar Park (\$24,970,000)
- City of Leander (\$91,180,000)

### **(3) Verify if BCRUA has equal Board representation from each entity.**

The BCRUA Board of Directors is comprised of three members. Each partner city has one Board member (director) appointed by their respective city councils. The appointed member must be a resident of the city that appointed them. Each member has equal representation from each city, although their financial interests are not equal. Reference the BCRUA Bylaws in Appendix E for additional information about Board member roles and responsibilities; this document is referenced in the BCRUA Board Resolution provided in Appendix D.

The Board members include Mayor John Cowman from Leander (Secretary/Treasurer), Council Member Scott Rhode from Round Rock (President) and Council Member Mitch Fuller from Cedar Park (Vice-President). The term of office for each member is two years, commencing with the date of the Board meeting when they were elected.

In hindsight, the General Manager of the BCRUA pointed out the benefit of having five or more members on a Board, with each entity's representation based on the size of the entity or their percentage of reserved capacity in the entire regional system. Over the past year, no two BCRUA Board members could discuss an issue offline since more than one member represents a quorum.

The Board has also found it difficult when taking action on agenda items since all three members must vote unanimously. For example, one of the Board members, having the least amount of reserved capacity in the system, recently voted against an issue regarding the awarding of construction contracts. As a result, completion of the first phase of the project will be delayed by a year.

#### **4) Describe the specific limits or how limits on bond indebtedness are decided.**

The creation document for the BCRUA does not describe any limitations on bond indebtedness. Following the creation of the BCRUA in July 2007, the entity submitted an application to the TWDB for \$309,755,000 to cover engineering design and construction costs of Phase I and II of the regional water system; funding was approved in January 2008. TWDB will issue bonds for BCRUA (separately for each city) in December 2008, and funds will be available for use in January 2009. The bonds will not exceed a maturity period of forty years from the date issued.

The Master Contract states that each bond resolution of the BCRUA specifies the maximum principal amount of the bonds for each city. The bond resolution for each city also includes creating a revenue fund, a debt service fund, a reserve fund, a construction fund and any other funds, as well as oversight of these funds, for the BCRUA. A copy of a bond resolution for the City of Round Rock is attached in Appendix F.

#### **(5) Describe how fees, distribution of debt service and operation costs are allocated to each entity of the BCRUA.**

The BCRUA will collect payments each month from the cities as required by the Master Contract for their bonds and proportionate share of overhead expenses and operations and maintenance expenses. Project fees distributed to each of the three cities are based on two scenarios: (1) expenses related to the ultimate treatment system capacity (105.8 MGD); and, (2) expenses related to a specific phase of the project.

As noted in the Interlocal Agreement for Ancillary Consulting Services (reference Appendix G), the cost allocation for each city in the first fee scenario is based on their percentage of total reserved capacity in the entire regional water system. Examples of fees that pertain to the entire system include costs for land acquisition, pipelines, legal fees, accounting, administrative, etc.

- City of Round Rock - 40.8 MGD (38.56%)
- City of Cedar Park - 15.0 MGD (14.18%)
- City of Leander - 50.0 MGD (47.26%)

In the second fee scenario, each city's prorata share for treatment and other costs associated with a specific phase, such as Phase I (30 MGD), is based on their reserved capacity:

- City of Round Rock - 8.0 MGD (27%)
- City of Cedar Park - 8.0 MGD (27%)
- City of Leander - 14.0 MGD (46%)

All costs for consulting services are shared by the cities according to the cost allocation percentages listed above, depending if the expenses pertain to Phase I or the entire project. Reference the BCRUA Project Capacity and Cost Allocation spreadsheet in Appendix H for a breakdown of project costs for each city. Phase IA costs are also detailed in Appendix H. For each consulting services contract, one city has served as the contracting party to oversee and administer the contract. All consulting services contracts must be approved unanimously by the three cities in a jointly executed Memorandum of Agreement. Once the BCRUA has funding in place, all contracts will be transferred from the partner cities to the BCRUA. Then, the BCRUA staff may directly administer consultant contracts, but the cost allocation would remain the same.

Each of the cities can transfer any portion of their reserved capacity to another city; however, they must provide a written notice to the BCRUA and other regional partners. The Master Contract provides the necessary flexibility to serve future customers. Also, the contract allows for the three cities in the BCRUA to not be obligated to participate in every expansion of the regional water system.

For operation and maintenance costs, the fees are allocated based on three categories:

- Fixed costs (i.e. staffing related costs)
- Variable costs (i.e. power and chemicals)
- Initial start-up costs (i.e. insurance, telephones, TCEQ fees, capital outlay)

The three cities are currently discussing precisely how to share the operating costs, especially in the first few years. It may be that all three cities will pay for initial start-up costs in Phase I based on their percentage of reserved capacity. Fixed costs will apply only to Cedar Park and Leander initially since they will have pipelines constructed to the regional water plant immediately; however, fixed costs for Round Rock will be delayed two to three years until they construct a pipeline to the plant. Finally, variable costs will be based on actual volume for each of the three cities.

The cities also have individual raw water contracts (reservation fee plus take-or-pay contracts) with the Lower Colorado River Authority (LCRA) to purchase water from Lake Travis to meet their long-term projected demands. The BCRUA is responsible for the operation of the regional project and treatment of raw water, but does not claim title to any of the cities' raw water contracts.

#### **(6) Describe problems associated with not controlling existing treatment facilities.**

The BCRUA does not own or operate any of the three cities' existing treatment facilities, nor is it the plan. The sole purpose of the creation of the BCRUA was to provide an efficient vehicle for the financing, construction, acquisition, ownership, maintenance, and operation of the new regional water system. The BCRUA does not see an issue with not controlling the three cities' existing treatment facilities.

From the new plant, BCRUA will essentially provide wholesale water service (no retail service). The only three "customers" are the three cities who funded and completely own the system. Since the three cities own the system, BCRUA will 'technically' not be providing

wholesale service; however, the cities have chosen for the BCRUA to operate in this manner. The BCRUA will treat raw water at the regional plant, deliver amounts of potable water without exceeding the reserved capacity of each city and bill according to a master meter at each city's delivery point along the transmission main.

### **(7) Provide the estimated cost to the entities in creating the BCRUA.**

The length of time to officially create the BCRUA was approximately seven months, starting in January 2007 and reaching completion in July 2007. However, the framework of the partnership between the cities had been established in the previous year through interlocal agreements. In addition to the Interlocal Agreement for Ancillary Consulting Services (Appendix G), copies of interlocal agreements for final design, project management and legal services are provided in Appendix I for reference.

Each of the cities contributed a significant number of hours of internal staff time (including city attorneys) towards the development of these interlocal agreements, which involved meetings to negotiate the terms of the contracts. Since the Sabine River Authority will be acting as an outside third party for creating the entity, they can provide direction for the other participants, as well as serve as a mediator. This will be an important factor for controlling costs spent to create a regional entity.

Outside legal counsel was also used to prepare the documents required by Subchapter D of Chapter 431 of the Local Government Code for the Secretary of State. While actual costs may vary based on numerous factors outside of the control of the attorney, an estimate of the legal costs to prepare each of the creation documents is summarized below:

- Articles of Incorporation (\$2,000)
- Interlocal Agreement for Ancillary Consulting Services (\$500)
- By-laws (\$500)
- Master Contract (\$20,000-\$30,000)
- Financial Agreement (\$2,500)

Once the Articles of Incorporation are complete, the Secretary of State charges a \$25 fee for processing the application. The costs incurred for outside legal counsel and accounting services were charged to each city based on their percentage of capacity in the entire regional system.

### **(8) Describe start-up procedure of BCRUA including estimated cost to the entities.**

In April 2007, the Articles of Incorporation were drafted and each of the three City Councils adopted a resolution to approve them (reference Appendix C for a copy of Round Rock's resolution). This resolution confirmed each city's interest in joining the BCRUA. Following council approval, the Articles of Incorporation were submitted to the Secretary of State. A certificate of formation for the BCRUA was received two days later.

During the early stages of creating the BCRUA, the cities decided to first hire a general manager. In January 2007, they selected Chris Lippe, former Director of City of Austin Water Utility, to serve in this role. Chris had retired from the City in the fall of 2006, and the timing

was right to immediately bring him on board to run the BCRUA. Since the regional entity had not been created at that time, the City of Round Rock took the lead of hiring Chris as a temporary employee for their City until he could officially be hired by the BCRUA as general manager.

After the BCRUA was officially created in July 2007, a number of activities occurred to get the entity established. First of all, the Board of Directors was appointed on August 7, 2007 (see press release in Appendix J). Following the appointment of the Board, the BCRUA held its first board meeting on August 22, 2007 at the Round Rock City Council Chambers. Meeting agendas and approved minutes from August 22 and October 16, 2007 are provided in Appendix J for reference. A copy of the water treatment plant presentation at the public meeting on October 1, 2007 is also included in Appendix J.

Following the first Board meeting in August, the BCRUA submitted an application to the TWDB in September 2007 for funding, hired a financial advisor for the regional system and established committees for finance, operations, and the city managers. The three cities had hired four engineering consulting firms to conduct the preliminary engineering design of the treatment plant and transmission mains in January 2007. These consultants completed the final design activities for the regional system in October 2008.

Since June 2006, each of the cities has committed staff time and internal resources towards the creation of the BCRUA. Based on their estimates, the partner cities meet approximately one to two times a week, which usually involves their respective City Manager, Assistant City Manager, City Attorney, and designated project manager. Each of the cities also noted that they work on this project outside of their weekly meetings. The designated project managers for each of the cities allocate approximately 30% of their time on this project.

The Operations Committee, as noted in the Master Contract, represents the collective interests of the cities. This committee is comprised of two representatives appointed by the city managers from each of the three cities. They meet on a regular basis regarding the following issues:

- Operation and maintenance of the BCRUA Regional Water System;
- Addition of new customers to the BCRUA, including terms and conditions of the agreements;
- Budget and annual report review prior to submittal to BCRUA Board of Directors;
- Improvements and expansions to the BCRUA Regional Water System;
- Review bids/proposals for construction and engineering services; and,
- Modifications to engineering reports.

The City Managers Committee is described in the Interlocal Agreement for Ancillary Consulting Services. This committee is comprised of the city managers for Cedar Park, Leander and Round Rock. They meet informally each week along with the city engineers and attorneys for each respective city to discuss the project status and unresolved issues. It is deemed important for the city managers to communicate frequently since they can easily discuss key issues with their council members and make management decisions on the spot to keep the project moving.

For all out-of-pocket expenses incurred by each city, a true-up will occur at the end of the BCRUA project to evenly distribute costs among all three parties regarding environmental issues, easements, general manager position, engineering, property acquisition, etc.

**(9) Verify if SRA can transfer the obligation of the TWDB IUP when Regional Authority is created.**

The TWDB offers low-interest loans and grant funds through their Clean Water State Revolving Funds (CWSRF) Program. As part of the CWSRF requirements, an entity has to submit an application for consideration on the draft version of the Intended Use Plan (IUP). The IUP for the TWDB identifies potential projects that rank high enough to receive financial assistance from TWDB. The FY2010 CWSRF IUP deadline is January 30, 2009.

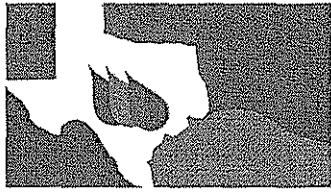
Subsequent to the adoption of the final IUP, the following changes are allowed to applications previously submitted without requiring them to be re-ranked:

- The applicant for a proposed project may change;
- An alternative project may be proposed which addresses the specific system conditions which received priority points;
- The number of participants in a consolidation project may change provided that the change does not result in a change to the combined rating factor; and,
- The total cost of a proposed project may decrease from the amount listed in the adopted IUP.

Sabine River Authority can submit an IUP for FY2010 and transfer the obligation of the funding to the new regional entity when it is officially created. Refer to Chapter 375 of the TWDB CWSRF Rule in Appendix K for additional information.

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# BRUSHY CREEK

## REGIONAL UTILITY AUTHORITY

A Partnership of Cedar Park, Leander, and Round Rock

For Immediate Release:  
Aug. 7, 2007

Contact: Chris Lippe, BCRUA Project Mgr.  
(512) 844-7419 clippe@round-rock.tx.us

### **City Councils appoint members to Brushy Creek Regional Utility Authority Board; Organizational Meeting Tentatively Scheduled**

The cities of Round Rock, Leander, and Cedar Park have named three representatives to the newly formed Brushy Creek Regional Utility Authority, Inc. (BCRUA) Board of Directors. They are: Mayor John Cowman from Leander, Council Member Scott Rhode from Round Rock, and Council Member Cobby Caputo from Cedar Park.

**The board is tentatively scheduled to hold its first meeting at 5 p.m. Wednesday, Aug. 22, 2007 at the Round Rock City Council Chambers, 221 East Main St.** The agenda for the meeting includes discussion of organizational issues, a proposed application for funding from the Texas Water Development Board, and an update on the status of the Regional Water Supply Project. The meeting was originally scheduled to be held Tuesday, Aug. 7, but was cancelled because of an agenda posting error.

Rapid growth in Central Texas has created a crucial issue the BCRUA must address. Planning projections indicate that without a new water supply system, the cities could face water shortages in three to seven years, jeopardizing the safety, well-being, and economic health of the entire region.

“We’ve had explosive growth in this area,” says Scott Rhode, Round Rock Council Member and new BCRUA board member. “Families and businesses understandably want to move here because it’s a great place to be. With that, we’ve got to stay ahead of the expected growth in order to ensure that we can provide this basic, yet critical service. There are new hospitals, new schools, and new residential developments on the ground or in the development stages and Round Rock is only one third of its final build out population. So, the responsibility we have as elected leaders in the region is to plan for and secure the water and infrastructure to meet the demands of our ultimate population. This project does that.”

The cities of Round Rock, Leander, and Cedar Park, through the BCRUA, are partnering in the development of a new water treatment plant in Cedar Park, new intake structures on Lake Travis, and new raw and treated water pipelines. The project will cost an estimated \$330 million dollars and will be completed in three phases.

*(Continued)*

“This is one of the most important and unique projects to be undertaken by the cities in recent years,” says Chris Lippe, BCRUA Project Manager. The cities are doing a great job of planning together to develop this regional water project. The result will be significant efficiencies and cost savings for ratepayers that wouldn’t have been possible had the cities chosen to go it alone.”

Phase 1 construction for the project will include a temporary, floating raw water intake structure at Cedar Park’s plant on the Sandy Creek arm of Lake Travis, a new raw water pipeline proposed within the Trails End Road right of way, and a new treatment plant. The proposed site of the plant is northwest of the intersection of Lime Creek Road and FM 1431 on the west side of Cedar Park.

Also in Phase 1, a treated water transmission pipeline is planned across the north side of Cedar Park with delivery facilities for Cedar Park, Leander, and Round Rock. The water treatment plant will have an initial capacity of 30 million gallons per day (mgd) and an ultimate capacity of 106 mgd. Cost is estimated at \$160 million. Construction is expected to begin in late spring or early summer of 2008 and be completed in two years.

Phase 2A of the project involves the construction of a new, fixed, deep-water intake structure in Lake Travis and a raw water pipeline to the new plant. Cedar Park’s and Leander’s existing floating intakes are located on the Sandy Creek arm of Lake Travis. Construction of a deep-water intake is vital to the project. If the drought had continued this year, the cities’ current floating intakes would have been grounded. The permanent deep-water intake structure is planned for completion in 2011. It will have an ultimate capacity of 142 mgd and will serve existing treatment plants as well as the regional plant.

Phase 2B of the project, which involves expansion of the treatment plant, is expected to be needed in 2016.

Cedar Park and Leander currently obtain their water from Lake Travis pursuant to contracts with the Lower Colorado River Authority (LCRA). Cedar Park owns and operates a 26 (mgd) water treatment plant on Lake Travis. The LCRA provides treated water to Leander. The City of Leander’s plant is being expanded from 6 mgd to 12 mgd, and Round Rock’s plant provides 48 mgd. Round Rock obtains water from the Brazos River Authority from intakes at Lake Georgetown and Lake Stillhouse Hollow. Round Rock also draws water from the Edwards Aquifer.

The LCRA holds water rights to the combined firm yield of Lakes Buchanan and Travis, which is equal to 489 billion gallons of water a year. Both reservoirs were constructed to serve as water supply reservoirs for Central Texas residents. Cedar Park, Leander, and Round Rock are planning to use a fraction of the water – about 8 percent when the project is completed – LCRA makes available. The water rights permit, issued by the Texas Commission on Environmental Quality (TCEQ), subject to TCEQ rules and regulations, has been thoroughly adjudicated.

*(Continued)*

In addition, the TCEQ requires that the LCRA maintain a Water Management Plan for the Highland Lakes that ensures their operation during a drought in a manner that meets the terms of its water rights permit. The plan governs operation of Lakes Travis and Buchanan and is reviewed periodically to keep pace with growing water demands and improved information.

A decision has not been made on where the new deep-water intake structure will be located. The project team will be evaluating sites near the Volente area over the next six to nine months. The public will be given opportunities to comment and provide input on the proposed sites as well as other aspects of the project. To encourage dialogue and to obtain feedback, a blog has been set up on the project website [www.bcrua.org](http://www.bcrua.org). Those with questions or concerns may also call the project hotline (512) 684-3200.

###

**BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.  
BOARD MEETING  
TUESDAY, OCTOBER 16, 2007 at 7:00 P.M.  
ROUND ROCK CITY HALL - COUNCIL CHAMBERS  
221 EAST MAIN STREET**

**DIRECTORS**

Scott Rhode, President  
Cobby Caputo, Vice President  
John D. Cowman, Secretary/Treasurer

**AGENDA**

1. **CALL BOARD MEETING TO ORDER – 7:00 p.m.**
2. **ROLL CALL**
3. **APPROVAL OF MINUTES:**
  - 3A. Consider approval of the Brushy Creek Regional Utility Authority, Inc. Organizational meeting minutes for August 22, 2007.
4. **RESOLUTIONS:**
  - 4A. Consider adoption of the Brushy Creek Regional Utility Authority, Inc. Board Meeting Procedures.
5. **PRESENTATIONS:**
  - 5A1. Consider a presentation concerning the Regional Water Treatment Plant Site.
  - 5A2. Consider an update for the Financial Application from First Southwest Company.
6. **PUBLIC HEARING:**
  - 6A. Public testimony regarding Brushy Creek Regional Utility Authority, Inc. proposed Regional Water System Project.

The Board of Directors of the Brushy Creek Regional Utility Authority, Inc., reserves the right to adjourn into executive session at any time during the course of this meeting to discuss any of the matters listed above, as authorized by Texas Government Code Sections 551.071 (Consultation with Attorney); 551.072 (Deliberations about Real Property); 551.073 (Deliberations about Gifts and Donations); 551.074 (Personnel Matters); 551.076 (Deliberations about Security Devices); and 551.087 (Economic Development).

**CERTIFICATE**

I certify that the above notice of the a Brushy Creek Regional Utility Authority, Inc. meeting was posted on the City Hall official bulletin board of the City of Round Rock, Texas at 5:00 on October 12, 2007.



Sara L. White on behalf of the Brushy  
Creek Regional Utility Authority

**The Round Rock City Council Chamber is wheelchair accessible. Requests for any special accommodations must be made 48 hours prior to the meeting. Please contact 218-5401. Requests for information may be faxed to 218-7097.**

**BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.  
ORGANIZATIONAL MEETING  
WEDNESDAY, AUGUST 22, 2007  
5:00 P.M.  
ROUND ROCK CITY HALL  
ROUND ROCK CITY COUNCIL CHAMBERS  
221 EAST MAIN STREET  
ROUND ROCK, TEXAS**

**DIRECTORS**

Cobby Caputo  
John D. Cowman  
Scott Rhode

**AGENDA**

1. Call Organizational Meeting to Order – 5:00 p.m.
2. Roll Call.
3. Consider the introduction to the Directors of the various staff members of the cities of Cedar Park, Leander, and Round Rock who will be assisting the Board.
4. Consider review and discussion of the Articles of Incorporation.
5. Review and discuss status of By-Laws.
6. Consider the election of a President, a Vice-President, and a Secretary/Treasurer.
7. Consider adoption of the corporate seal.
8. Consider adoption of a fiscal year.
9. Consider authorizing the application(s) for all required federal and state tax identification numbers.
10. Consider a resolution authorizing the President to execute a Financial Advisory Agreement with First Southwest Company to perform financial advisory services.
11. Consider a resolution authorizing the President to execute an engagement letter with McCall Parkhurst & Horton, L.L.P. to perform bond counsel services.
12. Consider a resolution expressing official intent to reimburse certain expenditures for the Brushy Creek Regional Water Project.
13. Consider and discuss a presentation regarding the status of the regional water project.

14. Consider and discuss a presentation regarding the proposed application for funding and/or financial participation from the Texas Water Development Board. The Board will also consider a resolution approving said application.
15. Consider and discuss proposed policies and procedures for conducting future Board meetings.
16. Consider Directors' requests for items to be placed on future meeting agendas.
17. Consider setting the date, time, and place for future meetings(s).
18. Adjournment.

**The Board of Directors of the Brushy Creek Regional Utility Authority, Inc., reserves the right to adjourn into executive session at any time during the course of this meeting to discuss any of the matters listed above, as authorized by Texas Government Code Sections 551.071 (Consultation with Attorney); 551.072 (Deliberations about Real Property); 551.073 (Deliberations about Gifts and Donations); 551.074 (Personnel Matters); 551.076 (Deliberations about Security Devices); and 551.087 (Economic Development).**

#### **CERTIFICATE**

I certify that this notice of the Organizational Meeting of the Board of Directors of the Brushy Creek Regional Utility Authority, Inc. was posted on the City Hall official bulletin board of the City of Round Rock, Texas at 10:00 a.m. on the 15th day of August 2007.

---

Christine R. Martinez, City Secretary  
City of Round Rock, Texas

**The Round Rock City Council Chamber is wheelchair accessible. Requests for any special accommodations must be made 48 hours prior to the meeting. Please contact 218-5401. Requests for information may be faxed to 218-7097.**

**INTERLOCAL AGREEMENT REGARDING PROJECT MANAGEMENT SERVICES  
FOR REGIONAL WATER SYSTEM**

THE STATE OF TEXAS                   §  
  §       KNOW ALL BY THESE PRESENTS:  
COUNTY OF WILLIAMSON           §

**THIS INTERLOCAL AGREEMENT REGARDING PROJECT MANAGEMENT SERVICES FOR REGIONAL WATER SYSTEM ("Agreement")** is entered into between the City of Round Rock, Texas, a Texas home-rule city ("**Round Rock**"); the City of Cedar Park, Texas, a Texas home-rule city ("**Cedar Park**"), and the City of Leander, Texas, a Texas home-rule city ("**Leander**"). In this Agreement, Round Rock, Cedar Park and Leander are sometimes individually referred to as "**Party**" and collectively referred to as "**Parties**".

**Recitals**

**WHEREAS**, the growth of the Cities of Round Rock, Cedar Park and Leander necessitates the development of additional water treatment capacity for each of these communities;

**WHEREAS**, the Parties have agreed to jointly pursue a regional water supply system that will ultimately provide treatment capacity for an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties based on projected population growth;

**WHEREAS**, the Parties will need the services of a skilled and experienced manager in order to pursue design and construction of the regional water supply system; and

**WHEREAS**, the purpose of this Agreement is to set forth the terms and conditions under which the Parties may authorize project management and oversight support for the design and construction of the regional water system and under which the Parties will cost participate in all costs and expenses related thereto.

**NOW, THEREFORE**, in consideration of the foregoing premises and the mutual promises and agreements of the Parties contained in this Agreement, the Parties agree as follows:

**I.  
DEFINITIONS**

When used in this Agreement, capitalized terms not otherwise defined shall have the meanings set forth below:

**1.01** "Agreement" means this Interlocal Agreement Regarding Project Management Services for Regional Water System.

**1.02** "Cedar Park" means the City of Cedar Park, Texas.

**1.03** "City Managers Committee" means the committee consisting of the City Managers for Cedar Park, Leander, and Round Rock.

**1.04** "Cost Allocation Percentage" means the percentage of Regional Project Management Services Costs to be paid by each Party. The Cost Allocation Percentage for each Party is as follows:

Cedar Park: 14.18%

Leander: 47.26%

Round Rock 38.56%

**1.05** "Design & Oversight Committee" or "D.O. Committee" means the engineering representative(s) selected by each Party for purposes of overseeing the Regional Project in accordance with the PER and the Project Schedule.

**1.06** "Effective Date" means the last date of execution of this Agreement by the Parties; provided all of the Parties must execute this Agreement for it to be effective.

**1.07** "Leander" means the City of Leander, Texas.

**1.08** "Party" or "Parties" means Cedar Park, Round Rock, and/or Leander, individually or collectively, as applicable.

**1.09** "PER" means the "Regional Water Supply Project Engineering Design Report" prepared by HDR Engineering, Inc. and dated November 2006.

**1.10** "Regional Project Manager" means the project manager selected and appointed by the Parties to provide project management and oversight support for the Regional Project. The project manager selected by the Parties will be experienced and qualified in public utility projects, particularly those involving large water and/or wastewater systems.

**1.11** "Regional Project Management Services" means the management and oversight services to be performed by the Regional Project Manager. These services will be in support of the Regional Project.

**1.12** "Regional Project Management Costs" means all costs and expenses incurred by the Parties for Regional Project Management Services. Each Party shall bear its share of the Regional Project Management Costs in accordance with the Cost Allocation Percentage set forth herein.

**1.13** "Regional Project" means the regional water supply system, which will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties, based on projected population growth, as more fully described in the PER.

**1.14** "Round Rock" means the City of Round Rock, Texas.



**II.**  
**REGIONAL PROJECT MANAGEMENT SERVICES**

**2.01 Regional Project Management Services.**

(a) The Parties hereby appoint and retain Chris Lippe ("Lippe") as Regional Project Manager. Lippe shall provide Regional Project Management Services to the Parties in accordance with the provisions of the Agreement.

(b) The Parties agree that Round Rock will serve as the principal contact with the Regional Project Manager and may employ him as a temporary employee. Round Rock will have primary responsibility to oversee and administer the Regional Project Management Services, but shall do so at all times in cooperation with the D.O. Committee.

**2.02 D.O. Committee Participation.**

(a) The Regional Project Manager shall work with and report to the D.O. Committee. The D.O. Committee shall prepare a schedule of meetings with the Regional Project Manager that shall be approved by all members of the D.O. Committee. Round Rock shall ensure that the Regional Project Manager works cooperatively with the D.O. Committee at all times. The foregoing shall not be construed to prohibit any Party from communicating directly with the Regional Project Manager regarding the Regional Project without the presence or participation of the other Parties, or from meeting with the Regional Project Manager when it is not practicable to schedule a meeting with the D.O. Committee.

(b) The D.O. Committee shall:

(i) Attend and participate in regular meetings with the Regional Project Manager to monitor the status of the Regional Project and to provide direction and recommendations with respect thereto;

(ii) Ensure that the Regional Project Management Services are performed in accordance with the PER and the Project Schedule; and

(iii) Address any other relevant matters relating to the Regional Project Management Services.

(c) Within ten (10) business days of receipt of any reports or recommendations prepared by a Condemnation Counsel, the members of the D.O. Committee shall specify in writing to each other any objections regarding the draft reports, and any proposed revisions thereto. If any member of the D.O. Committee fails to object in writing to the report within ten (10) business days, then that member shall be deemed to have approved the draft report. In the event that any member of the D.O. Committee timely objects to the draft report, then the D.O. Committee shall endeavor in good faith to resolve the matter by unanimous agreement. If the D.O. Committee cannot unanimously agree to the proper resolution within ten (10) business days, then the D.O. Committee shall refer the dispute to the City Managers Committee. The City Managers Committee shall work diligently and in good faith to resolve any dispute as quickly as possible so as not to jeopardize the completion of the Regional Project in

accordance with the Project Schedule. If the City Managers Committee is unable to resolve a dispute after reasonable and good faith efforts, the Parties shall promptly refer the dispute to their respective City Councils for consideration. If the dispute is not resolved within thirty (30) days after referral to the City Councils, then the Parties shall terminate this Agreement. In the event of termination, Round Rock may, at its own cost and expense, continue its temporary employment relationship with Lippe.

### **2.03 Access to Work Product.**

(a) Any Party is entitled to copies of any work product produced by the Regional Project Manager in connection with the Regional Project Management Services. The Party requesting a copy of such information shall pay all reasonable costs incurred in preparing and furnishing the copies.

(b) The Parties may utilize the work product produced by the Regional Project Manager for their own purposes.

## **III.**

### **PAYMENT OF REGIONAL PROJECT MANAGEMENT SERVICES COSTS.**

#### **3.01 Payment of Regional Project Management Services Costs.**

(a) All Regional Project Management Services Costs shall be shared by the Parties according to the Cost Allocation Percentages.

(b) The Parties agree that Round Rock shall administer the compensation and other benefits paid to the Regional Project Manager, who may be treated as a temporary employee of Round Rock. Each calendar quarter, Round Rock shall submit notice to the other Parties indicating each Party's share of the compensation and other benefits paid to the Regional Project Manager in accordance with each Party's Cost Allocation Percentage. Cedar Park and Leander shall forward payment therefor within ten (10) business days of the receipt of notice.

(c) In the event of any disputes among the Parties, the Parties agree that the City Managers Committee shall work diligently and in good faith to resolve any dispute concerning Regional Project Management Services and/or Regional Project Management Services Costs as quickly as possible so as not to jeopardize the completion of the Regional Project. If the City Managers Committee is unable to resolve a dispute after reasonable and good faith efforts, the Parties shall promptly refer the dispute to their respective City Councils for consideration. If the dispute is not resolved within thirty (30) days after referral to the City Councils, then the Parties shall terminate this Agreement. In the event of termination, Round Rock may, at its own cost and expense, continue its temporary employment relationship with Lippe.

## **IV.**

### **GENERAL PROVISIONS**

**4.01 Authority.** This Agreement is made in part under the authority conferred in Chapter 791, *Texas Government Code* and Section 402.001, *Texas Local Government Code*.

**4.02 Severability.** The provisions of this Agreement are severable and, if any provision of this Agreement is held to be invalid for any reason by a court or agency of competent jurisdiction, the remainder of this Agreement will not be affected and this Agreement will be construed as if the invalid portion had never been contained herein.

**4.03 Payments from Current Revenues.** Any payments required to be made by a Party under this Agreement will be paid from current revenues or other funds lawfully available to the Party for such purpose.

**4.04 Cooperation.** The Parties agree to cooperate at all times in good faith to effectuate the purposes and intent of this Agreement.

**4.05 Entire Agreement.** Except as otherwise expressly provided herein, this Agreement contains the entire agreement of the Parties regarding the sharing of costs for the Project Management Services and supersedes all prior or contemporaneous understandings or representations, whether oral or written, regarding the subject matter. The Parties confirm that further agreements regarding the Regional Project are contemplated and will not be affected or limited by this Agreement.

**4.06 Amendments.** Any amendment of this Agreement must be in writing and will be effective if signed by the authorized representatives of the Parties.

**4.07 Applicable Law; Venue.** This Agreement will be construed in accordance with Texas law. Venue for any action arising hereunder will be in Williamson County, Texas.

**4.08 Notices.** Any notices given under this Agreement will be effective if (i) forwarded to a Party by hand-delivery; (ii) transmitted to a Party by confirmed telecopy; or (iii) deposited with the U.S. Postal Service, postage prepaid, certified, to the address of the Party indicated below:

**CEDAR PARK:**

600 North Bell Blvd.  
Cedar Park, Texas 78613  
Attn: Sam Roberts  
Telephone: (512) 258-4121 x6321  
Facsimile: (512) 258-6083  
Email: [roberts@ci.cedar-park.tx.us](mailto:roberts@ci.cedar-park.tx.us)

with copy to:

Leonard Smith  
P.O. Box 684633  
Austin, Texas 78768  
Telephone: (512) 474-6707  
Facsimile: (512) 474-6706  
Email: [lsmith@leonardsmithlaw.com](mailto:lsmith@leonardsmithlaw.com)

**ROUND ROCK:**

221 East Main  
Round Rock, Texas 78664  
Attn: Jim Nuse  
Telephone: (512) 218-5410  
Facsimile: (512) 218-7097  
Email: [jnuse@round-rock.tx.us](mailto:jnuse@round-rock.tx.us)

with copy to:

Steve Sheets  
309 E. Main Street  
Round Rock, Texas 78664-5264  
Telephone: (512) 255-8877  
Facsimile: (512) 255-8986  
Email: [slsheets@sheets-crossfield.com](mailto:slsheets@sheets-crossfield.com)

**Leander:**

P.O. Box 319  
Leander, Texas 78646-0319  
Attn: Wayne Watts  
Telephone: (512) 259-1178  
Facsimile: (512) 259-1605  
Email: [w.watts@ci.leander.tx.us](mailto:w.watts@ci.leander.tx.us)

with copy to:

Diana Granger  
223 W. Anderson Lane, Suite A-105  
Austin, Texas 78752  
Telephone: (512) 323-5778  
Telecopy: (512) 323-5773  
Email: [attorneys@cityattorneytexas.com](mailto:attorneys@cityattorneytexas.com)

**4.09 Force Majeure.** Parties shall not be deemed in violation of this Contract if prevented from performing any of their obligations hereunder by reasons for which they are not responsible or circumstances beyond their control. However, notice of such impediment or delay in performance must be timely given, and all reasonable efforts undertaken to mitigate its effects.

**4.10 Counterparts. Effect of Partial Execution.** This Agreement may be executed simultaneously in multiple counterparts, each of which will be deemed an original, but all of which will constitute the same instrument.

**4.11 Authority.** Each Party represents and warrants that it has the full right, power and authority to execute this Agreement

***[SIGNATURES ON FOLLOWING PAGES]***

**CITY OF ROUND ROCK:**

ATTEST:

\_\_\_\_\_  
Christine Martinez, City Secretary

By: \_\_\_\_\_  
Nyle Maxwell, Mayor

Date: \_\_\_\_\_

**CITY OF CEDAR PARK:**

ATTEST:

\_\_\_\_\_  
LeAnn Quinn, City Secretary

By: \_\_\_\_\_  
Bob Lemon, Mayor

Date: \_\_\_\_\_

**CITY OF LEANDER:**

ATTEST:

\_\_\_\_\_  
Debbie Haile, City Secretary

By: \_\_\_\_\_  
John Cowman, Mayor

Date: \_\_\_\_\_

**INTERLOCAL AGREEMENT REGARDING CONDEMNATION LEGAL SERVICES  
FOR REGIONAL WATER SYSTEM**

THE STATE OF TEXAS           §  
  §     KNOW ALL BY THESE PRESENTS:  
COUNTY OF WILLIAMSON       §

**THIS INTERLOCAL AGREEMENT REGARDING CONDEMNATION LEGAL SERVICES FOR REGIONAL WATER SYSTEM** ("Agreement") is entered into between the City of Round Rock, Texas, a Texas home-rule city ("**Round Rock**"); the City of Cedar Park, Texas, a Texas home-rule city ("**Cedar Park**"), and the City of Leander, Texas, a Texas home-rule city ("**Leander**"). In this Agreement, Round Rock, Cedar Park and Leander are sometimes individually referred to as "**Party**" and collectively referred to as "**Parties**".

**Recitals**

**WHEREAS**, the growth of the Cities of Round Rock, Cedar Park and Leander necessitates the development of additional water treatment capacity for each of these communities;

**WHEREAS**, the Parties have agreed to jointly pursue a regional water supply system that will ultimately provide treatment capacity for an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties based on projected population growth;

**WHEREAS**, in order to pursue construction of the regional water supply system, the Parties may have to pursue condemnation to acquire necessary easements; and

**WHEREAS**, the purpose of this Agreement is to set forth the terms and conditions under which the Parties may authorize legal services in support such condemnation and under which the Parties will cost participate in all costs and expenses related thereto.

**NOW, THEREFORE**, in consideration of the foregoing premises and the mutual promises and agreements of the Parties contained in this Agreement, the Parties agree as follows:

**I.  
DEFINITIONS**

When used in this Agreement, capitalized terms not otherwise defined shall have the meanings set forth below:

**1.01** "Agreement" means this Interlocal Agreement Regarding Condemnation Legal Services for Regional Water System.

**1.02** "Cedar Park" means the City of Cedar Park, Texas.

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1.03 "City Managers Committee" means the committee consisting of the City Managers for Cedar Park, Leander, and Round Rock.

1.04 "Condemnation Counsel" means the attorney(s) appointed and retained by the Parties as condemnation counsel. Such attorney(s) shall be licensed to practice law in the State of Texas, shall be in good standing with the State Bar of Texas, and shall be experienced and qualified in the area of condemnation.

1.05 "Condemnation Legal Services" means the legal services to be performed by Condemnation Counsel. These services will be in support of the Regional Project and any condemnation required thereby.

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1.06 "Condemnation Legal Services Costs" means all costs and expenses incurred by the Parties for Condemnation Legal Services. Each Party shall bear its share of the Condemnation Legal Services Costs in accordance with the Cost Allocation Percentage set forth herein.

1.07 "Cost Allocation Percentage" means the percentage of Condemnation Legal Services Costs to be paid by each Party. The Cost Allocation Percentage for each Party is as follows:

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- Cedar Park: 14.18%
- Leander: 47.26%
- Round Rock 38.56%

1.08 "Design & Oversight Committee" or "D.O. Committee" means the engineering representative(s) selected by each Party for purposes of overseeing the Regional Project in accordance with the PER and the Project Schedule.

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1.09 "Effective Date" means the last date of execution of this Agreement by the Parties; provided all of the Parties must execute this Agreement for it to be effective.

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1.10 "Leander" means the City of Leander, Texas.

1.11 "Party" or "Parties" means Cedar Park, Round Rock, and/or Leander, individually or collectively, as applicable.

1.12 "PER" means the "Regional Water Supply Project Engineering Design Report" prepared by HDR Engineering, Inc. and dated November 2006.

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1.13 "Regional Project" means the regional water supply system, which will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties, based on projected population growth, as more fully described in the PER.

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1.14 "Round Rock" means the City of Round Rock, Texas.

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II.  
**CONDEMNATION LEGAL SERVICES**

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2.01 **Condemnation Legal Services.**

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(a) The Parties hereby appoint and retain Kent Sick ("Sick") as Condemnation Counsel. Sick shall provide Condemnation Legal Services to the Parties in accordance with the provisions of the Agreement. The Parties may designate an additional firm(s) or attorney(s) to serve as Condemnation Counsel from time to time.

(b) The Parties agree that Cedar Park will serve as the principal contact with Condemnation Counsel. Cedar Park will have primary responsibility to oversee and administer the Condemnation Legal Services, but shall do so at all times in cooperation with the D.O. Committee.

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2.02 **D.O. Committee Participation.**

(a) Each Condemnation Counsel shall work with and report to the D.O. Committee. The D.O. Committee shall prepare a schedule of meetings with each Condemnation Counsel that shall be approved by all members of the D.O. Committee. Cedar Park shall ensure that each Condemnation Counsel works cooperatively with the D.O. Committee. The foregoing shall not be construed to prohibit any Party from communicating directly with Condemnation Counsel, regarding the Condemnation Legal Services without the presence or participation of the other Parties, or from meeting with Condemnation Counsel when it is not practicable to schedule a meeting with the D.O. Committee.

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(b) The D.O. Committee shall:

(i) Attend and participate in regular meetings with each Condemnation Counsel to monitor the status of the Condemnation Legal Services and to provide direction and recommendations with respect thereto;

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(ii) Ensure that the Condemnation Legal Services are performed in accordance with the PER and the Project Schedule; and

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(iii) Address any other relevant matters relating to the Condemnation Legal Services.

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(c) Within five (5) business days of receipt of any reports or recommendations prepared by a Condemnation Counsel, the members of the D.O. Committee shall specify in writing to each other any objections regarding the draft reports, and any proposed revisions thereto. If any member of the D.O. Committee fails to object in writing to the report within five (5) business days, then that member shall be deemed to have approved the draft report. In the event that any member of the D.O. Committee timely objects to the draft report, then the D.O. Committee shall endeavor in good faith to resolve the matter by unanimous agreement. If the D.O. Committee cannot unanimously agree to the proper resolution within five (5) business days, then the D.O. Committee shall refer the dispute to the City Managers Committee. The City Managers Committee shall work diligently and in good faith to resolve any

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dispute as quickly as possible so as not to jeopardize the completion of the Regional Project in accordance with the Project Schedule. If the City Managers Committee is unable to resolve a dispute after reasonable and good faith efforts, the Parties shall promptly refer the dispute to their respective City Councils for consideration. If the dispute is not resolved within thirty (30) days after referral to the City Councils, then the Parties shall terminate this Agreement. In the event of termination, Cedar Park may, at its own cost and expense, continue its attorney-client relationship with Sick.

**2.03 Access to Work Product.**

(a) Any Party is entitled to copies of any work product produced by Condemnation Counsel in connection with the Consulting Services. The Party requesting a copy of such information shall pay all reasonable costs incurred in preparing and furnishing the copies.

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(b) The Parties acknowledge that Condemnation Counsel's communications and work product may be exempt from production under the Public Information Act, Section 552.001 *et seq.* of the Government Code, and/or privileged under the Texas Rules of Evidence. The Parties shall cooperate reasonably and in good faith to protect exempted or privileged information from disclosure.

**III.  
PAYMENT OF CONDEMNATION LEGAL SERVICES COSTS.**

**3.01 Payment of Condemnation Legal Services Costs.**

(a) All Condemnation Legal Services Costs shall be shared by the Parties according to the Cost Allocation Percentages.

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(b) The Parties agree that Condemnation Counsel shall be instructed to send all invoices to Cedar Park. Upon receipt of each invoice from any Condemnation Counsel, Cedar Park shall review the invoice and confirm that the Condemnation Legal Services have been satisfactorily completed in accordance with the request for payment. Thereafter, Cedar Park shall submit notice to the other Parties indicating each Party's share of the Condemnation Counsel's invoice in accordance with each Party's Cost Allocation Percentage. Round Rock and Leander shall forward payment therefor within ten (10) business days of the receipt of notice.

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(c) In the event of any disputes among the Parties, the Parties agree that the City Managers Committee shall work diligently and in good faith to resolve any dispute concerning Condemnation Legal Services and/or Condemnation Legal Services Costs as quickly as possible so as not to jeopardize the completion of the Regional Project. If the City Managers Committee is unable to resolve a dispute after reasonable and good faith efforts, the Parties shall promptly refer the dispute to their respective City Councils for consideration. If the dispute is not resolved within thirty (30) days after referral to the City Councils, then the Parties shall terminate this Agreement. In the event of termination, Cedar Park may, at its own cost and expense, continue its attorney-client relationship with Sick.

IV.  
**GENERAL PROVISIONS**

4.01 Authority. This Agreement is made in part under the authority conferred in Chapter 791, *Texas Government Code* and Section 402.001, *Texas Local Government Code*.

4.02 Severability. The provisions of this Agreement are severable and, if any provision of this Agreement is held to be invalid for any reason by a court or agency of competent jurisdiction, the remainder of this Agreement will not be affected and this Agreement will be construed as if the invalid portion had never been contained herein.

4.03 Payments from Current Revenues. Any payments required to be made by a Party under this Agreement will be paid from current revenues or other funds lawfully available to the Party for such purpose.

4.04 Cooperation. The Parties agree to cooperate at all times in good faith to effectuate the purposes and intent of this Agreement.

4.05 Entire Agreement. Except as otherwise expressly provided herein, this Agreement contains the entire agreement of the Parties regarding the sharing of costs for the Consulting Services and supersedes all prior or contemporaneous understandings or representations, whether oral or written, regarding the subject matter. The Parties confirm that further agreements regarding the Regional Project are contemplated and will not be affected or limited by this Agreement.

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4.06 Amendments. Any amendment of this Agreement must be in writing and will be effective if signed by the authorized representatives of the Parties.

4.07 Applicable Law; Venue. This Agreement will be construed in accordance with Texas law. Venue for any action arising hereunder will be in Williamson County, Texas.

4.08 Notices. Any notices given under this Agreement will be effective if (i) forwarded to a Party by hand-delivery; (ii) transmitted to a Party by confirmed telecopy; or (iii) deposited with the U.S. Postal Service, postage prepaid, certified, to the address of the Party indicated below:

**CEDAR PARK:** 600 North Bell Blvd.  
Cedar Park, Texas 78613  
Attn: Sam Roberts  
Telephone: (512) 258-4121 x6321  
Facsimile: (512) 258-6083  
Email: [roberts@ci.cedar-park.tx.us](mailto:roberts@ci.cedar-park.tx.us)

with copy to: Leonard Smith  
P.O. Box 684633  
Austin, Texas 78768  
Telephone: (512) 474-6707  
Facsimile: (512) 474-6706  
Email: [lsmith@leonardsmithlaw.com](mailto:lsmith@leonardsmithlaw.com)

**ROUND ROCK:** 221 East Main  
Round Rock, Texas 78664  
Attn: Jim Nuse  
Telephone: (512) 218-5410  
Facsimile: (512) 218-7097  
Email: [jnuse@round-rock.tx.us](mailto:jnuse@round-rock.tx.us)

with copy to: Steve Sheets  
309 E. Main Street  
Round Rock, Texas 78664-5264  
Telephone: (512) 255-8877  
Facsimile: (512) 255-8986  
Email: [slsheets@sheets-crossfield.com](mailto:slsheets@sheets-crossfield.com)

**Leander:** P.O. Box 319  
Leander, Texas 78646-0319  
Attn: Wayne Watts  
Telephone: (512) 259-1178  
Facsimile: (512) 259-1605  
Email: [w.watts@ci.leander.tx.us](mailto:w.watts@ci.leander.tx.us)

with copy to: Diana Granger  
223 W. Anderson Lane, Suite A-105  
Austin, Texas 78752  
Telephone: (512) 323-5778  
Telecopy: (512) 323-5773  
Email: [attorneys@cityattorneytexas.com](mailto:attorneys@cityattorneytexas.com)

**4.09 Force Majeure.** Parties shall not be deemed in violation of this Contract if prevented from performing any of their obligations hereunder by reasons for which they are not responsible or circumstances beyond their control. However, notice of such impediment or delay in performance must be timely given, and all reasonable efforts undertaken to mitigate its effects.

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**4.10 Counterparts. Effect of Partial Execution.** This Agreement may be executed simultaneously in multiple counterparts, each of which will be deemed an original, but all of which will constitute the same instrument.

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**4.11 Authority.** Each Party represents and warrants that it has the full right, power and authority to execute this Agreement

**CITY OF ROUND ROCK:**

ATTEST:

\_\_\_\_\_  
Christine Martinez, City Secretary

By: \_\_\_\_\_  
Nyle Maxwell, Mayor

Date: \_\_\_\_\_

**CITY OF CEDAR PARK:**

**ATTEST:**

\_\_\_\_\_  
LeAnn Quinn, City Secretary

By: \_\_\_\_\_  
Bob Lemon, Mayor

Date: \_\_\_\_\_

**CITY OF LEANDER:**

**ATTEST:**

\_\_\_\_\_  
Debbie Haile, City Secretary

By: \_\_\_\_\_  
John Cowman, Mayor

Date: \_\_\_\_\_



**INTERLOCAL AGREEMENT REGARDING  
FINAL DESIGN SERVICES FOR REGIONAL WATER SYSTEM**

THE STATE OF TEXAS                   §  
  §                   KNOW ALL BY THESE PRESENTS:  
COUNTY OF WILLIAMSON           §

**THIS INTERLOCAL AGREEMENT REGARDING FINAL DESIGN SERVICES FOR REGIONAL WATER SYSTEM ("Agreement")** is entered into between the City of Round Rock, Texas, a Texas home-rule city ("**Round Rock**"); the City of Cedar Park, Texas, a Texas home-rule city ("**Cedar Park**"), and the City of Leander, Texas, a Texas home-rule city ("**Leander**"). In this Agreement, Round Rock, Cedar Park and Leander are sometimes individually referred to as "**Party**" and collectively referred to as "**Parties**".

**Recitals**

**WHEREAS**, the growth of the Cities of Round Rock, Cedar Park and Leander necessitates the development of additional water supplies for each of these communities; and

**WHEREAS**, the Parties have agreed to jointly pursue a regional water supply system that will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties based on projected population growth; and

**WHEREAS**, Round Rock, Cedar Park and the Lower Colorado River Authority ("**LCRA**"). have previously entered into multiple agreements in anticipation of the regional water supply system, including: (i) the "Interlocal Agreement Regarding Design of New Hope Regional Waterline" between Round Rock, Cedar Park and LCRA dated December 15, 2005; (ii) the "Interlocal Agreement Regarding Construction of Regional Water Line" between Round Rock, Cedar Park and LCRA dated March 23, 2006; (iii) the "Interlocal Agreement for Interim Water Supply" between Round Rock and Cedar Park dated March 9, 2006; (iv) the Interlocal Agreement Regarding Water Supply Agreement Obligations between LCRA and Cedar Park, dated March 9, 2006; and the Wholesale Potable Water Service Agreement between the Brazos River Authority, LCRA and Leander dated March 2, 1998; and

**WHEREAS**, the Parties desire to proceed with the final design and other consulting services related to the regional water system project; and

**WHEREAS**, the purpose of this Agreement is to set forth the terms and conditions pursuant to which the Parties shall authorize final design and other consulting services related to the regional water system project, and pursuant to which the Parties will cost participate in all costs and expenses related thereto.

**NOW, THEREFORE**, in consideration of the foregoing premises and the mutual promises and agreements of the Parties contained in this Agreement, the Parties agree as follows:

**I.**  
**DEFINITIONS**

When used in this Agreement, capitalized terms not otherwise defined shall have the meanings set forth below:

1.01 "Agreement" means this Interlocal Agreement Regarding Final Design Services for Regional Project.

1.02 "Cedar Park" means the City of Cedar Park, Texas.

1.03 "Cost Allocation Percentage" means the percentage of Final Design Costs to be paid by each Party. The Cost Allocation Percentages for each category of Final Design Services and are set forth on Exhibit "A" attached hereto.

1.04 "Design & Oversight Committee" or "D.O. Committee" means the engineering representative(s) selected by each Party for purposes of overseeing the implementation of the final design of the Regional Project in accordance with the PER and the Project Schedule, as more particularly described in Art. II.

1.05 "Design Fund" means a fund to be established and administered by Round Rock in accordance with Section 4.03 in order to provide monies to pay the Final Design Costs.

1.06 "Effective Date" means the last date of execution of this Agreement by the Parties; provided all of the Parties must execute this Agreement for it to be effective.

1.07 "LCRA" means the Lower Colorado River Authority.

1.08 "Leander" means the City of Leander, Texas.

1.09 "New Hope Water Line" means the water transmission line and related equipment and appurtenances being constructed by Cedar Park on behalf of the Parties in accordance with the terms of the New Hope Water Line Construction Agreement.

1.10 "New Hope Water Line Construction Agreement" means that certain Interlocal Agreement Regarding Construction of Regional Water Line" dated March 23, 2006, between Round Rock, Cedar Park, and LCRA relating to the construction of the New Hope Water Line.

1.11 "Party" or "Parties" means Cedar Park, Round Rock, and/or Leander, individually or collectively, as applicable.

1.12 "PER" means the "Regional Water Supply Project Engineering Design Report" prepared by HDR Engineering, Inc. and dated November 2006 – Final Issue January 2007.

1.13 "Final Design Services" means the final engineering and other services to be performed by the Project Consultants pursuant to the Final Design Contracts.

1.14 "Final Design Contracts" means those certain contracts for engineering services to be approved by the Parties pursuant to which the Project Consultants shall provide Final Design Services.

1.15 "Final Design Costs" means all costs and expenses incurred by the Parties pursuant to the Final Design Contracts for Final Design Services.

1.16 "Project Consultant(s)" means one or more of the following firms which are parties to the Final Design Contracts with the Parties for each category of the Final Design Services, as follows:

- (a) Carter & Burgess, Inc. for the Raw Water System and Barge;
- (b) Camp Dresser & McKee, Inc. for the Water Treatment Plant;
- (c) Lockwood, Andrews and Newnam, Inc. for Segment 1 of the Treated Water Transmission Line; and
- (d) K Friese & Associates for Segment 2C of the Treated Water Transmission Line.

1.17 "Regional Project" means the regional water supply system, which will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties, based on projected population growth, as more fully described in the PER.

1.18 "Round Rock" means the City of Round Rock, Texas.

1.19 "Project Schedule" means the Regional Water System Project Schedule attached as Exhibit "B".

## II. DESIGN AND OVERSIGHT COMMITTEE

2.01 **D.O. Committee.** The Parties have created a Design & Oversight Committee ("D.O. Committee") composed of one representative appointed by each Party. The following persons are members of the D.O. Committee: Kenneth Wheeler on behalf of Cedar Park; Wayne Watts on behalf of Leander; and Don Rundell on behalf of Round Rock. Each representative of a Party shall serve at the will of the governing body (or its designee) that the person represents. Upon the incapacitation, resignation, or revocation of the power of such representative, the governing body of the appropriate Party (or its designee) shall promptly appoint a new representative to the D.O. Committee, and shall immediately notify the other Parties in writing of such appointment. Each Party may appoint one or more alternate representatives as it deems necessary and proper.

**2.02 Responsibility of D.O. Committee.** The D.O. Committee shall:

- (i) Attend and participate in regular meetings with the Project Consultants to monitor the status of the Final Design Services and to provide direction and recommendations with respect thereto;
- (ii) Review and unanimously approve in writing the final design report, routing and location of the Regional Project facilities produced by the Project Consultants in accordance with the PER;
- (iii) Review and unanimously approve in writing any revisions to the scope of Final Design Services to be performed by any Project Consultants;
- (iv) Confirm in writing the final completion of Final Design Services under the Final Design Contracts in accordance with the PER and the Project Schedule; and
- (v) Address any other pertinent matters relating to the Final Design Services.

The D.O. Committee shall meet at regular intervals to review the matters over which it has authority. The D.O. Committee shall be diligent, prompt and timely in reviewing and acting on matters submitted to it.

**III.  
FINAL DESIGN SERVICES**

**3.01 Final Design and Project Management Services.**

(a) The Parties intend to enter into Final Design Contracts in the form \_\_\_\_\_

(b) Once approved, the scope of Final Design Services, including any proposed changes to a Project Consultant's compensation in connection therewith, may only be modified by unanimous written authorization from the Parties, which authorization shall be set forth in a "Supplemental Contract" executed by each Party.

(c) The Parties have agreed to appoint Chris Lippe, P.E. to provide project management services for the Regional Project in general and this Agreement in particular. Mr. Lippe shall perform his work in cooperation with the D.O. Committee, shall regularly report to the D.O. Committee, and shall support and assist the D.O. Committee in the performance of its responsibilities.

**3.02 D.O. Committee Participation.**

(a) The D.O. Committee shall prepare a schedule of meetings with the Project Consultants that shall be approved by all members of the D.O. Committee. The foregoing shall not be construed to prohibit any Party from communicating with Project Consultants regarding

the Final Design Services without the presence or participation of the other Parties, or from meeting with the Project Consultants when it is not practicable to schedule a meeting with the D.O. Committee.

(b) The Parties agree that the final route and location of the Regional Project facilities will not be finalized until the D.O. Committee has reviewed and unanimously approved in writing such design and location.

(c) Within ten (10) business days of receipt of any preliminary and/or final reports prepared by the Project Consultants, the members of the D.O. Committee shall specify in writing to each other any objections regarding the draft reports, and any proposed revisions thereto. If any member of the D.O. Committee fails to object in writing to the report within the ten (10)-business-day period, then that member shall be deemed to have approved the draft report. In the event that any member of the D.O. Committee timely objects to the draft report, then the D.O. Committee shall endeavor in good faith to resolve the matter by unanimous agreement. If the D.O. Committee cannot unanimously agree to the proper resolution within fifteen (15) business days, then the D.O. Committee shall refer the dispute to the City Managers Committee. The City Managers Committee shall work diligently and in good faith to resolve the dispute as quickly as possible so as not to jeopardize the completion of the Regional Project in accordance with the Project Schedule.

### 3.03 Work Product.

(a) Any Party is entitled to copies of any work product produced by the Project Consultants in connection with the Final Design Services. The Party requesting a copy of such information shall pay all reasonable costs incurred in preparing and furnishing the copies.

(b) In accordance with, and subject to the terms and conditions set forth in the Final Design Contracts, the Parties may utilize the work product produced by the Project Consultants for their own purposes.

## IV. PAYMENT OF FINAL DESIGN COSTS.

**4.01 Allocation of Final Design Costs.** The Parties shall require each Project Consultant to categorize the costs and services for which it seeks payment under the Final Design Contracts into one of the following project categories (the "Project Categories") for purposes of applying the correct Cost Allocation Percentage and thereby calculating each Party's share of the Final Design Costs, as hereinafter set forth:

- (i) "Raw Water System and Barge";
- (ii) "Water Treatment Plant";
- (iii) "Transmission Line Segment 1"; or
- (iv) "Transmission Line Segment 2C".

The Parties shall also require the Project Consultants to prepare separate invoices for each of the project categories for payment.

#### 4.02 Payment of Final Design Costs.

(a) All Final Design Costs shall be shared by the Parties according to the Cost Allocation Percentages applicable to each Project Category designation, as set forth in Exhibit "A" attached hereto.

(b) The Parties agree that Project Consultants will be instructed to send all invoices to Round Rock and that upon receipt of each invoice from the Project Consultants, Round Rock shall review the invoice and confirm: (i) that the Final Design Services have been completed in accordance with the request for payment; (ii) that Final Design Services for which payment is sought have been properly allocated to the correct Project Category; and (iii) that each invoice does not seek payment for services for more than one Project Category.

(c) Upon Round Rock's approval of each invoice for Final Design Services, Round Rock will transmit a copy of the approved invoice to the Cedar Park and Leander representatives on the D.O. Committee. Within ten (10) business days of receipt of the invoice for payment, the members of the D.O. Committee shall specify in writing to Round Rock any objections regarding the invoice for payment, including any objections regarding the Project Category designation. If any member of the D.O. Committee fails to object in writing to the invoice within the ten (10) business day period, then the Party represented by such D.O. Committee member shall be deemed to have approved the invoice for payment and the Project category designation. In the event that any member of the D.O. Committee timely objects to the invoice or Project Category designation, then the matter shall be resolved in accordance with the following procedures:

(i) If the objection relates to the performance of work or services by a Project Consultant, then the D.O. Committee shall exercise all rights to which it is entitled under the Final Design Contract to resolve the dispute, require correction of the defective work, and otherwise address the concern of the objecting member of the D.O. Committee.

(ii) In the event that any member of the D.O. Committee objects to an invoice for reasons not related to the performance of work or services by the Project Consultant, including by way of example whether the correct Project Category designation has been applied, then the D.O. Committee shall endeavor in good faith to resolve the matter by unanimous agreement. If the D.O. Committee cannot unanimously agree to the proper resolution within thirty (30) calendar days of the date of written objection, then the invoice shall be paid as received; provided, however, that any Party may subsequently seek a determination of the proper Project Category designation through the dispute resolution process set forth in Sec. 4.04 below, and the allocation of costs between the Parties shall be adjusted in accordance with such determination. Any such request for dispute resolution must be brought within thirty (30) calendar days of the date of written objection.

(d) The Parties agree that the cost of Round Rock's performing the aforesaid financial administration and other general administrative services is the sum of \$3,500 per month, not to exceed \$42,000 total, which shall be shared and allocated among the Parties as follows:

Cedar Park: 14.18%  
Leander: 47.26%  
Round Rock 38.56%

(e) In the event of termination of this Agreement prior to the completion of the Regional Project, all Parties shall provide payment of their pro rata share of the Final Design Costs incurred prior to and through the date of the termination.

#### 4.03 Design Fund.

(a) The Parties shall contribute monies to the Design Fund in accordance with the following provisions:

(i) ~~Within ten (10) calendar days of execution of the Final Design Contracts by the Parties, each Party shall deposit into the Design Fund a sum ("the Design Payment"), which represents twenty five percent (25%) of each Party's share of the estimated Final Design Costs. Each Party's estimated Design Payment, based on the estimated Final Design Costs set forth in Exhibit "A" attached hereto, is set forth below:~~

- 1) Round Rock- \$657,015.50;
- 2) Leander- \$781,338.56; and
- 3) Cedar Park- \$211,735.69.

(ii) At such time as the balance in the Design Fund is substantially depleted, as determined in Round Rock's reasonable discretion, Round Rock shall provide written notice (by email or otherwise) thereof to the other Parties, each of which shall have thirty (30) calendar days to deposit into the Design Fund an additional Design Payment, in the same amount as originally deposited. Each notice by Round Rock shall be accompanied by a written accounting report that identifies in reasonable detail all prior expenditures from the Design Fund.

(iii) The foregoing process shall continue until such time as the Final Design Costs have been paid in full. In the event that the Final Design Costs exceed the original estimate, then each Party shall thereafter deposit within the Design Fund a sum equal to the product determined by multiplying each Party's Cost Allocation Percentage for the type of Final Design Services by the Final Design Costs for such services.

(b) In the event that there are remaining funds within the Design Fund upon final completion of the Final Design Services, then Round Rock shall promptly divide and remit within 30 calendar days such funds to the Parties on a pro rata basis according to the percentage of all Final Design Costs previously paid by each of the Parties, or in the event the remaining funds are attributable to one or more specific Project Category designations, the remaining funds shall be remitted to the Parties according to each of the Party's Cost Allocation Percentage for the Project Category designation. Payment shall be accompanied by a written accounting describing the basis for calculation of payment to each Party.

(c) All interest that accumulates within the Design Fund shall remain within such fund for payment of Final Design Costs.

**4.04 Disputes.** In the event of any disputes among the Parties, the Parties agree that the City Managers Committee shall work diligently and in good faith to resolve the dispute as quickly as possible so as not to jeopardize the completion of the Regional Project in accordance with the Project Schedule.

## V. GENERAL PROVISIONS

**5.01 Authority.** This Agreement is made in part under the authority conferred in Chapter 791, *Texas Government Code* and Section 402.001, *Texas Local Government Code*.

**5.02 Severability.** The provisions of this Agreement are severable and, if any provision of this Agreement is held to be invalid for any reason by a court or agency of competent jurisdiction, the remainder of this Agreement will not be affected and this Agreement will be construed as if the invalid portion had never been contained herein.

**5.03 Payments from Current Revenues.** Any payments required to be made by a Party under this Agreement will be paid from current revenues or other funds lawfully available to the Party for such purpose.

**5.04 Cooperation.** The Parties agree to cooperate at all times in good faith to effectuate the purposes and intent of this Agreement.

**5.05 Entire Agreement.** Except as otherwise expressly provided herein, this Agreement contains the entire agreement of the Parties regarding the sharing of costs for the Final Design Services and supersedes all prior or contemporaneous understandings or representations, whether oral or written, regarding the subject matter. The Parties confirm that further agreements regarding the Regional Project are contemplated and will not be affected or limited by this Agreement.

**5.06 Amendments.** Any amendment of this Agreement must be in writing and will be effective if signed by the authorized representatives of the Parties.

**5.07 Applicable Law; Venue.** This Agreement will be construed in accordance with Texas law. Venue for any action arising hereunder will be in Williamson County, Texas.



5.08 Notices. Any notices given under this Agreement will be effective if (i) forwarded to a Party by hand-delivery; (ii) transmitted to a Party by confirmed telecopy; or (iii) deposited with the U.S. Postal Service, postage prepaid, certified, to the address of the Party indicated below:

**CEDAR PARK:**

600 North Bell Blvd.  
Cedar Park, Texas 78613  
Attn: Sam Roberts  
Telephone: (512) 258-4121 x6321  
Facsimile: (512) 258-6083  
Email: [roberts@ci.cedar-park.tx.us](mailto:roberts@ci.cedar-park.tx.us)

with copy to:

Leonard Smith  
P.O. Box 684633  
Austin, Texas 78768  
Telephone: (512) 474-6707  
Facsimile: (512) 474-6706  
Email: [lsmith@leonardsmithlaw.com](mailto:lsmith@leonardsmithlaw.com)

**ROUND ROCK:**

221 East Main  
Round Rock, Texas 78664  
Attn: Jim Nuse  
Telephone: (512) 218-5410  
Facsimile: (512) 218-7097  
Email: [jnuse@round-rock.tx.us](mailto:jnuse@round-rock.tx.us)

with copy to:

Steve Sheets  
309 E. Main Street  
Round Rock, Texas 78664-5264  
Telephone: (512) 255-8877  
Facsimile: (512) 255-8986  
Email: [slsheets@sheets-crossfield.com](mailto:slsheets@sheets-crossfield.com)

**Leander:**

Attn: Wayne Watts  
P.O. Box 319  
Leander, Texas 78646-0319  
Attn: Wayne Watts  
Telephone: (512) 259-1178  
Facsimile: (512) 259-1605  
Email: [w.watts@ci.leander.tx.us](mailto:w.watts@ci.leander.tx.us)

with copy to:

Diana L. Granger  
223 W. Anderson Lane, Suite A-105  
Austin, Texas 78752  
Telephone: (512) 323-5778  
Telecopy: (512) 323-5773

Email: [attorneys@cityattorneytexas.com](mailto:attorneys@cityattorneytexas.com)

**5.09 Force Majeure.** The Parties shall not be deemed in violation of this Contract if prevented from performing any of their obligations hereunder by reasons for which they are not responsible or circumstances beyond their control. However, notice of such impediment or delay in performance must be timely given, and all reasonable efforts undertaken to mitigate its effects.

**5.10 Exhibits.** The following exhibits are attached to this Agreement and incorporated herein by reference:

Exhibit A - Cost Allocation Percentages

Exhibit B - Project Schedule

**5.11 Counterparts. Effect of Partial Execution.** This Agreement may be executed simultaneously in multiple counterparts, each of which will be deemed an original, but all of which will constitute the same instrument.


**5.12 Authority.** Each Party represents and warrants that it has the full right, power and authority to execute this Agreement

*[SIGNATURES ON FOLLOWING PAGES]*

CITY OF ROUND ROCK:

ATTEST:

Christine R. Martinez  
Christine Martinez, City Secretary

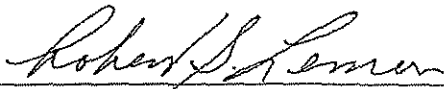
By:   
Nyle Maxwell, Mayor

Date: 04-12-07

CITY OF CEDAR PARK:

ATTEST:

  
\_\_\_\_\_  
LeAnn Quinn, City Secretary

By:   
\_\_\_\_\_  
Bob Lemon, Mayor

Date: April 26, 2007

CITY OF LEANDER:

ATTEST:

Debbie Haile  
Debbie Haile, City Secretary

By: John D. Cowman  
John Cowman, Mayor

Date: 5/3/07

**EXHIBIT "A"**  
**ALLOCATION OF COSTS**

<u>Phase/Segment</u>	<u>Capacity (MGD)</u>	<u>Cost Allocation</u>	<u>Costs</u>
<b>Raw Water System and Barge</b>			
Cedar Park	15.0	14.18%	\$310,835
Leander	50.0	47.26%	\$1,035,971
Round Rock	40.8	38.56%	\$845,261
<b>Total</b>	<b>105.8</b>	<b>100.00%</b>	<b>\$2,192,067</b>
<b>Water Treatment Plant</b>			
Cedar Park	15.0	14.18%	\$369,644
Leander	50.0	47.26%	\$1,231,974
Round Rock	40.8	38.56%	\$1,005,182
<b>Total</b>	<b>105.8</b>	<b>100.00%</b>	<b>\$2,606,800</b>
<b>Transmission Line Segments</b>			
<b>Segment 1</b>			
Cedar Park	15.0	14.18%	\$166,463
Leander	50.0	47.26%	\$554,800
Round Rock	40.8	38.56%	\$452,668
<b>Total</b>	<b>105.8</b>	<b>100.00%</b>	<b>\$1,173,931</b>
<b>Segment 2C</b>			
Cedar Park	0	0%	\$0
Leander	38	48.22%	\$302,610
Round Rock	40.8	51.78%	\$324,951
<b>Total</b>	<b>78.8</b>	<b>100.00%</b>	<b>\$627,561</b>
<b>Allocation of Costs</b>			
Cedar Park			\$846,943
Leander			\$3,125,354
Round Rock			\$2,628,062
<b>Total</b>			<b>\$6,600,359</b>
<b>25% Initial Payment</b>			
Cedar Park			\$211,735.69
Leander			\$781,338.56
Round Rock			\$657,015.50

**EXHIBIT B**  
**PROJECT SCHEDULE**

# Regional Water Project Phase 1A Costs

Project	Project Budget
Water Treatment Plant*	\$68,526,522
Floating Intake Barge*	\$7,295,414
Raw Water Line*	\$46,719,049
Treated Water Line, Segment 1*	\$19,960,258
Treated Water Line, Segment 2A**	\$975,848
Treated Water Line, Segment 2B**	\$9,432,469
Treated Water Line, Segment 2C*	\$12,351,805
Construction Management	\$4,043,593
Ancillary Services	\$1,611,725
Operations Expenses	\$679,768
<b>Total</b>	<b>\$171,596,452</b>

\*Includes Preliminary and Final Engineering, Easements, Construction, Construction Contingency, and Construction Phase Services

\*\*Construction Complete



**BCRUA Project  
Capacity and Cost  
Allocation  
Updated: July 23, 2008**

DESCRIPTION	CONSTRUCTED CAPACITY (MGD)	ESTIMATED COST	CEDAR PARK RESERVED CAPACITY (%)	CEDAR PARK COST	LEANDER RESERVED CAPACITY (%)	LEANDER COST	ROUND ROCK RESERVED CAPACITY (%)	ROUND ROCK COST
<b>BCRUA PROJECT (Operational April 1, 2011)</b>								
<b>FLOATING INTAKE BARGE</b>								
Preliminary Engineering	30.9	\$ 287,709.00	14.18	\$ 40,797.14	47.26	\$ 135,971.27	38.56	\$ 110,940.59
Final Engineering (thru Bidding)	30.9	\$ 458,610.00	14.18	\$ 65,030.90	47.26	\$ 216,739.09	38.56	\$ 176,840.02
Construction	30.9	\$ 5,583,201.00	28.8	\$ 1,607,961.89	45.31	\$ 2,529,748.37	25.89	\$ 1,445,490.74
Construction - Contingency (15%)	30.9	\$ 837,480.15	28.8	\$ 241,194.28	45.31	\$ 379,462.28	25.89	\$ 216,623.61
Total Construction (Includes Construction and Contingency)	30.9	\$ 6,420,681.15	28.8	\$ 1,849,156.17	45.31	\$ 2,909,210.63	25.89	\$ 1,662,314.35
Construction Phase Services (2% of Construction Amount)	30.9	\$ 128,413.62	28.8	\$ 36,983.12	45.31	\$ 58,184.21	25.89	\$ 33,246.29
<b>FLOATING INTAKE BARGE SUB-TOTAL</b>		<b>\$ 7,386,413.77</b>		<b>\$ 2,122,373.33</b>		<b>\$ 3,320,105.20</b>		<b>\$ 1,985,341.24</b>
Cost Allocation Percentages				27.90%		45.81%		27.19%
<b>RAW WATER LINE- FROM BARGE, UP TRAILS END ROAD TO REGIONAL WATER TREATMENT PLANT</b>								
Preliminary Engineering	105.8	\$ 570,069.00	14.18	\$ 80,838.62	47.26	\$ 269,424.06	38.56	\$ 219,826.32
Final Engineering (thru Bidding)	105.8	\$ 3,309,016.00	14.18	\$ 469,218.47	47.26	\$ 1,563,840.96	38.56	\$ 1,276,956.57
Environmental, Permit, and Habitat Mitigation	105.8	\$ 413,000.00	14.18	\$ 58,583.40	47.26	\$ 195,183.80	38.56	\$ 159,252.80
Construction (Based on Alternative No. 1 Route)	105.8	\$ 35,493,000.00	14.18	\$ 5,174,707.40	47.26	\$ 17,246,591.80	38.56	\$ 14,071,700.80
Contingency (10%)	105.8	\$ 3,649,300.00	14.18	\$ 517,470.74	47.26	\$ 1,724,659.18	38.56	\$ 1,407,170.08
Total Construction (Includes Construction and Contingency)	105.8	\$ 40,142,300.00	14.18	\$ 5,692,178.14	47.26	\$ 18,971,250.98	38.56	\$ 15,478,870.88
Easements	105.8	\$ 1,481,798.00	14.18	\$ 210,118.98	47.26	\$ 700,287.73	38.56	\$ 571,381.31
Construction Phase Services (2% of Construction Amount)	105.8	\$ 802,846.00	14.18	\$ 113,843.66	47.26	\$ 379,425.02	38.56	\$ 309,577.42
<b>RAW WATER LINE SUB-TOTAL</b>		<b>\$ 46,719,049.00</b>		<b>\$ 6,624,764.16</b>		<b>\$ 22,079,422.56</b>		<b>\$ 18,014,865.29</b>
Cost Allocation Percentages				14.18%		47.26%		38.56%
<b>REGIONAL WATER TREATMENT PLANT</b>								
WTP Land Acquisition	105.8	\$ 3,324,022.00	14.18	\$ 471,348.32	47.26	\$ 1,570,932.80	38.56	\$ 1,281,742.88
Preliminary Engineering	105.8	\$ 703,112.00	14.18	\$ 99,701.28	47.26	\$ 332,290.73	38.56	\$ 271,119.99
Final Engineering	17	\$ 3,457,493.00	14.18	\$ 490,272.51	47.26	\$ 1,634,011.19	38.56	\$ 1,333,209.30
Supplemental Engineering (Est. total Eng. based on 8% of Const.)	17	\$ 581,395.00	14.18	\$ 82,441.81	47.26	\$ 274,767.28	38.56	\$ 224,185.91
Construction Phase Services (2% of Construction Amount)	17	\$ 1,185,500.00	14.18	\$ 218,411.12	47.26	\$ 557,850.62	38.56	\$ 409,238.26
<b>1.0 Raw Water Conveyance</b>								
1.01 72"/54" Raw Water Line, Isolation Valves, and Chemical Injection Vaults	105.8	\$ 1,338,000.00	14.18	\$ 189,728.40	47.26	\$ 632,338.80	38.56	\$ 515,932.80
<b>2.0 Treatment Structure</b>								
2.01 54" Raw Water, Raw Water Pipe Gallery	43	\$ 267,000.00	26.67	\$ 71,208.90	46.66	\$ 124,582.20	26.67	\$ 71,208.90
2.02 30" Raw Water Venturi Meter and Rate of Flow Control Valve, and Hydraulic Rapid Mix 1C	22	\$ 275,000.00	26.67	\$ 73,342.50	46.66	\$ 128,315.00	26.67	\$ 73,342.50
2.03 Flocculators 1A-1C thru 4A-4C (12 total) and Flocculated Water Channel	22	\$ 1,619,000.00	26.67	\$ 431,787.30	46.66	\$ 755,425.40	26.67	\$ 431,787.30
2.04 Basin Inlet Channels, Sedimentation Basins 1 and 2 with Sludge Collection Equipment and Basin Outlet Channel, Settled Water Channel with Valves and Gates	22	\$ 3,747,000.00	26.67	\$ 999,324.90	46.66	\$ 1,748,050.20	26.67	\$ 999,324.90
2.05 Sludge Vault 1C and 12" Sludge Pipe	22	\$ 734,000.00	26.67	\$ 195,757.80	46.66	\$ 342,484.40	26.67	\$ 195,757.80
2.06 Filter Inlet Channel	48	\$ 1,031,000.00	26.67	\$ 274,967.70	46.66	\$ 481,064.60	26.67	\$ 274,967.70
2.07 Filters 1-4 (underdrains, media, troughs, effluent venturi meters, rate of flow control valves, piping and miscellaneous valves) and Filters 5-8 (structure, wall spools and blind flanges only)	12.8	\$ 2,530,000.00	26.67	\$ 674,751.00	46.66	\$ 1,180,498.00	26.67	\$ 674,751.00
2.08 Filter 6 (underdrains, media, troughs, effluent venturi meters, rate of flow control valves, piping and miscellaneous valves)	4.2	\$ 269,000.00	26.67	\$ 77,076.30	46.66	\$ 134,847.40	26.67	\$ 77,076.30
2.09 24" Backwash Water Venturi Meter and Rate of Flow Control Valve, and 30" Backwash Water Piping	105.8	\$ 288,000.00	14.18	\$ 38,002.40	47.26	\$ 126,656.80	38.56	\$ 103,940.80
2.1 36" Waste Backwash Water Piping and Valving	105.8	\$ 342,000.00	14.18	\$ 48,495.60	47.26	\$ 161,629.20	38.56	\$ 131,875.20
2.11 2 Air Scour Blowers	105.8	\$ 137,000.00	14.18	\$ 19,426.80	47.26	\$ 64,746.20	38.56	\$ 52,827.20

