

Texas Water Development Board



City of Grand Prairie

CWSRF GREEN PROJECT RESERVE BUSINESS CASE EVALUATION

STATE FISCAL YEAR 2013 INTENDED USE PLAN

PROJECT NUMBER 73654

COMMITMENT DATE: February 28, 2013

DATE OF LOAN CLOSING: July 18, 2013

GREEN ESTIMATE AT CLOSING: \$1,829,538

Subsidy awarded for Green components \$274,431

January 17, 2013

Mr. Ron McCuller
City of Grand Prairie
P.O. Box 534045
Grand Prairie, TX 75053-4045

**Re: SFY 2013 Clean Water State Revolving Fund Project 73654
Funding Determination Letter**

Dear Mr. McCuller:

The Texas Water Development Board (TWDB) received a financial application, including the Green Project Information Worksheets, on October 31, 2012, for the City of Grand Prairie (City) for project #9697, as listed in the Intended Use Plan (TWDB Project Number 73654). Based on a review of the information provided, and the current funds available in the Clean Water State Revolving Fund (CWSRF) program, the City's project is being offered the following funding:

- Mainstream Equivalency Loan – approximately \$1,774,382 (Note: This amount will be associated with a 1.85% loan origination fee.)
- Green Subsidy – After reviewing the Green Project Information Worksheets submitted with the application, TWDB staff determined the City meets the 30% green cost threshold to receive loan forgiveness for up to 15% of the green component costs, based on the following:
 - The City's Green Project Information Worksheets dated December 10, 2012 requested that \$1,829,538 of the City's total project cost of \$2,077,050 be considered eligible for the CWSRF Green Project Reserve (GPR). The green element(s) described include the replacement of wastewater collection lines to address infiltration & inflow.
 - The Environmental Protection Agency's (EPA's) *Green Project Reserve Guidance for Determining Project Eligibility* (TWDB-0161) lists Infiltration & Inflow correction projects that save energy from pumping and reduced treatment costs and are cost effective as business case eligible for the GPR (Part A, Section 3.5-4).
 - Information presented on the Green Project Information Worksheets and its attachments provided sufficient information to confirm the eligibility of a portion of the proposed Wastewater Replacement Pipelines Project for the GPR in accordance with TWDB-0161, Part A, Section 3.5-4.

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- Therefore, at this time the TWDB considers project costs associated with sewer line replacement in the amount of \$1,829,538 to be eligible for the CWSRF GPR.
- Please note that the City's application for financial assistance must be consistent with the project scope presented on the Green Project Information Worksheets. Inclusion of the green elements within the project will be verified prior to Board commitment.

The City has demonstrated that it exceeds the 30% green cost threshold. Based on this determination, the City is eligible to receive \$274,431 in loan forgiveness.

The City's application is currently under technical review by Texas Water Development Board staff. Please direct questions concerning the review of the application to Jessica Zuba, the Financial Analyst assigned to coordinate review of the City's application. You may contact Ms. Zuba at (512) 475-3734 or at Jessica.Zuba@twdb.texas.gov. The TWDB looks forward to working with the City to complete this project.

If you have any questions regarding this funding determination letter, please contact Clay Schultz, Program Specialist, at (512) 463-6277.

Sincerely,



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

SB:rf

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.

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 \$ _____
- Energy Efficiency \$ _____
- Environmentally Innovative \$ _____

Business Case Eligible

- Green Infrastructure \$ _____
- Water Efficiency \$ _____
- X Energy Efficiency \$ 2,077.050
- Environmentally Innovative \$ _____

Total Requested Green Amount \$ 1829538

Total Requested Funding Amount \$ 2,077,050

Type of Funding Requested:

- PAD (Planning, Acquisition, Design)
- X C (Construction)

Completed by:

Name: Ron McCuller

Title: Director of Public Works

Signature: 

Date: December 10, 2012

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

PART III - BUSINESS CASE ELIGIBLE

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

Green Infrastructure	Part A, Section 1.4 and 1.5
Water Efficiency	Part A, Section 2.4 and 2.5
Energy Efficiency	Part A, Section 3.4 and 3.5
Environmentally Innovative	Part A, Section 4.4 and 4.5

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 business case eligible projects. Refer to **Information on Completing Worksheets** for additional information.

