



General Guidelines for Regional Water Plan Development (2007-2012)

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Division of Regional Water and Flood Planning and Natural
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Background and Purpose

The third round of regional and state water planning as defined by Senate Bill 1 of the 75th Texas Legislature commenced in 2007 and will extend through 2012. Since the third round of planning takes place during an “off-census cycle,” regional water planning groups were in favor of refining the process to allow planning groups greater flexibility in determining the focus of their plans. In addition, both the planning groups and the Texas Water Development Board (TWDB) determined that the current planning cycle would not require complete revisions of regional water plans due to the lack of new population data from the U.S. Census Bureau. In general, regions will focus on specific areas of water demand and water supply availability; evaluations of new water management strategies in response to changed conditions; environmental studies or work to further the implementation of water management strategies recommended in previous plans, reevaluations of population and water demand projections only under the presence of changed conditions; updating the costs of water management strategies, interregional coordination; infrastructure financing surveys and administrative and public participation activities.

The following document summarizes guidelines for developing and/or reevaluating regional water plans for the current planning cycle. Provisions of Title 31 of the Texas Administrative Code (TAC) Chapter 357 serve as the foundation for information in this document. Other referenced sources throughout this document provide additional guidance and clarification including the TWDB document entitled “*Guidelines for Regional Water Planning Data Deliverables*” available at the TWDB’s website, which contains important supplementary information regarding estimating and reporting water supply availability and other data. Any future revisions to 31 TAC 357 adopted by the TWDB may result in a changes to these planning guidelines.

Included in this document are sections covering the following tasks as specified in statute and agency rules:

- 1) planning area description [31 TAC §357.7(a)(1)];
- 2) population and water demand projections [31 TAC §357.7(a)(2)];
- 3) water supply analysis [31 TAC §357.7(a)(3)];
- 4) identification, evaluation, and selection of water management strategies based on needs [31 TAC §357.7(a)(5-7)]
- 5) impacts of water management strategies on key water quality parameters of the state [31 TAC §357.7(a)(12)], and impacts of voluntary redistributions of water [31 TAC §357.7(a)(8)(g)];
- 6) consolidated water conservation and drought management strategy recommendations [31 TAC §357.7(a)(11) and 31 TAC 357.7(a)(7)];
- 7) description of how regional water plans are consistent with the long-term protection of the state’s water, agricultural and natural resources [31 TAC §357.7(a)(13) and §357.14(2)(C)];

- 8) unique stream segments, reservoir sites and legislative recommendations [31 TAC §357.7(a)(8-9); 31 TAC §357.8; 31 TAC §357.9];
- 9) reporting of water infrastructure financing mechanisms [31 TAC §357.7(a)(14)];
- 10) adoption of regional water plans and public participation [31 TAC §357.11-12]; and
- 11) data reporting requirements and written reports deliverable to the TWDB [31 TAC §357.7 (10)].

1.0 Planning Area Description

For the third round of planning, Task 1 is a relatively limited effort to update planning area descriptions reported in 2006 regional water plans. Planning groups should document substantial changes in any of the following areas:

- wholesale water providers, current water use, and identified water quality problems;
- sources of groundwater and surface water including major springs that are important for water supplies or natural resource protection;
- socioeconomic aspects including information on population, major water demand centers, agricultural and natural resources, and primary economic activities including businesses highly dependent on water resources;
- assessment of current preparations for drought within a regional water planning area;
- summaries of existing regional water plans, recommendations in state water plans, and local water plans;
- identified threats to agricultural and natural resources resulting from water quantity or quality problems related to water supply; and
- information compiled by the TWDB from water loss audits performed by retail public utilities pursuant to [31 TAC §358.6].

2.0 Population and Water Demand Projections

Population and water demand projections from the 2007 state water plan will serve as estimates for the current round of planning; however, the TWDB will consider requests for changes to population and water demand projections if conditions have changed. Entities wishing to revise projections should address their requests through their respective planning group. If the planning group concurs, it will submit requests to the executive administrator of the TWDB. Requests for revisions should be accompanied by supporting data, analyses and documentation. TWDB staff will coordinate reviews of each request with the Texas Commission on Environmental Quality, the Texas Parks and Wildlife Department, and the Texas Department of Agriculture.