**BCRUA Project  
Capacity and Cost  
Allocation  
Updated: July 23, 2008**

DESCRIPTION	CONSTRUCTED CAPACITY (MGD)	ESTIMATED COST	CEDAR PARK RESERVED CAPACITY (%)	CEDAR PARK COST	LEANDER RESERVE/DOCA PACITY (%)	LEANDER COST	ROUND ROCK RESERVED CAPACITY (%)	ROUND ROCK COST
2.12 Air Scour/Backwash/Waste Backwash piping and valves	22	\$ 137,000.00	26.67	\$ 36,537.90	46.66	\$ 63,924.20	26.67	\$ 36,537.90
2.13 84" Filtered Water Pipe	90	\$ 333,000.00	14.18	\$ 47,219.40	47.26	\$ 157,376.80	38.56	\$ 128,404.80
2.14 Administration Level, Mezzanine (Electrical Room, and Storage), and Maintenance Room	105.8	\$ 7,822,000.00	14.18	\$ 1,109,159.80	47.26	\$ 3,696,677.20	38.56	\$ 3,016,163.20
<b>3.0 Chemical Feed Facility</b>								
3.01 Chemical Feed Area	105.8	\$ 98,000.00	14.18	\$ 13,612.80	47.26	\$ 45,369.60	38.56	\$ 37,017.60
3.02 2 Alum Metering Pumps, 2 Alum Storage Tanks, Valves and Piping	22	\$ 209,000.00	26.67	\$ 55,740.30	46.66	\$ 97,519.40	26.67	\$ 55,740.30
3.03 2 Fluoride Metering Pumps, 1 Fluoride Storage Tank, Valve and Piping	43	\$ 120,000.00	26.67	\$ 32,004.00	46.66	\$ 55,992.00	26.67	\$ 32,004.00
3.04 2 Polymer Metering Pumps, 1 Drum Scale, Valves and Piping	22	\$ 110,000.00	26.67	\$ 29,337.00	46.66	\$ 51,326.00	26.67	\$ 29,337.00
3.05 Bulk Chemical Secondary Containment Structure	105.8	\$ 161,000.00	14.18	\$ 22,829.80	47.26	\$ 76,088.60	38.56	\$ 62,081.60
<b>4.0 Disinfection Facility</b>								
4.01 Disinfection Facility Building	105.8	\$ 1,819,000.00	14.18	\$ 257,934.20	47.26	\$ 859,659.40	38.56	\$ 701,408.40
4.02 3 Sodium Hypochlorite Metering Pumps, 2 Sodium Hypochlorite Storage Tanks, Control Valve and Piping	22	\$ 376,000.00	26.67	\$ 100,279.20	46.66	\$ 175,441.60	26.67	\$ 100,279.20
4.03 Bulk Sodium Hypochlorite Chemical Secondary Containment Structure	105.8	\$ 76,000.00	14.18	\$ 10,776.80	47.26	\$ 35,917.60	38.56	\$ 29,305.60
4.04 2 LAS Metering Pumps, 2 LAS Storage Tanks, Control Valves and Piping	22	\$ 196,000.00	26.67	\$ 52,273.20	46.66	\$ 91,463.60	26.67	\$ 52,273.20
4.05 Bulk LAS Chemical Secondary Containment Structure	105.8	\$ 76,000.00	14.18	\$ 10,776.80	47.26	\$ 35,917.60	38.56	\$ 29,305.60
4.06 2 Potassium Permanganate Metering Pumps, 1 Feed Unit	43	\$ 173,000.00	26.67	\$ 46,199.10	46.66	\$ 80,721.60	26.67	\$ 46,199.10
<b>5.0 Disinfection Basin</b>								
5.01 Disinfection Basin, Weir Plate, Sample Pump, Isolation Valves and Piping	43	\$ 857,000.00	26.67	\$ 228,561.90	46.66	\$ 399,876.20	26.67	\$ 228,561.90
<b>6.0 Ground Storage Tank</b>								
6.01 78" Inlet/Outlet Piping and Valves	43	\$ 231,000.00	26.67	\$ 61,607.70	46.66	\$ 107,784.60	26.67	\$ 61,607.70
6.02 4 MG Precast Storage Tanks with Baffle Walls	43	\$ 3,102,000.00	26.67	\$ 827,303.40	46.66	\$ 1,447,393.20	26.67	\$ 827,303.40
<b>7.0 Booster Pump Station</b>								
7.01 78" Discharge and Suction Piping and Isolation Valves	105.8	\$ 3,061,000.00	14.18	\$ 434,049.80	47.26	\$ 1,446,628.60	38.56	\$ 1,180,321.60
7.02 3 Booster Pumps & Motors, Cans, Discharge Piping, Control and Isolation Valves, and 3 Cans with Covers	43	\$ 1,996,000.00	26.67	\$ 532,333.20	46.66	\$ 931,333.60	26.67	\$ 532,333.20
7.03 2 Plant Water Pumps & Motors, Cans, Discharge Piping, and Valves	43	\$ 231,000.00	26.67	\$ 61,607.70	46.66	\$ 107,784.60	26.67	\$ 61,607.70
7.04 2 Backwash Water Pumps & Motors, Cans, Discharge Piping, and Valves	105.8	\$ 1,028,000.00	14.18	\$ 145,770.40	47.26	\$ 485,832.80	38.56	\$ 396,396.80
<b>8.0 Sludge Dewatering Facility</b>								
8.01 Sludge Dewatering Facility Building	67	\$ 1,503,000.00	14.18	\$ 213,125.40	47.26	\$ 710,317.80	38.56	\$ 579,566.80
8.02 1 Belt Filter Press, 2 Belt Press Feed Pumps, 2 Polymer Feed Systems, 2 Screw Conveyors, Valves and Piping	67	\$ 965,000.00	14.18	\$ 136,837.00	47.26	\$ 456,059.00	38.56	\$ 372,104.00
<b>9.0 Sludge Thickening and Handling Facilities</b>								
9.01 1 Sludge Thickener with Collector, Piping, Valves	31	\$ 556,000.00	26.67	\$ 148,285.20	46.66	\$ 259,429.60	26.67	\$ 148,285.20
9.02 Sludge Pump Station Wet Well	105.8	\$ 265,000.00	14.18	\$ 37,577.00	47.26	\$ 125,239.00	38.56	\$ 102,184.00
9.03 2 Sludge Pumps, with Valves and Piping	43	\$ 91,000.00	26.67	\$ 24,269.70	46.66	\$ 42,480.60	26.67	\$ 24,269.70
<b>10.0 Washwater Recovery &amp; Recycle</b>								
10.01 2 Washwater Settling/Decant Basins with Sludge Collectors	105.8	\$ 2,762,000.00	14.18	\$ 390,233.60	47.26	\$ 1,300,595.20	38.56	\$ 1,061,171.20
10.02 Recycle Pump Station Wet Well	105.8	\$ 221,000.00	14.18	\$ 31,337.80	47.26	\$ 104,444.60	38.56	\$ 85,217.60
10.03 3 Recycle Pumps, with Valves and Discharge Piping	43	\$ 150,000.00	26.67	\$ 40,005.00	46.66	\$ 69,990.00	26.67	\$ 40,005.00
<b>11.0 Electrical Building</b>								
11.01 Electrical Building	105.8	\$ 671,000.00	14.18	\$ 95,147.80	47.26	\$ 317,114.60	38.56	\$ 258,737.60
11.02 5KV Motor Control Center & 480V Motor Control Center with Switch Board, Transformer and Circuit Breaker	43	\$ 513,000.00	26.67	\$ 136,817.10	46.66	\$ 239,365.80	26.67	\$ 136,817.10
<b>12.0 Yard Piping</b>								
12.01 36"/84"/80" Filtered Water Piping with Valves and Chemical Injection Vaults	105.8	\$ 1,267,000.00	14.18	\$ 179,860.60	47.26	\$ 598,784.20	38.56	\$ 488,555.20
12.02 72" Finished Water Piping with Valves, Finished Water Meter Vault with 48" Venturi and Valves	105.8	\$ 2,376,000.00	14.18	\$ 336,916.80	47.26	\$ 1,122,897.60	38.56	\$ 916,185.60
12.03 36" Waste Backwash Piping with Valves, and Chemical Injection Vault	105.8	\$ 774,000.00	14.18	\$ 109,753.20	47.26	\$ 365,792.40	38.56	\$ 298,454.40

**BCRUA Project  
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Updated: July 23, 2008

DESCRIPTION	CONSTRUCTED CAPACITY (MGD)	ESTIMATED COST	CEDAR PARK RESERVED CAPACITY (%)	CEDAR PARK COST	LEANDER RESERVED CAPACITY (%)	LEANDER COST	ROUND ROCK RESERVED CAPACITY (%)	ROUND ROCK COST
12.04 30" Backwash Water Piping with Valves	105.8	\$ 313,000.00	14.18	\$ 44,383.40	47.26	\$ 147,923.80	38.56	\$ 120,692.80
12.05 36" Waste Wastewater Piping with Valves	105.8	\$ 381,000.00	14.18	\$ 54,025.80	47.26	\$ 180,060.60	38.56	\$ 146,913.60
12.06 20" Wastewater Recycle Piping with Valves, and Recycle Meter Vault with 18" Venturi and Valves	105.8	\$ 379,000.00	14.18	\$ 53,742.20	47.26	\$ 179,115.40	38.56	\$ 146,142.40
12.07 12" Sludge Line, Drain Line and Potable Water Line with Valves	105.8	\$ 1,094,000.00	14.18	\$ 155,129.20	47.26	\$ 517,024.40	38.56	\$ 421,846.40
12.08 8" Fire Water Line, Double Check Valves	105.8	\$ 236,000.00	14.18	\$ 33,464.80	47.26	\$ 111,533.60	38.56	\$ 91,001.80
12.09 Additional Piping and Appurtenances	105.8	\$ 916,000.00	14.18	\$ 129,888.60	47.26	\$ 432,901.60	38.56	\$ 353,209.60
<b>13.0 Wastewater Lift Station</b>								
13.01 Wastewater Lift Station Wet Well, 480VAC Utility Service	105.8	\$ 187,000.00	14.18	\$ 26,516.60	47.26	\$ 88,376.20	38.56	\$ 72,107.20
13.02 2 Submersible Motors, Force Main, Piping, Valves and Relocation	43	\$ 599,000.00	26.67	\$ 159,753.30	46.66	\$ 279,493.40	26.67	\$ 159,753.30
<b>14.0 Civil / Site</b>								
14.01 Rock Berm, Silt Fence, Tree Protection, Seeding and Topsoil	105.8	\$ 60,000.00	14.18	\$ 8,508.00	47.26	\$ 28,356.00	38.56	\$ 23,136.00
14.02 Water Quality Pond	105.8	\$ 550,000.00	14.18	\$ 77,980.00	47.26	\$ 259,930.00	38.56	\$ 212,080.00
14.03 Roads - 2" HMAAC with 10 Base, Concrete Pavement	105.8	\$ 2,201,000.00	14.18	\$ 312,101.80	47.26	\$ 1,040,192.60	38.56	\$ 848,705.60
14.04 8' Coated Chain Link Fence, 8' Concrete Fence and Gates	105.8	\$ 672,000.00	14.18	\$ 81,109.60	47.26	\$ 270,327.20	38.56	\$ 220,583.20
14.05 Landscaping and Irrigation with Lines and Sprinklers	105.8	\$ 481,000.00	14.18	\$ 68,205.80	47.26	\$ 227,320.60	38.56	\$ 185,473.60
14.06 Yard Electrical	105.8	\$ 4,415,000.00	14.18	\$ 626,047.00	47.26	\$ 2,088,529.00	38.56	\$ 1,702,424.00
<b>Total Construction Cost (includes 10% Contingency)</b>		\$ 59,275,000.00		\$ 10,920,556.10		\$ 27,892,531.00		\$ 20,461,912.90
Construction		\$ 53,886,363.64						
Contingency (10% of Construction; included in each line item cost)		\$ 5,388,636.36						
<b>REGIONAL WTR. SUB-TOTAL</b>		\$ 88,528,522.22		\$ 12,282,729.20		\$ 32,262,384.40		\$ 23,981,409.80
<b>Cost Allocation Percentages</b>				17.9%		47.1%		35.0%
<b>TRANSMISSION WATER LINES</b>								
<b>Segment 1</b>								
Preliminary Engineering	105.8	\$ 211,215.00	14.18	\$ 29,950.29	47.26	\$ 99,820.21	38.56	\$ 81,444.50
Final Engineering	105.8	\$ 1,173,931.00	14.18	\$ 166,483.42	47.26	\$ 554,799.79	38.56	\$ 462,667.79
Easements	105.8	\$ 250,000.00	14.18	\$ 35,450.00	47.26	\$ 118,160.00	38.56	\$ 96,400.00
Construction	105.8	\$ 16,332,642.00	14.18	\$ 2,315,954.46	47.26	\$ 7,718,769.35	38.56	\$ 6,297,828.20
Contingency (10%)	105.8	\$ 1,833,254.20	14.18	\$ 231,595.45	47.26	\$ 771,875.93	38.56	\$ 629,782.82
<b>Total Construction (includes Construction plus Contingency)</b>	105.8	\$ 17,985,798.20	14.18	\$ 2,547,549.90	47.26	\$ 8,490,835.28	38.56	\$ 6,927,611.01
Construction Phase Services (2% of Construction)	105.8	\$ 359,315.92	14.18	\$ 50,951.00	47.26	\$ 169,812.71	38.56	\$ 138,552.22
<b>SEGMENT 1 SUB-TOTAL</b>		\$ 19,980,255.12		\$ 2,930,384.60		\$ 9,433,247.98		\$ 7,696,676.53
<b>Cost Allocation Percentages</b>				14.18%		47.26%		38.56%
<b>SEGMENT 2A</b>								
<i>Transmission Water Line, Segment 2A, construction is complete. Cost allocations based on Interlocal Agreement Regarding Construction of Regional Water Line dated March 2006 and amended April 2008.</i>								
Engineering/Project Management/Inspection/Administration	105.8	\$ 55,971.00	3.90	\$ 2,182.67	46.34	\$ 25,836.98	48.76	\$ 27,851.17
Easements	105.8	\$ -	14.18	\$ -	47.26	\$ -	38.56	\$ -
Construction	105.8	\$ 858,980.00	14.18	\$ 121,803.36	47.26	\$ 405,963.65	38.56	\$ 331,222.69
Construction - Cedar Park Additional Connection Payment		\$ 38,690.00		\$ 38,690.00				
Construction - Leander Additional Valve Payment		\$ 22,207.00				\$ 22,207.00		
<b>SEGMENT 2A SUB-TOTAL</b>		\$ 975,848.00		\$ 162,675.23		\$ 454,097.91		\$ 359,073.86
<b>Cost Allocation Percentages</b>				16.67%		46.53%		36.80%
<b>SEGMENT 2B</b>								
<i>Transmission Water Line, Segment 2B, construction is complete. Cost allocations based on Interlocal Agreement Regarding Construction of Regional Water Line dated March 2006 and amended April 2008.</i>								
Engineering/Project Management/Inspection/Administration	78.8	\$ 754,029.00	0	\$ -	48.22	\$ 363,592.78	51.78	\$ 390,436.22
Easements	78.8	\$ -	0	\$ -	48.22	\$ -	51.78	\$ -
Construction	78.8	\$ 8,678,440.00	0	\$ -	48.22	\$ 4,184,743.77	51.78	\$ 4,493,696.23
<b>SEGMENT 2B SUB-TOTAL</b>	78.8	\$ 9,432,469.00	0	\$ -	48.22	\$ 4,548,336.55	51.78	\$ 4,884,132.45
<b>Cost Allocation Percentages</b>				0.00%		48.22%		51.78%

**BCRUA Project  
Capacity and Cost  
Allocation  
Updated: July 23, 2008**

DESCRIPTION	CONSTRUCTED CAPACITY (MGD)	ESTIMATED COST	CEDAR PARK RESERVED CAPACITY (%)	CEDAR PARK COST	LEANDER RESERVED CAPACITY (%)	LEANDER COST	ROUND ROCK RESERVED CAPACITY (%)	ROUND ROCK COST
<b>SEGMENT 2C</b>								
Preliminary Engineering	78.8	\$ 191,919.00	14.18	\$27,214.11	47.26	\$ 90,700.92	38.56	\$ 74,009.97
Final Engineering	78.8	\$ 627,561.00	0	\$0.00	48.22	\$ 302,609.91	51.78	\$ 324,951.09
Easements (Based on 25% of Fee Simple Value for 50' Perm. Esmt.)	78.8	\$ 330,000.00	0	\$0.00	48.22	\$ 159,126.00	51.78	\$ 170,874.00
Construction	78.8	\$ 9,550,149.00	0	\$0.00	48.22	\$ 4,605,091.85	51.78	\$ 4,945,057.15
Contingency (5% of Construction)	78.8	\$ 477,507.45	0	\$0.00	48.22	\$ 230,264.09	51.78	\$ 247,233.36
Allowance for Materials and Labor Fluctuations (10% of Const.)	78.8	\$ 955,014.90	0	\$0.00	48.22	\$ 460,508.18	51.78	\$ 494,506.72
Total Construction (Includes Const., Contingency, & Allowance)	78.8	\$ 10,982,671.35	0	\$0.00	48.22	\$ 5,295,844.12	51.78	\$ 5,686,827.23
Construction Phase Services (2% of Construction)	78.8	\$ 219,553.43	0	\$0.00	48.22	\$ 105,918.88	51.78	\$ 113,736.54
<b>SEGMENT 2C SUB-TOTAL</b>		<b>\$ 12,351,804.73</b>		<b>\$ 27,214.11</b>		<b>\$ 5,354,197.84</b>		<b>\$ 6,370,392.82</b>
Cost Allocation Percentages				0.22%		48.21%		61.87%
<b>CONSTRUCTION MANAGEMENT SERVICES AND INSPECTION (3% OF CONSTRUCTION COST)</b>								
<i>Includes estimated construction cost for Floating Barge, Raw Water Line, WTP, and Transmission Mains 1 and 2C @ 3% for C.M.</i>								
<b>CONSTRUCTION MGMT/INSPECT SUB-TOTAL</b>		<b>\$ 4,043,383.45</b>		<b>\$ 930,283.21</b>		<b>\$ 1,906,784.18</b>		<b>\$ 1,506,526.09</b>
Cost Allocation Percentages				15.69%		47.16%		37.26%
<b>ANCILLARY SERVICES</b>								
Environmental Consultant - Barry Allison		\$ 471,155.00	14.18	\$ 68,609.78	47.26	\$ 222,997.85	38.56	\$ 181,677.37
Real Estate Acquisition Consultant - LAN		\$ 470,670.00	14.18	\$ 66,726.83	47.26	\$ 222,391.38	38.56	\$ 181,451.79
Condemnation Counsel - Kent Slick		\$ 150,000.00	14.18	\$ 21,270.00	47.26	\$ 70,890.00	38.56	\$ 57,840.00
Public Relations - Staats Faulkenburg		\$ 200,000.00	14.18	\$ 28,380.00	47.26	\$ 94,520.00	38.56	\$ 77,120.00
Public Relations Firm - Group Solutions RJW		\$ 320,000.00	14.18	\$ 45,376.00	47.26	\$ 151,232.00	38.56	\$ 123,392.00
Ancillary Services Sub-Total		\$ 1,611,725.00	14.18	\$ 228,542.61	47.26	\$ 761,701.24	38.56	\$ 621,481.18
<b>OPERATIONAL AND MAINTENANCE EXPENSES</b>								
General Manager Salary and Supplies (5 years)		\$ 425,917.00	14.18	\$ 60,395.03	47.26	\$ 201,288.37	38.56	\$ 164,233.60
Preliminary Engineering Report Services		\$ 162,300.00	15.75	\$ 23,987.25	41.39	\$ 63,036.97	42.86	\$ 65,275.78
Surveying - The Wallace Group - New Hope Line		\$ 17,551.00	15.89	\$ 2,806.40	40.51	\$ 7,109.81	43.60	\$ 7,634.69
Administration Fees - Preliminary/Final Design		\$ 84,000.00	14.18	\$ 11,911.20	47.26	\$ 39,698.40	38.56	\$ 32,390.40
O&M Sub-Total		\$ 679,768.00		\$ 99,099.89		\$ 311,133.65		\$ 269,534.46
<b>ANCILLARY SVCS/O&amp;M EXPENSES SUB-TOTAL</b>		<b>\$ 2,291,493.00</b>		<b>\$ 327,642.49</b>		<b>\$ 1,072,834.89</b>		<b>\$ 891,015.62</b>
Cost Allocation Percentages				14.30%		48.82%		38.86%
<b>BCRUA PROJECT TOTAL COST</b>		<b>\$ 171,596,451.14</b>		<b>\$ 24,877,638.27</b>		<b>\$ 81,031,380.72</b>		<b>\$ 65,687,432.15</b>
Cost Allocation Percentages				14.50%		47.22%		36.28%
<b>Note: Upon completion of the Project, the BCRUA is obligated to deliver up to the following quantities of treated water to each City at the Points of Delivery:</b>								
		<b>Capacity (MGD)</b>	<b>% of Capacity</b>					
Cedar Park		4.53	26.67					
Leander		7.94	46.86					
Round Rock		4.53	26.67					
<b>Total</b>		<b>17.00</b>	<b>100</b>					

**INTERLOCAL AGREEMENT REGARDING ANCILLARY  
CONSULTING SERVICES FOR REGIONAL WATER SYSTEM**

THE STATE OF TEXAS                   §  
  §       KNOW ALL BY THESE PRESENTS:  
COUNTY OF WILLIAMSON           §

**THIS INTERLOCAL AGREEMENT REGARDING ANCILLARY CONSULTING SERVICES FOR REGIONAL WATER SYSTEM ("Agreement")** is entered into between the City of Round Rock, Texas, a Texas home-rule city ("**Round Rock**"); the City of Cedar Park, Texas, a Texas home-rule city ("**Cedar Park**"), and the City of Leander, Texas, a Texas home-rule city ("**Leander**"). In this Agreement, Round Rock, Cedar Park and Leander are sometimes individually referred to as "**Party**" and collectively referred to as "**Parties**".

**Recitals**

**WHEREAS**, the growth of the Cities of Round Rock, Cedar Park and Leander necessitates the development of additional water treatment capacity for each of these communities;

**WHEREAS**, the Parties have agreed to jointly pursue a regional water supply system that will ultimately provide treatment capacity for an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties based on projected population growth;

**WHEREAS**, the Parties desire to proceed with consulting services, including preliminary and final engineering design, related to the regional water system project; and

**WHEREAS**, the purpose of this Agreement is to set forth the terms and conditions pursuant to which the Parties may authorize ancillary consulting services related to the regional water system project, and pursuant to which the Parties will cost participate in all costs and expenses related thereto.

**NOW, THEREFORE**, in consideration of the foregoing premises and the mutual promises and agreements of the Parties contained in this Agreement, the Parties agree as follows:

**I  
DEFINITIONS**

When used in this Agreement, capitalized terms not otherwise defined shall have the meanings set forth below:

**1.01** "Agreement" means this Interlocal Agreement Regarding Consulting Services for Regional Project.

**1.02** "Cedar Park" means the City of Cedar Park, Texas.

1.03 "City Managers Committee" means the committee consisting of the City Managers for Cedar Park, Leander, and Round Rock.

1.04 "Consulting Services" means the ancillary consulting services to be performed by a Project Consultant pursuant to a Consulting Services Contract. These services will be ancillary to and in support of the preliminary and final design of the Regional Project and the construction thereof.

1.05 "Consulting Services Contract(s)" means any contract(s) for ancillary consulting services to be unanimously approved by the Parties as indicated by execution of a Memorandum of Agreement and under which a Project Consultant shall provide Consulting Services.

1.06 "Consulting Services Costs" means all costs and expenses incurred by the Parties pursuant to the Consulting Services Contracts for Consulting Services. Each Party shall bear its share of the Consulting Services Costs in accordance with the Cost Allocation Percentage set forth herein.

1.07 "Consulting Services Fund" means a fund to be established and administered by the Contracting Party in accordance with Section 4.03 in order to provide monies to pay the Consulting Services Costs.

1.08 "Contracting Party" means the city that contracts with the Project Consultant to provide the Consulting Services.

1.09 "Cost Allocation Percentage" means the percentage of Consulting Services Costs to be paid by each Party. The Cost Allocation Percentage for each Party is as follows:

Cedar Park: 14.18%

Leander: 47.26%

Round Rock 38.56%

1.10 "Design & Oversight Committee" or "D.O. Committee" means the engineering representative(s) selected by each Party for purposes of overseeing the Regional Project in accordance with the PER and the Project Schedule.

1.11 "Effective Date" means the last date of execution of this Agreement by the Parties; provided all of the Parties must execute this Agreement for it to be effective.

1.12 "Leander" means the City of Leander, Texas.

1.13 "Memorandum of Agreement" means the memorandum to be executed by the City Manager for each Party memorializing the Parties' acceptance and approval of a Consulting Services Contract.

1.14 "Party" or "Parties" means Cedar Park, Round Rock, and/or Leander, individually or collectively, as applicable.

1.15 "PER" means the "Regional Water Supply Project Engineering Design Report" prepared by HDR Engineering, Inc. and dated November 2006.

1.16 "Project Consultant" means a person or firm who is a party to a Consulting Services Contract with the Parties.

1.17 "Regional Project" means the regional water supply system, which will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties, based on projected population growth, as more fully described in the PER.

1.18 "Round Rock" means the City of Round Rock, Texas.

## II.

### ANCILLARY CONSULTING SERVICES

#### 2.01 Ancillary Consulting Services.

(a) The Parties expect to contract with one or more Project Consultants to provide Consulting Services.

(b) The Parties agree that one City will serve as the Contracting Party for each Consulting Services Contract. The Contracting Party will have primary responsibility to oversee and administer the Consulting Services contract, but shall do so at all times in cooperation with the D.O. Committee. However, no Consulting Services Contract shall be approved without the unanimous written consent of the Parties as indicated in a jointly executed Memorandum of Agreement in the form attached hereto as Exhibit A. Each Party grants its City Manager discretionary authority to execute a Memorandum of Agreement hereunder.

(c) Once unanimously approved, the scope of Consulting Services, including any proposed changes to a Project Consultant's compensation in connection therewith, may only be modified by unanimous written authorization of the Parties, acting by and through their respective City Managers, which authorization shall be set forth in a written supplement to the Memorandum of Agreement previously executed by each Party. Each Party grants its City Manager discretionary authority to execute a written supplement to a previously approved Memorandum of Agreement.

#### 2.02 D.O. Committee Participation.

(a) Each Project Consultant shall work with and report to the D.O. Committee. The D.O. Committee shall prepare a schedule of meetings with each Project Consultant that shall be approved by all members of the D.O. Committee. The Contracting Party shall ensure that each Project Consultant works cooperatively with the D.O. Committee. The foregoing shall not be construed to prohibit any Party from communicating directly with a Project Consultant regarding the Consulting Services without the presence or participation of the other Parties, or from meeting with the Project Consultants when it is not practicable to schedule a meeting with the D.O. Committee.

(b) The D.O. Committee shall:

(i) Attend and participate in regular meetings with each Project Consultant to monitor the status of the Consulting Services and to provide direction and recommendations with respect thereto;

(ii) Review and unanimously approve in writing any revisions to the scope of Consulting Services to be performed by any Project Consultant;

(iii) Confirm in writing the final completion of Consulting Services under the Consulting Services Contracts in accordance with the PER and the Project Schedule; and

(iv) Address any other relevant matters relating to the Consulting Services.

(c) Within ten (10) business days of receipt of any preliminary and/or final reports prepared by a Project Consultant, the members of the D.O. Committee shall specify in writing to each other any objections regarding the draft reports, and any proposed revisions thereto. If any member of the D.O. Committee fails to object in writing to the report within the 10-business-day period, then that member shall be deemed to have approved the draft report. In the event that any member of the D.O. Committee timely objects to the draft report, then the D.O. Committee shall endeavor in good faith to resolve the matter by unanimous agreement. If the D.O. Committee cannot unanimously agree to the proper resolution within fifteen (15) business days, then the D.O. Committee shall refer the dispute to the City Managers Committee. The City Managers Committee shall work diligently and in good faith to resolve the dispute as quickly as possible so as not to jeopardize the completion of the Regional Project in accordance with the Project Schedule. If the City Managers Committee is unable to resolve a dispute after reasonable and good faith efforts, the Contracting Party may terminate the affected Consulting Services Contract.

### **2.03 Work Product.**

(a) Any Party is entitled to copies of any work product produced by the Project Consultants in connection with the Consulting Services. The Party requesting a copy of such information shall pay all reasonable costs incurred in preparing and furnishing the copies.

(b) In accordance with, and subject to the terms and conditions set forth in the Consulting Services Contracts, the Parties may utilize the work product produced by the Project Consultants for their own purposes.

## **III. PAYMENT OF CONSULTING SERVICES COSTS.**

### **3.01 Payment of Consulting Services Costs.**

(a) All Consulting Services Costs shall be shared by the Parties according to the Cost Allocation Percentages.



(b) The Parties agree that all Project Consultants shall be instructed to send all invoices to the Contracting Party. Upon receipt of each invoice from a Project Consultant, the Contracting Party shall review the invoice and confirm that the Consulting Services have been satisfactorily completed in accordance with the request for payment. Thereafter, the Contracting Party shall submit notice to the other Parties indicating each Party's share of the Project Consultant's invoice in accordance with each Party's Cost Allocation Percentage. The other Parties shall forward payment therefor within ten (10) business days of the receipt of notice.

(c) In the event of any disputes among the Parties, the Parties agree that their respective City Managers shall work diligently and in good faith to resolve the dispute as quickly as possible so as not to jeopardize the completion of the Regional Project. If the City Managers are unable to resolve a dispute after reasonable and good faith efforts, the Contracting Party may terminate the affected Consulting Services Contract.

#### IV. GENERAL PROVISIONS

**4.01 Authority.** This Agreement is made in part under the authority conferred in Chapter 791, *Texas Government Code* and Section 402.001, *Texas Local Government Code*.

**4.02 Severability.** The provisions of this Agreement are severable and, if any provision of this Agreement is held to be invalid for any reason by a court or agency of competent jurisdiction, the remainder of this Agreement will not be affected and this Agreement will be construed as if the invalid portion had never been contained herein.

**4.03 Payments from Current Revenues.** Any payments required to be made by a Party under this Agreement will be paid from current revenues or other funds lawfully available to the Party for such purpose.

**4.04 Cooperation.** The Parties agree to cooperate at all times in good faith to effectuate the purposes and intent of this Agreement.

**4.05 Entire Agreement.** Except as otherwise expressly provided herein, this Agreement contains the entire agreement of the Parties regarding the sharing of costs for the Consulting Services and supersedes all prior or contemporaneous understandings or representations, whether oral or written, regarding the subject matter. The Parties confirm that further agreements regarding the Regional Project are contemplated and will not be affected or limited by this Agreement.

**4.06 Amendments.** Any amendment of this Agreement must be in writing and will be effective if signed by the authorized representatives of the Parties.

**4.07 Applicable Law; Venue.** This Agreement will be construed in accordance with Texas law. Venue for any action arising hereunder will be in Williamson County, Texas.

**4.08 Notices.** Any notices given under this Agreement will be effective if (i) forwarded to a Party by hand-delivery; (ii) transmitted to a Party by confirmed telecopy; or (iii) deposited with the U.S. Postal Service, postage prepaid, certified, to the address of the Party indicated below:

**CEDAR PARK:**

600 North Bell Blvd.  
Cedar Park, Texas 78613  
Attn: Sam Roberts  
Telephone: (512) 258-4121 x6321  
Facsimile: (512) 258-6083  
Email: [roberts@ci.cedar-park.tx.us](mailto:roberts@ci.cedar-park.tx.us)

with copy to:

Leonard Smith  
P.O. Box 684633  
Austin, Texas 78768  
Telephone: (512) 474-6707  
Facsimile: (512) 474-6706  
Email: [lsmith@leonardsmithlaw.com](mailto:lsmith@leonardsmithlaw.com)

**ROUND ROCK:**

221 East Main  
Round Rock, Texas 78664  
Attn: Jim Nuse  
Telephone: (512) 218-5410  
Facsimile: (512) 218-7097  
Email: [jnuse@round-rock.tx.us](mailto:jnuse@round-rock.tx.us)

with copy to:

Steve Sheets  
309 E. Main Street  
Round Rock, Texas 78664-5264  
Telephone: (512) 255-8877  
Facsimile: (512) 255-8986  
Email: [slsheets@sheets-crossfield.com](mailto:slsheets@sheets-crossfield.com)

**Leander:**

P.O. Box 319  
Leander, Texas 78646-0319  
Attn: Wayne Watts  
Telephone: (512) 259-1178  
Facsimile: (512) 259-1605  
Email: [w.watts@ci.leander.tx.us](mailto:w.watts@ci.leander.tx.us)

with copy to:

Diana Granger  
223 W. Anderson Lane, Suite A-105  
Austin, Texas 78752  
Telephone: (512) 323-5778  
Telecopy: (512) 323-5773  
Email: [attorneys@cityattorneytexas.com](mailto:attorneys@cityattorneytexas.com)

**4.09 Force Majeure.** Parties shall not be deemed in violation of this Contract if prevented from performing any of their obligations hereunder by reasons for which they are not responsible or circumstances beyond their control. However, notice of such impediment or delay in performance must be timely given, and all reasonable efforts undertaken to mitigate its effects.

**4.10 Exhibits.** The following exhibits are attached to this Agreement and incorporated herein by reference:

Exhibit A - Memorandum of Agreement

**4.11 Counterparts. Effect of Partial Execution.** This Agreement may be executed simultaneously in multiple counterparts, each of which will be deemed an original, but all of which will constitute the same instrument.

**4.12 Authority.** Each Party represents and warrants that it has the full right, power and authority to execute this Agreement

*[SIGNATURES ON FOLLOWING PAGES]*

**CITY OF ROUND ROCK:**

ATTEST:

\_\_\_\_\_  
Christine Martinez, City Secretary

By: \_\_\_\_\_  
Nyle Maxwell, Mayor

Date: \_\_\_\_\_

**CITY OF CEDAR PARK:**

ATTEST:

\_\_\_\_\_  
LeAnn Quinn, City Secretary

By: \_\_\_\_\_  
Bob Lemon, Mayor

Date: \_\_\_\_\_

**CITY OF LEANDER:**

ATTEST:

Debbie Haile, City Secretary

By: John Cowman, Mayor

Date: \_\_\_\_\_

Exhibit A

Memorandum of Agreement

To: Design and Oversight Committee  
From: Jim Nuse, Round Rock City Manager  
Biff Johnson, Leander City Manager  
Brenda Eivens, Cedar Park City Manager  
Date: January 10, 2007  
Re: *[Insert Name of Project Consultant]*

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Pursuant to the Interlocal Agreement Regarding Ancillary Consulting Services for Regional Water System, this Memorandum of Agreement is to confirm that the City of Round Rock, the City of Leander, and the City of Cedar Park have agreed to the Consulting Services Contract between the Project Consultant and \_\_\_\_\_ (the "Contracting Party"), a copy of which is attached hereto.

City of Round Rock

\_\_\_\_\_  
Jim Nuse, City Manager

Date: \_\_\_\_\_

City of Leander

\_\_\_\_\_  
Biff Johnson, City Manager

Date: \_\_\_\_\_

City of Cedar Park

\_\_\_\_\_  
Brenda Eivens, City Manager

Date: \_\_\_\_\_

RESOLUTION NO. \_\_\_\_\_

**A RESOLUTION BY THE BOARD OF DIRECTORS OF THE BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. AUTHORIZING THE ISSUANCE OF "BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. CITY OF ROUND ROCK, TEXAS CONTRACT REVENUE BONDS, (BRUSHY CREEK REGIONAL WATER TREATMENT AND DISTRIBUTION PROJECT)"; ESTABLISHING THE PROCEDURES FOR SELLING AND DELIVERING THE BONDS AND RESOLVING OTHER MATTERS INCIDENT AND RELATING TO THE ISSUANCE, PAYMENT, SECURITY, SALE, AND DELIVERY OF SUCH BONDS**

**ADOPTED \_\_\_\_\_, 2008**



RESOLUTION NO. \_\_\_\_\_

**A RESOLUTION BY THE BOARD OF DIRECTORS OF THE BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. AUTHORIZING THE ISSUANCE OF "BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. CITY OF ROUND ROCK, TEXAS CONTRACT REVENUE BONDS, (BRUSHY CREEK REGIONAL WATER TREATMENT AND DISTRIBUTION PROJECT)"; ESTABLISHING THE PROCEDURES FOR SELLING AND DELIVERING THE BONDS AND RESOLVING OTHER MATTERS INCIDENT AND RELATING TO THE ISSUANCE, PAYMENT, SECURITY, SALE, AND DELIVERY OF SUCH BONDS**

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RESOLUTION NO. \_\_\_\_\_

**A RESOLUTION BY THE BOARD OF DIRECTORS OF THE BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. AUTHORIZING THE ISSUANCE OF "BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. CITY OF ROUND ROCK, TEXAS CONTRACT REVENUE BONDS, (BRUSHY CREEK REGIONAL WATER TREATMENT AND DISTRIBUTION PROJECT)"; ESTABLISHING THE PROCEDURES FOR SELLING AND DELIVERING THE BONDS AND RESOLVING OTHER MATTERS INCIDENT AND RELATING TO THE ISSUANCE, PAYMENT, SECURITY, SALE, AND DELIVERY OF SUCH BONDS**

**WHEREAS**, the Brushy Creek Regional Utility Authority, Inc. (the "BCRUA") is a non-profit corporation of the State of Texas (the "State"), created by the Cities of Cedar Park, Leander and Round Rock, Texas (collectively, the "Cities" or singularly, a "City") and existing under the laws of the State, including Subchapter D of Chapter 431, as amended, Texas Transportation Code (the "Authority Act"); and

**WHEREAS**, pursuant to the Authority Act, the BCRUA, is empowered to acquire and construct water facilities including water conservation, storage, transportation, treatment and distribution facilities and to deliver this water to the Cities; and

**WHEREAS**, the Authority Act also authorizes the BCRUA acting through its Board of Directors (the "Board") to issue revenue bonds to finance such water projects, payable solely from the revenues derived from payments to be made to the BCRUA by each respective City for which a series of bonds are issued for the purpose of defraying such City's share of the cost of financing, acquiring, and constructing the BCRUA Project (as hereinafter defined); and

**WHEREAS**, the BCRUA initially expects to issue separate series of such revenue bonds for the City of Round Rock, Texas ("Round Rock"), the City of Leander, Texas ("Leander") and the City of Cedar Park, Texas ("Cedar Park") to finance their share of the BCRUA Project, with each such series payable from and secured solely by payments made by each respective City under the Contract (as hereinafter defined); and

**WHEREAS**, pursuant to the Authority Act, the BCRUA and the Cities have entered into a Master Contract for the Financing, Construction and Operation of the BCRUA Regional Water Treatment and Distribution Project, dated as of September 2, 2008 (the "Contract") pursuant to which the BCRUA has agreed to design, finance, construct, own, acquire, maintain and operate the BCRUA Project in a manner that will allow the BCRUA to deliver potable water to the Cities on a regional basis and under which each of the Cities agree to pay their share of the BCRUA Project and to make payments to or on behalf of the BCRUA in amounts sufficient to meet all of the BCRUA's obligations under the Contract including relating to a City's respective series of bonds issued to finance and refinance a City's share of the BCRUA Project and to own, operate and maintain the BCRUA Project; and

**WHEREAS**, Round Rock has requested that the BCRUA issue a separate series of revenue bonds in an aggregate principal amount not to exceed \$65,870,000 pursuant to the Contract to finance Round Rock's share of the BCRUA Project (the "Bonds"); and

**WHEREAS**, Cedar Park and Leander have also requested the BCRUA issue separate series of contract revenue bonds pursuant to the Contract to finance their respective share of the BCRUA Project Costs and the three separate series of contract revenue bonds for the Cities are expected to be issued and delivered simultaneously; and

**WHEREAS**, the Cities and the BCRUA have approved the Contract; and

**WHEREAS**, this Resolution constitutes a Bond Resolution as that term is defined in the Contract; and

**WHEREAS**, Round Rock has agreed pursuant to Article X of the Contract to provide continuing disclosure of certain financial and operating data so long as the Bonds are Outstanding; and

**WHEREAS**, the principal of the Bonds and the interest thereon are and shall be solely payable from and secured by a lien on and pledge of the portion of the Annual Payments designated as "Bond Payments" to be made by Round Rock pursuant to the Contract in amounts sufficient to pay and redeem, and provide for the payment of the principal of, premium, if any, and interest on the Bonds, when due, and the fees and expenses of the Paying Agent/Registrar for the Bonds, all as required by this Resolution.

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. THAT:**

**Section 1. DEFINITIONS.** In addition to the definitions set forth in the preamble of this Resolution, the terms used in this Resolution (except as may be otherwise indicated in the FORM OF BOND) and not otherwise defined shall have the meanings given in Exhibit "A" to this Resolution attached hereto and made a part hereof.

**Section 2. AMOUNT, PURPOSE AND DESIGNATION OF THE BONDS.** (a) *Amount and Designation.* The BCRUA's bonds issued pursuant to this Resolution shall each be entitled "BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. CITY OF ROUND ROCK, TEXAS CONTRACT REVENUE BONDS (BRUSHY CREEK REGIONAL WATER TREATMENT AND DISTRIBUTION PROJECT)" and are hereby authorized to be issued and delivered in an aggregate maximum principal amount not to exceed \$65,870,000. The title of the Bonds shall be designated by the year in which such Bonds are awarded pursuant to Section 3 below. The authority of the BCRUA Representative to execute and deliver an Award Certificate for the Bonds shall expire at the close of business on \_\_\_\_\_, 2009.

(b) *Purpose.* The Bonds are to be issued for the following purposes to: (i) PAY ROUND ROCK'S SHARE OF THE COSTS OF CONSTRUCTING, ACQUIRING, IMPROVING AND/OR EXPANDING THE BCRUA PROJECT INCLUDING BUT NOT LIMITED TO LAND INTERESTS, TEMPORARY INTAKE STRUCTURE, STORAGE TANKS, LINES, BOOSTER PUMPS, TREATMENT FACILITIES AND OTHER APPURTENANCES NECESSARY FOR THE DELIVERY, TREATMENT AND TRANSMISSION OF RAW WATER AND ACQUIRING EASEMENTS, RIGHTS-OF-WAY AND OTHER INTERESTS IN LAND OR OTHER FACILITIES NECESSARY FOR THE WITHDRAWAL, DIVERSION DELIVERY, TRANSMISSION AND TREATMENT OF RAW WATER ALL AS DESCRIBED IN THE PRELIMINARY DESIGN REPORT AND (ii) PAY THE COSTS OF ISSUANCE OF THE BONDS.

**Section 3. DATE, DENOMINATIONS, NUMBERS, MATURITIES AND TERMS OF BONDS.** (a) *Terms of the Bonds.* The Bonds shall initially be issued, sold, and delivered hereunder as fully registered bonds, without interest coupons, numbered consecutively from R-1 upward (except the initial Bond delivered to the Attorney General of the State which shall be numbered T-1), payable to the respective initial Registered Owners thereof in an Authorized Denomination, maturing not later than August 1, 2039, serially or otherwise on the dates, in the years and in the principal amounts, respectively, dated, all as set forth in the Award Certificate executed by the BCRUA Representative.

(b) *Award Certificate.* As authorized by the Authority Act, the BCRUA Representative is hereby authorized, appointed, and designated to act on behalf of the Board in selling and delivering the Bonds and carrying out the other procedures specified in this Resolution, including determining and fixing the date the Bonds, any additional or different designation or title by which the Bonds shall be known, the price at which the Bonds will be sold, the years in which the Bonds will mature, the principal amount to mature in each of such years, the aggregate principal amount of the Bonds, the rate or rates of interest to be borne by each maturity, the interest payment periods, the dates, price, and terms upon and at which the Bonds shall be subject to redemption prior to maturity at the option of the Board, as well as any mandatory sinking fund redemption provisions for the Bonds and all other matters relating to the issuance, sale, and delivery of the Bonds, all of which shall be specified in a certificate of the BCRUA Representative (the "Award Certificate"); provided that (i) the price to be paid for the Bonds shall not be less than 95% of the aggregate original principal amount thereof plus accrued interest, if any, thereon from its date to its delivery and (ii) the Bonds shall not bear interest at a rate in excess of the maximum rate allowed by law.

It is further provided, however, that, notwithstanding the foregoing provisions, the Bonds shall not be delivered unless prior to delivery of the Bonds the Award Certificate has been executed and delivered as required by this Resolution.

The Award Certificate is hereby incorporated in and made a part of this Resolution and shall be filed in the minutes of the Board as a part of this Resolution.

(c) *Sale of the Bonds.* To achieve advantageous borrowing costs for the BCRUA, the Bonds shall be sold to the Texas Water Development Board (the "Purchaser") at the price as set forth in the Award Certificate.

(d) *In General.* The Bonds (i) may and shall be redeemed prior to the respective scheduled maturity dates, (ii) may be assigned and transferred, (iii) may be exchanged for other Bonds, (iv) shall have the characteristics, (v) shall be signed and sealed, and the principal of and interest on the Bonds shall be payable, all as provided, and in the manner required or indicated, in the FORM OF BOND set forth in Exhibit "B" to this Resolution and as determined by the BCRUA Representative as provided herein, with such changes and additions as are required to be consistent with the terms and provisions shown in the Award Certificate.

**Section 4. INTEREST.** The Bonds shall bear interest, calculated on the basis of a 360-day year composed of twelve 30-day months, from their date of delivery as set forth in the Award Certificate, until maturity or redemption, at the rate or rates set forth in the Award Certificate. Interest shall be payable to the Registered Owner of any such Bond in the manner provided and on the dates stated in the FORM OF BOND set forth in Exhibit "B" to this Resolution and the Award Certificate.

**Section 5. REGISTRATION, TRANSFER, AND EXCHANGE; AUTHENTICATION; BOOK-ENTRY-ONLY SYSTEM.** (a) *Paying Agent/Registrar.* Wells Fargo Bank, National Association is hereby appointed the Paying Agent/Registrar for the Bonds. The BCRUA Representative is authorized to enter into and carry out a Paying Agent/Registrar Agreement with the Paying Agent/Registrar with respect to the Bonds in substantially the form and substance presented to the Board in connection with the approval of this Resolution with such changes as are acceptable to the BCRUA Representative.

(b) *Registration Books.* The Board shall keep or cause to be kept at the designated corporate trust office of the Paying Agent/Registrar in Austin, Texas (the "Designated Trust Office") the Registration Books and the Board hereby appoints the Paying Agent/Registrar as its registrar and transfer agent to keep such books or records and make such registrations of transfers, exchanges, and replacements under such reasonable regulations as the Board and Paying Agent/Registrar may prescribe; and the Paying Agent/Registrar shall make such registrations, transfers, exchanges, and replacements as herein provided. The Paying Agent/Registrar shall obtain and record in the Registration Books the address of the Registered Owner of each Bond to which payments with respect to the Bonds shall be mailed, as herein provided; but it shall be the duty of each Registered Owner to notify the Paying Agent/Registrar in writing of the address to which payments shall be mailed, and such interest payments shall not be mailed unless such notice has been given. The Board shall have the right to inspect the Registration Books at the Designated Trust Office of the Paying Agent/Registrar during regular business hours, but otherwise the Paying Agent/Registrar shall keep the Registration Books confidential and, unless otherwise required by law, shall not permit their inspection by any other entity. A copy of the Registration Books shall be maintained in the State.

(c) *Ownership of Bonds.* The entity or person in whose name any Bond shall be registered in the Registration Books at any time shall be deemed and treated as the absolute owner thereof for all purposes of this Resolution, whether or not such Bond shall be overdue, and, to the extent permitted by law, the Board and the Paying Agent/Registrar shall not be affected by any notice to the contrary; and payment of, or on account of, the principal of, premium, if any, and interest on any such Bond shall be made only to



such Registered Owner. All such payments shall be valid and effectual to satisfy and discharge the liability upon such Bond to the extent of the sum or sums so paid.

(d) ***Payment of Bonds and Interest.*** The Paying Agent/Registrar shall further act as the paying agent for paying the principal of, premium, if any, and interest on the Bonds, all as provided in this Resolution. The Paying Agent/ Registrar shall keep proper records of all payments made by the Board and the Paying Agent/Registrar with respect to the Bonds.

(e) ***Authentication.*** The Bonds initially issued and delivered pursuant to this Resolution shall be authenticated by the Paying Agent/Registrar by execution of the Paying Agent/Registrar's Authentication Certificate unless they have been approved by the Attorney General of the State and registered by the Comptroller of Public Accounts of the State, and on each substitute Bond issued in exchange for any Bond or Bonds issued under this Resolution the Paying Agent/Registrar shall execute the PAYING AGENT/REGISTRAR'S AUTHENTICATION CERTIFICATE (the "Authentication Certificate"). The Authentication Certificate shall be in the form set forth in the FORM OF BOND in Exhibit "B" attached hereto.

(f) ***Transfer, Exchange, or Replacement.*** Each Bond issued and delivered pursuant to this Resolution, to the extent of the unpaid or unredeemed principal amount thereof, may, upon surrender of such Bond at the Designated Trust Office of the Paying Agent/Registrar, together with a written request therefor duly executed by the Registered Owner or the assignee or assignees thereof, or its or their duly authorized attorneys or representatives, with guarantee of signatures satisfactory to the Paying Agent/Registrar, may, at the option of the Registered Owner or such assignee or assignees, as appropriate, be exchanged for fully registered Bonds, without interest coupons, in the appropriate form prescribed in the FORM OF BOND set forth in Exhibit "B" to this Resolution, in any Authorized Denomination (subject to the requirement hereinafter stated that each substitute Bond shall be of the same Series and have a single stated maturity date), as requested in writing by such Registered Owner or such assignee or assignees, in an aggregate principal amount equal to the unpaid or unredeemed principal amount of any Bond or Bonds so surrendered, and payable to the appropriate Registered Owner, assignee, or assignees, as the case may be. If a portion of any Bond shall be redeemed prior to its scheduled maturity as provided herein, a substitute Bond or Bonds having the same series designation and maturity date, bearing interest at the same rate, and payable in the same manner, in Authorized Denominations at the request of the Registered Owner, and in aggregate principal amount equal to the unredeemed portion thereof, will be issued to the Registered Owner upon surrender thereof for cancellation. If any Bond or portion thereof is assigned and transferred, each Bond issued in exchange therefor shall have the same series designation and maturity date and bear interest at the same rate and payable in the same manner as the Bond for which it is being exchanged. Each substitute Bond shall bear a letter and/or number to distinguish it from each other Bond. The Paying Agent/Registrar shall exchange or replace Bonds as provided herein, and each fully registered Bond delivered in exchange for or replacement of any Bond or portion thereof as permitted or required by any provision of this Resolution shall constitute one of the Bonds for all purposes of this Resolution, and may again be exchanged or replaced. On each substitute Bond issued in exchange for or replacement of any Bond or Bonds issued under this Resolution there shall be printed an Authentication Certificate, in the form set forth in Exhibit "B" to this Resolution. An authorized representative of the Paying Agent/Registrar shall, before the delivery of any such Bond, date and manually sign the Authentication

Certificate, and, except as provided in (e) above, no such Bond shall be deemed to be issued or outstanding unless the Authentication Certificate is so executed. The Paying Agent/Registrar promptly shall cancel all Bonds surrendered for transfer, exchange, or replacement. No additional orders or resolutions need be passed or adopted by the Board or any other body or person so as to accomplish the foregoing transfer, exchange, or replacement of any Bond or portion thereof, and the Paying Agent/Registrar shall provide for the printing, execution, and delivery of the substitute Bonds in the manner prescribed herein, and said Bonds shall be in typed or printed form as determined by the BCRUA Representative. Pursuant to Subtitle D, Texas Government Code and particularly Section 1201.063, thereof, the duty of transfer, exchange, or replacement of Bonds as aforesaid is hereby imposed upon the Paying Agent/Registrar, and, upon the execution of the Authentication Certificate, the exchanged or replaced Bond shall be valid, incontestable, and enforceable in the same manner and with the same effect as the Bonds which were originally issued pursuant to this Resolution. The Board shall pay the Paying Agent/Registrar's standard or customary fees and charges, if any, for transferring, and exchanging any Bond or any portion thereof, but the one requesting any such transfer and exchange shall pay any taxes or governmental charges required to be paid with respect thereto as a condition precedent to the exercise of such privilege. The Paying Agent/Registrar shall not be required to make any such transfer, exchange, or replacement of Bonds or any portion thereof (i) during the period commencing with the close of business on any Record Date and ending with the opening of business on the next following interest payment date, or (ii) with respect to any Bond or portion thereof called for redemption prior to maturity, within 45 days prior to its redemption date. To the extent possible, any new Bond issued in an exchange, replacement, or transfer of a Bond will be delivered to the Registered Owner or assignee of the Registered Owner not more than three business days after the receipt of the Bonds to be canceled and the written request as described above.

(g) *Substitute Paying Agent/Registrar.* The Board covenants with the Registered Owners of the Bonds that at all times while the Bonds are outstanding the Board will provide a competent and legally qualified bank, trust company, financial institution, or other agency to act as and perform the services of Paying Agent/Registrar for the Bonds under this Resolution, and that the Paying Agent/Registrar will be one entity. The Board reserves the right to, and may, at its option, change the Paying Agent/Registrar upon not less than ninety (90) days written notice to the Paying Agent/Registrar, to be effective not later than sixty (60) days prior to the next principal or interest payment date after such notice. In the event that the entity at any time acting as Paying Agent/Registrar (or its successor by merger, acquisition, or other method) should resign or otherwise cease to act as such, the Board covenants that promptly it will appoint a competent and legally qualified bank, trust company, financial institution, or other agency to act as Paying Agent/Registrar under this Resolution. Upon any change in the Paying Agent/Registrar, the previous Paying Agent/Registrar promptly shall transfer and deliver the Registration Books (or a copy thereof), along with all other pertinent books and records relating to the Bonds, to the new Paying Agent/Registrar designated and appointed by the Board. Upon any change in the Paying Agent/Registrar, the Board promptly will cause a written notice thereof to be sent by the new Paying Agent/Registrar to each Registered Owner of the Bonds, by United States mail, first-class postage prepaid, which notice also shall give the address of the new Paying Agent/Registrar. By accepting the position and performing as such, each Paying Agent/Registrar shall be deemed to have agreed to the provisions of this Resolution, and a certified copy of this Resolution shall be delivered to each Paying Agent/Registrar.

(h) ***Book-Entry-Only System.*** The Bonds issued in exchange for the Bonds initially issued and delivered to the Purchaser shall be issued in the form of a separate single fully registered Bond for each of the maturities thereof registered in the name of Cede & Co., as nominee of DTC, and except as provided in subsection (i) hereof, all of the Outstanding Bonds shall be registered in the name of Cede & Co., as nominee of DTC. With respect to Bonds registered in the name of Cede & Co., as nominee of DTC, the Board and the Paying Agent/Registrar shall have no responsibility or obligation to any DTC Participant or to any person on behalf of whom such a DTC Participant holds an interest on the Bonds. Without limiting the immediately preceding sentence, the Board and the Paying Agent/Registrar shall have no responsibility or obligation with respect to (i) the accuracy of the records of DTC, Cede & Co. or any DTC Participant with respect to any ownership interest in the Bonds, (ii) the delivery to any DTC Participant or any other person, other than a Registered Owner, as shown on the Registration Books, of any notice with respect to the Bonds, including any notice of redemption, or (iii) the payment to any DTC Participant or any other person, other than a Registered Owner, as shown in the Registration Books of any amount with respect to principal of, premium, if any, or interest on the Bonds. Notwithstanding any other provision of this Resolution to the contrary but to the extent permitted by law, the Board and the Paying Agent/Registrar shall be entitled to treat and consider the person in whose name each Bond is registered in the Registration Books as the absolute owner of such Bond for the purpose of payment of principal, premium, if any, and interest, with respect to such Bond, for the purpose of giving notices of redemption and other matters with respect to such Bond, for the purpose of registering transfers with respect to such Bond, and for all other purposes whatsoever. The Paying Agent/Registrar shall pay all principal of, premium, if any, and interest on the Bonds only to or upon the order of the respective Registered Owners, as shown in the Registration Books as provided in this Resolution, or their respective attorneys duly authorized in writing, and all such payments shall be valid and effective to fully satisfy and discharge the Board's obligations with respect to payment of principal of, premium, if any, and interest on the Bonds to the extent of the sum or sums so paid. No person other than an Registered Owner, as shown in the Registration Books, shall receive a Bond certificate evidencing the obligation of the Board to make payments of principal, premium, if any, and interest pursuant to this Resolution. Upon delivery by DTC to the Paying Agent/Registrar of written notice to the effect that DTC has determined to substitute a new nominee in place of Cede & Co., and subject to the provisions in this Resolution with respect to interest checks being mailed to the Registered Owner at the close of business on the Record Date, the word "Cede & Co." in this Resolution shall refer to such new nominee of DTC.

(i) ***Successor Securities Depository; Transfers Outside Book-Entry-Only System.*** In the event that the Board or the Paying Agent/Registrar determines that DTC is incapable of discharging its responsibilities described herein and in the representation letter of the Board to DTC (as described in Section 35 of this Resolution) or DTC determines to discontinue providing its services with respect to the Bonds, the Board shall (i) appoint a successor securities depository, qualified to act as such under Section 17A of the Securities and Exchange Act of 1934, as amended, notify DTC and DTC Participants of the appointment of such successor securities depository and transfer one or more separate Bonds to such successor securities depository or (ii) notify DTC and DTC Participants of the availability through DTC of Bonds and transfer one or more separate Bonds to DTC Participants having Bonds credited to their DTC accounts. In such event, the Bonds shall no longer be restricted to being registered in the Registration Books in the name of Cede & Co., as nominee of DTC, but may be registered in the name of the successor

securities depository, or its nominee, or in whatever name or names Registered Owners transferring or exchanging Bonds shall designate, in accordance with the provisions of this Resolution.

(j) *Payments to Cede & Co.* Notwithstanding any other provision of this Resolution to the contrary, so long as any Bond is registered in the name of Cede & Co., as nominee of DTC, all payments with respect to principal of, premium, if any, and interest on such Bond and all notices with respect to such Bond shall be made and given, respectively, in the manner provided in the representation letter of the BCRUA to DTC.

(k) *Notice of Redemption.* In addition to the method of providing a notice of redemption set forth in the FORM OF BOND, the Paying Agent/Registrar shall give notice of redemption of Bonds by mail, first-class postage prepaid at least thirty (30) days prior to a redemption date to each registered securities depository and to any national information service that disseminates redemption notices. In addition, in the event of a redemption caused by an advance refunding of the Bonds, the Paying Agent/Registrar shall send a second notice of redemption to the persons specified in the immediately preceding sentence at least thirty (30) days but not more than ninety (90) days prior to the actual redemption date. Any notice sent to the registered securities depositories or such national information services shall be sent so that they are received at least two (2) days prior to the general mailing or publication date of such notice. The Paying Agent/Registrar shall also send a notice of prepayment or redemption to the Registered Owner of any Bond who has not sent the Bonds in for redemption sixty (60) days after the redemption date. Each notice of redemption, whether required in the FORM OF BOND or in this Section, shall contain a description of the Bonds to be redeemed including the complete name of the Bonds, the Series, the date of issue, the interest rate or rates, the maturity date, the CUSIP number, a reference to the certificate numbers and the amounts called of each certificate, the publication and mailing date for the notice, the date of redemption, the redemption price, the name of the Paying Agent/Registrar and the address at which the Bonds may be redeemed, including a contact person and telephone number. All redemption payments made by the Paying Agent/Registrar to the registered owners of the Bonds shall include a CUSIP number relating to each amount paid to such Registered Owner.

(l) *Conditional Notice of Redemption.* With respect to any optional redemption of the Bonds, unless certain prerequisites to such redemption required by the Resolution have been met and moneys sufficient to pay the principal of and premium, if any, and interest on the Bonds to be redeemed shall have been received by the Paying Agent/Registrar prior to the giving of such notice of redemption, such notice shall state that said redemption may, at the option of the BCRUA, be conditional upon the satisfaction of such prerequisites and receipt of such moneys by the Paying Agent/Registrar on or prior to the date fixed for such redemption, or upon any prerequisite set forth in such notice of redemption. If a conditional notice of redemption is given and such prerequisites to the redemption and sufficient moneys are not received, such notice shall be of no force and effect, the BCRUA shall not redeem such Bonds and the Paying Agent/Registrar shall give notice, in the manner in which the notice of redemption was given, to the effect that the Bonds have not been redeemed.

**Section 6. FORM OF BOND.** The form of the Bond, including the form of the Authentication Certificate, the form of Assignment and the form of Registration Certificate of the Comptroller of Public Accounts of the State, with respect to the Bonds initially issued and delivered pursuant to this Resolution,

shall be, respectively, substantially as set forth in Exhibit "B", with such appropriate variations, omissions, or insertions as are permitted or required by this Resolution and any Award Certificate including specifically information relating to payment dates, the Bond date and redemption provisions.

**Section 7. PLEDGE OF BOND PAYMENTS.** (a) *Pledge.* The BCRUA hereby covenants and agrees that the Bond Payments are hereby irrevocably pledged to the payment and security of the Bonds Similarly Secured including the establishment and maintenance of the special funds or accounts created and established on the books and records of the BCRUA for the payment and security thereof, all as hereinafter provided; and it is hereby resolved that the Bonds Similarly Secured, and the interest thereon, shall constitute a lien on and pledge of the Bond Payments and be valid and binding without any physical delivery thereof or further act by the BCRUA, and the lien created hereby on the Bond Payments for the payment and security of the Bonds Similarly Secured shall be prior in right and claim as to any other indebtedness, liability, or obligation of the BCRUA or the BCRUA Project payable pursuant to the terms of the Contract. The BCRUA shall deposit the Bond Payments, as collected and received, into a separate fund and account on the books and records of the BCRUA known as the "Round Rock Debt Service Fund," which is hereby created, to be utilized pursuant to the Contract and Sections 9 and 12 hereof to pay the Bonds; provided, however, that the Board of the BCRUA may utilize any revenues, including those generated by the Contract, in excess of the Debt Service Requirements on the Bonds Similarly Secured for any lawful purpose in accordance with this Resolution and the Contract.

(b) *Perfection of Pledge.* Chapter 1208, as amended, Texas Government Code, applies to the issuance of the Bonds Similarly Secured and the lien on and pledge of Bond Payments granted by the BCRUA under subsection (a) of this Section, and such pledge is therefore valid, effective, and perfected. If State law is amended at any time while the Bonds Similarly Secured are outstanding and unpaid such that the pledge of the Bond Payments granted by the BCRUA is to be subject to the filing requirements of Chapter 9, Texas Business & Commerce Code, then in order to preserve to the Registered Owners of the Bonds Similarly Secured the perfection of the security interest in this pledge, the Board agrees to take such measures as it determines are reasonable and necessary under State law to comply with the applicable provisions of Chapter 9, as amended, Texas Business & Commerce Code and enable a filing to perfect the security interest in this pledge to occur.

**Section 8. RATES AND CHARGES.** For the benefit of the Registered Owners of the Bonds Similarly Secured and in addition to all provisions and covenants in the laws of the State and in this Resolution, the Contract between the BCRUA and Round Rock expressly stipulates and agrees, while any of the Bonds Similarly Secured are Outstanding, Round Rock will fix and collect such rates and charges for services to be supplied by the Round Rock System as will produce gross revenues at all times during the term of the Contract in an amount equal to pay all of the expenses of operation and maintenance of the Round Rock System including Annual Payments and Bond Payments under the Contract and all other amounts required by the laws and the provisions of the ordinances or resolutions authorizing the Round Rock Utility Bonds or other obligations now or hereafter outstanding payable, in whole or in part, from the net revenues of the Round Rock System, including the amounts required to pay all principal of and interest on such Round Rock Utility Bonds and other obligations. The BCRUA hereby expressly stipulates that it will maintain rates and charges through the Bond Payments to meet the debt service requirements

on the Bond Similarly Secured and agrees that it will take all appropriate action to enforce such terms of the Contract while any of the Bonds Similarly Secured are Outstanding.

The Registered Owner shall never have the right to demand payment for the Bonds out of any funds raised or to be raised from taxation by Round Rock or the BCRUA.

**Section 9. DISTRIBUTION OF BOND PAYMENTS.** After the Bond Payments have been received by the BCRUA such shall be deposited into the Debt Service Fund as required by this Resolution.

**Section 10. DEBT SERVICE FUND; CONSTRUCTION FUND; ESCROW FUND.** (a) *Debt Service Fund.* For purposes of providing funds to pay the principal of and interest on the Bonds Similarly Secured as the same become due and payable, the BCRUA agrees to maintain, at the Depository, a separate and special fund or account to be created and known as the "Brushy Creek Regional Utility Authority, Inc. City of Round Rock, Texas Contract Revenue Bonds (Brushy Creek Regional Water Treatment and Distribution Project), Debt Service Fund" (the "Debt Service Fund"). The BCRUA covenants that there shall be deposited into the Debt Service Fund prior to each principal and interest payment date solely from the available Bond Payments an amount equal to one hundred per cent (100%) of the amount required to fully pay the interest on and the principal of the Bonds Similarly Secured then falling due and payable, such deposits to pay maturing principal and accrued interest on the Bonds Similarly Secured to be made in substantially equal monthly installments on or before the first day of each month, beginning \_\_\_\_\_, 2008. If the Bond Payments in any month are insufficient to make the required payments into the Debt Service Fund, then the amount of any deficiency in such payment shall be added to the amount otherwise required to be paid into the Debt Service Fund in the next month. The BCRUA hereby also establishes a subaccount in the Debt Service Fund and shall deposit any capitalized interest for use in paying the initial Debt Service Requirements on the Bonds.

The required monthly deposits to the Debt Service Fund for the payment of principal of and interest on the Bonds Similarly Secured shall continue to be made as hereinabove provided until such time as (i) the total amount on deposit in the Debt Service Fund is equal to the amount required to fully pay and discharge all Outstanding Bonds Similarly Secured (principal and interest) or, (ii) the Bonds Similarly Secured are no longer Outstanding.

Any surplus proceeds from the sale of the Bonds, including investment income therefrom, not expended for authorized purposes shall be deposited into the Debt Service Fund, and such amounts (i.e., accrued and investment interest) so deposited into the Debt Service Fund shall reduce the sum otherwise required to be deposited in the Debt Service Fund from Bond Payments.

(b) *Construction Fund.* The BCRUA hereby creates and establishes and shall maintain on the books and records of the BCRUA a separate fund or account to be entitled the "Brushy Creek Regional Utility Authority, Inc. City of Round Rock, Texas Contract Revenue Bonds (Brushy Creek Regional Water Treatment and Distribution Project), Construction Fund" for use by the BCRUA for payment of Round Rock's share of the BCRUA Project. The BCRUA shall deposit the net proceeds from the sale of the Bonds released from escrow as provided in Section 10(c) below into the Construction Fund as provided in this Resolution. Funds in the Construction Fund shall be used for payment of Round Rock's

share of BCRUA Project Costs. Upon payment of all such costs, any moneys remaining on deposit in the Construction Fund shall be transferred to the Debt Service Fund.

(c) *Escrow Fund.* The Escrow Agreement between the BCRUA and the escrow agent named therein (the "Escrow Agent") substantially in the form and content presented at this meeting, specifying the duties and responsibilities of the BCRUA and the Escrow Agent, is hereby approved and the BCRUA Representative is hereby authorized and directed to execute the Escrow Agreement on behalf of the BCRUA. The Escrow Agent named in the Escrow Agreement is hereby appointed as the Escrow Agent pursuant to such Escrow Agreement.

On the closing date, the BCRUA shall cause the proceeds from the sale of the Bonds to be deposited into the Escrow Fund or, if agreed to by the Purchaser, all or a portion of the proceeds of the Bonds may be deposited into the Construction Fund.

Moneys disbursed from the Escrow Fund established pursuant to the Escrow Agreement shall be applied only for the costs of issuance of the Bonds or the BCRUA Project Costs.

The security for, and the investment of, funds on deposit in the Escrow Fund shall be governed by the provisions of the Escrow Agreement.

**Section 11. DEFICIENCIES - EXCESS BOND PAYMENTS.** (a) *Deficiencies.* If on any occasion there shall not be sufficient Bond Payments to make the required deposits into the Debt Service Fund, then such deficiency shall be cured as soon as possible from the next available unallocated Bond Payments and such payments shall be in addition to the amounts required to be paid into these Funds or accounts during such month or months.

(b) *Excess Bond Payments* Subject to making the required deposits to the Debt Service Fund when and as required by this Resolution or any resolution authorizing the issuance of Additional Bonds, any excess Bond Payments may be used by the BCRUA for any lawful purpose including, but not limited to, the redemption of any Bonds Similarly Secured.

**Section 12. PAYMENT OF BONDS.** While any of the Bonds Similarly Secured are Outstanding, the General Manager or other authorized BCRUA official, shall cause to be transferred to the Paying Agent/Registrar therefor, from funds on deposit in the Debt Service Fund, if necessary, amounts sufficient to fully pay and discharge promptly each installment of interest on and principal of the Bonds Similarly Secured as such installment accrues or matures; such transfer of funds must be made in such manner as will cause immediately available funds to be deposited with the Paying Agent/Registrar for the Bonds at the close of the Business Day next preceding the date a debt service payment is due on the Bonds Similarly Secured.

**Section 13. INVESTMENTS.** Funds held in any fund or account created, established, or maintained pursuant to this Resolution shall, at the option of the BCRUA, be invested as permitted by the provisions of the Public Funds Investment Act, as amended, Chapter 2256, Texas Government Code, or

any other law, and secured (to the extent not insured by the Federal Deposit Insurance Corporation) to the fullest extent required by the Public Funds Collateral Act, as amended, Chapter 2257, Texas Government Code. All interest and income derived from deposits and investments in any fund shall immediately be credited to, and any losses debited from, the fund from which such funds were derived. All such investments shall be sold promptly when necessary to prevent any default in connection with the Bonds.

**Section 14. ISSUANCE OF ADDITIONAL BONDS.** In addition to the right to issue bonds of inferior lien as authorized by the laws of this State, the BCRUA reserves the right hereafter to issue Additional Bonds. The Additional Bonds, when issued, shall be payable from and secured by a lien on and pledge of the Bond Payments in the same manner and to the same extent as the Bonds and the Bonds Similarly Secured, and shall in all respects be of equal dignity. The Additional Bonds may be issued in one or more series provided, however, that no Additional Bonds, shall be issued unless and until the following conditions have been met:

(i) Except for a refunding to cure a default, the BCRUA is not then in default as to any covenant, condition or obligation prescribed in the resolutions authorizing the issuance of the Bonds Similarly Secured or the Contract (including any amendment or supplement thereto) and the funds under the resolution authorizing the same contains the amounts then required to be therein;

(ii) A consulting engineer certifies to the BCRUA the need for an estimated amount of additional financing required for completion, expansion, enlargement or improvement of the BCRUA Project as now or hereafter defined in the Contract; provided, however this certification shall not be necessary for the issuance of any refunding bonds;

(iii) Round Rock, shall have approved the resolution(s) authorizing the issuance of the Additional Bonds as to form and content and acknowledged that the payment of principal of and interest on such Additional Bonds is payable, in whole or in part, from the Bond Payments to be made to the BCRUA under and pursuant to the Contract;

(iv) The resolution authorizing the issuance of the Additional Bonds provides for deposits to be made to the Debt Service Fund in amounts sufficient to pay the principal of and interest on such Additional Bonds as the same become due; and

(v) Based upon an opinion of legal counsel to the BCRUA that there are legal, valid and bindings contracts then in effect pursuant to which Round Rock and others, if any, which are parties to such contracts are obligated to make payments to the BCRUA during each fiscal year (including periods when services of the BCRUA Project may not be available to such contracting parties and others) in such amounts as shall be necessary to provide to the BCRUA sufficient funds to pay when due all principal and interest on all Bonds and Additional Bonds to be outstanding after the issuance of the proposed Additional Bonds.

The Bonds Similarly Secured may be refunded (pursuant to any law then available) upon such terms and conditions as the Board of the BCRUA may deem to be in the best interest of the BCRUA; provided, however, such refunding bonds do not have to comply with paragraph (ii) hereof.



**Section 15. SPECIAL PROJECT BONDS.** The BCRUA further reserves the right to issue bonds in one or more installments for the purchase, construction, improvement, extension, replacement, enlargement or repair of utility facilities necessary under a contract or contracts with persons, corporations, municipal corporations, political subdivisions, or entities including Round Rock, such bonds to be payable from and secured by the proceeds of such contract or contracts (other than the Contract). The BCRUA further reserves the right to refund such bonds and secure the payment of the debt service requirements on the refunding bonds in the same manner or as otherwise permitted by the laws of the State.

**Section 16. MAINTENANCE OF BCRUA PROJECT - INSURANCE.** The BCRUA covenants, agrees, and affirms its covenants that while the Bonds Similarly Secured remain outstanding it will maintain and operate the BCRUA Project with all possible efficiency and maintain casualty and other insurance on the properties of the BCRUA Project and its operations of a kind and in such amounts customarily carried by municipal corporations in the State engaged in a *similar* type of business (which may include an adequate program of self insurance); and that it will faithfully and punctually perform all duties with reference to the BCRUA Project required by the laws of the State. All money received from losses under such insurance policies, other than public liability policies, shall be retained for the benefit of the Registered Owners of the Bonds Similarly Secured until and unless the proceeds are paid out in making good the loss or damage in respect of which such proceeds are received, either by replacing the property destroyed or repairing the property damaged, and adequate provision for making good such loss or damage must be made within ninety (90) days after the date of loss. The payment of premiums for all insurance policies required under the provisions hereof shall be considered Maintenance and Operating Expenses of the BCRUA Project. Nothing in this Resolution shall be construed as requiring the BCRUA to expend any funds which are derived from sources other than the operation of the BCRUA Project but nothing herein shall be construed as preventing the BCRUA from doing so.

**Section 17. RECORDS AND ACCOUNTS - ANNUAL AUDIT.** The BCRUA covenants, agrees, and affirms its covenants that so long as any of the Bonds Similarly Secured remain outstanding, it will keep and maintain separate and complete records and accounts pertaining to the operations of the BCRUA Project in which complete and correct entries shall be made of all transactions relating thereto as provided by applicable law. The Registered Owners of any Bonds or any duly authorized agent or agents of such Registered Owners shall have the right to inspect the BCRUA Project and all properties comprising the same. The BCRUA further agrees that following (and in no event later than six (6) months after) the close of each Fiscal Year, it will cause an audit of such books and accounts to be made by an independent firm of Certified Public Accountants. Expenses incurred in making the annual audit of the operations of the BCRUA Project are to be regarded as Maintenance and Operating Expenses of the BCRUA Project.

**Section 18. SALE OR ENCUMBRANCE OF BCRUA PROJECT.** While any Bonds remain Outstanding, the BCRUA will not sell, dispose of or further encumber the BCRUA Project or any substantial part thereof; provided, however, that this provision shall not prevent the BCRUA from (i) pledging the Bond Payments to Additional Bonds or Special Project Bonds as set forth in Sections 14 and 15 of this Resolution or (ii) disposing of any part of the BCRUA Project which is being replaced or is deemed by the BCRUA to be obsolete, worn out, surplus or no longer needed for the proper operation of the BCRUA Project. Any agreement pursuant to which the BCRUA contracts with a person, corporation, municipal corporation or political subdivision to operate the BCRUA Project or to lease and/or operate

all or part of the BCRUA Project shall not be considered as an encumbrance of the BCRUA Project; provided, however, no such agreement shall impair the pledge and lien on the Bond Payments.

**Section 19. COMPETITION.** To the extent it legally may, the BCRUA will not grant any franchise or permit for the acquisition, construction or operation of any competing facilities which might be used as a substitute for the BCRUA Project and will prohibit the operation of any such competing facilities.

**Section 20. SPECIAL COVENANTS.** The BCRUA further covenants and agrees that: (a) *Title.* The BCRUA lawfully owns or will own and is or will be lawfully possessed of the lands or easements upon which its BCRUA Project is and will be located, and has or will purchase good and indefeasible estate in such lands in fee simple, or has or will lawfully obtain any necessary easements to operate the BCRUA Project, and it warrants that it has or will obtain and will defend, the title to all the aforesaid lands and easements for the benefit of the Registered Owners of the Bonds against the claims and demands of all persons whomsoever, that it is lawfully qualified to pledge the Bond Payments to the payment of the Bonds Similarly Secured, in the manner prescribed herein, and that it has lawfully exercised such rights.

(b) *Liens.* The BCRUA will from time to time and before the same become delinquent pay and discharge all taxes, assessments, and governmental charges, if any, which shall be lawfully imposed upon it, or its BCRUA Project, and it will pay all lawful claims for rents, royalties, labor, materials, and supplies which if unpaid might by law become a lien or charge upon its BCRUA Project, provided, however, that no such tax, assessment, or charge, and that no such claims which might be or other lien or charge, shall be required to be paid while the validity of the same shall be contested in good faith by the BCRUA.

(c) *Performance.* The BCRUA will faithfully perform at all times any and all covenants, undertakings, stipulations, and provisions contained in the resolutions authorizing the issuance of Bonds Similarly Secured, and in each and every Bond Similarly Secured and pay from the Bond Payments the principal of and interest on every Bond Similarly Secured on the dates and in the places and manner prescribed in such resolutions and Bonds Similarly Secured; and that it will, at the times and in the manner prescribed, or cause to be deposited from the Bond Payments the amounts required to be deposited into the Debt Service Fund; and the Registered Owner of the Bonds Similarly Secured may require the BCRUA, its officials, agents, and employees to carry out, respect, or enforce the covenants and obligations of this Resolution or any resolution authorizing the issuance of Bonds Similarly Secured including, but without limitation, the use and filing of mandamus proceedings, in any court of competent jurisdiction, against the BCRUA, its officials, agents, and employees.

(d) *Legal Authority.* The BCRUA is duly authorized under the laws of the State to issue the Bonds Similarly Secured; that all action on its part for the authorization and issuance of the Bonds Similarly Secured has been duly and effectively taken, and the Bonds Similarly Secured in the hands of the Registered Owners thereof are and will be valid and enforceable special obligations of the BCRUA in accordance with their terms payable solely from the Bond Payments.

(e) *Budget.* The BCRUA will prepare, adopt, and place into effect an annual budget (the "Annual Budget") for Maintenance and Operation Expenses of the BCRUA Project for each Fiscal Year, including in each Annual Budget such items as are customarily and reasonably contained in a utility system budget under generally accepted accounting procedures.

(f) *Permits.* The BCRUA will comply with all of the terms and conditions of any and all franchises, permits, and authorizations applicable to or necessary with respect to the BCRUA Project and which have been obtained from any governmental agency; and the BCRUA has or will obtain and keep in full force and effect all franchises, permits, authorizations, and other requirements applicable to or necessary with respect to the acquisition, construction, equipment, operation, and maintenance of the BCRUA Project.

**Section 21. LIMITED OBLIGATIONS OF THE BCRUA.** The Bonds Similarly Secured are limited, special obligations of the BCRUA payable from and equally and ratably secured solely by a lien on and pledge of the Bond Payments, and the Registered Owners thereof shall never have the right to demand payment of the principal or interest on the Bonds Similarly Secured from any funds raised or to be raised through taxation by Round Rock or the BCRUA.

