

Texas Water Development Board



City of Arlington

CWSRF GREEN PROJECT RESERVE BUSINESS CASE EVALUATION

STATE FISCAL YEAR 2014 INTENDED USE PLAN

PROJECT NUMBER 73679

COMMITMENT DATE: 11/21/2013

DATE OF LOAN CLOSING: 03/25/2014

GREEN ESTIMATE AT CLOSING: \$4,023,640

Subsidy awarded for Green components, (if any): N/A

September 10, 2013

Mr. Walter “Buzz” Pishkur
City of Arlington
P.O. Box 90231, MS 01-0200
Arlington, TX 76004

**Re: SFY 2014 Clean Water State Revolving Fund
Funding Determination for Project 10147 (CWSRF Project 73679)**

Dear Mr. Pishkur:

The Texas Water Development Board (TWDB) received a financial application on August 29, 2013, for the City of Arlington (City) for project #10147, as listed in the Intended Use Plan (TWDB Project Number 73679). 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 \$3,364,000 (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 exceeds the 30% green cost threshold to receive loan forgiveness for up to 15% of the green component costs; therefore, the City is eligible to receive \$593,640 in loan forgiveness, based on the following:
 - The City’s Green Project Information Worksheets dated August 22, 2013 requested that \$3,957,600 of the City’s total project cost of \$3,957,600 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.

Our Mission : **Board Members**

To provide leadership, planning, financial assistance, information, and education for the conservation and responsible development of water for Texas

Carlos Rubinstein, Chairman | Bech Bruun, Member | Mary Ann Williamson, Member
Robert E. Mace, Ph.D., P.G., Interim Executive Administrator

Mr. Walter "Buzz" Pishkur

September 10, 2013

Page 2

- Therefore, at this time the TWDB considers project costs associated with sewer line replacement in the amount of \$3,957,600 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's application is currently under technical review by TWDB staff. Based on this funding determination, the financial application may need updating. TWDB staff will notify you of any necessary changes in a subsequent letter. Please respond by the deadlines stated in any requests for information. Delays in responding could result in loss of subsidy. Please direct questions concerning the review of the application to Javier Pena, the Financial Analyst assigned to coordinate review of the City's application. You may contact Mr. Pena at (512) 463-8361 or at Javier.Pena@twdb.texas.gov.

If you have any questions regarding this funding determination letter, please contact Clay Schultz, Program Specialist, at (512) 463-6277. The TWDB appreciates the City's interest in the CWSRF and looks forward to working with the City to complete this project.

Sincerely,



Stacy L. Barna

Director of Program Development
Program and Policy Development

SLB: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 \$ _____
- Energy Efficiency \$3,957,600
- Environmentally Innovative \$ _____

Total Requested Green Amount \$ 3,957,600

Total Requested Funding Amount \$ 3,957,600

Type of Funding Requested:

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

Completed by:

Name: Walter J. Pishkur

Title: Director of Water Utilities

Signature: 

Date: 8/22/13

**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 Arlington, Texas PIF #: _____

Project Name: Project 11-25 (Kee Branch) and Project 21-33 (Lynn Creek)

Contact Name: Walter Pishkur, BSBA, MBA, ACHE

Contact Phone and e-mail: 817-459-6603

Total Project Cost: \$3,957,600 Green Amount: \$3,957,600
(Business Case Eligible)

Brief Overall Project Description:

The City of Arlington projects for which funding is requested are prioritized wastewater pipeline replacement segments originating from the 2009 Wastewater Master Plan. This request for funding consists of two gravity pipeline segments owned by the City. The total length of the pipeline replacement segments is 21,400 linear feet with pipe sizes ranging from 10 to 21 inches. Both pipe segments were noted to have high amounts of I/I and the majority of the lines have been in services for at least 30 years. The project names for the segments to be replaced reference the subbasins in which they lie; Kee Branch and Lynn Creek.

