



CITY OF PORTLAND | BUREAU OF ENVIRONMENTAL SERVICES

CIP ANNUAL REPORT

FISCAL YEAR 2015-2016

SEPTEMBER 2016



ENVIRONMENTAL SERVICES
CITY OF PORTLAND

working for clean rivers

Nick Fish, Commissioner
Michael Jordan, Director



CITY OF PORTLAND
ENVIRONMENTAL SERVICES



1120 SW Fifth Avenue, Room 1000, Portland, Oregon 97204 ■ Nick Fish, Commissioner ■ Dean Marriott, Director

September 2016

Attached is the Bureau of Environmental Services Capital Improvement Program (CIP) Annual Report for Fiscal Year 2015-16 (FY16). This report provides information on the status of major projects (those with a Fiscal Year budget of \$500,000 or more) and a summary of the entire FY16 CIP.

Much of the work in FY16 reflects the bureau's renewed focus on its aging collection system. A significant percentage of the total CIP is for projects that address pipe condition and/or capacity. Several major projects support the bureau's requirement to comply with a variety of regulations including the Clean Water Act, the Safe Drinking Water Act, and the Endangered Species Act. At Columbia Boulevard Wastewater Treatment Plant, a number of projects are ongoing related to compliance with the NPDES (National Pollutant Discharge Elimination System) permit. Several projects in the Surface Water Program area are in response to ESA requirements. Other Surface Water projects address the 10-year nuisance flood which have an added benefit of reducing flood insurance requirements.

The bureau continues to refine its Asset Management program, using that work to prioritize investments based on risk. Risk considers the likelihood of an asset failing and the consequences of that failure. The goal is to re-invest "just in time" to get the most useful life out of any asset – but not too late so that we have a catastrophic failure.

Information for major projects includes the project scope, schedule, and budget, key identifying information, expenditures by fiscal year, a Gantt chart view of the schedule, and a project location map. Some profiles include pictures of current project activities. A few projects, such as land acquisition, do not fit this format and are summarized in an alternative format more appropriate to the project type.

The report that follows provides information on the expenditures by program and comparisons of projected budgeted amounts to actual spending.

If you have any questions about this document, please contact Susan Aldrich, Division Manager, Program Management & Controls, 503-823-5331.

Sincerely,



William F. Ryan
Chief Engineer

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Bureau Mission

The Bureau of Environmental Services (BES) serves the Portland community by protecting public health, water quality and the environment. We provide sewage and stormwater collection and treatment services to accommodate Portland's current and future needs. We protect the quality of surface and ground waters and conduct activities that plan and promote healthy ecosystems in our watersheds.

CIP Highlights

The majority of FY 2015-16 expenditures were in the Maintenance and Reliability Program (69%). The major projects (by dollars expended) were in the pipe rehabilitation program. Much of the collection system pipe in the older close-in neighborhoods is more than 100 years old. BES has a regular inspection program to determine pipe condition. Capital projects and operational activities rehabilitate or replace failing pipe.

The Sewage Treatment program maintains and upgrades the two wastewater treatment plants (Columbia Boulevard and Tryon Creek) and nearly 100 pump stations located throughout the collection system. Expenditures in this program area represented 15% of the CIP. The single largest project in the program



Replacement of old collection system pipe



Construction on the solids lagoon at the Columbia Boulevard Wastewater Treatment Plant



was the upgrade of solids lagoons at the Columbia Boulevard plant. Several pump station upgrades are also in progress. In the coming years, expenditures in this program area will increase significantly due to major investments at the two treatment plants.

The Surface Water Management Program addresses stormwater management, flood management, and overall watershed health including projects for compliance with the Endangered Species Act (primarily migratory fish). FY 2015-16 expenditures in this program area represented approximately 11% of the CIP.



Engineered log jams installed on the Columbia Slough improve habitat for migratory fish.

The Systems Development Program is for projects that expand the bureau’s systems or for projects in response to other development, generally streets and transit. In FY 2015-16, this program area represented 3% of expenditures.