**Section 22. DEFAULT AND REMEDIES.** (a) *Events of Default.* Each of the following occurrences or events for the purpose of this Resolution is hereby declared to be an Event of Default:

(i) the failure to make payment of the principal of or interest on any of the Bonds when the same becomes due and payable; or

(ii) default in the performance or observance of any other covenant, agreement or obligation of the BCRUA, the failure to perform which materially, adversely affects the rights of the Registered Owners of the Bonds, including, but not limited to, their prospect or ability to be repaid in accordance with this Resolution, and, if such default is capable of cure, the continuation thereof for a period of sixty (60) days after notice of such default is given by any Registered Owner to the BCRUA; or

(iii) a default by Round Rock under the Contract.

(b) *Remedies for Event of Default.*

(i) Upon the happening of any Event of Default, then and in every case, any Registered Owner or an authorized representative thereof, including, but not limited to, a trustee or trustees therefor, may proceed against the BCRUA, or any official, officer or employee of the BCRUA in their official capacity, for the purpose of protecting and enforcing the rights of the Registered Owners under this Resolution, by mandamus or other suit, action or special proceeding in equity or at law, in any court of competent jurisdiction, for any relief permitted by law, including the specific performance of any covenant or agreement contained herein, or thereby to enjoin any act or thing that may be unlawful or in violation of any right of the Registered Owners hereunder or

any combination of such remedies. The Registered Owners are third party beneficiaries to the Contract with the ability to enforce the provisions of the Contract for such period that a default exists under the Contract.

(ii) It is provided that all such proceedings shall be instituted and maintained for the equal benefit of all Registered Owners of Bonds then Outstanding.

(iii) As long as an Insurer is not in payment default on the related Insurance Policy for the Bonds, the Insurer of a Series shall be deemed to be the sole Registered Owner of such Bonds issued by it for purposes of enforcing remedies in the Event of Default under this Resolution.

(c) *Remedies Not Exclusive.*

(i) No remedy herein conferred or reserved is intended to be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or under the Bonds or now or hereafter existing at law or in equity; provided, however, that notwithstanding any other provision of this Resolution, the right to accelerate the debt evidenced by the Bonds shall not be available as a remedy under this Resolution.

(ii) The exercise of any remedy herein conferred or reserved shall not be deemed a waiver of any other available remedy.

(iii) By accepting the delivery of a Bond authorized under this Resolution, such Registered Owner agrees that the certifications required to effectuate any covenants or representations contained in this Resolution do not and shall never constitute or give rise to a personal or pecuniary liability or charge against the officers, employees or trustees of the BCRUA or the Board.

(iv) None of the members of the Board of Directors, nor any other official or officer, agent, or employee of the BCRUA, shall be charged personally by the Registered Owners with any liability, or be held personally liable to the Registered Owners under any term or provision of this Resolution, or because of any Event of Default or alleged Event of Default under this Resolution.

**Section 23. AMENDMENT OF RESOLUTION.** (a) *Amendments Without Consent.* This Resolution and the rights and obligations of the Board and of the Registered Owners of the Bonds may be modified or amended at any time without notice to or the consent of any Registered Owner of the Bonds or any Bond similarly secured, solely for any one or more of the following purposes:

(i) To add to the covenants and agreements of the Board contained in this Resolution, other covenants and agreements thereafter to be observed, or to surrender any right or power reserved to or conferred upon the Board in this Resolution;

(ii) To cure any ambiguity or inconsistency, or to cure or correct any defective provisions contained in this Resolution, upon receipt by the Board of an opinion of counsel, that the same is needed for such purpose, and will more clearly express the intent of this Resolution;

(iii) To supplement the security for the Bonds, replace or provide additional Credit Agreement, or change the form of the Bonds or make such other changes in the provisions hereof as the Board may deem necessary or desirable and which shall not, in the judgment of the Board, materially adversely affect the interests of the owners of the Outstanding Bonds;

(iv) To make any changes or amendments requested by any bond rating agency then rating or requested to rate the Bonds, as a condition to the issuance or maintenance of a rating, which changes or amendments do not, in the judgment of the Board, materially adversely affect the interests of the owners of the Outstanding Bonds;

(v) To make such changes, modifications or amendments as are permitted by Section 30(c) of this Resolution;

(vi) To make such other changes in the provisions hereof as the Board may deem necessary or desirable and which shall not, in the judgment of the Board, materially adversely affect the interests of the owners of the Outstanding Bonds; or

(vii) To assign the Contract to a trustee.

(b) *Amendments With Consent.* Subject to the other provisions of this Resolution, the Registered Owners of Outstanding Bonds aggregating 51% in Outstanding Principal Amount shall have the right from time to time to approve any amendment, other than amendments described in Subsection (a) of this Section, to this Resolution which may be deemed necessary or desirable by the Board; provided, however, that nothing herein contained shall permit or be construed to permit, without the approval of the owners of all of the Outstanding Bonds, the amendment of the terms and conditions in this Resolution or in the Bonds so as to:

- (1) Make any change in the maturity of the Outstanding Bonds;
- (2) Reduce the rate of interest borne by the Outstanding Bonds;
- (3) Reduce the amount of the principal payable on the Outstanding Bonds;
- (4) Modify the terms of payment of principal of or interest on the Outstanding Bonds, or impose any conditions with respect to such payment;
- (5) Affect the rights of the owners of less than all Bonds then Outstanding; or
- (6) Change the minimum percentage of the Outstanding Principal Amount of Bonds necessary for consent to such amendment.

(c) *Notice.* (i) If at any time the Board shall desire to amend this Resolution other than pursuant to (a) above, the Board shall cause notice of the proposed amendment to be published in a financial newspaper or journal of general circulation in The City of New York, New York or the State including in the Texas Bond Reporter once during each calendar week for at least two (2) successive calendar weeks. Such notice shall briefly set forth the nature of the proposed amendment and shall state that a copy thereof is on file at the principal office of the Paying Agent/Registrar for inspection by all owners of Bonds. Such publication is not required, however, if the Board gives or causes to be given such notice in writing to each Registered Owner of Bonds.

(ii) Copies of any modification or amendment to this Resolution shall be sent to Standard & Poor's Ratings Services and Moody's Investors Service, Inc. at least ten (10) days prior to the effective date thereof.

(d) *Receipt of Consents.* Whenever at any time not less than thirty (30) days, and within one (1) year, from the date of the first publication of said notice or other service of written notice of the proposed amendment the Board shall receive an instrument or instruments executed by all of the owners or the owners of at least 51% in Outstanding Principal Amount of Bonds, as appropriate, which instrument or instruments shall refer to the proposed amendment described in said notice and which specifically consent to and approve such amendment in substantially the form of the copy thereof on file as aforesaid, the Board may adopt the amendatory resolution in substantially the same form.

(e) *Effect of Amendments.* Upon the adoption by the Board of any resolution to amend this Resolution pursuant to the provisions of this Section, this Resolution shall be deemed to be amended in accordance with the amendatory resolution, and the respective rights, duties, and obligations of the Board and all the owners of then Outstanding Bonds and all future Bonds shall thereafter be determined, exercised, and enforced under the resolution and this Resolution, as amended.

(f) *Consent Irrevocable.* Any consent given by any owner of Bonds pursuant to the provisions of this Section shall be irrevocable for a period of six (6) months from the date of the first publication or other service of the notice provided for in this Section, and shall be conclusive and binding upon all future owners of the same Bonds during such period. Such consent may be revoked at any time after six (6) months from the date of the first publication of such notice by the owner who gave such consent, or by a successor in title, by filing notice thereof with the Registrar and the Board, but such revocation shall not be effective if the owners of 51% in Outstanding Principal Amount of Bonds, prior to the attempted revocation, consented to and approved the amendment.

(g) *Ownership.* For the purpose of this Section, the ownership and other matters relating to all Bonds registered as to ownership shall be determined from the Registration Books kept by the Paying Agent/Registrar therefor. The Paying Agent/Registrar may conclusively assume that such ownership continues until written notice to the contrary is served upon the Paying Agent/Registrar.

(h) *Insurer Consent.* Notwithstanding the foregoing provisions of this Section, so long as any Insurer is not in payment default under its policy, no amendment or supplement to this Resolution may become effective except upon obtaining the prior written consent of any such Insurer.

**Section 24. COVENANTS REGARDING TAX-EXEMPTION OF INTEREST ON THE BONDS.** (a) *Covenants.* The Board covenants to take any action necessary to assure, or refrain from any action which would adversely affect, the treatment of the Bonds as obligations described in section 103 of the Internal Revenue Code of 1986, as amended (the "IRS Code"), the interest on which is not includable in the "gross income" of the holder for purposes of federal income taxation. In furtherance thereof, the Board covenants as follows:

(1) to take any action to assure that no more than 10 percent of the proceeds of the Bonds or the projects financed or refinanced therewith (less amounts deposited to a reserve fund, if any) are used for any "private business use," as defined in section 141(b)(6) of the IRS Code or, if more than 10 percent of the proceeds of the Bonds or the projects financed or refinanced therewith are so used, such amounts, whether or not received by the Board, with respect to such private business use, do not, under the terms of this Resolution or any underlying arrangement, directly or indirectly, secure or provide for the payment of more than 10 percent of the debt service on the Bonds, in contravention of section 141(b)(2) of the IRS Code;

(2) to take any action to assure that in the event that the "private business use" described in subsection (1) hereof exceeds 5 percent of the proceeds of the Bonds or the projects financed or refinanced therewith (less amounts deposited into a reserve fund, if any) then the amount in excess of 5 percent is used for a "private business use" which is "related" and not "disproportionate," within the meaning of section 141(b)(3) of the IRS Code, to the governmental use;

(3) to take any action to assure that no amount which is greater than the lesser of \$5,000,000, or 5 percent of the proceeds of the Bonds (less amounts deposited into a reserve fund, if any) is directly or indirectly used to finance loans to persons, other than state or local governmental units, in contravention of section 141(c) of the IRS Code;

(4) to refrain from taking any action which would otherwise result in the Bonds being treated as "private activity bonds" within the meaning of section 141(b) of the IRS Code;

(5) to refrain from taking any action that would result in the Bonds being "federally guaranteed" within the meaning of section 149(b) of the IRS Code;

(6) to refrain from using any portion of the proceeds of the Bonds, directly or indirectly, to acquire or to replace funds which were used, directly or indirectly, to acquire investment property (as defined in section 148(b)(2) of the IRS Code) which produces a materially higher yield over the term of the Bonds, other than investment property acquired with:

(A) proceeds of the Bonds invested for a reasonable temporary period of three (3) years or less or, in the case of a refunding bond, for a period of thirty (30) days or less until such proceeds are needed for the purpose for which the Bonds are issued,

(B) amounts invested in a bona fide debt service fund, within the meaning of section 1.148-1(b) of the Treasury Regulations, and

(C) amounts deposited in any reasonably required reserve or replacement fund to the extent such amounts do not exceed ten (10) percent of the proceeds of the Bonds;

(7) to otherwise restrict the use of the proceeds of the Bonds or amounts treated as proceeds of the Bonds, as may be necessary, so that the Tax-Exempt Bonds do not otherwise contravene the requirements of section 148 of the IRS Code (relating to arbitrage) and, to the extent applicable, section 149(d) of the IRS Code (relating to advance refundings); and

(8) to pay to the United States of America at least once during each five-year period (beginning on the date of delivery of the Bonds) an amount that is at least equal to 90 percent of the "Excess Earnings," within the meaning of section 148(f) of the IRS Code and to pay to the United States of America, not later than sixty (60) days after the Bonds have been paid in full, 100 percent of the amount then required to be paid as a result of Excess Earnings under section 148(f) of the IRS Code.

(b) *Rebate Fund*. In order to facilitate compliance with the above covenant (8), a "Rebate Fund" is hereby established by the Board for the sole benefit of the United States of America, and such fund shall not be subject to the claim of any other person, including without limitation the bondholders. The Rebate Fund is established for the additional purpose of compliance with section 148 of the IRS Code.

(c) *Proceeds*. The Board understands that the term "proceeds" includes "disposition proceeds" as defined in the Treasury Regulations and, in the case of refunding bonds, transferred proceeds (if any) and proceeds of the refunded bonds expended prior to the date of issuance of the Bonds. It is the understanding of the Board that the covenants contained herein are intended to assure compliance with the IRS Code and any regulations or rulings promulgated by the U.S. Department of the Treasury pursuant thereto. In the event that regulations or rulings are hereafter promulgated which modify or expand provisions of the IRS Code, as applicable to the Bonds, the BCRUA will not be required to comply with any covenant contained herein to the extent that such failure to comply, in the opinion of nationally recognized bond counsel, will not adversely affect the exemption from federal income taxation of interest on the Bonds under section 103 of the IRS Code. In the event that regulations or rulings are hereafter promulgated which impose additional requirements which are applicable to the Bonds, the BCRUA agrees to comply with the additional requirements to the extent necessary, in the opinion of nationally recognized bond counsel, to preserve the exemption from federal income taxation of interest on the Bonds under section 103 of the IRS Code. In furtherance of such intention, the BCRUA hereby authorizes and directs the BCRUA Representative to execute any documents, certificates or reports required by the IRS Code and to make such elections, on behalf of the BCRUA, which may be permitted by the IRS Code as are consistent with the purpose for the issuance of the Bonds.



(d) *Allocation Of, and Limitation On, Expenditures for the Project.* The BCRUA covenants to account for the expenditure of sale proceeds and investment earnings to be used for the purposes described in Section 2 of this Resolution (the "Project") on its books and records in accordance with the requirements of the IRS Code. The Board recognizes that in order for the proceeds to be considered used for the reimbursement of costs, the proceeds must be allocated to expenditures within 18 months of the later of the date that (1) the expenditure is made, or (2) the Project is completed; but in no event later than three years after the date on which the original expenditure is paid. The foregoing notwithstanding, the Board recognizes that in order for proceeds to be expended under the IRS Code, the sale proceeds or investment earnings must be expended no more than sixty (60) days after the earlier of (1) the fifth (5<sup>th</sup>) anniversary of the delivery of the Bonds, or (2) the date the Bonds are retired. The Board agrees to obtain the advice of nationally-recognized bond counsel if such expenditure fails to comply with the foregoing to assure that such expenditure will not adversely affect the tax-exempt status of the Bonds. For purposes of this subsection, the Board shall not be obligated to comply with this covenant if it obtains an opinion of nationally-recognized bond counsel to the effect that such failure to comply will not adversely affect the excludability for federal income tax purposes from gross income of the interest.

(e) *Disposition of Project.* The BCRUA covenants that the property constituting the BCRUA Project will not be sold or otherwise disposed in a transaction resulting in the receipt by the Board of cash or other compensation, unless the Board obtains an opinion of nationally-recognized bond counsel that such sale or other disposition will not adversely affect the tax-exempt status of the Bonds. For purposes of this subsection, the portion of the property comprising personal property and disposed of in the ordinary course shall not be treated as a transaction resulting in the receipt of cash or other compensation. For purposes of this subsection, the Board shall not be obligated to comply with this covenant if it obtains an opinion of nationally-recognized bond counsel to the effect that such failure to comply will not adversely affect the excludability for federal income tax purposes from gross income of the interest.

**Section 25. RESOLUTION TO CONSTITUTE A CONTRACT; EQUAL SECURITY.** In consideration of the acceptance of the Bonds, the issuance of which is authorized hereunder, by those who shall hold the same from time to time, this Resolution shall be deemed to be and shall constitute a contract between the Board and the Registered Owners from time to time of the Bonds and the pledge made in this Resolution by the Board and the covenants and agreements set forth in this Resolution to be performed by the Board shall be for the equal and proportionate benefit, security, and protection of all Registered Owners, without preference, priority, or distinction as to security or otherwise of any of the Bonds authorized hereunder over any of the others by reason of time of issuance, sale, or maturity thereof or otherwise for any cause whatsoever, except as expressly provided in or permitted by this Resolution.

**Section 26. SEVERABILITY OF INVALID PROVISIONS.** If any one or more of the covenants, agreements, or provisions herein contained shall be held contrary to any express provisions of law or contrary to the policy of express law, though not expressly prohibited, or against public policy, or shall for any reason whatsoever be held invalid, then such covenants, agreements, or provisions shall be null and void and shall be deemed separable from the remaining covenants, agreements, or provisions and shall in no way affect the validity of any of the other provisions hereof or of the Bonds issued hereunder.

**Section 27. PAYMENT AND PERFORMANCE ON BUSINESS DAYS.** Except as provided to the contrary in the FORM OF BOND, whenever under the terms of this Resolution or the Bonds, the performance date of any provision hereof or thereof, including the payment of principal of or interest on the Bonds, shall occur on a day other than a Business Day, then the performance thereof, including the payment of principal of and interest on the Bonds, need not be made on such day but may be performed or paid, as the case may be, on the next succeeding Business Day with the same force and effect as if made on the date of performance or payment.

**Section 28. LIMITATION OF BENEFITS WITH RESPECT TO THE RESOLUTION.** With the exception of the rights or benefits herein expressly conferred, nothing expressed or contained herein or implied from the provisions of this Resolution or the Bonds is intended or should be construed to confer upon or give to any person other than the Board, the Registered Owners, and the Paying Agent/Registrar, any legal or equitable right, remedy, or claim under or by reason of or in respect to this Resolution or any covenant, condition, stipulation, promise, agreement, or provision herein contained. This Resolution and all of the covenants, conditions, stipulations, promises, agreements, and provisions hereof are intended to be and shall be for and inure to the sole and exclusive benefit of the Board, the Registered Owners, and the Paying Agent/Registrar as herein and therein provided.

**Section 29. CUSTODY, APPROVAL, BOND COUNSEL'S OPINION, CUSIP NUMBERS, PREAMBLE AND INSURANCE.** The BCRUA Representative is hereby authorized to have control of the Bonds issued hereunder and all necessary records and proceedings pertaining to the Bonds pending their delivery and approval by the Attorney General of the State. The BCRUA Representative is hereby authorized, to the extent deemed necessary or advisable thereby, in the discretion thereof, to request that the Attorney General approve the Bonds as permitted by Chapter 1202, Texas Government Code, in which case the BCRUA Representative also is authorized to request the Comptroller of Public Accounts register the Bonds, and to cause an appropriate legend reflecting such approval and registration to appear on the Bonds and the substitute Bonds. The approving legal opinion of the Board's Bond Counsel and the assigned CUSIP numbers may, at the option of the Board, be printed on the Bonds and on any Bonds issued and delivered in exchange or replacement of any Bond, but neither shall have any legal effect, and shall be solely for the convenience and information of the Registered Owners of the Bonds. The preamble to this Resolution is hereby adopted and made a part of this Resolution for all purposes. If insurance is obtained on any of the Bonds, the Bonds shall bear, as appropriate and applicable, a legend concerning insurance as provided by the municipal bond insurance company issuing any such insurance.

**Section 30. COMPLIANCE WITH RULE 15c2-12.** (a) *Annual Reports.* (i) The Board shall provide annually to each NRMSIR and any SID, within six months after the end of each Fiscal Year ending in or after 2009, financial information and operating data with respect to the Board including financial statements of the BCRUA, and general financial and operating information of the general type included in the application to the Texas Water Development Board for financial assistance. Any financial statements so to be provided shall be prepared in accordance with the accounting principles described in Exhibit "C" hereto, or such other accounting principles as the Board may be required to employ from time to time pursuant to state law or regulation. If the Board commissions an audit of such statements and the audit is completed within the period during which they must be provided, a copy of such audit also shall be provided in accordance with the Rule. If any such audit of such financial statements, if one is commissioned

by the Board, is not complete within such period, then the Board shall provide unaudited financial statements within the required time period and audited financial statements for the applicable fiscal year to each NRMSIR and any SID, when and if the audit report on such statements become available.

(ii) If the Board changes its Fiscal Year, it will notify each NRMSIR and any SID of the change (and of the date of the new Fiscal Year end) prior to the next date by which the Board otherwise would be required to provide financial information and operating data pursuant to this Section. The financial information and operating data to be provided pursuant to this Section may be set forth in full in one or more documents or may be included by specific reference to any document (including an official statement or other offering document, if it is available from the MSRB) that theretofore has been provided to each NRMSIR and any SID or filed with the SEC.

(b) **Material Event Notices.** The Board shall notify any SID and each NRMSIR, in a timely manner, of any of the following events with respect to the Bonds, if such event is material within the meaning of the federal securities laws:

- (i) Principal and interest payment delinquencies;
- (ii) Non-payment related defaults;
- (iii) Unscheduled draws on debt service reserves reflecting financial difficulties;
- (iv) Unscheduled draws on credit enhancements reflecting financial difficulties;
- (v) Substitution of credit or liquidity providers, or their failure to perform;
- (vi) Adverse tax opinions or events affecting the tax-exempt status of the Bonds;
- (vii) Modifications to rights of holders of the Bonds;
- (viii) Bond calls;
- (ix) Defeasances;
- (x) Release, substitution, or sale of property securing repayment of the Bonds; and
- (xi) Rating changes.

The Board shall notify any SID and each NRMSIR, in a timely manner, of any failure by the Board to provide financial information or operating data in accordance with subsection (a) of this Section by the time required by such subsection.

(c) **Limitations, Disclaimers, and Amendments.** (i) The Board shall be obligated to observe and perform the covenants specified in this Section for so long as, but only for so long as, the Board remains

an "obligated person" with respect to the Bonds within the meaning of the Rule, except that the Board in any event will give notice of any deposit made in accordance with this Resolution or applicable law that causes the Bonds no longer to be Outstanding.

(ii) The provisions of this Section are for the sole benefit of the Registered Owners and beneficial owners of the Bonds, and nothing in this Section, express or implied, shall give any benefit or any legal or equitable right, remedy, or claim hereunder to any other person. The Board undertakes to provide only the financial information, operating data, financial statements, and notices which it has expressly agreed to provide pursuant to this Section and does not hereby undertake to provide any other information that may be relevant or material to a complete presentation of the Board's financial results, condition, or prospects or hereby undertake to update any information provided in accordance with this Section or otherwise, except as expressly provided herein. The Board does not make any representation or warranty concerning such information or its usefulness to a decision to invest in or sell Bonds at any future date.

(iii) Any filing required by this Section may be made solely with a central post office approved for such purposes by the SEC, such as the Texas Municipal Advisory Council (the "MAC") as provided at <http://www.disclosureusa.org>, for submission to the NRMSIRs and SID (without also separately submitting such filings to the NRMSIRs and SID by some other means) so long as such filing is acceptable to the SEC.

(iv) UNDER NO CIRCUMSTANCES SHALL THE BOARD BE LIABLE TO THE REGISTERED OWNER OR BENEFICIAL OWNER OF ANY BOND OR ANY OTHER PERSON, IN CONTRACT OR TORT, FOR DAMAGES RESULTING IN WHOLE OR IN PART FROM ANY BREACH BY THE BOARD, WHETHER NEGLIGENT OR WITHOUT FAULT ON ITS PART, OF ANY COVENANT SPECIFIED IN THIS SECTION, BUT EVERY RIGHT AND REMEDY OF ANY SUCH PERSON, IN CONTRACT OR TORT, FOR OR ON ACCOUNT OF ANY SUCH BREACH SHALL BE LIMITED TO AN ACTION FOR MANDAMUS OR SPECIFIC PERFORMANCE. NOTHING IN THIS RESOLUTION SHALL BE CONSTRUED AS A WAIVER OF THE CONSTITUTIONAL, STATUTORY OR COMMON LAW IMMUNITIES OR DEFENSES OF THE BOARD, WHICH IMMUNITIES AND DEFENSES ARE HEREBY AND HERETO AFFIRMED.

(v) No default by the Board in observing or performing its obligations under this Section shall comprise a breach of or default under this Resolution for purposes of any other provision of this Resolution. Nothing in this Section is intended or shall act to disclaim, waive, or otherwise limit the duties of the Board under federal and state securities laws.

(vi) The provisions of this Section may be amended by the Board from time to time to adapt to changed circumstances that arise from a change in legal requirements, a change in law, or a change in the identity, nature, status, or type of operations of the Board, but only if (1) the provisions of this Section, as so amended, would have permitted an underwriter to purchase or sell Bonds in the primary offering of the Bonds in compliance with the Rule, taking into account any amendments or interpretations of the Rule since such offering as well as such changed circumstances and (2) either (a) the Registered Owners of a majority in aggregate principal amount (or any greater amount required by any other provision of this Resolution that authorizes such an amendment) of the Bonds then outstanding consent to such amendment

or (b) a person that is unaffiliated with the Board (such as nationally recognized bond counsel) determined that such amendment will not materially impair the interest of the registered owners and beneficial owners of the Bonds. If the Board so amends the provisions of this Section, it shall include with any amended financial information or operating data next provided in accordance with subsection (a) of this Section an explanation, in narrative form, of the reason for the amendment and of the impact of any change in the type of financial information or operating data so provided. The Board may also amend or repeal the provisions of this continuing disclosure agreement if the SEC amends or repeals the applicable provision of the Rule or a court of final jurisdiction enters judgment that such provisions of the Rule are invalid, but only if and to the extent that the provisions of this sentence would not prevent an underwriter from lawfully purchasing or selling Bonds in the primary offering of the Bonds.

**Section 31. APPLICATION OF BOND PROCEEDS.** Proceeds from the sale of the Bonds shall, promptly upon receipt thereof, be applied by the BCRUA Representative as follows an amount sufficient to accomplish the purposes of Section 2 shall be deposited in the Escrow Fund or Construction Fund as authorized by the Texas Water Development Board.

Any sale proceeds of the Bonds remaining after making all deposits and payments provided for above shall be applied to the payment of interest on the Bonds.

**Section 32. DEFEASANCE PROVISIONS.** (a) Any Bond and the interest thereon shall be deemed to be paid, retired and no longer outstanding (a "Defeased Bond") within the meaning of this Resolution, except to the extent provided in subsections (c) and (e) of this Section, when payment of the principal of such Bond, plus interest thereon to the due date or dates (whether such due date or dates be by reason of maturity, upon redemption, or otherwise) either (i) shall have been made or caused to be made in accordance with the terms thereof (including the giving of any required notice of redemption or the establishment of irrevocable provisions for the giving of such notice) or (ii) shall have been provided for on or before such due date by irrevocably depositing with or making available to the Paying Agent/Registrar or an eligible trust company or commercial bank for such payment (1) lawful money of the United States of America sufficient to make such payment, (2) Defeasance Securities, certified by an independent public accounting firm of national reputation to mature as to principal and interest in such amounts and at such times as will ensure the availability, without reinvestment, of sufficient money to provide for such payment and when proper arrangements have been made by the BCRUA with the Paying Agent/Registrar or an eligible trust company or commercial bank for the payment of its services until all Defeased Bonds shall have become due and payable or (3) any combination of (1) and (2). At such time as a Bond shall be deemed to be a Defeased Bond hereunder, as aforesaid, such Bond and the interest thereon shall no longer be secured by, payable from, or entitled to the benefits of, the Bond Payments as provided in this Resolution, and such principal and interest shall be payable solely from such money or Defeasance Securities.

(b) The deposit under clause (ii) of subsection (a) shall be deemed a payment of a Bond as aforesaid when proper notice of redemption of such Bonds shall have been given or upon the establishment of irrevocable provisions for the giving of such notice, in accordance with this Resolution. Any money so deposited with the Paying Agent/Registrar or an eligible trust company or commercial bank as provided in this Section may at the discretion of the BCRUA also be invested in Defeasance Securities, maturing in

## Memorandum

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### Orange County Regional Wastewater Study: Creating a Regional Entity

**TO:** Rick Bourque, P.E. (Schaumburg & Polk)  
Bill Hughes, P.E. (Sabine River Authority)

**FROM:** Susan K. Roth, P.E.

**DATE:** November 19, 2008

For the Orange County Regional Wastewater Study, the participants are interested in the possibility of creating a regional entity similar to the Brushy Creek Regional Utility Authority (BCRUA) in Williamson County, Texas. The BCRUA is a partnership of the Cities of Round Rock, Cedar Park and Leander to develop a new regional water system. This 105.8 million gallon per day regional water system will cost an estimated \$350 million dollars and will be completed in three phases, with the first phase operational by 2012. The BCRUA will be responsible for owning and operating this system.

Research activities were conducted, including interviews with Chris Lippe (BCRUA General Manager), Steve Sheets (BCRUA attorney), Texas Water Development Board (TWDB) and each of the three partner cities, to respond to the questions listed below from Schaumburg & Polk, Inc. In addition, supporting documentation is provided in the appendices of this memorandum.

#### **(1) Verify the authority under which the BCRUA was created.**

One year prior to the formation of the BCRUA, each of the three cities created a partnership and drafted interlocal agreements between each other to address major issues of constructing and owning a regional water treatment system. This action resulted from the findings in the preliminary engineering study conducted for the Cedar Park-Round Rock-LCRA/Leander Regional Water Supply Project by HDR Engineering.

Since each of the cities had an immediate need for additional water supplies and treatment, they were motivated to work together after determining that developing a joint regional water system was the most cost-effective solution. In order to apply for TWDB funding, a new single entity needed to be created to make the request.

After researching the various options for a regional system in early 2007, the cities agreed to create a local government corporation. Based on the Texas Statutes, the authority to create a regional water/wastewater entity is outlined in the following:

- Transportation Code: Title 6, Chapter 431 – *Texas Transportation Corporation Act*
- Local Government Code: Title 13, Chapter 422 – *Public Utility Agencies for Provision of Water or Sewer Service*
- Local Government Code: Title 13, Chapter 572 – *Public Utility Agencies for Provision of Water or Sewer Service*

The creation processes outlined in Chapters 431 of the Transportation Code and 422 of the Local Government Code are quite similar in both statutes. However, the cities determined the best method would be to create a regional entity pursuant to Subchapter D of Chapter 431. According to this statute, "a local government corporation may be created to aid and act on behalf of one or more local governments to accomplish any governmental purpose of those local governments". This statute applies only to cities, counties and navigation districts for creating a regional entity.

Chapter 431 was primarily referenced for the BCRUA creation process instead of the other statutes due to its familiarity with the attorney general and TWDB for bond applications. Chapter 422 was relatively new at the time of the creation of the BCRUA. Chapter 572 is not active at this time; it will become effective on April 1, 2009 and replace Chapter 422. A copy of Chapter 431 of the Transportation Code is attached in Appendix A for reference.

Articles of Incorporation were drafted by an outside attorney and then submitted to the Secretary of State to receive a Certificate of Formation. BCRUA received their certificate approximately one year before approving the necessary exhibits referenced in the Articles of Incorporation (i.e. bylaws, master contract & financing agreement). Refer to Appendix B for copies of the Articles of Incorporation and Certificate of Formation for BCRUA.

In addition, each of the three City Councils adopted resolutions that approved the Articles of Incorporation prior to its submittal to the State. The resolution also confirmed each city's interest in joining the BCRUA. Adopting an ordinance by each city was not required to create the BCRUA, nor was it necessary to hold an election for approval by public vote. A copy of the City of Round Rock's resolution is provided in Appendix C.

Failure of one city to participate does not void the creation of the regional entity. However, the Board of Directors, with the direction of each of the three City Councils, can dissolve the corporation at any time according to the Articles of Incorporation if the purpose for creating the corporation has been substantially fulfilled. This process involves all three city councils approving a resolution to dissolve the corporation. In addition, all obligations and debt incurred by the regional entity must be fully paid.

## **(2) Describe the revenue source and authorization of the BCRUA.**

According to Chapter 431, regional entities can receive revenue through fees, general fund appropriations or gifts (bequest or grant-in-aid). Revenue sources and authorization for the BCRUA are outlined in the Master Contract and Financing Agreement of the September 2008 BCRUA Board Resolution provided in Appendix D. Since the official creation of the regional entity, BCRUA has not collected any revenue from the cities. The BCRUA has been operating through interlocal agreements until the recent adoption of this Board resolution (reference Appendix D).

The primary source of revenue for the BCRUA will come from monthly payments from each of the cities based on their financial obligations outlined in the Master Contract. In this contract, terms and conditions regarding financing, constructing, acquiring, owning, maintaining and operating the regional water system are outlined. The cities are obligated to

make payments to the BCRUA based on their annual budget, as noted in the Master Contract.

As collateral for payment to the BCRUA, each city pledges their gross revenues from their water system. Ad valorem tax revenues of cities can not be pledged as payment to the BCRUA. The BCRUA has the right at all reasonable times to inspect each city's water system, including records, accounts and data. The cities must furnish the BCRUA with financial statements, reports and other information relating to their water systems.

Following the creation of the BCRUA in July 2007, the entity submitted a funding application to the TWDB for \$309,755,000 to cover engineering design and construction costs of Phase I and II of the regional water system; funding was approved in January 2008. TWDB will issue bonds for BCRUA; three separate series of these bonds (D-Fund II) will be issued, one for each city requesting financing for their share of the total project estimate, including payment of all BCRUA project costs incurred prior to the issuance of bonds and funding a debt service reserve fund and interest on the bonds (during construction and for up to one year after the completion date).

The primary driver for creating the BCRUA was to provide an efficient vehicle for receiving low-interest loans through the TWDB. Each city is responsible for paying debt service on their series of TWDB bonds; they are not required to make debt service payments on any series of bonds issued for another city. For Phase I of the regional water supply project, the following allocation of bonds from the approved amount of TWDB funding (D-Fund II) will be available in January 2009:

- City of Round Rock (\$65,870,000)
- City of Cedar Park (\$24,970,000)
- City of Leander (\$91,180,000)

### **(3) Verify if BCRUA has equal Board representation from each entity.**

The BCRUA Board of Directors is comprised of three members. Each partner city has one Board member (director) appointed by their respective city councils. The appointed member must be a resident of the city that appointed them. Each member has equal representation from each city, although their financial interests are not equal. Reference the BCRUA Bylaws in Appendix E for additional information about Board member roles and responsibilities; this document is referenced in the BCRUA Board Resolution provided in Appendix D.

The Board members include Mayor John Cowman from Leander (Secretary/Treasurer), Council Member Scott Rhode from Round Rock (President) and Council Member Mitch Fuller from Cedar Park (Vice-President). The term of office for each member is two years, commencing with the date of the Board meeting when they were elected.

In hindsight, the General Manager of the BCRUA pointed out the benefit of having five or more members on a Board, with each entity's representation based on the size of the entity or their percentage of reserved capacity in the entire regional system. Over the past year, no two BCRUA Board members could discuss an issue offline since more than one member represents a quorum.



The Board has also found it difficult when taking action on agenda items since all three members must vote unanimously. For example, one of the Board members, having the least amount of reserved capacity in the system, recently voted against an issue regarding the awarding of construction contracts. As a result, completion of the first phase of the project will be delayed by a year.

#### **4) Describe the specific limits or how limits on bond indebtedness are decided.**

The creation document for the BCRUA does not describe any limitations on bond indebtedness. Following the creation of the BCRUA in July 2007, the entity submitted an application to the TWDB for \$309,755,000 to cover engineering design and construction costs of Phase I and II of the regional water system; funding was approved in January 2008. TWDB will issue bonds for BCRUA (separately for each city) in December 2008, and funds will be available for use in January 2009. The bonds will not exceed a maturity period of forty years from the date issued.

The Master Contract states that each bond resolution of the BCRUA specifies the maximum principal amount of the bonds for each city. The bond resolution for each city also includes creating a revenue fund, a debt service fund, a reserve fund, a construction fund and any other funds, as well as oversight of these funds, for the BCRUA. A copy of a bond resolution for the City of Round Rock is attached in Appendix F.

#### **(5) Describe how fees, distribution of debt service and operation costs are allocated to each entity of the BCRUA.**

The BCRUA will collect payments each month from the cities as required by the Master Contract for their bonds and proportionate share of overhead expenses and operations and maintenance expenses. Project fees distributed to each of the three cities are based on two scenarios: (1) expenses related to the ultimate treatment system capacity (105.8 MGD); and, (2) expenses related to a specific phase of the project.

As noted in the Interlocal Agreement for Ancillary Consulting Services (reference Appendix G), the cost allocation for each city in the first fee scenario is based on their percentage of total reserved capacity in the entire regional water system. Examples of fees that pertain to the entire system include costs for land acquisition, pipelines, legal fees, accounting, administrative, etc.

- City of Round Rock - 40.8 MGD (38.56%)
- City of Cedar Park - 15.0 MGD (14.18%)
- City of Leander - 50.0 MGD (47.26%)

In the second fee scenario, each city's prorata share for treatment and other costs associated with a specific phase, such as Phase I (30 MGD), is based on their reserved capacity:

- City of Round Rock - 8.0 MGD (27%)
- City of Cedar Park - 8.0 MGD (27%)
- City of Leander - 14.0 MGD (46%)

All costs for consulting services are shared by the cities according to the cost allocation percentages listed above, depending if the expenses pertain to Phase I or the entire project. Reference the BCRUA Project Capacity and Cost Allocation spreadsheet in Appendix H for a breakdown of project costs for each city. Phase IA costs are also detailed in Appendix H. For each consulting services contract, one city has served as the contracting party to oversee and administer the contract. All consulting services contracts must be approved unanimously by the three cities in a jointly executed Memorandum of Agreement. Once the BCRUA has funding in place, all contracts will be transferred from the partner cities to the BCRUA. Then, the BCRUA staff may directly administer consultant contracts, but the cost allocation would remain the same.

Each of the cities can transfer any portion of their reserved capacity to another city; however, they must provide a written notice to the BCRUA and other regional partners. The Master Contract provides the necessary flexibility to serve future customers. Also, the contract allows for the three cities in the BCRUA to not be obligated to participate in every expansion of the regional water system.

For operation and maintenance costs, the fees are allocated based on three categories:

- Fixed costs (i.e. staffing related costs)
- Variable costs (i.e. power and chemicals)
- Initial start-up costs (i.e. insurance, telephones, TCEQ fees, capital outlay)

The three cities are currently discussing precisely how to share the operating costs, especially in the first few years. It may be that all three cities will pay for initial start-up costs in Phase I based on their percentage of reserved capacity. Fixed costs will apply only to Cedar Park and Leander initially since they will have pipelines constructed to the regional water plant immediately; however, fixed costs for Round Rock will be delayed two to three years until they construct a pipeline to the plant. Finally, variable costs will be based on actual volume for each of the three cities.

The cities also have individual raw water contracts (reservation fee plus take-or-pay contracts) with the Lower Colorado River Authority (LCRA) to purchase water from Lake Travis to meet their long-term projected demands. The BCRUA is responsible for the operation of the regional project and treatment of raw water, but does not claim title to any of the cities' raw water contracts.

#### **(6) Describe problems associated with not controlling existing treatment facilities.**

The BCRUA does not own or operate any of the three cities' existing treatment facilities, nor is it the plan. The sole purpose of the creation of the BCRUA was to provide an efficient vehicle for the financing, construction, acquisition, ownership, maintenance, and operation of the new regional water system. The BCRUA does not see an issue with not controlling the three cities' existing treatment facilities.

From the new plant, BCRUA will essentially provide wholesale water service (no retail service). The only three "customers" are the three cities who funded and completely own the system. Since the three cities own the system, BCRUA will 'technically' not be providing

wholesale service; however, the cities have chosen for the BCRUA to operate in this manner. The BCRUA will treat raw water at the regional plant, deliver amounts of potable water without exceeding the reserved capacity of each city and bill according to a master meter at each city's delivery point along the transmission main.

### **(7) Provide the estimated cost to the entities in creating the BCRUA.**

The length of time to officially create the BCRUA was approximately seven months, starting in January 2007 and reaching completion in July 2007. However, the framework of the partnership between the cities had been established in the previous year through interlocal agreements. In addition to the Interlocal Agreement for Ancillary Consulting Services (Appendix G), copies of interlocal agreements for final design, project management and legal services are provided in Appendix I for reference.

Each of the cities contributed a significant number of hours of internal staff time (including city attorneys) towards the development of these interlocal agreements, which involved meetings to negotiate the terms of the contracts. Since the Sabine River Authority will be acting as an outside third party for creating the entity, they can provide direction for the other participants, as well as serve as a mediator. This will be an important factor for controlling costs spent to create a regional entity.

Outside legal counsel was also used to prepare the documents required by Subchapter D of Chapter 431 of the Local Government Code for the Secretary of State. While actual costs may vary based on numerous factors outside of the control of the attorney, an estimate of the legal costs to prepare each of the creation documents is summarized below:

- Articles of Incorporation (\$2,000)
- Interlocal Agreement for Ancillary Consulting Services (\$500)
- By-laws (\$500)
- Master Contract (\$20,000-\$30,000)
- Financial Agreement (\$2,500)

Once the Articles of Incorporation are complete, the Secretary of State charges a \$25 fee for processing the application. The costs incurred for outside legal counsel and accounting services were charged to each city based on their percentage of capacity in the entire regional system.

### **(8) Describe start-up procedure of BCRUA including estimated cost to the entities.**

In April 2007, the Articles of Incorporation were drafted and each of the three City Councils adopted a resolution to approve them (reference Appendix C for a copy of Round Rock's resolution). This resolution confirmed each city's interest in joining the BCRUA. Following council approval, the Articles of Incorporation were submitted to the Secretary of State. A certificate of formation for the BCRUA was received two days later.

During the early stages of creating the BCRUA, the cities decided to first hire a general manager. In January 2007, they selected Chris Lippe, former Director of City of Austin Water Utility, to serve in this role. Chris had retired from the City in the fall of 2006, and the timing

was right to immediately bring him on board to run the BCRUA. Since the regional entity had not been created at that time, the City of Round Rock took the lead of hiring Chris as a temporary employee for their City until he could officially be hired by the BCRUA as general manager.

After the BCRUA was officially created in July 2007, a number of activities occurred to get the entity established. First of all, the Board of Directors was appointed on August 7, 2007 (see press release in Appendix J). Following the appointment of the Board, the BCRUA held its first board meeting on August 22, 2007 at the Round Rock City Council Chambers. Meeting agendas and approved minutes from August 22 and October 16, 2007 are provided in Appendix J for reference. A copy of the water treatment plant presentation at the public meeting on October 1, 2007 is also included in Appendix J.

Following the first Board meeting in August, the BCRUA submitted an application to the TWDB in September 2007 for funding, hired a financial advisor for the regional system and established committees for finance, operations, and the city managers. The three cities had hired four engineering consulting firms to conduct the preliminary engineering design of the treatment plant and transmission mains in January 2007. These consultants completed the final design activities for the regional system in October 2008.

Since June 2006, each of the cities has committed staff time and internal resources towards the creation of the BCRUA. Based on their estimates, the partner cities meet approximately one to two times a week, which usually involves their respective City Manager, Assistant City Manager, City Attorney, and designated project manager. Each of the cities also noted that they work on this project outside of their weekly meetings. The designated project managers for each of the cities allocate approximately 30% of their time on this project.

The Operations Committee, as noted in the Master Contract, represents the collective interests of the cities. This committee is comprised of two representatives appointed by the city managers from each of the three cities. They meet on a regular basis regarding the following issues:

- Operation and maintenance of the BCRUA Regional Water System;
- Addition of new customers to the BCRUA, including terms and conditions of the agreements;
- Budget and annual report review prior to submittal to BCRUA Board of Directors;
- Improvements and expansions to the BCRUA Regional Water System;
- Review bids/proposals for construction and engineering services; and,
- Modifications to engineering reports.

The City Managers Committee is described in the Interlocal Agreement for Ancillary Consulting Services. This committee is comprised of the city managers for Cedar Park, Leander and Round Rock. They meet informally each week along with the city engineers and attorneys for each respective city to discuss the project status and unresolved issues. It is deemed important for the city managers to communicate frequently since they can easily discuss key issues with their council members and make management decisions on the spot to keep the project moving.

For all out-of-pocket expenses incurred by each city, a true-up will occur at the end of the BCRUA project to evenly distribute costs among all three parties regarding environmental issues, easements, general manager position, engineering, property acquisition, etc.

**(9) Verify if SRA can transfer the obligation of the TWDB IUP when Regional Authority is created.**

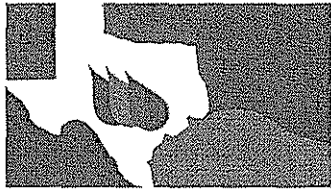
The TWDB offers low-interest loans and grant funds through their Clean Water State Revolving Funds (CWSRF) Program. As part of the CWSRF requirements, an entity has to submit an application for consideration on the draft version of the Intended Use Plan (IUP). The IUP for the TWDB identifies potential projects that rank high enough to receive financial assistance from TWDB. The FY2010 CWSRF IUP deadline is January 30, 2009.

Subsequent to the adoption of the final IUP, the following changes are allowed to applications previously submitted without requiring them to be re-ranked:

- The applicant for a proposed project may change;
- An alternative project may be proposed which addresses the specific system conditions which received priority points;
- The number of participants in a consolidation project may change provided that the change does not result in a change to the combined rating factor; and,
- The total cost of a proposed project may decrease from the amount listed in the adopted IUP.

Sabine River Authority can submit an IUP for FY2010 and transfer the obligation of the funding to the new regional entity when it is officially created. Refer to Chapter 375 of the TWDB CWSRF Rule in Appendix K for additional information.

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# BRUSHY CREEK

## REGIONAL UTILITY AUTHORITY

A Partnership of Cedar Park, Leander, and Round Rock

For Immediate Release:  
Aug. 7, 2007

Contact: Chris Lippe, BCRUA Project Mgr.  
(512) 844-7419 [clippe@round-rock.tx.us](mailto:clippe@round-rock.tx.us)

### **City Councils appoint members to Brushy Creek Regional Utility Authority Board; Organizational Meeting Tentatively Scheduled**

The cities of Round Rock, Leander, and Cedar Park have named three representatives to the newly formed Brushy Creek Regional Utility Authority, Inc. (BCRUA) Board of Directors. They are: Mayor John Cowman from Leander, Council Member Scott Rhode from Round Rock, and Council Member Cobby Caputo from Cedar Park.

**The board is tentatively scheduled to hold its first meeting at 5 p.m. Wednesday, Aug. 22, 2007 at the Round Rock City Council Chambers, 221 East Main St.** The agenda for the meeting includes discussion of organizational issues, a proposed application for funding from the Texas Water Development Board, and an update on the status of the Regional Water Supply Project. The meeting was originally scheduled to be held Tuesday, Aug. 7, but was cancelled because of an agenda posting error.

Rapid growth in Central Texas has created a crucial issue the BCRUA must address. Planning projections indicate that without a new water supply system, the cities could face water shortages in three to seven years, jeopardizing the safety, well-being, and economic health of the entire region.

“We’ve had explosive growth in this area,” says Scott Rhode, Round Rock Council Member and new BCRUA board member. “Families and businesses understandably want to move here because it’s a great place to be. With that, we’ve got to stay ahead of the expected growth in order to ensure that we can provide this basic, yet critical service. There are new hospitals, new schools, and new residential developments on the ground or in the development stages and Round Rock is only one third of its final build out population. So, the responsibility we have as elected leaders in the region is to plan for and secure the water and infrastructure to meet the demands of our ultimate population. This project does that.”

The cities of Round Rock, Leander, and Cedar Park, through the BCRUA, are partnering in the development of a new water treatment plant in Cedar Park, new intake structures on Lake Travis, and new raw and treated water pipelines. The project will cost an estimated \$330 million dollars and will be completed in three phases.

*(Continued)*

“This is one of the most important and unique projects to be undertaken by the cities in recent years,” says Chris Lippe, BCRUA Project Manager. The cities are doing a great job of planning together to develop this regional water project. The result will be significant efficiencies and cost savings for ratepayers that wouldn’t have been possible had the cities chosen to go it alone.”

Phase 1 construction for the project will include a temporary, floating raw water intake structure at Cedar Park’s plant on the Sandy Creek arm of Lake Travis, a new raw water pipeline proposed within the Trails End Road right of way, and a new treatment plant. The proposed site of the plant is northwest of the intersection of Lime Creek Road and FM 1431 on the west side of Cedar Park.

Also in Phase 1, a treated water transmission pipeline is planned across the north side of Cedar Park with delivery facilities for Cedar Park, Leander, and Round Rock. The water treatment plant will have an initial capacity of 30 million gallons per day (mgd) and an ultimate capacity of 106 mgd. Cost is estimated at \$160 million. Construction is expected to begin in late spring or early summer of 2008 and be completed in two years.

Phase 2A of the project involves the construction of a new, fixed, deep-water intake structure in Lake Travis and a raw water pipeline to the new plant. Cedar Park’s and Leander’s existing floating intakes are located on the Sandy Creek arm of Lake Travis. Construction of a deep-water intake is vital to the project. If the drought had continued this year, the cities’ current floating intakes would have been grounded. The permanent deep-water intake structure is planned for completion in 2011. It will have an ultimate capacity of 142 mgd and will serve existing treatment plants as well as the regional plant.

Phase 2B of the project, which involves expansion of the treatment plant, is expected to be needed in 2016.

Cedar Park and Leander currently obtain their water from Lake Travis pursuant to contracts with the Lower Colorado River Authority (LCRA). Cedar Park owns and operates a 26 (mgd) water treatment plant on Lake Travis. The LCRA provides treated water to Leander. The City of Leander’s plant is being expanded from 6 mgd to 12 mgd, and Round Rock’s plant provides 48 mgd. Round Rock obtains water from the Brazos River Authority from intakes at Lake Georgetown and Lake Stillhouse Hollow. Round Rock also draws water from the Edwards Aquifer.

The LCRA holds water rights to the combined firm yield of Lakes Buchanan and Travis, which is equal to 489 billion gallons of water a year. Both reservoirs were constructed to serve as water supply reservoirs for Central Texas residents. Cedar Park, Leander, and Round Rock are planning to use a fraction of the water – about 8 percent when the project is completed – LCRA makes available. The water rights permit, issued by the Texas Commission on Environmental Quality (TCEQ), subject to TCEQ rules and regulations, has been thoroughly adjudicated.

*(Continued)*

In addition, the TCEQ requires that the LCRA maintain a Water Management Plan for the Highland Lakes that ensures their operation during a drought in a manner that meets the terms of its water rights permit. The plan governs operation of Lakes Travis and Buchanan and is reviewed periodically to keep pace with growing water demands and improved information.

A decision has not been made on where the new deep-water intake structure will be located. The project team will be evaluating sites near the Volente area over the next six to nine months. The public will be given opportunities to comment and provide input on the proposed sites as well as other aspects of the project. To encourage dialogue and to obtain feedback, a blog has been set up on the project website [www.bcrua.org](http://www.bcrua.org). Those with questions or concerns may also call the project hotline (512) 684-3200.

###



**BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.  
BOARD MEETING  
TUESDAY, OCTOBER 16, 2007 at 7:00 P.M.  
ROUND ROCK CITY HALL - COUNCIL CHAMBERS  
221 EAST MAIN STREET**

**DIRECTORS**

Scott Rhode, President  
Cobby Caputo, Vice President  
John D. Cowman, Secretary/Treasurer

**AGENDA**

1. **CALL BOARD MEETING TO ORDER – 7:00 p.m.**
2. **ROLL CALL**
3. **APPROVAL OF MINUTES:**
  - 3A. Consider approval of the Brushy Creek Regional Utility Authority, Inc. Organizational meeting minutes for August 22, 2007.
4. **RESOLUTIONS:**
  - 4A. Consider adoption of the Brushy Creek Regional Utility Authority, Inc. Board Meeting Procedures.
5. **PRESENTATIONS:**
  - 5A1. Consider a presentation concerning the Regional Water Treatment Plant Site.
  - 5A2. Consider an update for the Financial Application from First Southwest Company.
6. **PUBLIC HEARING:**
  - 6A. Public testimony regarding Brushy Creek Regional Utility Authority, Inc. proposed Regional Water System Project.

The Board of Directors of the Brushy Creek Regional Utility Authority, Inc., reserves the right to adjourn into executive session at any time during the course of this meeting to discuss any of the matters listed above, as authorized by Texas Government Code Sections 551.071 (Consultation with Attorney); 551.072 (Deliberations about Real Property); 551.073 (Deliberations about Gifts and Donations); 551.074 (Personnel Matters); 551.076 (Deliberations about Security Devices); and 551.087 (Economic Development).

**CERTIFICATE**

I certify that the above notice of the a Brushy Creek Regional Utility Authority, Inc. meeting was posted on the City Hall official bulletin board of the City of Round Rock, Texas at 5:00 on October 12, 2007.



Sara L. White on behalf of the Brushy  
Creek Regional Utility Authority

**The Round Rock City Council Chamber is wheelchair accessible. Requests for any special accommodations must be made 48 hours prior to the meeting. Please contact 218-5401. Requests for information may be faxed to 218-7097.**

**BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.  
ORGANIZATIONAL MEETING  
WEDNESDAY, AUGUST 22, 2007  
5:00 P.M.  
ROUND ROCK CITY HALL  
ROUND ROCK CITY COUNCIL CHAMBERS  
221 EAST MAIN STREET  
ROUND ROCK, TEXAS**

**DIRECTORS**

Cobby Caputo  
John D. Cowman  
Scott Rhode

**AGENDA**

1. Call Organizational Meeting to Order – 5:00 p.m.
2. Roll Call.
3. Consider the introduction to the Directors of the various staff members of the cities of Cedar Park, Leander, and Round Rock who will be assisting the Board.
4. Consider review and discussion of the Articles of Incorporation.
5. Review and discuss status of By-Laws.
6. Consider the election of a President, a Vice-President, and a Secretary/Treasurer.
7. Consider adoption of the corporate seal.
8. Consider adoption of a fiscal year.
9. Consider authorizing the application(s) for all required federal and state tax identification numbers.
10. Consider a resolution authorizing the President to execute a Financial Advisory Agreement with First Southwest Company to perform financial advisory services.
11. Consider a resolution authorizing the President to execute an engagement letter with McCall Parkhurst & Horton, L.L.P. to perform bond counsel services.
12. Consider a resolution expressing official intent to reimburse certain expenditures for the Brushy Creek Regional Water Project.
13. Consider and discuss a presentation regarding the status of the regional water project.

14. Consider and discuss a presentation regarding the proposed application for funding and/or financial participation from the Texas Water Development Board. The Board will also consider a resolution approving said application.
15. Consider and discuss proposed policies and procedures for conducting future Board meetings.
16. Consider Directors' requests for items to be placed on future meeting agendas.
17. Consider setting the date, time, and place for future meetings(s).
18. Adjournment.

**The Board of Directors of the Brushy Creek Regional Utility Authority, Inc., reserves the right to adjourn into executive session at any time during the course of this meeting to discuss any of the matters listed above, as authorized by Texas Government Code Sections 551.071 (Consultation with Attorney); 551.072 (Deliberations about Real Property); 551.073 (Deliberations about Gifts and Donations); 551.074 (Personnel Matters); 551.076 (Deliberations about Security Devices); and 551.087 (Economic Development).**

#### **CERTIFICATE**

I certify that this notice of the Organizational Meeting of the Board of Directors of the Brushy Creek Regional Utility Authority, Inc. was posted on the City Hall official bulletin board of the City of Round Rock, Texas at 10:00 a.m. on the 15th day of August 2007.

---

Christine R. Martinez, City Secretary  
City of Round Rock, Texas

**The Round Rock City Council Chamber is wheelchair accessible. Requests for any special accommodations must be made 48 hours prior to the meeting. Please contact 218-5401. Requests for information may be faxed to 218-7097.**

**INTERLOCAL AGREEMENT REGARDING PROJECT MANAGEMENT SERVICES  
FOR REGIONAL WATER SYSTEM**

THE STATE OF TEXAS           §  
  §       KNOW ALL BY THESE PRESENTS:  
COUNTY OF WILLIAMSON       §

**THIS INTERLOCAL AGREEMENT REGARDING PROJECT MANAGEMENT SERVICES FOR REGIONAL WATER SYSTEM** (“**Agreement**”) is entered into between the City of Round Rock, Texas, a Texas home-rule city (“**Round Rock**”); the City of Cedar Park, Texas, a Texas home-rule city (“**Cedar Park**”), and the City of Leander, Texas, a Texas home-rule city (“**Leander**”). In this Agreement, Round Rock, Cedar Park and Leander are sometimes individually referred to as “**Party**” and collectively referred to as “**Parties**”.

**Recitals**

**WHEREAS**, the growth of the Cities of Round Rock, Cedar Park and Leander necessitates the development of additional water treatment capacity for each of these communities;

**WHEREAS**, the Parties have agreed to jointly pursue a regional water supply system that will ultimately provide treatment capacity for an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties based on projected population growth;

**WHEREAS**, the Parties will need the services of a skilled and experienced manager in order to pursue design and construction of the regional water supply system; and

**WHEREAS**, the purpose of this Agreement is to set forth the terms and conditions under which the Parties may authorize project management and oversight support for the design and construction of the regional water system and under which the Parties will cost participate in all costs and expenses related thereto.

**NOW, THEREFORE**, in consideration of the foregoing premises and the mutual promises and agreements of the Parties contained in this Agreement, the Parties agree as follows:

**I.  
DEFINITIONS**

When used in this Agreement, capitalized terms not otherwise defined shall have the meanings set forth below:

- 1.01** “**Agreement**” means this Interlocal Agreement Regarding Project Management Services for Regional Water System.
- 1.02** “**Cedar Park**” means the City of Cedar Park, Texas.

As of 5-3-07

**1.03** "City Managers Committee" means the committee consisting of the City Managers for Cedar Park, Leander, and Round Rock.

**1.04** "Cost Allocation Percentage" means the percentage of Regional Project Management Services Costs to be paid by each Party. The Cost Allocation Percentage for each Party is as follows:

Cedar Park: 14.18%

Leander: 47.26%

Round Rock 38.56%

**1.05** "Design & Oversight Committee" or "D.O. Committee" means the engineering representative(s) selected by each Party for purposes of overseeing the Regional Project in accordance with the PER and the Project Schedule.

**1.06** "Effective Date" means the last date of execution of this Agreement by the Parties; provided all of the Parties must execute this Agreement for it to be effective.

**1.07** "Leander" means the City of Leander, Texas.

**1.08** "Party" or "Parties" means Cedar Park, Round Rock, and/or Leander, individually or collectively, as applicable.

**1.09** "PER" means the "Regional Water Supply Project Engineering Design Report" prepared by HDR Engineering, Inc. and dated November 2006.

**1.10** "Regional Project Manager" means the project manager selected and appointed by the Parties to provide project management and oversight support for the Regional Project. The project manager selected by the Parties will be experienced and qualified in public utility projects, particularly those involving large water and/or wastewater systems.

**1.11** "Regional Project Management Services" means the management and oversight services to be performed by the Regional Project Manager. These services will be in support of the Regional Project.

**1.12** "Regional Project Management Costs" means all costs and expenses incurred by the Parties for Regional Project Management Services. Each Party shall bear its share of the Regional Project Management Costs in accordance with the Cost Allocation Percentage set forth herein.

**1.13** "Regional Project" means the regional water supply system, which will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties, based on projected population growth, as more fully described in the PER.

**1.14** "Round Rock" means the City of Round Rock, Texas.

**II.**  
**REGIONAL PROJECT MANAGEMENT SERVICES**

**2.01 Regional Project Management Services.**

(a) The Parties hereby appoint and retain Chris Lippe ("Lippe") as Regional Project Manager. Lippe shall provide Regional Project Management Services to the Parties in accordance with the provisions of the Agreement.

(b) The Parties agree that Round Rock will serve as the principal contact with the Regional Project Manager and may employ him as a temporary employee. Round Rock will have primary responsibility to oversee and administer the Regional Project Management Services, but shall do so at all times in cooperation with the D.O. Committee.

**2.02 D.O. Committee Participation.**

(a) The Regional Project Manager shall work with and report to the D.O. Committee. The D.O. Committee shall prepare a schedule of meetings with the Regional Project Manager that shall be approved by all members of the D.O. Committee. Round Rock shall ensure that the Regional Project Manager works cooperatively with the D.O. Committee at all times. The foregoing shall not be construed to prohibit any Party from communicating directly with the Regional Project Manager regarding the Regional Project without the presence or participation of the other Parties, or from meeting with the Regional Project Manager when it is not practicable to schedule a meeting with the D.O. Committee.

(b) The D.O. Committee shall:

(i) Attend and participate in regular meetings with the Regional Project Manager to monitor the status of the Regional Project and to provide direction and recommendations with respect thereto;

(ii) Ensure that the Regional Project Management Services are performed in accordance with the PER and the Project Schedule; and

(iii) Address any other relevant matters relating to the Regional Project Management Services.

(c) Within ten (10) business days of receipt of any reports or recommendations prepared by a Condemnation Counsel, the members of the D.O. Committee shall specify in writing to each other any objections regarding the draft reports, and any proposed revisions thereto. If any member of the D.O. Committee fails to object in writing to the report within ten (10) business days, then that member shall be deemed to have approved the draft report. In the event that any member of the D.O. Committee timely objects to the draft report, then the D.O. Committee shall endeavor in good faith to resolve the matter by unanimous agreement. If the D.O. Committee cannot unanimously agree to the proper resolution within ten (10) business days, then the D.O. Committee shall refer the dispute to the City Managers Committee. The City Managers Committee shall work diligently and in good faith to resolve any dispute as quickly as possible so as not to jeopardize the completion of the Regional Project in

accordance with the Project Schedule. If the City Managers Committee is unable to resolve a dispute after reasonable and good faith efforts, the Parties shall promptly refer the dispute to their respective City Councils for consideration. If the dispute is not resolved within thirty (30) days after referral to the City Councils, then the Parties shall terminate this Agreement. In the event of termination, Round Rock may, at its own cost and expense, continue its temporary employment relationship with Lippe.

### **2.03 Access to Work Product.**

(a) Any Party is entitled to copies of any work product produced by the Regional Project Manager in connection with the Regional Project Management Services. The Party requesting a copy of such information shall pay all reasonable costs incurred in preparing and furnishing the copies.

(b) The Parties may utilize the work product produced by the Regional Project Manager for their own purposes.

## **III.**

### **PAYMENT OF REGIONAL PROJECT MANAGEMENT SERVICES COSTS.**

#### **3.01 Payment of Regional Project Management Services Costs.**

(a) All Regional Project Management Services Costs shall be shared by the Parties according to the Cost Allocation Percentages.

(b) The Parties agree that Round Rock shall administer the compensation and other benefits paid to the Regional Project Manager, who may be treated as a temporary employee of Round Rock. Each calendar quarter, Round Rock shall submit notice to the other Parties indicating each Party's share of the compensation and other benefits paid to the Regional Project Manager in accordance with each Party's Cost Allocation Percentage. Cedar Park and Leander shall forward payment therefor within ten (10) business days of the receipt of notice.

(c) In the event of any disputes among the Parties, the Parties agree that the City Managers Committee shall work diligently and in good faith to resolve any dispute concerning Regional Project Management Services and/or Regional Project Management Services Costs as quickly as possible so as not to jeopardize the completion of the Regional Project. If the City Managers Committee is unable to resolve a dispute after reasonable and good faith efforts, the Parties shall promptly refer the dispute to their respective City Councils for consideration. If the dispute is not resolved within thirty (30) days after referral to the City Councils, then the Parties shall terminate this Agreement. In the event of termination, Round Rock may, at its own cost and expense, continue its temporary employment relationship with Lippe.

## **IV.**

### **GENERAL PROVISIONS**

**4.01 Authority.** This Agreement is made in part under the authority conferred in Chapter 791, *Texas Government Code* and Section 402.001, *Texas Local Government Code*.

**4.02 Severability.** The provisions of this Agreement are severable and, if any provision of this Agreement is held to be invalid for any reason by a court or agency of competent jurisdiction, the remainder of this Agreement will not be affected and this Agreement will be construed as if the invalid portion had never been contained herein.

**4.03 Payments from Current Revenues.** Any payments required to be made by a Party under this Agreement will be paid from current revenues or other funds lawfully available to the Party for such purpose.

**4.04 Cooperation.** The Parties agree to cooperate at all times in good faith to effectuate the purposes and intent of this Agreement.

**4.05 Entire Agreement.** Except as otherwise expressly provided herein, this Agreement contains the entire agreement of the Parties regarding the sharing of costs for the Project Management Services and supersedes all prior or contemporaneous understandings or representations, whether oral or written, regarding the subject matter. The Parties confirm that further agreements regarding the Regional Project are contemplated and will not be affected or limited by this Agreement.

**4.06 Amendments.** Any amendment of this Agreement must be in writing and will be effective if signed by the authorized representatives of the Parties.

**4.07 Applicable Law; Venue.** This Agreement will be construed in accordance with Texas law. Venue for any action arising hereunder will be in Williamson County, Texas.

**4.08 Notices.** Any notices given under this Agreement will be effective if (i) forwarded to a Party by hand-delivery; (ii) transmitted to a Party by confirmed telecopy; or (iii) deposited with the U.S. Postal Service, postage prepaid, certified, to the address of the Party indicated below:

**CEDAR PARK:**

600 North Bell Blvd.  
Cedar Park, Texas 78613  
Attn: Sam Roberts  
Telephone: (512) 258-4121 x6321  
Facsimile: (512) 258-6083  
Email: [roberts@ci.cedar-park.tx.us](mailto:roberts@ci.cedar-park.tx.us)

with copy to:

Leonard Smith  
P.O. Box 684633  
Austin, Texas 78768  
Telephone: (512) 474-6707  
Facsimile: (512) 474-6706  
Email: [lsmith@leonardsmithlaw.com](mailto:lsmith@leonardsmithlaw.com)



**ROUND ROCK:**

221 East Main  
Round Rock, Texas 78664  
Attn: Jim Nuse  
Telephone: (512) 218-5410  
Facsimile: (512) 218-7097  
Email: [jnuse@round-rock.tx.us](mailto:jnuse@round-rock.tx.us)

with copy to:

Steve Sheets  
309 E. Main Street  
Round Rock, Texas 78664-5264  
Telephone: (512) 255-8877  
Facsimile: (512) 255-8986  
Email: [slsheets@sheets-crossfield.com](mailto:slsheets@sheets-crossfield.com)

**Leander:**

P.O. Box 319  
Leander, Texas 78646-0319  
Attn: Wayne Watts  
Telephone: (512) 259-1178  
Facsimile: (512) 259-1605  
Email: [w.watts@ci.leander.tx.us](mailto:w.watts@ci.leander.tx.us)

with copy to:

Diana Granger  
223 W. Anderson Lane, Suite A-105  
Austin, Texas 78752  
Telephone: (512) 323-5778  
Telecopy: (512) 323-5773  
Email: [attorneys@cityattorneytexas.com](mailto:attorneys@cityattorneytexas.com)

**4.09 Force Majeure.** Parties shall not be deemed in violation of this Contract if prevented from performing any of their obligations hereunder by reasons for which they are not responsible or circumstances beyond their control. However, notice of such impediment or delay in performance must be timely given, and all reasonable efforts undertaken to mitigate its effects.

**4.10 Counterparts. Effect of Partial Execution.** This Agreement may be executed simultaneously in multiple counterparts, each of which will be deemed an original, but all of which will constitute the same instrument.

**4.11 Authority.** Each Party represents and warrants that it has the full right, power and authority to execute this Agreement

***[SIGNATURES ON FOLLOWING PAGES]***

**CITY OF ROUND ROCK:**

ATTEST:

\_\_\_\_\_  
Christine Martinez, City Secretary

By: \_\_\_\_\_  
Nyle Maxwell, Mayor

Date: \_\_\_\_\_

**CITY OF CEDAR PARK:**

ATTEST:

\_\_\_\_\_  
LeAnn Quinn, City Secretary

By: \_\_\_\_\_  
Bob Lemon, Mayor

Date: \_\_\_\_\_

**CITY OF LEANDER:**

ATTEST:

\_\_\_\_\_  
Debbie Haile, City Secretary

By: \_\_\_\_\_  
John Cowman, Mayor

Date: \_\_\_\_\_

**INTERLOCAL AGREEMENT REGARDING CONDEMNATION LEGAL SERVICES  
FOR REGIONAL WATER SYSTEM**

THE STATE OF TEXAS           §  
  §     **KNOW ALL BY THESE PRESENTS:**  
COUNTY OF WILLIAMSON       §

**THIS INTERLOCAL AGREEMENT REGARDING CONDEMNATION LEGAL SERVICES FOR REGIONAL WATER SYSTEM** ("Agreement") is entered into between the City of Round Rock, Texas, a Texas home-rule city ("**Round Rock**"); the City of Cedar Park, Texas, a Texas home-rule city ("**Cedar Park**"), and the City of Leander, Texas, a Texas home-rule city ("**Leander**"). In this Agreement, Round Rock, Cedar Park and Leander are sometimes individually referred to as "**Party**" and collectively referred to as "**Parties**".

**Recitals**

**WHEREAS**, the growth of the Cities of Round Rock, Cedar Park and Leander necessitates the development of additional water treatment capacity for each of these communities;

**WHEREAS**, the Parties have agreed to jointly pursue a regional water supply system that will ultimately provide treatment capacity for an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties based on projected population growth;

**WHEREAS**, in order to pursue construction of the regional water supply system, the Parties may have to pursue condemnation to acquire necessary easements; and

**WHEREAS**, the purpose of this Agreement is to set forth the terms and conditions under which the Parties may authorize legal services in support such condemnation and under which the Parties will cost participate in all costs and expenses related thereto.

**NOW, THEREFORE**, in consideration of the foregoing premises and the mutual promises and agreements of the Parties contained in this Agreement, the Parties agree as follows:

**I.  
DEFINITIONS**

When used in this Agreement, capitalized terms not otherwise defined shall have the meanings set forth below:

**1.01** "Agreement" means this Interlocal Agreement Regarding Condemnation Legal Services for Regional Water System.

**1.02** "Cedar Park" means the City of Cedar Park, Texas.

~~Deleted: Preliminary Design~~

1.03 "City Managers Committee" means the committee consisting of the City Managers for Cedar Park, Leander, and Round Rock.

1.04 "Condemnation Counsel" means the attorney(s) appointed and retained by the Parties as condemnation counsel. Such attorney(s) shall be licensed to practice law in the State of Texas, shall be in good standing with the State Bar of Texas, and shall be experienced and qualified in the area of condemnation.

1.05 "Condemnation Legal Services" means the legal services to be performed by Condemnation Counsel. These services will be in support of the Regional Project and any condemnation required thereby.

~~Deleted: Preliminary Design~~  
~~Deleted: preliminary engineering and other~~  
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1.06 "Condemnation Legal Services Costs" means all costs and expenses incurred by the Parties for Condemnation Legal Services. Each Party shall bear its share of the Condemnation Legal Services Costs in accordance with the Cost Allocation Percentage set forth herein.

1.07 "Cost Allocation Percentage" means the percentage of Condemnation Legal Services Costs to be paid by each Party. The Cost Allocation Percentage for each Party is as follows:

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- Cedar Park: 14.18%
- Leander: 47.26%
- Round Rock 38.56%

1.08 "Design & Oversight Committee" or "D.O. Committee" means the engineering representative(s) selected by each Party for purposes of overseeing the Regional Project in accordance with the PER and the Project Schedule.

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1.09 "Effective Date" means the last date of execution of this Agreement by the Parties; provided all of the Parties must execute this Agreement for it to be effective.

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1.10 "Leander" means the City of Leander, Texas.

1.11 "Party" or "Parties" means Cedar Park, Round Rock, and/or Leander, individually or collectively, as applicable.

1.12 "PER" means the "Regional Water Supply Project Engineering Design Report" prepared by HDR Engineering, Inc. and dated November 2006.

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1.13 "Regional Project" means the regional water supply system, which will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties, based on projected population growth, as more fully described in the PER.

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1.14 "Round Rock" means the City of Round Rock, Texas.

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II.  
**CONDEMNATION LEGAL SERVICES**

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**2.01 Condemnation Legal Services.**

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(a) The Parties hereby appoint and retain Kent Sick ("Sick") as Condemnation Counsel. Sick shall provide Condemnation Legal Services to the Parties in accordance with the provisions of the Agreement. The Parties may designate an additional firm(s) or attorney(s) to serve as Condemnation Counsel from time to time.

(b) The Parties agree that Cedar Park will serve as the principal contact with Condemnation Counsel. Cedar Park will have primary responsibility to oversee and administer the Condemnation Legal Services, but shall do so at all times in cooperation with the D.O. Committee.

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**2.02 D.O. Committee Participation.**

(a) Each Condemnation Counsel shall work with and report to the D.O. Committee. The D.O. Committee shall prepare a schedule of meetings with each Condemnation Counsel that shall be approved by all members of the D.O. Committee. Cedar Park shall ensure that each Condemnation Counsel works cooperatively with the D.O. Committee. The foregoing shall not be construed to prohibit any Party from communicating directly with Condemnation Counsel, regarding the Condemnation Legal Services without the presence or participation of the other Parties, or from meeting with Condemnation Counsel when it is not practicable to schedule a meeting with the D.O. Committee.

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(b) The D.O. Committee shall:

(i) Attend and participate in regular meetings with each Condemnation Counsel to monitor the status of the Condemnation Legal Services and to provide direction and recommendations with respect thereto;

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(ii) Ensure that the Condemnation Legal Services are performed in accordance with the PER and the Project Schedule; and

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(iii) Address any other relevant matters relating to the Condemnation Legal Services.

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(c) Within five (5) business days of receipt of any reports or recommendations prepared by a Condemnation Counsel, the members of the D.O. Committee shall specify in writing to each other any objections regarding the draft reports, and any proposed revisions thereto. If any member of the D.O. Committee fails to object in writing to the report within five (5) business days, then that member shall be deemed to have approved the draft report. In the event that any member of the D.O. Committee timely objects to the draft report, then the D.O. Committee shall endeavor in good faith to resolve the matter by unanimous agreement. If the D.O. Committee cannot unanimously agree to the proper resolution within five (5) business days, then the D.O. Committee shall refer the dispute to the City Managers Committee. The City Managers Committee shall work diligently and in good faith to resolve any

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dispute as quickly as possible so as not to jeopardize the completion of the Regional Project in accordance with the Project Schedule. If the City Managers Committee is unable to resolve a dispute after reasonable and good faith efforts, the Parties shall promptly refer the dispute to their respective City Councils for consideration. If the dispute is not resolved within thirty (30) days after referral to the City Councils, then the Parties shall terminate this Agreement. In the event of termination, Cedar Park may, at its own cost and expense, continue its attorney-client relationship with Sick.

**2.03 Access to Work Product.**

(a) Any Party is entitled to copies of any work product produced by Condemnation Counsel in connection with the Consulting Services. The Party requesting a copy of such information shall pay all reasonable costs incurred in preparing and furnishing the copies.

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(b) The Parties acknowledge that Condemnation Counsel's communications and work product may be exempt from production under the Public Information Act, Section 552.001 *et seq.* of the Government Code, and/or privileged under the Texas Rules of Evidence. The Parties shall cooperate reasonably and in good faith to protect exempted or privileged information from disclosure.

**III.  
PAYMENT OF CONDEMNATION LEGAL SERVICES COSTS.**

**3.01 Payment of Condemnation Legal Services Costs.**

(a) All Condemnation Legal Services Costs shall be shared by the Parties according to the Cost Allocation Percentages.

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(b) The Parties agree that Condemnation Counsel shall be instructed to send all invoices to Cedar Park. Upon receipt of each invoice from any Condemnation Counsel, Cedar Park shall review the invoice and confirm that the Condemnation Legal Services have been satisfactorily completed in accordance with the request for payment. Thereafter, Cedar Park shall submit notice to the other Parties indicating each Party's share of the Condemnation Counsel's invoice in accordance with each Party's Cost Allocation Percentage. Round Rock and Leander shall forward payment therefor within ten (10) business days of the receipt of notice.

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(c) In the event of any disputes among the Parties, the Parties agree that the City Managers Committee shall work diligently and in good faith to resolve any dispute concerning Condemnation Legal Services and/or Condemnation Legal Services Costs as quickly as possible so as not to jeopardize the completion of the Regional Project. If the City Managers Committee is unable to resolve a dispute after reasonable and good faith efforts, the Parties shall promptly refer the dispute to their respective City Councils for consideration. If the dispute is not resolved within thirty (30) days after referral to the City Councils, then the Parties shall terminate this Agreement. In the event of termination, Cedar Park may, at its own cost and expense, continue its attorney-client relationship with Sick.



IV.  
**GENERAL PROVISIONS**

4.01 Authority. This Agreement is made in part under the authority conferred in Chapter 791, *Texas Government Code* and Section 402.001, *Texas Local Government Code*.

4.02 Severability. The provisions of this Agreement are severable and, if any provision of this Agreement is held to be invalid for any reason by a court or agency of competent jurisdiction, the remainder of this Agreement will not be affected and this Agreement will be construed as if the invalid portion had never been contained herein.

4.03 Payments from Current Revenues. Any payments required to be made by a Party under this Agreement will be paid from current revenues or other funds lawfully available to the Party for such purpose.

4.04 Cooperation. The Parties agree to cooperate at all times in good faith to effectuate the purposes and intent of this Agreement.

4.05 Entire Agreement. Except as otherwise expressly provided herein, this Agreement contains the entire agreement of the Parties regarding the sharing of costs for the Consulting Services and supersedes all prior or contemporaneous understandings or representations, whether oral or written, regarding the subject matter. The Parties confirm that further agreements regarding the Regional Project are contemplated and will not be affected or limited by this Agreement.

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4.06 Amendments. Any amendment of this Agreement must be in writing and will be effective if signed by the authorized representatives of the Parties.

4.07 Applicable Law; Venue. This Agreement will be construed in accordance with Texas law. Venue for any action arising hereunder will be in Williamson County, Texas.

