Texas Water Development Board

City of Brady

CWSRF GREEN PROJECT RESERVE BUSINESS CASE EVALUATION

STATE FISCAL YEAR 2012 INTENDED USE PLAN

PROJECT NUMBER 73638

COMMITMENT DATE: July 19, 2012

DATE OF LOAN CLOSING: November 9, 2012

GREEN ESTIMATE AT CLOSING: $846,597

Subsidy awarded for Green components, (if any) $126,990

Texas Water Development Board

P.O. Box 13231, 1700 N. Congress Ave.
Austin, TX 78711-3231, www.twdb.state.tx.us
Phone (512) 463-7847, Fax (512) 475-2053

January 3, 2012

Mr. James Minor
City of Brady
P.O. Box 351
Brady, Texas 76825

Re: **State Fiscal Year 2012 Clean Water State Revolving Fund**
Green Project Eligibility

Dear Mr. Minor:

The Texas Water Development Board (TWDB) received Green Project Information Worksheets from the City of Brady (City) for project #9168 in response to a request letter dated August 24, 2011. The letter states that the City is eligible for loan forgiveness in an amount up to 15% of the green component cost if it can demonstrate that the project has green costs that are greater than or equal to 30% of the total project cost. After reviewing the worksheets, TWDB staff determined the City does meet the 30% green cost threshold based on the following:

- The City's Green Project Information Worksheets dated November 11, 2011 requested the planning and design for the reuse of effluent from two wastewater treatment plants be considered eligible for the Clean Water State Revolving Fund (CWSRF) Green Project Reserve (GPR) under the water efficiency category in the amount of $380,000. Additionally, the City requested GPR eligibility under the environmentally innovative category in the amount of $639,600. The total anticipated requested funding amount is $3,398,967.
- The proposed project consists of the construction of two wastewater treatment plants, a new collection system, pump stations, and an effluent reuse line.
- The Environmental Protection Agency's (EPA's) *Green Project Reserve Guidance for Determining Project Eligibility* (TWDB-0161) lists recycling and water reuse projects such as reuse distribution systems that replace potable sources with non-potable sources as categorically eligible for the GPR (Part A, 2.2-6).
- Information presented for the environmentally innovative category includes planning for the sustainability of the City's raw water supply through the use of effluent from the wastewater treatment plants and the planning and design of LEED certifiable buildings at each of the two proposed wastewater treatment plants.

- The EPA's *Green Project Reserve Guidance for Determining Project Eligibility* (TWDB-0161) lists planning activities by a POTW to prepare for adaption to the long-term effects of climate change and/or extreme weather recycling and construction of US Building Council LEED certified buildings or renovation of an existing building on POTW facilities as categorically eligible for the GPR (Part A, 4.2-4 and 4.2-5, respectively).
- Therefore, $1,094,253 of the City of Brady's planning and design project is considered categorically eligible for the CWSRF GPR. This amount includes a proportionate share of the project's financing costs in addition to the requested planning and design amounts.
- Please note that the City's application for financial assistance must be consistent with the project scope presented on the Green Project Information Worksheets dated November 11, 2011. Inclusion of the green elements within the project will be verified prior to Board commitment.

For SFY 2012, the TWDB is required by federal law to allocate no less than 20% of the capitalization grant toward green component costs (also referred to as the Green Project Reserve). Therefore, the TWDB gives first preference for invitations to entities that have a documented percentage of green component cost of at least 30% of the total project cost. The City has demonstrated that it meets/exceeds the 30% green cost threshold. A letter dated October 14, 2011 was sent inviting the City to apply for Mainstream-Tier II funding.

If you have any questions regarding green project eligibility, please feel free to contact John Muras, Project Engineer, by phone at 512-463-1706 or by email at john.muras@twdb.state.tx.us.

The TWDB appreciates the City's interest in the CWSRF program.

Sincerely,

Stacy L. Barna
Director of Program Development
Program & Policy Development

SB:rf

Attachments: 1. Green Project Information Worksheets, Approved
2. Green Project Cost Summary

TEXAS WATER DEVELOPMENT BOARD

Green Project Reserve

Green Project Information Worksheets

Clean Water State Revolving Plan

Intended Use Plan

The Federal Appropriation Law for the current fiscal year Clean Water and Drinking Water State Revolving Fund programs contains the Green Project Reserve (GPR) requirement. The following Green Project Information Worksheets have been developed to assist TWDB Staff in verifying eligibility of potential GPR projects.