Section 4.3 – Other Energy Efficiency Improvements

Complete this section for energy efficiency improvements other than those listed above. Provide reference to the applicable sections of the EPA GPR guidance (TWDB-0161) that demonstrate GPR eligibility. Provide a detailed description of the proposed energy efficiency 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 Arlington's Projects Kee Branch and Lynn Creek 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 the Trinity River Authority (TRA) for all flows received. The cost for the transport and treatment of wastewater flows for which the City pays TRA is as follows:

- 2013 - \$1.844/1,000 gallons
- 2014 - \$2.164/1,000 gallons
- 2015 - \$2.338/1,000 gallons
- 2016 - \$2.483/1,000 gallons
- 2017 - \$2.663/1,000 gallons
- 2018 - \$2.819/1,000 gallons

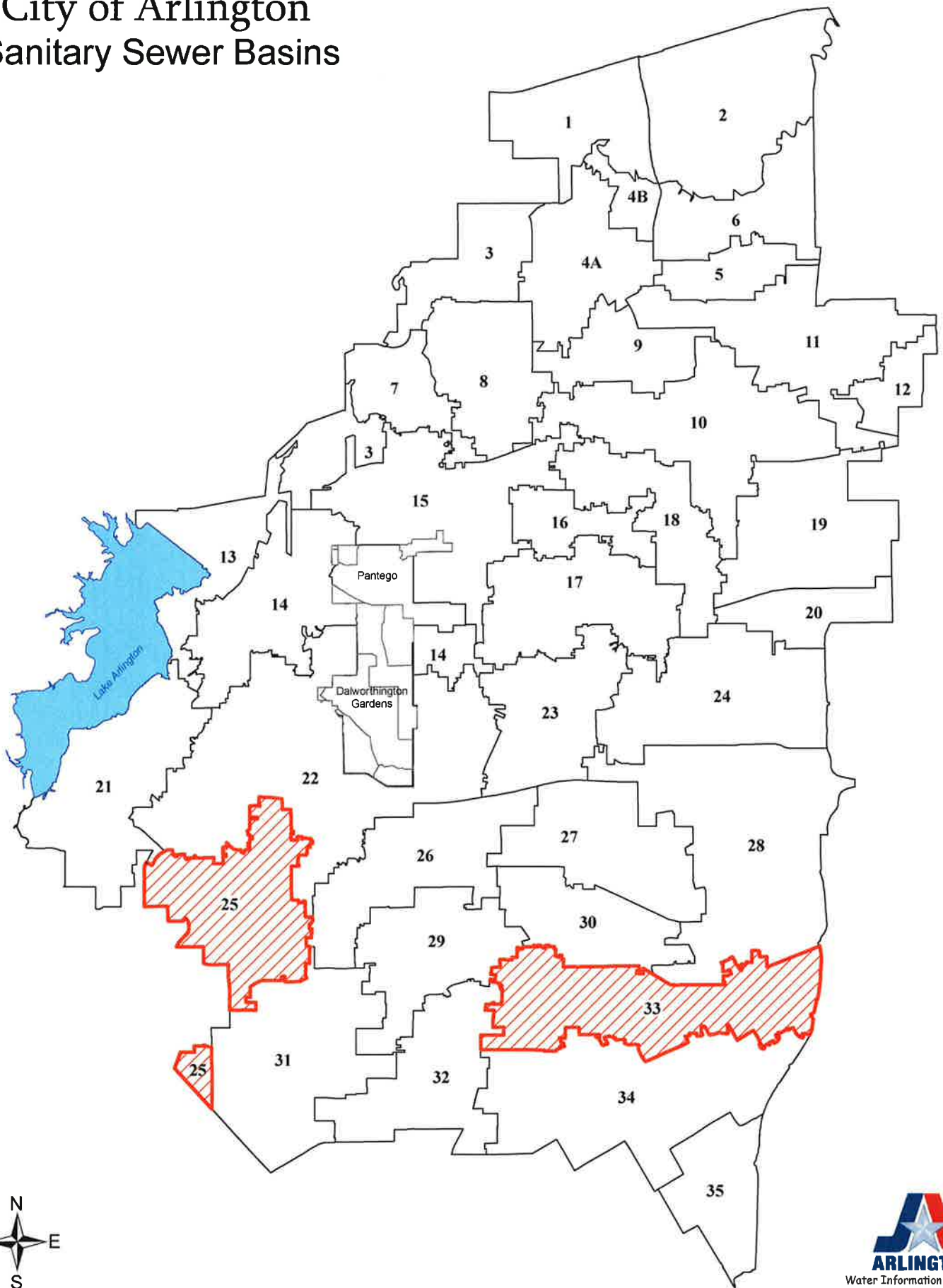
As a result of a hydraulic model and master plan developed for the City's wastewater collection system, an evaluation the system, including the two proposed replacement segments was performed. This evaluation produced a predicted I/I amount totaling 136,080 gallons per day.