4.08 Notices. Any notices given under this Agreement will be effective if (i) forwarded to a Party by hand-delivery; (ii) transmitted to a Party by confirmed telecopy; or (iii) deposited with the U.S. Postal Service, postage prepaid, certified, to the address of the Party indicated below:

**CEDAR PARK:** 600 North Bell Blvd.  
Cedar Park, Texas 78613  
Attn: Sam Roberts  
Telephone: (512) 258-4121 x6321  
Facsimile: (512) 258-6083  
Email: [roberts@ci.cedar-park.tx.us](mailto:roberts@ci.cedar-park.tx.us)

with copy to: Leonard Smith  
P.O. Box 684633  
Austin, Texas 78768  
Telephone: (512) 474-6707  
Facsimile: (512) 474-6706  
Email: [lsmith@leonardsmithlaw.com](mailto:lsmith@leonardsmithlaw.com)

**ROUND ROCK:** 221 East Main  
Round Rock, Texas 78664  
Attn: Jim Nuse  
Telephone: (512) 218-5410  
Facsimile: (512) 218-7097  
Email: [jnuse@round-rock.tx.us](mailto:jnuse@round-rock.tx.us)

with copy to: Steve Sheets  
309 E. Main Street  
Round Rock, Texas 78664-5264  
Telephone: (512) 255-8877  
Facsimile: (512) 255-8986  
Email: [slsheets@sheets-crossfield.com](mailto:slsheets@sheets-crossfield.com)

**Leander:** P.O. Box 319  
Leander, Texas 78646-0319  
Attn: Wayne Watts  
Telephone: (512) 259-1178  
Facsimile: (512) 259-1605  
Email: [w.watts@ci.leander.tx.us](mailto:w.watts@ci.leander.tx.us)

with copy to: Diana Granger  
223 W. Anderson Lane, Suite A-105  
Austin, Texas 78752  
Telephone: (512) 323-5778  
Telecopy: (512) 323-5773  
Email: [attorneys@cityattorneytexas.com](mailto:attorneys@cityattorneytexas.com)

**4.09 Force Majeure.** Parties shall not be deemed in violation of this Contract if prevented from performing any of their obligations hereunder by reasons for which they are not responsible or circumstances beyond their control. However, notice of such impediment or delay in performance must be timely given, and all reasonable efforts undertaken to mitigate its effects.

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**4.10 Counterparts. Effect of Partial Execution.** This Agreement may be executed simultaneously in multiple counterparts, each of which will be deemed an original, but all of which will constitute the same instrument.

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**4.11 Authority.** Each Party represents and warrants that it has the full right, power and authority to execute this Agreement

**CITY OF ROUND ROCK:**

ATTEST:

\_\_\_\_\_  
Christine Martinez, City Secretary

By: \_\_\_\_\_  
Nyle Maxwell, Mayor

Date: \_\_\_\_\_

**CITY OF CEDAR PARK:**

**ATTEST:**

\_\_\_\_\_  
LeAnn Quinn, City Secretary

By: \_\_\_\_\_  
Bob Lemon, Mayor

Date: \_\_\_\_\_

**CITY OF LEANDER:**

**ATTEST:**

\_\_\_\_\_  
Debbie Haile, City Secretary

By: \_\_\_\_\_  
John Cowman, Mayor

Date: \_\_\_\_\_

**INTERLOCAL AGREEMENT REGARDING  
FINAL DESIGN SERVICES FOR REGIONAL WATER SYSTEM**

THE STATE OF TEXAS                   §  
  §                   KNOW ALL BY THESE PRESENTS:  
COUNTY OF WILLIAMSON           §

**THIS INTERLOCAL AGREEMENT REGARDING FINAL DESIGN SERVICES FOR REGIONAL WATER SYSTEM ("Agreement")** is entered into between the City of Round Rock, Texas, a Texas home-rule city ("**Round Rock**"); the City of Cedar Park, Texas, a Texas home-rule city ("**Cedar Park**"), and the City of Leander, Texas, a Texas home-rule city ("**Leander**"). In this Agreement, Round Rock, Cedar Park and Leander are sometimes individually referred to as "**Party**" and collectively referred to as "**Parties**".

**Recitals**

**WHEREAS**, the growth of the Cities of Round Rock, Cedar Park and Leander necessitates the development of additional water supplies for each of these communities; and

**WHEREAS**, the Parties have agreed to jointly pursue a regional water supply system that will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties based on projected population growth; and

**WHEREAS**, Round Rock, Cedar Park and the Lower Colorado River Authority ("**LCRA**"). have previously entered into multiple agreements in anticipation of the regional water supply system, including: (i) the "Interlocal Agreement Regarding Design of New Hope Regional Waterline" between Round Rock, Cedar Park and LCRA dated December 15, 2005; (ii) the "Interlocal Agreement Regarding Construction of Regional Water Line" between Round Rock, Cedar Park and LCRA dated March 23, 2006; (iii) the "Interlocal Agreement for Interim Water Supply" between Round Rock and Cedar Park dated March 9, 2006; (iv) the Interlocal Agreement Regarding Water Supply Agreement Obligations between LCRA and Cedar Park, dated March 9, 2006; and the Wholesale Potable Water Service Agreement between the Brazos River Authority, LCRA and Leander dated March 2, 1998; and

**WHEREAS**, the Parties desire to proceed with the final design and other consulting services related to the regional water system project; and

**WHEREAS**, the purpose of this Agreement is to set forth the terms and conditions pursuant to which the Parties shall authorize final design and other consulting services related to the regional water system project, and pursuant to which the Parties will cost participate in all costs and expenses related thereto.

**NOW, THEREFORE**, in consideration of the foregoing premises and the mutual promises and agreements of the Parties contained in this Agreement, the Parties agree as follows:

**I.**  
**DEFINITIONS**

When used in this Agreement, capitalized terms not otherwise defined shall have the meanings set forth below:

1.01 "Agreement" means this Interlocal Agreement Regarding Final Design Services for Regional Project.

1.02 "Cedar Park" means the City of Cedar Park, Texas.

1.03 "Cost Allocation Percentage" means the percentage of Final Design Costs to be paid by each Party. The Cost Allocation Percentages for each category of Final Design Services and are set forth on Exhibit "A" attached hereto.

1.04 "Design & Oversight Committee" or "D.O. Committee" means the engineering representative(s) selected by each Party for purposes of overseeing the implementation of the final design of the Regional Project in accordance with the PER and the Project Schedule, as more particularly described in Art. II.

1.05 "Design Fund" means a fund to be established and administered by Round Rock in accordance with Section 4.03 in order to provide monies to pay the Final Design Costs.

1.06 "Effective Date" means the last date of execution of this Agreement by the Parties; provided all of the Parties must execute this Agreement for it to be effective.

1.07 "LCRA" means the Lower Colorado River Authority.

1.08 "Leander" means the City of Leander, Texas.

1.09 "New Hope Water Line" means the water transmission line and related equipment and appurtenances being constructed by Cedar Park on behalf of the Parties in accordance with the terms of the New Hope Water Line Construction Agreement.

1.10 "New Hope Water Line Construction Agreement" means that certain Interlocal Agreement Regarding Construction of Regional Water Line" dated March 23, 2006, between Round Rock, Cedar Park, and LCRA relating to the construction of the New Hope Water Line.

1.11 "Party" or "Parties" means Cedar Park, Round Rock, and/or Leander, individually or collectively, as applicable.

1.12 "PER" means the "Regional Water Supply Project Engineering Design Report" prepared by HDR Engineering, Inc. and dated November 2006 – Final Issue January 2007.

1.13 "Final Design Services" means the final engineering and other services to be performed by the Project Consultants pursuant to the Final Design Contracts.

1.14 "Final Design Contracts" means those certain contracts for engineering services to be approved by the Parties pursuant to which the Project Consultants shall provide Final Design Services.

1.15 "Final Design Costs" means all costs and expenses incurred by the Parties pursuant to the Final Design Contracts for Final Design Services.

1.16 "Project Consultant(s)" means one or more of the following firms which are parties to the Final Design Contracts with the Parties for each category of the Final Design Services, as follows:

- (a) Carter & Burgess, Inc. for the Raw Water System and Barge;
- (b) Camp Dresser & McKee, Inc. for the Water Treatment Plant;
- (c) Lockwood, Andrews and Newnam, Inc. for Segment 1 of the Treated Water Transmission Line; and
- (d) K Friese & Associates for Segment 2C of the Treated Water Transmission Line.

1.17 "Regional Project" means the regional water supply system, which will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties, based on projected population growth, as more fully described in the PER.

1.18 "Round Rock" means the City of Round Rock, Texas.

1.19 "Project Schedule" means the Regional Water System Project Schedule attached as Exhibit "B".

## II. DESIGN AND OVERSIGHT COMMITTEE

2.01 **D.O. Committee.** The Parties have created a Design & Oversight Committee ("D.O. Committee") composed of one representative appointed by each Party. The following persons are members of the D.O. Committee: Kenneth Wheeler on behalf of Cedar Park; Wayne Watts on behalf of Leander; and Don Rundell on behalf of Round Rock. Each representative of a Party shall serve at the will of the governing body (or its designee) that the person represents. Upon the incapacitation, resignation, or revocation of the power of such representative, the governing body of the appropriate Party (or its designee) shall promptly appoint a new representative to the D.O. Committee, and shall immediately notify the other Parties in writing of such appointment. Each Party may appoint one or more alternate representatives as it deems necessary and proper.



**2.02 Responsibility of D.O. Committee.** The D.O. Committee shall:

- (i) Attend and participate in regular meetings with the Project Consultants to monitor the status of the Final Design Services and to provide direction and recommendations with respect thereto;
- (ii) Review and unanimously approve in writing the final design report, routing and location of the Regional Project facilities produced by the Project Consultants in accordance with the PER;
- (iii) Review and unanimously approve in writing any revisions to the scope of Final Design Services to be performed by any Project Consultants;
- (iv) Confirm in writing the final completion of Final Design Services under the Final Design Contracts in accordance with the PER and the Project Schedule; and
- (v) Address any other pertinent matters relating to the Final Design Services.

The D.O. Committee shall meet at regular intervals to review the matters over which it has authority. The D.O. Committee shall be diligent, prompt and timely in reviewing and acting on matters submitted to it.

**III.  
FINAL DESIGN SERVICES**

**3.01 Final Design and Project Management Services.**

(a) The Parties intend to enter into Final Design Contracts in the form \_\_\_\_\_

(b) Once approved, the scope of Final Design Services, including any proposed changes to a Project Consultant's compensation in connection therewith, may only be modified by unanimous written authorization from the Parties, which authorization shall be set forth in a "Supplemental Contract" executed by each Party.

(c) The Parties have agreed to appoint Chris Lippe, P.E. to provide project management services for the Regional Project in general and this Agreement in particular. Mr. Lippe shall perform his work in cooperation with the D.O. Committee, shall regularly report to the D.O. Committee, and shall support and assist the D.O. Committee in the performance of its responsibilities.

**3.02 D.O. Committee Participation.**

(a) The D.O. Committee shall prepare a schedule of meetings with the Project Consultants that shall be approved by all members of the D.O. Committee. The foregoing shall not be construed to prohibit any Party from communicating with Project Consultants regarding

the Final Design Services without the presence or participation of the other Parties, or from meeting with the Project Consultants when it is not practicable to schedule a meeting with the D.O. Committee.

(b) The Parties agree that the final route and location of the Regional Project facilities will not be finalized until the D.O. Committee has reviewed and unanimously approved in writing such design and location.

(c) Within ten (10) business days of receipt of any preliminary and/or final reports prepared by the Project Consultants, the members of the D.O. Committee shall specify in writing to each other any objections regarding the draft reports, and any proposed revisions thereto. If any member of the D.O. Committee fails to object in writing to the report within the ten (10)-business-day period, then that member shall be deemed to have approved the draft report. In the event that any member of the D.O. Committee timely objects to the draft report, then the D.O. Committee shall endeavor in good faith to resolve the matter by unanimous agreement. If the D.O. Committee cannot unanimously agree to the proper resolution within fifteen (15) business days, then the D.O. Committee shall refer the dispute to the City Managers Committee. The City Managers Committee shall work diligently and in good faith to resolve the dispute as quickly as possible so as not to jeopardize the completion of the Regional Project in accordance with the Project Schedule.

### 3.03 Work Product.

(a) Any Party is entitled to copies of any work product produced by the Project Consultants in connection with the Final Design Services. The Party requesting a copy of such information shall pay all reasonable costs incurred in preparing and furnishing the copies.

(b) In accordance with, and subject to the terms and conditions set forth in the Final Design Contracts, the Parties may utilize the work product produced by the Project Consultants for their own purposes.

## IV. PAYMENT OF FINAL DESIGN COSTS.

**4.01 Allocation of Final Design Costs.** The Parties shall require each Project Consultant to categorize the costs and services for which it seeks payment under the Final Design Contracts into one of the following project categories (the "Project Categories") for purposes of applying the correct Cost Allocation Percentage and thereby calculating each Party's share of the Final Design Costs, as hereinafter set forth:

- (i) "Raw Water System and Barge";
- (ii) "Water Treatment Plant";
- (iii) "Transmission Line Segment 1"; or
- (iv) "Transmission Line Segment 2C".

The Parties shall also require the Project Consultants to prepare separate invoices for each of the project categories for payment.

#### 4.02 Payment of Final Design Costs.

(a) All Final Design Costs shall be shared by the Parties according to the Cost Allocation Percentages applicable to each Project Category designation, as set forth in Exhibit "A" attached hereto.

(b) The Parties agree that Project Consultants will be instructed to send all invoices to Round Rock and that upon receipt of each invoice from the Project Consultants, Round Rock shall review the invoice and confirm: (i) that the Final Design Services have been completed in accordance with the request for payment; (ii) that Final Design Services for which payment is sought have been properly allocated to the correct Project Category; and (iii) that each invoice does not seek payment for services for more than one Project Category.

(c) Upon Round Rock's approval of each invoice for Final Design Services, Round Rock will transmit a copy of the approved invoice to the Cedar Park and Leander representatives on the D.O. Committee. Within ten (10) business days of receipt of the invoice for payment, the members of the D.O. Committee shall specify in writing to Round Rock any objections regarding the invoice for payment, including any objections regarding the Project Category designation. If any member of the D.O. Committee fails to object in writing to the invoice within the ten (10) business day period, then the Party represented by such D.O. Committee member shall be deemed to have approved the invoice for payment and the Project category designation. In the event that any member of the D.O. Committee timely objects to the invoice or Project Category designation, then the matter shall be resolved in accordance with the following procedures:

(i) If the objection relates to the performance of work or services by a Project Consultant, then the D.O. Committee shall exercise all rights to which it is entitled under the Final Design Contract to resolve the dispute, require correction of the defective work, and otherwise address the concern of the objecting member of the D.O. Committee.

(ii) In the event that any member of the D.O. Committee objects to an invoice for reasons not related to the performance of work or services by the Project Consultant, including by way of example whether the correct Project Category designation has been applied, then the D.O. Committee shall endeavor in good faith to resolve the matter by unanimous agreement. If the D.O. Committee cannot unanimously agree to the proper resolution within thirty (30) calendar days of the date of written objection, then the invoice shall be paid as received; provided, however, that any Party may subsequently seek a determination of the proper Project Category designation through the dispute resolution process set forth in Sec. 4.04 below, and the allocation of costs between the Parties shall be adjusted in accordance with such determination. Any such request for dispute resolution must be brought within thirty (30) calendar days of the date of written objection.

(d) The Parties agree that the cost of Round Rock's performing the aforesaid financial administration and other general administrative services is the sum of \$3,500 per month, not to exceed \$42,000 total, which shall be shared and allocated among the Parties as follows:

Cedar Park: 14.18%  
Leander: 47.26%  
Round Rock 38.56%

(e) In the event of termination of this Agreement prior to the completion of the Regional Project, all Parties shall provide payment of their pro rata share of the Final Design Costs incurred prior to and through the date of the termination.

#### 4.03 Design Fund.

(a) The Parties shall contribute monies to the Design Fund in accordance with the following provisions:

(i) ~~Within ten (10) calendar days of execution of the Final Design Contracts by the Parties, each Party shall deposit into the Design Fund a sum ("the Design Payment"), which represents twenty five percent (25%) of each Party's share of the estimated Final Design Costs. Each Party's estimated Design Payment, based on the estimated Final Design Costs set forth in Exhibit "A" attached hereto, is set forth below:~~

- 1) Round Rock- \$657,015.50;
- 2) Leander- \$781,338.56; and
- 3) Cedar Park- \$211,735.69.

(ii) At such time as the balance in the Design Fund is substantially depleted, as determined in Round Rock's reasonable discretion, Round Rock shall provide written notice (by email or otherwise) thereof to the other Parties, each of which shall have thirty (30) calendar days to deposit into the Design Fund an additional Design Payment, in the same amount as originally deposited. Each notice by Round Rock shall be accompanied by a written accounting report that identifies in reasonable detail all prior expenditures from the Design Fund.

(iii) The foregoing process shall continue until such time as the Final Design Costs have been paid in full. In the event that the Final Design Costs exceed the original estimate, then each Party shall thereafter deposit within the Design Fund a sum equal to the product determined by multiplying each Party's Cost Allocation Percentage for the type of Final Design Services by the Final Design Costs for such services.

(b) In the event that there are remaining funds within the Design Fund upon final completion of the Final Design Services, then Round Rock shall promptly divide and remit within 30 calendar days such funds to the Parties on a pro rata basis according to the percentage of all Final Design Costs previously paid by each of the Parties, or in the event the remaining funds are attributable to one or more specific Project Category designations, the remaining funds shall be remitted to the Parties according to each of the Party's Cost Allocation Percentage for the Project Category designation. Payment shall be accompanied by a written accounting describing the basis for calculation of payment to each Party.

(c) All interest that accumulates within the Design Fund shall remain within such fund for payment of Final Design Costs.

**4.04 Disputes.** In the event of any disputes among the Parties, the Parties agree that the City Managers Committee shall work diligently and in good faith to resolve the dispute as quickly as possible so as not to jeopardize the completion of the Regional Project in accordance with the Project Schedule.

## V. GENERAL PROVISIONS

**5.01 Authority.** This Agreement is made in part under the authority conferred in Chapter 791, *Texas Government Code* and Section 402.001, *Texas Local Government Code*.

**5.02 Severability.** The provisions of this Agreement are severable and, if any provision of this Agreement is held to be invalid for any reason by a court or agency of competent jurisdiction, the remainder of this Agreement will not be affected and this Agreement will be construed as if the invalid portion had never been contained herein.

**5.03 Payments from Current Revenues.** Any payments required to be made by a Party under this Agreement will be paid from current revenues or other funds lawfully available to the Party for such purpose.

**5.04 Cooperation.** The Parties agree to cooperate at all times in good faith to effectuate the purposes and intent of this Agreement.

**5.05 Entire Agreement.** Except as otherwise expressly provided herein, this Agreement contains the entire agreement of the Parties regarding the sharing of costs for the Final Design Services and supersedes all prior or contemporaneous understandings or representations, whether oral or written, regarding the subject matter. The Parties confirm that further agreements regarding the Regional Project are contemplated and will not be affected or limited by this Agreement.

**5.06 Amendments.** Any amendment of this Agreement must be in writing and will be effective if signed by the authorized representatives of the Parties.

**5.07 Applicable Law; Venue.** This Agreement will be construed in accordance with Texas law. Venue for any action arising hereunder will be in Williamson County, Texas.

5.08 Notices. Any notices given under this Agreement will be effective if (i) forwarded to a Party by hand-delivery; (ii) transmitted to a Party by confirmed telecopy; or (iii) deposited with the U.S. Postal Service, postage prepaid, certified, to the address of the Party indicated below:

**CEDAR PARK:**

600 North Bell Blvd.  
Cedar Park, Texas 78613  
Attn: Sam Roberts  
Telephone: (512) 258-4121 x6321  
Facsimile: (512) 258-6083  
Email: [roberts@ci.cedar-park.tx.us](mailto:roberts@ci.cedar-park.tx.us)

with copy to:

Leonard Smith  
P.O. Box 684633  
Austin, Texas 78768  
Telephone: (512) 474-6707  
Facsimile: (512) 474-6706  
Email: [lsmith@leonardsmithlaw.com](mailto:lsmith@leonardsmithlaw.com)

**ROUND ROCK:**

221 East Main  
Round Rock, Texas 78664  
Attn: Jim Nuse  
Telephone: (512) 218-5410  
Facsimile: (512) 218-7097  
Email: [jnuse@round-rock.tx.us](mailto:jnuse@round-rock.tx.us)

with copy to:

Steve Sheets  
309 E. Main Street  
Round Rock, Texas 78664-5264  
Telephone: (512) 255-8877  
Facsimile: (512) 255-8986  
Email: [slsheets@sheets-crossfield.com](mailto:slsheets@sheets-crossfield.com)

**Leander:**

Attn: Wayne Watts  
P.O. Box 319  
Leander, Texas 78646-0319  
Attn: Wayne Watts  
Telephone: (512) 259-1178  
Facsimile: (512) 259-1605  
Email: [w.watts@ci.leander.tx.us](mailto:w.watts@ci.leander.tx.us)

with copy to:

Diana L. Granger  
223 W. Anderson Lane, Suite A-105  
Austin, Texas 78752  
Telephone: (512) 323-5778  
Telecopy: (512) 323-5773

Email: [attorneys@cityattorneytexas.com](mailto:attorneys@cityattorneytexas.com)

**5.09 Force Majeure.** The Parties shall not be deemed in violation of this Contract if prevented from performing any of their obligations hereunder by reasons for which they are not responsible or circumstances beyond their control. However, notice of such impediment or delay in performance must be timely given, and all reasonable efforts undertaken to mitigate its effects.

**5.10 Exhibits.** The following exhibits are attached to this Agreement and incorporated herein by reference:

Exhibit A - Cost Allocation Percentages

Exhibit B - Project Schedule

**5.11 Counterparts. Effect of Partial Execution.** This Agreement may be executed simultaneously in multiple counterparts, each of which will be deemed an original, but all of which will constitute the same instrument.


**5.12 Authority.** Each Party represents and warrants that it has the full right, power and authority to execute this Agreement

*[SIGNATURES ON FOLLOWING PAGES]*

CITY OF ROUND ROCK:

ATTEST:

Christine R. Martinez  
Christine Martinez, City Secretary

By:   
Nyle Maxwell, Mayor

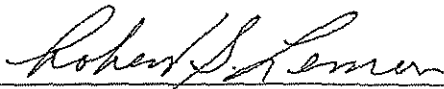
Date: 04-12-07



CITY OF CEDAR PARK:

ATTEST:

  
\_\_\_\_\_  
LeAnn Quinn, City Secretary

By:   
\_\_\_\_\_  
Bob Lemon, Mayor

Date: April 26, 2007

CITY OF LEANDER:

ATTEST:

Debbie Haile  
Debbie Haile, City Secretary

By: John D. Cowman  
John Cowman, Mayor

Date: 5/3/07

**EXHIBIT "A"**  
**ALLOCATION OF COSTS**

<u>Phase/Segment</u>	<u>Capacity (MGD)</u>	<u>Cost Allocation</u>	<u>Costs</u>
<b>Raw Water System and Barge</b>			
Cedar Park	15.0	14.18%	\$310,835
Leander	50.0	47.26%	\$1,035,971
Round Rock	40.8	38.56%	\$845,261
<b>Total</b>	<b>105.8</b>	<b>100.00%</b>	<b>\$2,192,067</b>
<b>Water Treatment Plant</b>			
Cedar Park	15.0	14.18%	\$369,644
Leander	50.0	47.26%	\$1,231,974
Round Rock	40.8	38.56%	\$1,005,182
<b>Total</b>	<b>105.8</b>	<b>100.00%</b>	<b>\$2,606,800</b>
<b>Transmission Line Segments</b>			
<b>Segment 1</b>			
Cedar Park	15.0	14.18%	\$166,463
Leander	50.0	47.26%	\$554,800
Round Rock	40.8	38.56%	\$452,668
<b>Total</b>	<b>105.8</b>	<b>100.00%</b>	<b>\$1,173,931</b>
<b>Segment 2C</b>			
Cedar Park	0	0%	\$0
Leander	38	48.22%	\$302,610
Round Rock	40.8	51.78%	\$324,951
<b>Total</b>	<b>78.8</b>	<b>100.00%</b>	<b>\$627,561</b>
<b>Allocation of Costs</b>			
Cedar Park			\$846,943
Leander			\$3,125,354
Round Rock			\$2,628,062
<b>Total</b>			<b>\$6,600,359</b>
<b>25% Initial Payment</b>			
Cedar Park			\$211,735.69
Leander			\$781,338.56
Round Rock			\$657,015.50

**EXHIBIT B**  
**PROJECT SCHEDULE**

# Regional Water Project Phase 1A Costs

Project	Project Budget
Water Treatment Plant*	\$68,526,522
Floating Intake Barge*	\$7,295,414
Raw Water Line*	\$46,719,049
Treated Water Line, Segment 1*	\$19,960,258
Treated Water Line, Segment 2A**	\$975,848
Treated Water Line, Segment 2B**	\$9,432,469
Treated Water Line, Segment 2C*	\$12,351,805
Construction Management	\$4,043,593
Ancillary Services	\$1,611,725
Operations Expenses	\$679,768
<b>Total</b>	<b>\$171,596,452</b>

\*Includes Preliminary and Final Engineering, Easements, Construction, Construction Contingency, and Construction Phase Services

\*\*Construction Complete

**BCRUA Project  
Capacity and Cost  
Allocation  
Updated: July 23, 2008**

DESCRIPTION	CONSTRUCTED CAPACITY (MGD)	ESTIMATED COST	CEDAR PARK RESERVED CAPACITY (%)	CEDAR PARK COST	LEANDER RESERVED CAPACITY (%)	LEANDER COST	ROUND ROCK RESERVED CAPACITY (%)	ROUND ROCK COST
<b>BCRUA PROJECT (Operational April 1, 2011)</b>								
<b>FLOATING INTAKE BARGE</b>								
Preliminary Engineering	30.9	\$ 287,709.00	14.18	\$ 40,797.14	47.26	\$ 135,971.27	38.56	\$ 110,940.59
Final Engineering (thru Bidding)	30.9	\$ 458,610.00	14.18	\$ 65,030.90	47.26	\$ 216,739.09	38.56	\$ 176,840.02
Construction	30.9	\$ 5,583,201.00	28.8	\$ 1,607,961.89	45.31	\$ 2,529,748.37	25.89	\$ 1,445,490.74
Construction - Contingency (15%)	30.9	\$ 837,480.15	28.8	\$ 241,194.28	45.31	\$ 379,462.28	25.89	\$ 216,623.61
Total Construction (Includes Construction and Contingency)	30.9	\$ 6,420,681.15	28.8	\$ 1,849,156.17	45.31	\$ 2,909,210.63	25.89	\$ 1,662,314.35
Construction Phase Services (2% of Construction Amount)	30.9	\$ 128,413.62	28.8	\$ 36,983.12	45.31	\$ 58,184.21	25.89	\$ 33,246.29
<b>FLOATING INTAKE BARGE SUB-TOTAL</b>		<b>\$ 7,386,413.77</b>		<b>\$ 2,122,377.33</b>		<b>\$ 3,320,105.20</b>		<b>\$ 1,985,341.24</b>
Cost Allocation Percentages				27.90%		45.81%		27.19%
<b>RAW WATER LINE- FROM BARGE, UP TRAILS END ROAD TO REGIONAL WATER TREATMENT PLANT</b>								
Preliminary Engineering	105.8	\$ 570,069.00	14.18	\$ 80,838.62	47.26	\$ 269,424.06	38.56	\$ 219,826.32
Final Engineering (thru Bidding)	105.8	\$ 3,309,016.00	14.18	\$ 469,218.47	47.26	\$ 1,563,840.96	38.56	\$ 1,276,956.57
Environmental, Permit, and Habitat Mitigation	105.8	\$ 413,000.00	14.18	\$ 58,583.40	47.26	\$ 195,183.80	38.56	\$ 159,252.80
Construction (Based on Alternative No. 1 Route)	105.8	\$ 35,493,000.00	14.18	\$ 5,174,707.40	47.26	\$ 17,246,591.80	38.56	\$ 14,071,700.80
Contingency (10%)	105.8	\$ 3,649,300.00	14.18	\$ 517,470.74	47.26	\$ 1,724,659.18	38.56	\$ 1,407,170.08
Total Construction (Includes Construction and Contingency)	105.8	\$ 40,142,300.00	14.18	\$ 5,692,178.14	47.26	\$ 18,971,250.98	38.56	\$ 15,478,870.88
Easements	105.8	\$ 1,481,798.00	14.18	\$ 210,118.98	47.26	\$ 700,287.73	38.56	\$ 571,381.31
Construction Phase Services (2% of Construction Amount)	105.8	\$ 802,846.00	14.18	\$ 113,843.66	47.26	\$ 379,425.02	38.56	\$ 309,577.42
<b>RAW WATER LINE SUB-TOTAL</b>		<b>\$ 46,719,049.00</b>		<b>\$ 6,624,764.16</b>		<b>\$ 22,079,422.56</b>		<b>\$ 18,014,865.29</b>
Cost Allocation Percentages				14.18%		47.26%		38.56%
<b>REGIONAL WATER TREATMENT PLANT</b>								
WTP Land Acquisition	105.8	\$ 3,324,022.00	14.18	\$ 471,348.32	47.26	\$ 1,570,932.80	38.56	\$ 1,281,742.88
Preliminary Engineering	105.8	\$ 703,112.00	14.18	\$ 99,701.28	47.26	\$ 332,290.73	38.56	\$ 271,119.99
Final Engineering	17	\$ 3,457,493.00	14.18	\$ 490,272.51	47.26	\$ 1,634,011.19	38.56	\$ 1,333,209.30
Supplemental Engineering (Est. total Eng. based on 8% of Const.)	17	\$ 581,395.00	14.18	\$ 82,441.81	47.26	\$ 274,767.28	38.56	\$ 224,185.91
Construction Phase Services (2% of Construction Amount)	17	\$ 1,185,500.00	14.18	\$ 218,411.12	47.26	\$ 567,850.62	38.56	\$ 409,238.26
<b>1.0 Raw Water Conveyance</b>								
1.01 72"/54" Raw Water Line, Isolation Valves, and Chemical Injection Vaults	105.8	\$ 1,338,000.00	14.18	\$ 189,728.40	47.26	\$ 632,338.80	38.56	\$ 515,932.80
<b>2.0 Treatment Structure</b>								
2.01 54" Raw Water, Raw Water Pipe Gallery	43	\$ 267,000.00	26.67	\$ 71,208.90	46.66	\$ 124,582.20	26.67	\$ 71,208.90
2.02 30" Raw Water Venturi Meter and Rate of Flow Control Valve, and Hydraulic Rapid Mix 1C	22	\$ 275,000.00	26.67	\$ 73,342.50	46.66	\$ 128,315.00	26.67	\$ 73,342.50
2.03 Flocculators 1A-1C thru 4A-4C (12 total) and Flocculated Water Channel	22	\$ 1,619,000.00	26.67	\$ 431,787.30	46.66	\$ 755,425.40	26.67	\$ 431,787.30
2.04 Basin Inlet Channels, Sedimentation Basins 1 and 2 with Sludge Collection Equipment and Basin Outlet Channel, Settled Water Channel with Valves and Gates	22	\$ 3,747,000.00	26.67	\$ 999,324.90	46.66	\$ 1,748,050.20	26.67	\$ 999,324.90
2.05 Sludge Vault 1C and 12" Sludge Pipe	22	\$ 734,000.00	26.67	\$ 195,757.80	46.66	\$ 342,484.40	26.67	\$ 195,757.80
2.06 Filter Inlet Channel	48	\$ 1,031,000.00	26.67	\$ 274,967.70	46.66	\$ 481,064.60	26.67	\$ 274,967.70
2.07 Filters 1-4 (underdrains, media, troughs, effluent venturi meters, rate of flow control valves, piping and miscellaneous valves) and Filters 5-8 (structure, wall spools and blind flanges only)	12.8	\$ 2,530,000.00	26.67	\$ 674,751.00	46.66	\$ 1,180,498.00	26.67	\$ 674,751.00
2.08 Filter 6 (underdrains, media, troughs, effluent venturi meters, rate of flow control valves, piping and miscellaneous valves)	4.2	\$ 269,000.00	26.67	\$ 77,076.30	46.66	\$ 134,847.40	26.67	\$ 77,076.30
2.09 24" Backwash Water Venturi Meter and Rate of Flow Control Valve, and 30" Backwash Water Piping	105.8	\$ 288,000.00	14.18	\$ 38,002.40	47.26	\$ 126,656.80	38.56	\$ 103,940.80
2.1 36" Waste Backwash Water Piping and Valving	105.8	\$ 342,000.00	14.18	\$ 48,495.60	47.26	\$ 161,629.20	38.56	\$ 131,875.20
2.11 2 Air Scour Blowers	105.8	\$ 137,000.00	14.18	\$ 19,426.80	47.26	\$ 64,746.20	38.56	\$ 52,827.20

**BCRUA Project  
Capacity and Cost  
Allocation  
Updated: July 23, 2008**

DESCRIPTION	CONSTRUCTED CAPACITY (MGD)	ESTIMATED COST	CEDAR PARK RESERVED CAPACITY (%)	CEDAR PARK COST	LEANDER RESERVE/DOCA CAPACITY (%)	LEANDER COST	ROUND ROCK RESERVED CAPACITY (%)	ROUND ROCK COST
2.12 Air Scour/Backwash/Waste Backwash piping and valves	22	\$ 137,000.00	26.67	\$ 36,537.90	46.66	\$ 63,924.20	26.67	\$ 36,537.90
2.13 84" Filtered Water Pipe	90	\$ 333,000.00	14.18	\$ 47,219.40	47.26	\$ 157,376.80	38.56	\$ 128,404.80
2.14 Administration Level, Mezzanine (Electrical Room, and Storage), and Maintenance Room	105.8	\$ 7,822,000.00	14.18	\$ 1,109,159.80	47.26	\$ 3,696,677.20	38.56	\$ 3,016,163.20
<b>3.0 Chemical Feed Facility</b>								
3.01 Chemical Feed Area	105.8	\$ 98,000.00	14.18	\$ 13,612.80	47.26	\$ 45,369.60	38.56	\$ 37,017.60
3.02 2 Alum Metering Pumps, 2 Alum Storage Tanks, Valves and Piping	22	\$ 209,000.00	26.67	\$ 55,740.30	46.66	\$ 97,519.40	26.67	\$ 55,740.30
3.03 2 Fluoride Metering Pumps, 1 Fluoride Storage Tank, Valve and Piping	43	\$ 120,000.00	26.67	\$ 32,004.00	46.66	\$ 55,992.00	26.67	\$ 32,004.00
3.04 2 Polymer Metering Pumps, 1 Drum Scale, Valves and Piping	22	\$ 110,000.00	26.67	\$ 29,337.00	46.66	\$ 51,326.00	26.67	\$ 29,337.00
3.05 Bulk Chemical Secondary Containment Structure	105.8	\$ 161,000.00	14.18	\$ 22,829.80	47.26	\$ 76,088.60	38.56	\$ 62,081.60
<b>4.0 Disinfection Facility</b>								
4.01 Disinfection Facility Building	105.8	\$ 1,819,000.00	14.18	\$ 257,934.20	47.26	\$ 859,659.40	38.56	\$ 701,408.40
4.02 3 Sodium Hypochlorite Metering Pumps, 2 Sodium Hypochlorite Storage Tanks, Control Valve and Piping	22	\$ 376,000.00	26.67	\$ 100,279.20	46.66	\$ 175,441.60	26.67	\$ 100,279.20
4.03 Bulk Sodium Hypochlorite Chemical Secondary Containment Structure	105.8	\$ 76,000.00	14.18	\$ 10,776.80	47.26	\$ 35,917.60	38.56	\$ 29,305.60
4.04 2 LAS Metering Pumps, 2 LAS Storage Tanks, Control Valves and Piping	22	\$ 196,000.00	26.67	\$ 52,273.20	46.66	\$ 91,463.60	26.67	\$ 52,273.20
4.05 Bulk LAS Chemical Secondary Containment Structure	105.8	\$ 76,000.00	14.18	\$ 10,776.80	47.26	\$ 35,917.60	38.56	\$ 29,305.60
4.06 2 Potassium Permanganate Metering Pumps, 1 Feed Unit	43	\$ 173,000.00	26.67	\$ 46,199.10	46.66	\$ 80,721.60	26.67	\$ 46,199.10
<b>5.0 Disinfection Basin</b>								
5.01 Disinfection Basin, Weir Plate, Sample Pump, Isolation Valves and Piping	43	\$ 857,000.00	26.67	\$ 228,561.90	46.66	\$ 399,876.20	26.67	\$ 228,561.90
<b>6.0 Ground Storage Tank</b>								
6.01 78" Inlet/Outlet Piping and Valves	43	\$ 231,000.00	26.67	\$ 61,607.70	46.66	\$ 107,784.60	26.67	\$ 61,607.70
6.02 4 MG Precast Storage Tanks with Baffle Walls	43	\$ 3,102,000.00	26.67	\$ 827,303.40	46.66	\$ 1,447,393.20	26.67	\$ 827,303.40
<b>7.0 Booster Pump Station</b>								
7.01 78" Discharge and Suction Piping and Isolation Valves	105.8	\$ 3,061,000.00	14.18	\$ 434,049.80	47.26	\$ 1,446,628.60	38.56	\$ 1,180,321.60
7.02 3 Booster Pumps & Motors, Cans, Discharge Piping, Control and Isolation Valves, and 3 Cans with Covers	43	\$ 1,996,000.00	26.67	\$ 532,333.20	46.66	\$ 931,333.60	26.67	\$ 532,333.20
7.03 2 Plant Water Pumps & Motors, Cans, Discharge Piping, and Valves	43	\$ 231,000.00	26.67	\$ 61,607.70	46.66	\$ 107,784.60	26.67	\$ 61,607.70
7.04 2 Backwash Water Pumps & Motors, Cans, Discharge Piping, and Valves	105.8	\$ 1,028,000.00	14.18	\$ 145,770.40	47.26	\$ 485,832.80	38.56	\$ 396,396.80
<b>8.0 Sludge Dewatering Facility</b>								
8.01 Sludge Dewatering Facility Building	67	\$ 1,503,000.00	14.18	\$ 213,125.40	47.26	\$ 710,317.80	38.56	\$ 579,566.80
8.02 1 Belt Filter Press, 2 Belt Press Feed Pumps, 2 Polymer Feed Systems, 2 Screw Conveyors, Valves and Piping	67	\$ 965,000.00	14.18	\$ 136,837.00	47.26	\$ 456,059.00	38.56	\$ 372,104.00
<b>9.0 Sludge Thickening and Handling Facilities</b>								
9.01 1 Sludge Thickener with Collector, Piping, Valves	31	\$ 556,000.00	26.67	\$ 148,285.20	46.66	\$ 259,429.60	26.67	\$ 148,285.20
9.02 Sludge Pump Station Wet Well	105.8	\$ 265,000.00	14.18	\$ 37,577.00	47.26	\$ 125,239.00	38.56	\$ 102,184.00
9.03 2 Sludge Pumps, with Valves and Piping	43	\$ 91,000.00	26.67	\$ 24,269.70	46.66	\$ 42,480.60	26.67	\$ 24,269.70
<b>10.0 Washwater Recovery &amp; Recycle</b>								
10.01 2 Washwater Settling/Decant Basins with Sludge Collectors	105.8	\$ 2,762,000.00	14.18	\$ 390,233.60	47.26	\$ 1,300,595.20	38.56	\$ 1,061,171.20
10.02 Recycle Pump Station Wet Well	105.8	\$ 221,000.00	14.18	\$ 31,337.80	47.26	\$ 104,444.60	38.56	\$ 85,217.60
10.03 3 Recycle Pumps, with Valves and Discharge Piping	43	\$ 150,000.00	26.67	\$ 40,005.00	46.66	\$ 69,990.00	26.67	\$ 40,005.00
<b>11.0 Electrical Building</b>								
11.01 Electrical Building	105.8	\$ 671,000.00	14.18	\$ 95,147.80	47.26	\$ 317,114.60	38.56	\$ 258,737.60
11.02 5KV Motor Control Center & 480V Motor Control Center with Switch Board, Transformer and Circuit Breaker	43	\$ 513,000.00	26.67	\$ 136,817.10	46.66	\$ 239,365.80	26.67	\$ 136,817.10
<b>12.0 Yard Piping</b>								
12.01 36"/84"/80" Filtered Water Piping with Valves and Chemical Injection Vaults	105.8	\$ 1,267,000.00	14.18	\$ 179,860.60	47.26	\$ 598,784.20	38.56	\$ 488,555.20
12.02 72" Finished Water Piping with Valves, Finished Water Meter Vault with 48" Venturi and Valves	105.8	\$ 2,376,000.00	14.18	\$ 336,916.80	47.26	\$ 1,122,897.60	38.56	\$ 916,185.60
12.03 36" Waste Backwash Piping with Valves, and Chemical Injection Vault	105.8	\$ 774,000.00	14.18	\$ 109,753.20	47.26	\$ 365,792.40	38.56	\$ 298,454.40

**BCRUA Project  
Capacity and Cost  
Allocation**  
Updated: July 23, 2008

DESCRIPTION	CONSTRUCTED CAPACITY (MGD)	ESTIMATED COST	CEDAR PARK RESERVED CAPACITY (%)	CEDAR PARK COST	LEANDER RESERVED CAPACITY (%)	LEANDER COST	ROUND ROCK RESERVED CAPACITY (%)	ROUND ROCK COST
12.04 30" Backwash Water Piping with Valves	105.8	\$ 313,000.00	14.18	\$ 44,383.40	47.26	\$ 147,923.80	38.56	\$ 120,692.80
12.05 36" Waste Wastewater Piping with Valves	105.8	\$ 381,000.00	14.18	\$ 54,025.80	47.26	\$ 180,060.60	38.56	\$ 146,913.60
12.06 20" Wastewater Recycle Piping with Valves, and Recycle Meter Vault with 18" Venturi and Valves	105.8	\$ 379,000.00	14.18	\$ 53,742.20	47.26	\$ 179,115.40	38.56	\$ 146,142.40
12.07 12" Sludge Line, Drain Line and Potable Water Line with Valves	105.8	\$ 1,094,000.00	14.18	\$ 155,129.20	47.26	\$ 517,024.40	38.56	\$ 421,846.40
12.08 8" Fire Water Line, Double Check Valves	105.8	\$ 236,000.00	14.18	\$ 33,464.80	47.26	\$ 111,533.60	38.56	\$ 91,001.80
12.09 Additional Piping and Appurtenances	105.8	\$ 916,000.00	14.18	\$ 129,888.60	47.26	\$ 432,901.60	38.56	\$ 353,209.60
<b>13.0 Wastewater Lift Station</b>								
13.01 Wastewater Lift Station Wet Well, 480VAC Utility Service	105.8	\$ 187,000.00	14.18	\$ 26,516.60	47.26	\$ 88,376.20	38.56	\$ 72,107.20
13.02 2 Submersible Motors, Force Main, Piping, Valves and Relocation	43	\$ 599,000.00	26.67	\$ 159,753.30	46.66	\$ 279,493.40	26.67	\$ 159,753.30
<b>14.0 Civil / Site</b>								
14.01 Rock Berm, Silt Fence, Tree Protection, Seeding and Topsoil	105.8	\$ 60,000.00	14.18	\$ 8,508.00	47.26	\$ 28,356.00	38.56	\$ 23,136.00
14.02 Water Quality Pond	105.8	\$ 550,000.00	14.18	\$ 77,980.00	47.26	\$ 259,930.00	38.56	\$ 212,080.00
14.03 Roads - 2" HMAAC with 10 Base, Concrete Pavement	105.8	\$ 2,201,000.00	14.18	\$ 312,101.80	47.26	\$ 1,040,192.60	38.56	\$ 848,705.60
14.04 8' Coated Chain Link Fence, 8' Concrete Fence and Gates	105.8	\$ 672,000.00	14.18	\$ 81,109.60	47.26	\$ 270,327.20	38.56	\$ 220,583.20
14.05 Landscaping and Irrigation with Lines and Sprinklers	105.8	\$ 481,000.00	14.18	\$ 68,205.80	47.26	\$ 227,320.60	38.56	\$ 185,473.60
14.06 Yard Electrical	105.8	\$ 4,415,000.00	14.18	\$ 626,047.00	47.26	\$ 2,088,529.00	38.56	\$ 1,702,424.00
<b>Total Construction Cost (includes 10% Contingency)</b>		\$ 59,275,000.00		\$ 10,920,556.10		\$ 27,892,531.00		\$ 20,461,912.90
Construction		\$ 53,886,363.64						
Contingency (10% of Construction; included in each line item cost)		\$ 5,388,636.36						
<b>REGIONAL WTR. SUB-TOTAL</b>		\$ 88,528,522.22		\$ 12,282,729.20		\$ 32,262,384.20		\$ 23,981,409.80
<b>Cost Allocation Percentages</b>				17.9%		47.1%		35.0%
<b>TRANSMISSION WATER LINES</b>								
<b>Segment 1</b>								
Preliminary Engineering	105.8	\$ 211,215.00	14.18	\$ 29,950.29	47.26	\$ 99,820.21	38.56	\$ 81,444.50
Final Engineering	105.8	\$ 1,173,931.00	14.18	\$ 166,483.42	47.26	\$ 554,799.79	38.56	\$ 462,667.79
Easements	105.8	\$ 250,000.00	14.18	\$ 35,450.00	47.26	\$ 118,160.00	38.56	\$ 96,400.00
Construction	105.8	\$ 16,332,642.00	14.18	\$ 2,315,954.46	47.26	\$ 7,718,769.35	38.56	\$ 6,297,828.20
Contingency (10%)	105.8	\$ 1,833,254.20	14.18	\$ 231,595.45	47.26	\$ 771,875.93	38.56	\$ 629,782.82
<b>Total Construction (includes Construction plus Contingency)</b>	105.8	\$ 17,985,798.20	14.18	\$ 2,547,549.90	47.26	\$ 8,490,835.28	38.56	\$ 6,927,611.01
Construction Phase Services (2% of Construction)	105.8	\$ 359,316.92	14.18	\$ 50,951.00	47.26	\$ 169,812.71	38.56	\$ 138,552.22
<b>SEGMENT 1 SUB-TOTAL</b>		\$ 19,980,255.12		\$ 2,930,384.60		\$ 9,433,247.98		\$ 7,696,676.53
<b>Cost Allocation Percentages</b>				14.18%		47.26%		38.56%
<b>SEGMENT 2A</b>								
<i>Transmission Water Line, Segment 2A, construction is complete. Cost allocations based on Interlocal Agreement Regarding Construction of Regional Water Line dated March 2006 and amended April 2008.</i>								
Engineering/Project Management/Inspection/Administration	105.8	\$ 55,971.00	3.90	\$ 2,182.67	46.34	\$ 25,836.98	48.76	\$ 27,851.17
Easements	105.8	\$ -	14.18	\$ -	47.26	\$ -	38.56	\$ -
Construction	105.8	\$ 858,980.00	14.18	\$ 121,803.36	47.26	\$ 405,963.65	38.56	\$ 331,222.69
Construction - Cedar Park Additional Connection Payment		\$ 38,690.00		\$ 38,690.00		\$ -		\$ -
Construction - Leander Additional Valve Payment		\$ 22,207.00		\$ -		\$ 22,207.00		\$ -
<b>SEGMENT 2A SUB-TOTAL</b>		\$ 975,848.00		\$ 162,675.23		\$ 433,997.91		\$ 359,073.86
<b>Cost Allocation Percentages</b>				16.67%		46.63%		36.80%
<b>SEGMENT 2B</b>								
<i>Transmission Water Line, Segment 2B, construction is complete. Cost allocations based on Interlocal Agreement Regarding Construction of Regional Water Line dated March 2006 and amended April 2008.</i>								
Engineering/Project Management/Inspection/Administration	78.8	\$ 754,029.00	0	\$ -	48.22	\$ 363,592.78	51.78	\$ 390,436.22
Easements	78.8	\$ -	0	\$ -	48.22	\$ -	51.78	\$ -
Construction	78.8	\$ 8,678,440.00	0	\$ -	48.22	\$ 4,184,743.77	51.78	\$ 4,493,696.23
<b>SEGMENT 2B SUB-TOTAL</b>	78.8	\$ 9,432,469.00	0	\$ -	48.22	\$ 4,548,336.55	51.78	\$ 4,884,132.45
<b>Cost Allocation Percentages</b>				0.00%		48.22%		51.78%



**BCRUA Project  
Capacity and Cost  
Allocation  
Updated: July 23, 2008**

DESCRIPTION	CONSTRUCTED CAPACITY (MGD)	ESTIMATED COST	CEDAR PARK RESERVED CAPACITY (%)	CEDAR PARK COST	LEANDER RESERVED CAPACITY (%)	LEANDER COST	ROUND ROCK RESERVED CAPACITY (%)	ROUND ROCK COST
<b>SEGMENT 2C</b>								
Preliminary Engineering	78.8	\$ 191,919.00	14.18	\$27,214.11	47.26	\$ 90,700.92	38.56	\$ 74,009.97
Final Engineering	78.8	\$ 627,561.00	0	\$0.00	48.22	\$ 302,609.91	51.78	\$ 324,951.09
Easements (Based on 25% of Fee Simple Value for 50' Perm. Esmt.)	78.8	\$ 330,000.00	0	\$0.00	48.22	\$ 159,126.00	51.78	\$ 170,874.00
Construction	78.8	\$ 9,550,149.00	0	\$0.00	48.22	\$ 4,605,091.85	51.78	\$ 4,945,057.15
Contingency (5% of Construction)	78.8	\$ 477,507.45	0	\$0.00	48.22	\$ 230,264.09	51.78	\$ 247,233.36
Allowance for Materials and Labor Fluctuations (10% of Const.)	78.8	\$ 955,014.90	0	\$0.00	48.22	\$ 460,508.18	51.78	\$ 494,506.72
Total Construction (Includes Const., Contingency, & Allowance)	78.8	\$ 10,982,671.35	0	\$0.00	48.22	\$ 5,295,844.12	51.78	\$ 5,686,827.23
Construction Phase Services (2% of Construction)	78.8	\$ 219,553.43	0	\$0.00	48.22	\$ 105,918.88	51.78	\$ 113,736.54
<b>SEGMENT 2C SUB-TOTAL</b>		<b>\$ 12,351,804.73</b>		<b>\$ 27,214.11</b>		<b>\$ 5,354,197.84</b>		<b>\$ 6,370,392.82</b>
Cost Allocation Percentages				0.22%		48.21%		61.87%
<b>CONSTRUCTION MANAGEMENT SERVICES AND INSPECTION (3% OF CONSTRUCTION COST)</b>								
<i>Includes estimated construction cost for Floating Barge, Raw Water Line, WTP, and Transmission Mains 1 and 2C @ 3% for C.M.</i>								
<b>CONSTRUCTION MGMT/INSPECT SUB-TOTAL</b>		<b>\$ 4,043,383.45</b>		<b>\$ 930,283.21</b>		<b>\$ 1,906,784.18</b>		<b>\$ 1,506,526.09</b>
Cost Allocation Percentages				15.69%		47.16%		37.26%
<b>ANCILLARY SERVICES</b>								
Environmental Consultant - Barry Allison		\$ 471,155.00	14.18	\$ 68,609.78	47.26	\$ 222,697.85	38.56	\$ 181,677.37
Real Estate Acquisition Consultant - LAN		\$ 470,670.00	14.18	\$ 66,726.83	47.26	\$ 222,391.38	38.56	\$ 181,451.79
Condemnation Counsel - Kent Slick		\$ 150,000.00	14.18	\$ 21,270.00	47.26	\$ 70,890.00	38.56	\$ 57,840.00
Public Relations - Staats Faulkenburg		\$ 200,000.00	14.18	\$ 28,380.00	47.26	\$ 94,520.00	38.56	\$ 77,120.00
Public Relations Firm - Group Solutions RJW		\$ 320,000.00	14.18	\$ 45,376.00	47.26	\$ 151,232.00	38.56	\$ 123,392.00
Ancillary Services Sub-Total		\$ 1,611,725.00	14.18	\$ 228,542.61	47.26	\$ 761,701.24	38.56	\$ 621,481.18
<b>OPERATIONAL AND MAINTENANCE EXPENSES</b>								
General Manager Salary and Supplies (5 years)		\$ 425,917.00	14.18	\$ 60,395.03	47.26	\$ 201,288.37	38.56	\$ 164,233.60
Preliminary Engineering Report Services		\$ 162,300.00	15.75	\$ 23,987.25	41.39	\$ 63,036.97	42.86	\$ 65,275.78
Surveying - The Wallace Group - New Hope Line		\$ 17,551.00	15.89	\$ 2,806.40	40.51	\$ 7,109.81	43.60	\$ 7,634.69
Administration Fees - Preliminary/Final Design		\$ 84,000.00	14.18	\$ 11,911.20	47.26	\$ 39,698.40	38.56	\$ 32,390.40
O&M Sub-Total		\$ 679,768.00		\$ 99,098.89		\$ 311,133.65		\$ 269,534.46
<b>ANCILLARY SVCS/O&amp;M EXPENSES SUB-TOTAL</b>		<b>\$ 2,291,493.00</b>		<b>\$ 327,642.49</b>		<b>\$ 1,072,834.89</b>		<b>\$ 891,015.62</b>
Cost Allocation Percentages				14.30%		48.82%		36.86%
<b>BCRUA PROJECT TOTAL COST</b>		<b>\$ 171,596,451.14</b>		<b>\$ 24,877,638.27</b>		<b>\$ 81,031,380.72</b>		<b>\$ 65,687,432.15</b>
Cost Allocation Percentages				14.50%		47.22%		36.28%
<b>Note: Upon completion of the Project, the BCRUA is obligated to deliver up to the following quantities of treated water to each City at the Points of Delivery:</b>								
	Capacity (MGD)	% of Capacity						
Cedar Park	4.53	26.67						
Leander	7.94	46.86						
Round Rock	4.53	26.67						
Total	17.00	100						

**INTERLOCAL AGREEMENT REGARDING ANCILLARY  
CONSULTING SERVICES FOR REGIONAL WATER SYSTEM**

THE STATE OF TEXAS                   §  
  §       KNOW ALL BY THESE PRESENTS:  
COUNTY OF WILLIAMSON           §

**THIS INTERLOCAL AGREEMENT REGARDING ANCILLARY CONSULTING SERVICES FOR REGIONAL WATER SYSTEM ("Agreement")** is entered into between the City of Round Rock, Texas, a Texas home-rule city ("**Round Rock**"); the City of Cedar Park, Texas, a Texas home-rule city ("**Cedar Park**"), and the City of Leander, Texas, a Texas home-rule city ("**Leander**"). In this Agreement, Round Rock, Cedar Park and Leander are sometimes individually referred to as "**Party**" and collectively referred to as "**Parties**".

**Recitals**

**WHEREAS**, the growth of the Cities of Round Rock, Cedar Park and Leander necessitates the development of additional water treatment capacity for each of these communities;

**WHEREAS**, the Parties have agreed to jointly pursue a regional water supply system that will ultimately provide treatment capacity for an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties based on projected population growth;

**WHEREAS**, the Parties desire to proceed with consulting services, including preliminary and final engineering design, related to the regional water system project; and

**WHEREAS**, the purpose of this Agreement is to set forth the terms and conditions pursuant to which the Parties may authorize ancillary consulting services related to the regional water system project, and pursuant to which the Parties will cost participate in all costs and expenses related thereto.

**NOW, THEREFORE**, in consideration of the foregoing premises and the mutual promises and agreements of the Parties contained in this Agreement, the Parties agree as follows:

**I  
DEFINITIONS**

When used in this Agreement, capitalized terms not otherwise defined shall have the meanings set forth below:

**1.01** "Agreement" means this Interlocal Agreement Regarding Consulting Services for Regional Project.

**1.02** "Cedar Park" means the City of Cedar Park, Texas.

1.03 "City Managers Committee" means the committee consisting of the City Managers for Cedar Park, Leander, and Round Rock.

1.04 "Consulting Services" means the ancillary consulting services to be performed by a Project Consultant pursuant to a Consulting Services Contract. These services will be ancillary to and in support of the preliminary and final design of the Regional Project and the construction thereof.

1.05 "Consulting Services Contract(s)" means any contract(s) for ancillary consulting services to be unanimously approved by the Parties as indicated by execution of a Memorandum of Agreement and under which a Project Consultant shall provide Consulting Services.

1.06 "Consulting Services Costs" means all costs and expenses incurred by the Parties pursuant to the Consulting Services Contracts for Consulting Services. Each Party shall bear its share of the Consulting Services Costs in accordance with the Cost Allocation Percentage set forth herein.

1.07 "Consulting Services Fund" means a fund to be established and administered by the Contracting Party in accordance with Section 4.03 in order to provide monies to pay the Consulting Services Costs.

1.08 "Contracting Party" means the city that contracts with the Project Consultant to provide the Consulting Services.

1.09 "Cost Allocation Percentage" means the percentage of Consulting Services Costs to be paid by each Party. The Cost Allocation Percentage for each Party is as follows:

Cedar Park: 14.18%

Leander: 47.26%

Round Rock 38.56%

1.10 "Design & Oversight Committee" or "D.O. Committee" means the engineering representative(s) selected by each Party for purposes of overseeing the Regional Project in accordance with the PER and the Project Schedule.

1.11 "Effective Date" means the last date of execution of this Agreement by the Parties; provided all of the Parties must execute this Agreement for it to be effective.

1.12 "Leander" means the City of Leander, Texas.

1.13 "Memorandum of Agreement" means the memorandum to be executed by the City Manager for each Party memorializing the Parties' acceptance and approval of a Consulting Services Contract.

1.14 "Party" or "Parties" means Cedar Park, Round Rock, and/or Leander, individually or collectively, as applicable.

1.15 "PER" means the "Regional Water Supply Project Engineering Design Report" prepared by HDR Engineering, Inc. and dated November 2006.

1.16 "Project Consultant" means a person or firm who is a party to a Consulting Services Contract with the Parties.

1.17 "Regional Project" means the regional water supply system, which will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Parties, based on projected population growth, as more fully described in the PER.

1.18 "Round Rock" means the City of Round Rock, Texas.

## II.

### ANCILLARY CONSULTING SERVICES

#### 2.01 Ancillary Consulting Services.

(a) The Parties expect to contract with one or more Project Consultants to provide Consulting Services.

(b) The Parties agree that one City will serve as the Contracting Party for each Consulting Services Contract. The Contracting Party will have primary responsibility to oversee and administer the Consulting Services contract, but shall do so at all times in cooperation with the D.O. Committee. However, no Consulting Services Contract shall be approved without the unanimous written consent of the Parties as indicated in a jointly executed Memorandum of Agreement in the form attached hereto as Exhibit A. Each Party grants its City Manager discretionary authority to execute a Memorandum of Agreement hereunder.

(c) Once unanimously approved, the scope of Consulting Services, including any proposed changes to a Project Consultant's compensation in connection therewith, may only be modified by unanimous written authorization of the Parties, acting by and through their respective City Managers, which authorization shall be set forth in a written supplement to the Memorandum of Agreement previously executed by each Party. Each Party grants its City Manager discretionary authority to execute a written supplement to a previously approved Memorandum of Agreement.

#### 2.02 D.O. Committee Participation.

(a) Each Project Consultant shall work with and report to the D.O. Committee. The D.O. Committee shall prepare a schedule of meetings with each Project Consultant that shall be approved by all members of the D.O. Committee. The Contracting Party shall ensure that each Project Consultant works cooperatively with the D.O. Committee. The foregoing shall not be construed to prohibit any Party from communicating directly with a Project Consultant regarding the Consulting Services without the presence or participation of the other Parties, or from meeting with the Project Consultants when it is not practicable to schedule a meeting with the D.O. Committee.

(b) The D.O. Committee shall:

(i) Attend and participate in regular meetings with each Project Consultant to monitor the status of the Consulting Services and to provide direction and recommendations with respect thereto;

(ii) Review and unanimously approve in writing any revisions to the scope of Consulting Services to be performed by any Project Consultant;

(iii) Confirm in writing the final completion of Consulting Services under the Consulting Services Contracts in accordance with the PER and the Project Schedule; and

(iv) Address any other relevant matters relating to the Consulting Services.

(c) Within ten (10) business days of receipt of any preliminary and/or final reports prepared by a Project Consultant, the members of the D.O. Committee shall specify in writing to each other any objections regarding the draft reports, and any proposed revisions thereto. If any member of the D.O. Committee fails to object in writing to the report within the 10-business-day period, then that member shall be deemed to have approved the draft report. In the event that any member of the D.O. Committee timely objects to the draft report, then the D.O. Committee shall endeavor in good faith to resolve the matter by unanimous agreement. If the D.O. Committee cannot unanimously agree to the proper resolution within fifteen (15) business days, then the D.O. Committee shall refer the dispute to the City Managers Committee. The City Managers Committee shall work diligently and in good faith to resolve the dispute as quickly as possible so as not to jeopardize the completion of the Regional Project in accordance with the Project Schedule. If the City Managers Committee is unable to resolve a dispute after reasonable and good faith efforts, the Contracting Party may terminate the affected Consulting Services Contract.

### **2.03 Work Product.**

(a) Any Party is entitled to copies of any work product produced by the Project Consultants in connection with the Consulting Services. The Party requesting a copy of such information shall pay all reasonable costs incurred in preparing and furnishing the copies.

(b) In accordance with, and subject to the terms and conditions set forth in the Consulting Services Contracts, the Parties may utilize the work product produced by the Project Consultants for their own purposes.

## **III. PAYMENT OF CONSULTING SERVICES COSTS.**

### **3.01 Payment of Consulting Services Costs.**

(a) All Consulting Services Costs shall be shared by the Parties according to the Cost Allocation Percentages.

(b) The Parties agree that all Project Consultants shall be instructed to send all invoices to the Contracting Party. Upon receipt of each invoice from a Project Consultant, the Contracting Party shall review the invoice and confirm that the Consulting Services have been satisfactorily completed in accordance with the request for payment. Thereafter, the Contracting Party shall submit notice to the other Parties indicating each Party's share of the Project Consultant's invoice in accordance with each Party's Cost Allocation Percentage. The other Parties shall forward payment therefor within ten (10) business days of the receipt of notice.

(c) In the event of any disputes among the Parties, the Parties agree that their respective City Managers shall work diligently and in good faith to resolve the dispute as quickly as possible so as not to jeopardize the completion of the Regional Project. If the City Managers are unable to resolve a dispute after reasonable and good faith efforts, the Contracting Party may terminate the affected Consulting Services Contract.

#### IV. GENERAL PROVISIONS

**4.01 Authority.** This Agreement is made in part under the authority conferred in Chapter 791, *Texas Government Code* and Section 402.001, *Texas Local Government Code*.

**4.02 Severability.** The provisions of this Agreement are severable and, if any provision of this Agreement is held to be invalid for any reason by a court or agency of competent jurisdiction, the remainder of this Agreement will not be affected and this Agreement will be construed as if the invalid portion had never been contained herein.

**4.03 Payments from Current Revenues.** Any payments required to be made by a Party under this Agreement will be paid from current revenues or other funds lawfully available to the Party for such purpose.

**4.04 Cooperation.** The Parties agree to cooperate at all times in good faith to effectuate the purposes and intent of this Agreement.

**4.05 Entire Agreement.** Except as otherwise expressly provided herein, this Agreement contains the entire agreement of the Parties regarding the sharing of costs for the Consulting Services and supersedes all prior or contemporaneous understandings or representations, whether oral or written, regarding the subject matter. The Parties confirm that further agreements regarding the Regional Project are contemplated and will not be affected or limited by this Agreement.

**4.06 Amendments.** Any amendment of this Agreement must be in writing and will be effective if signed by the authorized representatives of the Parties.

**4.07 Applicable Law; Venue.** This Agreement will be construed in accordance with Texas law. Venue for any action arising hereunder will be in Williamson County, Texas.

**4.08 Notices.** Any notices given under this Agreement will be effective if (i) forwarded to a Party by hand-delivery; (ii) transmitted to a Party by confirmed telecopy; or (iii) deposited with the U.S. Postal Service, postage prepaid, certified, to the address of the Party indicated below:

**CEDAR PARK:**

600 North Bell Blvd.  
Cedar Park, Texas 78613  
Attn: Sam Roberts  
Telephone: (512) 258-4121 x6321  
Facsimile: (512) 258-6083  
Email: [roberts@ci.cedar-park.tx.us](mailto:roberts@ci.cedar-park.tx.us)

with copy to:

Leonard Smith  
P.O. Box 684633  
Austin, Texas 78768  
Telephone: (512) 474-6707  
Facsimile: (512) 474-6706  
Email: [lsmith@leonardsmithlaw.com](mailto:lsmith@leonardsmithlaw.com)

**ROUND ROCK:**

221 East Main  
Round Rock, Texas 78664  
Attn: Jim Nuse  
Telephone: (512) 218-5410  
Facsimile: (512) 218-7097  
Email: [jnuse@round-rock.tx.us](mailto:jnuse@round-rock.tx.us)

with copy to:

Steve Sheets  
309 E. Main Street  
Round Rock, Texas 78664-5264  
Telephone: (512) 255-8877  
Facsimile: (512) 255-8986  
Email: [slsheets@sheets-crossfield.com](mailto:slsheets@sheets-crossfield.com)

**Leander:**

P.O. Box 319  
Leander, Texas 78646-0319  
Attn: Wayne Watts  
Telephone: (512) 259-1178  
Facsimile: (512) 259-1605  
Email: [w.watts@ci.leander.tx.us](mailto:w.watts@ci.leander.tx.us)

with copy to:

Diana Granger  
223 W. Anderson Lane, Suite A-105  
Austin, Texas 78752  
Telephone: (512) 323-5778  
Telecopy: (512) 323-5773  
Email: [attorneys@cityattorneytexas.com](mailto:attorneys@cityattorneytexas.com)

**4.09 Force Majeure.** Parties shall not be deemed in violation of this Contract if prevented from performing any of their obligations hereunder by reasons for which they are not responsible or circumstances beyond their control. However, notice of such impediment or delay in performance must be timely given, and all reasonable efforts undertaken to mitigate its effects.

**4.10 Exhibits.** The following exhibits are attached to this Agreement and incorporated herein by reference:

Exhibit A - Memorandum of Agreement

**4.11 Counterparts. Effect of Partial Execution.** This Agreement may be executed simultaneously in multiple counterparts, each of which will be deemed an original, but all of which will constitute the same instrument.

**4.12 Authority.** Each Party represents and warrants that it has the full right, power and authority to execute this Agreement

*[SIGNATURES ON FOLLOWING PAGES]*



**CITY OF ROUND ROCK:**

ATTEST:

\_\_\_\_\_  
Christine Martinez, City Secretary

By: \_\_\_\_\_  
Nyle Maxwell, Mayor

Date: \_\_\_\_\_

**CITY OF CEDAR PARK:**

ATTEST:

\_\_\_\_\_  
LeAnn Quinn, City Secretary

By: \_\_\_\_\_  
Bob Lemon, Mayor

Date: \_\_\_\_\_

**CITY OF LEANDER:**

ATTEST:

Debbie Haile, City Secretary

By: John Cowman, Mayor

Date: \_\_\_\_\_

Exhibit A

Memorandum of Agreement

To: Design and Oversight Committee  
From: Jim Nuse, Round Rock City Manager  
Biff Johnson, Leander City Manager  
Brenda Eivens, Cedar Park City Manager  
Date: January 10, 2007  
Re: *[Insert Name of Project Consultant]*

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Pursuant to the Interlocal Agreement Regarding Ancillary Consulting Services for Regional Water System, this Memorandum of Agreement is to confirm that the City of Round Rock, the City of Leander, and the City of Cedar Park have agreed to the Consulting Services Contract between the Project Consultant and \_\_\_\_\_ (the "Contracting Party"), a copy of which is attached hereto.

City of Round Rock

\_\_\_\_\_  
Jim Nuse, City Manager

Date: \_\_\_\_\_

City of Leander

\_\_\_\_\_  
Biff Johnson, City Manager

Date: \_\_\_\_\_

City of Cedar Park

\_\_\_\_\_  
Brenda Eivens, City Manager

Date: \_\_\_\_\_

RESOLUTION NO. \_\_\_\_\_

**A RESOLUTION BY THE BOARD OF DIRECTORS OF THE BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. AUTHORIZING THE ISSUANCE OF "BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. CITY OF ROUND ROCK, TEXAS CONTRACT REVENUE BONDS, (BRUSHY CREEK REGIONAL WATER TREATMENT AND DISTRIBUTION PROJECT)"; ESTABLISHING THE PROCEDURES FOR SELLING AND DELIVERING THE BONDS AND RESOLVING OTHER MATTERS INCIDENT AND RELATING TO THE ISSUANCE, PAYMENT, SECURITY, SALE, AND DELIVERY OF SUCH BONDS**

**ADOPTED \_\_\_\_\_, 2008**

RESOLUTION NO. \_\_\_\_\_

**A RESOLUTION BY THE BOARD OF DIRECTORS OF THE BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. AUTHORIZING THE ISSUANCE OF "BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. CITY OF ROUND ROCK, TEXAS CONTRACT REVENUE BONDS, (BRUSHY CREEK REGIONAL WATER TREATMENT AND DISTRIBUTION PROJECT)"; ESTABLISHING THE PROCEDURES FOR SELLING AND DELIVERING THE BONDS AND RESOLVING OTHER MATTERS INCIDENT AND RELATING TO THE ISSUANCE, PAYMENT, SECURITY, SALE, AND DELIVERY OF SUCH BONDS**

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RESOLUTION NO. \_\_\_\_\_

**A RESOLUTION BY THE BOARD OF DIRECTORS OF THE BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. AUTHORIZING THE ISSUANCE OF "BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. CITY OF ROUND ROCK, TEXAS CONTRACT REVENUE BONDS, (BRUSHY CREEK REGIONAL WATER TREATMENT AND DISTRIBUTION PROJECT)"; ESTABLISHING THE PROCEDURES FOR SELLING AND DELIVERING THE BONDS AND RESOLVING OTHER MATTERS INCIDENT AND RELATING TO THE ISSUANCE, PAYMENT, SECURITY, SALE, AND DELIVERY OF SUCH BONDS**

**WHEREAS**, the Brushy Creek Regional Utility Authority, Inc. (the "BCRUA") is a non-profit corporation of the State of Texas (the "State"), created by the Cities of Cedar Park, Leander and Round Rock, Texas (collectively, the "Cities" or singularly, a "City") and existing under the laws of the State, including Subchapter D of Chapter 431, as amended, Texas Transportation Code (the "Authority Act"); and

**WHEREAS**, pursuant to the Authority Act, the BCRUA, is empowered to acquire and construct water facilities including water conservation, storage, transportation, treatment and distribution facilities and to deliver this water to the Cities; and

**WHEREAS**, the Authority Act also authorizes the BCRUA acting through its Board of Directors (the "Board") to issue revenue bonds to finance such water projects, payable solely from the revenues derived from payments to be made to the BCRUA by each respective City for which a series of bonds are issued for the purpose of defraying such City's share of the cost of financing, acquiring, and constructing the BCRUA Project (as hereinafter defined); and

**WHEREAS**, the BCRUA initially expects to issue separate series of such revenue bonds for the City of Round Rock, Texas ("Round Rock"), the City of Leander, Texas ("Leander") and the City of Cedar Park, Texas ("Cedar Park") to finance their share of the BCRUA Project, with each such series payable from and secured solely by payments made by each respective City under the Contract (as hereinafter defined); and

**WHEREAS**, pursuant to the Authority Act, the BCRUA and the Cities have entered into a Master Contract for the Financing, Construction and Operation of the BCRUA Regional Water Treatment and Distribution Project, dated as of September 2, 2008 (the "Contract") pursuant to which the BCRUA has agreed to design, finance, construct, own, acquire, maintain and operate the BCRUA Project in a manner that will allow the BCRUA to deliver potable water to the Cities on a regional basis and under which each of the Cities agree to pay their share of the BCRUA Project and to make payments to or on behalf of the BCRUA in amounts sufficient to meet all of the BCRUA's obligations under the Contract including relating to a City's respective series of bonds issued to finance and refinance a City's share of the BCRUA Project and to own, operate and maintain the BCRUA Project; and

**WHEREAS**, Round Rock has requested that the BCRUA issue a separate series of revenue bonds in an aggregate principal amount not to exceed \$65,870,000 pursuant to the Contract to finance Round Rock's share of the BCRUA Project (the "Bonds"); and

**WHEREAS**, Cedar Park and Leander have also requested the BCRUA issue separate series of contract revenue bonds pursuant to the Contract to finance their respective share of the BCRUA Project Costs and the three separate series of contract revenue bonds for the Cities are expected to be issued and delivered simultaneously; and

**WHEREAS**, the Cities and the BCRUA have approved the Contract; and

**WHEREAS**, this Resolution constitutes a Bond Resolution as that term is defined in the Contract; and

**WHEREAS**, Round Rock has agreed pursuant to Article X of the Contract to provide continuing disclosure of certain financial and operating data so long as the Bonds are Outstanding; and

**WHEREAS**, the principal of the Bonds and the interest thereon are and shall be solely payable from and secured by a lien on and pledge of the portion of the Annual Payments designated as "Bond Payments" to be made by Round Rock pursuant to the Contract in amounts sufficient to pay and redeem, and provide for the payment of the principal of, premium, if any, and interest on the Bonds, when due, and the fees and expenses of the Paying Agent/Registrar for the Bonds, all as required by this Resolution.

**NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. THAT:**

**Section 1. DEFINITIONS.** In addition to the definitions set forth in the preamble of this Resolution, the terms used in this Resolution (except as may be otherwise indicated in the FORM OF BOND) and not otherwise defined shall have the meanings given in Exhibit "A" to this Resolution attached hereto and made a part hereof.

**Section 2. AMOUNT, PURPOSE AND DESIGNATION OF THE BONDS.** (a) *Amount and Designation.* The BCRUA's bonds issued pursuant to this Resolution shall each be entitled "BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC. CITY OF ROUND ROCK, TEXAS CONTRACT REVENUE BONDS (BRUSHY CREEK REGIONAL WATER TREATMENT AND DISTRIBUTION PROJECT)" and are hereby authorized to be issued and delivered in an aggregate maximum principal amount not to exceed \$65,870,000. The title of the Bonds shall be designated by the year in which such Bonds are awarded pursuant to Section 3 below. The authority of the BCRUA Representative to execute and deliver an Award Certificate for the Bonds shall expire at the close of business on \_\_\_\_\_, 2009.

(b) *Purpose.* The Bonds are to be issued for the following purposes to: (i) PAY ROUND ROCK'S SHARE OF THE COSTS OF CONSTRUCTING, ACQUIRING, IMPROVING AND/OR EXPANDING THE BCRUA PROJECT INCLUDING BUT NOT LIMITED TO LAND INTERESTS, TEMPORARY INTAKE STRUCTURE, STORAGE TANKS, LINES, BOOSTER PUMPS, TREATMENT FACILITIES AND OTHER APPURTENANCES NECESSARY FOR THE DELIVERY, TREATMENT AND TRANSMISSION OF RAW WATER AND ACQUIRING EASEMENTS, RIGHTS-OF-WAY AND OTHER INTERESTS IN LAND OR OTHER FACILITIES NECESSARY FOR THE WITHDRAWAL, DIVERSION DELIVERY, TRANSMISSION AND TREATMENT OF RAW WATER ALL AS DESCRIBED IN THE PRELIMINARY DESIGN REPORT AND (ii) PAY THE COSTS OF ISSUANCE OF THE BONDS.

**Section 3. DATE, DENOMINATIONS, NUMBERS, MATURITIES AND TERMS OF BONDS.** (a) *Terms of the Bonds.* The Bonds shall initially be issued, sold, and delivered hereunder as fully registered bonds, without interest coupons, numbered consecutively from R-1 upward (except the initial Bond delivered to the Attorney General of the State which shall be numbered T-1), payable to the respective initial Registered Owners thereof in an Authorized Denomination, maturing not later than August 1, 2039, serially or otherwise on the dates, in the years and in the principal amounts, respectively, dated, all as set forth in the Award Certificate executed by the BCRUA Representative.

(b) *Award Certificate.* As authorized by the Authority Act, the BCRUA Representative is hereby authorized, appointed, and designated to act on behalf of the Board in selling and delivering the Bonds and carrying out the other procedures specified in this Resolution, including determining and fixing the date the Bonds, any additional or different designation or title by which the Bonds shall be known, the price at which the Bonds will be sold, the years in which the Bonds will mature, the principal amount to mature in each of such years, the aggregate principal amount of the Bonds, the rate or rates of interest to be borne by each maturity, the interest payment periods, the dates, price, and terms upon and at which the Bonds shall be subject to redemption prior to maturity at the option of the Board, as well as any mandatory sinking fund redemption provisions for the Bonds and all other matters relating to the issuance, sale, and delivery of the Bonds, all of which shall be specified in a certificate of the BCRUA Representative (the "Award Certificate"); provided that (i) the price to be paid for the Bonds shall not be less than 95% of the aggregate original principal amount thereof plus accrued interest, if any, thereon from its date to its delivery and (ii) the Bonds shall not bear interest at a rate in excess of the maximum rate allowed by law.

It is further provided, however, that, notwithstanding the foregoing provisions, the Bonds shall not be delivered unless prior to delivery of the Bonds the Award Certificate has been executed and delivered as required by this Resolution.

The Award Certificate is hereby incorporated in and made a part of this Resolution and shall be filed in the minutes of the Board as a part of this Resolution.

(c) *Sale of the Bonds.* To achieve advantageous borrowing costs for the BCRUA, the Bonds shall be sold to the Texas Water Development Board (the "Purchaser") at the price as set forth in the Award Certificate.

(d) *In General.* The Bonds (i) may and shall be redeemed prior to the respective scheduled maturity dates, (ii) may be assigned and transferred, (iii) may be exchanged for other Bonds, (iv) shall have the characteristics, (v) shall be signed and sealed, and the principal of and interest on the Bonds shall be payable, all as provided, and in the manner required or indicated, in the FORM OF BOND set forth in Exhibit "B" to this Resolution and as determined by the BCRUA Representative as provided herein, with such changes and additions as are required to be consistent with the terms and provisions shown in the Award Certificate.

**Section 4. INTEREST.** The Bonds shall bear interest, calculated on the basis of a 360-day year composed of twelve 30-day months, from their date of delivery as set forth in the Award Certificate, until maturity or redemption, at the rate or rates set forth in the Award Certificate. Interest shall be payable to the Registered Owner of any such Bond in the manner provided and on the dates stated in the FORM OF BOND set forth in Exhibit "B" to this Resolution and the Award Certificate.

