

2020 SEWER MASTER PLAN UPDATE

Temporary Flow Monitoring, Inspection and Condition Assessment, Sanitary Sewer Master Plan Update, and Ongoing Sewer System Modeling



BPU Contract Review Subcommittee | October 15, 2019
Jason Roberts, PE | Associate Civil Engineer



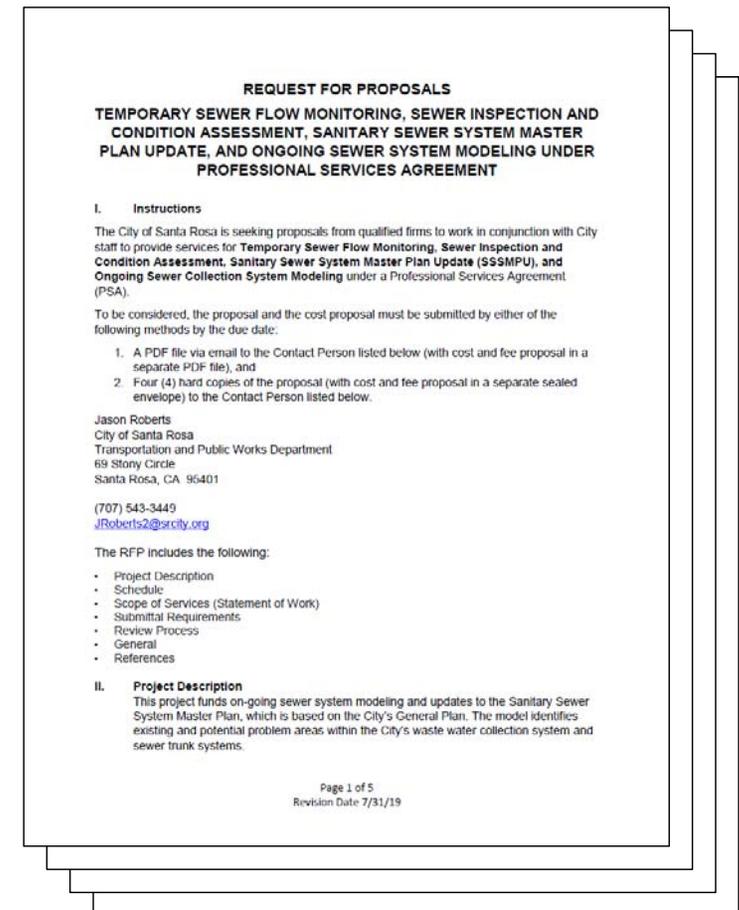
OUR FUTURE IN EVERY DRÖP

Background

- Master Plan Updates on ~5-yr cycle
- Previous Master Plan Update by Arcadis in 2014
- Previous Flow Monitoring Data from 2007-2008
- 2nd Round of Inspections for Riverwatch Settlement Due 2021 & 2023*

The RFP Process

- Advertised on August 1, 2019
- Professional Services Agreement or Project Work Order
- Proposals submitted August 27, 2019
 - Three Proposals Received
- Woodard & Curran Selected on September 11, 2019
- Fee Estimate
 - Base \$1,935,096
 - Optional \$198,212
 - **Total** \$2,133,308



An Integrated Approach

Scope of Work Includes Four Traditional Projects

1. Temporary Flow Monitoring
2. Inspection and Condition Assessment
3. Sanitary Sewer System Master Plan Update
4. On-Call Modeling Support



This Approach Consolidates Work Under A Single Consultant Contract

- Greater Efficiency in Communication and Execution of Work
- Cost Savings From Less City Overhead



Services

Base Services

- Temporary Flow Monitoring
- Sewer System Model Development
- Inspection and Condition Assessment
- Review of City's Sewer Inspections
- Sanitary Sewer System Master Plan Update