Population Projections

To ensure consistency and to maintain public credibility in population projections, population estimates published by the Texas State Data Center will be the primary source of reference for any revision requests, unless planning groups can provide alternate published sources based on a similarly rigorous methodology. In regions where estimates from the Texas State Data Center show that current population growth on a regional level is falling significantly short of growth projected in the 2007 state water plan, some localized adjustments and redistribution of projected populations may be appropriate, but increases to regional totals may not be justifiable.

Some examples of changes to sub-county populations (i.e., cities, utilities or rural areas) projections that may be justifiable include:

- population estimates of the Texas State Data Center, or other credible sources, are greater than projected populations used in the 2007 state water plan for the year 2010;
- population growth rates for a sub-county area as tabulated by the Texas State Data Center over the most recent five years is substantially greater than growth rates reported by the U.S. Census Bureau between 1990 and 2000;
- cities have annexed additional land since the 2000 Census; or
- water utilities have expanded their service areas since last updated by the Texas Commission on Environmental Quality.

Water Demand Projections

Municipal water demands will be adjusted for water user groups with revised population projections. Similarly, if acceptable data sources indicate that a measured gallons per capita per day from years prior to 2000 is more representative of drought of record conditions, the TWDB will consider formal requests for revisions. Entities may also request changes to water demand projections for other water user groups including irrigation, livestock, and manufacturing assuming they provide verifiable supporting data and documentation to their respective planning group and the TWDB. The TWDB is currently engaged in a study with the Bureau of Economic Geology at the University of Texas at Austin to revise and/or verify steam-electric water demands for each planning region. Results of the study should be available by August of 2008; at which time, the TWDB will disseminate results to each planning group for review and comment.

3.0 Existing Water Supplies

Planning groups will reevaluate “existing” water supplies for entities including water user groups and wholesale water providers as defined in statute and administrative rules [31 TAC §357.3(A)(F)].¹ An existing water supply is the volume of water available to water user groups

¹ In addition to material regarding water supplies in this document, planning groups should refer to the TWDB’s “*Guidelines for Regional Water Planning Data Deliverables*” for additional information for estimating existing water supplies.

and wholesale water providers under drought of record conditions taking into account any physical constraints such as transmission or treatment facilities that would limit supplies *and* any legal or policy constraints. An existing supply must be connected meaning that it currently has infrastructure for conveying water to water users, or it is anticipated that it will be accessible and connected by the conclusion of the current planning cycle. An example of supplies that are "non-connected" would include lakes without connecting pipelines. Evaluations should consider surface water and groundwater data from the 2007 state water plan and 2006 regional water plans, data regarding existing water rights, contracts and option agreements, and/or other planning and water supply studies. Water supplies from contracted agreements should be based on the terms of a contract, which may be assumed to renew upon a contract's termination date if contract holders contemplate renewals or extensions. The amount of water available from existing supplies in future decades assumes that current infrastructure for existing water supplies does not change through time. In addition to reporting existing water supply volumes, planning groups must also identify all water sources in a planning region even if such sources are not connected, but are potentially available for use in the future (see the "*Guidelines for Regional Water Planning Data Deliverables*" for further information).

The current infrastructure associated with existing supplies - excluding internal water distribution systems – should be researched to determine how much water a system can transport, pump, and distribute.

Source for existing water supplies may include surface waters such as reservoirs and rivers, groundwater, water reuse, and/or a system of several different sources.

3.1 Surface Water

Planning groups should analyze existing surface water supplies based on firm yield for both reservoirs and surface water diversions. For reservoirs, firm yield is the maximum amount of water a reservoir can provide in a given year during drought of record conditions using reasonable sedimentation rates, and under the assumption that senior water rights holders have their full allotments of water. Planning groups may analyze existing water supplies from reservoirs on operational procedures other than firm yield and may use other methods of determining existing supplies in addition to firm yield with written approval from the TWDB's executive administrator; however, *existing water supply data submitted to the TWDB for incorporation into the state water plan must include firm yield*. Unless the TWDB's executive administrator has approved other models, planning groups should use "Run 3" of Water Availability Models maintained by the Texas Commission on Environmental Quality to estimate firm yields for surface water supplies. The TWDB's executive administrator must approve any modifications to data files used in Water Availability Models for permitted return flows and changed conditions.