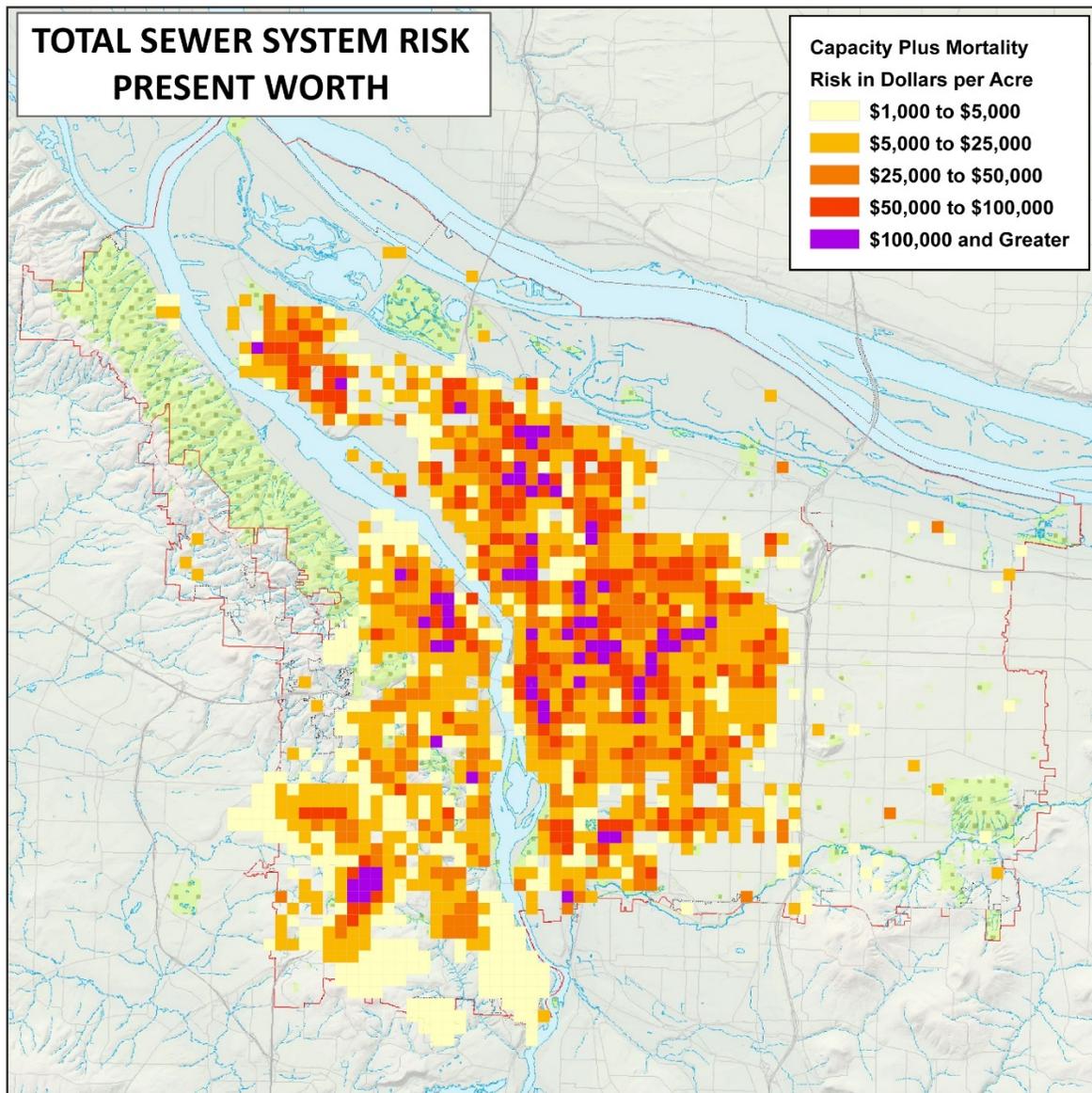
Capital Programs and Major Projects

The CIP is developed through a multi-step process to identify, develop, review, score, and rank projects for funding and scheduling priority. This process ensures that the core needs of the sewage, drainage, and surface water systems, and the communities they serve are appropriately funded and scheduled. A bureau-wide stakeholder review team investigates, scores, and ranks all CIP projects in accordance with identified CIP criteria. CIP-weighted criteria, scoring instructions, scheduling guidelines, estimating procedures, and project request forms are used to ensure each project is developed, reviewed, and scored based on detailed and consistent information. A CIP development strategy guides project selection and scheduling. Projects are reviewed by managers in finance, program areas, operations, and engineering to ensure financial resources are expended effectively and appropriately. The CIP management team evaluates all the information from the process, meets with project and program managers to refine cost and schedule data, and submits a recommendation to the Bureau Director. The Bureau Director reviews the findings and approves the CIP plan.



Maintenance and Reliability

This program funds systematic rehabilitation and replacement of the collection system to consistently and progressively reduce the total capital maintenance and reliability backlog. The March 2012 Systems Plan identified high priority pipe rehabilitation and capacity projects. Pipe segments were prioritized based on risk: likelihood of failure multiplied by consequence of failure. Failure can be structural and/or capacity-related. Projects with the highest benefit/cost ratios are proposed for funding in the CIP.



MAINTENANCE AND RELIABILITY MAJOR PROJECTS

Maintenance Capital Contract: This program is for relatively small collection system projects delivered through contracted construction. This work is distinguished from routine maintenance because the solutions require private contracting. Spot repair techniques used by city maintenance crews are insufficient. Due to the age of the system, structural failures, localized flooding, and/or hydraulic capacity problems are discovered with some frequency and need to be addressed quickly.

Northwest Neighborhoods: This series of projects will repair and upgrade sewers in this 4,000-acre basin where more than 50% of the area does not meet the bureau's level of service.

