

Sanitary Sewer System

Page	Project	Project Name	2015	2016	2017	2018	2019	5-Year Total
63	93002	Citywide Sanitary Sewer Extension Program	191,200	0	0	0	0	191,200
64	93003	Sanitary Sewer Major Maintenance Program	90,000	90,000	90,000	90,000	90,000	450,000
65	93009	Fanno Creek Slope Stabilization <i>(Arthur Court)</i>	0	800,000	0	0	0	800,000
66	93010	Derry Dell Creek Sewer Interceptor Relocation	1,135,000	0	0	0	0	1,135,000
67	93013	East Tigard Sewer Replacement	0	1,185,000	0	0	0	1,185,000
68	93014	Krueger Creek <i>(Benchview)</i> Slope Stabilization <i>(Gallin Court)</i>	611,300	0	0	0	0	611,300
69	93016	Sewer Rehabilitation Program	495,000	495,000	495,000	495,000	495,000	2,475,000
70	93017	72nd Avenue Sewer Modification <i>(Bonita Road)</i>	0	0	0	400,000	400,000	800,000
71	93035	Barrows Road/Scholls Ferry Road Sewer Line Extension <i>(Phase 2)</i>	390,000	0	0	0	0	390,000
72	93053	Red Rock Creek Corridor Sewer Study	0	182,000	0	0	0	182,000
Total Funded			2,912,500	2,752,000	585,000	985,000	985,000	8,219,500

Citywide Sanitary Sewer Extension Program

LOCATION	Various
PROJECT MANAGER	Greg Berry, <i>Public Works</i>
FUNDING STATUS	Fully Funded
PROJECT RESULTS	Connection of properties not served by the sanitary sewer system.

PROJECT NEED

Extension of sanitary sewer service.

PROJECT DESCRIPTION

The Sanitary Sewer Extension Program was started in FY 2001–02 in order to extend sanitary sewer service to all developed but unserved residential areas citywide. The city utilizes the formation of reimbursement districts to construct the sewers. The program allows residents to connect to the sanitary sewer system using economy of scale thereby reducing individual construction costs. This is a program and does not identify any specific projects at this time.

PROJECT FUNDING

Actual Through 2013 is not calculated on Programs.



Citywide Sanitary Sewer Extension Program

	Actual 2013	Projected 2014	Revised 2014	2015	2016	2017	2018	2019	Project Total
INTERNAL EXPENSES									
Project Management	0	0	20,000	8,900	0	0	0	0	8,900
Construction Management	0	10,000	20,000	9,800	0	0	0	0	19,800
Total Internal Expenses	0	10,000	40,000	18,700	0	0	0	0	28,700
EXTERNAL EXPENSES									
Public Involvement	0	0	5,000	5,000	0	0	0	0	5,000
Land/Right of Way Acquisition	0	0	7,500	7,500	0	0	0	0	7,500
Design and Engineering	0	0	60,000	60,000	0	0	0	0	60,000
Construction	0	500	10,000	100,000	0	0	0	0	100,500
Total External Expenses	0	500	172,500	172,500	0	0	0	0	173,000
Total Tigard Project Expense	0	10,500	212,500	191,200	0	0	0	0	201,700
REVENUE FUNDING SOURCE									
Sanitary Sewer Fund	0	10,500	212,500	191,200	0	0	0	0	201,700
Total Tigard Project Revenues	0	10,500	212,500	191,200	0	0	0	0	201,700



Sanitary Sewer Major Maintenance Program

LOCATION Citywide

PROJECT MANAGER Rob Block, *Public Works*

FUNDING STATUS Fully Funded

PROJECT RESULTS Reduction in the possibilities of service interruptions and spills.



PROJECT NEED

Provide major maintenance of the sanitary sewer system.