When using Water Availability Models for firm yield analyses, the TWDB recommends using an "adding-in" approach where each water right is added into the model one by one beginning with the most senior right. After a water right is added into the model, simulated water supply shortages are evaluated. If a supply shortage exists, the diversion amount of the newly added water right should be reduced until the supply shortage disappears. The next right is added in only when all senior rights have their maximum diversions without supply shortages (capped by their permitted amounts). The process terminates when no further diversions can be added in. If all water rights have been fully satisfied and a given reservoir still has surplus supply, a hypothetical junior water right should be added, using a uniform monthly distribution that reduces

the supply source to zero. The firm yield is the sum of model specified diversions, including extended diversions, of added-in water rights. If applicable, environmental flow requirements including bay and estuary and instream flow requirements should be fully satisfied when modeling add-in water rights.

When simulating firm yields for reservoirs, the following criteria must be met if applicable:

1. inflows to reservoirs are the remainder of naturalized stream flows after upstream senior water rights are met;
2. downstream senior water rights must be met; however, this does not require releases of water from a reservoir unless specifically stated in existing water rights;
3. bay, estuary and instream flow requirements should be fully satisfied if permits authorizing a reservoir include such requirements, or if a simulation is for a new water right or proposed diversion;
4. minimum allowable reservoir levels are the top of dead storage;
5. maximum allowable reservoir levels are the top of water supply storage volume for reservoirs with existing water rights, and special conditions of water rights should be honored (this may result in a different minimum and/or maximum allowable reservoir levels);
6. evaporative losses are based on evaporation rate data that best coincide with the period of record and time steps for inflows;
7. annual water supply demands are constant values in all years, and the distribution of annual demands within a given year are constant in all years and should consider different types of water use expected; and
8. time steps should not exceed one month.

Planning groups may modify input data sets for Water Availability Models to reflect return flows specified in water rights permits and other changed conditions; however, planning groups must provide documentation to the TWDB justifying such changes.

For surface water diversions, planning groups should use “firm diversions,” which are the maximum annual diversions in a given year assuming drought of record conditions using reasonable diversion distribution patterns and assuming that senior water rights are met. These amounts should not exceed the infrastructure’s diversion capacity and permit amounts. As is the case with reservoirs, planning groups should use Water Availability Models (Run 3) for surface water diversions unless the TWDB approves other methods. In addition, the TWDB suggests using the same “adding in” approach for water rights. Firm diversions are the sum of model specified diversions, including extended diversions, of all added-in water rights. Parameters of Water Availability Models should not be altered, and environmental flow requirements, if applicable, should be fully satisfied when modeling hypothetical added-in water rights.

If relevant, when simulating firm diversions the following criteria must be met:

1. inflows to diversion sites are the remainder of naturalized stream flows assuming upstream and downstream senior water rights are met (during times of drought it is possible that senior water rights will be withdrawn to legal limits either for use, sale and/or transfer; nevertheless, if planning groups can provide documentation to the TWDB showing a lower demand than legal maximums, they can modify inputs accordingly);
2. bay and estuary and instream flow requirements should be fully satisfied if permits authorizing diversions include such requirements, or if a simulation is for a new water right or proposed diversion;
3. annual diversion amounts are constant values in all years, and the distribution of diversions within a given year are constant and consider different types of water use expected; and
4. time steps should not exceed one month.

For run-of-the-river diversions, drought periods begin with unappropriated flows in rivers declining significantly from their normal levels, or above and before their full recovery to normal levels or greater. The drought of record is a period that includes record minimum river channel unappropriated monthly flow rates and begins and ends with unappropriated flows at or above normal levels.

For surface waters bordering neighboring states or countries, planning groups should analyze and report available water supplies taking into account existing legal agreements; and for surface water withdrawals that do not require permits, such as domestic and livestock uses, estimate water available under drought of record conditions based on available information.

Each planning group should also provide both a list of water rights associated with existing surface water supplies and the association between these water rights, the sources and the water user groups, and in what amounts. All water used by a water user group must be attributed to one or more existing water supplies and all surface water supplies must be associated with applicable water rights. When water rights are consolidated into one existing surface water supply per basin, a water right included in the consolidation should not also be listed as a right for another existing water supply source. Water rights cannot be counted more than once as a source for an existing supply.