TWDB-0162
Revised 12/2/2010

TEXAS WATER DEVELOPMENT BOARD
CLEAN WATER STATE REVOLVING FUND (CWSRF)
GREEN PROJECT INFORMATION WORKSHEETS

PART I - GREEN PROJECT INFORMATION

Check all that apply and complete applicable worksheets:

Categorically Eligible

- ☐ Green Infrastructure $ _____
- ☒ Water Efficiency $ 380,000
- ☐ Energy Efficiency $ _____
- ☒ Environmentally Innovative $639,690

Business Case Eligible

- ☐ Green Infrastructure $ _____
- ☐ Water Efficiency $ _____
- ☐ Energy Efficiency $ _____
- ☐ Environmentally Innovative $ _____

Total Requested Green Amount $1,109,690 ($1,019,690 - Number transposed)

Total Requested Funding Amount $ 3,398,967

Type of Funding Requested:

- ☒ PAD (Planning, Acquisition, Design)
- ☐ C (Construction)

Completed by:

Name: Deana Sealy Title: Project Engineer

Signature: [signature] Date: 11/11/11

City of Brady
PIF# 9168
WWTP's and Collection System
Green Project PAD Budget

CATEGORY	GREEN ELEMENTS	NON-GREEN ELEMENTS	TOTAL
PAD PROJECT COSTS			
Reuse line & pump stations for golf course reuse	$ 380,000		$ 380,000
WWTP's and planning to address climate change	$ 425,000	$ 853,808	$ 1,278,808
LEED Building Planning & Design	$ 214,690		$ 214,690
Lake Area Collection System		$ 569,206	$ 569,206
Effluent Discharge Line to Brady Lake		$ 454,716	$ 454,716
Environmental, Surveying, Geotechnical, & Permitting		$ 269,940	$ 269,940
SUBTOTAL	**$ 1,019,690**	**$ 2,147,670**	**$ 3,167,360**
OTHER PROJECT COSTS	**Attributable to Green Elements**	**Non attributable to Green Elements**	
Fiscal Services	$ 54,687	$ 115,181	$ 169,868
SUBTOTAL PROJECT COSTS			**$ 3,337,228**
Loan Origination Fee (1.85%)	$ 19,876	$ 41,863	$ 61,739
TOTAL PROJECT COSTS			**$ 3,398,967**
Total Green Element Cost	$ 1,019,690		
Attributable Green Element Cost	$ 74,563		
GREEN PROJECT RESERVE AMOUNT	**$ 1,094,253**		

Project Budget Prepared by:
Sealy Engineering, Inc.
F-6119
12318 Treadwell Lane
Fort McKavett, TX 76841
(325) 656-3452

TEXAS WATER DEVELOPMENT BOARD
CLEAN WATER STATE REVOLVING FUND (CWSRF)
GREEN PROJECT INFORMATION WORKSHEETS

PART I – GREEN PROJECT INFORMATION SUMMARY

Check all that apply and complete applicable worksheets:

Categorically Eligible

- ☐ Green Infrastructure $ _____
- ☒ Water Efficiency $ 380,000
- ☐ Energy Efficiency $ _____
- ☒ Environmentally Innovative $639,690

Business Case Eligible

- ☐ Green Infrastructure $ _____
- ☐ Water Efficiency $ _____
- ☐ Energy Efficiency $ _____
- ☐ Environmentally Innovative $ _____

Total Requested Green Amount $1,019,690

Total Requested Funding Amount $ 3,398,967

Type of Funding Requested:

- ☒ PAD (Planning, Acquisition, Design)
- ☐ C (Construction)

Completed by:

Name: Deana Sealy Title: Project Engineer

Signature: _____ Date: 11/11/11

TEXAS WATER DEVELOPMENT BOARD
CLEAN WATER STATE REVOLVING FUND (CWSRF)
GREEN PROJECT INFORMATION WORKSHEETS

PART II - CATEGORICALLY ELIGIBLE

Complete this worksheet for projects being considered for the Green Project Reserve (GPR) as categorically eligible. Categorically eligible projects or project components are described in the following sections of the EPA GPR guidance (TWDB-0161):

Green Infrastructure	Part A, Section 1.2
Water Efficiency	Part A, Section 2.2
Energy Efficiency	Part A, Section 3.2
Environmentally Innovative	Part A, Section 4.2

Information provided on this worksheet should be of sufficient detail and should clearly demonstrate that the proposed improvements are consistent with EPA and TWDB GPR guidance for categorically eligible projects. Refer to **Information on Completing Worksheets** for additional information.