**Section 5. REGISTRATION, TRANSFER, AND EXCHANGE; AUTHENTICATION; BOOK-ENTRY-ONLY SYSTEM.** (a) *Paying Agent/Registrar.* Wells Fargo Bank, National Association is hereby appointed the Paying Agent/Registrar for the Bonds. The BCRUA Representative is authorized to enter into and carry out a Paying Agent/Registrar Agreement with the Paying Agent/Registrar with respect to the Bonds in substantially the form and substance presented to the Board in connection with the approval of this Resolution with such changes as are acceptable to the BCRUA Representative.

(b) *Registration Books.* The Board shall keep or cause to be kept at the designated corporate trust office of the Paying Agent/Registrar in Austin, Texas (the "Designated Trust Office") the Registration Books and the Board hereby appoints the Paying Agent/Registrar as its registrar and transfer agent to keep such books or records and make such registrations of transfers, exchanges, and replacements under such reasonable regulations as the Board and Paying Agent/Registrar may prescribe; and the Paying Agent/Registrar shall make such registrations, transfers, exchanges, and replacements as herein provided. The Paying Agent/Registrar shall obtain and record in the Registration Books the address of the Registered Owner of each Bond to which payments with respect to the Bonds shall be mailed, as herein provided; but it shall be the duty of each Registered Owner to notify the Paying Agent/Registrar in writing of the address to which payments shall be mailed, and such interest payments shall not be mailed unless such notice has been given. The Board shall have the right to inspect the Registration Books at the Designated Trust Office of the Paying Agent/Registrar during regular business hours, but otherwise the Paying Agent/Registrar shall keep the Registration Books confidential and, unless otherwise required by law, shall not permit their inspection by any other entity. A copy of the Registration Books shall be maintained in the State.

(c) *Ownership of Bonds.* The entity or person in whose name any Bond shall be registered in the Registration Books at any time shall be deemed and treated as the absolute owner thereof for all purposes of this Resolution, whether or not such Bond shall be overdue, and, to the extent permitted by law, the Board and the Paying Agent/Registrar shall not be affected by any notice to the contrary; and payment of, or on account of, the principal of, premium, if any, and interest on any such Bond shall be made only to

such Registered Owner. All such payments shall be valid and effectual to satisfy and discharge the liability upon such Bond to the extent of the sum or sums so paid.

(d) **Payment of Bonds and Interest.** The Paying Agent/Registrar shall further act as the paying agent for paying the principal of, premium, if any, and interest on the Bonds, all as provided in this Resolution. The Paying Agent/ Registrar shall keep proper records of all payments made by the Board and the Paying Agent/Registrar with respect to the Bonds.

(e) **Authentication.** The Bonds initially issued and delivered pursuant to this Resolution shall be authenticated by the Paying Agent/Registrar by execution of the Paying Agent/Registrar's Authentication Certificate unless they have been approved by the Attorney General of the State and registered by the Comptroller of Public Accounts of the State, and on each substitute Bond issued in exchange for any Bond or Bonds issued under this Resolution the Paying Agent/Registrar shall execute the PAYING AGENT/REGISTRAR'S AUTHENTICATION CERTIFICATE (the "Authentication Certificate"). The Authentication Certificate shall be in the form set forth in the FORM OF BOND in Exhibit "B" attached hereto.

(f) **Transfer, Exchange, or Replacement.** Each Bond issued and delivered pursuant to this Resolution, to the extent of the unpaid or unredeemed principal amount thereof, may, upon surrender of such Bond at the Designated Trust Office of the Paying Agent/Registrar, together with a written request therefor duly executed by the Registered Owner or the assignee or assignees thereof, or its or their duly authorized attorneys or representatives, with guarantee of signatures satisfactory to the Paying Agent/Registrar, may, at the option of the Registered Owner or such assignee or assignees, as appropriate, be exchanged for fully registered Bonds, without interest coupons, in the appropriate form prescribed in the FORM OF BOND set forth in Exhibit "B" to this Resolution, in any Authorized Denomination (subject to the requirement hereinafter stated that each substitute Bond shall be of the same Series and have a single stated maturity date), as requested in writing by such Registered Owner or such assignee or assignees, in an aggregate principal amount equal to the unpaid or unredeemed principal amount of any Bond or Bonds so surrendered, and payable to the appropriate Registered Owner, assignee, or assignees, as the case may be. If a portion of any Bond shall be redeemed prior to its scheduled maturity as provided herein, a substitute Bond or Bonds having the same series designation and maturity date, bearing interest at the same rate, and payable in the same manner, in Authorized Denominations at the request of the Registered Owner, and in aggregate principal amount equal to the unredeemed portion thereof, will be issued to the Registered Owner upon surrender thereof for cancellation. If any Bond or portion thereof is assigned and transferred, each Bond issued in exchange therefor shall have the same series designation and maturity date and bear interest at the same rate and payable in the same manner as the Bond for which it is being exchanged. Each substitute Bond shall bear a letter and/or number to distinguish it from each other Bond. The Paying Agent/Registrar shall exchange or replace Bonds as provided herein, and each fully registered Bond delivered in exchange for or replacement of any Bond or portion thereof as permitted or required by any provision of this Resolution shall constitute one of the Bonds for all purposes of this Resolution, and may again be exchanged or replaced. On each substitute Bond issued in exchange for or replacement of any Bond or Bonds issued under this Resolution there shall be printed an Authentication Certificate, in the form set forth in Exhibit "B" to this Resolution. An authorized representative of the Paying Agent/Registrar shall, before the delivery of any such Bond, date and manually sign the Authentication

Certificate, and, except as provided in (e) above, no such Bond shall be deemed to be issued or outstanding unless the Authentication Certificate is so executed. The Paying Agent/Registrar promptly shall cancel all Bonds surrendered for transfer, exchange, or replacement. No additional orders or resolutions need be passed or adopted by the Board or any other body or person so as to accomplish the foregoing transfer, exchange, or replacement of any Bond or portion thereof, and the Paying Agent/Registrar shall provide for the printing, execution, and delivery of the substitute Bonds in the manner prescribed herein, and said Bonds shall be in typed or printed form as determined by the BCRUA Representative. Pursuant to Subtitle D, Texas Government Code and particularly Section 1201.063, thereof, the duty of transfer, exchange, or replacement of Bonds as aforesaid is hereby imposed upon the Paying Agent/Registrar, and, upon the execution of the Authentication Certificate, the exchanged or replaced Bond shall be valid, incontestable, and enforceable in the same manner and with the same effect as the Bonds which were originally issued pursuant to this Resolution. The Board shall pay the Paying Agent/Registrar's standard or customary fees and charges, if any, for transferring, and exchanging any Bond or any portion thereof, but the one requesting any such transfer and exchange shall pay any taxes or governmental charges required to be paid with respect thereto as a condition precedent to the exercise of such privilege. The Paying Agent/Registrar shall not be required to make any such transfer, exchange, or replacement of Bonds or any portion thereof (i) during the period commencing with the close of business on any Record Date and ending with the opening of business on the next following interest payment date, or (ii) with respect to any Bond or portion thereof called for redemption prior to maturity, within 45 days prior to its redemption date. To the extent possible, any new Bond issued in an exchange, replacement, or transfer of a Bond will be delivered to the Registered Owner or assignee of the Registered Owner not more than three business days after the receipt of the Bonds to be canceled and the written request as described above.

(g) *Substitute Paying Agent/Registrar.* The Board covenants with the Registered Owners of the Bonds that at all times while the Bonds are outstanding the Board will provide a competent and legally qualified bank, trust company, financial institution, or other agency to act as and perform the services of Paying Agent/Registrar for the Bonds under this Resolution, and that the Paying Agent/Registrar will be one entity. The Board reserves the right to, and may, at its option, change the Paying Agent/Registrar upon not less than ninety (90) days written notice to the Paying Agent/Registrar, to be effective not later than sixty (60) days prior to the next principal or interest payment date after such notice. In the event that the entity at any time acting as Paying Agent/Registrar (or its successor by merger, acquisition, or other method) should resign or otherwise cease to act as such, the Board covenants that promptly it will appoint a competent and legally qualified bank, trust company, financial institution, or other agency to act as Paying Agent/Registrar under this Resolution. Upon any change in the Paying Agent/Registrar, the previous Paying Agent/Registrar promptly shall transfer and deliver the Registration Books (or a copy thereof), along with all other pertinent books and records relating to the Bonds, to the new Paying Agent/Registrar designated and appointed by the Board. Upon any change in the Paying Agent/Registrar, the Board promptly will cause a written notice thereof to be sent by the new Paying Agent/Registrar to each Registered Owner of the Bonds, by United States mail, first-class postage prepaid, which notice also shall give the address of the new Paying Agent/Registrar. By accepting the position and performing as such, each Paying Agent/Registrar shall be deemed to have agreed to the provisions of this Resolution, and a certified copy of this Resolution shall be delivered to each Paying Agent/Registrar.

(h) ***Book-Entry-Only System.*** The Bonds issued in exchange for the Bonds initially issued and delivered to the Purchaser shall be issued in the form of a separate single fully registered Bond for each of the maturities thereof registered in the name of Cede & Co., as nominee of DTC, and except as provided in subsection (i) hereof, all of the Outstanding Bonds shall be registered in the name of Cede & Co., as nominee of DTC. With respect to Bonds registered in the name of Cede & Co., as nominee of DTC, the Board and the Paying Agent/Registrar shall have no responsibility or obligation to any DTC Participant or to any person on behalf of whom such a DTC Participant holds an interest on the Bonds. Without limiting the immediately preceding sentence, the Board and the Paying Agent/Registrar shall have no responsibility or obligation with respect to (i) the accuracy of the records of DTC, Cede & Co. or any DTC Participant with respect to any ownership interest in the Bonds, (ii) the delivery to any DTC Participant or any other person, other than a Registered Owner, as shown on the Registration Books, of any notice with respect to the Bonds, including any notice of redemption, or (iii) the payment to any DTC Participant or any other person, other than a Registered Owner, as shown in the Registration Books of any amount with respect to principal of, premium, if any, or interest on the Bonds. Notwithstanding any other provision of this Resolution to the contrary but to the extent permitted by law, the Board and the Paying Agent/Registrar shall be entitled to treat and consider the person in whose name each Bond is registered in the Registration Books as the absolute owner of such Bond for the purpose of payment of principal, premium, if any, and interest, with respect to such Bond, for the purpose of giving notices of redemption and other matters with respect to such Bond, for the purpose of registering transfers with respect to such Bond, and for all other purposes whatsoever. The Paying Agent/Registrar shall pay all principal of, premium, if any, and interest on the Bonds only to or upon the order of the respective Registered Owners, as shown in the Registration Books as provided in this Resolution, or their respective attorneys duly authorized in writing, and all such payments shall be valid and effective to fully satisfy and discharge the Board's obligations with respect to payment of principal of, premium, if any, and interest on the Bonds to the extent of the sum or sums so paid. No person other than an Registered Owner, as shown in the Registration Books, shall receive a Bond certificate evidencing the obligation of the Board to make payments of principal, premium, if any, and interest pursuant to this Resolution. Upon delivery by DTC to the Paying Agent/Registrar of written notice to the effect that DTC has determined to substitute a new nominee in place of Cede & Co., and subject to the provisions in this Resolution with respect to interest checks being mailed to the Registered Owner at the close of business on the Record Date, the word "Cede & Co." in this Resolution shall refer to such new nominee of DTC.

(i) ***Successor Securities Depository; Transfers Outside Book-Entry-Only System.*** In the event that the Board or the Paying Agent/Registrar determines that DTC is incapable of discharging its responsibilities described herein and in the representation letter of the Board to DTC (as described in Section 35 of this Resolution) or DTC determines to discontinue providing its services with respect to the Bonds, the Board shall (i) appoint a successor securities depository, qualified to act as such under Section 17A of the Securities and Exchange Act of 1934, as amended, notify DTC and DTC Participants of the appointment of such successor securities depository and transfer one or more separate Bonds to such successor securities depository or (ii) notify DTC and DTC Participants of the availability through DTC of Bonds and transfer one or more separate Bonds to DTC Participants having Bonds credited to their DTC accounts. In such event, the Bonds shall no longer be restricted to being registered in the Registration Books in the name of Cede & Co., as nominee of DTC, but may be registered in the name of the successor



securities depository, or its nominee, or in whatever name or names Registered Owners transferring or exchanging Bonds shall designate, in accordance with the provisions of this Resolution.

(j) *Payments to Cede & Co.* Notwithstanding any other provision of this Resolution to the contrary, so long as any Bond is registered in the name of Cede & Co., as nominee of DTC, all payments with respect to principal of, premium, if any, and interest on such Bond and all notices with respect to such Bond shall be made and given, respectively, in the manner provided in the representation letter of the BCRUA to DTC.

(k) *Notice of Redemption.* In addition to the method of providing a notice of redemption set forth in the FORM OF BOND, the Paying Agent/Registrar shall give notice of redemption of Bonds by mail, first-class postage prepaid at least thirty (30) days prior to a redemption date to each registered securities depository and to any national information service that disseminates redemption notices. In addition, in the event of a redemption caused by an advance refunding of the Bonds, the Paying Agent/Registrar shall send a second notice of redemption to the persons specified in the immediately preceding sentence at least thirty (30) days but not more than ninety (90) days prior to the actual redemption date. Any notice sent to the registered securities depositories or such national information services shall be sent so that they are received at least two (2) days prior to the general mailing or publication date of such notice. The Paying Agent/Registrar shall also send a notice of prepayment or redemption to the Registered Owner of any Bond who has not sent the Bonds in for redemption sixty (60) days after the redemption date. Each notice of redemption, whether required in the FORM OF BOND or in this Section, shall contain a description of the Bonds to be redeemed including the complete name of the Bonds, the Series, the date of issue, the interest rate or rates, the maturity date, the CUSIP number, a reference to the certificate numbers and the amounts called of each certificate, the publication and mailing date for the notice, the date of redemption, the redemption price, the name of the Paying Agent/Registrar and the address at which the Bonds may be redeemed, including a contact person and telephone number. All redemption payments made by the Paying Agent/Registrar to the registered owners of the Bonds shall include a CUSIP number relating to each amount paid to such Registered Owner.

(l) *Conditional Notice of Redemption.* With respect to any optional redemption of the Bonds, unless certain prerequisites to such redemption required by the Resolution have been met and moneys sufficient to pay the principal of and premium, if any, and interest on the Bonds to be redeemed shall have been received by the Paying Agent/Registrar prior to the giving of such notice of redemption, such notice shall state that said redemption may, at the option of the BCRUA, be conditional upon the satisfaction of such prerequisites and receipt of such moneys by the Paying Agent/Registrar on or prior to the date fixed for such redemption, or upon any prerequisite set forth in such notice of redemption. If a conditional notice of redemption is given and such prerequisites to the redemption and sufficient moneys are not received, such notice shall be of no force and effect, the BCRUA shall not redeem such Bonds and the Paying Agent/Registrar shall give notice, in the manner in which the notice of redemption was given, to the effect that the Bonds have not been redeemed.

**Section 6. FORM OF BOND.** The form of the Bond, including the form of the Authentication Certificate, the form of Assignment and the form of Registration Certificate of the Comptroller of Public Accounts of the State, with respect to the Bonds initially issued and delivered pursuant to this Resolution,

shall be, respectively, substantially as set forth in Exhibit "B", with such appropriate variations, omissions, or insertions as are permitted or required by this Resolution and any Award Certificate including specifically information relating to payment dates, the Bond date and redemption provisions.

**Section 7. PLEDGE OF BOND PAYMENTS.** (a) *Pledge.* The BCRUA hereby covenants and agrees that the Bond Payments are hereby irrevocably pledged to the payment and security of the Bonds Similarly Secured including the establishment and maintenance of the special funds or accounts created and established on the books and records of the BCRUA for the payment and security thereof, all as hereinafter provided; and it is hereby resolved that the Bonds Similarly Secured, and the interest thereon, shall constitute a lien on and pledge of the Bond Payments and be valid and binding without any physical delivery thereof or further act by the BCRUA, and the lien created hereby on the Bond Payments for the payment and security of the Bonds Similarly Secured shall be prior in right and claim as to any other indebtedness, liability, or obligation of the BCRUA or the BCRUA Project payable pursuant to the terms of the Contract. The BCRUA shall deposit the Bond Payments, as collected and received, into a separate fund and account on the books and records of the BCRUA known as the "Round Rock Debt Service Fund," which is hereby created, to be utilized pursuant to the Contract and Sections 9 and 12 hereof to pay the Bonds; provided, however, that the Board of the BCRUA may utilize any revenues, including those generated by the Contract, in excess of the Debt Service Requirements on the Bonds Similarly Secured for any lawful purpose in accordance with this Resolution and the Contract.

(b) *Perfection of Pledge.* Chapter 1208, as amended, Texas Government Code, applies to the issuance of the Bonds Similarly Secured and the lien on and pledge of Bond Payments granted by the BCRUA under subsection (a) of this Section, and such pledge is therefore valid, effective, and perfected. If State law is amended at any time while the Bonds Similarly Secured are outstanding and unpaid such that the pledge of the Bond Payments granted by the BCRUA is to be subject to the filing requirements of Chapter 9, Texas Business & Commerce Code, then in order to preserve to the Registered Owners of the Bonds Similarly Secured the perfection of the security interest in this pledge, the Board agrees to take such measures as it determines are reasonable and necessary under State law to comply with the applicable provisions of Chapter 9, as amended, Texas Business & Commerce Code and enable a filing to perfect the security interest in this pledge to occur.

**Section 8. RATES AND CHARGES.** For the benefit of the Registered Owners of the Bonds Similarly Secured and in addition to all provisions and covenants in the laws of the State and in this Resolution, the Contract between the BCRUA and Round Rock expressly stipulates and agrees, while any of the Bonds Similarly Secured are Outstanding, Round Rock will fix and collect such rates and charges for services to be supplied by the Round Rock System as will produce gross revenues at all times during the term of the Contract in an amount equal to pay all of the expenses of operation and maintenance of the Round Rock System including Annual Payments and Bond Payments under the Contract and all other amounts required by the laws and the provisions of the ordinances or resolutions authorizing the Round Rock Utility Bonds or other obligations now or hereafter outstanding payable, in whole or in part, from the net revenues of the Round Rock System, including the amounts required to pay all principal of and interest on such Round Rock Utility Bonds and other obligations. The BCRUA hereby expressly stipulates that it will maintain rates and charges through the Bond Payments to meet the debt service requirements

on the Bond Similarly Secured and agrees that it will take all appropriate action to enforce such terms of the Contract while any of the Bonds Similarly Secured are Outstanding.

The Registered Owner shall never have the right to demand payment for the Bonds out of any funds raised or to be raised from taxation by Round Rock or the BCRUA.

**Section 9. DISTRIBUTION OF BOND PAYMENTS.** After the Bond Payments have been received by the BCRUA such shall be deposited into the Debt Service Fund as required by this Resolution.

**Section 10. DEBT SERVICE FUND; CONSTRUCTION FUND; ESCROW FUND.** (a) *Debt Service Fund.* For purposes of providing funds to pay the principal of and interest on the Bonds Similarly Secured as the same become due and payable, the BCRUA agrees to maintain, at the Depository, a separate and special fund or account to be created and known as the "Brushy Creek Regional Utility Authority, Inc. City of Round Rock, Texas Contract Revenue Bonds (Brushy Creek Regional Water Treatment and Distribution Project), Debt Service Fund" (the "Debt Service Fund"). The BCRUA covenants that there shall be deposited into the Debt Service Fund prior to each principal and interest payment date solely from the available Bond Payments an amount equal to one hundred per cent (100%) of the amount required to fully pay the interest on and the principal of the Bonds Similarly Secured then falling due and payable, such deposits to pay maturing principal and accrued interest on the Bonds Similarly Secured to be made in substantially equal monthly installments on or before the first day of each month, beginning \_\_\_\_\_, 2008. If the Bond Payments in any month are insufficient to make the required payments into the Debt Service Fund, then the amount of any deficiency in such payment shall be added to the amount otherwise required to be paid into the Debt Service Fund in the next month. The BCRUA hereby also establishes a subaccount in the Debt Service Fund and shall deposit any capitalized interest for use in paying the initial Debt Service Requirements on the Bonds.

The required monthly deposits to the Debt Service Fund for the payment of principal of and interest on the Bonds Similarly Secured shall continue to be made as hereinabove provided until such time as (i) the total amount on deposit in the Debt Service Fund is equal to the amount required to fully pay and discharge all Outstanding Bonds Similarly Secured (principal and interest) or, (ii) the Bonds Similarly Secured are no longer Outstanding.

Any surplus proceeds from the sale of the Bonds, including investment income therefrom, not expended for authorized purposes shall be deposited into the Debt Service Fund, and such amounts (i.e., accrued and investment interest) so deposited into the Debt Service Fund shall reduce the sum otherwise required to be deposited in the Debt Service Fund from Bond Payments.

(b) *Construction Fund.* The BCRUA hereby creates and establishes and shall maintain on the books and records of the BCRUA a separate fund or account to be entitled the "Brushy Creek Regional Utility Authority, Inc. City of Round Rock, Texas Contract Revenue Bonds (Brushy Creek Regional Water Treatment and Distribution Project), Construction Fund" for use by the BCRUA for payment of Round Rock's share of the BCRUA Project. The BCRUA shall deposit the net proceeds from the sale of the Bonds released from escrow as provided in Section 10(c) below into the Construction Fund as provided in this Resolution. Funds in the Construction Fund shall be used for payment of Round Rock's

share of BCRUA Project Costs. Upon payment of all such costs, any moneys remaining on deposit in the Construction Fund shall be transferred to the Debt Service Fund.

(c) **Escrow Fund.** The Escrow Agreement between the BCRUA and the escrow agent named therein (the "Escrow Agent") substantially in the form and content presented at this meeting, specifying the duties and responsibilities of the BCRUA and the Escrow Agent, is hereby approved and the BCRUA Representative is hereby authorized and directed to execute the Escrow Agreement on behalf of the BCRUA. The Escrow Agent named in the Escrow Agreement is hereby appointed as the Escrow Agent pursuant to such Escrow Agreement.

On the closing date, the BCRUA shall cause the proceeds from the sale of the Bonds to be deposited into the Escrow Fund or, if agreed to by the Purchaser, all or a portion of the proceeds of the Bonds may be deposited into the Construction Fund.

Moneys disbursed from the Escrow Fund established pursuant to the Escrow Agreement shall be applied only for the costs of issuance of the Bonds or the BCRUA Project Costs.

The security for, and the investment of, funds on deposit in the Escrow Fund shall be governed by the provisions of the Escrow Agreement.

**Section 11. DEFICIENCIES - EXCESS BOND PAYMENTS.** (a) **Deficiencies.** If on any occasion there shall not be sufficient Bond Payments to make the required deposits into the Debt Service Fund, then such deficiency shall be cured as soon as possible from the next available unallocated Bond Payments and such payments shall be in addition to the amounts required to be paid into these Funds or accounts during such month or months.

(b) **Excess Bond Payments** Subject to making the required deposits to the Debt Service Fund when and as required by this Resolution or any resolution authorizing the issuance of Additional Bonds, any excess Bond Payments may be used by the BCRUA for any lawful purpose including, but not limited to, the redemption of any Bonds Similarly Secured.

**Section 12. PAYMENT OF BONDS.** While any of the Bonds Similarly Secured are Outstanding, the General Manager or other authorized BCRUA official, shall cause to be transferred to the Paying Agent/Registrar therefor, from funds on deposit in the Debt Service Fund, if necessary, amounts sufficient to fully pay and discharge promptly each installment of interest on and principal of the Bonds Similarly Secured as such installment accrues or matures; such transfer of funds must be made in such manner as will cause immediately available funds to be deposited with the Paying Agent/Registrar for the Bonds at the close of the Business Day next preceding the date a debt service payment is due on the Bonds Similarly Secured.

**Section 13. INVESTMENTS.** Funds held in any fund or account created, established, or maintained pursuant to this Resolution shall, at the option of the BCRUA, be invested as permitted by the provisions of the Public Funds Investment Act, as amended, Chapter 2256, Texas Government Code, or

any other law, and secured (to the extent not insured by the Federal Deposit Insurance Corporation) to the fullest extent required by the Public Funds Collateral Act, as amended, Chapter 2257, Texas Government Code. All interest and income derived from deposits and investments in any fund shall immediately be credited to, and any losses debited from, the fund from which such funds were derived. All such investments shall be sold promptly when necessary to prevent any default in connection with the Bonds.

**Section 14. ISSUANCE OF ADDITIONAL BONDS.** In addition to the right to issue bonds of inferior lien as authorized by the laws of this State, the BCRUA reserves the right hereafter to issue Additional Bonds. The Additional Bonds, when issued, shall be payable from and secured by a lien on and pledge of the Bond Payments in the same manner and to the same extent as the Bonds and the Bonds Similarly Secured, and shall in all respects be of equal dignity. The Additional Bonds may be issued in one or more series provided, however, that no Additional Bonds, shall be issued unless and until the following conditions have been met:

(i) Except for a refunding to cure a default, the BCRUA is not then in default as to any covenant, condition or obligation prescribed in the resolutions authorizing the issuance of the Bonds Similarly Secured or the Contract (including any amendment or supplement thereto) and the funds under the resolution authorizing the same contains the amounts then required to be therein;

(ii) A consulting engineer certifies to the BCRUA the need for an estimated amount of additional financing required for completion, expansion, enlargement or improvement of the BCRUA Project as now or hereafter defined in the Contract; provided, however this certification shall not be necessary for the issuance of any refunding bonds;

(iii) Round Rock, shall have approved the resolution(s) authorizing the issuance of the Additional Bonds as to form and content and acknowledged that the payment of principal of and interest on such Additional Bonds is payable, in whole or in part, from the Bond Payments to be made to the BCRUA under and pursuant to the Contract;

(iv) The resolution authorizing the issuance of the Additional Bonds provides for deposits to be made to the Debt Service Fund in amounts sufficient to pay the principal of and interest on such Additional Bonds as the same become due; and

(v) Based upon an opinion of legal counsel to the BCRUA that there are legal, valid and bindings contracts then in effect pursuant to which Round Rock and others, if any, which are parties to such contracts are obligated to make payments to the BCRUA during each fiscal year (including periods when services of the BCRUA Project may not be available to such contracting parties and others) in such amounts as shall be necessary to provide to the BCRUA sufficient funds to pay when due all principal and interest on all Bonds and Additional Bonds to be outstanding after the issuance of the proposed Additional Bonds.

The Bonds Similarly Secured may be refunded (pursuant to any law then available) upon such terms and conditions as the Board of the BCRUA may deem to be in the best interest of the BCRUA; provided, however, such refunding bonds do not have to comply with paragraph (ii) hereof.

**Section 15. SPECIAL PROJECT BONDS.** The BCRUA further reserves the right to issue bonds in one or more installments for the purchase, construction, improvement, extension, replacement, enlargement or repair of utility facilities necessary under a contract or contracts with persons, corporations, municipal corporations, political subdivisions, or entities including Round Rock, such bonds to be payable from and secured by the proceeds of such contract or contracts (other than the Contract). The BCRUA further reserves the right to refund such bonds and secure the payment of the debt service requirements on the refunding bonds in the same manner or as otherwise permitted by the laws of the State.

**Section 16. MAINTENANCE OF BCRUA PROJECT - INSURANCE.** The BCRUA covenants, agrees, and affirms its covenants that while the Bonds Similarly Secured remain outstanding it will maintain and operate the BCRUA Project with all possible efficiency and maintain casualty and other insurance on the properties of the BCRUA Project and its operations of a kind and in such amounts customarily carried by municipal corporations in the State engaged in a *similar* type of business (which may include an adequate program of self insurance); and that it will faithfully and punctually perform all duties with reference to the BCRUA Project required by the laws of the State. All money received from losses under such insurance policies, other than public liability policies, shall be retained for the benefit of the Registered Owners of the Bonds Similarly Secured until and unless the proceeds are paid out in making good the loss or damage in respect of which such proceeds are received, either by replacing the property destroyed or repairing the property damaged, and adequate provision for making good such loss or damage must be made within ninety (90) days after the date of loss. The payment of premiums for all insurance policies required under the provisions hereof shall be considered Maintenance and Operating Expenses of the BCRUA Project. Nothing in this Resolution shall be construed as requiring the BCRUA to expend any funds which are derived from sources other than the operation of the BCRUA Project but nothing herein shall be construed as preventing the BCRUA from doing so.

**Section 17. RECORDS AND ACCOUNTS - ANNUAL AUDIT.** The BCRUA covenants, agrees, and affirms its covenants that so long as any of the Bonds Similarly Secured remain outstanding, it will keep and maintain separate and complete records and accounts pertaining to the operations of the BCRUA Project in which complete and correct entries shall be made of all transactions relating thereto as provided by applicable law. The Registered Owners of any Bonds or any duly authorized agent or agents of such Registered Owners shall have the right to inspect the BCRUA Project and all properties comprising the same. The BCRUA further agrees that following (and in no event later than six (6) months after) the close of each Fiscal Year, it will cause an audit of such books and accounts to be made by an independent firm of Certified Public Accountants. Expenses incurred in making the annual audit of the operations of the BCRUA Project are to be regarded as Maintenance and Operating Expenses of the BCRUA Project.

**Section 18. SALE OR ENCUMBRANCE OF BCRUA PROJECT.** While any Bonds remain Outstanding, the BCRUA will not sell, dispose of or further encumber the BCRUA Project or any substantial part thereof; provided, however, that this provision shall not prevent the BCRUA from (i) pledging the Bond Payments to Additional Bonds or Special Project Bonds as set forth in Sections 14 and 15 of this Resolution or (ii) disposing of any part of the BCRUA Project which is being replaced or is deemed by the BCRUA to be obsolete, worn out, surplus or no longer needed for the proper operation of the BCRUA Project. Any agreement pursuant to which the BCRUA contracts with a person, corporation, municipal corporation or political subdivision to operate the BCRUA Project or to lease and/or operate

all or part of the BCRUA Project shall not be considered as an encumbrance of the BCRUA Project; provided, however, no such agreement shall impair the pledge and lien on the Bond Payments.

**Section 19. COMPETITION.** To the extent it legally may, the BCRUA will not grant any franchise or permit for the acquisition, construction or operation of any competing facilities which might be used as a substitute for the BCRUA Project and will prohibit the operation of any such competing facilities.

**Section 20. SPECIAL COVENANTS.** The BCRUA further covenants and agrees that: (a) *Title.* The BCRUA lawfully owns or will own and is or will be lawfully possessed of the lands or easements upon which its BCRUA Project is and will be located, and has or will purchase good and indefeasible estate in such lands in fee simple, or has or will lawfully obtain any necessary easements to operate the BCRUA Project, and it warrants that it has or will obtain and will defend, the title to all the aforesaid lands and easements for the benefit of the Registered Owners of the Bonds against the claims and demands of all persons whomsoever, that it is lawfully qualified to pledge the Bond Payments to the payment of the Bonds Similarly Secured, in the manner prescribed herein, and that it has lawfully exercised such rights.

(b) *Liens.* The BCRUA will from time to time and before the same become delinquent pay and discharge all taxes, assessments, and governmental charges, if any, which shall be lawfully imposed upon it, or its BCRUA Project, and it will pay all lawful claims for rents, royalties, labor, materials, and supplies which if unpaid might by law become a lien or charge upon its BCRUA Project, provided, however, that no such tax, assessment, or charge, and that no such claims which might be or other lien or charge, shall be required to be paid while the validity of the same shall be contested in good faith by the BCRUA.

(c) *Performance.* The BCRUA will faithfully perform at all times any and all covenants, undertakings, stipulations, and provisions contained in the resolutions authorizing the issuance of Bonds Similarly Secured, and in each and every Bond Similarly Secured and pay from the Bond Payments the principal of and interest on every Bond Similarly Secured on the dates and in the places and manner prescribed in such resolutions and Bonds Similarly Secured; and that it will, at the times and in the manner prescribed, or cause to be deposited from the Bond Payments the amounts required to be deposited into the Debt Service Fund; and the Registered Owner of the Bonds Similarly Secured may require the BCRUA, its officials, agents, and employees to carry out, respect, or enforce the covenants and obligations of this Resolution or any resolution authorizing the issuance of Bonds Similarly Secured including, but without limitation, the use and filing of mandamus proceedings, in any court of competent jurisdiction, against the BCRUA, its officials, agents, and employees.

(d) *Legal Authority.* The BCRUA is duly authorized under the laws of the State to issue the Bonds Similarly Secured; that all action on its part for the authorization and issuance of the Bonds Similarly Secured has been duly and effectively taken, and the Bonds Similarly Secured in the hands of the Registered Owners thereof are and will be valid and enforceable special obligations of the BCRUA in accordance with their terms payable solely from the Bond Payments.

(e) *Budget.* The BCRUA will prepare, adopt, and place into effect an annual budget (the "Annual Budget") for Maintenance and Operation Expenses of the BCRUA Project for each Fiscal Year, including in each Annual Budget such items as are customarily and reasonably contained in a utility system budget under generally accepted accounting procedures.

(f) *Permits.* The BCRUA will comply with all of the terms and conditions of any and all franchises, permits, and authorizations applicable to or necessary with respect to the BCRUA Project and which have been obtained from any governmental agency; and the BCRUA has or will obtain and keep in full force and effect all franchises, permits, authorizations, and other requirements applicable to or necessary with respect to the acquisition, construction, equipment, operation, and maintenance of the BCRUA Project.

**Section 21. LIMITED OBLIGATIONS OF THE BCRUA.** The Bonds Similarly Secured are limited, special obligations of the BCRUA payable from and equally and ratably secured solely by a lien on and pledge of the Bond Payments, and the Registered Owners thereof shall never have the right to demand payment of the principal or interest on the Bonds Similarly Secured from any funds raised or to be raised through taxation by Round Rock or the BCRUA.

**Section 22. DEFAULT AND REMEDIES.** (a) *Events of Default.* Each of the following occurrences or events for the purpose of this Resolution is hereby declared to be an Event of Default:

(i) the failure to make payment of the principal of or interest on any of the Bonds when the same becomes due and payable; or

(ii) default in the performance or observance of any other covenant, agreement or obligation of the BCRUA, the failure to perform which materially, adversely affects the rights of the Registered Owners of the Bonds, including, but not limited to, their prospect or ability to be repaid in accordance with this Resolution, and, if such default is capable of cure, the continuation thereof for a period of sixty (60) days after notice of such default is given by any Registered Owner to the BCRUA; or

(iii) a default by Round Rock under the Contract.

(b) *Remedies for Event of Default.*

(i) Upon the happening of any Event of Default, then and in every case, any Registered Owner or an authorized representative thereof, including, but not limited to, a trustee or trustees therefor, may proceed against the BCRUA, or any official, officer or employee of the BCRUA in their official capacity, for the purpose of protecting and enforcing the rights of the Registered Owners under this Resolution, by mandamus or other suit, action or special proceeding in equity or at law, in any court of competent jurisdiction, for any relief permitted by law, including the specific performance of any covenant or agreement contained herein, or thereby to enjoin any act or thing that may be unlawful or in violation of any right of the Registered Owners hereunder or



any combination of such remedies. The Registered Owners are third party beneficiaries to the Contract with the ability to enforce the provisions of the Contract for such period that a default exists under the Contract.

(ii) It is provided that all such proceedings shall be instituted and maintained for the equal benefit of all Registered Owners of Bonds then Outstanding.

(iii) As long as an Insurer is not in payment default on the related Insurance Policy for the Bonds, the Insurer of a Series shall be deemed to be the sole Registered Owner of such Bonds issued by it for purposes of enforcing remedies in the Event of Default under this Resolution.

(c) *Remedies Not Exclusive.*

(i) No remedy herein conferred or reserved is intended to be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or under the Bonds or now or hereafter existing at law or in equity; provided, however, that notwithstanding any other provision of this Resolution, the right to accelerate the debt evidenced by the Bonds shall not be available as a remedy under this Resolution.

(ii) The exercise of any remedy herein conferred or reserved shall not be deemed a waiver of any other available remedy.

(iii) By accepting the delivery of a Bond authorized under this Resolution, such Registered Owner agrees that the certifications required to effectuate any covenants or representations contained in this Resolution do not and shall never constitute or give rise to a personal or pecuniary liability or charge against the officers, employees or trustees of the BCRUA or the Board.

(iv) None of the members of the Board of Directors, nor any other official or officer, agent, or employee of the BCRUA, shall be charged personally by the Registered Owners with any liability, or be held personally liable to the Registered Owners under any term or provision of this Resolution, or because of any Event of Default or alleged Event of Default under this Resolution.

**Section 23. AMENDMENT OF RESOLUTION.** (a) *Amendments Without Consent.* This Resolution and the rights and obligations of the Board and of the Registered Owners of the Bonds may be modified or amended at any time without notice to or the consent of any Registered Owner of the Bonds or any Bond similarly secured, solely for any one or more of the following purposes:

(i) To add to the covenants and agreements of the Board contained in this Resolution, other covenants and agreements thereafter to be observed, or to surrender any right or power reserved to or conferred upon the Board in this Resolution;

(ii) To cure any ambiguity or inconsistency, or to cure or correct any defective provisions contained in this Resolution, upon receipt by the Board of an opinion of counsel, that the same is needed for such purpose, and will more clearly express the intent of this Resolution;

(iii) To supplement the security for the Bonds, replace or provide additional Credit Agreement, or change the form of the Bonds or make such other changes in the provisions hereof as the Board may deem necessary or desirable and which shall not, in the judgment of the Board, materially adversely affect the interests of the owners of the Outstanding Bonds;

(iv) To make any changes or amendments requested by any bond rating agency then rating or requested to rate the Bonds, as a condition to the issuance or maintenance of a rating, which changes or amendments do not, in the judgment of the Board, materially adversely affect the interests of the owners of the Outstanding Bonds;

(v) To make such changes, modifications or amendments as are permitted by Section 30(c) of this Resolution;

(vi) To make such other changes in the provisions hereof as the Board may deem necessary or desirable and which shall not, in the judgment of the Board, materially adversely affect the interests of the owners of the Outstanding Bonds; or

(vii) To assign the Contract to a trustee.

(b) *Amendments With Consent.* Subject to the other provisions of this Resolution, the Registered Owners of Outstanding Bonds aggregating 51% in Outstanding Principal Amount shall have the right from time to time to approve any amendment, other than amendments described in Subsection (a) of this Section, to this Resolution which may be deemed necessary or desirable by the Board; provided, however, that nothing herein contained shall permit or be construed to permit, without the approval of the owners of all of the Outstanding Bonds, the amendment of the terms and conditions in this Resolution or in the Bonds so as to:

- (1) Make any change in the maturity of the Outstanding Bonds;
- (2) Reduce the rate of interest borne by the Outstanding Bonds;
- (3) Reduce the amount of the principal payable on the Outstanding Bonds;
- (4) Modify the terms of payment of principal of or interest on the Outstanding Bonds, or impose any conditions with respect to such payment;
- (5) Affect the rights of the owners of less than all Bonds then Outstanding; or
- (6) Change the minimum percentage of the Outstanding Principal Amount of Bonds necessary for consent to such amendment.

(c) *Notice.* (i) If at any time the Board shall desire to amend this Resolution other than pursuant to (a) above, the Board shall cause notice of the proposed amendment to be published in a financial newspaper or journal of general circulation in The City of New York, New York or the State including in the Texas Bond Reporter once during each calendar week for at least two (2) successive calendar weeks. Such notice shall briefly set forth the nature of the proposed amendment and shall state that a copy thereof is on file at the principal office of the Paying Agent/Registrar for inspection by all owners of Bonds. Such publication is not required, however, if the Board gives or causes to be given such notice in writing to each Registered Owner of Bonds.

(ii) Copies of any modification or amendment to this Resolution shall be sent to Standard & Poor's Ratings Services and Moody's Investors Service, Inc. at least ten (10) days prior to the effective date thereof.

(d) *Receipt of Consents.* Whenever at any time not less than thirty (30) days, and within one (1) year, from the date of the first publication of said notice or other service of written notice of the proposed amendment the Board shall receive an instrument or instruments executed by all of the owners or the owners of at least 51% in Outstanding Principal Amount of Bonds, as appropriate, which instrument or instruments shall refer to the proposed amendment described in said notice and which specifically consent to and approve such amendment in substantially the form of the copy thereof on file as aforesaid, the Board may adopt the amendatory resolution in substantially the same form.

(e) *Effect of Amendments.* Upon the adoption by the Board of any resolution to amend this Resolution pursuant to the provisions of this Section, this Resolution shall be deemed to be amended in accordance with the amendatory resolution, and the respective rights, duties, and obligations of the Board and all the owners of then Outstanding Bonds and all future Bonds shall thereafter be determined, exercised, and enforced under the resolution and this Resolution, as amended.

(f) *Consent Irrevocable.* Any consent given by any owner of Bonds pursuant to the provisions of this Section shall be irrevocable for a period of six (6) months from the date of the first publication or other service of the notice provided for in this Section, and shall be conclusive and binding upon all future owners of the same Bonds during such period. Such consent may be revoked at any time after six (6) months from the date of the first publication of such notice by the owner who gave such consent, or by a successor in title, by filing notice thereof with the Registrar and the Board, but such revocation shall not be effective if the owners of 51% in Outstanding Principal Amount of Bonds, prior to the attempted revocation, consented to and approved the amendment.

(g) *Ownership.* For the purpose of this Section, the ownership and other matters relating to all Bonds registered as to ownership shall be determined from the Registration Books kept by the Paying Agent/Registrar therefor. The Paying Agent/Registrar may conclusively assume that such ownership continues until written notice to the contrary is served upon the Paying Agent/Registrar.

(h) *Insurer Consent.* Notwithstanding the foregoing provisions of this Section, so long as any Insurer is not in payment default under its policy, no amendment or supplement to this Resolution may become effective except upon obtaining the prior written consent of any such Insurer.

**Section 24. COVENANTS REGARDING TAX-EXEMPTION OF INTEREST ON THE BONDS.** (a) *Covenants.* The Board covenants to take any action necessary to assure, or refrain from any action which would adversely affect, the treatment of the Bonds as obligations described in section 103 of the Internal Revenue Code of 1986, as amended (the "IRS Code"), the interest on which is not includable in the "gross income" of the holder for purposes of federal income taxation. In furtherance thereof, the Board covenants as follows:

(1) to take any action to assure that no more than 10 percent of the proceeds of the Bonds or the projects financed or refinanced therewith (less amounts deposited to a reserve fund, if any) are used for any "private business use," as defined in section 141(b)(6) of the IRS Code or, if more than 10 percent of the proceeds of the Bonds or the projects financed or refinanced therewith are so used, such amounts, whether or not received by the Board, with respect to such private business use, do not, under the terms of this Resolution or any underlying arrangement, directly or indirectly, secure or provide for the payment of more than 10 percent of the debt service on the Bonds, in contravention of section 141(b)(2) of the IRS Code;

(2) to take any action to assure that in the event that the "private business use" described in subsection (1) hereof exceeds 5 percent of the proceeds of the Bonds or the projects financed or refinanced therewith (less amounts deposited into a reserve fund, if any) then the amount in excess of 5 percent is used for a "private business use" which is "related" and not "disproportionate," within the meaning of section 141(b)(3) of the IRS Code, to the governmental use;

(3) to take any action to assure that no amount which is greater than the lesser of \$5,000,000, or 5 percent of the proceeds of the Bonds (less amounts deposited into a reserve fund, if any) is directly or indirectly used to finance loans to persons, other than state or local governmental units, in contravention of section 141(c) of the IRS Code;

(4) to refrain from taking any action which would otherwise result in the Bonds being treated as "private activity bonds" within the meaning of section 141(b) of the IRS Code;

(5) to refrain from taking any action that would result in the Bonds being "federally guaranteed" within the meaning of section 149(b) of the IRS Code;

(6) to refrain from using any portion of the proceeds of the Bonds, directly or indirectly, to acquire or to replace funds which were used, directly or indirectly, to acquire investment property (as defined in section 148(b)(2) of the IRS Code) which produces a materially higher yield over the term of the Bonds, other than investment property acquired with:

(A) proceeds of the Bonds invested for a reasonable temporary period of three (3) years or less or, in the case of a refunding bond, for a period of thirty (30) days or less until such proceeds are needed for the purpose for which the Bonds are issued,

(B) amounts invested in a bona fide debt service fund, within the meaning of section 1.148-1(b) of the Treasury Regulations, and

(C) amounts deposited in any reasonably required reserve or replacement fund to the extent such amounts do not exceed ten (10) percent of the proceeds of the Bonds;

(7) to otherwise restrict the use of the proceeds of the Bonds or amounts treated as proceeds of the Bonds, as may be necessary, so that the Tax-Exempt Bonds do not otherwise contravene the requirements of section 148 of the IRS Code (relating to arbitrage) and, to the extent applicable, section 149(d) of the IRS Code (relating to advance refundings); and

(8) to pay to the United States of America at least once during each five-year period (beginning on the date of delivery of the Bonds) an amount that is at least equal to 90 percent of the "Excess Earnings," within the meaning of section 148(f) of the IRS Code and to pay to the United States of America, not later than sixty (60) days after the Bonds have been paid in full, 100 percent of the amount then required to be paid as a result of Excess Earnings under section 148(f) of the IRS Code.

(b) *Rebate Fund.* In order to facilitate compliance with the above covenant (8), a "Rebate Fund" is hereby established by the Board for the sole benefit of the United States of America, and such fund shall not be subject to the claim of any other person, including without limitation the bondholders. The Rebate Fund is established for the additional purpose of compliance with section 148 of the IRS Code.

(c) *Proceeds.* The Board understands that the term "proceeds" includes "disposition proceeds" as defined in the Treasury Regulations and, in the case of refunding bonds, transferred proceeds (if any) and proceeds of the refunded bonds expended prior to the date of issuance of the Bonds. It is the understanding of the Board that the covenants contained herein are intended to assure compliance with the IRS Code and any regulations or rulings promulgated by the U.S. Department of the Treasury pursuant thereto. In the event that regulations or rulings are hereafter promulgated which modify or expand provisions of the IRS Code, as applicable to the Bonds, the BCRUA will not be required to comply with any covenant contained herein to the extent that such failure to comply, in the opinion of nationally recognized bond counsel, will not adversely affect the exemption from federal income taxation of interest on the Bonds under section 103 of the IRS Code. In the event that regulations or rulings are hereafter promulgated which impose additional requirements which are applicable to the Bonds, the BCRUA agrees to comply with the additional requirements to the extent necessary, in the opinion of nationally recognized bond counsel, to preserve the exemption from federal income taxation of interest on the Bonds under section 103 of the IRS Code. In furtherance of such intention, the BCRUA hereby authorizes and directs the BCRUA Representative to execute any documents, certificates or reports required by the IRS Code and to make such elections, on behalf of the BCRUA, which may be permitted by the IRS Code as are consistent with the purpose for the issuance of the Bonds.

(d) *Allocation Of, and Limitation On, Expenditures for the Project.* The BCRUA covenants to account for the expenditure of sale proceeds and investment earnings to be used for the purposes described in Section 2 of this Resolution (the "Project") on its books and records in accordance with the requirements of the IRS Code. The Board recognizes that in order for the proceeds to be considered used for the reimbursement of costs, the proceeds must be allocated to expenditures within 18 months of the later of the date that (1) the expenditure is made, or (2) the Project is completed; but in no event later than three years after the date on which the original expenditure is paid. The foregoing notwithstanding, the Board recognizes that in order for proceeds to be expended under the IRS Code, the sale proceeds or investment earnings must be expended no more than sixty (60) days after the earlier of (1) the fifth (5<sup>th</sup>) anniversary of the delivery of the Bonds, or (2) the date the Bonds are retired. The Board agrees to obtain the advice of nationally-recognized bond counsel if such expenditure fails to comply with the foregoing to assure that such expenditure will not adversely affect the tax-exempt status of the Bonds. For purposes of this subsection, the Board shall not be obligated to comply with this covenant if it obtains an opinion of nationally-recognized bond counsel to the effect that such failure to comply will not adversely affect the excludability for federal income tax purposes from gross income of the interest.

(e) *Disposition of Project.* The BCRUA covenants that the property constituting the BCRUA Project will not be sold or otherwise disposed in a transaction resulting in the receipt by the Board of cash or other compensation, unless the Board obtains an opinion of nationally-recognized bond counsel that such sale or other disposition will not adversely affect the tax-exempt status of the Bonds. For purposes of this subsection, the portion of the property comprising personal property and disposed of in the ordinary course shall not be treated as a transaction resulting in the receipt of cash or other compensation. For purposes of this subsection, the Board shall not be obligated to comply with this covenant if it obtains an opinion of nationally-recognized bond counsel to the effect that such failure to comply will not adversely affect the excludability for federal income tax purposes from gross income of the interest.

**Section 25. RESOLUTION TO CONSTITUTE A CONTRACT; EQUAL SECURITY.** In consideration of the acceptance of the Bonds, the issuance of which is authorized hereunder, by those who shall hold the same from time to time, this Resolution shall be deemed to be and shall constitute a contract between the Board and the Registered Owners from time to time of the Bonds and the pledge made in this Resolution by the Board and the covenants and agreements set forth in this Resolution to be performed by the Board shall be for the equal and proportionate benefit, security, and protection of all Registered Owners, without preference, priority, or distinction as to security or otherwise of any of the Bonds authorized hereunder over any of the others by reason of time of issuance, sale, or maturity thereof or otherwise for any cause whatsoever, except as expressly provided in or permitted by this Resolution.

**Section 26. SEVERABILITY OF INVALID PROVISIONS.** If any one or more of the covenants, agreements, or provisions herein contained shall be held contrary to any express provisions of law or contrary to the policy of express law, though not expressly prohibited, or against public policy, or shall for any reason whatsoever be held invalid, then such covenants, agreements, or provisions shall be null and void and shall be deemed separable from the remaining covenants, agreements, or provisions and shall in no way affect the validity of any of the other provisions hereof or of the Bonds issued hereunder.

**Section 27. PAYMENT AND PERFORMANCE ON BUSINESS DAYS.** Except as provided to the contrary in the FORM OF BOND, whenever under the terms of this Resolution or the Bonds, the performance date of any provision hereof or thereof, including the payment of principal of or interest on the Bonds, shall occur on a day other than a Business Day, then the performance thereof, including the payment of principal of and interest on the Bonds, need not be made on such day but may be performed or paid, as the case may be, on the next succeeding Business Day with the same force and effect as if made on the date of performance or payment.

**Section 28. LIMITATION OF BENEFITS WITH RESPECT TO THE RESOLUTION.** With the exception of the rights or benefits herein expressly conferred, nothing expressed or contained herein or implied from the provisions of this Resolution or the Bonds is intended or should be construed to confer upon or give to any person other than the Board, the Registered Owners, and the Paying Agent/Registrar, any legal or equitable right, remedy, or claim under or by reason of or in respect to this Resolution or any covenant, condition, stipulation, promise, agreement, or provision herein contained. This Resolution and all of the covenants, conditions, stipulations, promises, agreements, and provisions hereof are intended to be and shall be for and inure to the sole and exclusive benefit of the Board, the Registered Owners, and the Paying Agent/Registrar as herein and therein provided.

**Section 29. CUSTODY, APPROVAL, BOND COUNSEL'S OPINION, CUSIP NUMBERS, PREAMBLE AND INSURANCE.** The BCRUA Representative is hereby authorized to have control of the Bonds issued hereunder and all necessary records and proceedings pertaining to the Bonds pending their delivery and approval by the Attorney General of the State. The BCRUA Representative is hereby authorized, to the extent deemed necessary or advisable thereby, in the discretion thereof, to request that the Attorney General approve the Bonds as permitted by Chapter 1202, Texas Government Code, in which case the BCRUA Representative also is authorized to request the Comptroller of Public Accounts register the Bonds, and to cause an appropriate legend reflecting such approval and registration to appear on the Bonds and the substitute Bonds. The approving legal opinion of the Board's Bond Counsel and the assigned CUSIP numbers may, at the option of the Board, be printed on the Bonds and on any Bonds issued and delivered in exchange or replacement of any Bond, but neither shall have any legal effect, and shall be solely for the convenience and information of the Registered Owners of the Bonds. The preamble to this Resolution is hereby adopted and made a part of this Resolution for all purposes. If insurance is obtained on any of the Bonds, the Bonds shall bear, as appropriate and applicable, a legend concerning insurance as provided by the municipal bond insurance company issuing any such insurance.

**Section 30. COMPLIANCE WITH RULE 15c2-12.** (a) *Annual Reports.* (i) The Board shall provide annually to each NRMSIR and any SID, within six months after the end of each Fiscal Year ending in or after 2009, financial information and operating data with respect to the Board including financial statements of the BCRUA, and general financial and operating information of the general type included in the application to the Texas Water Development Board for financial assistance. Any financial statements so to be provided shall be prepared in accordance with the accounting principles described in Exhibit "C" hereto, or such other accounting principles as the Board may be required to employ from time to time pursuant to state law or regulation. If the Board commissions an audit of such statements and the audit is completed within the period during which they must be provided, a copy of such audit also shall be provided in accordance with the Rule. If any such audit of such financial statements, if one is commissioned

by the Board, is not complete within such period, then the Board shall provide unaudited financial statements within the required time period and audited financial statements for the applicable fiscal year to each NRMSIR and any SID, when and if the audit report on such statements become available.

(ii) If the Board changes its Fiscal Year, it will notify each NRMSIR and any SID of the change (and of the date of the new Fiscal Year end) prior to the next date by which the Board otherwise would be required to provide financial information and operating data pursuant to this Section. The financial information and operating data to be provided pursuant to this Section may be set forth in full in one or more documents or may be included by specific reference to any document (including an official statement or other offering document, if it is available from the MSRB) that theretofore has been provided to each NRMSIR and any SID or filed with the SEC.

(b) **Material Event Notices.** The Board shall notify any SID and each NRMSIR, in a timely manner, of any of the following events with respect to the Bonds, if such event is material within the meaning of the federal securities laws:

- (i) Principal and interest payment delinquencies;
- (ii) Non-payment related defaults;
- (iii) Unscheduled draws on debt service reserves reflecting financial difficulties;
- (iv) Unscheduled draws on credit enhancements reflecting financial difficulties;
- (v) Substitution of credit or liquidity providers, or their failure to perform;
- (vi) Adverse tax opinions or events affecting the tax-exempt status of the Bonds;
- (vii) Modifications to rights of holders of the Bonds;
- (viii) Bond calls;
- (ix) Defeasances;
- (x) Release, substitution, or sale of property securing repayment of the Bonds; and
- (xi) Rating changes.

The Board shall notify any SID and each NRMSIR, in a timely manner, of any failure by the Board to provide financial information or operating data in accordance with subsection (a) of this Section by the time required by such subsection.

(c) **Limitations, Disclaimers, and Amendments.** (i) The Board shall be obligated to observe and perform the covenants specified in this Section for so long as, but only for so long as, the Board remains



an "obligated person" with respect to the Bonds within the meaning of the Rule, except that the Board in any event will give notice of any deposit made in accordance with this Resolution or applicable law that causes the Bonds no longer to be Outstanding.

(ii) The provisions of this Section are for the sole benefit of the Registered Owners and beneficial owners of the Bonds, and nothing in this Section, express or implied, shall give any benefit or any legal or equitable right, remedy, or claim hereunder to any other person. The Board undertakes to provide only the financial information, operating data, financial statements, and notices which it has expressly agreed to provide pursuant to this Section and does not hereby undertake to provide any other information that may be relevant or material to a complete presentation of the Board's financial results, condition, or prospects or hereby undertake to update any information provided in accordance with this Section or otherwise, except as expressly provided herein. The Board does not make any representation or warranty concerning such information or its usefulness to a decision to invest in or sell Bonds at any future date.

(iii) Any filing required by this Section may be made solely with a central post office approved for such purposes by the SEC, such as the Texas Municipal Advisory Council (the "MAC") as provided at <http://www.disclosureusa.org>, for submission to the NRMSIRs and SID (without also separately submitting such filings to the NRMSIRs and SID by some other means) so long as such filing is acceptable to the SEC.

(iv) UNDER NO CIRCUMSTANCES SHALL THE BOARD BE LIABLE TO THE REGISTERED OWNER OR BENEFICIAL OWNER OF ANY BOND OR ANY OTHER PERSON, IN CONTRACT OR TORT, FOR DAMAGES RESULTING IN WHOLE OR IN PART FROM ANY BREACH BY THE BOARD, WHETHER NEGLIGENT OR WITHOUT FAULT ON ITS PART, OF ANY COVENANT SPECIFIED IN THIS SECTION, BUT EVERY RIGHT AND REMEDY OF ANY SUCH PERSON, IN CONTRACT OR TORT, FOR OR ON ACCOUNT OF ANY SUCH BREACH SHALL BE LIMITED TO AN ACTION FOR MANDAMUS OR SPECIFIC PERFORMANCE. NOTHING IN THIS RESOLUTION SHALL BE CONSTRUED AS A WAIVER OF THE CONSTITUTIONAL, STATUTORY OR COMMON LAW IMMUNITIES OR DEFENSES OF THE BOARD, WHICH IMMUNITIES AND DEFENSES ARE HEREBY AND HERETO AFFIRMED.

(v) No default by the Board in observing or performing its obligations under this Section shall comprise a breach of or default under this Resolution for purposes of any other provision of this Resolution. Nothing in this Section is intended or shall act to disclaim, waive, or otherwise limit the duties of the Board under federal and state securities laws.

(vi) The provisions of this Section may be amended by the Board from time to time to adapt to changed circumstances that arise from a change in legal requirements, a change in law, or a change in the identity, nature, status, or type of operations of the Board, but only if (1) the provisions of this Section, as so amended, would have permitted an underwriter to purchase or sell Bonds in the primary offering of the Bonds in compliance with the Rule, taking into account any amendments or interpretations of the Rule since such offering as well as such changed circumstances and (2) either (a) the Registered Owners of a majority in aggregate principal amount (or any greater amount required by any other provision of this Resolution that authorizes such an amendment) of the Bonds then outstanding consent to such amendment

or (b) a person that is unaffiliated with the Board (such as nationally recognized bond counsel) determined that such amendment will not materially impair the interest of the registered owners and beneficial owners of the Bonds. If the Board so amends the provisions of this Section, it shall include with any amended financial information or operating data next provided in accordance with subsection (a) of this Section an explanation, in narrative form, of the reason for the amendment and of the impact of any change in the type of financial information or operating data so provided. The Board may also amend or repeal the provisions of this continuing disclosure agreement if the SEC amends or repeals the applicable provision of the Rule or a court of final jurisdiction enters judgment that such provisions of the Rule are invalid, but only if and to the extent that the provisions of this sentence would not prevent an underwriter from lawfully purchasing or selling Bonds in the primary offering of the Bonds.

**Section 31. APPLICATION OF BOND PROCEEDS.** Proceeds from the sale of the Bonds shall, promptly upon receipt thereof, be applied by the BCRUA Representative as follows an amount sufficient to accomplish the purposes of Section 2 shall be deposited in the Escrow Fund or Construction Fund as authorized by the Texas Water Development Board.

Any sale proceeds of the Bonds remaining after making all deposits and payments provided for above shall be applied to the payment of interest on the Bonds.

**Section 32. DEFEASANCE PROVISIONS.** (a) Any Bond and the interest thereon shall be deemed to be paid, retired and no longer outstanding (a "Defeased Bond") within the meaning of this Resolution, except to the extent provided in subsections (c) and (e) of this Section, when payment of the principal of such Bond, plus interest thereon to the due date or dates (whether such due date or dates be by reason of maturity, upon redemption, or otherwise) either (i) shall have been made or caused to be made in accordance with the terms thereof (including the giving of any required notice of redemption or the establishment of irrevocable provisions for the giving of such notice) or (ii) shall have been provided for on or before such due date by irrevocably depositing with or making available to the Paying Agent/Registrar or an eligible trust company or commercial bank for such payment (1) lawful money of the United States of America sufficient to make such payment, (2) Defeasance Securities, certified by an independent public accounting firm of national reputation to mature as to principal and interest in such amounts and at such times as will ensure the availability, without reinvestment, of sufficient money to provide for such payment and when proper arrangements have been made by the BCRUA with the Paying Agent/Registrar or an eligible trust company or commercial bank for the payment of its services until all Defeased Bonds shall have become due and payable or (3) any combination of (1) and (2). At such time as a Bond shall be deemed to be a Defeased Bond hereunder, as aforesaid, such Bond and the interest thereon shall no longer be secured by, payable from, or entitled to the benefits of, the Bond Payments as provided in this Resolution, and such principal and interest shall be payable solely from such money or Defeasance Securities.

(b) The deposit under clause (ii) of subsection (a) shall be deemed a payment of a Bond as aforesaid when proper notice of redemption of such Bonds shall have been given or upon the establishment of irrevocable provisions for the giving of such notice, in accordance with this Resolution. Any money so deposited with the Paying Agent/Registrar or an eligible trust company or commercial bank as provided in this Section may at the discretion of the BCRUA also be invested in Defeasance Securities, maturing in

the amounts and at the times as hereinbefore set forth, and all income from all Defeasance Securities in possession of the Paying Agent/Registrar or an eligible trust company or commercial bank pursuant to this Section which is not required for the payment of such Bond and premium, if any, and interest thereon with respect to which such money has been so deposited, shall be remitted to the BCRUA.

(c) Notwithstanding any provision of any other Section of this Resolution which may be contrary to the provisions of this Section, all money or Defeasance Securities set aside and held in trust pursuant to the provisions of this Section for the payment of principal of the Bonds and premium, if any, and interest thereon, shall be applied to and used solely for the payment of the particular Bonds and premium, if any, and interest thereon, with respect to which such money or Defeasance Securities have been so set aside in trust. Until all Defeased Bonds shall have become due and payable, the Paying Agent/Registrar shall perform the services of Paying Agent/Registrar for such Defeased Bonds the same as if they had not been defeased, and the BCRUA shall make proper arrangements to provide and pay for such services as required by this Resolution.

(d) Notwithstanding anything elsewhere in this Resolution, if money or Defeasance Securities have been deposited or set aside with the Paying Agent/Registrar or an eligible trust company or commercial bank pursuant to this Section for the payment of Bonds and such Bonds shall not have in fact been actually paid in full, no amendment of the provisions of this Section shall be made without the consent of the registered owner of each Bond affected thereby.

(e) Notwithstanding the provisions of subsection (a) immediately above, to the extent that, upon the defeasance of any Defeased Bond to be paid at its maturity, the BCRUA retains the right under State law to later call that Defeased Bond for redemption in accordance with the provisions of this Resolution, the BCRUA may call such Defeased Bond for redemption upon complying with the provisions of State law and upon the satisfaction of the provisions of subsection (a) immediately above with respect to such Defeased Bond as though it was being defeased at the time of the exercise of the option to redeem the Defeased Bond and the effect of the redemption is taken into account in determining the sufficiency of the provisions made for the payment of the Defeased Bond.

**Section 33. TEXAS WATER DEVELOPMENT BOARD MATTERS.** The provisions of this Section shall apply so long as the Bonds, or any of them, are owned by the Texas Water Development Board.

(a) Annual Audit Reporting. The BCRUA shall provide to the Development Fund Manager of the Texas Water Development Board, without the necessity of a written request therefor, a copy of the BCRUA's annual audit report, to be submitted without charge, within 120 days of the close of each BCRUA fiscal year.

(b) As-Built Plans. The BCRUA shall provide to the Texas Water Development Board a full and complete set of "as-built" plans relating to the BCRUA Project, promptly upon completion of such project.

(c) Final Accounting. Upon completion of the BCRUA Project, the BCRUA shall render a final accounting of the cost of such project to the Texas Water Development Board. If the total cost of such

project, as finally completed, is less than originally estimated, so that the proper share of the participation by the Texas Water Development Board in such project is reduced, the BCRUA shall return to the Texas Water Development Board the amount of such excess to the nearest multiple of the denomination of the Bonds, whereupon the Texas Water Development Board shall cancel and return to the BCRUA a like amount of said Bonds held by the Texas Water Development Board. The Bonds to be canceled and returned shall be chosen in inverse order of maturity. The remainder of any such excess, an amount less than \$5,000, shall be deposited into the Debt Service Fund.

(d) Covenant to Abide with Rules. The BCRUA will abide with all applicable laws of the State of Texas and Rules of the Texas Water Development Board relating to the loan of funds evidenced by the Bonds and the project for which the Bonds are issued, sold and delivered.

(e) Records and Accounts. The BCRUA agrees and covenants that it will maintain current, accurate and complete records and accounts regarding the BCRUA Project in accordance with 31 TAC 375.71(a)(2)(G).

(f) Environmental Determinations. The BCRUA agrees and covenants that it will comply with any special conditions of the Executive Administrator's environmental determination in accordance with 31 TAC 375.71(a)(8).

(g) Environmental Expenditures. The BCRUA covenants and agrees that none of the proceeds of the Bonds will be expended on costs incurred or to be incurred relating to the sampling, testing, removing or disposing of potentially contaminated soils and/or media at the project site.

(h) Indemnification. The BCRUA further agrees, to the extent permitted by law, to indemnify, hold harmless and protect the Texas Water Development Board from any and all claims or causes of action arising from the sampling, analysis, transport, removal and off-site disposition of any contaminated media that may be generated by the BCRUA, its contractors, consultants, agents, officials and employees as a result of activities related to the BCRUA.

**Section 34. FURTHER PROCEDURES.** The President of the Board, the BCRUA Representative, and all other officers, employees, and agents of the Board, and each of them, shall be and they are hereby expressly authorized, empowered, and directed from time to time and at any time to do and perform all such acts and things and to execute, acknowledge, and deliver in the name and under the corporate seal and on behalf of the Board all such instruments, whether or not herein mentioned, as may be necessary or desirable in order to carry out the terms and provisions of this Resolution, the Bonds, the sale and delivery of the Bonds and fixing all details in connection therewith. The BCRUA Representative is authorized to sign this Resolution.

**Section 35. DTC LETTER OF REPRESENTATION.** The Board approves execution by the BCRUA Representative and delivery to DTC of a "Blanket Letter of Representations" with respect to the utilization by the Board of DTC's book-entry-only system and the Board intends to utilize such book-entry-only system in connection with the Bonds.

**Section 36. BOND INSURANCE.** (a) In connection with the sale of the Bonds, the Board may obtain municipal bond insurance policies from one or more municipal bond insurers (the "Insurer") to guarantee the full and complete payment required to be made by or on behalf of the Board on some or all of the Bonds as determined by the BCRUA Representative. The BCRUA Representative is hereby authorized to sign a commitment letter with the Insurer and to pay the premium for the bond insurance policies at the time of the delivery of the Bonds out of the proceeds of sale of the Bonds or from other available funds and to execute such other documents and certificates as necessary in connection with the bond insurance policies as he or she may deem appropriate. Printing on Bonds covered by the bond insurance policies a statement describing such insurance, in form and substance satisfactory to the Insurer and the BCRUA Representative, is hereby approved and authorized. The Award Certificate may contain provisions related to the bond insurance policies, including payment provisions thereunder, and the rights of the Insurer or Insurers, and any such provisions shall be read and interpreted as an integral part of this Resolution.

(b) As long as an Insurer is not in default on the related Insurance Policy for the Bonds, the Insurer of a Series shall be deemed to be the sole Registered Owner of such Bonds insured by it for all purposes of this Resolution.

**Section 37. REPEAL OF CONFLICTING RESOLUTIONS.** All resolutions and all parts of any resolutions which are in conflict or inconsistent with this Resolution are hereby repealed and shall be of no further force or effect to the extent of such conflict or inconsistency.

**Section 38. PUBLIC NOTICE.** It is hereby found and determined that each of the officers and members of the Board was duly and sufficiently notified officially and personally, in advance, of the time, place, and purpose of the Meeting at which this Resolution was adopted; that this Resolution would be introduced and considered for adoption at said meeting; and that said meeting was open to the public, and public notice of the time, place, and purpose of said meeting was given, all as required by Chapter 551, Texas Government Code.

**Section 39. NO PERSONAL LIABILITY.** No covenant or agreement contained in the Bonds, this Resolution or any corollary instrument shall be deemed to be the covenant or agreement of any member of the Board or any officer, agent, employee or representative of the Board in his individual capacity, and neither the directors, officers, agents, employees or representatives of the Board nor any person executing the Bonds shall be personally liable thereon or be subject to any personal liability for damages or otherwise or accountability by reason of the issuance thereof, or any actions taken or duties performed, whether by virtue of any constitution, statute or rule of law, or by the enforcement of any assessment or penalty, or otherwise, all such liability being expressly released and waived as a condition of and in consideration for the issuance of the Bonds.

**Section 40. CREDIT AGREEMENTS.** To the extent permitted by law, the BCRUA reserves the right to enter into Credit Agreements in connection with the Bonds, upon the written opinion of the BCRUA Representative that such Credit Agreements are in the best interest of the BCRUA given the market conditions at the time. The Credit Agreements will constitute a Credit Agreement as defined

in this Resolution. Credit Agreements and the obligations thereunder may, pursuant to their terms, constitute (i) debt secured by a pledge of the Bond Payments on parity with the Bonds Similarly Secured (ii) debt secured by an inferior lien secured by a pledge of the Bond Payments subordinate to the Bonds Similarly Secured or (iii) partially parity and partially inferior lien.

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**PASSED AND ADOPTED** on the \_\_\_\_ day of \_\_\_\_\_, 2008.

**BRUSHY CREEK REGIONAL  
UTILITY AUTHORITY, INC.**

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BCRUA Representative

(SEAL)

EXHIBIT A - Definitions  
EXHIBIT B - Form of Bond  
EXHIBIT C - Continuing Disclosure  
EXHIBIT D - Contract

## EXHIBIT A

### DEFINITIONS

As used in this Resolution, the following terms and expressions shall have the meanings set forth below, unless the text in this Resolution specifically indicates otherwise.

The term *Additional Bonds* shall mean the obligations issued in accordance with the terms and conditions prescribed in Section 17 hereof.

The term *Annual Payments* shall have the meaning given in the Contract.

The term *Authorized Denominations* shall mean with respect to the Bonds the denomination of \$5,000 or any integral multiple thereof.

The term *Average Annual Debt Service Requirements* shall mean that average amount which, at the time of computation, will be required to pay the Debt Service Requirements on all outstanding Bonds Similarly Secured when due (either at Stated Maturity or mandatory redemption) and derived by dividing the total of such Debt Service Requirement by the number of Fiscal Years then remaining before Stated Maturity of such Bonds Similarly Secured. For purposes of this definition, a fractional period of a Fiscal Year shall be treated as an entire Fiscal Year. Capitalized interest payments provided from Bond proceeds shall be excluded in making the aforementioned computation.

The Term *Award Certificate* shall mean the Certificate executed by the BCRUA Representative in connection with the Bonds that establishes the terms of the Bonds issued pursuant to Section 3 of this Resolution.

The term *BCRUA* shall mean Brushy Creek Regional Utility Authority, Inc. and any other public agency succeeding to the powers, rights, privileges and functions of the BCRUA and, when appropriate, the Board of Directors of the BCRUA.

The term *BCRUA Project* shall mean, collectively, the Land Interests and the improvements described in the recitals to the Contract and further described in the Preliminary Design Report, and as shown on Exhibit "D" to the Contract. Without limitation the BCRUA Project includes the facilities, lines, intake structures, storage tanks, booster pumps and other appurtenances in the BCRUA Project as described in the Preliminary Design Report and owned by the BCRUA sufficient to treat the raw water and deliver the treated water to which the Cities, respectively, are entitled under the Contract.

The term *BCRUA Project Costs* means and includes, without limitation, the following costs incurred for the BCRUA Project by or on behalf of the BCRUA or the Cities: (i) the cost of acquisition of the Land Interests, including appraisals, closing costs and title insurance policies; (ii) the cost of acquisition, construction, repair, replacement, improvement or decommissioning of the Facilities, and any structure, item of equipment, or other item, used for, or in connection with, the BCRUA Project; (iii) the cost of site preparation of the Land Interests, including demolition or removal of structures and



improvements as necessary or incident to accomplishing the BCRUA Project; (iv) the cost of engineering, legal, architectural or other related services; (v) the preparation cost of plans, specifications, studies, surveys, cost estimates, and other expenses necessary or incident to planning, providing, or financing the BCRUA Project; (vi) the cost of machinery, equipment, furnishings, and facilities necessary or incident to placing the BCRUA Project in operation; (vii) finance charges and interest before, during, and after construction as permitted by the laws of the State; (viii) costs incurred in connection with financing the BCRUA Project, including, without limitation: (1) financing, legal, accounting, financial advisory, rating agency, and auditing fees, expenses and disbursements; (2) the cost of printing, engraving, and reproduction services; and (3) the cost of a trustee's or paying agent's initial or acceptance fee and subsequent fees; (ix) all costs, fees and expenses of litigation of all kinds; (x) the cost of property casualty and public liability insurance; (xi) the fees and costs of the Purchaser as the anticipated purchasers of the Bonds; (xii) reimbursement of the costs previously incurred by the Cities with respect to the BCRUA Project; and (xiii) other costs generally recognized as part of BCRUA Project construction costs.

The term *BCRUA Representative* shall mean the President of the Board of the BCRUA or in his absence the Secretary of the Board of the BCRUA or such other person authorized by the Board to act as a BCRUA Representative.

The term *Bond Payments* shall mean the payments defined as "Bond Payments" within the Contract that the BCRUA expects to receive from the City of Round Rock, Texas pursuant to the terms of the Contract.

The term *Bonds* shall mean and include collectively the Bonds issued and delivered pursuant to this Resolution and the Award Certificate for the Bonds and all substitute Bonds exchanged therefor, as well as all other substitute bonds and replacement bonds issued pursuant hereto, and the term *Bond* shall mean any of the Bonds.

The term *Bonds Similarly Secured* shall mean the Bonds issued pursuant to this Resolution and any Additional Bonds hereafter issued by the BCRUA or bonds issued to refund any of the foregoing if issued in a manner that provides that the refunding bonds are payable from and equally and ratably secured by a lien on and pledge of the Bond Payments.

The term *Business Day* shall mean any day which is not a Saturday, Sunday, legal holiday, or a day on which banking institutions in The City of New York, New York or in the city where the Designated Trust Office of the Paying Agent/Registrar is located are authorized by law or executive order to close.

The term *Certified Public Accountant* shall mean an independent certified public accountant or firm of independent certified public accountants.

The term *Closing Date* shall mean the date of physical delivery of the Initial Bond issued pursuant to this Resolution for the payment in full by the Purchaser.

The term *Contract* shall mean the Master Contract for the Financing, Construction and Operation of the BCRUA Regional Water Treatment and Distribution Project, dated as of September 2, 2008,

together with amendments and supplements thereto (which by the term of such instrument is designated as a supplement or amendment to such Contract), a copy of such Contract being attached hereto as Exhibit "D".

The term *Credit Agreement* shall mean an Insurance Policy, a surety bond (including any supporting Insurance Agreement), a letter or line of credit or other type of enhancement issued in support of any Bonds or Additional Bonds by a Credit Agreement Provider at the request of the BCRUA.

The term *Credit Agreement Provider* shall mean (i) with respect to any Credit Agreement consisting of a policy of municipal bond insurance or a surety bond, an issuer of policies of insurance insuring the timely payment of scheduled debt service on governmental obligations such as the Bonds or Additional Bonds, provided that a Rating Agency having an outstanding rating on the Bonds or Additional Bonds would rate the Bonds or Additional Bonds upon delivery of the Bonds or Additional Bonds fully insured by a standard policy issued by the issuer in its highest generic rating category for such obligations; and (ii) with respect to any Credit Agreement consisting of a letter or line of credit, any financial institution, provided that a Rating Agency having an outstanding rating on the Bonds or Additional Bonds would rate the Bonds or Additional Bonds in one of its two highest generic rating categories for such obligations if the letter or line of credit proposed to be issued by such financial institution secured the timely payment of the entire principal amount of the Bonds or Additional Bonds and the interest thereon.

The term *Debt Service Fund* shall mean the special fund or account created and established by the provisions of Section 10(a) of this Resolution.

The term *Debt Service Requirements* shall mean as of any particular date of computation, with respect to any obligations and with respect to any period, the aggregate of the amounts to be paid or set aside by the BCRUA as of such date or in such period for the payment of the principal of, premium, if any, and interest (to the extent not capitalized) on such obligations; assuming, in the case of obligations without a fixed numerical rate, that such obligations bear interest calculated by (a) either (i) an interest rate equal to the average rate borne by such Bonds (or by comparable debt in the event that such Bonds have not been outstanding during the preceding 24 months) for any 24 month period ending within 30 days prior to the date of calculation, (ii) if the Bonds bear interest at tax-exempt rates, an interest rate equal to the 24 month average of the Index (as most recently published in The Bond Buyer), unless such index is no longer published in The Bond Buyer, in which case the index to be used in its place shall be that index which the BCRUA Representative determines most closely replicates such index as set forth in a certificate of a BCRUA Representative, (iii) if the Bonds bear interest at taxable rates, an interest rate equal to the rate of the 30 day London Interbank Offered Rate, (iv) that interest rate which, in the judgment of the BCRUA Representative, based, to the extent possible, upon an accepted market index which corresponds with the provisions of the subject Bonds, is the average rate anticipated to be in effect with respect to such Bonds or (v) that interest rate which, in the judgment of the BCRUA Representative, based upon the interest rate methodology in the applicable Credit Agreement if calculating payments under a Credit Agreement, is the average rate anticipated to be in effect; and (b) that the debt service of such bonds is amortized such that annual debt service is substantially level over the remaining stated life of such bonds, and further assuming in the case of obligations required to be redeemed or prepaid as to principal prior to Stated Maturity, the

principal amounts thereof will be redeemed prior to Stated Maturity in accordance with the mandatory redemption provisions applicable thereto.