Section 1 – General Project Information

Applicant: City of Grand Prairie, Texas PIF #: 9497

Project Name: CWSRF 2013 Wastewater Replacement Pipelines project

Contact Name: Ron McCuller, Director of Public Works

Contact Phone and e-mail: 972-237-8066; rmcculle@gptx.org

Total Project Cost: \$2,077,050 Green Amount: \$1,829,538
(Business Case Eligible)

Brief Overall Project Description:

The City of Grand Prairie projects for which funding is requested are prioritized wastewater pipeline replacement segments originating from an Infiltration/Inflow(I/I) Assessment generated by the Trinity River Authority as part of an I/I reduction initiative. This request for funding consists of ten gravity pipeline segments owned by the city. These segments all lie within three subbasins that TRA flagged in the assessment as having a large amount of I/I contributing to their collection system. All segments consist entirely of vitrified clay pipe with 88% of the lines being in service for 50 years or more and the rest being in service for at least 40 years. The total length of the segment is 25,467 linear feet with pipe sizes ranging from 10 to 21 inches. The project names for the segments to be replaced reference the subbasins in which they lie. These segment names consist of the following: Projects 5.0J (A - G), Project 3.0W (A), and Projects JA1 (A-B).

Section 2 – Green Infrastructure

Certain green infrastructure improvements may be considered business case eligible for the GPR. Refer to EPA and TWDB GPR guidance for a complete list and description of business case eligible GPR Projects. Provide reference to the applicable sections of the EPA GPR guidance (TWDB-0161) that demonstrate GPR eligibility. Provide a detailed description of the proposed green infrastructure improvements of sufficient detail that clearly demonstrates that the proposed improvements are consistent with EPA GPR guidance (TWDB-0161).

Guidance Reference:

TWDB 0161, Part A CWSRF Section 3.5-4, infiltration/inflow correction improvements that save energy from reduced pumping and treatment and are cost effective

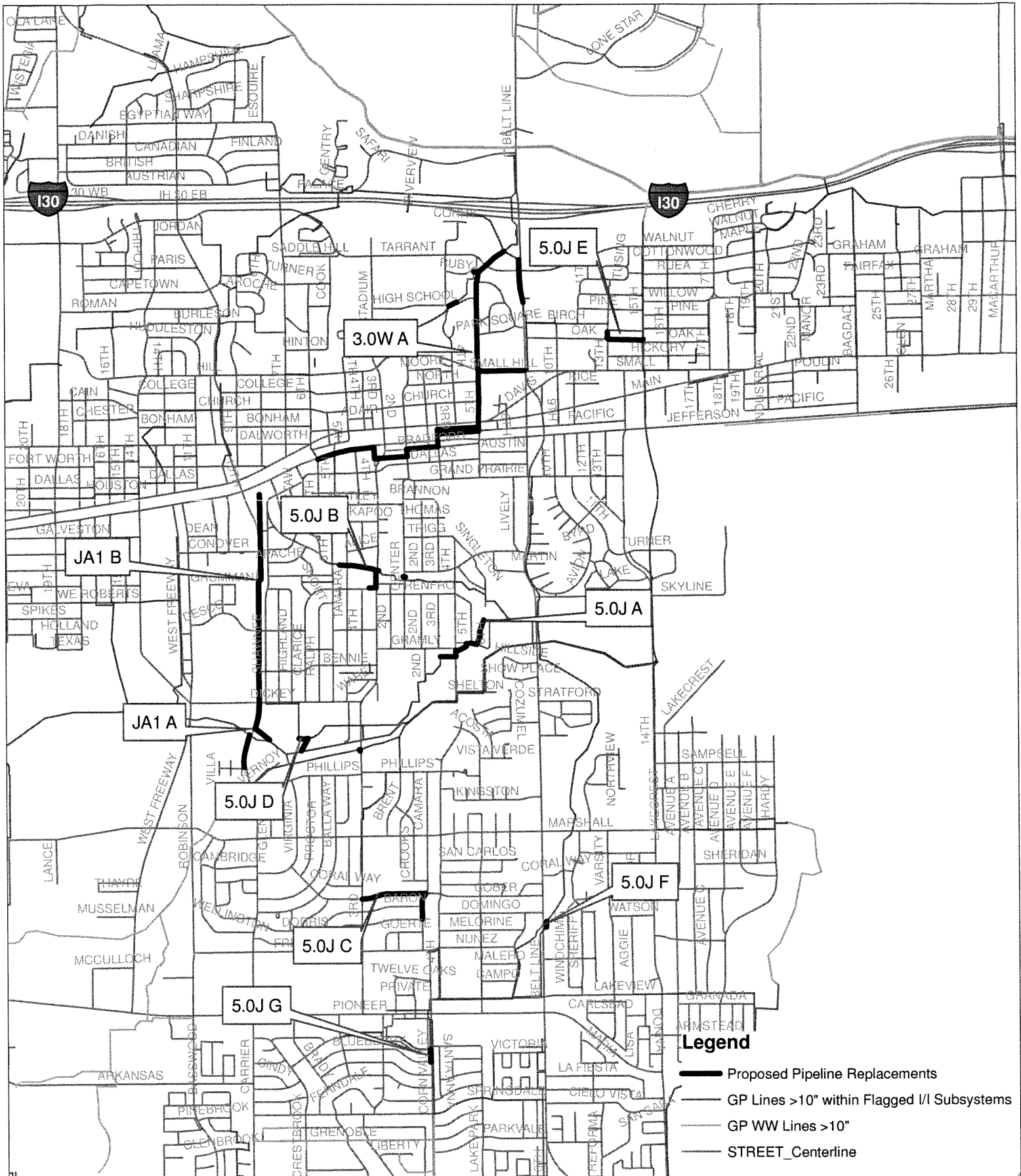
Detailed Description (attach additional pages if necessary):