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. As shown in Attachment B, this I/I equates to a cost to the City for transportation and treatment of \$6,916,000 over the service life of the improvements. The cost for implementing the Project is \$3,957,600. 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 energy efficiency (business case eligible): \$3,957,600
(Attach a detailed cost estimate if necessary)

City of Arlington Sanitary Sewer Basins



Water Information Services
March 1, 2013

Project 11 - Basin 25 (Key Branch)												
Location: South of I-20 and east of US 287												
Item Description	Quantity (ft) or (ea)	Diameter (inch)		Unit Price		Segment Cost		Total Estimated Constr. Cost		Total Estimated Project Cost		
		Existing	Upsized	Existing	Upsized	Replacement	Upsized	Replacement	Upsized	Replacement	Upsized	
18" Pipe 0-8', Deep (ft)	2,600	10	18	\$80	\$144	\$208,000	\$374,400					
18" Pipe 8-16', Deep (ft)	2,500	10	18	\$100	\$180	\$250,000	\$450,000					
18" Pipe >16', Deep (ft)	150	10	18	\$120	\$216	\$18,000	\$32,400					
24" Pipe 0-8', Deep (ft)	3,450	18	24	\$144	\$192	\$496,800	\$662,400					
24" Pipe 8-16', Deep (ft)	3,950	21	24	\$168	\$240	\$663,600	\$948,000					
24" Pipe >16', Deep (ft)	450	21	24	\$180	\$288	\$81,000	\$129,600					
60" Diameter Manhole (ea)	30			\$5,000	\$5,000	\$150,000	\$150,000					
32" Boring and Casing (ft)	100	32	24	\$450	\$495	\$45,000	\$49,500					
32" Boring and Casing (ft)	300	38	34	\$495	\$600	\$148,500	\$180,000					
Totals	13,100 ft					\$2,060,900	\$2,976,300	\$2,473,080	\$3,571,560	\$2,769,850	\$4,000,147	
Upsizing Cost Increase							\$915,400		\$1,098,480		\$1,230,298	