Existing supplies from run-of-river diversions are based on the diversion point or on an aggregate of diversions. List the county-basin of the source diversion point. Run-of-river diversions can be aggregated into a combined run-of-river diversion source type if the aggregated water rights are individually less than 10,000 acre feet for irrigation or individually less than 1,000 acre feet for other use categories. Do not list water rights within aggregated run-of-river diversion source types individually. List run-of-river diversions as individual water rights for irrigation permits equal to or greater than 10,000 acre feet. For all other water uses list the individual water rights if the permit is equal to or greater than 1,000 acre feet. All other run-of-river diversions may be listed as individual water rights.

For unpermitted supplies, list the source as the sum of unpermitted surface water in the county-basin. Unpermitted supplies may be listed individually as well.

3.2 Groundwater

For groundwater supplies, planning groups should calculate the greatest annual amount of water available from an aquifer without violating the most restrictive physical and/or regulatory conditions limiting withdrawals under drought-of-record conditions. Regulatory conditions refer to limits on water withdrawals imposed by groundwater conservation districts. When estimating groundwater supplies, planning groups should use TWDB Groundwater Availability Models if available unless better site specific information is accessible. As is the case with surface water supplies, planning groups should document and justify other methods used. If groundwater districts within a groundwater management area have determined the desired future condition for their aquifers, and the TWDB has translated desired future conditions into an estimated managed available groundwater as of January, 1st 2008; then planning groups must use these estimates as the basis for existing groundwater supplies.

3.3 Systems

Water supplies can be categorized as systems if they meet one or more of the following criteria: 1) a source includes groundwater and surface water; 2) several reservoirs operate together, but supplies from a specific reservoir cannot be tracked directly to an end user; and/or 3) two or more reservoirs operate as a system resulting in a system gain in firm yield. System gain is the amount of water a system creates that would otherwise be unavailable if the reservoirs were operated independently. For multi-reservoir systems, the minimum system gain during drought-of-record conditions can be considered additional water available. Total existing water from a system should not exceed the sum of the firm yields of individual reservoirs in a system. Planning groups must adequately describe methods used to calculate system gains. Where special conditions exist, such as in the Rio Grande Project, planning groups may base existing water supplies on operational procedures rather than firm yield. Planning groups must adequately describe special conditions other than the Rio Grande Project in submitted scopes of work. For interstate and international reservoirs, planning groups should report water amounts available to Texas according to existing legal agreements.

3.4 Reuse

Planning groups will quantify existing water supplies from reuse as either direct or indirect. Indirect reuse is process water that reenters rivers or stream systems and is diverted and used again downstream. For indirect reuse, planning groups will use currently permitted reuse projects with infrastructure in place needed to divert and use water in accordance with permits issued by the Texas Commission on Environmental Quality. Potential sources for indirect reuse in the future will require new permits and additional infrastructure. As such, planning groups should consider these as water management strategies, and should explain methods used to estimate the amount of water that such strategies would generate in the future. Direct reuse is process water recirculated within a given system. For direct reuse, planning groups should use the amount of water from direct reuse sources that they expect will be available during drought of record conditions from currently installed wastewater reclamation infrastructure. These amounts should not exceed the amounts of water available to utilities generating the wastewater. Planning groups should treat potential future sources of direct reuse as water management strategies, and should

provide adequate justification to explain methods for estimating the amount of reused water available from such sources.

4.0 Water Management Strategies

Planning groups will reevaluate water management strategies identified in 2006 regional water plans for each water user group and wholesale water provider as defined in statute and administrative rules where future water supply needs exist [31 TAC §357.5-6]. A need for water is present when existing water supplies are less than projected water demands. In addition, each group may recommend new management strategies due to changed physical or socioeconomic conditions. Existing water rights, water contracts, and option agreements should be protected, although amendments to these may be recommended realizing that consent of owners would be needed for implementation. Planning groups will reevaluate and/or evaluate new and existing water management strategies based on criteria specified in [31 TAC §357.7.7-9, 12] including water quantities generated by strategies, the reliability of strategies, financial costs, and environmental impacts. For all strategies identified in 2006 regional water plans, planning groups must update financial costs. For remaining criteria, each planning group will determine if physical and/or socioeconomic conditions have changed enough to warrant a reassessment. For any new strategy recommended, all evaluation criteria must be met.