PROJECT DESCRIPTION

This program is used for urgent projects to renew, repair or replace sections of the sanitary sewer system that have failed or are near failure. Normal operations and maintenance includes work on the system to keep it functioning but does not result in renewing or replacing the pipe or other appurtenances. Projects included in the Major Maintenance Program exceed normal maintenance and operations and typically replace pipe and add a renewed service life.

PROJECT FUNDING

Actual Through 2013 is not calculated on Programs.

Sanitary Sewer Major Maintenance Program

	Actual 2013	Projected 2014	Revised 2014	2015	2016	2017	2018	2019	Project Total
INTERNAL EXPENSES									
Project Management	0	12,000	12,000	5,000	5,000	5,000	5,000	5,000	37,000
Construction Management	0	10,000	10,000	5,000	5,000	5,000	5,000	5,000	35,000
Total Internal Expenses	0	22,000	22,000	10,000	10,000	10,000	10,000	10,000	72,000
EXTERNAL EXPENSES									
Public Involvement	0	5,000	5,000	5,000	5,000	5,000	5,000	5,000	30,000
Construction	0	175,000	175,000	75,000	75,000	75,000	75,000	75,000	550,000
Total External Expenses	0	180,000	180,000	80,000	80,000	80,000	80,000	80,000	580,000
Total Tigard Project Expense	0	202,000	202,000	90,000	90,000	90,000	90,000	90,000	652,000
REVENUE FUNDING SOURCE									
Sanitary Sewer Fund	0	202,000	202,000	90,000	90,000	90,000	90,000	90,000	652,000
Total Tigard Project Revenues	0	202,000	202,000	90,000	90,000	90,000	90,000	90,000	652,000

Fanno Creek Slope Stabilization (Arthur Court)

LOCATION	Fanno Creek near Arthur Court
PROJECT MANAGER	Greg Berry, <i>Public Works</i>
FUNDING STATUS	Fully Funded
PROJECT RESULTS	A stabilized bank, providing protection of the sanitary sewer main and the Fanno Creek Trail.



PROJECT NEED

Provide soil protection of sanitary sewer piping.

PROJECT DESCRIPTION

A section of bank along the Fanno Creek near Arthur Court has eroded due to high water levels threatening a sanitary sewer main and a portion of the Fanno Creek Trail. The project will restore the section of eroding bank and divert high flows from the impacted area.

Fanno Creek Slope Stabilization

	Actual 2013	Projected 2014	Revised 2014	2015	2016	2017	2018	2019	Project Total
INTERNAL EXPENSES									
Project Management	0	35,000	90,000	0	35,000	0	0	0	70,000
Construction Management	0	0	70,000	0	10,000	0	0	0	10,000
Total Internal Expenses	0	35,000	160,000	0	45,000	0	0	0	80,000
EXTERNAL EXPENSES									
Construction Management	0	0	0	0	40,000	0	0	0	40,000
Design and Engineering	0	58,000	0	0	15,000	0	0	0	73,000
Construction	0	0	527,000	0	700,000	0	0	0	700,000
Prior Life-to-Date	64,674	0	0	0	0	0	0	0	64,674
Total External Expenses	64,674	58,000	527,000	0	755,000	0	0	0	877,674
Total Tigard Project Expense	64,674	93,000	687,000	0	800,000	0	0	0	957,674
REVENUE FUNDING SOURCE									
Sanitary Sewer Fund	64,674	93,000	687,000	0	800,000	0	0	0	957,674
Total Tigard Project Revenues	64,674	93,000	687,000	0	800,000	0	0	0	957,674



Derry Dell Creek Sewer Interceptor Relocation

LOCATION Derry Dell Creek

PROJECT MANAGER Kim McMillan, *Public Works*

FUNDING STATUS Fully Funded

PROJECT RESULTS New trail, boardwalk, storm culvert, waterline and roadbed widening, plus sanitary sewer line replacement and creek realignment. This project supports the vision statement in the City of Tigard's Strategic Plan: "the most walkable community in the Pacific Northwest..."