The term *Defeasance Securities* shall mean (i) Federal Securities, (ii) noncallable obligations of an agency or instrumentality of the United States of America, including obligations that are unconditionally guaranteed or insured by the agency or instrumentality and that, on the date the Board adopts or approves proceedings authorizing the issuance of refunding bonds or otherwise provide for the funding of an escrow to effect the defeasance of the Bonds are rated as to investment quality by a nationally recognized investment rating firm not less than "AAA" or its equivalent, and (iii) noncallable obligations of a state or an agency or a county, municipality, or other political subdivision of a state that have been refunded and that, on the date the Board adopts or approves proceedings authorizing the issuance of refunding bonds or otherwise provide for the funding of an escrow to effect the defeasance of the Bonds, are rated as to investment quality by a nationally recognized investment rating firm no less than "AAA" or its equivalent.

The term *Depository* shall mean an official depository bank of the BCRUA.

The term *Designated Trust Office* shall have the meaning ascribed to said term in Section 5(b) of this Resolution.

The term *DTC* shall mean The Depository Trust Company, New York, New York, or any successor securities depository.

The term *DTC Participant* shall mean securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations on whose behalf DTC was created to hold securities to facilitate the clearance and settlement of securities transactions among DTC Participants.

The term *Federal Securities* shall mean direct, noncallable obligations of the United States of America, including obligations that are unconditionally guaranteed by the United States of America (including Interest Strips of the Resolution Funding Corporation).

The term *Fiscal Year* shall mean the twelve month accounting period used by the BCRUA in connection with the operation of the BCRUA Project, currently ending on September 30th of each year, which may be any twelve consecutive month period established by the BCRUA, but in no event may the Fiscal Year be changed more than one time in any three calendar year period.

The term *Fitch* shall mean Fitch Investors Service, L.P., its successors and their assigns, and, if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, Fitch shall be deemed to refer to any other nationally recognized securities rating agency designated by the BCRUA.

The term *Funds* shall mean the Debt Service Fund and Construction Fund created and held pursuant to this Resolution.

The term *Government Securities* shall mean (i) direct noncallable obligations of the United States, including obligations that are unconditionally guaranteed by, the United States of America; (ii) noncallable obligations of an agency or instrumentality of the United States, including obligations that are unconditionally guaranteed or insured by the agency or instrumentality and that, on the date the governing body of the issuer adopts or approves the proceedings authorizing the issuance of refunding bonds, are rated as to investment quality by a nationally recognized investment rating firm not less than "AAA" or its equivalent; or (iii) noncallable obligations of a state or an agency or a county, municipality, or other political subdivision of a state that have been refunded and that, on the date the governing body of the issuer adopts or approves the proceedings authorizing the issuance of refunding bonds, are rated as to investment quality by a nationally recognized investment rating firm not less than "AAA" or its equivalent.

The term *Interest Payment Date* shall mean the date semiannual interest is payable on the Bonds, while any of the Bonds remain Outstanding as established in the Award Certificate.

The term *IRS Code* shall mean the Internal Revenue Code of 1986, as amended.

The term *Land Interests* shall mean the fee simple interests and/or the easements, right-of-way and other interests in real property necessary for the acquisition, construction and operation of the BCRUA Project.

The term *Maintenance and Operation Expenses* shall mean the expenses necessary to provide for the administration, efficient operation and adequate maintenance of the BCRUA's System, including the cost of purchasing water, paying necessary wages, salaries, and benefits, the acquisition of property and materials necessary to maintain the System in good condition and to operate it efficiently, together with such other costs and expenses as may now or hereafter be defined by law as proper maintenance and operation expenses of the System, including Operation and Maintenance Expenses (as defined in the Contract).

The term *Maturity* shall mean the date on which the principal of a Bond becomes due and payable as therein and herein provided, whether at Stated Maturity, by redemption or otherwise.

The term *Moody's* shall mean Moody's Investors Service, Inc., its successors and their assigns, and, if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, Moody's shall be deemed to refer to any other nationally recognized securities rating agency designated by the BCRUA.

The term *MSRB* shall mean the Municipal Securities Rulemaking Board.

The term *NRMSIR* shall mean each person whom the SEC or its staff has determined to be a nationally recognized municipal securities information repository within the meaning of the Rule from time to time.

The term *Outstanding* shall mean when used in this Resolution with respect to Bonds means, as of the date of determination, all Bonds of any series issued and delivered pursuant to this Resolution, except:

(1) those Bonds canceled by the Paying Agent/Registrar or delivered to the Paying Agent/Registrar for cancellation;

(2) those Bonds for which payment has been duly provided by the BCRUA in accordance with the provisions of Section 32 of this Resolution by the irrevocable deposit with the Paying Agent/Registrar, or an authorized escrow agent, of money or Government Securities, or both, in the amount necessary to fully pay the principal of, premium, if any, and interest thereon to maturity or redemption, as the case may be, provided that, if such Bonds are to be redeemed, notice of redemption thereof shall have been duly given pursuant to this Resolution or irrevocably provided to be given to the satisfaction of the Paying Agent/Registrar, or waived; and

(3) those Bonds that have been mutilated, destroyed, lost, or stolen and replacement Bonds have been registered and delivered in lieu thereof as provided in Section 5(f) of this Resolution.

The terms *Paying Agent/Registrar*, *Paying Agent* or *Registrar* shall mean the agent appointed pursuant to Section 5 of this Resolution or any successor to such agent.

The term *Preliminary Design Report* shall mean, collectively, the following described documents:

(i) *Treatment Plant PDR*, "Brushy Creek Regional Water Treatment Plant; Preliminary Design Report" prepared by Camp Dresser & McKee, Inc., dated July, 2008;

(ii) *Raw Water PDR*, "Brushy Creek Regional Water Supply Project – Phase 1 Raw Water Facilities – Floating Intake and Raw Water Pipeline; Preliminary Design Report" prepared by Carter & Burgess, Inc., dated October 2007;

(iii) *Treated Transmission Main, Segment 1 PDR*, "Brushy Creek Regional Utility Authority 78 inch Water Transmission Main Preliminary Engineering Report" prepared by Lockwood, Andrews & Newman, Inc., dated May 24, 2007; and

(iv) *Treated Transmission Main, Segment 2C PDR*, "Preliminary Engineering Report – Treated Water Transmission Line Segment 2C" prepared by K. Friese & Associates, Inc., dated September 2007.

The term *Purchaser* shall mean the Texas Water Development Board.

The term *Rating Agencies* shall mean S&P, Moody's and/or Fitch according to which of such rating agencies then rates the Bonds or Additional Bonds of the applicable series; and provided that if neither of such rating agencies then rates any series of Bonds or Additional Bonds of such series, the term "Registered Owner" shall refer to any national rating agency (if any) which provides such rating.

The term *Record Date* shall mean, with respect to the Bonds, the Business Day of each month as set forth in the Award Certificate.

The term *Registration Books* shall mean the books or records relating to the registration, payment and transfer or exchange of the Bonds maintained by the Paying Agent/Registrar pursuant to Section 5 of this Resolution.

The term *Registered Owner* shall mean the entity or person in whose names any of the Bonds are registered in the Registration Books.

The term *Resolution* shall mean this resolution adopted by the Board on \_\_\_\_\_, 2008.

The term *Round Rock System* shall mean the combined water and wastewater system of Round Rock together with all future extensions, improvements, enlargements, and additions thereto, including, to the extent permitted by law, storm sewer and drainage and/or reclaimed water systems which are integrated with the waterworks or wastewater disposal system, and all replacements thereof, provided that, notwithstanding the foregoing, and to the extent now or hereafter authorized or permitted by law, the term Round Rock System shall not include any waterworks or wastewater facilities which are declared by Round Rock not to be a part of the Round Rock System and which are hereafter acquired or constructed by Round Rock with the proceeds from the issuance of "Special Facilities Bonds," which are not secured by or payable from the net revenues of the Round Rock System, but which are secured by and are payable solely from special contract revenues, or payments received from Round Rock or any other legal entity, or any combination thereof, in connection with such facilities; and such revenues or payments shall not be considered as or constitute gross revenues of the Round Rock System, unless and to the extent otherwise provided in the ordinance or ordinances authorizing the issuance of such "Special Facilities Bonds."

The term *Round Rock Utility Bonds* shall mean the bonds, notes or other obligations issued by Round Rock secured by a lien on and pledge of the net revenues of the Round Rock System or any part thereof regardless of lien priority including such bonds, notes or other obligations now or hereafter outstanding.

The term *Rule* shall mean SEC Rule 15c2-12, as amended from time to time.

The term *S&P* shall mean Standard & Poor's Ratings Services, a division of The McGraw-Hill Companies, Inc., its successors and their assigns, and, if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, S&P shall be deemed to refer to any other nationally recognized securities rating agency designated by the BCRUA.

The term *SEC* shall mean the United States Securities and Exchange Commission.

The term *SID* shall mean any person designated by the State or an authorized department, officer, or agency thereof as, and determined by the SEC or its staff to be, a state information depository within the meaning of the Rule from time to time.

The term *Special Project Bonds* shall mean obligations which the BCRUA expressly reserves the right to issue in Section 15 of this Resolution.

The term *State* shall mean the State of Texas.

The term *Stated Maturity* shall mean, when used with respect to the Bonds, the scheduled maturity or mandatory sinking fund redemption date of a series of the Bonds..

EXHIBIT B

FORM OF BOND

REGISTERED  
NO. \_\_\_\_\_

REGISTERED  
PRINCIPAL AMOUNT  
\$ \_\_\_\_\_

UNITED STATES OF AMERICA  
STATE OF TEXAS  
BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.  
CITY OF ROUND ROCK, TEXAS CONTRACT REVENUE BONDS  
SERIES \_\_\_\_\_  
(BRUSHY CREEK REGIONAL WATER TREATMENT AND DISTRIBUTION PROJECT)

BOND DATE:      STATED MATURITY:      INTEREST RATE:      CUSIP No.:

REGISTERED OWNER: \_\_\_\_\_

PRINCIPAL AMOUNT: \_\_\_\_\_ DOLLARS

The Brushy Creek Regional Utility Authority, Inc. (the "BCRUA"), a non-profit corporation of the State of Texas, with its principal office in \_\_\_\_\_, Texas, for value received, hereby promises to pay to the order of the Registered Owner specified above, or the registered assigns thereof, on the Stated Maturity date specified above, the Principal Amount specified above (or so much thereof as shall not have been paid upon prior redemption), and to pay interest on the unpaid principal amount hereof from the Bond Date, or from the most recent Interest Payment Date to which interest has been paid or duly provided for, to the earlier of redemption or Stated Maturity, at the per annum rate of interest specified above computed on the basis of a 360-day year of twelve 30-day months; such interest being payable on \_\_\_\_\_ and \_\_\_\_\_ of each year commencing \_\_\_\_\_.

Principal and premium, if any, of the Bond shall be payable to the Registered Owner hereof (the "Holder") upon presentation and surrender, at a corporate trust office of the Paying Agent/Registrar executing the registration certificate appearing hereon or a successor thereof. Interest shall be payable to the Holder of this Bond (or one or more Predecessor Bonds, as defined in the Resolution hereinafter

\_\_\_\_\_  
\* As provided in the Award Certificate. To the extent that the Award Certificate relating to the Bonds is inconsistent with any provisions in this Form of Bond or contains information to complete missing information in this Form of Bond, the language in the Award Certificate shall be used in the executed Bonds.



referenced) whose name appears on the Security Register maintained by the Paying Agent/Registrar at the close of business on the Record Date, which is the fifteenth day of the month next preceding each interest payment date. All payments of principal of and interest on this Bond shall be in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts. In addition, interest may be paid by such other method, acceptable to the Texas Water Development Board, or such other Registered Owner, requested by, and at the risk and expense, of the Registered Owner; provided, however, that if this Bond is owned by the Texas Water Development Board, interest will be paid by wire transfer or other method acceptable to the Texas Water Development Board, and there will be no charge.

This Bond is one of the series specified in its title issued in the aggregate principal amount of \$ \_\_\_\_\_ (the "Bonds") pursuant to a resolution adopted by the governing body of the BCRUA (the "Resolution"), to (i) PAY ROUND ROCK'S SHARE OF THE COSTS OF CONSTRUCTING, ACQUIRING, IMPROVING AND/OR EXPANDING THE BCRUA PROJECT INCLUDING BUT NOT LIMITED TO LAND INTERESTS, TEMPORARY INTAKE STRUCTURE, STORAGE TANKS, LINES, BOOSTER PUMPS, TREATMENT FACILITIES AND OTHER APPURTENANCES NECESSARY FOR THE DELIVERY, TREATMENT AND TRANSMISSION OF RAW WATER AND ACQUIRING EASEMENTS, RIGHTS-OF-WAY AND OTHER INTERESTS IN LAND OR OTHER FACILITIES NECESSARY FOR THE WITHDRAWAL, DIVERSION DELIVERY, TRANSMISSION AND TREATMENT OF RAW WATER ALL AS DESCRIBED IN THE PRELIMINARY DESIGN REPORT AND (ii) PAY THE COSTS OF ISSUANCE OF THE BONDS.

The Bonds stated to mature on and after \_\_\_\_\_\* may be redeemed prior to their Stated Maturities, at the option of the BCRUA, on \_\_\_\_\_\*, or on any date thereafter, in whole or in part, and, if in part, the BCRUA shall in inverse order of maturity select and designate the maturity or maturities in principal amounts of \$5,000 or any integral multiple thereof (and if within a Stated Maturity selected at random and by lot by the Paying Agent/Registrar) at the redemption price of par, together with accrued interest to the date of redemption, and upon thirty (30) days prior written notice being given by United States mail, first-class postage prepaid, to Holders of the Bonds to be redeemed, and subject to the terms and provisions relating thereto contained in the Resolution. If this Bond is subject to redemption prior to Stated Maturity and is in a denomination in excess of \$5,000, portions of the principal sum hereof in installments of \$5,000 or any integral multiple thereof may be redeemed, and, if less than all of the principal sum hereof is to be redeemed, there shall be issued, without charge therefor, to the Holder hereof, upon the surrender of this Bond to the Paying Agent/Registrar at its corporate trust office, a new Bond or Bonds of like Stated Maturity and interest rate in any authorized denominations provided in the Resolution for the then unredeemed balance of the principal sum hereof.

If this Bond (or any portion of the principal sum hereof) shall have been duly called for redemption and notice of such redemption duly given, then upon such redemption date this Bond (or the portion of the

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\* As provided in the Award Certificate. To the extent that the Award Certificate relating to the Bonds is inconsistent with any provisions in this Form of Bond or contains information to complete missing information in this Form of Bond, the language in the Award Certificate shall be used in the executed Bonds.

principal sum hereof to be redeemed) shall become due and payable, and, if money for the payment of the redemption price and the interest accrued on the principal amount to be redeemed to the date of redemption is held for the purpose of such payment by the Paying Agent/Registrar, interest shall cease to accrue and be payable hereon from and after the redemption date on the principal amount hereof to be redeemed. If this Bond is called for redemption, in whole or in part, the BCRUA or the Paying Agent/Registrar shall not be required to issue, transfer, or exchange this Bond within forty-five (45) days of the date fixed for redemption; provided, however, such limitation of transfer shall not be applicable to an exchange by the Holder of the unredeemed balance hereof in the event of its redemption in part.

The Bonds of this series are special obligations of the BCRUA payable from and equally and ratably secured solely by a lien on and pledge of the Bond Payments received by the BCRUA from the City of Round Rock, Texas pursuant to the provisions of the Contract. In the Resolution, the BCRUA reserves and retains the right to issue Additional Bonds, without limitation as to principal amount but subject to any terms, conditions, or restrictions set forth in the Resolution or as may be applicable thereto under law or otherwise. The Bonds do not constitute a legal or equitable pledge, charge, lien, or encumbrance upon any property of the BCRUA or BCRUA Project, except with respect to the Bond Payments.

The Holder hereof shall never have the right to demand payment of this obligation out of any funds raised or to be raised by taxation.

Reference is hereby made to the Resolution, copies of which are on file in the corporate trust office of the Paying Agent/Registrar, and to all of the provisions of which the Holder by his acceptance hereof hereby assents, for definitions of terms; the description and nature of the Special Payments pledged for the payment of the Bonds; the terms and conditions under which the BCRUA may issue Additional Bonds; the terms and conditions relating to the transfer or exchange of the Bonds; the conditions upon which the Resolution may be amended or supplemented with or without the consent of the Holders; the rights, duties, and obligations of the BCRUA and the Paying Agent/Registrar; the terms and provisions upon which this Bond may be redeemed or discharged at or prior to the Stated Maturity thereof, and deemed to be no longer Outstanding thereunder; and for the other terms and provisions specified in the Resolution. Capitalized terms used herein have the same meanings assigned in the Resolution.

This Bond, subject to certain limitations contained in the Resolution, may be transferred on the Registration Books upon presentation and surrender at a corporate trust office of the Paying Agent/Registrar, duly endorsed by, or accompanied by a written instrument of transfer in form satisfactory to the Paying Agent/Registrar duly executed by the Holder hereof, or his duly authorized agent, and thereupon one or more new fully registered Bonds of the same Stated Maturity, of authorized denominations, bearing the same rate of interest, and of the same aggregate principal amount will be issued to the designated transferee or transferees.

The BCRUA and the Paying Agent/Registrar, and any agent of either, shall treat the Holder hereof whose name appears on the Security Register (i) on the Record Date as the owner hereof for purposes of receiving payment of interest hereon, (ii) on the date of surrender of this Bond as the owner hereof for purposes of receiving payment of principal hereof at its Stated Maturity, or its redemption, in whole or in part, and (iii) on any other date as the owner hereof for all other purposes, and neither the BCRUA nor the

Paying Agent/Registrar, or any such agent of either, shall be affected by notice to the contrary. In the event of a non-payment of interest on a scheduled payment date, and for thirty (30) days thereafter, a new record date for such interest payment (a "Special Record Date") will be established by the Paying Agent/Registrar, if and when funds for the payment of such interest have been received from the BCRUA. Notice of the Special Record Date and of the scheduled payment date of the past due interest (the "Special Payment Date" - which shall be fifteen (15) days after the Special Record Date) shall be sent at least five (5) business days prior to the Special Record Date by United States mail, first-class postage prepaid, to the address of each Holder appearing on the Security Register at the close of business on the last business day next preceding the date of mailing of such notice.

It is hereby certified, covenanted, and represented that all acts, conditions, and things required to be performed, exist, and be done precedent to the issuance of this Bond in order to render the same a legal, valid, and binding special obligation of the BCRUA have been performed, exist, and have been done, in regular and due time, form, and manner, as required by law, and that issuance of the Bonds does not exceed any constitutional or statutory limitation; and that due provision has been made for the payment of the principal of and interest on the Bonds by a lien on and pledge of the Bond Payments and as otherwise provided in this Resolution. In case any provision in this Bond or any application thereof shall be deemed invalid, illegal, or unenforceable, the validity, legality, and enforceability of the remaining provisions and applications shall not in any way be affected or impaired thereby. The terms and provisions of this Bond and the Resolution shall be construed in accordance with and shall be governed by the laws of the State of Texas.

IN WITNESS WHEREOF, the Board of the BCRUA has caused this Bond to be duly executed under the official seal of the BCRUA.

BRUSHY CREEK REGIONAL UTILITY  
AUTHORITY, INC.

\_\_\_\_\_  
President, Board of Directors

ATTESTED:

\_\_\_\_\_  
Secretary, Board of Directors

(SEAL)

C. Form of Registration Certificate of Comptroller of Public Accounts to Appear on Initial Bond Only.

REGISTRATION CERTIFICATE OF  
COMPTROLLER OF PUBLIC ACCOUNTS

OFFICE OF THE COMPTROLLER OF  
PUBLIC ACCOUNTS

THE STATE OF TEXAS

§  
§  
§

REGISTER NO. \_\_\_\_\_

I HEREBY CERTIFY that this Bond has been examined, certified as to validity and approved by the Attorney General of the State of Texas, and duly registered by the Comptroller of Public Accounts of the State of Texas.

WITNESS my signature and seal of office this \_\_\_\_\_.

\_\_\_\_\_  
Comptroller of Public Accounts  
of the State of Texas

(SEAL)

D. Form of Certificate of Paying Agent/Registrar to Appear on Definitive Bonds Only.

This Bond has been duly issued under the provisions of the within-mentioned Resolution; the Bond or Bonds of the above-entitled and designated series originally delivered having been approved by the Attorney General of the State of Texas and registered by the Comptroller of Public Accounts, as shown by the records of the Paying Agent/Registrar.

Registered this date: \_\_\_\_\_

**WELLS FARGO BANK, NATIONAL ASSOCIATION**  
as Paying Agent/Registrar

By: \_\_\_\_\_  
Authorized Signature

E. Form of Assignment.

**ASSIGNMENT**

FOR VALUE RECEIVED the undersigned hereby sells, assigns, and transfers unto (Print or typewrite name, address, and zip code of transferee): \_\_\_\_\_

(Social Security or other identifying number): \_\_\_\_\_

the within Bond and all rights thereunder, and hereby irrevocably constitutes and appoints \_\_\_\_\_ attorney to transfer the within Bond on the books kept for registration thereof, with full power of substitution in the premises.

DATED: \_\_\_\_\_

---

NOTICE: The signature on this assignment must correspond with the name of the registered owner as it appears on the face of the within Bond in every particular.

Signature guaranteed:

\_\_\_\_\_

F. The Initial Bond of each series shall be in the form set forth in paragraph B of this Section, except that the form of a single fully registered Initial Bond shall be modified as follows:

i) immediately under the name of the Bond(s) the headings "Interest Rate" and "Stated Maturity" shall both be completed "as shown below";

ii) the first two paragraphs shall read as follows:

Registered Owner: \_\_\_\_\_

Principal Amount: \_\_\_\_\_

The Brushy Creek Regional Utility Authority, Inc. (the "BCRUA"), a non-profit corporation of the State of Texas, with its principal office located in \_\_\_\_\_, Texas, for value received, hereby promises to pay to the order of the Registered Owner named above, or the registered assigns thereof, the Principal Amount specified above on the \_\_\_\_\_\* day of \_\_\_\_\_\* in each of the years and in principal amounts and bearing interest at per annum rates in accordance with the following schedule:

<u>Years of Stated Maturity</u>	<u>Principal Amounts (\$)</u>	<u>Interest Rates (%)</u>
-------------------------------------	-----------------------------------	-------------------------------

(Information to be inserted from Award Certificate).

(or so much thereof as shall not have been paid upon prior redemption) and to pay interest on the unpaid Principal Amount hereof from the \_\_\_\_\_\*, or from the most recent Interest Payment Date to which interest has been paid or duly provided for, to Stated Maturity or prior redemption, at the per annum rates of interest specified above computed on the basis of a 360-day year of twelve 30-day months; such interest being payable on \_\_\_\_\_\* and \_\_\_\_\_\*, commencing \_\_\_\_\_\* (the "Interest Payment Date").

Principal and premium, if any, of this Bond shall be payable to the Registered Owner hereof (the Holder), upon its presentation and surrender, at a corporate trust office of Wells Fargo Bank, National Association, Austin, Texas (the "Paying Agent/Registrar"). Interest shall be payable to the Holder of this Bond whose name appears on the Security Register maintained by the Paying Agent/Registrar at the close of business on the Record Date, which is the fifteenth day of the month next preceding each interest payment date. All payments of principal of and interest on this Bond shall be in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts. Interest shall be paid by the Paying Agent/Registrar by check sent on or prior to the appropriate date of payment by United States mail, first-class postage prepaid, to the Holder hereof at the

\* As provided in the Award Certificate. To the extent that the Award Certificate relating to the Bonds is inconsistent with any provisions in this Form of Bond or contains information to complete missing information in this Form of Bond, the language in the Award Certificate shall be used in the executed Bonds.

address appearing in the Security Register or by such other method, acceptable to the Paying Agent/Registrar, requested by, and at the risk and expense of, the Holder hereof.

G. Insurance Legend. If an Insurance Policy is obtained by the Purchasers or the BCRUA for any series of Bonds, the definitive Bonds and the Initial Bond shall bear an appropriate legend as provided by the Insurer.

## EXHIBIT C

### CONTINUING DISCLOSURE OF INFORMATION

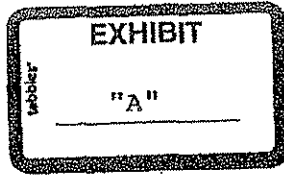
#### **Accounting Principles**

The accounting principles referred to in such Section are generally accepted accounting principles for governmental units as prescribed by the Government Accounting Standards Board from time to time.



**EXHIBIT D**

**MASTER CONTRACT FOR THE FINANCING, CONSTRUCTION  
AND OPERATION OF THE BCRUA REGIONAL WATER  
TREATMENT AND DISTRIBUTION**



*Clean Draft: 8/11/08*

**BYLAWS**

**OF THE**

**BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.**

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**BYLAWS  
OF THE  
BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.**

**ARTICLE I  
PURPOSES**

**Section 1.01 Purposes.** Brushy Creek Regional Utility Authority, Inc. (the "Corporation") is organized for the purpose of aiding, assisting, and acting on behalf of the cities of Round Rock, Cedar Park, and Leander, Texas (collectively, the "Cities"), in the performance of their governmental functions to promote the common good and general welfare of the Cities, including, without limitation, the financing, construction, acquisition, ownership, maintenance, and operation of a regional water transmission, treatment and distribution and/or regional wastewater transmission, treatment systems and/or water reuse system (the "Facilities") on behalf of the Cities, and to perform such other governmental functions and purposes of the Cities as may be determined from time to time by the City Councils of the Cities (the "City Councils").

The Corporation is formed pursuant to the provisions of Subchapter D, Chapter 431, Texas Transportation Code (the "Act") as it now or may hereafter be amended, which authorizes the Corporation to assist and act on behalf of the Cities to accomplish any governmental purpose of the Cities and to engage in activities in the furtherance of the purposes for its creation.

The Corporation shall have and exercise all of the rights, powers, privileges, authority, and functions, now or hereafter, given by the general laws of the State of Texas to non-profit corporations incorporated under the Act including, without limitation, the Texas Non-Profit Corporation Act, Article 1396-1.01 et seq., Vernon's Texas Civil Statutes.

The Corporation shall have all other powers of a like or different nature not prohibited by law which are available to non-profit corporations in Texas and which are necessary or useful to enable the Corporation to perform the purposes for which it is created, including the power to issue bonds, notes or other obligations, and otherwise exercise its borrowing power to accomplish the purposes for which it was created.

The Corporation is created as a local governmental corporation pursuant to the Act and shall be a governmental unit within the meaning of Subdivision (2), Section 101.001, Texas Civil Practice and Remedies Code. The operations of the Corporation are governmental and not proprietary functions for purposes of the Texas Tort Claims Act, Section 101.001 et seq., Texas Civil Practice and Remedies Code. The Corporation shall have the power to acquire land in accordance with the Act as amended from time to time.

## ARTICLE II DIRECTORS

**Section 2.01. Appointment, Classes, Powers, Number, and Term of Office.** All powers of the Corporation shall be vested in the Board of Directors (the "Board"). The Board shall consist of three (3) persons. Each City shall have one (1) Director appointed by the respective City Council. Each Director shall be a resident of the City that appointed such Director.

The term of office for each Director of the Board shall be two (2) years. The terms of the Directors shall commence on the date that the respective City Councils make the appointment(s). Upon the expiration of the term of office of a Director, the City Council shall appoint a Director as stated above, and the term of office for each appointed Director shall also be two (2) years. The number of Directors may subsequently be either increased or decreased in accordance with the provisions of Article VI of the Articles of Incorporation of the Corporation.

Any Director may be removed at will by a majority vote of the City Council that made such appointment and such City Council shall appoint a new Director to complete the unexpired term.

In the event that a Director resigns or otherwise ceases to reside within the city limits of the City that appointed him/her, then such Director shall be considered removed from the Board and the appropriate City Council shall provide for the appointment of a new Director to complete the unexpired term.

**Section 2.02. Meetings of Directors.** The Directors may hold their meetings and may have an office and keep the books of the Corporation at

such place or places as the Board may from time to time determine; provided, however, in the absence of any such determination, such places shall be the registered office of the Corporation in the State of Texas.

The Board shall meet in accordance with and file notices of each meeting of the Board as is required by Chapter 551, Government Code (the "Open Meetings Act").

The Corporation, the Board, and any committee of the Board exercising the powers of the Board are subject to Chapter 552, Government Code, and (the "Public Information Act").

**Section 2.03. Annual Meetings.** The annual meeting of the Board shall be held at the time and at the location in any of the Cities designated by the resolution of the Board for the purposes of transacting such business as may be brought before the meeting.

**Section 2.04. Regular Meetings.** Regular meetings of the Board shall be held at such times and places as shall be designated, from time to time, by a resolution of the Board.

**Section 2.05. Special and Emergency Meetings.** Special and emergency meetings of the Board shall be held whenever called by the President of the Board or by a majority of the Directors.

The Secretary shall give reasonable notice to all Directors of each special meeting in person, by telephone, electronic transmission (e.g., facsimile transmission or electronic mail) or mail at least seventy-two (72) hours before the meeting. Unless otherwise indicated in the notice thereof, any and all matters pertaining to the purposes of the Corporation may be considered and acted upon at a special or emergency meeting; provided that all meetings shall comply with the Open Meetings Act.

**Section 2.06. Quorum.** A majority of the Board shall constitute a quorum for the consideration of matters pertaining to the purposes of the Corporation. Except as provided herein, and unless otherwise required by law, the affirmative votes of a majority of the Directors present and voting at a meeting shall constitute the act of the Board.

The affirmative votes of all three Directors shall be required to approve the following matters:

- 1) The amendment of the Articles of Incorporation;
- 2) The amendment of these Bylaws; and
- 3) The addition of new members to the Corporation.

A Director who is present at a meeting of the Board at which any corporate action is taken shall be presumed to have assented to such action, unless his or her dissent shall be entered in the minutes of the meeting or unless he or she shall file a written dissent to such action with the person acting as the secretary of the meeting before the adjournment thereof or shall forward such dissent by registered mail to the Secretary of the Corporation immediately after the adjournment of the meeting; and the Secretary shall forward a copy of such dissent to the other Directors by mail within seven (7) days. Such right to dissent shall not apply to a Director who voted in favor of the action.

**Section 2.07. Conduct of Business.** At the meetings of the Board, matters pertaining to the purposes of the Corporation shall be considered in such order as from time to time the Board may determine.

At all meetings of the Board, the President shall preside, and in the absence of the President, the Vice-President shall preside. In the absence of the President and the Vice-President, an acting presiding officer shall be chosen by the Board from among the Directors present.

The Secretary of the Corporation shall act as secretary of all meetings of the Board, but in the absence of the Secretary, the presiding officer may appoint any person to act as secretary of the meeting.

**Section 2.08. Compensation of Directors; Reimbursement for Expenses.** Directors shall not receive any salary or compensation for their services as Directors. Directors shall be reimbursed for their actual expenses incurred in the performance of their duties as Directors.

**Section 2.09. Director's Reliance on Consultant Information.** A Director shall not be liable if while acting in good faith and with ordinary care, the Director relies on information, opinions, reports, or statements,



including financial statements and other financial data, concerning the Corporation or another person that were prepared or presented by:

- (a) one or more other officers or employees of the Corporation;
- (b) legal counsel, public accountants, or other persons as to matters the Director reasonably believes are within the person's professional or expert competence; or
- (c) a committee of the Board of which the Director is not a member.

### **ARTICLE III OFFICERS**

**Section 3.01. Titles and Term of Office.** The officers of the Corporation shall be a President, a Vice-President, a Secretary, a Treasurer, and other officers as the Board may from time to time elect or appoint. The President shall also serve as Chairman of the Board and the Vice-President shall serve as Vice-Chairman of the Board. One person may hold more than one office, except that one person shall not concurrently hold the offices of President and Secretary. The term of office for each officer shall be two (2) years (or one (1) year) commencing with the date of the meeting of the Board at which each such officer is elected.

Any vacancy in the office of any officer shall be filled by a majority vote of the Board.

**Section 3.02. Powers and Duties of the President.** The President shall be a member of the Board and shall preside at all meetings of the Board. When authorized by the Board, the President or the Vice-President may sign and execute all bonds, notes, deeds, conveyances, franchises, assignments, mortgages, notes, contracts and other obligations in the name of the Corporation. The President shall have such other duties as are assigned by the Board. The President may call special and emergency meetings of the Board.

**Section 3.03. Powers and Duties of the Vice-President.** The Vice-President shall be a member of the Board and shall not be from the same City as the President. The Vice-President shall perform the duties and exercise the powers of the President upon the President's death, absence, disability, or resignation, or upon the President's inability to perform the duties of his or

her office. Any action taken by the Vice-President in the performance of the duties of the President shall be conclusive evidence of the absence or inability to act of the President at the time such action was taken. The Vice-President shall have such other powers and duties as may be assigned to him or her by the Board.

**Section 3.04. Treasurer.** The Treasurer shall have custody of all the funds and securities of the Corporation which come into his or her hands. When necessary or proper, he or she may endorse, on behalf of the Corporation, for collection, checks, notes and other obligations and shall deposit the same to the credit of the Corporation in such bank or banks or depositories as shall be designated in the manner prescribed by the Board; he or she may sign all receipts and vouchers for payments made to the Corporation, either alone or jointly with such other officer as is designated by the Board; he or she shall enter or cause to be entered regularly in the books of the Corporation to be kept by him or her for that purpose full and accurate accounts of all moneys received and paid out on account of the Corporation; he or she shall perform all acts incident to the position of Treasurer subject to the control of the Board; and he or she shall, if required by the Board, give such bond for the faithful discharge of his or her duties in such forms as the Board may require. The Treasurer need not be a member of the Board.

**Section 3.05. Secretary.** The Secretary shall keep or cause to be kept the minutes of all meetings of the Board in books provided for that purpose; he or she shall attend to the giving and serving of all notices; in furtherance of the purposes of the Corporation and subject to the limitations contained in the Articles of Incorporation, he or she may sign with the President in the name of the Corporation and/or attest the signatures thereof, all contracts, conveyances, franchises, bonds, deeds, assignments, mortgages, notes and other instruments of the Corporation; he or she shall have charge of the Corporation's books, records, documents and instruments, except the books of account and financial records and securities of which the Treasurer shall have custody and charge, and such other books and papers as the Board may direct, all of which shall at all reasonable times be open to the inspection of any Director upon application at the office of the Corporation during business hours; and, he or she shall, in general, perform all duties incident to the office of Secretary subject to the control of the Board. The Secretary need not be a Director.

**Section 3.06. Compensation.** Officers are not entitled to compensation except as otherwise provided in Section 2.08 of these Bylaws.

**Section 3.07. Officer's Reliance on Consultant Information.** In the discharge of a duty imposed or power conferred on an officer of the Corporation, the officer may in good faith and with ordinary care rely on information, opinions, reports, or statements, including financial statements and other financial data, concerning the Corporation or another person that were prepared or presented by:

- (a) one or more other officers or employees of the Corporation, including Directors; or
- (b) legal counsel, public accountants, or other persons as to matters the officer reasonably believes are within the person's professional or expert competence.

#### **ARTICLE IV BUDGET**

**Section 4.01. Budget and Fiscal Year.** The fiscal year of the Corporation shall commence on October 1<sup>st</sup> of each year and end on September 30<sup>th</sup> of the following year. At least ninety (90) days prior to October 1<sup>st</sup> of each year, the Board shall prepare and adopt a proposed budget of expected revenues and proposed expenditures for the next ensuing fiscal year. The budget shall contain such classifications and shall be in such form as may be prescribed from time to time by the City Councils. The budget proposed for adoption shall include the projected expenses, and such other budgetary information as shall be required by the City Councils for their approval and adoption. The budget shall be considered adopted upon formal approval of all three City Councils. Should any of the City Councils take no final action on or before October 1<sup>st</sup>, the proposed budget shall be deemed to have been finally adopted by such City Council.

**ARTICLE V  
INDEMNIFICATION**

**Section 5.01. Right to Indemnification.**

A. Definitions in this Article:

1. Covered person includes current and former Directors, committee members, employees of the Corporation, and officers and former officers and the estate of current or former Directors, ex-officio Directors, officers and former officers or employees of the Corporation
2. Loss means a sum of money which a covered person is legally obligated to pay.
3. Proceeding means any threatened, pending or completed claim, action, suit or civil, criminal, administrative, arbitratve or investigative proceeding.

B. Coverage Generally. To the fullest extent permitted by law, the Corporation shall indemnify and defend a covered person in accordance with this Section from and against a loss arising in connection with a proceeding relating to an act or omission of the covered person during the course and scope of the covered person's office or employment for the Corporation.

C. Additional Coverage. In addition to the coverage described in subsection B of this Section, the Corporation will pay the following:

1. The Corporation's expenses in investigating and defending the proceeding;
2. Court costs assessed against a covered person;
3. Reasonable expenses of the covered person incurred at the Corporation's request or with the Corporation's approval; and

4. Attorney's fees ordered by a court to be paid by the covered person.

D. Criteria for Coverage. To be entitled to coverage under this Section, a covered person must:

1. Notify the Corporation's General Manager or legal counsel in writing as soon as practicable, but not later than three (3) working days, after receipt of written notice of a proceeding;
2. Cooperate with the Corporation in the conduct of the proceeding, negotiation of settlements, and enforcement of any rights of the Corporation or the covered person against any claimant;
3. Attend depositions, hearings and trials, and assist in securing evidence and obtaining attendance of witnesses;
4. Not, except with the written consent of the Corporation's General Manager or legal counsel, enter into any agreement or stipulation concerning a proceeding;
5. Not, except with the written consent of the Corporation's General Manager or legal counsel, or upon request of a public officer at the scene of an accident, give any oral or written statement concerning the accident; and
6. Not, except at the covered person's own cost, voluntarily make any payment, assume any obligation or incur any expense in connection with a proceeding without the consent of the Corporation's General Manager or legal counsel.

E. Exemptions. Coverage under this Section will not apply to a claim or suit brought against a covered person:

1. By the Corporation;

2. Arising from the intentional or knowing violation of a penal statute or law committed by or with the knowledge and consent of the covered person, or arising from a fraudulent act committed by or at the direction of the covered person;
3. If the covered person joins or attempts to join a proceeding against the Corporation or an officer or employee of the Corporation with a proceeding against the covered person; or
4. If the covered person fails to comply with subsection (e) of this Section.

F. Investigation, negotiation, settlement. The Corporation may investigate, retain counsel, negotiate and settle any proceeding as it determines to be reasonable and prudent.

G. Subrogation of rights. A covered person, in accepting coverage under this Section, agrees to allow the Corporation to be subrogated to any rights of the covered person to the extent of the Corporation's obligations and payments under this Section.

H. Conflict of Interest. If the Corporation's General Manager or legal counsel determines there is a conflict between the interests of the Corporation and those of the person involved in a proceeding, the Corporation may designate and pay the reasonable fees of a separate attorney.

I. Disciplinary action. Nothing in this Section will affect the Corporation's right to take disciplinary action against a covered person for conduct otherwise indemnified or defended by the Corporation under this Section.

**Section 5.02. Indemnification of Employees and Agents.** The Corporation, by adoption of a resolution of the Board, may indemnify and advance expenses to an employee or agent of the Corporation to the same extent and subject to the same conditions under which it may indemnify and advance expenses to Directors and officers under this Article V; and the Corporation may indemnify and advance expenses to persons who are not or

were not Directors, officers, employees or agents of the Corporation but who are or were serving at the request of the Corporation as a Director, officer, partner, venture proprietor, trustee, employee, agent or similar functionary of another foreign or domestic corporation, partnership, joint venture, sole proprietorship, trust, employee benefit plan or other enterprise against any liability asserted against him or her and incurred by him or her in such a capacity or arising out of his or her status such a person to the same extent that it may indemnify and advance expenses to Directors under this Article V.

**Section 5.03. Non-exclusivity of Rights.** The right to indemnification conferred in this Article V shall not be exclusive of any other right which a covered person may have or hereafter acquire under any law (common or statutory), these Bylaws, written agreement with the Corporation, vote of disinterested Directors or otherwise.

**Section 5.04. Insurance.** The Corporation may purchase and maintain insurance, at its expense, to protect itself and any covered person against any expense, liability or loss, whether or not the Corporation would have power to indemnify such person against such expense, liability or loss under this Article V.

**Section 5.05. Savings Clause.** If this Article V or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless indemnify and hold harmless each covered person with respect to a proceeding to the extent permitted by any applicable portion of this Article V that shall not have been invalidated and to the fullest extent permitted by applicable law.

## ARTICLE VI CODE OF ETHICS

### **Section 6.01. Policy and Purposes.**

- A. It is the policy of the Corporation that Directors and officers conduct themselves in a manner consistent with sound business and ethical practices; that the public interest always be considered in conducting corporate business; that the appearance of impropriety be avoided to ensure and maintain the public confidence in the Corporation; and that the Board establish

policies to control and manage the affairs of the Corporation fairly, impartially, and without discrimination.

- B. This Code of Ethics has been adopted as part of the Board's Bylaws for the following purposes: (a) to encourage high ethical standards in official conduct by Directors and corporate officers; and (b) to establish guidelines for such ethical standards of conduct.

**Section 6.02. Unlawful Acts.** A Director or officer shall not intentionally or knowingly offer, confer or agree to confer on another, or solicit, or agree to accept from another:

- (a) any benefit as consideration for the Director or officer's decision, opinion, recommendation, vote, or other exercise of discretion as a Director or officer;
- (b) any benefit as consideration for the Director's or officer's, decision, vote, recommendation, or other exercise of official discretion in a judicial or administrative proceeding; or
- (c) any benefit as consideration for a violation of a duty imposed by law on the Director or officer.

**Section 6.03. Nepotism.** No Director or officer shall appoint, or vote for, or confirm the appointment to any office, position, clerkship, employment or duty, or any person related within the second degree by affinity (marriage relationship) or within the third degree of consanguinity (blood relationship) to the Director or officer so appointing, voting or confirming, or to any other Director or officer. This provision shall not prevent the appointment, voting for, or confirmation of any person who shall have been continuously employed in such office, position, clerkship, employment or duty at least thirty (30) days prior to the appointment of the Director or officer so appointing or voting.



## **ARTICLE VII AMENDMENTS**

**Section 7.01. Amendments.** A proposal to alter, amend, or repeal these Bylaws shall be made by the affirmative vote of all the Directors at any annual or regular meeting, or at any special meeting if notice of the proposed amendment be contained in the notice of said special meeting. However, any proposed change or amendment to the Bylaws must be approved by the three City Councils to be effective.

## **ARTICLE VIII CONSENT OF CITY COUNCILS**

**Section 8.01. Council Consent.** To the extent that these Bylaws refer to approval by the Cities or refer to advice and consent by the Cities, such approval or advice and consent shall be evidenced by a certified copy of a resolution or other official action duly adopted by each of the City Councils.

## **ARTICLE IX DISTRIBUTION OF NET INCOME**

**Section 9.07. Distribution of Net Income.** Unless otherwise determined by the City Councils in accordance with the provisions of Section 431.107 of the Transportation Code, any income earned by the Corporation after payment of reasonable expenses, debt, and the establishment of a reserve sufficient to cover estimated expenditures for future activities, shall either be retained by the Corporation or distributed to the Cities in an equitable manner to be determined by the three City Councils taking into consideration the relative use of the Facilities and the initial capital investments of the respective Cities. In the event that the Facilities cease to operate, the three City Councils may either direct that (a) the Corporation retain such income, but only in such a manner so as to ensure compliance with all then applicable federal tax law relating to the Corporation and its non-profit status, or (b) the Cities receive any such income earned by the Corporation in an equitable manner determined by the three City Councils as set forth above.

**ARTICLE X  
AUTHORITY TO CONTRACT**

**Section 10.01. Authority to Contract.**

- A. The Board may, with the approval of the three (3) City Councils, contract with any qualified and appropriate person, association, corporation or governmental entity to perform and discharge designated tasks which will aid or assist the Board in the performance of its duties. However, no such contract shall ever be approved or entered into which seeks or attempts to divest the Board of its discretion and policy making functions in discharging the duties herein set forth.
  
- B. The Board may, with the approval of the three (3) City Councils, contract with one or more of the Cities to utilize the services of staff and employees of the respective Cities.

**ARTICLE XI  
MISCELLANEOUS PROVISIONS**

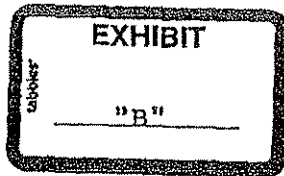
**Section 11.01. Seal.** The seal of the Corporation shall be such as from time to time may be approved by the Board.

**Section 11.02. Notice and Waiver of Notice.** Whenever any notice whatever is required to be given under the provisions of these Bylaws, such notice shall be deemed to be sufficient if given by depositing the same in a post office box in a sealed postpaid wrapper addressed to the person entitled thereto at his or her post office address, as it appears on the books of the Corporation, and such notice shall be deemed to have been given on the day of such mailing. A waiver of notice, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent thereto.

**Section 11.03. Resignations.** Any Director or officer may resign at any time. Such resignations shall be made in writing and shall take effect at the time specified therein, or, if no time be specified, at the time of its receipt by the President or Secretary. The acceptance of a resignation shall not be necessary to make it effective, unless expressly so provided in the resignation.

**Section 11.04. Gender.** References herein to the masculine gender shall also refer to the feminine in all appropriate cases, and vice versa.

**Section 11.05. Appropriations and Grants.** The Corporation shall have the power to request and accept any appropriation, grant, contribution, donation, or other form of aid from the federal government, the State, or from any other source.



**MASTER CONTRACT FOR THE FINANCING,  
CONSTRUCTION AND OPERATION OF THE BCRUA  
REGIONAL WATER TREATMENT  
AND DISTRIBUTION PROJECT**

**Among**

**BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC,**

**CITY OF CEDAR PARK**

**CITY OF LEANDER**

**AND**

**CITY OF ROUND ROCK**

**Dated: August \_\_, 2008**

*Clean Draft Master Agreement  
August 13, 2008  
00143974*

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**MASTER CONTRACT FOR THE FINANCING, CONSTRUCTION AND OPERATION  
OF THE BCRUA REGIONAL WATER TREATMENT  
AND DISTRIBUTION PROJECT**

THIS MASTER CONTRACT FOR THE FINANCING, CONSTRUCTION AND OPERATION OF THE BCRUA REGIONAL WATER TREATMENT AND DISTRIBUTION PROJECT (the "Contract") is dated and entered into as of the \_\_\_ day of August, 2008, by and among the Brushy Creek Regional Utility Authority, Inc. ("BCRUA"), a non-profit corporation of the State of Texas (the "State"), created and existing under the laws of the State, including Subchapter D of Chapter 431 as amended, Texas Transportation Code, and the City of Cedar Park, Texas ("Cedar Park"), the City of Leander, Texas ("Leander"), and the City of Round Rock, Texas ("Round Rock") all home-rule municipalities and political subdivisions of the State (individually, the "City"; collectively, the "Cities"). The BCRUA and the Cities are collectively referred to herein as the "Parties."

**RECITALS**

WHEREAS, Subchapter D of Chapter 431 of the Texas Transportation Code, as amended (the "Act") authorizes municipalities to create one or more local government corporations to accomplish any governmental purpose of the Cities including to plan, finance, construct, own, operate, and/or maintain facilities necessary for the conservation, storage, transportation, treatment, and/or distribution of treated water, including a plant site, right-of-way, and property, equipment, and/or right of any kind useful in connection with the conservation, storage, transportation, treatment, and/or distribution of treated water that will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the Cities based on current population projections and estimates (said facilities herein referred to as the "BCRUA System");

WHEREAS, the City Councils of Cedar Park, Leander, and Round Rock, respectively (collectively, the "Governing Bodies"), have authorized and approved the creation of the BCRUA as their constituted authority and instrumentality to accomplish the specific public purpose to plan, finance, construct, acquire, own, operate, or maintain facilities necessary for the conservation, storage, transportation, treatment, or distribution of treated water, including plant sites, rights-of-way, and property, equipment, or rights of any kind useful in connection with the conservation, storage, transportation, treatment, or distribution of treated water, pursuant to the provisions of the Act and other applicable law, including Section 791.026 Texas Government Code, as amended;

WHEREAS, the Cities, pursuant to the Act and other applicable law, have authorized the creation of the BCRUA, which affords the Cities and their ratepayers, respectively, the most efficient and cost-effective option for municipal water treatment;

WHEREAS, the Cities and the BCRUA anticipate that the BCRUA System will eventually supply 105.8 million gallons per day of potable water to the Cities as generally described in the Preliminary Engineering Report;



WHEREAS, the Cities and the BCRUA recognize that the establishment of the BCRUA system will occur in phases or stages that will occur over time and will depend on future growth and environmental conditions that are uncertain today;

WHEREAS, in furtherance of its purposes, the BCRUA will issue one or more series of bonds to finance the costs of the "BCRUA Project," as hereinafter defined;

WHEREAS, the Cities and the Lower Colorado River Authority ("LCRA") have previously entered into multiple agreements in anticipation of the regional water system, including, but not limited to, (i) the "Interlocal Agreement Regarding Design of New Hope Regional Waterline" among Round Rock, Cedar Park and LCRA dated December 15, 2005, (ii) the "Interlocal Agreement Regarding Construction of Regional Water Line" among Round Rock, Cedar Park, and LCRA dated March 23, 2006, (iii) the "Interlocal Agreement for Interim Water Supply" between Round Rock and Cedar Park dated March 9, 2006, (iv) the "Interlocal Agreement Regarding Water Supply Agreement Obligations" between LCRA and Cedar Park, dated March 9, 2006 and (v) the "Wholesale Potable Water Service Agreement" among the Brazos River Authority, LCRA and Leander dated March 2, 1998;

WHEREAS, the BCRUA intends to own, design, finance, construct, acquire, maintain, and operate the BCRUA Project in a manner that will allow the BCRUA to deliver potable water to the Cities on a regional basis;

WHEREAS, the Cities and the BCRUA, exercising their respective mutual authorities, wish to enter into this Contract in order to most efficiently and quickly obtain the capability to deliver treated water to the Cities;

WHEREAS, it is necessary that BCRUA construct facilities, intake structures, storage tanks, lines, booster pumps, treatment facilities, and other appurtenances necessary and sufficient for the delivery, treatment, and transmission of the raw water for which the Cities, individually, have contracted with the LCRA, as well any additional raw water which one or more of the Cities may acquire in the future, and acquire easements, rights-of-way, and other interests in land or other facilities necessary for the withdrawal, diversion, delivery, transmission and/or treatment of such raw water;

WHEREAS, the Cities, respectively, have contracted with LCRA, directly or indirectly, to purchase raw water from Lake Travis in sufficient quantities to meet each City's anticipated treatment capacity for the BCRUA Project (as hereinafter defined,) and each City shall make available sufficient raw water to the BCRUA for its reserved treatment capacity in the BCRUA Project;

WHEREAS, after treatment, the BCRUA, will deliver the treated water to the Cities, respectively, for use within their respective corporate limits or applicable service areas;

WHEREAS, the governing bodies of the Cities and the Board of Directors of the BCRUA have determined that the provisions of this Contract and all of the actions contemplated

herein are in compliance with the Texas State Water Plan and the Regional Water Plan adopted pursuant to Chapter 16, Subchapter C, Planning, of the Texas Water Code;

WHEREAS, the Cities, respectively, have adopted water conservation plans approved by the Texas Commission on Environmental Quality ("TCEQ") prior to execution of this Contract;

WHEREAS, it is expected by the BCRUA and the Cities that as soon as practicable after the execution of this Contract the BCRUA will issue its Bonds in separate series (as hereinafter defined) for one or more of the Cities requesting financing through the BCRUA to pay for the BCRUA Project (as hereinafter defined);

WHEREAS, it is further acknowledged by the BCRUA and the Cities that this Contract covers only the first phase of the BCRUA System, and that any future phases of the BCRUA System may be accomplished by amending this Contract or by one or more separate future contracts among the BCRUA and one or more of the Cities, and by future series of bonds, which bonds may be payable from payments on parity with the payments under this Contract; and

WHEREAS, the BCRUA, to the best of its ability, shall in general do or cause to be done all such things as may be required or necessary for the proper acquisition, construction, and operation of the BCRUA Project;

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, the sufficiency of which are hereby conclusively acknowledged, and subject to the terms and conditions hereinafter set forth, the Cities and the BCRUA mutually undertake, promise, and agree as follows:

## ARTICLE I

### DEFINITIONS AND INTERPRETATIONS

Section 1.1      Definitions. In addition to the terms defined above, the following terms shall have the meanings assigned to them below wherever they are used in this Contract, unless the context clearly requires otherwise:

(a) "Additional Bonds" means one or more series of additional Bonds which are issued by the BCRUA to finance completion of the BCRUA Project pursuant to Section 3.9 hereof or for any other lawful purpose.

(b) "Annual Payments" means the amount of money constituting the Operation and Maintenance Expenses, Overhead Expenses, and to the extent the BCRUA issues a series of Bonds on behalf of a City, the Bond Payment to be paid to the BCRUA by each City, on a several and not a joint basis as described in Section 4.1 and Section 4.5 hereof from the revenues of each City's System as an operating and maintenance expense of each City's System at the times and in the amounts required by Sections 4.5 and 9.2 of this Contract.

(c) "Authorized Representative" means any person at the time delegated authority to act on behalf of the Cities or the BCRUA, as the case may be, and designated as such in a written certificate, containing a specimen signature of such person, which, for the Cities shall be the City Manager, of each City or such other officers or employees of the Cities authorized to act on

behalf of the Cities during the respective City Manager's absence or incapacity, and for the BCRUA shall be the General Manager of the BCRUA or such other officer or employee of the BCRUA authorized to act on behalf of the BCRUA during the General Manager's absence or incapacity, unless a party notifies the other party in writing of a change in its Authorized Representative.

(d) "BCRUA" means the Brushy Creek Regional Utility Authority, Inc. and its lawful successors and assigns.

(e) "BCRUA Consulting Engineer(s)" means such engineering firm or firms as may be selected by the BCRUA.

(f) "BCRUA Project" means, collectively, the Land Interests and the improvements described in the recitals to this Contract and further described in the Preliminary Design Report, and as shown on Exhibit "D". Without limitation the BCRUA Project includes the facilities, lines, intake structures, storage tanks, booster pumps, and other appurtenances in the BCRUA Project as described in the Preliminary Design Report and owned by the BCRUA sufficient to treat the raw water and deliver the treated water to which the Cities, respectively, are entitled under this Contract.

(g) "BCRUA Project Costs" means and includes, without limitation, the following costs incurred for the BCRUA Project by or on behalf of the BCRUA or the Cities:

(i) the cost of acquisition of the Land Interests, including appraisals, closing costs and title insurance policies;

(ii) the cost of acquisition, construction, repair, replacement, improvement or decommissioning of the BCRUA Project, and any structure, item of equipment, or other item, used for, or in connection with, the BCRUA Project;

(iii) the cost of site preparation of the Land Interests, including demolition or removal of structures and improvements as necessary or incident to accomplishing the BCRUA Project;

(iv) the cost of engineering, legal, architectural or other related services;

(v) the preparation cost of plans, specifications, studies, surveys, cost estimates, and other expenses necessary or incident to planning, providing, or financing the BCRUA Project;

(vi) the cost of machinery, equipment, furnishings, and facilities necessary or incident to placing the BCRUA Project in operation;

(vii) finance charges and interest before, during, and after construction as permitted by the laws of the State;

(viii) costs incurred in connection with financing the BCRUA Project, including, without limitation:

(1) financing, legal, accounting, financial advisory, rating agency, and auditing fees, expenses and disbursements;

(2) the cost of printing, engraving, and reproduction services; and

- (3) the cost of a trustee's or paying agent's initial or acceptance fee and subsequent fees;
- (ix) all costs, fees and expenses of litigation of all kinds;
- (x) the cost of property casualty and public liability insurance;
- (xi) the fees and costs of the underwriters as the anticipated purchasers of the Bonds;
- (xii) reimbursement of the costs previously incurred by and agreeable to the other Cities with respect to the BCRUA Project; and
- (xiii) other costs generally recognized as a part of BCRUA Project construction costs.

BCRUA Project Costs will be allocated among the Cities in accordance with Exhibit "D".

(h) "Bond Payment(s)" means the amount of money to be paid to the BCRUA by a City, for the debt service or to fund or replenish any debt service reserve fund or other special or contingency fund or the payment of Trustee or other fees related to one or more series of Bonds issued for that City, which Bonds are payable from the gross revenues of the City's System as an operating and maintenance expense of the City's System at the times and in the amounts required to pay debt service on a series of Bonds issued for that City, at such time as further provided in Section 4.5 of this Contract. A City is responsible for paying debt service on only the series of Bonds issued for that City, after taking into account any capitalized interest funded from the proceeds of any series of Bonds issued for that City. A City is not responsible for paying debt service on any series of Bonds issued for another City.

(i) "Bond Resolution" means any resolution and/or trust indenture of the BCRUA, authorizing the issuance of and securing a series of Bonds and all amendments and supplements thereto authorized by such resolution to establish certain terms of the Bonds authorized by such resolution. Since separate series of Bonds will be issued for each City requesting financing, any such reference in this Contract means the Bond Resolutions related to the City for which such series of Bonds are being issued.

(j) "Bonds" means all bonds, notes, or other obligations hereafter issued by the BCRUA, for each City requesting financing, the proceeds of which shall be used to pay such City's share of BCRUA Project Costs, (including any Additional Bonds ) or to refund any Bonds or to refund any such refunding Bonds.

(k) "Cities" means, collectively, the City of Cedar Park, Texas, the City of Leander, Texas, and the City of Round Rock, Texas. "City" means, respectively, the City of Cedar Park, Texas, the City of Leander, Texas, or the City of Round Rock, Texas.

(l) "City System" means and includes a respective City's existing combined waterworks and wastewater disposal system, together with all future extensions, improvements, enlargements, and additions thereto, including, to the extent permitted by law, and/or reclaimed water systems which are integrated with the waterworks or wastewater disposal system, and all replacements thereof, provided that, notwithstanding the foregoing, and to the extent now or hereafter authorized or permitted by law, the term City System shall not include any waterworks or wastewater facilities which are declared by a City not to be a part of its City System of such City and which are hereafter acquired or constructed by a respective City with the proceeds from

the issuance of "Special Project Bonds", which are hereby defined as being special revenue obligations of such City, which are not secured by or payable from the net revenues of a respective City System, but which are secured by and are payable solely from special contract revenues, or payments received by a City or any other legal entity, or any combination thereof, in connection with such facilities; and such revenues or payments shall not be considered as or constitute gross revenues of a respective City System, unless and to the extent otherwise provided in the ordinance or ordinances authorizing the issuance of such "Special Project Bonds."

(m) "Claim", as used in Section 12.13 of this Contract, means claims, demands, and expenses, including reasonable attorney's fees.

(n) "Code" means the Internal Revenue Code of 1986, and any amendments thereto, as in force and effect on the date of delivery of any series of Bonds.

(o) "Completion Date" means such term as it is defined in Section 3.9 of this Contract.

(p) "Construction Fund" means the fund created with that name pursuant to a Bond Resolution.

(q) "Credit Agreement" means any bond insurance policy or other credit agreement, as defined in and authorized by the provisions of Chapter 1371, as amended, Texas Government Code, which the BCRUA may execute relating to a series of Bonds.

(r) "Delivery Point" means the place, whether one or more, to which the BCRUA will deliver treated water to each City pursuant to this Contract.

(s) "Engineering Reports" means collectively the Preliminary Engineering Report ("PER") and the Preliminary Design Report ("PDR"). The Preliminary Design Report updates, and in some circumstances replaces and modifies, the Preliminary Engineering Report. In the event there is a conflict between the two reports, the Preliminary Design Report shall prevail. The Engineering Reports may be amended, modified and changed and superseded with the approval of the BCRUA and Cities, at any time prior to the execution of construction contracts for the BCRUA Project or as modified and changed by change orders issued after the execution of such construction contracts; provided, however, no such change order shall adversely affect any City without the unanimous consent of the Cities.

(t) "Fiscal Year" means the fiscal year, which currently begins on October 1 of each year and ends on September 30 of the following year.

(u) "Force Majeure" means such term as it is defined in Section 12.3 of this Contract.

(v) "General Manager" means the individual hired by the BCRUA to manage the affairs of the BCRUA.

(w) "Insurance Policy" means the insurance policy, if any, issued by the Insurer guaranteeing the scheduled payment of principal of and interest on a particular series of Bonds when due.

(x) "Insurer" means the company, if any, insuring a particular series of the Bonds, or any successor thereto or assignee thereof.

(y) "Land Interests" means the fee simple interests and/or the easements, right-of-way, and other interests in real property necessary for the acquisition, construction, and operation of the BCRUA Project.

(z) "MSRB" means the Municipal Securities Rulemaking Board and any successor to its duties.

(aa) "NRMSIR" means each person whom the SEC or its staff has determined to be a nationally recognized municipal securities information repository within the meaning of the Rule from time to time.

(bb) "Operation and Maintenance Expenses" means all direct costs and expenses, fixed and variable, incurred by the BCRUA for its operation and maintenance of the BCRUA Project, including (for greater certainty but without limiting the generality of the foregoing) the costs of utilities, supervision, treatment, engineering, accounting, auditing, legal services, insurance premiums, supplies, services, and administration of the BCRUA Project, Overhead Expenses, and costs of operating, repairing, maintaining, and replacing equipment for proper operation and maintenance of the BCRUA Project. The term "Operation and Maintenance Expenses" does not include depreciation charges or such portion of the above-described costs to the extent such costs are paid pursuant to an agreement other than this Contract.

(cc) "Operations Committee" means the committee created in Article V of this Contract.

(dd) "Overhead Expenses" means the BCRUA's reasonable and necessary costs and expenses incurred at any time directly related to the issuance and servicing of the Bonds, the acquisition of Land Interests required for the BCRUA Project, the design, permitting, financing, acquisition, construction, and ownership of the BCRUA Project and any other activities required of or involving the BCRUA in connection with or attributable to the BCRUA Project or the Bonds.

(ee) "Permitted Liens" means

(i) minor irregularities, charges, liens, encumbrances, defects, easements, licenses, rights-of-way, servitudes, restrictions, mineral rights, and clouds on title which, in the opinion of counsel to the BCRUA, a copy of which shall be forwarded to each City, do not materially impair the use of the BCRUA Project for the purposes for which it is designed;

(ii) easements for roads (as used in this Contract, the term "roads" shall include, without limitation, streets, curbs, gutters, drains, ditches, sewers, conduits, canals, mains, aqueducts, aerators, connections, ramps, docks, viaducts, alleys, driveways, parking areas, walkways, and trackage), utilities (which for purposes of this Contract shall include, without limitation, water, sewer, electricity, gas, telephone, pipeline, railroad, and other collection, transportation, light, heat, power, and communication systems) and similar easements and other easements, rights-of-way, rights of flowage, flooding, diversion or outfall, licenses, restrictions, and obligations relating to the operation and maintenance of the BCRUA Project which, in the opinion of counsel to the BCRUA, a copy of which shall be forwarded to each City, do not materially impair the use of the BCRUA Project for the purposes for which it is designed; and

(iii) rights of the United States or any state or political subdivision thereof, or other public or governmental authority or agency or any other entity vested with the power of eminent domain to take or control property or to terminate any right, power, franchise, grant, license, or permit previously in force.

(ff) "Plans and Specifications" means the plans and specifications prepared for the BCRUA Project by the BCRUA Consulting Engineer(s), as the same may be revised from time to time in accordance with this Contract.

(gg) "Preliminary Design Report" or "PDR" means collectively the following described documents:

(i) *Treatment Plant PDR*. "Brushy Creek Regional Water Treatment Plant; Preliminary Design Report prepared by Camp Dresser & McKee, Inc., dated July, 2008;

(ii) *Raw Water PDR*, "Brushy Creek Regional Water Supply Project – Phase I Raw Water Facilities – Floating Intake and Raw Water Pipeline; Preliminary Design Report" prepared by Carter & Burgess, Inc., dated October 2007;

(iii) *Treated Transmission Main, Segment 1 PDR*, "Brushy Creek Regional Utility Authority 78 inch Water Transmission Main Preliminary Engineering Report: prepared by Lockwood, Andrews & Newnam, Inc., dated May 24, 2007; and

(iv) *Treated Transmission Main, Segment 2C PDR*, "Preliminary Engineering Report – Treated Water Transmission Line Segment 2C" prepared by K. Friese & Associates, Inc., dated September 2007.

(hh) "Preliminary Engineering Report" or "PER" means the "Cedar Park – Round Rock – Leander Regional Water Supply Project Preliminary Engineering Report," prepared by HDR Engineering, Inc., dated January 2007.

(ii) "Prudent Utility Practice" means any of the practices, methods, and acts, in the exercise of reasonable judgment, in the light of the facts, including but not limited to the practices, methods, and acts engaged in or approved by a significant portion of the public utility industry prior thereto, known at the time the decision was made, that would have been expected to accomplish the desired result at the lowest reasonable cost consistent with reliability, safety, and expedition. It is recognized that Prudent Utility Practice is not intended to be limited to the optimum practice, method, or act at the exclusion of all others, but rather is a spectrum of possible practices, methods, or acts which could have been expected to accomplish the desired result at the lowest reasonable cost consistent with reliability, safety, and expedition. In the case of any facility included in a City System which is owned in common with one or more other entities, the term "Prudent Utility Practice", as applied to such facility, shall have the meaning set forth in the agreement governing the operation of such facility.

(jj) "Rule" means SEC Rule 15c2-12, as amended from time to time.

(kk) "Sale and Offering Documents" means any official notice of sale, official bid form, preliminary official statement, official statement, or other offering document for the Bonds.

(ll) "SEC" means the United States Securities and Exchange Commission and any successor to its duties.

(mm) "SID" means any entity designated by the State or an authorized department, officer, or agency thereof as, and determined by the SEC or its staff to be, a state information depository within the meaning of the Rule from time to time.

(nn) "State" means the State of Texas.

(oo) "TCEQ" means the Texas Commission on Environmental Quality or its successors or assigns.

(pp) "Trustee" means any trustee named under a trust indenture or the paying agent/registrar named in a paying agent/registrar agreement entered into by the BCRUA relating to the payment of a series of Bonds and authorized by a Bond Resolution.

(qq) "Utility Bond" means the bonds, notes and other obligations of a City outstanding from time to time secured by a lien on and pledge of the net revenues of that City's System or any part thereof, regardless of lien priority.

(rr) "TWDB" means the Texas Water Development Board or any successor entity thereto.

(ss) "TWDB Program" means the applicable TWDB programs.

(tt) "Water Rights" means each City's respective right to raw water under each City's contract with LCRA. Each City's right(s) to raw water are and shall remain the City's sole property. The BCRUA holds no raw water rights and will not acquire any raw water rights by virtue of this Contract.

Section 1.2 Interpretation. The table of contents and caption headings of this Contract are for reference purposes only and shall not affect its interpretation in any respect. Unless the context otherwise requires, words of the masculine gender shall be construed to include correlative words of the feminine and neuter genders and vice versa. Defined terms include the plural and singular versions of the words. This Contract and all the terms and provisions shall be liberally construed to effectuate the purpose set forth herein and to sustain the validity of this Contract.

## ARTICLE II

### PURPOSE AND DESCRIPTION OF THE BCRUA PROJECT

Section 2.1 Raw Water Contracts. Each City, individually, has contracted with LCRA to purchase raw water from Lake Travis in sufficient quantities to meet the long-term projected demands for treated water for each City. Each City has conducted its own investigation and, based solely thereon, has determined that it has contracted for and acquired sufficient quantities of raw water to meet its own needs. A copy of the contract between the City of Round Rock and LCRA for raw water from Lake Travis is attached hereto as Exhibit "A." A copy of the contract between the City of Cedar Park and LCRA for raw water from Lake Travis is attached hereto as Exhibit "B." A copy of the contract, as amended, between the City of Leander and LCRA for raw water from Lake Travis is attached hereto as Exhibit "C."

Section 2.2 Regional Water Treatment and Distribution. In order to utilize the raw water from Lake Travis, in 2005, each City began independently studying and planning for its own water intake, treatment, and distribution system. In early 2006, the three Cities entered into discussions regarding the possibility of a joint regional intake, treatment, and distribution system.



Shortly thereafter, the Cities determined that a joint regional intake, treatment, and distribution system would be the most efficient and cost-effective option for each of them and their respective rate-payers.

Section 2.3      Local Government Corporation. After determining that a joint regional intake, treatment, and distribution system was the best solution available to the Cities water needs, in 2007 the Cities continued their discussions to determine the best method of jointly acquiring, financing, constructing, and operating such system. After researching the various options for a regional system, the Cities determined that the best method would be to create a Local Government Corporation pursuant to Subchapter D of Chapter 431, Texas Transportation Code. In July 2007, the three Cities jointly created a Local Government Corporation which was named the Brushy Creek Regional Utility Authority, Inc. The express purpose for the creation of the BCRUA was to provide an efficient vehicle for the financing, construction, acquisition, ownership, maintenance, and operation of a regional water transmission, treatment, and distribution and/or a regional wastewater collection and treatment systems and/or a water reuse system.

Section 2.4      Purpose of this Contract. The purpose of this Contract is to set forth the terms and conditions under which the Cities, by and through the BCRUA, will finance, construct, acquire, own, maintain and operate the BCRUA Project. This Contract also sets forth in general terms the manner in which the Cities will share the costs of constructing, operating, and maintaining the BCRUA Project.

Section 2.5      Title to Raw Water. Title to and interest in each City's raw water supply shall remain with each City, respectively, at all times. The BCRUA shall not acquire any right or title to the Cities' respective raw water interests by virtue of this Contract and shall not otherwise assert any ownership interest in any City's raw water rights. However, the Cities hereby authorize and assign to the BCRUA the authority to take the raw water from Lake Travis and to exercise servicing authority over, and in all respects, to use the raw water for the sole purpose of treating said water in order to deliver potable water to the Cities. The BCRUA will be responsible for the operation of the BCRUA Project and the treatment of raw water, but shall not claim title to any of the raw water contracted for by the Cities, respectively, which passes through and is treated by the BCRUA Project. Each City is solely responsible to make available sufficient raw water to the BCRUA for its reserved treatment capacity in the BCRUA Project, and the BCRUA shall treat such raw water at its treatment plant.

Section 2.6      Other Contracts. The BCRUA shall not enter into contracts with other entities or persons for the supply of treated water without the prior written consent of all the Cities, which consent shall not be unreasonably withheld.

Section 2.7      Quality. The treated water to be delivered by the BCRUA and received by the Cities shall be potable water. The BCRUA will draw all or a portion, as the case may be, of each City's raw water from Lake Travis into the BCRUA Project for treatment and distribution in order to serve each City's need for treated water, and the BCRUA will treat such raw water using the BCRUA Project and equipment described in the Preliminary Design Report.

Section 2.8      Operation. The BCRUA covenants to operate the BCRUA Project in accordance with Prudent Utility Practices and in accordance with applicable regulatory requirements and standards.

Section 2.9 Conservation Plans. Each City has adopted a water conservation plan in accordance with the rules and regulations of the TCEQ. Each City agrees to provide the BCRUA a certified copy of its adopted plan. Each City covenants to the other Cities and to the BCRUA to fully comply with their respective conservation plans and to comply with all applicable rules and regulations of the TCEQ.

### ARTICLE III

#### ACQUISITION AND CONSTRUCTION OF THE BCRUA PROJECT

Section 3.1 General. Subject to the remaining terms and provisions of this Contract, the BCRUA agrees to issue one or more series of the Bonds, as requested by any City, to acquire and construct the BCRUA Project as generally described in the Preliminary Design Report. The Parties anticipate that the BCRUA Project will be operational by April 1, 2011. It is expressly understood and agreed that any obligations on the part of the BCRUA to finance, acquire, construct, and complete the BCRUA Project and any future expansions of the BCRUA Project and to provide the water treatment capacity to the Cities shall be (i) conditioned upon the BCRUA's ability to obtain all necessary permits, Land Interests, material, labor, and equipment, and upon the ability of the BCRUA to finance the BCRUA Project Costs through the actual sale of the Bonds or receipt of funds from the Cities, including any Additional Bonds needed to complete the BCRUA Project, and (ii) subject to all present and future valid laws, orders, rules, and regulations of the United States of America, the State, and any regulatory body having jurisdiction. The BCRUA shall acquire and construct the BCRUA Project with all reasonable dispatch, and the BCRUA will diligently pursue such acquisition and construction in order that the BCRUA Project will be operational by April 1, 2011, delays incident to events of Force Majeure only excepted; but if for any reason there should be delays in or the entire failure of such acquisition, construction, and improvement, there shall be no diminution in or postponement of the Annual Payments to be made by the Cities hereunder and no resulting liability on the part of the BCRUA.

Section 3.2 Location of BCRUA Project; Acquisition of Land Interests. The BCRUA Project will be constructed and located on, across, within and through the Land Interests. The BCRUA (or one or more of the Cities) shall, as soon as possible after the delivery of this Contract, and subject to the receipt of the Bond proceeds or funds from the Cities, undertake the acquisition of the Land Interests. The BCRUA shall be responsible for ensuring that proper filings of each such portion of the Land Interests are made in the deed records of the appropriate counties to ensure that all interested parties have proper notice of the BCRUA's interests in the Land Interests. As each deed, easement, or other evidence of an interest in real property comprising a portion of the Land Interests is acquired by the BCRUA, a copy of such instrument, together with evidence of its filing in the deed records of the counties in which such portion lies, shall, upon the written request of the Cities, be given to the Cities.

The BCRUA shall acquire a title insurance policy or a title opinion showing good and indefeasible title with respect to each Land Interest acquired. A copy of each such title insurance policy or title opinion shall be retained in the BCRUA's official records.

Section 3.3 Construction. The BCRUA shall, as soon as possible, undertake to make, execute, deliver, and prosecute all contracts, orders, receipts, writings, and instructions with or to

other persons, and in general do or cause to be done all such other things, as may be required for the proper acquisition and construction of the BCRUA Project.

Section 3.4            Selection of BCRUA Consulting Engineer(s); Plans and Specifications. The BCRUA acknowledges that the Cities have previously contracted with several engineering firms to prepare the Preliminary Design Report for the BCRUA Project. Upon BCRUA's receipt of funding, the Cities shall assign to the BCRUA the aforesaid engineering contracts. Upon assignment, the BCRUA shall cause the aforesaid engineering firms to complete the Plans and Specifications and the other materials to be used in the construction of the BCRUA Project and to perform such other engineering tasks as shall be necessary for construction of the BCRUA Project.

Section 3.5            Award of Construction Contracts. Upon obtaining the approval of the Board of Directors of the BCRUA of the Plans and Specifications, the BCRUA will promptly advertise for sealed bids or comply with the requirements for an alternative delivery method for the BCRUA Project to the extent and as required by law. The BCRUA may break the BCRUA Project into several contracts or phases as it determines is best for the timely acquisition and construction of the BCRUA Project. The BCRUA shall not be obligated to award a construction contract unless the proceeds from the Bonds or other funding are available to pay the contract(s). The BCRUA shall ensure that all contracts for the construction of the BCRUA Project provide that the BCRUA Project will be operational by April 1, 2011.

Section 3.6            Liens. Neither the Cities nor the BCRUA will create or permit or suffer to exist any lien, encumbrance, or charge upon the BCRUA Project or any interest therein at any time, except Permitted Liens.

Section 3.7            Revisions of Plans. The BCRUA may revise the Plans and Specifications prior to the Completion Date with the unanimous approval of the Cities.

Section 3.8            Approvals. Unless otherwise required by law, each consent, approval, or other official action required of the Cities or the BCRUA by any provision of this Contract shall be deemed in compliance with this Contract when written evidence of such action, signed by the respective Authorized Representative, is delivered to the party who is to receive evidence of such action. All contracts to be entered into by the BCRUA shall be authorized by the BCRUA's Board of Directors. The Cities will cooperate with the BCRUA in the design, financing, acquisition, and construction of the BCRUA Project and, following the adoption of the Bond Resolution by the BCRUA's Board of Directors, will not take any action or fail to take any action (including, without limitation, any exercise or denial of its consent or approval of any action proposed to be taken by the BCRUA or any of its agents hereunder), if taking or failing to take such action, respectively, would unreasonably delay or obstruct the completion of the BCRUA Project by the BCRUA.

Section 3.9            Completion. Upon completion of the BCRUA Project, the BCRUA shall deliver to the Cities a certificate of the BCRUA and the BCRUA Consulting Engineer(s) stating that, as of a specified date, the BCRUA Project has been completed (the date specified in such certificate being herein called the "Completion Date").

Section 3.10          Raw Water Supply. Each City has conducted its own investigation and, based solely thereon, has determined that it has contracted for and acquired sufficient quantities of raw water to meet its needs. Title to and interest in each City's raw water supply shall remain

with each City, respectively, at all times. The BCRUA shall not acquire any right or title to the Cities' respective raw water interests by virtue of this Contract and shall not otherwise assert any ownership interest in any City's raw water rights. However, the Cities hereby authorize and assign to the BCRUA the authority to take the raw water from Lake Travis and to exercise servicing authority over and in all respects to use such raw water for the sole purpose of treating such raw water in order to deliver potable water to the Cities. The BCRUA will be responsible for the operation of the BCRUA Project and the treatment of raw water, but shall not claim title to any of the raw water contracted for by the Cities, respectively, which passes through and is treated by the BCRUA Project. Each City is solely responsible to make available to the BCRUA sufficient raw water for its reserved treatment capacity in the BCRUA Project, and the BCRUA shall treat such raw water at its treatment plant.

Section 3.11      Access to Cities. If any facility, pipeline, or appurtenance owned by the BCRUA is installed in any street, alley, or public way within the boundaries of a City, as same is now constituted or as may hereafter be extended, such City hereby grants to the BCRUA, upon complying with such City's franchise ordinances or other provisions, the right, privilege, and franchise of using such street, alley or public way for the purposes of maintaining, operating, laying, repairing, or removing such facility, pipeline, or appurtenance.

Section 3.12      Easements. Each City hereby agrees to grant to the BCRUA such easements as may be reasonably necessary for the purposes of placing, constructing, operating, repairing, maintaining, rebuilding, replacing, relocating, and removing water treatment facilities upon, over, across and through the City's property and giving to the BCRUA, and its successors and assigns, all of the rights and benefits necessary or appropriate for the full enjoyment and use of the easement, including but without limiting the same, to the free right of ingress and egress to and from the City's property.