4.1 Quantity, Reliability and Financial Costs

4.1.1 Quantity and Reliability

Water quantities produced by recommended surface water management strategies will be based on firm yield as defined in Section 3.1; and water quantities generated by groundwater should be based on groundwater availability as defined in Section 3.2.

4.1.2 Financial Costs

Cost evaluations for new and existing water management strategies will include capital costs, debt service, and annual operating and maintenance expenses over the planning horizon. Reported costs will only include expenses associated with infrastructure needed to convey water from sources and treat water for end user requirements; however, reported costs should not include expenses associated with internal distribution networks outside of treatment plants and major transmission facilities. Planning groups must report capital costs and average annual operation and maintenance costs as separate items in the Regional Water Planning Data Web Interface (see the TWDB's "*Guidelines for Regional Water Planning Data Deliverables*" for further information).

Capital Costs

Capital costs consist of construction funds and other capital outlays including, but not limited to, costs for engineering, contingencies, financial, legal, administration, environmental permitting and mitigation, land, and interest during construction. Construction costs, if applicable, should include expenses for the following types of infrastructure:

- pump stations,
- pipelines,
- water intakes,
- water treatment and storage facilities,
- well fields;
- relocation of existing infrastructure such as roads and utilities; and
- any other significant construction costs identified by each planning group.

Interest during construction is based on total project costs drawn down at a constant rate per month during a construction period. Interest is the total interest accrued at the end of a construction period using a 6.0 percent annual interest rate less a 4.0 percent rate of return on investment of unspent funds. Each planning group should adjust construction cost estimates for existing water management strategies based on the most recent price indices for commodities such as cement and steel as reported in the “*Engineering News Record (ENR) Construction Cost Index.*”

If applicable, other capital costs include:

- engineering and feasibility studies including those for permitting and mitigation, legal assistance, financing, bond counsel, and contingencies (engineering, contingencies, financial and legal services should be lumped together and estimated as 30 percent of total construction costs for pipeline projects and 35 percent for other facilities unless more detailed project and/or site specific information is available);
- land and easements costs (easement costs for pipelines should include a permanent easement plus a temporary construction easement as well as rights to enter easements for maintenance); and
- purchases of water rights.

Debt Service

For water management strategies other than reservoirs the length of debt service is 20 years unless otherwise justified. For reservoirs, the period is 40 years. Level debt service applies to all projects, and the annual interest rate for project financing is 6.0 percent. Terms of debt service will be reported in the TWDB’s Regional Water Planning Data Interface.

Annual Operating and Maintenance Costs

Operations and maintenance costs should be based on the quantity of water supplied. Unless project specific data are accessible, planning groups will calculate annual operating and maintenance costs as 1.0 percent of total estimated construction cost for pipelines, 2.5 percent of estimated construction costs for pump stations, and 1.5 percent of estimated construction costs for dams. Costs include labor and materials required to maintain projects such as regular repair and/or replacement of equipment. Power costs are calculated on an annual basis using calculated horsepower input and a power purchase cost of \$0.09 per kilowatt hour; however, each planning group may adjust this figure based on local and regional conditions if they specify and document their reasons. Planning groups should include costs of water if water management strategies involve purchases of raw or treated water on an annual basis (e.g. leases of water rights).

4.2 Environmental Impacts

Planning groups will evaluate and provide a quantitative reporting of how water management strategies could affect environmental and cultural resources including impacts to environmental water needs, wildlife habitats, cultural resources, and the effects of upstream development on the bays, estuaries, and arms of the Gulf of Mexico. Planning groups are free to develop and document an overall methodology for evaluating impacts; however, for environmental flows, planning groups should use site specific studies when available. If such studies are not available, then planning groups should use the 1997 “*Consensus Criteria for Environmental Flow Needs*” for strategies involving surface water development and those requiring permits from the Texas Commission on Environmental Quality. These criteria were developed through extensive collaboration among scientists and engineers from the state’s natural resource agencies including the TWDB, the Texas Parks and Wildlife Department, and the Texas Commission on Environmental Quality, as well as academic professionals, engineering consultants, and informed members of the public. More specifically, the criteria are multi-stage rules for environmentally safe operation of impoundments and diversions during above normal flow conditions, below normal flow conditions, and during drought of record conditions. Documentation describing the methodology and its application is available at the TWDB’s website: <http://www.twdb.state.tx.us/RWPG/twdb-docs/env-criteria.htm>.