Tabor to the River: This multi-year, multi-project program addresses system deficiencies and will eliminate basement flooding for the 25-year storm with cost-effective projects in the 1,500-acre Taggart D Basin. The projects include both traditional pipe solutions and green infrastructure (green streets and private property retrofits). A similar suite of projects is getting underway in the Alder Basin.

Fanno Basin Improvements: This group of projects addresses deficiencies in the Fanno Basin Pump Station and Pressure Line system. Remaining work includes completion of improvements to major trunk and pressure lines.



A Tabor to the River green street facility at work during the December 2015 storm



Phases 2 and 3 Pipe Rehabilitation: These two programs include structural rehabilitation of critical small diameter (less than 36 inches) combined and sanitary sewers that are at the end of their economic life and have the highest consequence of failure. The pipes have been prioritized based on their business risk exposure so that pipes with the highest benefit (risk reduction) to cost ratio are addressed soonest. Recent inspections have added significantly to the number of pipe segments that need repair. Because the system is aging, this is anticipated to be an ongoing need.



Much of the collection system pipe in the older, close-in neighborhoods is more than 100 years old.

Large Diameter Sewer Rehabilitation: Large diameter pipes (over 36 inches) are the backbone of the collection system. This program is focused on nine of the large diameter sewers. Like the small diameter program, this program prioritizes projects to reduce risk. In addition to the program, there are two standalone large diameter projects: Southeast Interceptor and Taggart Outfall 30.

Fanno and Burlingame Basins Infiltration and Inflow: These programs will reduce infiltration and inflow of stormwater to sanitary sewers to reduce peak wet weather flows and the frequency of sanitary sewer overflows.



Sewage Treatment

This program funds projects at the Columbia Boulevard Wastewater Treatment Plant (CBWTP) and the Tryon Creek Wastewater Treatment Plant (TCWTP) as well as maintenance and repair/rehabilitation of the nearly 100 active pump stations located system-wide. The recently completed TCWTP Facilities Plan and the preliminary draft CBWTP Facilities Plan have identified the need for significant improvements at both plants for capacity and to meet permit requirements. Expenditures in this program are planned to increase significantly in the coming years.