Ongoing Services

- On-Call Modelling Support
- Sewer Model Updates

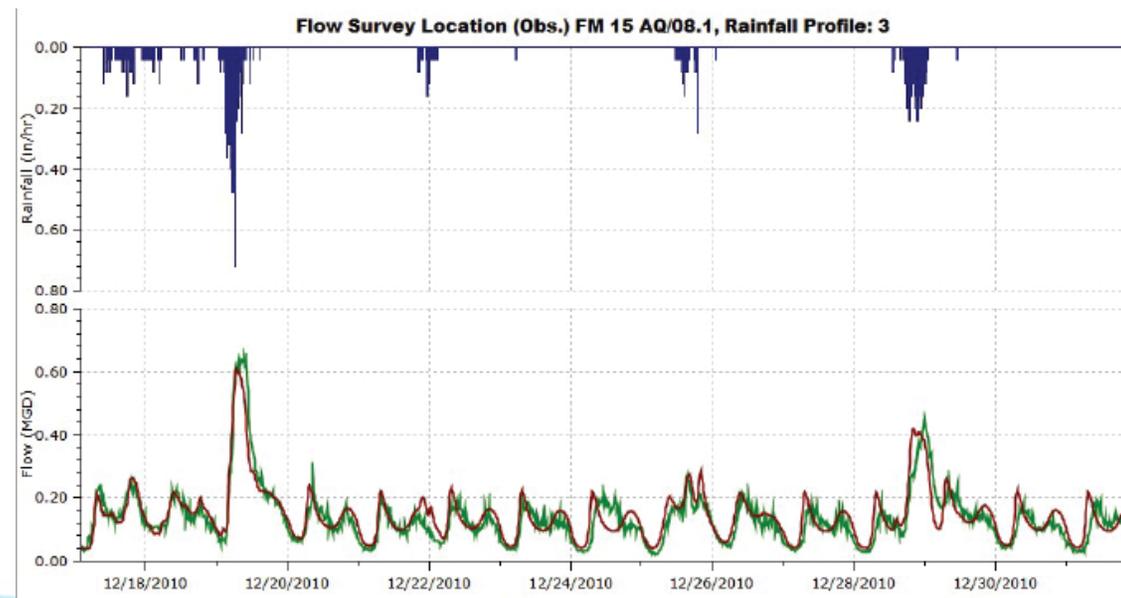
Optional Tasks (Flow Monitoring)

- Additional Flow Meters & Model Calibration
- Additional Traffic Control As Needed

Sewer System Model Development

- Develop Sewer Model Network From City GIS Data
- Develop Model Wastewater Flows (Dry and Wet Weather)
- Calibrate and Verify Model Using Flow Meter and Rainfall Data

The Sewer Model Developed in this Task will be used to Assess the Hydraulic Capacity of the Sewer System and Identify Capacity Deficiencies for the Master Plan Update

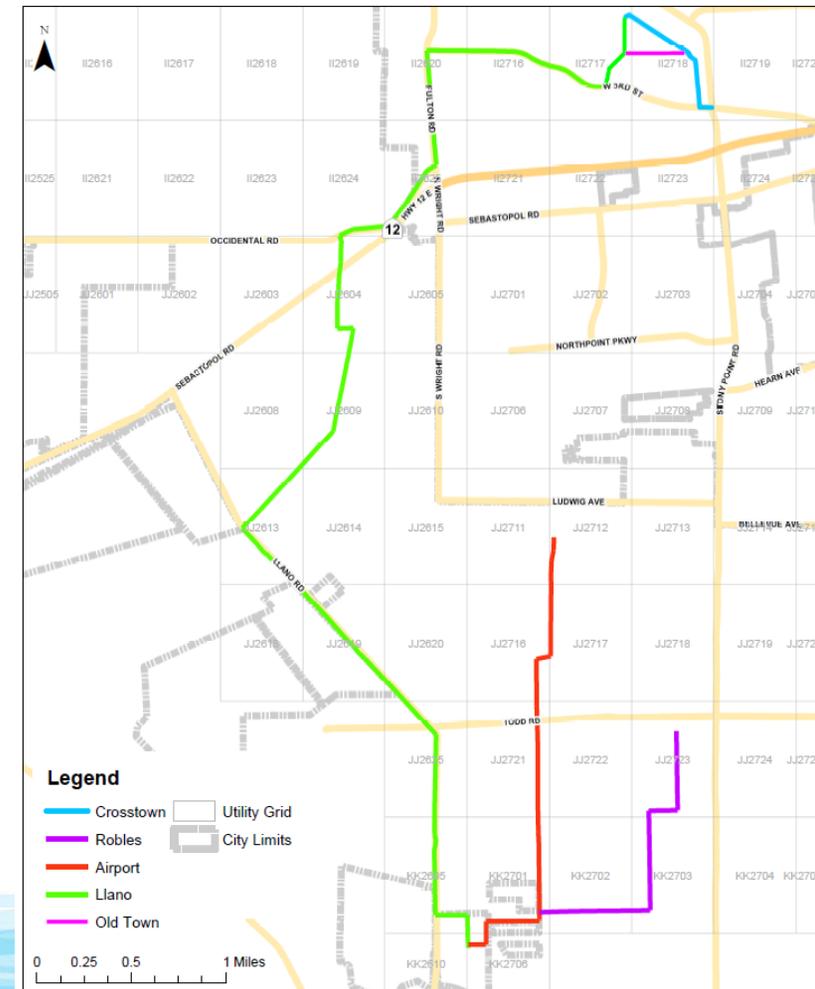


Inspection and Condition Assessment

- Development of a Sewer Inspection Plan
- 67,657-feet of Large Diameter Trunk Sewer
- 28 Siphons
- 214 Manholes