Section 1 – General Project Information

Applicant: City of Brady PIF #: 9168

Project Name: Brady Wastewater Treatment Plants

Contact Name: James Minor

Contact Phone and e-mail: (325)597-2152 bradyco@bradytx.us

Total Project Cost: 3,398,967 Green Amount: 1,019,690
(Categorically Eligible)

Brief Overall Project Description:
This project will be for the planning and design of a collection system and WWTP for the residents of the Brady Lake area and will also include a new WWTP for the City to replace the current plant. The City of Brady pumps its drinking water from Brady Lake. The City of Brady currently is operating with a very old and unreliable wastewater treatment plant which discharges its effluent downstream of Brady Lake into Brady Creek. The residents of the Brady Lake area are currently on septic sytems which are leaching into the Lake. This leads to low quality raw water. A collection system will be designed for the Lake area residents along with a small WWTP for that area. The effluent from the large WWTP will be used as irrigation water for the golf course and the remainder will be discharged upstream into the lake, along with the effluent from the small WWTP at the Lake, instead of being discharged into Brady Creek. This will improve the raw water quality for the City of Brady as well as provide for source water protection, by reusing the water from the WWTP as drinking water. Brady will be able to provide sustainablity for their drinking water. The reuse of the water will also improve the quality of the ecosystem in the Lake and will in time improve the habitat quality of the lake. The project will also include completion of an asset management plan.

Section 3 – Water Efficiency

Certain water efficiency improvements may be considered categorically eligible for the GPR. Refer to EPA and TWDB GPR guidance for a complete list and description of categorically eligible GPR Projects. One such common type of water efficiency project is effluent reuse to replace potable water use. For this type of project, complete section 3.1 below. For any other water efficiency projects being considered for categorical eligibility, complete Section 3.2.

Section 3.1 – Wastewater Effluent Reuse

Briefly describe existing wastewater treatment and disposal system: The City of Brady currently has a WWTP that discharges effluent (approximately 500,000 gpd) into Brady Creek, downstream from Brady Lake. The Brady Lake residents are all on individual septic systems, many of which are leaching into the Lake. The City currently pumps its raw drinking water from the Lake. Drought conditions have led to historic low levels of water in the Lake.

Provide a detailed description of proposed effluent reuse facilities including all additional treatment and distribution improvements. Individually list, describe and provide costs for components such as treatment units, pumping facilities and distribution lines. Description should identify reuse users and quantify potable water saved (attach additional pages if necessary): The new large WWTP for the City of Brady will pump its effluent to Brady Lake. The Brady Golf Course is in between the WWTP and the lake. The Brady Golf Course currently uses 100% potable water for their irrigation purposes. The pipeline and pump stations to deliver the effluent from the large WWTP, upstream to the golf course will be approximately $1,900,000, which includes force main at $60/lf with an estimated 19,000 feet and three pump stations at an estimated cost of $250,000 each. The reuse user will be the Brady Golf Course. Planning and design cost associated with this reuse project is approximately 20% or $380,000. This reuse line will save approximately 28,000,000 gallons of water per year.

Green amount associated with effluent reuse (categorically eligible): $380,000

Section 5 – Environmentally Innovative

Certain environmentally innovative improvements may be considered categorically eligible for the GPR. Refer to EPA and TWDB GPR guidance for a complete list and description of categorically eligible GPR Projects.

Provide reference to applicable EPA GPR guidance (TWDB-0161) sections that demonstrates GPR eligibility and provide a detailed description of the proposed environmentally innovative project or project components.

Guidance Reference:
EPA GPR guidance (TWDB-0161) Part A, Section 4.2.4 Planning activities by a POTW to prepare for adaptation to the long-term effects of climate change and/or extreme weather
EPA GPR guidance (TWDB-0161) Part A, Section 4.2.5 Construction of US Building Council LEED certified buildings or renovation of an existing building on POTW facilities