4.3 Alternative Water Management Strategies

A list of recommended alternative water management strategies will be included in regional water plans along with each strategy’s name, an expected implementation date, water amounts generated by each strategy on decadal basis and capital costs need to implement the given strategy. All alternative water management strategies must be evaluated based on criteria specified in [31 TAC §357.7, 9, 12].

Planning groups may substitute an evaluated alternative water management strategy for a strategy previously recommended, if the previously recommended strategy is no longer feasible. Proposed alternatives should not result in water supplies that exceed 125 percent of identified water needs for a given water user group for which an alternative is recommended taking into account other strategies already recommended for the same water user group. Planning groups must submit proposed alternative strategies to the TWDB for approval by the executive administrator. If a planning group can demonstrate that there is good cause for a requested alternative to exceed the 125 percent limit, then the executive administrator may issue a written waiver.

5.0 Impacts of Water Management Strategies on Key Water Quality Parameters in the State and Impacts of Moving Water from Agricultural and Rural Areas

Each planning group must describe how implementing recommended and alternative water management strategies could affect water quality in Texas. Planning groups should base water quality impacts on parameters important to water uses in each region. Planning groups will also discuss how water management strategies could affect: 1) agricultural resources including

analyses of third-party impacts of moving water from rural and agricultural areas; 2) water resources of the state including ground and surface water interrelationships; and 3) other factors deemed relevant by planning groups such as recreational impacts. Furthermore, planning groups should consider statutory provisions regarding interbasin transfers of surface water [(TWC §11.085(k)(1)]. At minimum, considerations should include a summation of water needs in basins of origin and receiving basins based on water needs in approved regional plans.

6.0 Water Conservation and Drought Management Recommendations

When evaluating and recommending water management strategies, each planning group will consider “active” water conservation as potentially feasible water management strategies for water user groups for which [TWC §11.127] applies and must consider active water conservation strategies for water user groups with needs. Active water conservation strategies are those that conserve water over and beyond what would happen anyway as result of “passive” water conservation measures that stem from federal and state legislation requiring more efficient plumbing fixtures in new building construction. If a planning group does not adopt active water conservation strategies to meet needs, they must document their reasons. In addition, planning groups should include active water conservation strategies for water user groups or wholesale water providers that will obtain water from new interbasin transfers.

Planning groups must also consider drought management strategies for identified water needs, and whenever applicable, drought management strategies should be consistent with guidance provided by the Texas Commission on Environmental Quality [TWC §11.1272]. Drought management strategies decrease short-term peak water requirements. Strategies for drought management are similar to those for water conservation, although there are some basic differences. For example, water conservation and drought management strategies differ in their longevity. Water conservation strategies are generally implemented on a permanent basis, whereas drought management practices are implemented during times of severe drought or other emergencies that can limit water supplies. If a planning group does not select drought management as a water management strategy, they must document the reason.

7.0 Descriptions of how Regional Water Plans are Consistent with the Long-term Protection of the State's Water, Agricultural and Natural Resources

Planning groups should describe how regional water plans are consistent with the long-term protection of Texas' water, agricultural and natural resources including the requirement that planning analyses and recommendations honor all existing water rights and contracts. Although much of the analysis pertaining to this requirement will be developed for other tasks including tasks associated with estimating the environmental and water quality impacts of water management strategies, planning groups are encouraged to identify the specific resources important to their planning areas and describe how these resources are protected through the regional water planning process.

8.0 Unique Stream Segments and Reservoir Sites and Other Legislative Recommendations

8.1 Unique Stream Segments

Planning groups may recommend all or parts of river and stream segments in their respective regions as having "unique ecological values." To recommend a designation, planning groups must justify it based on the following criteria:

- biological function measured as stream segments displaying significant habitat value including both quantity and quality considering degrees of biodiversity, age, and uniqueness including terrestrial, wetland, aquatic, or estuarine habitats;
- hydrologic function measured as stream segments fringed by habitats that perform valuable hydrologic functions relating to water quality, flood attenuation, flow stabilization, or groundwater recharge and discharge;
- riparian conservation areas measured as stream segments fringed by significant areas in public ownership including state and federal refuges, wildlife management areas, preserves, parks, mitigation areas, or other areas held by governmental organizations for conservation purposes, or stream segments fringed by other areas managed for conservation purposes under governmentally approved conservation plans;
- high water quality, exceptional aquatic life, high aesthetic value and spring resources that are significant due to unique or critical habitats and exceptional aquatic life uses dependent on or associated with high water quality; or
- threatened or endangered species and unique communities defined as sites along streams where water development projects would have significant detrimental effects on state or federally listed threatened and endangered species, and sites along streams significant due to the presence of unique, exemplary, or unusually extensive natural communities.