I/I (gal) 74,970

\$2,271,229 \$1,368,211 \$74.97 \$74,970

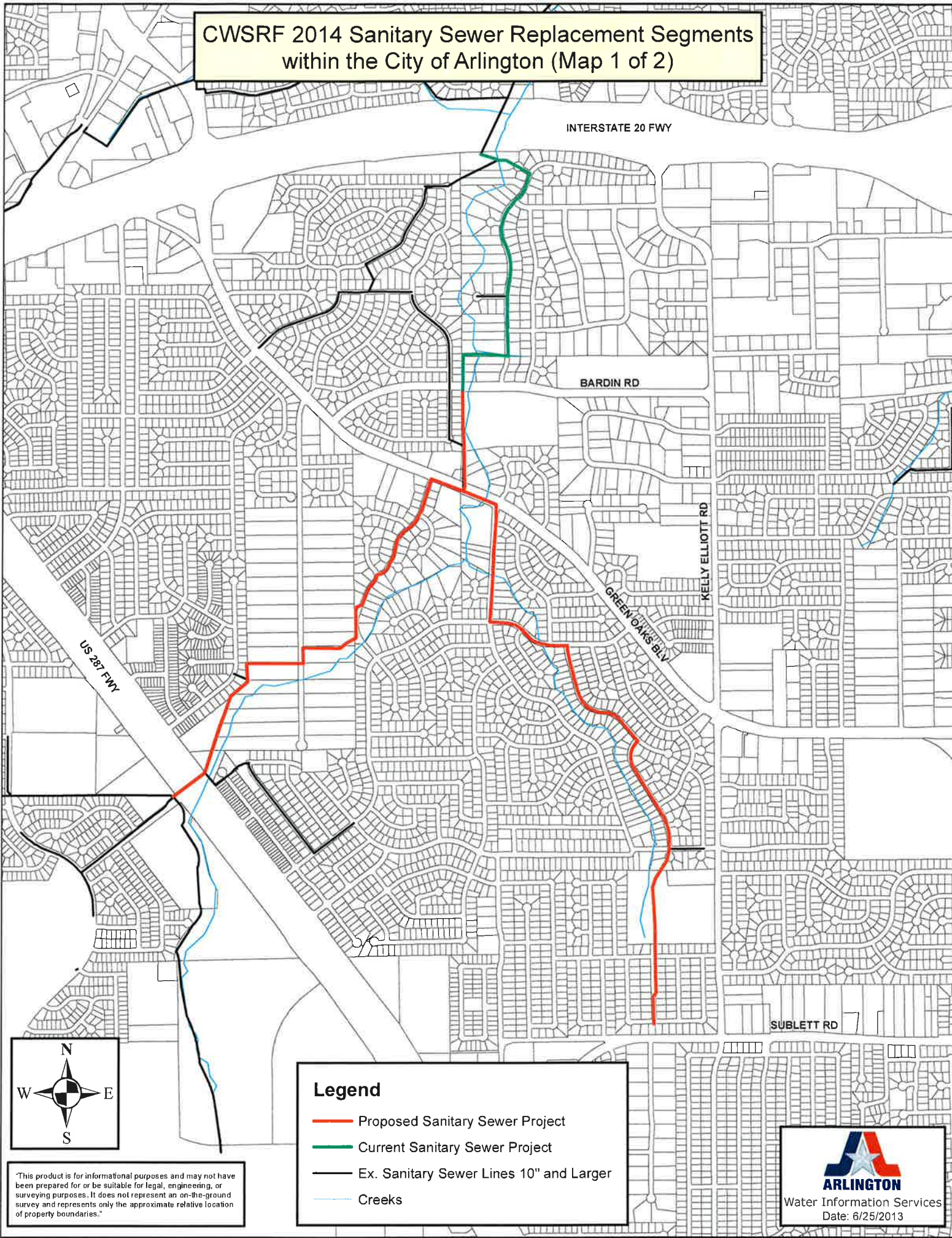
Project 21 - Basin 33 (Lynn Creek)												
Location: Between Matlock Road and Silo Road												
Item Description	Quantity (ft) or (ea)	Diameter (inch)		Unit Price		Segment Cost		Total Estimated Constr. Cost		Total Estimated Project Cost		
		Existing	Upsized	Existing	Upsized	Replacement	Upsized	Replacement	Upsized	Replacement	Upsized	
15" Pipe 0-8', Deep (ft)	1,950	10	15	\$100	\$150	\$195,000	\$292,500					
18" Pipe 0-8', Deep (ft)	100	12	18	\$96	\$144	\$9,600	\$14,400					
18" Pipe 8-16', Deep (ft)	6,250	15	18	\$150	\$180	\$937,500	\$1,125,000					
60" Diameter Manhole (ea)	19			\$5,000	\$5,000	\$95,000	\$95,000					
Totals	8,300 ft					\$1,237,100	\$1,526,900	\$1,484,520	\$1,832,280	\$1,662,662	\$2,052,154	
Upsizing Cost Increase							\$289,800		\$347,760		\$389,491	

I/I (gal) 61,038

\$1,849,140

Item Description	Quantity (ft)	Segment Cost		Total Estimated Constr. Cost		Total Estimated Project Cost	
		Replacement	Upsized	Replacement	Upsized	Replacement	Upsized
TOTALS	21,400 ft	\$3,298,000	\$4,503,200	\$3,957,600	\$5,403,840	\$4,432,512	\$6,052,301
I/I (gal) Removed	136,008						

CWSRF 2014 Sanitary Sewer Replacement Segments within the City of Arlington (Map 1 of 2)