PROJECT NEED

Replace sanitary sewer lines and prevent bank erosion.

PROJECT DESCRIPTION

In a partnership with Clean Water Services (CWS), the project will replace existing sanitary sewer lines and reroute a section of Derry Dell Creek to protect homes from bank erosion. It will replace the storm culverts under Walnut Street with a fish-friendly, large box culvert, install a 6-inch waterline, construct trail and boardwalk connections from adjacent neighborhoods to Woodard Park and widen the roadbed on a section of Walnut Street.

Derry Dell Creek and Sewer Interceptor Relocation

	Actual 2013	Projected 2014	Revised 2014	2015	2016	2017	2018	2019	Project Total
INTERNAL EXPENSES									
Project Management	0	30,000	160,000	50,000	0	0	0	0	80,000
Construction Management	0	10,000	85,000	50,000	0	0	0	0	60,000
Total Internal Expenses	0	40,000	245,000	100,000	0	0	0	0	140,000
EXTERNAL EXPENSES									
Public Involvement	0	5,000	5,000	5,000	0	0	0	0	10,000
Land/Right of Way Acquisition	0	155,000	0	0	0	0	0	0	155,000
Design and Engineering	0	30,000	30,000	0	0	0	0	0	30,000
Construction	0	100,000	430,000	1,030,000	0	0	0	0	1,130,000
Prior Life-to-Date	509,404	0	0	0	0	0	0	0	509,404
Total External Expenses	509,404	290,000	465,000	1,035,000	0	0	0	0	1,834,404
Total Tigard Project Expense	509,404	330,000	710,000	1,135,000	0	0	0	0	1,974,404
REVENUE FUNDING SOURCE									
Gas Tax Fund	0	0	0	45,400	0	0	0	0	45,400
Parks Bond Fund	0	13,200	30,000	21,800	0	0	0	0	35,000
Parks SDC Fund	0	0	0	375,450	0	0	0	0	375,450
Sanitary Sewer Fund	496,356	128,700	275,000	204,300	0	0	0	0	829,356
Stormwater Fund	0	56,100	120,000	272,400	0	0	0	0	328,500
Water CIP Fund	13,048	132,000	285,000	215,650	0	0	0	0	360,698
Total Tigard Project Revenues	509,404	330,000	710,000	1,135,000	0	0	0	0	1,974,404

East Tigard Sewer Replacement

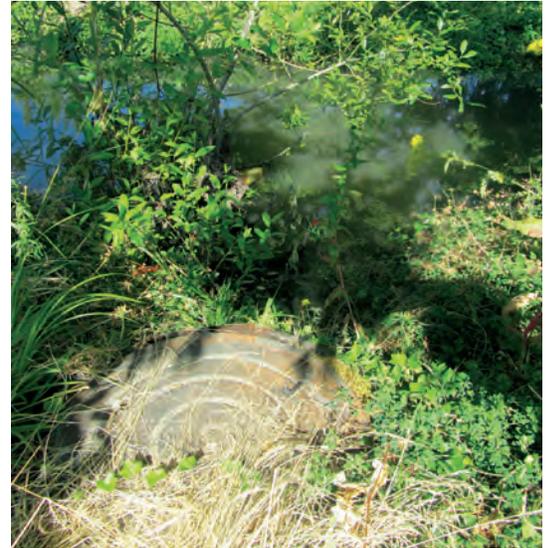
LOCATION	From Hunziker Street to the Railroad
PROJECT MANAGER	Michael Stone, <i>Public Works</i>
FUNDING STATUS	Fully Funded
PROJECT RESULTS	Additional sanitary sewer pipe capacity for development and improved maintenance access.

PROJECT NEED

Upgrade line capacity to reduce higher than normal maintenance needs.

PROJECT DESCRIPTION

This project is identified as #D-120 in the Sanitary Sewer Master Plan and involves increasing the capacity of an existing sanitary sewer line (serving the area north of Hunziker Street) to prevent overflows and to improve the access for routine maintenance. It will also provide sanitary sewer service for a portion of the undeveloped adjacent parcel (Fields property).