Planning groups seeking a designation should forward a recommendation package to the Texas Parks and Wildlife Department, who will in turn provide a written evaluation of the

proposal within 30 days. Packages should contain a description of a site's location along with maps, photographs, and documentation with supporting literature and data that characterizes a site's unique ecological value. Adopted regional water plans should include, if available, the Texas Parks and Wildlife Department's written evaluation.

If the Texas Legislature designates a stream or river segment as unique; or if a planning group recommends that a stream or river segment be classified as unique, each planning group must quantitatively assess how recommended water management strategies in a regional plan would affect flows deemed important (by planning groups) to the stream or river segment in question. Furthermore, assessments should describe how a regional plan would affect the unique features cited by a region as the impetus for a legislative designation.

8.2 Unique Reservoir Sites

Planning groups may recommend sites for reservoir construction that have "unique value" by including a description of the site, reasons for the unique designation and expected beneficiaries of water supplies developed at a given site. The following criteria should be used to determine if a site is unique:

- site specific reservoir development is recommended as a specific water management strategy or as an alternative long-term scenario in an adopted regional water plan; or
- factors such as location, hydrologic, geologic, topographic, water availability, water quality, environmental, cultural, and current development characteristics make a site uniquely suited for either reservoir development to provide water supply for the current planning period; or where it might reasonably be needed to meet water needs beyond the 50-year planning period.

8.3 Other Legislative Recommendations

Planning groups may compile regulatory, administrative, or legislative recommendations that will facilitate the orderly development, management, and conservation of water resources in Texas, and will help the state prepare for and respond to droughts. In addition, they may develop information regarding the potential impacts of recommendations enacted into law once proposed changes are in effect.

9.0 Reporting of Financing Mechanisms for Water Management Strategies

Planning groups will assess how local governments, regional authorities, and other political subdivisions would finance the implementation of water management strategies via a formal survey administered by the TWDB and executed by each planning group. The TWDB will develop a survey instrument and methodology. Each planning group will conduct a survey and report findings to the TWDB. The TWDB will provide additional instructions and documentation describing the survey methodology and formats for reporting resultant data.

10) Adoption of Plan and Public Participation

Planning groups will adopt regional plans and allow for public participation in the plan adoption process in accordance with administrative rules and statute and allow for public participation.

11.0 Deliverables

11.1 Written Reports

Planning groups will update the contents of 2006 regional water plans with new information and analyses conducted as part of the current planning cycle. As was the case for the last planning cycle, initially prepared and adopted regional water plans or amendments to approved regional water plans should include a technical report containing chapters describing each task summarized in this document; and an executive summary documenting key findings and recommendations that does not exceed 30 pages. Appendices deemed appropriate by planning groups may also be included.

In addition, each regional water plan must include in its chapter describing water management strategies (Task 4) a list of all potentially feasible water management strategies, and all recommended water management strategies including their names, implementation dates, water amounts by decade, and capital costs. Similarly, each regional water plan must report in the same chapter all alternative water management strategies (as described in Section 4.5 of this document) considered for substitution listing the same criteria. Other documentation should include: 1) model water conservation plans pursuant to [TWC §11.1271]; 2) model drought contingency plans pursuant to [TWC §11.1272]; and 3) summaries of written and oral comments from the public during the plan adoption process with responses by planning groups explaining how plans were revised or why changes were not warranted.

11.2 Regional Water Planning Data Reporting

Planning groups must submit data generated or updated during the current round of planning to the TWDB in accordance with TWDB specifications *prior to* submitting initially prepared regional water plans. Data must be entered through the TWDB's Regional Water Planning Data Web Interface at <http://www.twdb.state.tx.us/apps/db12>. Specifications regarding data requirements, format, calculation and composition are available on the TWDB's website.