INTERSTATE 20 FWY

BARDIN RD

KELLY ELLIOTT RD

GREEN OAKS BLVD

US 297 FWY

SUBLETT RD



Legend

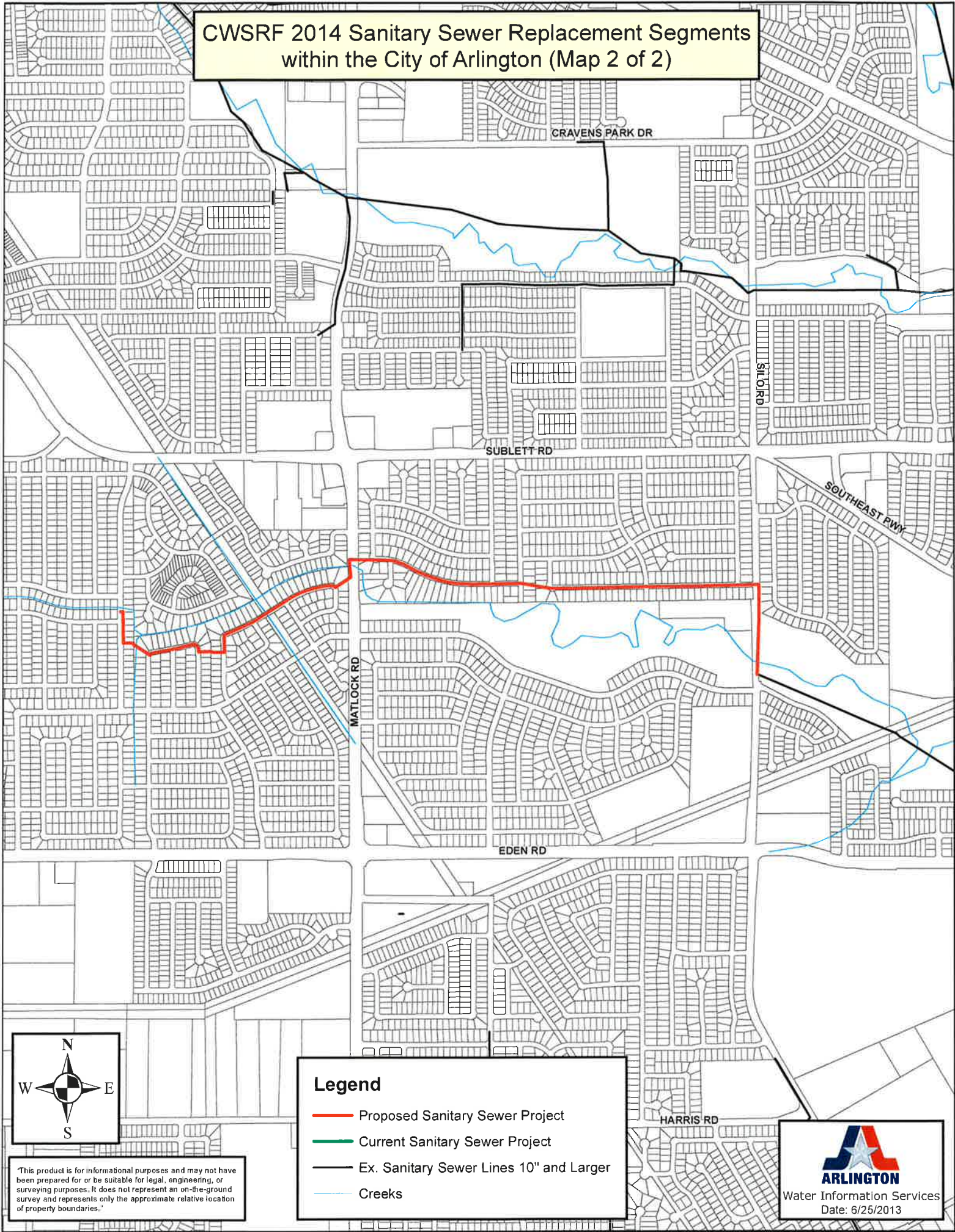
- Proposed Sanitary Sewer Project
- Current Sanitary Sewer Project
- Ex. Sanitary Sewer Lines 10" and Larger
- Creeks

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Water Information Services
Date: 6/25/2013

**CWSRF 2014 Sanitary Sewer Replacement Segments
within the City of Arlington (Map 2 of 2)**



Legend

- Proposed Sanitary Sewer Project
- Current Sanitary Sewer Project
- Ex. Sanitary Sewer Lines 10" and Larger
- Creeks



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ARLINGTON
Water Information Services
Date: 6/25/2013