East Tigard Sewer Replacement

	Actual 2013	Projected 2014	Revised 2014	2015	2016	2017	2018	2019	Project Total
INTERNAL EXPENSES									
Project Management	0	5,000	5,000	0	50,000	0	0	0	55,000
Construction Management	0	10,000	10,000	0	30,000	0	0	0	40,000
Prior Life-to-Date	5,524	0	0	0	0	0	0	0	5,524
Total Internal Expenses	5,527	15,000	15,000	0	80,000	0	0	0	100,524
EXTERNAL EXPENSES									
Land/Right of Way Acquisition	0	25,000	0	0	0	0	0	0	25,000
Design and Engineering	0	305,000	0	0	5,000	0	0	0	310,000
Construction	0	0	330,000	0	1,100,000	0	0	0	1,100,000
Total External Expenses	0	330,000	330,000	0	1,105,000	0	0	0	1,435,000
Total Tigard Project Expense	5,524	345,000	345,000	0	1,185,000	0	0	0	1,535,524
REVENUE FUNDING SOURCE									
Sanitary Sewer Fund	5,524	345,000	345,000	0	1,185,000	0	0	0	1,535,524
Total Tigard Project Revenues	5,524	345,000	345,000	0	1,185,000	0	0	0	1,535,524



Krueger Creek (*Benchview*) Slope Stabilization (*Gallin Court*)

LOCATION Benchview Road

PROJECT MANAGER Michael Stone, *Public Works*

FUNDING STATUS Fully Funded

PROJECT RESULTS A stabilized bank and protected pipe.
Once the project is complete, it will be recommended that the residence be sold to recoup the costs of the purchase.

PROJECT NEED

Provide bank stabilization to prevent additional erosion.

PROJECT DESCRIPTION

Krueger Creek has eroded a segment of its bank exposing a sanitary sewer line and endangering a single family residence, which the city purchased in FY 2012–13. The city undertook a similar project just downstream of this site when only the sanitary sewer line was endangered.

Krueger Creek Slope Stabilization

	Actual 2013	Projected 2014	Revised 2014	2015	2016	2017	2018	2019	Project Total
INTERNAL EXPENSES									
Project Management	0	25,000	100,000	26,300	0	0	0	0	51,300
Construction Management	0	0	50,000	20,000	0	0	0	0	20,000
Prior Life-to-Date	26,253	0	0	0	0	0	0	0	26,253
Total Internal Expenses	26,253	25,000	150,000	46,300	0	0	0	0	97,553
EXTERNAL EXPENSES									
Construction Management	0	0	0	40,000	0	0	0	0	40,000
Land/Right of Way Acquisition	257,521	0	0	0	0	0	0	0	257,521
Design and Engineering	0	125,000	300,000	25,000	0	0	0	0	150,000
Construction	0	0	850,000	500,000	0	0	0	0	500,000
Total External Expenses	257,521	125,000	1,150,000	565,000	0	0	0	0	947,521
Total Tigard Project Expense	283,774	150,000	1,300,000	611,300	0	0	0	0	1,045,074
REVENUE FUNDING SOURCE									
Sanitary Sewer Fund	265,794	42,000	364,000	172,100	0	0	0	0	479,894
Water Quality/Quantity Fund	17,980	108,000	936,000	439,200	0	0	0	0	565,180
Total Tigard Project Revenues	283,774	150,000	1,300,000	611,300	0	0	0	0	1,045,074

Sewer Rehabilitation Program

LOCATION	To Be Determined
PROJECT MANAGER	To Be Determined, <i>Public Works</i>
FUNDING STATUS	Fully Funded
PROJECT RESULTS	Less infiltration and inflow (in compliance with local, state and federal regulations) thus delaying the requirement of treatment plant expansion and reducing maintenance costs.