Section 3.13      Delivery Point. The BCRUA Project will include the Land Interests required to deliver treated water to the Delivery Point for each City at the location depicted in the Engineering Reports. After completion of the BCRUA Project, each City shall have the sole responsibility, at its own cost and expense, for providing additional pipelines and other facilities required for transporting its share of the treated water from the BCRUA Project to a new or additional Delivery Point, but an additional or alternative Delivery Point will be allowed only with the consent of the Cities, which consent will not be unreasonably withheld.

Section 3.14      Other Contracts. The BCRUA shall not enter into contracts with other persons for the supply of treated water without the prior written consent of all the Cities, which consent shall not be unreasonably withheld.

Section 3.15      Quality. The treated water to be delivered by the BCRUA and received by the Cities shall be potable water. The BCRUA will draw all or a portion, as the case may be, of each City's raw water from Lake Travis into the BCRUA Project for treatment and distribution in order to serve each City's need for treated water, and the BCRUA will treat such raw water using the BCRUA Project and equipment described in the Engineering Reports.

ARTICLE IV  
FINANCING OF THE BCRUA PROJECT

Section 4.1            Issuance of Bonds.

(a) The BCRUA's acquisition, construction, and completion of the BCRUA Project will be financed by

- (i) receipt of funds from the Cities, respectively,
- (ii) the BCRUA through the issuance of one or more series or issues of Bonds by the BCRUA for a City, which Bonds are payable solely from and secured, in part, by an assignment of the Bond Payments made under this Contract by the City for which such series of Bonds are issued, or
- (iii) any combination of funds from the Cities, respectively, and the issuance of Bonds for the Cities, respectively. It is expressly understood and agreed by the BCRUA and the Cities that the BCRUA shall issue Bonds as separate series for the applicable City.

Each City shall be solely responsible for Bond Payments on its series of Bonds. No City shall have any liability or responsibility for any Bond Payment on a series of Bonds issued for another City. In consideration of the covenants and agreements set forth in this Contract, and to enable the BCRUA to issue the Bonds to carry out the intents and purposes hereof, this Contract is executed to assure the issuance of the Bonds at the request of a City and to provide for and ensure the due and punctual payment by such City to the BCRUA, or to the Trustee relating to the series of Bonds issued for such City, of amounts not less than the Bond Payments. Each City hereby agrees to make, or cause to be made, its respective Bond Payments, as and when due, for the benefit of the owners of the Bonds, as provided in the Bonds and the Bond Resolution. The cost allocations for the BCRUA Project Cost are shown in Exhibit "D."

(b) The proceeds from the sale of the Bonds, together with any funds received from a City will be used for the payment of the BCRUA Project Costs. Upon request of a City, the Bonds will be issued by the BCRUA for such City's share of the amount anticipated to be required to acquire and construct the BCRUA Project, including payment of all BCRUA Project Costs advanced by such City and incurred by the BCRUA prior to the date of issuance of the Bonds, and to fund, to the extent deemed advisable by the BCRUA, a debt service reserve fund, if applicable, and interest on the Bonds during construction and for up to one year after the Completion Date. However, each City specifically reserves the right to pay cash to the BCRUA rather than have the BCRUA issue Bonds on its behalf.

(c) Each Bond Resolution of the BCRUA shall specify the maximum principal amount of the Bonds for each City's series of Bonds to be issued thereunder. The Bonds shall mature not more than forty (40) years from the date of such Bonds and shall bear interest at not to exceed the maximum legal rate then permitted by law, and the Bond Resolution may create and provide for the maintenance of a revenue fund, a debt service fund, a reserve fund, a construction fund, and any other funds deemed prudent by the BCRUA, all in the manner and amounts as provided in such Bond Resolution.

(d) Prior to the final adoption of a Bond Resolution or any amendment of a Bond Resolution by the BCRUA's Board of Directors for a City, a substantially final copy of the

proposed Bond Resolution for such City and the Sale and Offering Documents, if any, for such City shall be presented to the governing body of such City for review and approval.

- (e) Upon approval by the City's governing body of
  - (i) a substantially final copy of the Bond Resolution for the City hereafter adopted by the BCRUA for the applicable City, including any Credit Agreements,
  - (ii) any amendments to any Bond Resolution for the City, and
  - (iii) the Sale and Offering Documents for the City and the delivery to the BCRUA of a certification signed by the Authorized Representative of the City to the effect that the Bond Resolution and the Sale and Offering Documents comply with this Contract,

then upon the adoption and approval of the Bond Resolution in such final form by the BCRUA's Board of Directors or Authorized Representative, as the case may be, and the issuance and delivery of the Bonds to the purchaser thereof, the Bond Resolution shall for all purposes be considered approved by the City for its Bonds and deemed to be in compliance with this Contract in all respects, and the Bonds issued thereunder will constitute Bonds as defined in this Contract for all purposes. Any registered owner of Bonds is entitled to rely fully and unconditionally on any such approval.

(f) All covenants and provisions in the Bond Resolution affecting, or purporting to bind, the City shall, upon the delivery of the Bonds, become absolute, unconditional, valid, and binding covenants and obligations of the City so long as the Bonds and interest thereon are outstanding and unpaid, and may be enforced by the remedies of mandamus and specific performance in addition to any other legal or equitable remedies which may be available, as provided in Section 12.10 of this Contract and the Bond Resolution. Particularly, the obligation of the City to make, promptly when due, all Annual Payments specified in this Contract shall be absolute and unconditional, and said obligation may be enforced as provided in this Contract. In addition, subject to the approval of the City, the BCRUA may enter into Credit Agreements for the purpose of achieving the lowest financing costs for the BCRUA Project.

Section 4.2 Proceeds of Bonds. Subject to the terms and provisions of this Contract, the proceeds of the Bonds shall be used by the BCRUA for the purpose of financing and funding the BCRUA's acquisition and construction of the BCRUA Project as provided in Section 4.1. Upon request by a City, the BCRUA shall use its best efforts to issue its Bonds, in one or more separate series for each City requesting financing, in amounts which will be sufficient, together with any funds contributed by a City, to accomplish such purpose. The proceeds of the Bonds shall be deposited in the Construction Fund established pursuant to the terms of each Bond Resolution. A trust indenture may be entered into between the BCRUA and a corporate trustee for the purpose of securing the payment of the Bonds. The trust indenture or each Bond Resolution, as appropriate, will establish procedures for the payment of BCRUA Project Costs out of one or more construction funds, or subaccount within the Construction Fund. It is anticipated that the Bonds will be issued pursuant to each Bond Resolution and that a paying agent/registrars agreement will be executed between the BCRUA and the Trustee concerning the payment procedures with respect to the Bonds.

Any funds contributed by a City for its share of BCRUA Project Costs shall be deposited into a separate subaccount of the Construction Fund of the BCRUA

(a) prior to the BCRUA pricing any series of Bonds for a City or

(b) simultaneous with the delivery of the proceeds of any series of Bonds so long as sufficient evidence is provided to the BCRUA and Cities prior to pricing of Bonds that their funds will be available at the closing of the Bonds.

Section 4.3            Refunding of Bonds. The BCRUA reserves the right to issue refunding bonds in accordance with the laws of the State and will provide notice to each applicable City, respectively, of the redetermined Bond Payment in accordance with Section 9.2 of this Contract.

Section 4.4            Redemption of Bonds. The BCRUA, in its sole discretion or upon the written request of a City (and provided that the affected series of Bonds for such City are subject to redemption or prepayment prior to maturity at the option of the BCRUA, and provided that such request is received in sufficient time prior to the date upon which such redemption or prepayment is proposed), forthwith shall take or cause to be taken all action that may be necessary under the applicable redemption provisions of the series of Bonds to redeem the Bonds or any part thereof, to the full extent of funds that are either made available for such purpose by the applicable City or already on deposit under the Bond Resolution and available for such purpose. The redemption of any outstanding Bonds prior to maturity at any time shall not relieve the applicable City of its absolute and unconditional obligation to pay each remaining Annual Payment with respect to any outstanding Bonds, as specified in the Bond Resolution.

Section 4.5            Debt Service on Bonds and Other Bond Funding Requirements. It is acknowledged and agreed that payments to be made under this Contract will be the primary source available to the BCRUA to provide the money necessary for the BCRUA to meet its obligations with respect to any series of Bonds and any Credit Agreements. Each City therefore agrees and accepts sole responsibility to pay the Bond Payments related to the series of Bonds issued for the respective City, as outlined in subsections (a) through (c) below, in full when due as provided in this Contract. However, no City shall have any liability or responsibility for any Bond Payments on a series of Bonds issued for another City. Bond Payments shall be due by the close of business on the business day prior to each date on which any of the following payments or deposits shall be due and shall be in an amount equal to all such payments and deposits due on such date:

(a) debt service on its related series of Bonds for each respective City for which such series of Bonds were issued and related payments and deposits, as follows:

(i) principal of, redemption premium, if any, and interest on, its related series of Bonds for each respective City, less interest to be paid out of Bond proceeds or from other sources if permitted by any Bond Resolution, and the redemption price of any Bonds to be redeemed prior to maturity when and as provided in any Bond Resolution plus the fees, expenses, and, to the extent permitted by law, indemnities of the Trustee, if any, for the Bonds, and those of the paying agent/registrars for paying the principal of and interest on the Bonds and for authenticating, registering, and transferring Bonds on the registration books;

(ii) deposits required to be made to any special, contingency, or reserve fund by the provisions of any Bond Resolution; and

(iii) any deposit in addition thereto required to restore any deficiency in any of such funds by the provisions of any Bond Resolution,

(b) amounts payable by the BCRUA under a Credit Agreement; and

(c) the fees, expenses, and indemnities (to the extent permitted by law) of the Trustee, remarketing agent, rate setting agent, authentication agent, arbitrage rebate compliance firm, and tender agent, if any, for the Bonds.

Section 4.6            Billing. The BCRUA will maintain rates and charges sufficient to meet the debt service requirements on outstanding Bonds, and each City shall maintain rates and charges for its City System sufficient to pay the City's obligations secured by and made payable from the revenues derived from the operation of its City System, as provided in Section 9.3(b) of this Contract. To the extent Annual Payments are due, the BCRUA will render a bill to each City not more than once each month, for the payments required by this Contract. The BCRUA shall, until further notice, render such bills on or before the 5th day of each month and such bills shall be due and payable on the 15th day of each month or ten (10) days after such bill is deposited into the United States mail, properly stamped and addressed to the Cities whichever is later and thereafter, to the extent permitted by law, interest shall accrue thereon at the rate of ten per cent (10%) per annum until paid in full. Notwithstanding the foregoing, Bond Payments shall be paid in accordance with Section 4.5 of this Contract. The BCRUA may, however, from time to time by sixty (60) days' written notice change the date by which it shall render bills, and all bills shall thereafter be due and payable fifteen (15) days after such dates as herein provided. Each City shall make all payments in such coin or currency of the United States of America as at the time of payment shall be legal tender for the payment of public and private debts and shall make payment to the BCRUA as its office in Williamson County, Texas, or at such other place as the BCRUA may from time to time designate by sixty (60) days written notice.

Section 4.7            Delinquency in Payment. If any City fails to pay in full any bills when due and payable, the BCRUA shall give written notice of such delinquency to the City and if all bills due and unpaid, including interest thereon, are not paid in full within forty-five (45) days after delivery of such notice, then the City agrees that the BCRUA shall be authorized, at its sole option, to institute suit for collection thereof and to collect any amounts due and unpaid, together with interest thereon and reasonable attorneys' fees, and the City further agrees that the BCRUA shall, at its sole option, discontinue providing treated water to the City until all amounts due and unpaid are paid in full with interest as herein specified. Any such discontinuation of service shall not, however, relieve the City of its unconditional obligations to make the payments required by this Contract. It is also hereby expressly acknowledged and agreed that any nondefaulting City shall have no obligation to make any payments for the benefit of the defaulting City.

Section 4.8            BCRUA's Rights Assigned to Trustee. The Cities are advised and recognize that as security for the payment of a series of Bonds, the BCRUA may, subsequent to the issuance of the initial series of Bonds, assign to the Trustee, pursuant to one or more trust indentures (or paying agent/registrars agreements) to be authorized by a Bond Resolution, the BCRUA's rights under this Contract, including the right to receive the Annual Payments hereunder (but not the right to receive payments, if any, under Section 12.13 hereof). Each City assents to such assignment and will make the Annual Payments directly to the Trustee without defense or set-off by reason of any dispute between one or both of the Cities and the BCRUA or the Trustee. All rights against a City arising under this Contract or each Bond Resolution and



assigned to the Trustee may be enforced by the Trustee, or the owners of the Bonds, to the extent provided in each Bond Resolution, and the Trustee, or the owners of the Bonds, shall be entitled to bring any suit, action, or proceeding against a City, to the extent provided in the Bond Resolution, for the enforcement of this Contract, and it shall not be necessary in any such suit, action, or proceeding to make the BCRUA or any other City a party thereto.

Section 4.9            Tax-Exempt Bonds. The Parties hereto understand and agree that the BCRUA will use reasonable efforts to provide for, but will not be liable for a failure to produce, the lowest overall debt service cost for any series of Bonds to be issued for the BCRUA Project. In connection therewith, each City understands that the BCRUA intends to issue Bonds the interest on which is excludable from the gross income of the owners thereof for federal income tax purposes. The Parties hereto acknowledge their understanding that the federal income tax laws impose certain restrictions on the use and investment of proceeds of such tax-exempt bonds and on the use of the property financed therewith and the output produced therefrom. Accordingly, each City agrees and covenants that if any series of Bonds are offered to investors with the understanding that the interest will be exempt from federal income taxation, then the Parties, their assigns and agents, will take such action to assure, and refrain from such action which will adversely affect the treatment of such Bonds as obligations described in section 103 of the Code. Should any party fail to comply with such covenant, the effect of which being that the Bonds no longer qualify as obligations described in the Code, such defaulting party shall be liable for all costs resulting from the loss of the tax-exempt status of the Bonds. The Parties hereby agree and covenant to comply with all of the representations and covenants relating to such exemption which are set out in any Bond Resolution. Each City and the BCRUA further agree and covenant that in the event any series of Bonds issued are to be tax-exempt, they will modify such agreements, make such filings, restrict the yield on investments, and take such other action necessary to fulfill the applicable provisions of the Code. For these purposes, the Parties may rely on the respective opinion of any firm of nationally-recognized bond attorneys selected by them. In the event that a conflict arises in the opinions of the respective firms of each of the Parties, the Parties will identify a different firm that is mutually acceptable to all Parties, in order to resolve the conflict of opinion.

Section 4.10            Payment to Rebate Fund. In the event that tax-exempt Bonds are issued as provided in Section 4.9, the BCRUA hereby covenants and agrees to make the determinations and to pay any deficiency into a rebate fund, at the times and as described in each Bond Resolution to comply with the provisions of section 148(f)(2) of the Code. In any event, if the amount of cash held in each rebate fund shall be insufficient to permit the BCRUA or the Trustee to make payment to the United States of America of any amount due on any date under section 148(f)(2) of the Code, each City forthwith shall pay the amount of such insufficiency for the series of Bonds issued for that City on such date to the Trustee in immediately available funds for such purpose. The obligations of each City under this Section 4.10 are direct obligations of the City, acting under the authorization of, and on behalf of, the BCRUA and the BCRUA shall have no further obligation or duty with respect to the rebate fund.

Section 4.11            City's Obligations. In the event the BCRUA Project is not completed for any of the reasons contemplated herein or otherwise, or any proceeds from issuance of a series of Bonds are not used for completion of the BCRUA Project for any reason, any Bond proceeds and earnings thereon for such series not used for completion of the BCRUA Project shall be utilized to satisfy amounts due and owing on such Bonds as described in the related Bond Resolution,

and herein, so as to reduce the Bond Payments which would otherwise be due hereunder, or be applied for the benefit of each City as provided in the related Bond Resolution. Each City has covenanted absolutely and unconditionally, in accordance with all other terms of this Contract, to make the Annual Payments, as provided herein, in consideration for such application of the money as well as the other covenants and obligations of the BCRUA and others set forth or contemplated herein.

Section 4.12        Interest on Money. All legally available money respecting a series of Bonds shall be invested in the manner set forth in each Bond Resolution. Any interest earnings on the Bond proceeds may be used to pay principal of and interest on the related Bonds or for the payment of any BCRUA Project Costs or other costs related to the BCRUA Project approved by the Cities, subject to Section 4.9.

Section 4.13        Sale and Offering Documents. At the request of the BCRUA, each City for which a series of Bonds is being issued shall provide to the BCRUA current and historical information concerning such City's System, the financial conditions results, and prospects of the City, and such other information concerning such City as the BCRUA shall deem advisable for inclusion in the Sale and Offering Documents, if any, for the Bonds to be issued for such City, and shall certify to the BCRUA and the underwriters of any offering of Bonds to be made by means of such Sale and Offering Documents when and if the City deems such Sale and Offering Documents to be complete and final for purposes of the Rule. Each City represents and warrants that all statements concerning it (including, without limitation, its financial condition, results, and prospects, and any demographic and economic information concerning the area served by the BCRUA Project) that are contained in any Sale and Offering Document approved by the City pursuant to Section 4.1 hereof shall be true in all material respects and shall not omit to state any material fact necessary to make the statements made in such Sale and Offering Document, in the light of the circumstances in which they are made, not misleading.

Section 4.14        Right to Prepay. Each City shall have the right at any time to prepay all or any portion of its Annual Payments. Subject to the provisions of Section 4.9, such prepaid Annual Payments, including any interest accruing, shall be used and invested by the BCRUA as directed by the City which made such prepayment

- (a) as a credit against future Annual Payment obligations of such City,
- (b) to redeem Bonds issued for such City pursuant to the provisions of Section 4.4, or
- (c) to provide for the defeasance of the Bonds pursuant to the provisions of the applicable Bond Resolution.

Any such prepayment will not cause a termination of this Contract until all other amounts owed or to be incurred by the BCRUA or any other person under the provisions of the applicable Bond Resolution have been paid in full or waived by such person.

## ARTICLE V

### OPERATION, FINANCE AND MAINTENANCE OF BCRUA PROJECT

Section 5.1        Operation. The BCRUA shall operate the BCRUA Project in accordance with accepted good business and engineering practices and in accordance with requirements of federal

and state law, including without limitation the Texas Water Code, as amended, and as said laws may be amended in the future, and any rules and regulations issued and to be issued by appropriate agencies in the administration of said laws. The Operations Committee, as set forth below, shall assist the BCRUA by providing advice and recommendations on the operations of the BCRUA Project, as provided below.

Section 5.2 Payments for Operations and Maintenance Expenses. Each City shall pay to the BCRUA its Annual Payments, including Operations and Maintenance Expenses related to the operation of the BCRUA Project. However, controlling the costs paid by the Cities to the BCRUA for Operation and Maintenance Expenses shall be of primary importance to the BCRUA. The BCRUA shall use diligent efforts so that Operation and Maintenance Expenses incurred by the BCRUA and ultimately paid by the Cities are reasonable and justified. The BCRUA and the Cities agree that fixed Operation and Maintenance Expenses shall be allocated among the Cities based upon each City's reserved capacity in the BCRUA Project components, and that variable Operation and Maintenance Expenses shall be allocated among the Cities based upon the volume of treated water delivered to each City in relation to the volume of treated water delivered to all Cities.

Section 5.3 Composition of Operations Committee. The Cities and the BCRUA hereby create an Operations Committee to be composed of the following:

- (a) Two representatives appointed by Cedar Park;
- (b) Two representatives appointed by Round Rock; and
- (c) Two representatives appointed by Leander.

The City Manager of each City shall appoint appropriate city staff members as the City's representatives (and alternate representatives to serve in the absence of the City's representatives) to the Operations Committee promptly after execution of this Contract, and shall immediately notify the other Parties of such appointment. Each representative (or alternate representative) shall serve at the will of the City Manager who appointed such representative. Upon the death, resignation or revocation of the power of a City's representative (or alternate representative), the City Manager of such City shall promptly appoint a new representative (or alternate representative) to the Operations Committee.

Section 5.4 Responsibility of Operations Committee. The Operations Committee shall represent the individual and collective interests of the Cities and shall consult with and advise the BCRUA Board of Directors and its respective General Manager or other designated representative with regard to the following matters pertaining to the BCRUA Project:

- (a) The operation and maintenance of the BCRUA Project;
- (b) The addition of new customers to the BCRUA Project and the terms and conditions of the agreements with such new customers consistent with the provisions of this Contract;
- (c) Review of the budgets, prior to submission to the Board of Directors of BCRUA;

- (d) Review of the annual reports of the BCRUA Project;
- (e) Improvements to and expansions of the BCRUA Project;
- (f) Review and make suggestions regarding proposals submitted to BCRUA for engineering services related to the BCRUA Project;
- (g) Review bids or proposals received for construction of BCRUA Project components, and make recommendations for contract award;
- (h) Review invoices received for the construction of BCRUA Project components, and make recommendations for the allocation and payment of such invoices;
- (i) Make recommendations for professional services consultants, including, but not limited to, engineering and financial services;
- (j) Changes to the Engineering Reports;
- (k) Review cash flow projections and provide input as to the assumptions contained therein; and
- (l) Any other pertinent matters relating to the management of the BCRUA Project.

The Board of Directors of the BCRUA shall not take any action with respect to any of the foregoing matters without a recommendation from the Operations Committee. The Operations Committee shall meet at regular intervals to review the progress of construction of the BCRUA Project and the ongoing operation of the BCRUA Project. The Operations Committee shall have access to and may inspect at any reasonable time all physical elements of the BCRUA Project and all records and accounts of BCRUA pertaining to the BCRUA Project. The Operations Committee shall be diligent, prompt, and timely in reviewing and commenting on matters submitted to it. The Cities recognize that the activities of the Operations Committee are an important function of the operation of the BCRUA Project and authorize payment of all reasonable expenses and charges associated therewith.

Section 5.5 BCRUA's Overhead Expenses. To the extent not paid out of the proceeds of a series of Bonds, or otherwise, each City shall pay and reimburse the BCRUA for its share of the Overhead Expenses incurred by or attributable to it throughout the term of this Contract within thirty (30) days of receipt of documentation therefor from the BCRUA. Each City also agrees, with the consent of the BCRUA, to enter into an interlocal agreement to provide for, among other matters, an annual adjustment of the Overhead Expenses paid by each City based upon certain formulas and taking into account each City's reserved capacity in the BCRUA Project and/or the quantity of treated water actually delivered to each City.

**ARTICLE VI**  
**RESERVED CAPACITIES**

Section 6.1 Reserved Capacities in BCRUA Project Components. Each City, respectively, shall have the exclusive right to its reserved capacity in each BCRUA Project component as described in Exhibit D. No reserved capacity may be allocated to or used by anyone other than the City on whose behalf that capacity has been reserved, unless the affected City specifically agrees in writing to the allocation or use.

Section 6.2 Reserved Capacities for Treated Water in the BCRUA Project. Each City, respectively, shall have the exclusive right to take, and the BCRUA shall have the obligation to deliver, treated water at the Delivery Points in the amounts shown in Exhibit D.

Section 6.3 Transfer of Reserved Capacity. Any City may transfer any portion of its reserved capacity in one or more BCRUA Project components to another City, in exchange for such consideration as such Cities shall deem appropriate. The Cities making such transfer shall provide written notice to the BCRUA and the other City, signed by the Cities making the transfer, specifying the amount of transferred reserved capacity and the affected BCRUA Project component(s), and providing that the Cities otherwise ratify and confirm their pre-existing obligations under this Contract. No such transfer shall be effective until and unless such notice is provided. A transfer of reserved capacity shall not change any Bond Payment, other payment, or other obligations of the Cities pursuant to this Contract.

Section 6.4 Documentation of Transferred Reserved Capacity. In the event that reserved capacity is transferred, the BCRUA and the Cities shall cause a written amendment to be made to Exhibit D describing such transfer and setting forth the revised reserved capacity of each City in the BCRUA Project or component(s) thereof.

**ARTICLE VII**  
**DELIVERY POINT(S)**

Section 7.1 Delivery Point(s). Each City shall receive its treated water at a Delivery Point designated for each City in the Engineering Reports, or as mutually agreed upon by all Cities.

Section 7.2 Rate and Quantity at Delivery Point(s). The rate and quantity of treated water delivered to each City at its Delivery Point shall be metered. Each City shall cooperate in good faith to design the Delivery Point(s) to be at appropriate sizes and in appropriate locations to deliver the City's reserved capacity. Each Delivery Point shall be designed to deliver treated water at a maximum rate to be agreed upon by the Cities as design of the BCRUA Project progresses and stated in an amendment to the Engineering Reports, and no City shall take delivery of treated water from the BCRUA Project at such Delivery Point at a rate exceeding such agreed design rate.

## ARTICLE VIII

### METERING AND MEASUREMENT

Section 8.1 Unit of Measurement. The unit of measurement for water delivered hereunder shall be 1,000 gallons of water, U. S. Standard Liquid Measure.

Section 8.2 Measuring Equipment at the Intake Point. In compliance with the regulations and requirements of the LCRA, the BCRUA shall furnish, install, operate and maintain for the intake point on Lake Travis the necessary meters, including electronic or other equipment and devices of standard type for measuring properly the quantity of water taken from Lake Travis. Each City also agrees, with the consent of the BCRUA, to enter into an interlocal agreement to provide for, among other matters, the appropriate amount of water taken from Lake Travis to be allocated to each City based upon certain formulas and taking into account the quantity of treated water actually delivered to each City.

Section 8.3 Measuring Equipment at Delivery Points. The BCRUA shall furnish, install, operate and maintain at its own expense for each Delivery Point the necessary meters, including electronic or other equipment and devices of standard type for measuring properly the quantity of treated water delivered under this Contract. Such meter or meters and other equipment so installed shall remain the property of the BCRUA. Each City shall have access to such metering equipment at all reasonable times, but the reading, calibration, and adjustment thereof shall be done only by the employees or agents of the BCRUA. For the purpose of this Contract the original record or reading of the meter or meters shall be the journal or other record book of BCRUA in its office in which the records of the employees or agents of the BCRUA who take readings are or may be transcribed. Upon written request of a City, the BCRUA will give the City a copy of such journal or record book, or permit the City to have access to the same in the office of the BCRUA during reasonable business hours.

The BCRUA shall calibrate its meters periodically, but not less often than every three (3) years, in the presence of a representative of each City. The BCRUA and the Cities shall jointly observe any necessary adjustments which are made to the meters. If any check meter(s) hereinafter provided for have been installed, the same shall also be calibrated by each City in the presence of a representative of the BCRUA and a representative of the other Cities, who shall jointly observe any necessary adjustment. The BCRUA shall give the Cities reasonable notice of the time when any such calibration is to be made. In the event that a representative of a City is not present at the time set, the BCRUA may proceed with calibration and adjustment in the absence of any such representative.

If any party at any time observes a variation between the delivery meter or meters and the check meter or meters, if any such check meter or meters shall be installed, such party will promptly notify the other Parties, and the Parties hereto shall then cooperate to procure an immediate calibration test and joint observation of any adjustment, and said meter or meters shall then be adjusted to accuracy. Each party shall give the other Parties not less than forty-eight (48) hours notice of the time of all tests of meters so that the other Parties may have a representative present.

If upon any test, the percentage of inaccuracy of any metering equipment is found to be in excess of two percent (2%), registration thereof shall be corrected for a period extending back to the time when such inaccuracy began, if such time is ascertainable, and if such time is not

ascertainable, then for a period extending back one-half (1/2) of the time elapsed since the last date of calibration, but in no event further back than a period of six (6) months. If for any reason any meters are out of service or out of repair so that the amount of treated water delivered cannot be ascertained or computed from the reading thereof, the treated water delivered during the period such meters are out of service or out of repair shall be estimated and agreed upon by the Parties hereto upon the basis of the best data available. For such purpose, the best data available shall be deemed to be the registration of any check meter or meters if the same have been installed and are accurately registering. Otherwise the amount of treated water delivered during such period may be estimated (i) by correcting the error if the percentage of the error is ascertainable by calibration tests or mathematical calculation, or (ii) by estimating the quantity of delivery by deliveries during the preceding periods under similar conditions when the meter or meters were registering accurately.

Each City may, at its sole option and its own expense, install and operate a check meter to verify the operation of each meter installed by the BCRUA, but the measurement of treated water for the purpose of this Contract shall be determined solely by the BCRUA's meters, except in the cases hereinabove specifically provided to the contrary. All such check meters shall be of standard make and shall be subject at all reasonable times to inspection and examination by any employee or agent of the BCRUA, but the reading, calibration and adjustment thereof shall be made only by the City that installed the check meter, except during any period when a check meter may be used under the provisions hereof for measuring the amount of treated water delivered, in which case the reading, calibration and adjustment thereof shall be made by BCRUA with like effect as if such check meter or meters had been furnished or installed by BCRUA.

## ARTICLE IX

### ANNUAL PAYMENTS, CITY COVENANTS

Section 9.1 Annual Estimate of Annual Payments. Not less than ninety (90) days prior to each Fiscal Year, the BCRUA shall furnish to the Cities an estimate and schedule of the Annual Payments required to be paid by each City in such Fiscal Year.

Section 9.2 Annual Payments by the Cities.

(a) Each City hereby agrees that it will make payment of its Bond Payment to the extent BCRUA issues a series of Bonds for such City and its proportionate share of the Operation and Maintenance Expenses and Overhead Expenses to the BCRUA, or to the Trustee on behalf of the BCRUA, as provided in each Bond Resolution in accordance with the procedures established in Section 4.6 hereof. If a City at any time disputes the amount to be paid by it to the BCRUA, such City shall nevertheless promptly make such payment or payments, but if it is subsequently determined by agreement or court decision that such disputed payments made by the such City should have been less, or more, the BCRUA shall promptly revise the charges for such City in such manner that a City will recover its overpayment or the BCRUA will recover the amount due it. The BCRUA shall pursue all legal remedies, including the remedies of mandamus and specific performance in addition to any other legal or equitable remedies (other than termination) which may also be available to it, against any City to enforce and protect the rights of the BCRUA and the owners of the Bonds, and the City shall not be

relieved of the liability to the BCRUA for the payment of all amounts which are due by them hereunder. However, no City shall have any liability or responsibility for any Annual Payment attributable to another City.

(b) Except to the extent otherwise provided by a Bond Resolution, all amounts due under this Contract shall be paid and are due in Williamson County, Texas, which is the County in which the principal administrative offices of the BCRUA are located.

(c) The BCRUA shall redetermine the estimate and schedule of Annual Payments due in any Fiscal Year at any time during such Fiscal Year, as and to the extent deemed necessary or advisable by the BCRUA to accurately forecast the amount and date of Annual Payments to be made by each City, if (i) the BCRUA issues Bonds to complete the BCRUA Project or to refund any Bonds or enters into, amends, or terminates a Credit Agreement, (ii) actual interest rates on any variable interest rate Bonds differ from those projected by the BCRUA, or (iii) any other event occurs which results in an increase or decrease in the Annual Payments required to be made by any City in such Fiscal Year.

(d) If, during any Fiscal Year, the Annual Payment is redetermined in any manner as provided or required in this Section, the BCRUA will promptly furnish the Cities with an updated schedule of payments reflecting such redetermination.

(e) Notwithstanding anything herein to the contrary, no failure of the BCRUA to estimate, and no mistake by the BCRUA in any estimate of, the amount of or schedule for Annual Payments due from the Cities in any Fiscal Year shall relieve any City from (or defer) its absolute and unconditional obligation to make all Annual Payments in full when due.

#### Section 9.3 Source of Payment.

(a) Each City represents and covenants that all payments to be made by it under this Contract shall constitute reasonable and necessary "operating expenses", as defined in Chapter 1502, as amended, Texas Government Code, of its City System, but only to the extent of the Annual Payment, and the Cities shall not be obligated to make the payments under this Contract from any source other than the gross revenues of its City System. Each City further represents that its Governing Body has determined that the services to be provided by the BCRUA Project are absolutely necessary and essential to provide the treated water to such City.

(b) Each City agrees throughout the term of this Contract to fix and collect such rates and charges for services to be supplied by its City System as will produce gross revenues at all times during the term of this Contract in an amount at least equal to (i) all of the expenses of operation and maintenance of its City System, including specifically its Annual Payments under this Contract and (ii) all other amounts as required by law and the provisions of the ordinances or resolutions authorizing its Utility Bonds or other obligations now or hereafter outstanding payable, in whole or in part, from the net revenues of the its City System, including the amounts required to pay all principal of and interest on such City's Utility Bonds and other obligations.

(c) No ad valorem tax revenues of any City shall be pledged to the payment of any amounts to be paid by the City to the BCRUA under this Contract, nor shall the BCRUA have the right to demand payment of any amounts to be paid by the City under this Contract be paid from funds raised or to be raised from ad valorem taxation from the City and the obligations under this Contract shall never be construed to be a debt or pecuniary obligation of the City of such kind as to require the City to levy and collect an ad valorem tax to discharge its obligations.



Section 9.4 Annual Budgeting by the Cities. Each City shall make provision in each of its annual budgets and shall appropriate an amount sufficient, at a minimum, for the payment of all amounts required to be paid by the City under this Contract.

Section 9.5 Revenue Sources Pledged. Each City hereby pledges the gross revenues of its City System to the payment of its obligations under this Contract and recognizes that the BCRUA will, and authorizes the BCRUA to, pledge the Bond Payments owing to it by each City under this Contract to the payment of the applicable series of Bonds and Credit Agreements issued for that particular City. The BCRUA agrees to make the payments for such series of Bonds and Credit Agreements when and as required by each Bond Resolution, each Credit Agreement, and this Contract, from and to the extent of proceeds of a series of Bonds not expended for the BCRUA Project and Bond Payments made by each City.

Section 9.6 General Covenants by Cities. Each City further represents, covenants and agrees that in accordance with and to the extent permitted by law, it will comply with the covenants listed below.

(a) Performance. It will faithfully perform at all times any and all covenants, undertakings, stipulations, and provisions contained in each ordinance or resolution authorizing the issuance of the series of Bonds issued for it by the BCRUA; and it will, at the time and in the manner prescribed, deposit or cause to be deposited the amounts required to be deposited into the fund and accounts created by said ordinances, but only from and to the extent of the sources of funds described in such ordinances.

(b) Legal Authority. It is a duly created and existing home rule city of the State and is duly authorized under the laws of the State to enter into this Contract. By execution hereof, it represents that all actions on its part for the execution and delivery of this Contract have been duly and effectively taken; and that this Contract is a valid and enforceable special obligation of the City in accordance with its terms.

(c) Acquisition and Construction; Operation and Maintenance. (i) It shall use its best efforts in accordance with Prudent Utility Practice to acquire and construct, or cause to be acquired and constructed, any capital improvements to its City System, which shall mean and include any capital extensions, improvements, and betterments, in accordance with the plans and specifications therefor, as modified from time to time with due diligence and in a sound and economical manner; and (ii) it shall at all times use its best efforts to operate or cause to be operated its City System properly and in an efficient manner, consistent with Prudent Utility Practice, and shall use its best efforts to maintain, preserve, reconstruct and keep the same or cause the same to be so maintained, preserved, reconstructed and kept, with the appurtenances and every part and parcel thereof, in good repair, working order and condition, and shall from time to time make, or use its best efforts to cause to be made, all necessary and proper repairs, replacements, and renewals so that at all times the operation of its City System may be properly and advantageously conducted.

(d) Title. It has or will obtain lawful title, whether such title is in fee or lesser interest, to the lands, buildings, structures, and facilities constituting its City System; it will defend the title to all the aforesaid lands, buildings, structures, and facilities; and every part thereof, for the benefit of the BCRUA and the owners of each series of Bonds, against the claims and demands of all persons whomsoever; and it is lawfully qualified to pledge the gross revenues

of its City System to the payment of the payments required by this Contract in the manner prescribed herein, and has lawfully exercised such rights.

(e) Liens. It will from time to time and before the same become delinquent pay and discharge all taxes, assessments, and governmental charges, if any, which shall be lawfully imposed upon its City System; it will pay all lawful claims for rents, royalties, labor, materials, and supplies which if unpaid might by law become a lien or charge thereon, the lien of which would be prior to or interfere with the liens hereof, so that the priority of the lien granted hereunder shall be fully preserved in the manner provided herein; and it will not create or suffer to be created any mechanic's, laborer's, materialman's, or other lien or charge which might or could be prior to the liens hereof, or do or suffer any matter or thing whereby the lien hereof might or could be impaired; provided however, that no such tax, assessment, or charge, and that no such claims which might be used as the basis of a mechanic's, laborer's, materialman's, or other lien or charge, shall be required to be paid so long as the validity of the same shall be contested in good faith by the Cities.

(f) Books, Records, and Accounts. It shall keep proper books, records, and accounts separate and apart from all other records and accounts, in which complete and correct entries shall be made of all transactions relating to its City System and each series of Bonds, and it shall cause said books and accounts to be audited annually as of the close of each Fiscal Year. At the request of the BCRUA, the Cities shall allow the BCRUA to audit such books, records, and accounts at any reasonable time and from time to time.

(g) Insurance.

(i) Except as otherwise permitted in clause (ii) below, it shall cause to be insured such parts of its City System as would usually be insured by governmental entities operating like properties, with a responsible insurance company or companies, against risks, accidents, or casualties against which and to the extent insurance is usually carried by governmental entities operating like properties, including, to the extent reasonably obtainable, fire and extended coverage insurance, insurance against damage by floods, and use and occupancy insurance. Public liability and property damage insurance shall also be carried unless the City Attorney gives a written opinion to the effect that the City is not liable for claims which would be protected by such insurance. At any time while any contractor engaged in construction work shall be fully responsible therefor, the Cities shall not be required to carry insurance on the work being constructed if the contractor is required to carry appropriate insurance. All such policies shall be open to the inspection of the BCRUA at all reasonable times.

(ii) In lieu of obtaining policies for insurance as provided above, the Cities may self-insure against risks, accidents, claims, or casualties described in clause (i) above.

(iii) The annual audit hereinafter required shall contain a section commenting on whether or not the City has complied with the requirements of this Section with respect to the maintenance of

insurance, and listing the areas of insurance for which the City is self-insuring, all policies carried, and whether or not all insurance premiums upon the insurance policies to which reference is hereinbefore made have been paid.

(h) Audits. After the close of each Fiscal Year while this Contract is in effect, an audit will be made by each City of the books and accounts relating to its City System and the revenues of the its City System. As soon as practicable after the close of each such Fiscal Year, and when said audit has been completed and made available to the Cities, a copy of such audit for the preceding Fiscal Year shall be mailed to the BCRUA. Such annual audit reports shall be open to the inspection of the BCRUA, its agents and representatives, the Trustee, and the owners of the Bonds at all reasonable times at the BCRUA's office.

(i) Governmental Agencies. It will comply with all of the terms and conditions of any and all franchises, permits, and authorizations applicable to or necessary with respect to a respective City System, and which have been obtained from any governmental entity, and the Cities have or will obtain and keep in full force and effect all franchises, permits, authorizations, and other requirements applicable to or necessary with respect to the acquisition, construction, equipment, operation, and maintenance of a respective City System.

(j) No Competition. To the extent it legally may, each City hereby covenants solely with the owners of its series of Bonds issued by the BCRUA, if any, that such City will not grant any franchise or permit for the acquisition, construction, or operation of any competing facilities which might be used as a substitute for a City System, to the extent such competing facility would impair the City System's ability to pay under this Contract, and, to the extent that it legally may, each City will prohibit any such competing facilities.

(k) Rights of Inspection. The BCRUA, the Trustee, and the owners of 10% or more in principal amount of the Bonds of any series shall have the right at all reasonable times to inspect each City System and all records, accounts, and data of the respective City relating thereto, and upon request, each City shall furnish to the BCRUA, the Trustee, and such owners of Bonds such financial statements, reports, and other information relating to a respective City and a respective City System as any such person may from time to time reasonably request.

(l) Sale, Lease, or Disposal of Property by the Cities. No part of a City System shall be sold, leased, mortgaged, demolished, removed, or otherwise disposed of, except as follows:

(i) To the extent permitted by law, a City may sell or exchange at any time and from time to time any property or facilities constituting a part of its City System only if (a) it shall determine such property or facilities are not useful in the operation of its City System, (b) the proceeds of such sale are \$250,000 or less, or it shall have received a certificate executed by the City Manager stating, in his/her opinion, that the fair market value of the property or facilities exchanged is \$250,000 or less, (c) if such proceeds or fair market value exceeds \$250,000 it shall have received a certificate executed by the City Manager stating his/her opinion that the sale or exchange of such property or facilities will not impair the ability of the Cities to comply during the current or any future year with the provisions of Section 9.3(b) of this Contract,

or (d) the sale or exchange will not adversely affect the excludability of interest on the Bonds from the gross income of the owners thereof. The proceeds of any such sale or exchange not used to acquire other property necessary or desirable for the safe or efficient operation of its City System shall forthwith, at the option of the City be used as provided in the ordinances of the City authorizing its Utility Bonds.

(ii) To the extent permitted by law, a City may lease or make contracts or grant licenses for the operation of, or make arrangements for the use of, or grant easements or other rights with respect to, any part of its City System, provided that any such lease, contract, license, arrangement, easement or right (a) does not impede the operation by such City of its City System and (b) does not in any manner impair or adversely affect the rights or security of the BCRUA under this Contract; and provided, further, that if the depreciated cost of the property to be covered by any such lease, contract, license, arrangement, easement, or other right is in excess of \$500,000, the affected City shall have received a certificate executed by the City Manager that the action of the such City with respect thereto does not result in a breach of the conditions under this subsection (ii). Any payments received by the affected City under or in connection with any such lease, contract, license, arrangement, easement or right in respect of one or more City System or any part thereof shall constitute gross revenues of the respective City System or Systems.

## ARTICLE X

### CONTINUING DISCLOSURE

Section 10.1 Annual Reports. Following the issuance of Bonds of any series by the BCRUA for the benefit of the appropriate City, the offer or sale of which is not exempt from the Rule and, until the City is no longer obligated, contingently or otherwise, to make Bond Payments in respect of the Bonds of such series issued for such City, each City undertakes to and shall provide annually to each NRMSIR and any SID, within six months after the end of each Fiscal Year, (i) financial information and operating data of the general type included in the Sale and Offering Documents for the Bonds of such series, as specified in its approval of such Sale and Offering Documents pursuant to Section 4.1 hereof and (ii) audited general purpose financial statements of the City, if then available. Any financial statements so to be provided shall be (i) prepared in accordance with generally accepted accounting principles for governmental agencies or such other accounting principles as the City may be required to employ from time to time pursuant to state law or regulation, and (ii) audited, if the City commissions an audit of such statements and the audit is completed within the period during which it must be provided. If the audit of such financial statements is not complete within such period, then the City shall provide unaudited financial statements within the required period, and shall provide audited financial

statements for the applicable Fiscal Year to each NRMSIR and any SID, when and if the audit report on such statements become available.

If a City changes its Fiscal Year, the City will notify the Trustee, each NRMSIR, and any SID in writing of the change (and of the date of the new Fiscal Year end) prior to the next date by which the City otherwise would be required to provide financial information and operating data pursuant to this Section.

The financial information and operating data to be provided pursuant to this Section may be set forth in full in one or more documents or may be incorporated by specific reference to any document or specific part thereby (including an official statement or other offering document, if it is available from the MSRB) that theretofore has been provided to each NRMSIR and any SID or filed with the SEC. Copies of such information and operating data shall be furnished to the BCRUA at the same time the information and data are furnished to any NRMSIR or SID.

Section 10.2 Material Event Notices.

(a) The following are the events with respect to any series of Bonds which the BCRUA must agree to disclose in a timely manner pursuant to the Rule, if "material" under applicable federal securities laws and regulations promulgated thereunder.

- (i) Principal and interest payment delinquencies;
- (ii) Non-payment related defaults;
- (iii) Unscheduled draws on debt service reserves reflecting financial difficulties;
- (iv) Unscheduled draws on credit enhancements reflecting financial difficulties;
- (v) Substitution of credit or liquidity providers, or their failure to perform;
- (vi) Adverse tax opinions or events affecting the tax-exempt status of the Bonds;
- (vii) Modifications to rights of holders of the Bonds;
- (viii) Bond calls;
- (ix) Defeasances;
- (x) Release, substitution, or sale of property securing repayment of the Bonds; and
- (xi) Rating changes.

(b) Each City shall, promptly after obtaining actual knowledge of the occurrence of any of the events enumerated in (a) above, notify the BCRUA of such event and provide all information in the format required to satisfy the requirements of the Rule. Further, each City shall provide, in a timely manner, notice of any failure to provide audited financial statements, financial information, and operating data in accordance with Section 10.1 hereof to each NRMSIR and each SID.

Section 10.3 Limitations, Disclaimers, and Amendments.

(a) Each City shall be obligated to observe and perform the covenants specified in this Article in respect of its Bonds of any series for so long as, but only for so long as, the City remains an "obligated person" with respect to the Bonds of such series within the meaning of the Rule, except that the City in any event will give notice of any deposit made in accordance with the Bond Resolution that causes Bonds of such series no longer to be outstanding.

(b) The provisions of this Article are for the sole benefit of (and may be enforced by) the owners and beneficial owners of the Bonds of such City, and nothing in this Article, express or implied, shall give any benefit or any legal or equitable right, remedy, or claim hereunder to any other person. Each City undertakes to provide only the financial information, operating data, financial statements, and notices which they have expressly agreed to provide pursuant to this Article and does not hereby undertake to provide any other information that may be relevant or material to a complete presentation of the its financial results, condition, or prospects or hereby undertake to update any information provided in accordance with this Article or otherwise, except as expressly provided herein. Each City makes no representation or warranty concerning such information or its usefulness to a decision to invest in or sell Bonds at any future date.

(c) UNDER NO CIRCUMSTANCES SHALL A CITY BE LIABLE TO THE OWNER OR BENEFICIAL OWNER OF ANY BOND OR ANY OTHER PERSON, IN CONTRACT OR TORT, FOR DAMAGES RESULTING IN WHOLE OR IN PART FROM ANY BREACH BY A CITY WHETHER NEGLIGENT OR WITHOUT FAULT ON ITS PART, OF ANY COVENANT SPECIFIED IN THIS ARTICLE, BUT EVERY RIGHT AND REMEDY OF ANY SUCH PERSON, IN CONTRACT OR TORT, FOR OR ON ACCOUNT OF ANY SUCH BREACH SHALL BE LIMITED TO AN ACTION FOR MANDAMUS OR SPECIFIC PERFORMANCE.

(d) No default by a City in observing or performing its obligations under this Article shall comprise a breach of or default under this Contract for purposes of any other provision of this Contract.

(e) Nothing in this Article is intended or shall act to disclaim, waive, or otherwise limit the duties of the BCRUA or each City under federal and state securities laws.

(f) The provisions of this Article may be amended by the BCRUA and the Cities from time to time to adapt to changed circumstances that arise from a change in legal requirements, a change in law, or a change in the identity, nature, status, or type of operations of the BCRUA or the appropriate Cities, but only if

(i) the provisions of this Article, as so amended, would have permitted an underwriter to purchase or sell Bonds of the applicable series in the primary offering of the Bonds of such series in compliance with the Rule, taking into account any amendments or interpretations of the Rule since such offering as well as such changed circumstances, and

(ii) either

(1) the owners of a majority in aggregate principal amount (or any greater amount required by any other provision of this Contract that authorizes such an amendment) of the outstanding Bonds of each such series affected consent to such amendment or

(2) an entity that is unaffiliated with the BCRUA or the appropriate Cities (such as nationally recognized bond counsel) determines that such amendment will not materially impair the interest of the owners and beneficial owners of the Bonds of such series and is permitted by the terms of the Article.

If the BCRUA and the Cities so amend the provisions of this Article in connection with the financial or operating data which the Cities are required to disclose under Section 10.1 hereof, the appropriate Cities shall provide a notice of such amendment to be filed in accordance with Section 10.2(b) hereof, together with an explanation, in narrative form, of the reason for the amendment and the impact of any change in the type of financial information or operating data to be so provided. The BCRUA and the appropriate Cities may also amend or repeal the provisions of this Article if the SEC amends or repeals the applicable provision of the Rule or a court of final jurisdiction enters judgment that such provisions of the Rule are invalid, but only if and to the extent that the provisions of this sentence would not prevent an underwriter from lawfully purchasing or selling Bonds in the primary offering of each series of Bonds.

## ARTICLE XI

### COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS

Section 11.1 Compliance with Federal, State and Local Laws. In addition to the provisions of Section 9.6 hereof, this Contract is subject to all applicable federal and State laws and any applicable permits, ordinances, rules, orders, and regulations of any local, state or federal government authority having or asserting jurisdiction. The Contract is specifically subject to the rules of the TCEQ, and the BCRUA shall have the right to terminate this Contract upon a City's non-compliance with the rules promulgated by the TCEQ, but such termination shall only affect the non-complying City; provided however, such termination shall not affect the non-complying City's obligation to pay Bond Payments in accordance with this Contract.

Section 11.2 Recordkeeping and Reporting. The BCRUA shall maintain records on site in accordance with applicable State laws.

- (a) Records to be maintained by the BCRUA include:
  - (i) copies of notifications made to the TCEQ concerning water systems;
  - (ii) as applicable, copies of contracts made with each water user;
  - (iii) records of volume of treated water delivered to each water user per delivery; and
  - (iv) water quality analyses.
- (b) The BCRUA shall report to the TCEQ as required by law. All costs of compliance with the rules of the TCEQ shall be paid by the BCRUA, but such costs shall be considered an Operation and Maintenance Expense.

ARTICLE XII  
GENERAL PROVISIONS

Section 12.1 Participation by the Parties. The BCRUA and each City represents to the others that it is empowered by law to participate in the acquisition, construction, and financing of the BCRUA Project, and to execute this Contract and other agreements and documents as are or may hereafter be required to accomplish the same; and that its participation in the BCRUA Project and execution of this Contract have been duly authorized by action of its governing body at a meeting conducted in accordance with the Texas Open Meetings Act, as amended, Chapter 551, Texas Government Code. The BCRUA and each City agree to furnish to each other such documentation or evidence of its authority to so participate and execute the contracts and other agreements as the other party may reasonably request, and to take and perform such other and further actions and execute such other agreements and documents as may be reasonably required to carry out the provisions of this Contract.

Section 12.2 Insurance.

(a) The BCRUA agrees to carry public liability insurance on the BCRUA Project for purposes and in amounts which ordinarily would be carried by a privately owned utility company owning and operating such facilities, except that the BCRUA shall not be required to carry liability insurance except to insure itself against risk of loss due to claims for which it can, in the opinion of the BCRUA's legal counsel, be potentially liable considering relevant governmental immunities of the Cities and the BCRUA. The BCRUA shall also carry property casualty insurance in the amount of the replacement value of all improvements and personal property connected with the BCRUA Project (less a deductible comparable to the deductible on the Cities' property insurance for Cities property generally).

All premiums for such insurance shall constitute an expense of the BCRUA Project but may be paid out of the proceeds of the Bonds to the extent that such proceeds are available. In the event the BCRUA is required to pay a deductible with respect to a claim under any such policy, the amount of such deductible shall constitute an expense and shall be paid by the Cities.

(b) The BCRUA shall require the contractor or contractors employed for construction of the BCRUA Project to carry insurance coverage throughout the construction period in at least the following amounts:

- (i) Workers' Compensation: State law limits;
- (ii) General Liability (including contractual liability) and Automobile Liability: One million dollars (\$1,000,000.00) per person and per occurrence for bodily injury and One million dollars (\$1,000,000.00) for property damage;
- (iii) Builder's Risk: full replacement value of improvements;
- (iv) Performance and Payment Bond: full value of contract;
- (v) Cost Overrun Insurance; and
- (vi) Timely Completion Insurance.

The Cities shall be furnished with a certified copy of such effective policy of insurance prior to commencement of construction. Such insurance policies shall name the BCRUA and the Cities



as additional insureds, and the BCRUA shall be provided with a certificate of insurance showing the required coverage and providing that the policies may not be canceled, changed, or not renewed until the BCRUA has been given thirty (30) days prior written notice of such event.

(c) The insurance required by this section may be modified by written agreement of the Cities and the BCRUA, in accordance with good business practice. Any questions about the scope of coverage required hereunder shall be resolved by written agreement between the Cities and the BCRUA. The Parties can agree to substitute an owner controlled insurance program for any of the above specified insurance requirements.

Section 12.3 Force Majeure. If by reason of Force Majeure any party hereto shall be rendered unable wholly or in part to carry out its obligations under this Contract, other than the obligation of each City to make the payments required under Sections 4.5 and 9.2 of this Contract, which payments will continue irrespective of a Force Majeure event, then if such party shall give notice and full particulars of such Force Majeure in writing to the other party within a reasonable time after the occurrence of the event or cause relied on, the obligation of the party giving such notice, so far as it is affected by such Force Majeure, shall be suspended during the continuance of the inability then claimed, but for no longer period, and any such party shall endeavor to remove or overcome such inability with all reasonable dispatch. The term "Force Majeure" as employed herein shall mean acts of God, war, strikes, fires, explosions or other causes that are beyond the reasonable control of the party claiming such inability and that by exercise of due foresight such party could not reasonably have been expected to avoid and which by exercise of all reasonable due diligence such party is unable to overcome.

Section 12.4 Unconditional Obligation to Make Payment. Recognizing the fact that the Cities urgently require the facilities and services of the BCRUA Project, and that such facilities and services are essential and necessary for actual use and for standby purposes, and recognizing the fact that the Bond Payments to be received from each City will be the primary source of funds available to the BCRUA and the Trustee to pay the Bonds and other BCRUA Project Costs, and recognizing the fact that purchasers of Bonds will rely on the obligation of the Cities to make Annual Payments with respect to their series of Bonds in accordance with the provisions of this Contract, each City hereby waives all rights of set-off, recoupment, counterclaim, suspension, deferment, reduction, and amendment, with respect to making its Annual Payments against the BCRUA, the Trustee, and any other direct or indirect recipients of Annual Payments, and each City agrees that it shall make its appropriate Annual Payment even if no Bonds are issued for its benefit by the BCRUA and if any Bonds are issued, each City shall be unconditionally obligated to pay its Annual Payments as provided and determined by this Contract, regardless of whether or not the BCRUA actually acquires, constructs, or completes the BCRUA Project, or the portions thereof designated for its use, or breaches any obligation on its part hereunder, and whether or not each City actually uses the BCRUA Project, or the portions thereof designated for its use, whether due to Force Majeure or any other reason whatsoever, regardless of any other provisions of this Contract, any other contract or agreement between any of the Parties hereto. This covenant by each City shall be for the benefit of and enforceable by the owners of the Bonds and/or by the BCRUA.

By entering into this Contract and performing its obligations under any Section of this Contract, each City does not release any persons from or waive any claims against such persons that the City may have resulting from actions by such persons contrary to that person's legal obligations.

Section 12.5 Term of Contract. This Contract shall be effective from and after its date, and this Contract shall continue in force and effect until the principal of and interest on all Bonds shall have been paid or provision for the payment of all of the Bonds has been made in accordance with the terms of each Bond Resolution and thereafter continue in force and effect during the entire useful life of the BCRUA Project. When the principal of and interest on all Bonds shall have been paid or provision for the payment of all of the Bonds has been made in accordance with the terms of the Bond Resolution and all amounts owed to the BCRUA, the Trustee, or any other person hereunder have been paid, all money held by the Trustee or the BCRUA pursuant to the terms of the Bond Resolution shall be paid to the BCRUA. Upon the termination of this Contract, the BCRUA will charge each City a per gallonage charge (or other published rate) for treated water delivered to the Cities in accordance with the BCRUA's then existing rate schedule.

Section 12.6 Amendment and Modification. This Contract shall not be amended except in writing of all Parties hereto. No change, amendment, or modification of this Contract shall be made or be effective which will affect adversely the prompt payment when due of all money required to be paid by each City under the terms of this Contract and no such change, amendment, or modification shall be made or be effective which would cause a violation of any provisions of any Bond Resolution.

Section 12.7 Addresses and Notice. Unless otherwise provided herein, any notice, communication, request, reply, or advice (herein severally and collectively, for convenience, called "Notice") herein provided or permitted to be given, made, or accepted by any party to the other parties must be in writing and may be given or be served by depositing the same in the United States mail postpaid and registered or certified and addressed to the party to be notified, with return receipt requested, or by delivering the same to an officer of such party, or by prepaid telegram when appropriate, addressed to the party to be notified. Notice deposited in the mail in the manner hereinabove described shall be conclusively deemed to be effective, unless otherwise stated herein, from and after the expiration of three days after it is so deposited. Notice given in any other manner shall be effective only if and when received by the party to be notified. For the purposes of notice, the addresses of the Parties shall, until changed as hereinafter provided, be as follows:

If to the BCRUA:

President, Board of Directors  
Brushy Creek Regional Utility Authority, Inc.  
221 E. Main St.  
Round Rock, Texas 78664

If to Cedar Park:

City Manager  
600 North Bell Blvd.  
Cedar Park, Texas 78613

If to Leander:

City Manager  
P.O. Box 319  
Leander, Texas 78646-0319

If to Round Rock:

City Manager  
221 E. Main St.  
Round Rock, Texas 78664

The BCRUA and the Cities hereto shall have the right from time to time and at any time to change their respective addresses and each shall have the right to specify as its address any other address by at least fifteen (15) days' written notice to the other Parties.

Section 12.8 State or Federal Laws, Rules, Orders, or Regulations. This Contract is subject to all applicable federal and State laws and any applicable permits, ordinances, rules, orders, and regulations of any local, state, or federal governmental authority having or asserting jurisdiction but nothing contained herein shall be construed as a waiver of any right to question or contest any such law, ordinance, order, rule, or regulation in any forum having jurisdiction and the Cities and the BCRUA represent that, to the best of their knowledge, no provisions of any applicable federal or State law, including the City Charters of the Cities, nor any permit, ordinance, rule, order, or regulation of either party will limit or restrict the ability of either party to carry out their respective obligations under or contemplated by this Contract.

Section 12.9 Severability. The Parties hereto specifically agree that in case any one or more of the sections, subsections, provisions, clauses, or words of this Contract or the application of such sections, subsections, provisions, clauses, or words to any situation or circumstance should be, or should be held to be, for any reason, invalid or unconstitutional, under the laws or constitutions of the State or the United States of America, or in contravention of any such laws or constitutions, such invalidity, unconstitutionality, or contravention shall not affect any other sections, subsections, provisions, clauses, or words of this Contract or the application of such actions, subsections, provisions, clauses, or words to any other situation or circumstance, and it is intended that this Contract shall be severable and shall be construed and applied as if any such invalid or unconstitutional section, subsection, provision, clause, or word had not been included herein, and the rights and obligations of the Parties hereto shall be construed and remain in force accordingly.

Section 12.10 Remedies Upon Default. It is not intended hereby to specify (and this Contract shall not be considered as specifying) an exclusive remedy for any default, but all such other remedies (other than termination) existing at law or in equity may be availed of by either party hereto and shall be cumulative. Recognizing that failure in the performance of the Cities' obligations hereunder could not be adequately compensated in money damages alone, each City agrees in the event of any default on its part that the BCRUA and the owners of the Bonds as third-party beneficiaries shall have available to them the remedies of mandamus and specific performance in addition to any other legal or equitable remedies (other than termination) which may also be available to them. As long as an Insurer is not in default on the related Insurance Policy for a series of Bonds, the Insurer of a series of Bonds shall be deemed to be the Owner of

such Bonds insured by it for purposes of enforcing the provisions of this Contract, so long as no event of default exists. Notwithstanding anything to the contrary contained in this Contract, any right or remedy or any default hereunder, except the right of the BCRUA to receive the Annual Payments and the provision of Section 4.9 hereof, which shall never be determined to be waived, shall be deemed to be conclusively waived unless asserted by a proper proceeding at law or in equity within two (2) years plus one (1) day after the occurrence of such default. No waiver or waivers of any breach or default (or any breaches or defaults) by any party hereto or of the performance by any other party of any duty or obligation hereunder shall be deemed a waiver thereof in the future, nor shall any such waiver or waivers be deemed or construed to be a waiver of subsequent breaches or defaults of any kind, character or description, under any circumstances.

Section 12.11 Venue. All amounts due under this Contract, including, but not limited to, payments due under this Contract or damages for the breach of this Contract, shall be paid and be due in Williamson County, Texas, which is the County in which the principal administrative offices of the BCRUA are located. It is specifically agreed among the Parties to this Contract that Williamson County, Texas, is the place of performance of this Contract; and in the event that any legal proceeding is brought to enforce this Contract or any provision hereof, the same shall be brought in Williamson County, Texas.

Section 12.12 Statutory Authority. In entering into this Contract and performing all duties and obligations hereunder, the Cities and the BCRUA exercise their authority under and in accordance with the State Constitution and laws including, but not limited to, the Act, Chapter 402, as amended, Texas Local Government Code; Chapter 1502, as amended, Texas Government Code, each City's respective Home Rule Charter; Chapter 1371, as amended, Texas Government Code and all other laws which may authorize this Contract, all of which provisions and laws, cited or not cited herein, shall cumulatively provide the authority for this Contract.

Section 12.13 Indemnification. FOR SO LONG AS THE BONDS ARE OUTSTANDING AND UNPAID, AND ALSO WITH RESPECT TO ANY CLAIM THAT MAY ARISE OUT OF THE OFFER AND SALE OF THE BONDS OF ANY SERIES OR THE ALLEGED MISSTATEMENT OR OMISSION OF A MATERIAL FACT IN OR FROM ANY SALE AND OFFERING DOCUMENT RELATING TO ANY OF THE CITIES USED IN CONNECTION THEREWITH, TO THE EXTENT PERMITTED BY LAW, EACH CITY AGREES TO INDEMNIFY, TO THE EXTENT PERMITTED BY LAW, AND SAVE AND HOLD HARMLESS THE BCRUA, AND THE OTHER CITIES, AND THEIR RESPECTIVE OFFICERS, DIRECTORS, AGENTS, FINANCIAL ADVISORS, ATTORNEYS, AND EMPLOYEES, AND THE UNDERWRITERS OF ANY SUCH OFFERING AND THEIR RESPECTIVE DIRECTORS, OFFICERS, EMPLOYEES, AND AGENTS, AND ALL PERSONS WHO CONTROL THE SAME WITHIN THE MEANING OF THE FEDERAL SECURITIES LAWS, FROM AND AGAINST ALL CLAIMS THAT MAY ARISE AS A RESULT OF ANY UNDERTAKING, ACT, OR OMISSION, WHETHER NEGLIGENT OR NOT, WHICH IS DONE OR OMITTED TO BE DONE BY THE CITIES OR ANY OF THEIR OFFICERS, COUNCILMEN, AGENTS, ATTORNEYS, AND EMPLOYEES, RELATING TO THE BCRUA PROJECT OR PROVIDING INFORMATION FOR INCLUSION IN THE SALE AND OFFERING DOCUMENTS. IF ANY SUCH CLAIM IS BROUGHT AGAINST ANY SUCH INDEMNIFIED PERSON, THE CITIES SHALL PAY ALL COSTS INCURRED BY

SUCH PERSON IN DEFENDING AND (SUBJECT TO APPLICABLE RULES OF ATTORNEY CONDUCT) MAY CONTROL THE DEFENSE OF SUCH CLAIM.

Section 12.14 Contract for Benefit of the Cities. This Contract is made for the exclusive benefit of the Cities (except with respect to Section 9.6(j) which is solely for the benefit of the owners of the Bonds issued by the BCRUA for a particular City), the BCRUA, the Trustee, the owners of the Bonds, the parties to any Credit Agreements, the underwriters of any offering of and remarketing agent and tender agent, if any, for any Bonds, and their respective successors and assigns herein permitted, and not for any third party or parties other than the BCRUA (including its officers, directors, employees, agents, and attorneys), the Trustee, the owners of the Bonds, the Cities, and the parties to any Credit Agreements, the underwriters of any offering of and remarketing agent and tender agent, if any, for any Bonds, the other persons indemnified by Section 12.13 hereof, and their respective successors and assigns herein permitted, any rights or remedies under or by reason of this Contract.

Section 12.15 Succession and Assignment. This Contract is binding on and inures to the benefit of the Parties hereto and their respective successors, representatives, and assigns. This Contract may not be assigned by any party hereto without (i) complying with any provisions relating to the right of the Parties to assign this Contract contained in the Bond Resolution and (ii) prior written notice to and approval by the other Parties, which consent may be withheld without cause. The provisions of this Section do not affect the assignment of the BCRUA's rights under this Contract to a Trustee pursuant to Section 4.8.

Section 12.16 Incorporation of Preamble Recitals. The recitals contained in the preamble hereof are hereby found to be true, and such recitals are hereby made a part of this Contract for all purposes and are adopted as a part of the judgment and findings of the BCRUA and the Cities.

Section 12.17 Independent Contractor. As among the Parties, the BCRUA shall be solely responsible for the operation of the BCRUA Project to produce and treat raw water and to deliver treated water to the Cities pursuant to this Contract (except to the extent the BCRUA and the Cities enter into agreements for the Cities to operate parts of the BCRUA Project); and the BCRUA shall be an independent contractor in the operation of the BCRUA Project.

Section 12.18 Financing Statement. Each City agrees at the request of the BCRUA to execute a financing statement in a form satisfactory to the BCRUA and meeting the requirements of the Texas Business and Commerce Code to perfect any security interest created hereby. The Cities further agree to execute such continuation statements or other documents as may be necessary to maintain any such security interest.

Section 12.19 Entire Agreement. This Contract constitutes the entire agreement among the Parties with respect to the matters described herein.

Section 12.20 Applicable Law. This Contract shall be governed by and construed in accordance with the laws of the State, and the obligations, rights, and remedies of the Parties hereunder shall be determined in accordance with such laws without reference to the laws of any other state or jurisdiction, except for applicable federal laws, rules, and regulations.

Section 12.21 Counterparts. This Contract may be executed in counterparts, each of which shall be an original and all of which together shall constitute but one and the same instrument.

IN WITNESS WHEREOF, the Parties hereto acting under authority of their respective governing bodies have caused this Contract to be duly executed as of the day and year first above written.

**BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.**

By: \_\_\_\_\_  
Scott Rhode, President

Attest:

By: \_\_\_\_\_  
John Cowman, Secretary

**CITY OF CEDAR PARK, TEXAS**

By: \_\_\_\_\_  
Bob Lemon, Mayor

Attest:

By: \_\_\_\_\_  
LeAnn Quinn, City Secretary

CITY OF LEANDER, TEXAS

By: \_\_\_\_\_  
John Cowman, Mayor

Attest:

By: \_\_\_\_\_  
Debbie Haile, City Secretary

CITY OF ROUND ROCK, TEXAS

By: \_\_\_\_\_  
Alan McGraw, Mayor

Attest:

By: \_\_\_\_\_  
Sara White, City Secretary



EXHIBIT A  
Contract between City of Round Rock and LCRA  
for Lake Travis Water

EXHIBIT B  
Contract between City of Cedar Park and LCRA  
for Lake Travis Water

EXHIBIT C  
Contract between City of Leander and LCRA  
for Lake Travis Water

**EXHIBIT D**  
**Cities' Reserved Capacity and Cost Allocation in BCRUA Project Components**



Draft 8/21/08

FINANCING AGREEMENT

THIS FINANCING AGREEMENT (Agreement) is entered into between the TEXAS WATER DEVELOPMENT BOARD (Board), an agency of the State of Texas, and the BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC., local government corporation created, and acting on behalf of, the cities of Cedar Park, Leander and Round Rock, Texas pursuant to Subchapter D of Chapter 431 of the Texas Government Code as amended # (Borrower).

RECITALS

WHEREAS, the Board adopted Resolution No. 08-03 on January 28, 2008, making a commitment to the Borrower for financial assistance in the amount of \$309,755,000 from the Financial Assistance Account of the Development Fund II (DFund II) administered by the Board.

WHEREAS, the Borrower intends to sell the Board the Borrower's Contract Revenue Bonds, proposed as three separate series as follows \$24,970,000\* Brushy Creek Regional Utility Authority, Inc. City of Cedar Park Contract Revenue Bonds (Brushy Creek Regional Water Treatment and Distribution Project), Series 2009A; \$91,180,000\* Brushy Creek Regional Utility Authority Inc. City of Leander Contract Revenue Bonds (Brushy Creek Regional Water Treatment and Distribution Project) Series 2009B and \$65,870,000\* Brushy Creek Regional Utility Authority, the City of Round Rock Contract Revenue Bonds (Brushy Creek Regional Water Treatment and Distribution Project), Series 2009C (collectively, Borrower Bonds), described on Attachment A attached hereto, to fund the first phase of the Borrower's regional water supply project described in Board Resolution No. 08-03; and

WHEREAS, DFund II is funded, in part, with proceeds of the Board's Water Financial Assistance Bonds, which is used to provide financial assistance, under Texas Water Code §17.959 and Texas Constitution Article III, Section 49-d-8; and

WHEREAS, DFund II is funded, in part, with money received as repayment of financial assistance provided from DFund II, which is used to pay the principal and interest on the Board's Water Financial Assistance Bonds, under Texas Constitution, Article III, Section 49-d-8(e); and

WHEREAS, Condition No. 13 of Board Resolution 08-03 provides that the commitment is contingent on a future sale of bonds or on the availability of funds on hand; and

WHEREAS, the Board intends to issue Water Financial Assistance Bonds in order to enable it to provide financial assistance from DFund II to the Borrower; and

WHEREAS, the Board has a reasonable expectation that the proceeds from the Water Financial Assistance Bonds will be loaned only to the Borrower, and will not be loaned as part of a pooled fund; and

\*Not to exceed principal amount

WHEREAS, the Board and the Borrower desire to enter into this Agreement to set forth the obligations of the parties with respect to the Board's intent to issue Water Financial Assistance Bonds to provide financial assistance from DFund II solely to the Borrower, and the Borrower's intent to issue its Borrower Bonds to the Board;

NOW, THEREFORE, for and in consideration of the premises and the mutual covenants herein contained, the Board and the Borrower hereby agree as follows:

### AGREEMENT

Section 1. Loan Commitment Schedule. The Board hereby commits to lend \$182,020,000\* as evidenced by Attachment A to the Borrower from DFund II, which loan will be evidenced by the Board's purchase of the Borrower Bonds for deposit in the Financial Assistance Account of DFund II. The Borrower hereby commits to borrow \$182,020,000\* from DFund II, which loan will be evidenced by the Borrower's sale of the Borrower Bonds identified in Attachment A for deposit in the Financial Assistance Account of DFund II. Each party agrees to use its best efforts to take actions as may be required by such party in order to effectuate the purchase and sale of the Borrower Bonds by January 8, 2009.

Section 2. Interest Rates. The loan to be made from Water Financial Assistance Bonds specifically issued for the Borrower will be made at a yield similar to the rate the Board received in the open market the day the Board sold the Water Financial Assistance Bonds, but which also recovers the Board's costs of issuance associated with the issuance of such bonds. By 12:00 p.m. (Central Standard Time) on the business day preceding the date on which the Board intends to execute a bond purchase agreement relating to the Board's Water Financial Assistance Bonds described herein (Bond Purchase Agreement), the Development Fund Manager shall notify the Borrower of the rates (Initial Rates) to be borne by the Borrower Bonds, which rates shall be subject to approval by the Borrower. Unless such rates are approved in writing by the Borrower by 2:00 p.m. (Central Standard Time) on the business day preceding the date on which the Board intends to execute the Bond Purchase Agreement, neither the Board nor the Borrower shall have any continuing obligation hereunder.

Section 3. Closing. The Borrower agrees, subject to receipt of the Texas Attorney General approval, to close on the Borrower Bonds described in Attachment A within 30 days after the Water Financial Assistance Bond proceeds are delivered to the Board by the Underwriters. If the Borrower fails to close on the sale of its Borrower Bonds within 30 days after the Water Financial Assistance Bond proceeds are delivered to the Board by the Underwriters, the Borrower agrees to pay the Board the amount of principal and interest the Board pays on its Water Financial Assistance Bonds. Such payments shall be made to the Board on or before the payment dates on the Board's debt service schedule for its Water Financial Assistance Bonds, and continuing until such time as the Borrower closes its Borrower Bonds or the Board is no longer required to pay principal and interest on its Water Financial Assistance

\*Not to exceed principal amount

Bonds. Beginning 30 days after the Water Financial Assistance Bond proceeds are delivered to the Board by the Underwriters, the Board may use the Water Financial Assistance Bond proceeds to provide financial assistance to other entities or to defease the Water Financial Assistance Bonds and the amount of principal and interest the Borrower must pay the Board under this Section may be reduced by the amount of return funds the Board receives from the other entities.

Section 4. Termination.

A. The parties hereto agree that the Board's obligation to lend money to the Borrower from DFund II is contingent upon the purchase of the Board's Water Financial Assistance Bonds by the underwriters thereof (Underwriters) pursuant to the Bond Purchase Agreement. Accordingly, if the Underwriters fail to purchase the Board's Water Financial Assistance Bonds pursuant to the Bond Purchase Agreement, the Board, upon delivery of written notice thereof to the Borrower, may extend or terminate this Agreement together with all of its obligations and duties hereunder without incurring any cost, fee or penalty therefor.

B. The Borrower may terminate this Agreement by delivery of written notice to the Board at any time prior to any purchase of the Board's Water Financial Assistance Bonds by the Underwriters, provided that the Borrower agrees to compensate the Board for its costs related to the preparations for bond issuance within 30 days of the Board's written notification to the Borrower of such costs.

Section 5. Redemption of Outstanding Debt. If proceeds of the Borrower Bonds are to be used, in whole or in part, to redeem outstanding bonds, commercial paper, or other interim financing issued by the Borrower, the Borrower agrees that it will not take or fail to take any action that will cause the Board's Water Financial Assistance Bonds to be considered to be advance refunding bonds under Section 148 of the Internal Revenue Service Code of 1986, as amended. Specifically, the Borrower agrees to redeem any such outstanding bonds, commercial paper, or other interim financing within ninety (90) days of the date of delivery of the Board's Water Financial Assistance Bonds and to take such other action as shall be required to comply with this Section.

Section 6. Notices. All notices, agreements or other communications required hereunder shall be given, and shall be deemed given, when delivered in writing to the address or telecopier number of the identified party or parties set forth below:

Texas Water Development Board Nancy Banks Marsteller, Development Fund Manager P.O. Box 13231 Austin, Texas 78711-3231 Telephone (512) 475-2091 Facsimile (512) 475-2053	Brushy Creek Regional Utility Authority, Inc. Chris Lippe 221 E. Main Street Round Rock, Texas 78664 Telephone (512) Facsimile
--	--

\*Not to exceed principal amount

Section 7. Severability. In the event any provision of this Agreement shall be held illegal, invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate, render unenforceable or otherwise affect any other provisions hereof.

Section 8. Amendments, Supplements and Modifications. This Agreement shall not be amended, supplemented or modified except by a written instrument executed by the Board and the Borrower.

Section 9. Applicable Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Texas.

Section 10. State Audit. By executing this Agreement, the Borrower accepts the authority of the State Auditor's Office, under direction of the legislative audit committee, to conduct audits and investigations in connection with any and all state funds received pursuant to this Agreement. The Borrower shall comply with and cooperate in any such investigation or audit. The Borrower agrees to provide the State Auditor with access to any information the State Auditor considers relevant to the investigation or audit. The Borrower also agrees to include a provision in any subcontract related to this Agreement that requires the subcontractor to submit to audits and investigation by the State Auditor's Office in connection with any and all state funds received pursuant to the subcontract.

Section 11. Force Majeure. Either party may be excused from performance under this contract for any period when performance is prevented as the result of an act of God, strike, war, civil disturbance, epidemic, or court order, provided that the party experiencing the event of Force Majeure has prudently and promptly acted to take any and all steps that are within the party's control to ensure performance and to shorten the duration of the event of Force Majeure. The party suffering an event of Force Majeure shall provide notice of the event to the other parties as soon as practicable but not later than 36 hours after the termination of the event. Subject to this provision, such nonperformance shall not be deemed a default or a ground for termination.

Section 12. Effective Date. This Agreement shall be effective as of the date of the last signature below.

Section 13. Binding Agreement. The respective commitments of the Board and the Borrower set forth above shall be binding upon the Board and the Borrower upon both parties' execution of this Agreement.

BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.