The city of Grand Prairie's Projects 5.0J (A - G), 3.0W (A), and JA1 (A-B) are replacement segments within the city's collection system. The City's collection system discharges to the Trinity River Authority's Central Regional Wastewater System for transporting and treating wastewater flows generated within the city's system. The city pays a cost of \$1.66/1000 gallons transported and treated to TRA for all flows received.





The city's system was evaluated by Espey Consultants, Inc., in 2008, resulting in the development of a hydraulic model for the system using actual metered wastewater flows. When focusing on these ten proposed replacement segments, this evaluation produced a predicted I/I amount totaling 76,845 gallons per day. The design criteria to be used for the replacement projects will have a design life of 50 years. It is appropriate to then apply the amount of I/I to be removed with the projects and the period of service life of the proposed pipelines to account for the benefit. This I/I equates to a cost to the city for transportation and treatment of \$2,328,000 over the service life of the improvements. The costs for implementing the Projects is \$2,077,050. This construction cost is less than the cost of the I/I resulting from no action. TWDB guidance TWDB-0161, Part A - CWSRF, section 3.5-4 establishes that the criteria for the required business case is cost effectiveness, which can be demonstrated with a benefit that exceeds the cost.

Attached is a detailed breakdown of each project segment, including the opinion of probable construction costs and the predicted I/I to be removed as a result.

Green amount associated with green infrastructure (business case eligible): \$1,829,538
(Attach a detailed cost estimate if necessary)



Legend

-  Proposed Pipeline Replacements
-  GP Lines >10" within Flagged I/I Subsystems
-  GP WW Lines >10"
-  STREET_Centerline

Project 5.0J A						
Location: Gramley St. to SE 6th St.						
	Pipe Length (ft)	Diameter (inch)		Unit	Segment	Total Estimated
		Existing	Proposed	Price	Cost	Constr. Cost
	1626	12	14	\$70	\$113,820	
Totals	1626				\$113,820	\$136,584

Subsystem 5.0J Project A

YEAR_BUILT	DIAMETER	MATERIAL	shape_len	I/I (gal)
1952	12	VCP	576	6,722
1952	12	VCP	118	
1952	12	VCP	124	
1952	12	VCP	265	
1952	12	VCP	55	
1952	12	VCP	139	
1952	12	VCP	350	

Project 5.0J B						
Location: Cherokee Tr. to SW 3rd St.						
	Pipe Length (ft)	Diameter (inch)		Unit	Segment	Total Estimated
		Existing	Proposed	Price	Cost	Constr. Cost
	542	10	12	\$60	\$32,520	
	935	12	14	\$70	\$65,450	
Totals	1477				\$97,970	\$117,564

YEAR_BUILT	DIAMETER	MATERIAL	shape_len	I/I (gal)
1950	10	VCP	95	6,102
1950	10	VCP	299	
1951	12	VCP	268	
1951	12	VCP	23	
1951	12	VCP	61	
1951	12	VCP	190	
1951	12	VCP	369	
1950	10	PVC	148	
1951	12	VCP	24	

Project 5.0J C						
Location: Tompkins Dr. to Baron Pl.						
	Pipe Length (ft)	Diameter (inch)		Unit	Segment	Total Estimated
		Existing	Proposed	Price	Cost	Constr. Cost
	2028	10	12	\$60	\$121,680	
Totals	2028				\$121,680	\$146,016

MATERIAL	DIAMETER	YEAR_BUILT	shape_len	I/I (gal)
VCP	10	1955	565	4,412
VCP	10	1955	289	
VCP	10	1955	301	
VCP	10	1955	873	

Project 5.0J D						
Location: Cottonwood Park						
	Pipe Length (ft)	Diameter (inch)		Unit	Segment	Total Estimated
		Existing	Proposed	Price	Cost	Constr. Cost
	555	12	14	\$70	\$38,850	
Totals	555				\$38,850	\$46,620