PROJECT NEED

Prevent infiltration and inflow into the city's sanitary sewer system.

PROJECT DESCRIPTION

The Sanitary Sewer Master Plan identified sections of the sanitary sewer system where water is leaking (infiltrating) into the system as a result of older pipes, manholes and other appurtenances. In addition, rainwater is being directed into the system (inflow). This additional water results in less usable treatment capacity at the waste water treatment plant. This program continues the process of replacing identified older sections of the system piping, etc., where infiltration and inflow has become an issue. Work will continue through other identified problem areas where conditions warrant replacement.

PROJECT FUNDING

Actual Through 2013 is not calculated on Programs.

Sewer Rehabilitation Program

	Actual 2013	Projected 2014	Revised 2014	2015	2016	2017	2018	2019	Project Total
INTERNAL EXPENSES									
Project Management	0	30,500	30,500	20,000	20,000	20,000	20,000	20,000	130,500
Construction Management	0	30,500	30,500	20,000	20,000	20,000	20,000	20,000	130,500
Total Internal Expenses	0	61,000	61,000	40,000	40,000	40,000	40,000	40,000	261,000
EXTERNAL EXPENSES									
Public Involvement	0	6,100	6,100	5,000	5,000	5,000	5,000	5,000	31,100
Design and Engineering	0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	600,000
Construction	0	233,900	233,900	350,000	350,000	350,000	350,000	350,000	1,983,900
Total External Expenses	0	340,000	340,000	455,000	455,000	455,000	455,000	455,000	2,615,000
Total Tigard Project Expense	0	401,000	401,000	495,000	495,000	495,000	495,000	495,000	2,876,000
REVENUE FUNDING SOURCE									
Sanitary Sewer Fund	0	148,500	148,500	242,500	242,500	242,500	242,500	242,500	1,361,000
Total Revenue Funding	0	148,500	148,500	242,500	242,500	242,500	242,500	242,500	1,361,000
OTHER FUNDING SOURCE									
Clean Water Services	0	252,500	252,500	252,500	252,500	252,500	252,500	252,500	1,515,000
Total Other Revenue Funding	0	252,000	1,515,000						
Total Tigard Project Revenues	0	401,000	401,000	495,000	495,000	495,000	495,000	495,000	2,876,000



72nd Avenue Sewer Modification (Bonita Road)

LOCATION	72nd Avenue at Bonita Road
PROJECT MANAGER	Greg Berry, <i>Public Works</i>
FUNDING STATUS	Fully Funded
PROJECT RESULTS	Once completed, the potential to discharge raw sewage during peak flow conditions will be reduced.



PROJECT NEED

Correction of an existing capacity deficiency in the sanitary sewer system.

PROJECT DESCRIPTION

The project, as indicated in the Sanitary Sewer Master Plan, will correct a capacity deficiency along Bonita Road through the connection of two existing parallel lines so the capacity of both lines can be utilized.

72nd Avenue Sewer Replacement at Bonita Road

	Actual 2013	Projected 2014	Revised 2014	2015	2016	2017	2018	2019	Project Total
INTERNAL EXPENSES									
Project Management	0	0	0	0	0	0	40,000	40,000	80,000
Construction Management	0	0	0	0	0	0	40,000	40,000	80,000
Total Internal Expenses	0	0	0	0	0	0	80,000	80,000	160,000
EXTERNAL EXPENSES									
Public Involvement	0	0	0	0	0	0	5,000	5,000	10,000
Design and Engineering	0	0	0	0	0	0	65,000	65,000	130,000
Construction	0	0	0	0	0	0	250,000	250,000	500,000
Total External Expenses	0	0	0	0	0	0	320,000	320,000	640,000
Total Tigard Project Expense	0	0	0	0	0	0	400,000	400,000	800,000
REVENUE FUNDING SOURCE									
Sanitary Sewer Fund	0	0	0	0	0	0	400,000	400,000	800,000
Total Tigard Project Revenues	0	0	0	0	0	0	400,000	400,000	800,000

Barrows Road/Scholls Ferry Road Sewer Line Extension (Phase 2)

LOCATION	Barrows Road and Scholls Ferry Road
PROJECT MANAGER	Rob Murchison, <i>Public Works</i>
FUNDING STATUS	Fully Funded
PROJECT RESULTS	This project will be a part of the ‘back-bone’ sanitary sewer system to serve River Terrace.

