



# REGIONAL FACILITIES PLAN: PLANNING PERIOD 2017-2037

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Richmond  Utilities

*PREPARED BY:*

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*VOLUME 1 OF 2*

**SECTION 1  
EXECUTIVE SUMMARY**

**E. Summary of Project Costs**

**TABLE 1-1  
PROBABLE ESTIMATES OF PROJECT COSTS  
FOR PHASED IMPROVEMENTS**

Description	0-2 Years	3-10 Years	11-20 Years
<b>1. Wastewater Treatment Plants</b>			
a. Otter Creek		\$ 8,628,125	
b. Silver Creek – Phase I	\$ 7,008,500		
c. Silver Creek – Phase II		\$3,516,100	
<b>2. Otter Creek Sewers</b>			
Lancaster Road (TC-15) Service Area	825,000		
Motel 6 Pump Station Replacement	206,000		
Wilderness Trail & Lost Fork Outfall Sewers		2,346,000	
South Robert R. Martin Bypass Pump Station		295,600	
Taylor Fork Relief Sewer		790,600	
Lower West Fork Outfall Sewer System			3,026,400
<b>Sub-Total Otter Creek Sewers</b>	<b>\$975,000</b>	<b>\$3,432,200</b>	<b>\$3,026,400</b>
<b>3. Silver Creek Sewers</b>			
Silver Creek Outfall Sewers	1,134,400		
Outfall Sewers, Duncannon Road Area		1,813,000	
North Duncannon Road Area		1,678,900	
Parrish Road Area		395,400	
Hays Fork Outfall Sewer			2,990,700
Old Town Branch Pump Station & Force Main			976,000
<b>Sub-Total Silver Creek Sewers</b>	<b>\$1,134,400</b>	<b>\$3,887,300</b>	<b>\$3,966,700</b>
<b>4. Sanitary Sewer Rehabilitation</b>	<b>\$300,000</b>	<b>\$300,000</b>	<b>\$300,000</b>
<b>TOTALS</b>	<b>\$ 9,473,900</b>	<b>\$ 19,763,725</b>	<b>\$ 7,293,100</b>

## SECTION 7

### FORECAST FLOWS AND WASTELOADS IN THE PLANNING AREA

sewer rehabilitation program has been limited to the Otter Creek sewershed. In light of this data, the rehabilitation crew will begin to focus on the Silver Creek sewershed to reduce I/I.

#### 6. Sanitary Sewer System Rehabilitation Program

Richmond's wastewater transportation system has experienced excessive I/I by the "Ten States Standards" but both of Richmond's major pumping stations have equalization facilities to store high flows for treatment following significant rainfall events. Since the last upgrade of the treatment facilities both plants have been successful in meeting their effluent limits at all points. Richmond is pro-active in the management of the City wastewater facilities and this performance emphasizes that Richmond acts expediently to implement cost-effective enhancements to the system, including I/I control.

This facilities management plan identifies a rehabilitation program implemented by RU over 10 years ago. To pinpoint where excessive I/I exists, the Richmond Utilities developed a Sanitary Sewer Rehabilitation Program in June 2005. Flow monitoring was conducted on each watershed to identify high I/I locations. The rehabilitation program includes the following phases:

1. Phase 1 – Perform Flow monitoring at the mouth of major watersheds.
2. Phase 2 – Identify and rank sewersheds based on I/I levels.
3. Phase 3 – Perform a physical survey of manholes in sewershed #1.
4. Phase 4 – Perform a physical survey of pumping stations in Sewershed # 1.
5. Phase 5 – Hydraulic jet and mechanical cleaning of known high I/I areas.
6. Phase 6 – TV Inspection
7. Phase 7 – Identify rehabilitation projects.
8. Phase 8 – Perform rehabilitation work.
9. Phase 9 – Move to the next highest I/I sewershed and repeat until all sewersheds have been rehabilitated.

See Exhibit 7-1 for a map of all rehabilitation activities since 2005. A copy of the report to EPA is located in Appendix A.