\*Not to exceed principal amount



By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Accepted:

TEXAS WATER DEVELOPMENT BOARD

By: \_\_\_\_\_  
Name: Nancy Banks Marsteller  
Title: Development Fund Manager  
Date: \_\_\_\_\_

**ATTACHMENT A**

**DESCRIPTION OF BORROWER BONDS**

**Title of Borrower Bonds**      Brushy Creek Regional Utility Authority, Inc. Contract Revenue Bonds, Series 2009 A, B, and C as set forth below

**Project Name**                      First Phase, Regional Water Supply Project as further described in Master Contract

**Project Number**

**Aggregate Principal Amount of Borrower Bonds**  
Consisting of:  
Brushy Creek Regional Utility Authority, Inc. City of Cedar Park Contract Revenue Bonds

\*Not to exceed principal amount

(Brushy Creek Regional Water Treatment and Distribution Project), Series 2009A,  
\$24,970,000\*

Brushy Creek Regional Utility Authority, Inc. City of Leander Contract Revenue Bonds (Brushy  
Creek Regional Water Treatment and Distribution Project), Series 2009B, \$91,180,000\*

Brushy Creek Regional Utility Authority, Inc. City of Round Rock Texas Contract Revenue  
Bonds (Brushy Creek Regional Water Treatment and Distribution Project), Series 2009C,  
\$65,870,000\*

**Anticipated Closing Date**    **January 8, 2009**

**Dated Date:**                    **January 1, 2009**

**Maturity Schedule:** [To Come]

**Maturity**

**Principal Amount**

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\*Not to exceed principal amount

**RESOLUTION APPROVING BYLAWS OF THE BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.; APPROVING A MASTER CONTRACT FOR THE FINANCING, CONSTRUCTION AND OPERATION OF THE BCRUA REGIONAL WATER TREATMENT AND DISTRIBUTION PROJECT; APPROVING A FINANCING AGREEMENT; AND OTHER MATTERS IN CONNECTION THEREWITH**

**THE STATE OF TEXAS**

**BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.**

**WHEREAS**, there has been presented and approved by the City Council of each of the participating and founding members of the Brushy Creek Regional Utility Authority, Inc. ("BCRUA") namely, the City of Cedar Park, Texas ("Cedar Park"), the City of Leander, Texas ("Leander") and the City of Round Rock, Texas ("Round Rock") (collectively, the Member Cities) a copy of the proposed Bylaws of the BCRUA (the "Bylaws"), by which the BCRUA will operate; and

**WHEREAS**, there has been presented and approved by the City Council of each of the Members Cities a draft of the Master Contract for the financing, construction and operation of the BCRUA Regional Water Treatment and Distribution Project (the "Master Contract") between the Member Cities and the BCRUA, pursuant to which the BCRUA will construct, finance, operate and maintain water treatment and distribution facilities for the benefit of the Member Cities; and

**WHEREAS**, the BCRUA has received a request from Cedar Park to issue a separate series of contract revenue bonds for Cedar Park in the aggregate principal amount of \$24,970,000 to finance Cedar Park's contribution to the construction and equipment of the BCRUA Project pursuant to the Master Contract; and

**WHEREAS**, the BCRUA has received a request from Leander to issue a separate series of contract revenue bonds for Leander in the aggregate principal amount of \$91,180,000 to finance Leander's contribution to the construction and equipment of the BCRUA Project pursuant to the Master Contract; and

**WHEREAS**, the BCRUA has received a request from the Round Rock to issue a separate series of contract revenue bonds for Round Rock in the aggregate principal amount of \$65,870,000 to finance Round Rock's contribution to the construction and equipment of the BCRUA Project pursuant to the Master Contract; and

**WHEREAS**, there has been presented to the BCRUA a financing agreement with the Texas Water Development Board ("TWDB") in connection with the issuance of a separate series of contract revenue bonds for each Member City; and

**WHEREAS**, it is hereby found and determined that it is necessary and in the best interests of the BCRUA and the Member Cities for BCRUA to approve the financing agreement with the TWDB pursuant to the Master Contract; and

**WHEREAS**, it is hereby further officially found and determined that public notice of the time, place, and purpose of this meeting was given, all as required by Texas Government Code, Chapter 551.

**NOW, THEREFOR, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.:**

**SECTION 1. RECITALS.** The recitals set forth in the preamble hereof are incorporated herein and shall have the same force and effect as if set forth in this Section. Capitalized terms used herein shall have the meaning assigned in the preamble hereof or the Master Contract, unless otherwise defined.

**SECTION 2. BYLAWS.** The Bylaws, as attached hereto as Exhibit "A", are hereby approved and the President and Secretary of the Board are hereby authorized and directed to execute the Bylaws, as appropriate.

**SECTION 3. MASTER CONTRACT.** The Master Contract is hereby approved and the President and Secretary of the Board are hereby authorized and directed to execute the Master Contract in substantially the form and substance attached hereto as Exhibit "B", with such changes as may be approved by general counsel and bond counsel to the BCRUA.

**SECTION 4. FINANCING AGREEMENT.** The financing agreement is hereby approved and the President and Secretary of the Board are hereby authorized and directed to execute the financing agreement in substantially the form and substance attached hereto as Exhibit "C" with such changes as may be approved by general counsel and bond counsel to the BCRUA. The General Manager is hereby delegated the authority to confer with the City Manager of each Member City regarding approval of TWDB financing rates in accordance with the financing agreement.

**SECTION 5. IMMEDIATE EFFECT.** This Resolution shall take effect immediately from and after its adoption in accordance with the law.

PASSED AND APPROVED THIS \_\_\_\_\_.

\_\_\_\_\_  
President  
Brushy Creek Regional Utility Authority, Inc.

**ATTEST:**

\_\_\_\_\_  
Secretary  
Brushy Creek Regional Utility Authority, Inc.

[SEAL]

**EXHIBIT A**

**By Laws**

Board Packet Resolution

**EXHIBIT B**

**Master Contract**

Board Packet Resolution

**EXHIBIT C**

**TWDB Financing Agreement**

Board Packet Resolution



RESOLUTION NO. R-07-07-12-11B1

WHEREAS, the current and projected rates of population growth for the Cities of Round Rock, Cedar Park and Leander necessitates the development of additional water supplies for each of these communities; and

WHEREAS, the three cities have agreed to jointly pursue a regional water supply system that will ultimately provide an additional 105.8 million gallons per day of potable water supply to meet future water demands of the cities based on projected population growth; and

WHEREAS, the three cities have previously entered into multiple agreements in anticipation of the regional water supply system; and

WHEREAS, the three cities have determined that it would facilitate the financing and efficiency of the operation of the proposed regional water supply system to create a local government corporation pursuant to the provisions of Subchapter D, Chapter 431, Transportation Code; and

WHEREAS, the three cities wish to approve the Articles of Incorporation of the Brushy Creek Regional Utility Authority, Inc.; Now Therefore

**BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF ROUND ROCK TEXAS, THAT:**


The Articles of Incorporation of Brushy Creek Regional Utility Authority, Inc., a copy of which is attached hereto as Exhibit A, are hereby approved and the Mayor and the City Manager are hereby authorized to execute same as the two (2) incorporators for the City of Round Rock; and

BE IT FURTHER RESOLVED, THAT:

Councilmember Scott Rhode is hereby appointed by the City Council of Round Rock to serve as Round Rock's representative on the Board of Directors of the Brushy Creek Regional Utility Authority.

The City Council hereby finds and declares that written notice of the date, hour, place and subject of the meeting at which this Resolution was adopted was posted and that such meeting was open to the public as required by law at all times during which this Resolution and the subject matter hereof were discussed, considered and formally acted upon, all as required by the Open Meetings Act, Chapter 551, Texas Government Code, as amended.

RESOLVED this 12th day of July, 2007.

  
ALAN McGRAW ~~NYLE MAXWELL~~, Mayor Pro-tem  
City of Round Rock, Texas

ATTEST:

Christine R. Martinez  
CHRISTINE R. MARTINEZ, City Secretary

**ARTICLES OF INCORPORATION  
OF  
BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.**

We, the undersigned natural persons, each of whom is at least eighteen (18) years of age or more, and a resident and a qualified voter of one of the Cities of Round Rock, Cedar Park, or Leander, Texas (collectively, the "Cities"), and a citizen of the State of Texas, acting as incorporators of a corporation under the provisions of Subchapter D of Chapter 431, Texas Transportation Code, as amended (or the "Act"), hereby adopt the following Articles of Incorporation for such corporation.

**ARTICLE I**

The name of the corporation is Brushy Creek Regional Utility Authority, Inc. (the "Corporation").

**ARTICLE II**

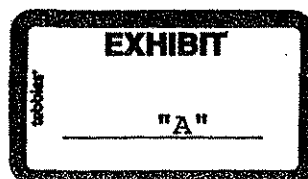
The Corporation is a public, non-profit corporation.

**ARTICLE III**

The period of duration of the Corporation shall be perpetual.

**ARTICLE IV**

The Corporation is organized for the purpose of aiding, assisting, and acting on behalf of the Cities in the performance of their governmental functions to promote the common good and general welfare of the Cities, including, without limitation, the financing, construction, acquisition, ownership, maintenance, and operation of regional water transmission, treatment, and distribution and/or regional wastewater collection and treatment systems and/or water reuse systems (the "Facilities") on behalf of the Cities and to perform such other governmental purposes of the Cities, including, without limitation, the transmission, treatment, and distribution of water, and/or the collection and treatment of wastewater, and/or water reuse system, as may be determined from time to time by the City Councils of the Cities (the "City Councils").



The Corporation is formed pursuant to the provisions of the Act as it now or may hereafter be amended, which authorizes the Corporation to assist and act on behalf of the Cities to accomplish any governmental purpose of the Cities and to engage in activities in the furtherance of the purposes for its creation.

The Corporation shall have and exercise all of the rights, powers, privileges, authority, and functions now or hereafter given by the general laws of the State of Texas to non-profit corporations incorporated under the Act including, without limitation, the powers granted under the Texas Non-Profit Corporation Act, Article 1396-1.01 et seq., Vernon's Texas Civil Statutes, as amended.

The Corporation shall have all other powers of a like or different nature not prohibited by law which are available to non-profit corporations in Texas and which are necessary or useful to enable the Corporation to perform the purposes for which it is created, including the power to issue bonds, notes or other obligations, and otherwise exercise its borrowing power to promote the common good and general welfare of the Cities, including, without limitation, the financing, acquisition, construction, ownership, maintenance and operation of the Facilities.

The Corporation is created as a local government corporation pursuant to the Act and shall be a governmental unit within the meaning of Subdivision (2), Section 101.001, Texas Civil Practice and Remedies Code. The operations of the Corporation are governmental and not proprietary functions for purposes of the Texas Tort Claims Act, Section 101.001 et seq., Texas Civil Practice and Remedies Code. The Corporation shall have the power to acquire land in accordance with the Act, as amended from time to time.

## **ARTICLE V**

The Corporation shall have no members and shall have no stock.

## **ARTICLE VI**

The Board of Directors (the "Board") shall consist of three (3) Directors. Each City shall appoint one Director, who shall be either the Mayor or a Councilmember of the City. Except as otherwise provided in

these Articles of Incorporation or Bylaws, all powers of the Corporation shall be vested in the Board. The Directors' terms of office each shall be two years. When any Director ceases to hold his/her elected position, then the City Council of the subject City shall appoint a replacement Director as provided herein. The Board will consist initially of the three (3) persons identified in Exhibit A to these Articles of Incorporation, as appointed by the City Councils. With respect to the initial Board, the terms of the Directors shall commence on the date that the Texas Secretary of State issues a certificate of incorporation for the Corporation. Upon the expiration of the terms of office of the initial Directors, each City Council shall reappoint one (1) Director, who shall be either the Mayor or a Councilmember of the respective City.

Any Director may be removed at will by a majority vote of the City Council which appointed such Director.

All other matters pertaining to the internal affairs of the Corporation shall be governed by the Bylaws of the Corporation, so long as such Bylaws are not inconsistent with these Articles of Incorporation or the laws of the State of Texas. Adoption of the Bylaws shall require unanimous approval of the Directors and the consent and approval of the City Councils of all three Cities. The Bylaws shall contain a provision that once adopted, they may not be amended except with the unanimous approval of the Directors and the consent and approval of the City Councils of all three Cities. Until such time as the Bylaws are adopted and approved, Board action shall require unanimous approval of the Directors.

#### **ARTICLE VII**

The street address of the initial registered office of the Corporation is 221 E. Main Street, Texas 78664, and the name of its initial registered agent at such address is James R. Nuse.

#### **ARTICLE VIII**

The names and street addresses of the two (2) incorporators who are residents and qualified voters in the City of Cedar Park are:

NAME	ADDRESS
Robert S. Lemon	1401 Deer Ledge Trail Cedar Park, Texas 78613
Brenda Eivens	1500 Woodstone South Cedar Park, Texas 78613

The names and street addresses of the two (2) incorporators who are residents and qualified voters in the City of Leander are:

NAME	ADDRESS
_____	_____
	Leander, Texas _____
_____	_____
	Leander, Texas _____

The names and street addresses of the two (2) incorporators who are residents and qualified voters in the City of Round Rock are:

NAME	ADDRESS
Alan McGraw	2708 Wolkin Cove Round Rock, Texas 78681
James R. Nuse	903 Summit Street Round Rock, Texas 78664

### ARTICLE IX

A resolution approving the form of these Articles of Incorporation has been adopted by the City Councils as follows: on July 12, 2007 (Round Rock), July 12, 2007 (Cedar Park), and July 19, 2007 (Leander).

## ARTICLE X

No Director shall be liable to the Corporation for monetary damages for an act or omission in the Director's capacity as a Director, except for damages resulting from (i) any breach of the Director's duty of loyalty to the Corporation, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) any transaction from which the Director received an improper benefit, whether the benefit resulted from an act taken within the scope of the Director's office, or (iv) acts or omissions for which the liability of a Director is expressly provided by statute. In addition to the circumstances in which a Director shall not be liable as set forth in the preceding sentences, a Director shall not be liable to the fullest extent permitted by any amendment to the Texas statutes hereafter enacted that further limits the liability of a Director.

## ARTICLE XI

Regardless of any other provisions of these Articles of Incorporation or the laws of the State of Texas, the Corporation: (a) shall not permit any part of the net earnings of the Corporation to inure to the benefit of any private individual (except that reasonable compensation may be paid for personal services rendered to or for the Corporation in effecting one or more of its purposes); (b) shall not direct any of its activities to attempt to influence legislation by propaganda or otherwise; (c) shall not participate in or intervene in (including the publication or distribution of statements), any political campaign on behalf of any candidate for public office; and (d) shall not attempt to influence the outcome of any election for public office or to carry on, directly or indirectly, any voter registration drives.

Notwithstanding the provisions of the Act entitling the Cities at all times to have the right to equally receive any income earned by the Corporation, exclusive of amounts needed to cover reasonable expenditures and reasonable reserves for future activities, such income shall either be retained by the Corporation, or distributed to the Cities in an equitable manner to be determined by the Board in accordance with the provisions of the Bylaws of the Corporation. Notwithstanding the foregoing sentence, in the event that all of the Facilities cease to operate, any such income shall be used or equitably distributed as determined by the Board as provided in the Bylaws of the Corporation. Any income of the Corporation received by the

Cities shall be deposited into such account(s) or fund(s) as determined by the Cities. No part of the Corporation's income shall inure to the benefit or any private interests.

Subject to the approval by the affirmative vote of all three City Councils, if the Board of Directors determines by resolution that the purposes for which the Corporation was formed have been substantially met and all bonds issued by and all obligations incurred by the Corporation have been fully paid, the Board shall execute a certificate of dissolution which states those facts and declares the Corporation dissolved in accordance with the requirements of applicable law then in existence. In the event of dissolution or liquidation of the Corporation, all cash or cash equivalent assets will be distributed among the Cities and/or deposited into such account(s) or fund(s) as each City shall direct.

If the Corporation is a private foundation within the meaning of Section 509 (a) of the Internal Revenue Code of 1986 (the "Code"), the Corporation

- (i) Shall distribute its income for each taxable year at such time and in such manner as not to become subject to the tax on undistributed income imposed by Section 4942 of the Code;
- (ii) Shall not engage in any act of self-dealing as defined in Section 4941(d) of the Code;
- (iii) Shall not retain any excess business holdings as defined in Section 4943(c) of the Code;
- (iv) Shall not make any investments in such manner as to subject it to tax under Section 4944 of the Code; and
- (v) Shall not make any taxable expenditure as defined in Section 4945(d) of the Code.

## ARTICLE XII

Upon approval of a resolution by each of the three City Councils, the City Councils may at any time, and in accordance with state law, direct the Board to proceed with the dissolution of the Corporation, at which time the



Board shall proceed with the dissolution of the Corporation in accordance with applicable Texas law and the provisions of this Article XII.

**ARTICLE XIII**

These Articles may not be changed or amended unless approved by the City Councils of all three Cities.

IN WITNESS WHEREOF, we have hereunto set our hands  
this \_\_\_\_\_ of \_\_\_\_\_ 2007.

\_\_\_\_\_  
\_\_\_\_\_, Incorporator

\_\_\_\_\_  
\_\_\_\_\_, Incorporator

IN WITNESS WHEREOF, we have hereunto set our hands  
this \_\_\_\_\_ of \_\_\_\_\_ 2007.

\_\_\_\_\_  
Robert S. Lemon, Incorporator

\_\_\_\_\_  
Brenda Eivens, Incorporator

IN WITNESS WHEREOF, we have hereunto set our hands  
this \_\_\_\_\_ of \_\_\_\_\_ 2007.

\_\_\_\_\_  
Alan McGraw, Incorporator

\_\_\_\_\_  
James R. Nuse, Incorporator

**Exhibit A**

The names and street addresses of the three (3) initial Directors are:

Name

Address

\_\_\_\_\_

Round Rock, TX \_\_\_\_\_

\_\_\_\_\_

Cedar Park, TX \_\_\_\_\_

\_\_\_\_\_

Leander, TX \_\_\_\_\_

**DATE:** July 5, 2007

**SUBJECT:** City Council Meeting – July 12, 2007

**ITEM:** 11B1. Consider a resolution approving the Articles of Incorporation of the Brushy Creek Regional Utility Authority, Inc. and appointing a member of the City Council to serve on the Board of Directors of said corporation.

**Department:** Legal  
**Staff Person:** Steve Sheets, City Attorney

**Justification:**

This resolution is the first step in the creation of the Brushy Creek Regional Utility Authority, Inc. Soon after all three city councils approve the Articles, the document will be filed with the Secretary of State and the Board of Directors will conduct the organization meeting. Soon thereafter the Board will consider approving a loan application to the Texas Water Development Board for partial financing of the proposed regional water system.

**Funding:**

Cost: N/A  
Source of funds: N/A

**Outside Resources:** N/A

**Background Information:** N/A

**Public Comment:** N/A

**EXECUTED**

**DOCUMENT**

**FOLLOWS**

**ARTICLES OF INCORPORATION  
OF  
BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.**

We, the undersigned natural persons, each of whom is at least eighteen (18) years of age or more, and a resident and a qualified voter of one of the Cities of Round Rock, Cedar Park, or Leander, Texas (collectively, the "Cities"), and a citizen of the State of Texas, acting as incorporators of a corporation under the provisions of Subchapter D of Chapter 431, Texas Transportation Code, as amended (or the "Act"), hereby adopt the following Articles of Incorporation for such corporation.

**ARTICLE I**

The name of the corporation is Brushy Creek Regional Utility Authority, Inc. (the "Corporation").

**ARTICLE II**

The Corporation is a public, non-profit corporation.

**ARTICLE III**

The period of duration of the Corporation shall be perpetual.

**ARTICLE IV**

The Corporation is organized for the purpose of aiding, assisting, and acting on behalf of the Cities in the performance of their governmental functions to promote the common good and general welfare of the Cities, including, without limitation, the financing, construction, acquisition, ownership, maintenance, and operation of regional water transmission, treatment, and distribution and/or regional wastewater collection and treatment systems and/or water reuse systems (the "Facilities") on behalf of the Cities and to perform such other governmental purposes of the Cities, including, without limitation, the transmission, treatment, and distribution of water, and/or the collection and treatment of wastewater, and/or water reuse system, as may be determined from time to time by the City Councils of the Cities (the "City Councils").

The Corporation is formed pursuant to the provisions of the Act as it now or may hereafter be amended, which authorizes the Corporation to assist and act on behalf of the Cities to accomplish any governmental purpose of the Cities and to engage in activities in the furtherance of the purposes for its creation.

The Corporation shall have and exercise all of the rights, powers, privileges, authority, and functions now or hereafter given by the general laws of the State of Texas to non-profit corporations incorporated under the Act including, without limitation, the powers granted under the Texas Non-Profit Corporation Act, Article 1396-1.01 et seq., Vernon's Texas Civil Statutes, as amended.

The Corporation shall have all other powers of a like or different nature not prohibited by law which are available to non-profit corporations in Texas and which are necessary or useful to enable the Corporation to perform the purposes for which it is created, including the power to issue bonds, notes or other obligations, and otherwise exercise its borrowing power to promote the common good and general welfare of the Cities, including, without limitation, the financing, acquisition, construction, ownership, maintenance and operation of the Facilities.

The Corporation is created as a local government corporation pursuant to the Act and shall be a governmental unit within the meaning of Subdivision (2), Section 101.001, Texas Civil Practice and Remedies Code. The operations of the Corporation are governmental and not proprietary functions for purposes of the Texas Tort Claims Act, Section 101.001 et seq., Texas Civil Practice and Remedies Code. The Corporation shall have the power to acquire land in accordance with the Act, as amended from time to time.

#### **ARTICLE V**

The Corporation shall have no members and shall have no stock.

#### **ARTICLE VI**

The Board of Directors (the "Board") shall consist of three (3) Directors. Each City shall appoint one Director, who shall be either the Mayor or a Councilmember of the City. Except as otherwise provided in

these Articles of Incorporation or Bylaws, all powers of the Corporation shall be vested in the Board. The Directors' terms of office each shall be two years. When any Director ceases to hold his/her elected position, then the City Council of the subject City shall appoint a replacement Director as provided herein. The Board will consist initially of the three (3) persons identified in Exhibit A to these Articles of Incorporation, as appointed by the City Councils. With respect to the initial Board, the terms of the Directors shall commence on the date that the Texas Secretary of State issues a certificate of incorporation for the Corporation. Upon the expiration of the terms of office of the initial Directors, each City Council shall reappoint one (1) Director, who shall be either the Mayor or a Councilmember of the respective City.

Any Director may be removed at will by a majority vote of the City Council which appointed such Director.

All other matters pertaining to the internal affairs of the Corporation shall be governed by the Bylaws of the Corporation, so long as such Bylaws are not inconsistent with these Articles of Incorporation or the laws of the State of Texas. Adoption of the Bylaws shall require unanimous approval of the Directors and the consent and approval of the City Councils of all three Cities. The Bylaws shall contain a provision that once adopted, they may not be amended except with the unanimous approval of the Directors and the consent and approval of the City Councils of all three Cities. Until such time as the Bylaws are adopted and approved, Board action shall require unanimous approval of the Directors.

#### **ARTICLE VII**

The street address of the initial registered office of the Corporation is 221 E. Main Street, Texas 78664, and the name of its initial registered agent at such address is James R. Nuse.

#### **ARTICLE VIII**

The names and street addresses of the two (2) incorporators who are residents and qualified voters in the City of Cedar Park are:

NAME	ADDRESS
Robert S. Lemon	1401 Deer Ledge Trail Cedar Park, Texas 78613
Brenda Eivens	1500 Woodstone South Cedar Park, Texas 78613

The names and street addresses of the two (2) incorporators who are residents and qualified voters in the City of Leander are:

NAME	ADDRESS
John D. Cowman	1920 Holly Hill Drive Leander, Texas 78641
Anthony Johnson	403 Hernando's Loop Leander, Texas 78641

The names and street addresses of the two (2) incorporators who are residents and qualified voters in the City of Round Rock are:

NAME	ADDRESS
Alan McGraw	2708 Wolkin Cove Round Rock, Texas 78681
James R. Nuse	903 Summit Street Round Rock, Texas 78664

#### ARTICLE IX

A resolution approving the form of these Articles of Incorporation has been adopted by the City Councils as follows: on July 12, 2007 (Round Rock), July 12, 2007 (Cedar Park), and July 19, 2007 (Leander).



## ARTICLE X

No Director shall be liable to the Corporation for monetary damages for an act or omission in the Director's capacity as a Director, except for damages resulting from (i) any breach of the Director's duty of loyalty to the Corporation, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) any transaction from which the Director received an improper benefit, whether the benefit resulted from an act taken within the scope of the Director's office, or (iv) acts or omissions for which the liability of a Director is expressly provided by statute. In addition to the circumstances in which a Director shall not be liable as set forth in the preceding sentences, a Director shall not be liable to the fullest extent permitted by any amendment to the Texas statutes hereafter enacted that further limits the liability of a Director.

## ARTICLE XI

Regardless of any other provisions of these Articles of Incorporation or the laws of the State of Texas, the Corporation: (a) shall not permit any part of the net earnings of the Corporation to inure to the benefit of any private individual (except that reasonable compensation may be paid for personal services rendered to or for the Corporation in effecting one or more of its purposes); (b) shall not direct any of its activities to attempt to influence legislation by propaganda or otherwise; (c) shall not participate in or intervene in (including the publication or distribution of statements), any political campaign on behalf of any candidate for public office; and (d) shall not attempt to influence the outcome of any election for public office or to carry on, directly or indirectly, any voter registration drives.

Notwithstanding the provisions of the Act entitling the Cities at all times to have the right to equally receive any income earned by the Corporation, exclusive of amounts needed to cover reasonable expenditures and reasonable reserves for future activities, such income shall either be retained by the Corporation, or distributed to the Cities in an equitable manner to be determined by the Board in accordance with the provisions of the Bylaws of the Corporation. Notwithstanding the foregoing sentence, in the event that all of the Facilities cease to operate, any such income shall be used or equitably distributed as determined by the Board as provided in the Bylaws of the Corporation. Any income of the Corporation received by the

Cities shall be deposited into such account(s) or fund(s) as determined by the Cities. No part of the Corporation's income shall inure to the benefit or any private interests.

Subject to the approval by the affirmative vote of all three City Councils, if the Board of Directors determines by resolution that the purposes for which the Corporation was formed have been substantially met and all bonds issued by and all obligations incurred by the Corporation have been fully paid, the Board shall execute a certificate of dissolution which states those facts and declares the Corporation dissolved in accordance with the requirements of applicable law then in existence. In the event of dissolution or liquidation of the Corporation, all cash or cash equivalent assets will be distributed among the Cities and/or deposited into such account(s) or fund(s) as each City shall direct.

If the Corporation is a private foundation within the meaning of Section 509 (a) of the Internal Revenue Code of 1986 (the "Code"), the Corporation

- (i) Shall distribute its income for each taxable year at such time and in such manner as not to become subject to the tax on undistributed income imposed by Section 4942 of the Code;
- (ii) Shall not engage in any act of self-dealing as defined in Section 4941(d) of the Code;
- (iii) Shall not retain any excess business holdings as defined in Section 4943(c) of the Code;
- (iv) Shall not make any investments in such manner as to subject it to tax under Section 4944 of the Code; and
- (v) Shall not make any taxable expenditure as defined in Section 4945(d) of the Code.

## ARTICLE XII

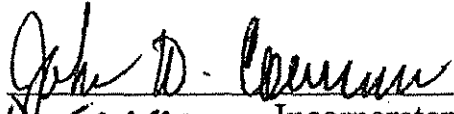
Upon approval of a resolution by each of the three City Councils, the City Councils may at any time, and in accordance with state law, direct the Board to proceed with the dissolution of the Corporation, at which time the


Board shall proceed with the dissolution of the Corporation in accordance with applicable Texas law and the provisions of this Article XII.

### ARTICLE XIII


These Articles may not be changed or amended unless approved by the City Councils of all three Cities.

IN WITNESS WHEREOF, we have hereunto set our hands  
this 19<sup>th</sup> of July 2007.

  
John D. Cowman, Incorporator


  
Anthony Johnson, Incorporator

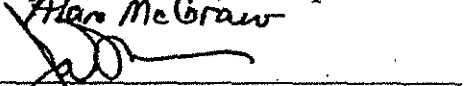
IN WITNESS WHEREOF, we have hereunto set our hands  
this 12<sup>th</sup> of July 2007.

  
Robert S. Lemon, Incorporator

x   
Brenda Eivens, Incorporator

IN WITNESS WHEREOF, we have hereunto set our hands  
this 20<sup>th</sup> of July 2007.

  
Alan McGraw, Incorporator

  
James R. Nuse, Incorporator

**Exhibit A**

The names and street addresses of the three (3) initial Directors are:

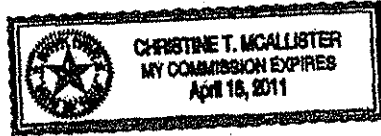
<u>Name</u>	<u>Address</u>
Scott Rhode	221 E. Main Street Round Rock, Texas 78664
Cobby Caputo	600 North Bell Blvd. Cedar Park, Texas 78613
<u>John D. Cowman</u>	<u>1920 Holly Hill Drive</u> Leander, TX <u>78641</u>

SUBSCRIBED AND SWORN TO BEFORE ME by Alan McGraw, Incorporator for the City of Round Rock, on the 20<sup>th</sup> day of July, 2007.



*Christine T. McAllister*  
Notary Public, State of Texas

SUBSCRIBED AND SWORN TO BEFORE ME by James R. Nuse, Incorporator for the City of Round Rock, on the 20<sup>th</sup> day of July, 2007.



*Christine T. McAllister*  
Notary Public, State of Texas



**CITY OF ROUND ROCK, TEXAS  
CITY COUNCIL WORK SESSION AND  
REGULAR SESSION  
THURSDAY, JULY 12, 2007-6:00 P.M.  
CITY HALL-CITY COUNCIL CHAMBER  
221 EAST MAIN STREET**

**COUNCILMEMBERS**

Nyle Maxwell, Mayor  
Alan McGraw, Mayor Pro-tem  
Rufus Honeycutt  
Joe Clifford  
Carlos T. Salinas  
Scott Rhode  
Kris Whitfield

**AGENDA**

1. **CALL WORK SESSION TO ORDER – 6:00 P.M.**
2. **ROLL CALL**
3. **PRESENTATIONS:**
  - A. **POLICE DEPARTMENT**
    - 3A1. Consider an update on the Williamson County Regional Animal Shelter.
  - B. **ADMINISTRATION DEPARTMENT**
    - 3B1. Consider a presentation concerning redevelopment opportunities for the downtown area.
4. **CALL REGULAR SESSION TO ORDER – 7:00 P.M.**
5. **PLEDGE OF ALLEGIANCE:**
  - 5A. United States Flag
  - 5B. Texas State Flag
6. **CITIZENS COMMUNICATIONS**
7. **APPROVAL OF MINUTES:**
  - 7A. Consider approval of the City Council meeting minutes for June 28, 2007.
8. **PRESENTATIONS:**
  - 8A. Continuation of presentations not addressed during the Work Session.
9. **PUBLIC HEARINGS:**
  - A. **PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT**
    - 9A1. Consider public testimony regarding the Draft Community Development Block Grant (CDBG) Fourth Program Year Action Plan.
    - 9A2. Consider public testimony regarding an application filed by Les Kilday to rezone 9.0 acres of land from the Light Industrial zoning district to the Planned Unit Development No. 76 zoning district. (Rabbit Hill)

9. **PUBLIC HEARINGS CONTINUED:**

A. **PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT**

- 9A3. Consider public testimony regarding an application filed by Les Kilday to rezone 8.05 acres of land from the Light Industrial zoning district to the Senior zoning district. (Rabbit Hill)

10. **ORDINANCES:**

A. **CONVENTION AND VISITORS BUREAU DEPARTMENT**

- 10A1. Consider an ordinance amending the membership of the Tourism Commission to include an At-Large position. (First Reading)

B. **PARKS AND RECREATION DEPARTMENT**

- 10B1. Consider an ordinance amending Chapter 6, Section 6.611(4), Code of Ordinances regarding the increase of fees for curbside brush pick up. (Second Reading)

C. **ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENT**

- 10C1. Consider an ordinance amending Chapter 10, Section 10.900, Code of Ordinances revising the rules and regulations governing the construction and use of public rights-of-way. (First Reading) *Requires Two Readings*

D. **FINANCE DEPARTMENT**

- 10D1. Consider an ordinance authorizing the Issuance of City of Round Rock, Texas General Obligation and Refunding Bonds, Series 2007; authorizing the Levy of an Ad Valorem Tax in Support of the Bonds; approving a Paying Agent/Registrar Agreement, an Official Statement, a Purchase Agreement, an Escrow Agreement and Other Agreements Related to the Sale and Issuance of the Bonds; Calling Certain Obligations for Redemption; and authorizing Other Matters Relating to the Issuance of the Bonds. (First Reading)

- 10D2. Consider an ordinance authorizing the Issuance of City of Round Rock, Texas Combination Tax and Revenue Certificates of Obligation, Series 2007; authorizing the Levy of an Ad Valorem Tax and the Pledge of Certain Revenues in Support of the Certificates; approving a Paying Agent/Registrar Agreement, an Official Statement, a Purchase Agreement and other Agreements Related to the Sale and Issuance of the Certificates; and authorizing Other Matters Related to the Issuance of the Certificates. (First Reading)

E. **PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT**

- 10E1. Consider an ordinance rezoning 9.0 acres of land from the Light Industrial zoning district to the Planned Unit Development No. 76 zoning district. (First Reading)

- 10E2. Consider an ordinance rezoning 8.05 acres of land from the Light Industrial zoning district to the Senior zoning district. (First Reading)

10. **ORDINANCES CONTINUED:**

E. **PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT**

- 10E3. Consider an ordinance annexing the tract of land known as F.M. 1431 Parcel 5, a total of 52.84 acres, located between the eastern edge of Stone Oak at Round Rock and the western edge of IH-35. (First Reading)

11. **RESOLUTIONS:**

A. **INFORMATION TECHNOLOGY & COMMUNICATION DEPARTMENT**

- 11A1. Consider a resolution authorizing the Mayor to execute an Interlocal Agreement with the Round Rock ISD for fiber optic networking infrastructure and related services.

B. **LEGAL DEPARTMENT**

- 11B1. Consider a resolution approving the Articles of Incorporation of the Brushy Creek Regional Utility Authority, Inc. and appointing a member of the City Council to serve on the Board of Directors of said corporation.

C. **PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT**

- 11C1. Consider a resolution consenting to the annexation of a 1.339 acre tract of land by the Paloma Lake Municipal Utility District No. 1.

D. **ADMINISTRATION DEPARTMENT**

- 11D1. Consider a resolution authorizing the Mayor to execute a consent to the Assignment of the Behrens Ranch Public Improvement District developer rights and reimbursement payments to the developer's lender, Compass Bank.
- 11D2. Consider a resolution authorizing the Mayor to execute an agreement amending the Development Agreement between the City of Round Rock and Merion 100, L.P.

E. **TRANSPORTATION SERVICES DEPARTMENT**

- 11E1. Consider a resolution authorizing the Mayor to execute all applicable paper work for the dedication a 0.177 acre parcel of land to TxDOT, from the east side of IH-35, for the proposed construction of the northbound to southbound turnaround structure at RM 620.
- 11E2. Consider a resolution of support for the closing of the Union Pacific Railroad private crossing between Burnet Street and A.W. Grimes Boulevard adjacent to the proposed Colonial Grand at Ashton Oaks.

F. **PARKS AND RECREATION DEPARTMENT**

- 11F1. Consider a resolution authorizing the Mayor to execute an Agreement for Consulting Services with Halff Associates, Inc. for the Strategic Parks and Recreation Master Plan.
- 11F2. Consider a resolution authorizing the City Manager to issue a purchase order to Contech Bridge Solutions Inc. for a pedestrian bridge for the Old Settlers Park Lakeside Trail Improvement Project.




12. **COUNCIL COMMENTS**

13. **ADJOURNMENT**

"The City Council for the City of Round Rock reserves the right to adjourn into executive session at any time during the course of this meeting to discuss any of the matters listed above, as authorized by Texas Government Code Sections 551.071 (Consultation with Attorney), 551.072 (Deliberations about Real Property), 551.073 (Deliberations about Gifts and Donations), 551.074 (Personnel Matters), 551.076 (Deliberations about Security Devices) and 551.087 (Economic Development)."

**CERTIFICATE**

I certify that this notice of the City Council Meeting was posted on the City Hall bulletin board of the City of Round Rock, Texas at 5:00 p.m. on the 6th day of July 2007.

  
Christine R. Martinez, City Secretary

**The City Council Chamber is wheelchair accessible. Requests for any special accommodations must be made 48 hours prior to the meeting. Please contact 218-5401. Requests for information may be faxed to 218-7097.**

<<Prev Rule

# Texas Administrative Code

Next Rule>>

<b>TITLE 31</b>	<b>NATURAL RESOURCES AND CONSERVATION</b>
<b>PART 10</b>	<b>TEXAS WATER DEVELOPMENT BOARD</b>
<b>CHAPTER 375</b>	<b>CLEAN WATER STATE REVOLVING FUND</b>
<b>SUBCHAPTER A</b>	<b>GENERAL PROVISIONS</b>
<b>DIVISION 2</b>	<b>PROGRAM REQUIREMENTS</b>
<b>RULE §375.17</b>	<b>Intended Use Plan</b>

Historical

Texas Register

(a) Each fiscal year the board shall prepare an intended use plan to meet the requirements of the Act, §606(c), and to assist the board in its financial planning. The intended use plan will identify projects anticipated to receive assistance from that year's available funds. The list of projects by priority ranking included in the intended use plan may also serve as the project priority list required by the Act.

(b) The process for listing projects in the intended use plan will be as follows.

(1) Each year the executive administrator will provide written notice and solicit project information from entities desiring to receive funding commitments during the next fiscal year on the basis of that year's intended use plan. The notice will include forms to be used to submit information needed to rate the principal project and the deadline by which rating information must be submitted in order for projects to be rated and included in the intended use plan. The required project information will include:

- (A) information needed to rate the project;
- (B) a description of the proposed facilities;
- (C) the status of any required permit application, including projected effluent limitations;
- (D) the estimated total project cost;
- (E) an estimated schedule for planning, design and construction of the proposed project;
- (F) a statement as to whether the applicant is under enforcement by EPA or the commission;

(G) beginning with the intended use plan for fiscal year 2005 and all subsequent intended use plans, for those potential applicants with existing populations of 25,000 or fewer, information regarding the eligibility of the area to be served by the project as a disadvantaged community as defined in §375.19; and

(H) such other information as may be requested by the executive administrator.

(2) The required information must be submitted not later than the deadline specified in the written notice to be included in the draft intended use plan. Rating information submitted after the deadline will not be accepted. Incomplete rating information forms may prevent projects from being rated for inclusion in the intended use plan.

(c) Subsequent to adoption of an intended use plan, the nature of a proposed project included in the intended use plan may change without requiring a re-ranking in the following circumstances:

- (1) the applicant for a proposed project may change;

(2) an alternative may be proposed which addresses the specific system condition for which priority points were assigned; or,

(3) the total cost of a proposed project may decrease from the amount listed in the adopted intended use plan.

(d) If any changes are proposed to the nature of the improvements of a proposed project which would result in a change to the rating score as determined by §375.16 of this title (relating to Rating Process), the project must be re-ranked in the intended use plan. In this case the availability of funds will be determined based on the revised rating score.

(e) After a period of public review and comment, the intended use plan will be presented for adoption to the board at a regularly scheduled meeting.

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**Source Note:** The provisions of this §375.17 adopted to be effective February 11, 1999, 24 TexReg 769; amended to be effective November 7, 2000, 25 TexReg 10927; amended to be effective January 6, 2004, 29 TexReg 216

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Corporations Section  
P.O.Box 13697  
Austin, Texas 78711-3697



Phil Wilson  
Secretary of State

## Office of the Secretary of State

### Certificate of Fact

The undersigned, as Secretary of State of Texas, does hereby certify that the document, Certificate of Formation for Brushy Creek Regional Utility Authority, Inc. (file number 800848913), a Domestic Nonprofit Corporation, was filed in this office on July 26, 2007.

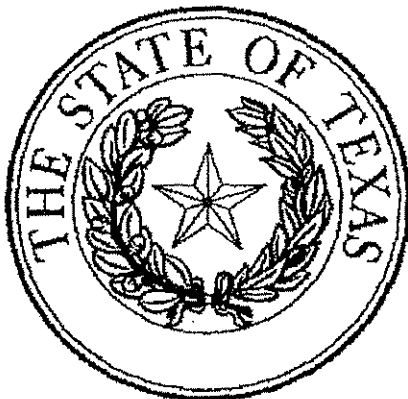
It is further certified that the entity status in Texas is in existence.

It is further certified that our records indicate JAMES R. NUSE as the designated registered agent for the above named entity and the designated registered office for said entity is as follows:

221 E. MAIN STREET

ROUND ROCK, TX - 78664 USA

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on July 30, 2007.



A handwritten signature in black ink that reads "Phil Wilson".

Phil Wilson  
Secretary of State

**ARTICLES OF INCORPORATION  
OF  
BRUSHY CREEK REGIONAL UTILITY AUTHORITY, INC.**

We, the undersigned natural persons, each of whom is at least eighteen (18) years of age or more, and a resident and a qualified voter of one of the Cities of Round Rock, Cedar Park, or Leander, Texas (collectively, the "Cities"), and a citizen of the State of Texas, acting as incorporators of a corporation under the provisions of Subchapter D of Chapter 431, Texas Transportation Code, as amended (or the "Act"), hereby adopt the following Articles of Incorporation for such corporation.

**ARTICLE I**

The name of the corporation is Brushy Creek Regional Utility Authority, Inc. (the "Corporation").

**ARTICLE II**

The Corporation is a public, non-profit corporation.

**ARTICLE III**

The period of duration of the Corporation shall be perpetual.

**ARTICLE IV**

The Corporation is organized for the purpose of aiding, assisting, and acting on behalf of the Cities in the performance of their governmental functions to promote the common good and general welfare of the Cities, including, without limitation, the financing, construction, acquisition, ownership, maintenance, and operation of regional water transmission, treatment, and distribution and/or regional wastewater collection and treatment systems and/or water reuse systems (the "Facilities") on behalf of the Cities and to perform such other governmental purposes of the Cities, including, without limitation, the transmission, treatment, and distribution of water, and/or the collection and treatment of wastewater, and/or water reuse system, as may be determined from time to time by the City Councils of the Cities (the "City Councils").

The Corporation is formed pursuant to the provisions of the Act as it now or may hereafter be amended, which authorizes the Corporation to assist and act on behalf of the Cities to accomplish any governmental purpose of the Cities and to engage in activities in the furtherance of the purposes for its creation.

The Corporation shall have and exercise all of the rights, powers, privileges, authority, and functions now or hereafter given by the general laws of the State of Texas to non-profit corporations incorporated under the Act including, without limitation, the powers granted under the Texas Non-Profit Corporation Act, Article 1396-1.01 et seq., Vernon's Texas Civil Statutes, as amended.

The Corporation shall have all other powers of a like or different nature not prohibited by law which are available to non-profit corporations in Texas and which are necessary or useful to enable the Corporation to perform the purposes for which it is created, including the power to issue bonds, notes or other obligations, and otherwise exercise its borrowing power to promote the common good and general welfare of the Cities, including, without limitation, the financing, acquisition, construction, ownership, maintenance and operation of the Facilities.

The Corporation is created as a local government corporation pursuant to the Act and shall be a governmental unit within the meaning of Subdivision (2), Section 101.001, Texas Civil Practice and Remedies Code. The operations of the Corporation are governmental and not proprietary functions for purposes of the Texas Tort Claims Act, Section 101.001 et seq., Texas Civil Practice and Remedies Code. The Corporation shall have the power to acquire land in accordance with the Act, as amended from time to time.

#### **ARTICLE V**

The Corporation shall have no members and shall have no stock.

#### **ARTICLE VI**

The Board of Directors (the "Board") shall consist of three (3) Directors. Each City shall appoint one Director, who shall be either the Mayor or a Councilmember of the City. Except as otherwise provided in

these Articles of Incorporation or Bylaws, all powers of the Corporation shall be vested in the Board. The Directors' terms of office each shall be two years. When any Director ceases to hold his/her elected position, then the City Council of the subject City shall appoint a replacement Director as provided herein. The Board will consist initially of the three (3) persons identified in Exhibit A to these Articles of Incorporation, as appointed by the City Councils. With respect to the initial Board, the terms of the Directors shall commence on the date that the Texas Secretary of State issues a certificate of incorporation for the Corporation. Upon the expiration of the terms of office of the initial Directors, each City Council shall reappoint one (1) Director, who shall be either the Mayor or a Councilmember of the respective City.

Any Director may be removed at will by a majority vote of the City Council which appointed such Director.

All other matters pertaining to the internal affairs of the Corporation shall be governed by the Bylaws of the Corporation, so long as such Bylaws are not inconsistent with these Articles of Incorporation or the laws of the State of Texas. Adoption of the Bylaws shall require unanimous approval of the Directors and the consent and approval of the City Councils of all three Cities. The Bylaws shall contain a provision that once adopted, they may not be amended except with the unanimous approval of the Directors and the consent and approval of the City Councils of all three Cities. Until such time as the Bylaws are adopted and approved, Board action shall require unanimous approval of the Directors.

## **ARTICLE VII**

The street address of the initial registered office of the Corporation is 221 E. Main Street, Texas 78664, and the name of its initial registered agent at such address is James R. Nuse.

## **ARTICLE VIII**

The names and street addresses of the two (2) incorporators who are residents and qualified voters in the City of Cedar Park are:

**NAME**

**ADDRESS**

Robert S. Lemon

1401 Deer Ledge Trail  
Cedar Park, Texas 78613

Brenda Eivens

1500 Woodstone South  
Cedar Park, Texas 78613

The names and street addresses of the two (2) incorporators who are residents and qualified voters in the City of Leander are:

**NAME**

**ADDRESS**

\_\_\_\_\_

\_\_\_\_\_  
Leander, Texas \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Leander, Texas \_\_\_\_\_

The names and street addresses of the two (2) incorporators who are residents and qualified voters in the City of Round Rock are:

**NAME**

**ADDRESS**

Nyle Maxwell

3400 Vintage Dr.  
Round Rock, Texas 78664

James R. Nuse

903 Summit Street  
Round Rock, Texas 78664

**ARTICLE IX**

A resolution approving the form of these Articles of Incorporation has been adopted by the City Councils as follows: on July 2, 2007 (Round Rock), July \_\_\_\_, 2007 (Cedar Park), and July \_\_\_\_, 2007 (Leander).



## **ARTICLE X**

No Director shall be liable to the Corporation for monetary damages for an act or omission in the Director's capacity as a Director, except for damages resulting from (i) any breach of the Director's duty of loyalty to the Corporation, (ii) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) any transaction from which the Director received an improper benefit, whether the benefit resulted from an act taken within the scope of the Director's office, or (iv) acts or omissions for which the liability of a Director is expressly provided by statute. In addition to the circumstances in which a Director shall not be liable as set forth in the preceding sentences, a Director shall not be liable to the fullest extent permitted by any amendment to the Texas statutes hereafter enacted that further limits the liability of a Director.

## **ARTICLE XI**

Regardless of any other provisions of these Articles of Incorporation or the laws of the State of Texas, the Corporation: (a) shall not permit any part of the net earnings of the Corporation to inure to the benefit of any private individual (except that reasonable compensation may be paid for personal services rendered to or for the Corporation in effecting one or more of its purposes); (b) shall not direct any of its activities to attempt to influence legislation by propaganda or otherwise; (c) shall not participate in or intervene in (including the publication or distribution of statements), any political campaign on behalf of any candidate for public office; and (d) shall not attempt to influence the outcome of any election for public office or to carry on, directly or indirectly, any voter registration drives.

Notwithstanding the provisions of the Act entitling the Cities at all times to have the right to equally receive any income earned by the Corporation, exclusive of amounts needed to cover reasonable expenditures and reasonable reserves for future activities, such income shall either be retained by the Corporation, or distributed to the Cities in an equitable manner to be determined by the Board in accordance with the provisions of the Bylaws of the Corporation. Notwithstanding the foregoing sentence, in the event that all of the Facilities cease to operate, any such income shall be used or equitably distributed as determined by the Board as provided in the Bylaws of the Corporation. Any income of the Corporation received by the

Cities shall be deposited into such account(s) or fund(s) as determined by the Cities. No part of the Corporation's income shall inure to the benefit or any private interests.

Subject to the approval by the affirmative vote of all three City Councils, if the Board of Directors determines by resolution that the purposes for which the Corporation was formed have been substantially met and all bonds issued by and all obligations incurred by the Corporation have been fully paid, the Board shall execute a certificate of dissolution which states those facts and declares the Corporation dissolved in accordance with the requirements of applicable law then in existence. In the event of dissolution or liquidation of the Corporation, all cash or cash equivalent assets will be distributed among the Cities and/or deposited into such account(s) or fund(s) as each City shall direct.

If the Corporation is a private foundation within the meaning of Section 509 (a) of the Internal Revenue Code of 1986 (the "Code"), the Corporation

- (i) Shall distribute its income for each taxable year at such time and in such manner as not to become subject to the tax on undistributed income imposed by Section 4942 of the Code;
- (ii) Shall not engage in any act of self-dealing as defined in Section 4941(d) of the Code;
- (iii) Shall not retain any excess business holdings as defined in Section 4943(c) of the Code;
- (iv) Shall not make any investments in such manner as to subject it to tax under Section 4944 of the Code; and
- (v) Shall not make any taxable expenditure as defined in Section 4945(d) of the Code.

## ARTICLE XII

Upon approval of a resolution by each of the three City Councils, the City Councils may at any time, and in accordance with state law, direct the Board to proceed with the dissolution of the Corporation, at which time the

Board shall proceed with the dissolution of the Corporation in accordance with applicable Texas law and the provisions of this Article XII.

**ARTICLE XIII**

These Articles may not be changed or amended unless approved by the City Councils of all three Cities.

IN WITNESS WHEREOF, we have hereunto set our hands  
this \_\_\_\_\_ of \_\_\_\_\_ 2007.

\_\_\_\_\_  
\_\_\_\_\_, Incorporator

\_\_\_\_\_  
\_\_\_\_\_, Incorporator

IN WITNESS WHEREOF, we have hereunto set our hands  
this \_\_\_\_\_ of \_\_\_\_\_ 2007.

\_\_\_\_\_  
Robert S. Lemon, Incorporator

\_\_\_\_\_  
Brenda Eivens, Incorporator

IN WITNESS WHEREOF, we have hereunto set our hands  
this \_\_\_\_\_ of \_\_\_\_\_ 2007.

\_\_\_\_\_  
Nyle Maxwell, Incorporator

\_\_\_\_\_  
James R. Nuse, Incorporator

**Exhibit A**

The names and street addresses of the three (3) initial Directors are:

<u>Name</u>	<u>Address</u>
_____	Round Rock, TX _____
_____	Cedar Park, TX _____
_____	Leander, TX _____

TRANSPORTATION CODE  
SUBTITLE I. TRANSPORTATION CORPORATIONS  
CHAPTER 431. TEXAS TRANSPORTATION CORPORATION ACT  
SUBCHAPTER A. GENERAL PROVISIONS

Sec. 431.001. SHORT TITLE. This chapter may be cited as the Texas Transportation Corporation Act.  
Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.002. PURPOSES; LIBERAL CONSTRUCTION. (a) The purposes of this chapter are:

(1) the promotion and development of public transportation facilities and systems by new and alternative means;

(2) the expansion and improvement of transportation facilities and systems;

(3) the creation of corporations to secure and obtain rights-of-way for urgently needed transportation systems and to assist in the planning and design of those systems;

(4) the reduction of burdens and demands on the limited funds available to the commission and an increase in the effectiveness and efficiency of the commission; and

(5) the promotion and development of transportation facilities and systems that are public, not private, in nature, although these facilities and systems may benefit private interests as well as the public.

(b) This chapter shall be liberally construed to give effect to the purposes of this chapter.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.003. DEFINITIONS. In this chapter:

(1) "Board" means the board of directors of a corporation organized under this chapter.

(2) "Corporation" means a corporation organized under this chapter and includes a local government corporation.

(3) "Local government" means:

(A) a municipality;

(B) a county; or

(C) for purposes of Subchapter D, a navigation district.

(4) "Local government corporation" means a corporation incorporated as provided by Subchapter D to act on behalf of a local government.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995. Amended by Acts 2001, 77th Leg., ch. 1370, Sec. 1, eff. June 16, 2001.

Sec. 431.004. OPEN MEETINGS. (a) A corporation is subject to Chapter 551, Government Code.

(b) Except as provided by Subsection (c) or (d), the board shall file notice of each meeting of the board in the same manner and in the same location as is required of a state governmental body under Chapter 551, Government Code.

(c) If the commission designates an area of the state in which a corporation may act on behalf of the commission, the board shall file notice of each meeting of the board in the same manner and in the same location as is required of a governmental body under Section 551.053, Government Code.

(d) The board of a local government corporation shall file notice of each meeting of the board in the same manner and in the same location as is required of the governing body under Chapter 551, Government Code, of the one or more local governments that created the local government corporation.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.005. OPEN RECORDS. The board is subject to Chapter 552, Government Code.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.006. APPLICATION OF TEXAS NON-PROFIT CORPORATION ACT. The Texas Non-Profit Corporation Act (Article 1396-1.01 et seq., Vernon's Texas Civil Statutes) applies to a corporation to the extent that the provisions of that Act are not inconsistent with this chapter.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

SUBCHAPTER B. CREATION AND OPERATION OF CORPORATION

Sec. 431.021. PURPOSE OF CORPORATION. The purpose of a corporation is limited to the promotion and development of public transportation facilities and systems.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.022. APPLICATION. (a) Three or more individuals may file with the commission an application for the creation of a corporation within a designated area.

- (b) Each of the individuals must be a qualified voter.
- (c) The application must be in writing.
- (d) The application must contain the articles of incorporation proposed to be used in organizing the corporation.
- (e) The commission may not charge a filing fee for the application.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.023. ADOPTION OF RESOLUTION. (a) A corporation may be created only if the commission adopts a resolution authorizing the creation of a corporation to act on behalf of the commission.

(b) A resolution must state that the commission:

(1) determines that creation of the corporation is advisable; and

(2) approves the articles of incorporation proposed to be used in organizing the corporation.

(c) The commission may designate the area of the state in which the corporation may act on behalf of the commission. The designated area may include the territory of more than one political subdivision of the state.

(d) The commission may authorize the creation of more than one corporation to act within the same designated area. The resolution authorizing each corporation must specify the public purpose of that corporation.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995. Amended by Acts 1999, 76th Leg., ch. 62, Sec. 17.04, eff. Sept. 1, 1999.

Sec. 431.024. FORM OF CORPORATION. (a) A corporation is a nonmember, nonstock corporation.

(b) A corporation is nonprofit, and its earnings may not benefit a private interest.

(c) A corporation may be created as a perpetual corporation. Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.025. ARTICLES OF INCORPORATION. The articles of incorporation must state:

- (1) the name of the corporation;
- (2) that the corporation is a nonprofit corporation;
- (3) the duration of the corporation;
- (4) the specific purpose for which the corporation is organized on behalf of the commission;

(5) that the corporation does not have any members and is a nonstock corporation;

(6) the street address of the corporation's initial registered office and the name of its initial registered agent at that address;

(7) the number of directors of the initial board and the name and address of each director;

(8) the name and street address of each incorporator;

(9) any provision for the regulation of the internal affairs of the corporation, including any provision required or permitted by this chapter to be in the bylaws; and

(10) that the commission has:

(A) by resolution specifically authorized the corporation to act on its behalf to further the public purpose stated in the resolution and in the articles of incorporation; and

(B) approved the articles of incorporation.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.026. DELIVERY AND FILING OF CERTIFICATE OF INCORPORATION. (a) After the commission adopts a resolution under Section 431.023, three originals of the articles of incorporation shall be delivered to the secretary of state.

(b) The secretary of state shall determine whether the articles of incorporation conform to this chapter. On determination that the articles conform to this chapter and on receipt of a \$25 fee, the secretary of state shall:

(1) endorse on each original the word "filed" and the date of the filing;

(2) file one of the originals in the secretary's office;

(3) issue two certificates of incorporation;

(4) attach to each certificate an original of the articles of incorporation; and

(5) deliver a certificate of incorporation and the attached articles of incorporation to:

(A) each incorporator or its representative; and

(B) the commission.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.027. EFFECT OF ISSUANCE OF CERTIFICATE OF INCORPORATION. (a) A corporation's existence begins when its certificate of incorporation is issued.

(b) After the issuance of the certificate of incorporation, the incorporation may not be contested for any reason.

(c) A certificate of incorporation is conclusive evidence that:

(1) all conditions for incorporation required of the incorporators and the commission are satisfied; and

(2) the corporation is incorporated under this chapter.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.028. BOARD. (a) A corporation must have a board in which the powers of the corporation reside.

(b) The board consists of three or more directors.

(c) The commission shall appoint each director for a term that may not exceed six years.

(d) The commission may remove a director for or without cause.

(e) A director serves without compensation but is entitled to reimbursement from the corporation for expenses incurred in the performance of the director's duties.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.029. ADVISORY DIRECTORS. (a) The board may appoint any number of advisory directors.

(b) An advisory director advises and assists the directors in promoting and developing new and expanded transportation facilities and systems.

(c) An advisory director serves until the completion of a particular project or at the will of the directors.

(d) An advisory director does not have a vote in the affairs of the corporation.

(e) An advisory director serves without compensation. The corporation may not reimburse an advisory director for expenses incurred in the performance of the director's duties.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.030. BYLAWS. (a) The board shall adopt the initial bylaws of a corporation. The commission, by resolution, must approve the initial bylaws.

(b) A corporation may change its bylaws only with the approval of the commission.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.031. QUORUM. (a) A quorum of a board is the lesser of:

(1) a majority of:

(A) the membership of the board under the bylaws;

or

(B) if the bylaws do not provide the membership of the board, the membership of the board under the articles of incorporation; or

(2) the number, which must be more than two, set as the quorum by the articles of incorporation or the bylaws.

(b) An act of the majority of the directors present at a meeting at which there is a quorum is an act of the board, unless the act of a greater number is required by the articles of incorporation or the bylaws.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.032. INDEMNIFICATION. (a) A corporation may indemnify a director or officer of the corporation for necessary expenses and costs, including attorney's fees, incurred by the director or officer in connection with any claim asserted against the director or officer in a court action or otherwise for negligence or misconduct.

(b) If a corporation does not fully indemnify a director or officer as provided by Subsection (a), the court in a proceeding in which any claim against the director or officer is asserted or any court with jurisdiction of an action instituted by the director or officer on a claim for indemnity may assess indemnity against the corporation, its receiver, or trustee for the amount paid by the director or officer, including attorney's fees, to pay any judgment or settlement of the claim necessarily incurred by the director or officer in connection with the claim in an amount the court considers reasonable and equitable only if the court finds that, in connection with the claim, the director or officer is not guilty of negligence or misconduct.

(c) A court may not assess indemnity under Subsection (b) for an amount paid by the director or officer to the corporation.

(d) In this section, "director or officer" includes a former director or officer.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.033. EXEMPTION FROM TAXATION. A corporation affects all the people in its area by assuming to a material extent what otherwise might be an obligation or duty of the commission and is a purely public charity under Section 2, Article VIII, Texas Constitution. However, a corporation is exempt from the franchise tax under Chapter 171, Tax Code, only if the corporation is exempted by that chapter.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.034. INCOME OF TRANSPORTATION CORPORATION. The commission has the unrestricted right at any time to receive any income earned by a corporation other than a local government corporation.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

#### SUBCHAPTER C. CORPORATE POWERS

Sec. 431.061. DEFINITIONS. In this subchapter:

(1) "Construction" includes improvement and landscaping.

(2) "Highway" includes an improvement to a highway.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.062. GENERAL POWERS. (a) A corporation has the powers and privileges of a nonprofit corporation incorporated under the Texas Non-Profit Corporation Act (Article 1396-1.01 et seq., Vernon's Texas Civil Statutes).

(b) A corporation has the powers provided by this subchapter to promote and develop new and expanded transportation facilities and systems on behalf of the commission and powers incidental to or necessary for the performance of that purpose.

(c) A corporation may, at the request of the commission, perform any function not specified by this chapter to promote and develop transportation facilities and systems.

(d) A corporation has the powers necessary to construct or improve transportation facilities and systems approved by the commission.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.063. PROMOTION AND DEVELOPMENT OF TRANSPORTATION FACILITIES AND SYSTEMS. A corporation may work directly with property owners, local and state governmental agencies, and elected officials to support an activity required to promote and develop a transportation facility or system.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.064. ALIGNMENT STUDIES. A corporation may perform a preliminary or final alignment study.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.065. CONTRIBUTIONS; EXPENSES. (a) A corporation may receive:

(1) a contribution of real property for a right-of-way; and

(2) a cash donation for:

(A) the purchase of a right-of-way; or

(B) the design or construction of a transportation facility or system.

(b) A corporation may establish a formula to determine the amount of cash donations from affected property owners and others necessary to cover the cost of a service to be performed by the corporation or its consultants.

(c) A corporation may borrow money to meet any expense or need associated with the regular operation of the corporation or a particular transportation project.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.066. EMPLOYEES AND CONSULTANTS. (a) A corporation may employ an administrative staff.

(b) A corporation may retain legal, public relations, and engineering services required to develop a transportation facility or system.

(c) Through its staff and retained consultants, a corporation may prepare an exhibit, right-of-way document, environmental report, schematic, or preliminary or final engineering plan necessary to develop a transportation facility or system.

(d) A corporation may pay an employee or consultant from



money donated to develop a transportation facility or system.  
Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.067. PROMOTIONAL ACTIVITIES. (a) A corporation may make official presentations to the state and other affected agencies or groups concerning the development of a transportation project.

(b) A corporation may issue a press release or other material to promote the activities of a transportation project.  
Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.068. CONSTRUCTION OR IMPROVEMENT CONTRACTS. (a) A corporation may contract with the commission to:

(1) construct or improve a transportation project designated by the commission; and

(2) sell the project or improvement to the commission.

(b) For a transportation project constructed by a corporation, the corporation may contract with the commission for the commission to:

(1) supervise the construction; or

(2) provide construction management services.

(c) A corporation and a county, a home-rule municipality, a county road district created under Chapter 257, or a road utility district created under Chapter 441 may contract to pay jointly the cost of a transportation project designated by the commission. The contract may obligate the corporation to design, construct, or improve the transportation project.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.069. LOCATION OF TRANSPORTATION PROJECTS. A corporation may construct or improve a transportation project on real property, including a right-of-way acquired by the corporation, provided to the corporation for that purpose by the commission or a political subdivision of this state.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.070. BONDS AND NOTES. (a) A corporation may issue bonds and notes to carry out its purpose.

(b) The bonds and notes may be issued under any power or authority available to the corporation, including Chapter 1201, Government Code.

(c) A bond or note must state on its face that it is not an obligation of the State of Texas.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995. Amended by Acts 2001, 77th Leg., ch. 1420, Sec. 8.394, eff. Sept. 1, 2001.

Sec. 431.071. APPROVAL OF BONDS AND NOTES BY ATTORNEY GENERAL. (a) A corporation shall submit a bond or note authorized under Section 431.070 and a contract supporting its issuance to the attorney general for examination.

(b) If the attorney general finds that the bond or note, and any supporting contract are authorized under this chapter, the attorney general shall approve them.

(c) After approval by the attorney general, a bond, note, or contract may not be contested for any reason.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.072. LIMITATION TO FEDERAL OR STATE HIGHWAY SYSTEM. A corporation may plan, design, acquire, construct, improve, extend, or maintain a transportation project only if the project:

(1) is intended by the commission to become part of the federal or state highway system; and

(2) is not intended to:

(A) become a county road or municipal street; or

(B) be owned by a county road district or by a

road utility district.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.073. PROJECT IN COUNTY OF 500,000 OR MORE OR ADJACENT COUNTY. (a) This section applies only to a corporation that was created by the state or one or more counties or municipalities to implement a transportation project in:

(1) a county with a population of 500,000 or more; or

(2) a county adjacent to a county described by

Subdivision (1).

(b) If approved and authorized by the commission, a corporation created by the state has the rights, powers, privileges, authority, and functions given the department under this title to:

(1) construct, improve, operate, and maintain high occupancy vehicle lanes; and

(2) charge a toll for the use of one or more high occupancy vehicle lanes for the purpose of congestion mitigation.

(c) A corporation in existence on August 31, 1991, has the powers, rights, and privileges of a corporation created under Chapter 11, Title 32, Revised Statutes, as that law existed on August 31, 1991, except that the required right-of-way of any highway, road, street, or turnpike may be of the width required or approved by the commission or each governing body creating the corporation.

Text of subsec. (d) effective until August 31, 2008.

(d) A motor vehicle displaying the "low-emissions vehicle" insignia authorized by Section 502.186 in an easily readable location on the back of the vehicle is entitled to travel in a high occupancy vehicle lane designated under this section regardless of the number of occupants in the vehicle. This subsection expires August 31, 2008.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995. Amended by Acts 1997, 75th Leg., ch. 1171, Sec. 1.25, eff. Sept. 1, 1997; Acts 2001, 77th Leg., ch. 967, Sec. 6, eff. Sept. 1, 2001.

#### SUBCHAPTER D. LOCAL GOVERNMENT CORPORATIONS

##### Sec. 431.101. CREATION OF LOCAL GOVERNMENT CORPORATION. (a)

A local government corporation may be created to aid and act on behalf of one or more local governments to accomplish any governmental purpose of those local governments. To be effective, the articles of incorporation and the bylaws of a local government corporation must be approved by ordinance, resolution, or order adopted by the governing body of each local government that the corporation is created to aid and act on behalf of.

(b) A local government corporation has the powers of a corporation authorized for creation by the commission under this chapter.

(c) The provisions of the Texas Non-Profit Corporation Act (Article 1396-1.01 et seq., Vernon's Texas Civil Statutes) relating to powers, standards of conduct, and interests in contracts apply to the directors and officers of the local government corporation.

(d) A provision of this chapter relating to the creation, dissolution, administration, or supervision of a corporation by the commission does not apply to a local government corporation.

(e) Section 394.904(a), Local Government Code, applies to property and improvements owned by a local government corporation. Section 394.904(b) of that code applies to each contract awarded by the local government corporation.

(f) A member of the board of directors of a local government corporation:

(1) is not a public official by virtue of that position; and

(2) unless otherwise ineligible, may be appointed to serve concurrently on the board of directors of a reinvestment zone created under Chapter 311, Tax Code.

(g) A local government corporation created by a navigation district must comply with all state law related to the design and construction of projects, including the procurement of design and construction services, that applies to the navigation district that created the corporation.

(h) A local government corporation formed by a navigation district shall not condemn a right-of-way through any part of a municipality without the consent of the municipality's governing body.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995. Amended by Acts 1997, 75th Leg., ch. 165, Sec. 30.24, eff. Sept. 1, 1997; Acts 1999, 76th Leg., ch. 983, Sec. 12, eff. June 18, 1999; Acts 2001, 77th Leg., ch. 1370, Sec. 2, 3, eff. June 16, 2001.

Sec. 431.102. APPLICATION OF CHAPTER 394, LOCAL GOVERNMENT CODE. (a) In the manner in which Chapter 394, Local Government Code, applies to a corporation created under that chapter, that chapter applies to:

(1) the manner in which a local government corporation is created and dissolved;

(2) the appointment of the board of a local government corporation and the members' terms of service;

(3) the manner and the conditions under which the board serves; and

(4) the form, execution, approval, filing, and amending of the articles of incorporation and bylaws of a local government corporation.

(b) The property of a local government corporation and a transaction to acquire the property is exempt from taxation in the same manner as a corporation created under Chapter 394, Local Government Code.

(c) The requirement of Section 394.021(a), Local Government Code, that all directors must be residents of the local government shall not be applicable to directors of a local government corporation except that a person may not be appointed to the board of a local government corporation if the appointment of that person would result in less than a majority of the board members being residents of the local government.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995. Amended by Acts 1999, 76th Leg., ch. 983, Sec. 13, eff. June 18, 1999.

Sec. 431.103. CONTRACTS WITH POLITICAL SUBDIVISIONS. A local government corporation may contract with a political subdivision of this state in the manner and to the same extent as any other corporation.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.104. ASSUMPTION OF POWERS AND DUTIES. (a) The governing body of a local government may assume for the local government the powers and duties of a local government corporation created by the local government.

(b) A local government that assumes the powers and duties of a local government corporation assumes the assets and liabilities of the corporation.

(c) The powers and duties of a local government corporation created by more than one local government may be assumed only if each local government that created the corporation agrees to the assumption.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.105. CONTRACTUAL AUTHORITY. (a) A state agency, including the commission, or a political subdivision may contract with a local government corporation to accomplish a governmental purpose of the sponsoring local government in the same manner and to the same extent that it:

(1) may contract with any other corporation created under this chapter; and

(2) is authorized to contract under Subchapter A, Chapter 472.

(b) A local government may contract with a corporation to accomplish the purposes of the sponsoring local government in the manner provided under Subchapter C, Chapter 224.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.106. PUBLIC SAFETY RULES. A local government that creates a local government corporation may establish and enforce traffic and other public safety rules on a toll road, toll bridge, or turnpike of the corporation. Local governments that jointly create a local government corporation may jointly establish and enforce those rules.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.107. INCOME OF LOCAL GOVERNMENT CORPORATION. (a) A local government creating a local government corporation is entitled at any time to receive any income earned by the local government corporation that is not needed to pay the corporation's expenses or obligations.

(b) The earnings of a local government corporation may not benefit a private interest.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.108. GOVERNMENTAL FUNCTIONS. (a) A local government corporation is a governmental unit as that term is used in Chapter 101, Civil Practice and Remedies Code.

(b) The operations of a local government corporation are governmental; not proprietary, functions.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.109. CONTRACTS FOR HISTORICALLY UNDERUTILIZED BUSINESSES. (a) This section applies only to a local government corporation serving a county with a population of more than 2.4 million.

(b) A local government corporation shall set and make a good faith effort to meet or exceed goals for awarding contracts or subcontracts associated with a project it operates, maintains, or constructs to historically underutilized businesses.

(c) The goals must equal or exceed:

(1) the federal requirement on federal money used in highway construction and maintenance; and

(2) the goals adopted by the department under Section 201.702.

(d) The goals apply to the total value of all contracts and subcontracts awarded, including contracts and subcontracts for construction, maintenance, operations, supplies, services, materials, equipment, professional services, the issuance of bonds, and bond counsel.

(e) In this section, "historically underutilized business" means:

(1) a corporation formed for the purpose of making a profit in which at least 51 percent of all classes of the shares of stock or other equitable securities is owned, managed, and in daily operations controlled by one or more persons who have been historically underutilized because of their identification as members of certain groups, including African Americans, Hispanic Americans, women, Asian Pacific Americans, and Native Americans, who have suffered the effects of discriminatory practices or similar invidious circumstances over which they have no control;

(2) a sole proprietorship formed for the purpose of making a profit that is 100 percent owned and in daily operation is controlled by a person described by Subdivision (1);

(3) a partnership formed for the purpose of making a profit in which at least 51 percent of the assets and interest in the partnership are owned by one or more persons described by Subdivision (1) and who also have proportionate interest in the control, daily operation, and management of the partnership's affairs;

(4) a joint venture in which each entity in the joint venture is a historically underutilized business; or

(5) a supplier contract between a historically underutilized business and a prime contractor under which the historically underutilized business is directly involved in the manufacture or distribution of the supplies or materials or otherwise warehouses and ships the supplies or materials.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

SUBCHAPTER E. AMENDMENT OR RESTATEMENT OF ARTICLES OF INCORPORATION  
Sec. 431.141. AMENDMENT. The articles of incorporation of a corporation created under this chapter may be amended only as provided by this subchapter.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.142. AMENDMENT BY BOARD OF DIRECTORS. (a) The board at any time may file with the commission a written application requesting that the commission approve an amendment to the articles of incorporation.

(b) The application must specify the proposed amendment.

(c) The board shall amend the articles if the commission by resolution:

(1) determines that it is advisable to adopt the proposed amendment;

(2) authorizes the adoption of the amendment; and

(3) approves the form of the amendment.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.143. AMENDMENT BY COMMISSION. The commission, at its sole discretion, may amend the articles of incorporation at any time by:

(1) adopting the amendment by resolution; and

(2) delivering the articles of amendment to the secretary of state.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.144. CONTENTS OF ARTICLES OF AMENDMENT. The articles of amendment must:

(1) state the name of the corporation;

(2) if the amendment alters a provision of the articles of incorporation, identify by reference or describe the altered provision and include its text as it is amended;

(3) if the amendment is an addition to the articles of incorporation, state that fact and include the text of each provision added; and

(4) state that the amendment was adopted or was approved by the commission and give the date the commission adopted or approved the amendment.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.145. EXECUTION AND VERIFICATION OF ARTICLES OF AMENDMENT. (a) Articles of amendment adopted by the board shall be executed by:

(1) the president or vice-president of the corporation; and  
(2) the secretary or assistant secretary of the corporation.

(b) Articles of amendment adopted by the commission shall be executed by:

- (1) the presiding officer of the commission; and
- (2) the secretary or clerk of the commission.

(c) One of the officers signing the articles shall verify each of the articles of amendment.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.146. DELIVERY AND FILING OF ARTICLES OF AMENDMENT. (a) Three originals of the articles of amendment shall be delivered to the secretary of state.

(b) The secretary of state shall determine whether the articles of amendment conform to this chapter. On determination that the articles conform to this chapter and on receipt of a \$25 fee, the secretary of state shall:

- (1) endorse on each original the word "filed" and the date of the filing;
- (2) file one of the originals in the secretary's office;
- (3) issue two certificates of amendment;
- (4) attach to each certificate one of the originals;

and  
(5) deliver a certificate of amendment and the attached articles of amendment to:

- (A) the corporation or its representative; and
- (B) the commission.

(c) On the issuance of the certificate of amendment, the amendment is effective and the articles of incorporation are amended accordingly.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.147. SUITS NOT AFFECTED. (a) An amendment to the articles of incorporation does not affect:

- (1) any existing cause of action in favor of or against the corporation;
- (2) any pending suit to which the corporation is a party; or
- (3) the existing rights of any person.

(b) If an amendment to the articles of incorporation changes the name of the corporation, a suit brought by or against the corporation under its former name does not abate for that reason.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.148. RESTATEMENT OF ARTICLES. A corporation, by following the procedure to amend the articles of incorporation in this subchapter, including obtaining the approval of the commission, may authorize, execute, and file restated articles of incorporation as provided by this subchapter.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.149. RESTATEMENT WITHOUT ADDITIONAL AMENDMENT. (a) A corporation may, without making any additional amendment, restate the entire text of the articles of incorporation as amended or supplemented by all certificates of amendment previously issued by the secretary of state.

(b) The introductory paragraph of a restatement under this section must contain a statement that the restatement:

- (1) accurately copies the articles of incorporation and all amendments to the articles that are in effect; and
- (2) does not contain any additional amendments to the articles.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.150. RESTATEMENT WITH ADDITIONAL AMENDMENT. (a) A corporation may:

- (1) restate the entire text of the articles of incorporation as amended or supplemented by all certificates of amendment previously issued by the secretary of state; and
- (2) as part of the restatement, make additional amendments to the articles.

(b) A restatement under this section must:

- (1) state that any additional amendment to the articles of incorporation conforms to this chapter;
- (2) contain any statement required by this subchapter for articles of amendment except that the full text of any additional amendment is not required to be presented other than in

the restatement itself;

(3) contain a statement that:

(A) the restatement is an accurate copy of the articles of incorporation and all amendments to the articles that are in effect and all additional amendments made to the articles; and

(B) the restatement does not contain any other change; and

(4) restate the text of the entire articles of incorporation as amended or supplemented by all certificates of amendment previously issued by the secretary of state and as additionally amended by the restated articles of incorporation. Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.151. CHANGE IN BOARD INFORMATION NOT AMENDMENT. For the purposes of Sections 431.149 and 431.150, substituting in the restated articles of incorporation the number, names, and addresses of the directors for the initial board or omitting the name and address of each incorporator is not an amendment or change in the articles of incorporation. Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.152. EXECUTION AND VERIFICATION OF RESTATEMENT OF ARTICLES. (a) Originals of the restated articles of incorporation shall be executed by:

(1) the president or vice-president of the corporation; and

(2) the secretary or assistant secretary of the corporation.

(b) One of the officers signing the restated articles shall verify each of the restated articles.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.153. DELIVERY AND FILING OF RESTATEMENT OF ARTICLES. (a) Three originals of the restated articles of incorporation shall be delivered to the secretary of state.

(b) The secretary of state shall determine whether the restated articles conform to this chapter. On a determination that the restated articles conform to law and on receipt of a \$50 fee, the secretary of state shall:

(1) endorse on each original the word "filed" and the date of the filing;

(2) file one of the originals in the secretary's office;

(3) issue two restated certificates of incorporation;

(4) attach to each certificate one of the original restated articles; and

(5) deliver a restated certificate of incorporation and the attached restated articles to:

(A) the corporation or its representative; and

(B) the governing body of the entity that created the corporation.

(c) On the issuance of the restated certificate of incorporation, the original articles of incorporation and all amendments to the original articles are superseded. The restated articles of incorporation become the articles of incorporation of the corporation.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

#### SUBCHAPTER F. ALTERATION OR DISSOLUTION OF CORPORATION

Sec. 431.181. ALTERATION OR DISSOLUTION BY COMMISSION. (a) At any time the commission in its sole discretion may:

(1) alter the structure, organization, programs, or activities of a corporation; or

(2) dissolve a corporation.

(b) The authority of the commission under this section is limited only by:

(1) any law of this state prohibiting the impairment of a contract entered into by a corporation; and

(2) any provision of this subchapter relating to alteration or dissolution.

(c) The commission must make an alteration or dissolution under this section by a written resolution.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.182. DISSOLUTION BY BOARD ON COMPLETION OF PURPOSE. The board, with the approval by written resolution of the commission, shall dissolve the corporation as provided by this subchapter if the board by resolution determines that:

(1) the purposes for which the corporation was formed

have been substantially fulfilled; and

(2) all obligations of the corporation have been fully paid.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.183. EXECUTION OF ARTICLES OF DISSOLUTION. Articles of dissolution shall be executed by:

- (1) the president or vice-president of the corporation and the secretary or assistant secretary of the corporation; or
- (2) any two members of the commission.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.184. DELIVERY AND FILING OF ARTICLES OF DISSOLUTION. (a) Three originals of the articles of dissolution shall be delivered to the secretary of state.

(b) The secretary of state shall determine whether the articles of dissolution conform to this chapter. On a determination that the articles conform and on receipt of a \$50 fee, the secretary of state shall:

- (1) endorse on each original the word "filed" and the date of the filing;
- (2) file one of the originals in the secretary's office;
- (3) issue two certificates of dissolution;
- (4) attach to each certificate an original of the articles of dissolution; and
- (5) deliver a certificate and the attached articles of dissolution to:

(A) the representative of the dissolved corporation; and

(B) the commission.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.185. EFFECT OF ISSUANCE OF CERTIFICATE OF DISSOLUTION. The corporate existence ends on the issuance of the certificate of dissolution except for:

- (1) the purpose of any ongoing suit or other proceeding; and
- (2) corporate action by a director or officer under this chapter.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.

Sec. 431.186. ASSETS ON DISSOLUTION. On dissolution or liquidation of a corporation, the title to all assets, including funds and property, shall be transferred to the commission unless the corporation is a local government corporation, in which case the title shall be transferred to the local governments that created the corporation.

Acts 1995, 74th Leg., ch. 165, Sec. 1, eff. Sept. 1, 1995.