MATERIAL	DIAMETER	YEAR_BUIL	shape	len	I/I (gal)
VCP	12	1953		204	1,209
VCP	12	1955		313	
VCP	12	1955		39	

Project 5.0J E						
Location: NE 13th St. to Hickory St.						
	Pipe Length (ft)	Diameter (inch)		Unit	Segment	Total Estimated
		Existing	Proposed	Price	Cost	Constr. Cost
	835	10	12	\$60	\$50,100	
	143	15	18	\$90	\$12,870	
Totals	978				\$62,970	\$75,564

MATERIAL	DIAMETER	YEAR_BUIL	shape	len	I/I (gal)
VCP	15	1942		143	1,362
VCP	10	1950		835	

Project 5.0J F						
Location: Along South Beltline Rd.						
	Pipe Length (ft)	Diameter (inch)		Unit	Segment	Total Estimated
		Existing	Proposed	Price	Cost	Constr. Cost
	127	21	24	\$120	\$15,240	
Totals	127				\$15,240	\$18,288

MATERIAL	DIAMETER	YEAR_BUIL	shape	len	I/I (gal)
PVC	21	1950		127	210

Project 5.0J G						
Location: Along Corn Valley Rd.						
	Pipe Length (ft)	Diameter (inch)		Unit	Segment	Total Estimated
		Existing	Proposed	Price	Cost	Constr. Cost
	288	10	12	\$60	\$17,280	
Totals	288				\$17,280	\$20,736

MATERIAL	DIAMETER	YEAR_BUIL	shape	len	I/I (gal)
VCP	10	1957		288	477

Project 3.0W A						
Location: Along E Jefferson St., NE 5th St., & Small Hill Dr.						
	Pipe Length (ft)	Diameter (inch)		Unit	Segment	Total Estimated
		Existing	Proposed	Price	Cost	Constr. Cost
	8252	10	12	\$60	\$495,120	
	298	12	14	\$70	\$20,860	
	2493	15	18	\$90	\$224,370	
	953	21	24	\$120	\$114,360	
Totals	11996				\$854,710	\$1,025,652

MATERIAL	DIAMETER	YEAR_BUIL	shape_len	I/I (gal)
VCP	10	1950	84	42,424
VCP	10	1923	431	
VCP	10	1923	436	
VCP	10	1923	161	
VCP	10	1923	711	
VCP	10	1923	336	
VCP	10	1923	164	
VCP	10	1923	768	
VCP	10	1923	130	
VCP	10	1923	418	
VCP	10	1923	185	
VCP	10	1923	313	
VCP	10	1923	738	
VCP	10	1923	252	
VCP	10	1923	398	
VCP	10	1950	351	
VCP	10	1950	151	
VCP	10	1950	930	
VCP	10	1923	265	
VCP	10	1923	932	
VCP	10	1923	79	
VCP	10	1923	19	
PVC	12	1949	192	
VCP	12	1962	106	
VCP	15	1950	251	
VCP	15	1950	500	
VCP	15	1950	251	
VCP	15	1950	252	
VCP	15	1950	239	
VCP	15	1950	505	
VCP	15	1950	250	
VCP	15	1950	245	
VCP	21	1953	94	
VCP	21	1953	56	
VCP	21	1953	473	
VCP	21	1953	330	

Project JA1 A						
Location: Along S. Carrier Pkwy to Cottonwood Park						
	Pipe Length (ft)	Diameter (inch)		Unit	Segment	Total Estimated
		Existing	Proposed	Price	Cost	Constr. Cost
	600	10	12	\$60	\$36,000	
	405	21	24	\$120	\$48,600	
Totals	1005				\$84,600	\$101,520

MATERIAL	DIAMETER	YEAR_BUILT	shape_len	I/I (gal)
VCP	21	1958	405	2,188
VCP	10	1954	601	

Project JA1 B						
Location: Along S. Carrier Pkwy to Cottonwood Park						
	Pipe Length (ft)	Diameter (inch)		Unit	Segment	Total Estimated
		Existing	Proposed	Price	Cost	Constr. Cost
	5396	10	12	\$60	\$323,760	
Totals	5396				\$323,760	\$388,512

MATERIAL	DIAMETER	YEAR_BUILT	shape_len	I/I (gal)
VCP	10	1970	86	11,739
VCP	10	1970	1582	
VCP	10	1970	559	
VCP	10	1972	350	
VCP	10	1970	442	
VCP	10	1970	656	
VCP	10	1970	131	
VCP	10	1970	1194	
VCP	10	1972	396	

TOTALS	Length
	25476

TOTALS	SEG. COST	CONST COST
	\$1,730,880	\$2,077,056

TOTAL I/I (gal)	76,845
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