Detailed Description (attach additional pages if necessary):
Planning activities by the City of Brady to prepare for the long-term effects of climate change will be utilized in this project. The City of Brady currently relies on water from Brady Lake to supply a large portion of the drinking water for the City. According to the NOAA National Weather Service, 2010 was a record breaking year with June 2010 being one of the hottest months on record. The entire year of 2011 brought more record breaking temperatures and lowest totals of precipitation. The summer months of June, July and August 2011 set records for being the hottest and driest on record. NOAA also reports above normal temperatures for every month since March 2010. With this climate change, the amount of surface water available for use by the City of Brady has severely decreased. Currently the City of Brady's effluent is being discharged into Brady Creek downstream of Brady Lake. All residents of the Brady Lake area are water users from the City of Brady, but are all on septic tanks that are leaching into the lake and reducing the raw water quality of the lake. Planning for the recycling of water from the City of Brady's waste water treatment plant, recapturing water used by residents of the lake area and increasing the sustainability and raw water quality of the lake are needed steps planned by the City of Brady to prepare for the long term effects of climate change. Planning activities will be approximately $ 425,000.
Buildings will be to house pumps, operations, maintenance, control and laboratory facilities for the waste water treatment plants. Pump station buildings will be approximately 600 square feet, operation and maintenance building at the lake will be approximately 800 square feet and operations, maintenance, and lab building at large WWTP will be approximately 2000 square feet.
All buildings designed for this project will be US Building Council LEED certified buildings. Water and energy efficient appliances and fixtures will be used. Site placement will be in a previously disturbed area and landscaping will be water efficient. The total cost of these buildings is approximately $750,000. The planning and design cost associated with the LEED certified building is approximately $214,690.

Green amount associated with environmentally innovative: $639,690
(Attach detailed cost estimate if necessary)

GREEN PROJECT COST SUMMARY

PIF # 9168
Entity: Brady
Project Name: 2 WWTP's and Collection system
Project Description: Proposed new WWTP for the City of Brady; proposed first time WWTP and collection for the Brady Lake community; piping effluent to lake to replenish supply of raw water for the water treatment plant.

Green Description: LEED certificable operation, control, and maintenance buildings
Planning and design for two new WWTP's using their discharge to address unusual weather and climate change
Pumping and piping effluent to golf course to replace potable water with reuse for irrigation
Phases to be Funded: Planning, Acquisition, and Design

PART I

Planning, Acquisition, Design and Related Project Costs	Green Elements	Non-Green Elements	Total
1. P, A, D			
a) Reuse line & Pump stations to irrigate golf course	$ 380,000	$ -	$ 380,000
b) WWTP's and planning to address severe weather and climate change	$ 425,000	$ 853,808	$ 1,278,808
c) LEED Building Planning and Design	$ 214,690		$ 214,690
d) Lakeside collection system	$ -	$ 569,206	$ 569,206
e) Effluent line to Brady Lake	$ -	$ 454,716	$ 454,716
f)	$ -		$ -
2. Other Project Costs if Applicable (Land, easements, equipment, etc.)			
a) Environmental, surveying, geotechnical, permitting	$ -	$ 269,940	$ 269,940
3. Engineering (included in P,A, D costs)			$ -
Total	**$ 1,019,690**	**$ 2,147,670**	**$ 3,167,360**

32% Project Elements Considered Green

PART II

Other Project Costs	Item Cost	Attributable to Green Elements
1. Fiscal Services		
a) Financial Advisor	$ 169,868	$ 54,687
b) Bond Counsel	$ -	$ -
c) Issuance Costs		$ -
d) Bond Insurance / Surety	$ -	$ -
e) Bond Reserve Fund	$ -	$ -
f) Other (Description)		$ -
2. Project Legal Expenses	$ -	$ -
3. Contingency		$ -
Total Other Project Costs	**$ 169,868**	**$ 54,687**
Subtotal SRF Funded Amount	**$ 3,337,228**	
4. Loan Origination Fee (1.85%)	$ 61,739	$ 19,876
Grand Total SRF Funded Amount	**$ 3,398,967**	

PART III

Part I Total Green Element Costs = $ 1,019,690
Part II Costs Attributable to Green Project Elements = $ 74,563

Eligible Green Project Reserve Amount = $ 1,094,253

1. "LEED" building planning & design costs - any level of LEED budding certification results in the entire construction costs for the building being categorically green. During the planning & design phase, elements will be chosen that are LEED certified with the final goal being a LEED certifiable building being constructed at each of the WWTP's. 2. The City will complete planning, design, and permitting for two new WWTP's, using the effluent discharged to replenish the water in Brady Lake. The use of the effluent to replenish the lake will result in a more sustainable water supply for the City. The City will develop a plan to address the sustainability of the water supply to address extreme weather and climate change. The City currently uses Brady Lake, which is at less than 30% capacity, as a source of raw water for their microfiltration/reverse osmosis water treatment plant. The City owns the lake and has 3,500 acre-feet of water rights per year within the lake. 3. The City will plan and design a pipeline and pump stations to transport the effluent from the WWTP discharge to the Brady Gold Course, located on US 87, to be used a irrigation water. The use of the treated effluent will replace approximately 28 million gallons of potable water per year with reuse water.

Reviewed By: _____ Date: 14-Dec-11
Checked By: JJM Date: 12/22/11