This Task Serves Two Purposes:

1. Fulfills the requirements of the California River Watch Settlement Agreement
2. Adding Condition Assessment as a component of project prioritization for the Sewer Master Plan Update



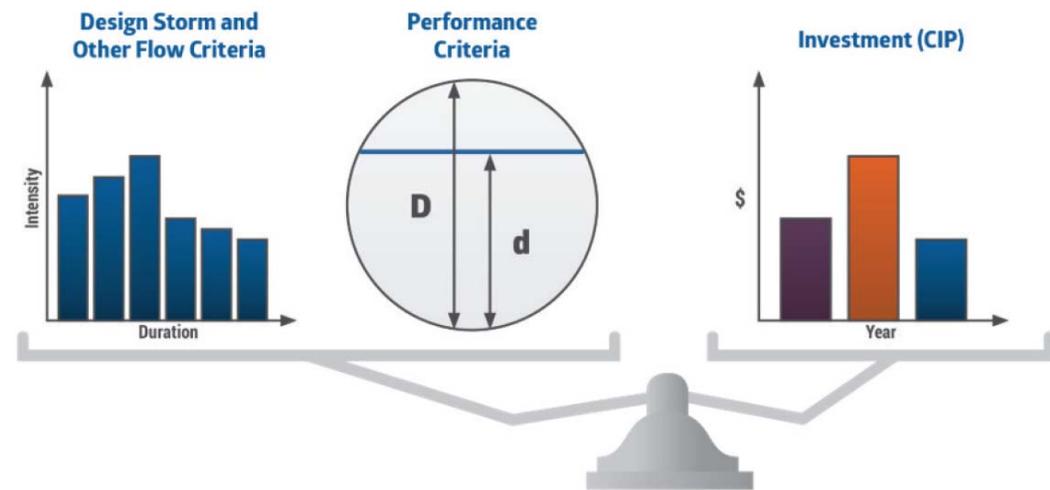
Review of City Sewer Inspections

- Review CCTV Footage from 50 Selected Pipe Segments
- Evaluate City Pipe Assessments



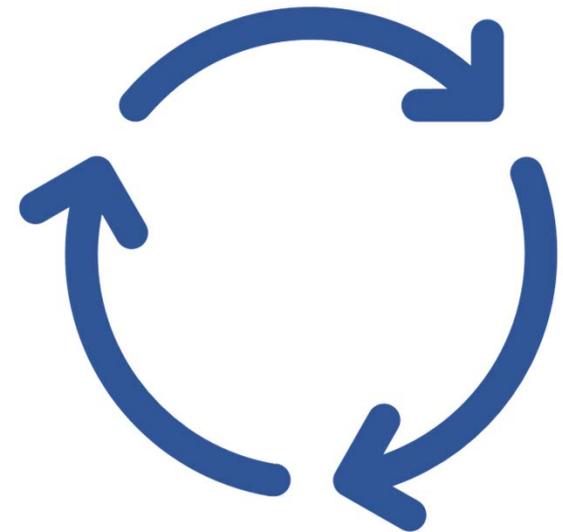
Sanitary Sewer System Master Plan Update

- Establish Performance Criteria with City Staff
- Evaluate System Performance for Existing Conditions and Future Growth
- Develop Capacity Improvements and Identify Rehabilitation Projects
- Prioritize Projects and Develop a Capital Improvement Program
- Prepare 2020 Sanitary Sewer System Master Plan Update



On-Call Modeling Support & Sewer Model Updates

- Provide Ongoing Modeling Assistance
 - Capital Projects Engineering
 - Engineering Development Services
- Update the City's Sewer Model as CIP and Private Development Projects are Completed



Recommendation

It is recommended by the Water Department that the Contract Review Subcommittee recommend to the Board of Public Utilities approval a Project Work Order with Woodard & Curran under a Master Professional Services Agreement to provide professional engineering services for **Temporary Flow Monitoring, Inspection and Condition Assessment, Sanitary Sewer Master Plan Update, and Ongoing Sewer System Modeling** in the amount not to exceed **\$2,133,308**.