PROJECT NEED

In conjunction with the development of the River Terrace Planning Area, Tigard’s sanitary sewer system will need to be extended to meet increased demands.

PROJECT DESCRIPTION

This project will extend a 27-inch sanitary sewer trunk line from existing facilities in Barrows Road to the improvements completed in conjunction with Phase 1 (FY 2013–14). The line will terminate west of the Scholls Ferry Road and Roy Rogers Road intersection. This is a cooperative effort with Clean Water Services (CWS) and the City of Beaverton.

Barrows Road/Scholls Ferry Road Sewer Line Extension (Phase 2)

	Actual 2013	Projected 2014	Revised 2014	2015	2016	2017	2018	2019	Project Total
INTERNAL EXPENSES									
Project Management	0	37,500	37,500	20,000	0	0	0	0	57,500
Construction Management	0	72,500	72,500	20,000	0	0	0	0	92,500
Total Internal Expenses	0	110,000	110,000	40,000	0	0	0	0	150,000
EXTERNAL EXPENSES									
Construction	0	410,000	410,000	350,000	0	0	0	0	760,000
Total External Expenses	0	410,000	410,000	350,000	0	0	0	0	760,000
Total Tigard Project Expense	0	520,000	520,000	390,000	0	0	0	0	910,000
REVENUE FUNDING SOURCE									
Sanitary Sewer Fund	0	520,000	520,000	390,000	0	0	0	0	910,000
Total Tigard Project Revenues	0	520,000	520,000	390,000	0	0	0	0	910,000



Red Rock Creek Corridor Sewer Study

LOCATION Near Baby's R Us

PROJECT MANAGER Greg Berry, *Public Works*

FUNDING STATUS Fully Funded

PROJECT RESULTS A more permanent solution to the continued erosion problem.



PROJECT NEED

Eroding creek banks continue to endanger a sanitary sewer line.

PROJECT DESCRIPTION

The city has made temporary repairs on two separate occasions, the last occurring in FY 2013–14. In an effort to develop a more permanent solution, a study will be conducted to provide recommendations and cost estimates on the potential rerouting of the sanitary sewer line or extensive restoration of the Red Rock Creek basin itself to stabilize the bank supporting the line.

Red Rock Creek/Slope Stabilization

	Actual 2013	Projected 2014	Revised 2014	2015	2016	2017	2018	2019	Project Total
INTERNAL EXPENSES									
Project Management	0	5,000	10,000	0	12,000	0	0	0	17,000
Construction Management	0	0	10,000	0	0	0	0	0	0
Total Internal Expenses	0	5,000	20,000	0	12,000	0	0	0	17,000
EXTERNAL EXPENSES									
Public Involvement	0	0	5,000	0	5,000	0	0	0	5,000
Design and Engineering	0	10,000	25,000	0	165,000	0	0	0	175,000
Construction	0	0	150,000	0	0	0	0	0	0
Total External Expenses	0	10,000	180,000	0	170,000	0	0	0	180,000
Total Tigard Project Expense	0	15,000	200,000	0	182,000	0	0	0	197,000
REVENUE FUNDING SOURCE									
Sanitary Sewer Fund	0	15,000	200,000	0	182,000	0	0	0	197,000
Total Tigard Project Revenues	0	15,000	200,000	0	182,000	0	0	0	197,000

Sanitary Sewer System Project Locations

CITYWIDE PROJECTS 93002, 93003 and 93016