SEWAGE TREATMENT MAJOR PROJECTS

Pump Station Improvement Program:

This is an ongoing program to refurbish and upgrade pump stations to meet current codes, to operate more reliably, to meet increased demand, and to replace outdated equipment.

Treatment Facilities — Rehabilitation and Modification: Both the CBWTP and TCWTP are major capital assets that require ongoing investment for repair, rehabilitation, and maintenance to protect the capital investment and enhance system reliability. This program is key to preventing violations of the city's National Pollutant Discharge Elimination System (NPDES) permit. It facilitates small capital projects to replace equipment and upgrade aging facilities.

CBWTP Lagoon Reconstruction: To better manage solids, this project is lining individual ponds and constructing additional dikes in the existing lagoon to create more separation.



Columbia Boulevard Wastewater Treatment Plant



Tryon Creek Wastewater Treatment Plant



Surface Water Management

This program systematically protects and restores surface water assets and ensures overall watershed health; prioritizes projects that protect the most critical existing watershed functions and/or preserve those locations at the greatest risk of damage; and implements Portland Watershed Management Plan (PWMP) recommendations. The program funds projects aimed at meeting requirements of Portland’s Underground Injection Controls (UIC) permit, Municipal Separate Storm Sewer System (MS4) permit, Total Maximum Daily Loads (TMDL), and Endangered Species Act (ESA) commitments. The bureau focuses efforts on comprehensive, multi-purpose solutions in the highest priority areas to address watershed health and public safety concerns associated with flooding, stream erosion, and urban pollution. The program pursues cost-sharing partnerships for projects to protect and restore critical watershed functions and provides matching funds for projects that are significantly funded by others. This program also supports the completion of the stormwater element of the BES System Plan.



Multnomah Arts Center Stormwater Retrofit

SURFACE WATER MANAGEMENT MAJOR PROJECTS

Johnson Creek Restoration Program: This program implements the recommendations of the 2001 Johnson Creek Restoration Plan. The plan identifies a number of projects to mitigate flooding, improve water quality, and enhance fish and wildlife habitat. This program includes willing seller land acquisition in four target areas. It also includes restoration of floodplain areas along Johnson Creek with the goals of increased flood storage, enhanced habitat for fish and other wildlife, and improved water quality. A series of projects are included in the five-year CIP.



Fanno/Tryon projects: This group of projects implements the recommendations of the Fanno/Tryon Watershed Plan and the objectives of the city's TMDL.

Grey to Green: These three capital improvement programs provide for land acquisition to protect habitat and watershed health, replacement of culverts for fish passage, and construction of green streets for more sustainable stormwater management.

Watershed Investment Program: This program funds innovative watershed enhancements. Priority is given to projects that leverage other funding sources, demonstrate new technologies, and/or address multiple watershed health goals.



Crystal Springs Green Streets – stream bank restoration

Systems Development

In support of the City's Comprehensive Plan and Metro's 2040 plan, BES funds projects that cost effectively and incrementally expand the sewer collection system and meet multiple watershed objectives. In addition, the bureau funds sewer rehabilitation and/or relocation required for major public infrastructure projects managed by others, specifically TriMet's Portland to Milwaukie Light Rail Project. This program also includes other capital projects that do not fall under the scope of other CIP program areas relating to sewer system expansion and privately funded development.

SYSTEMS DEVELOPMENT MAJOR PROJECTS

Party Sewers: This program addresses shared private sewer lines. Over several years, the program will provide property owners direct access to a municipal sewer line or ensure that appropriate easements have been acquired.



Summary Tables

Table 1. Environmental Services Capital Program Status Report

CIP Program	FY 2015-16 Adopted Budget	FY 2015-16 Revised Budget	FY 2015-16 Year-End Actuals	Variance \$	Variance %	FY 2016-17 Adopted Budget	Fall BMP Revised Budget	Variance \$	Variance %
	\$0	\$0	\$87,732	\$87,732		\$0	\$0	\$0	
Buildings	\$0	\$0	\$9,740	\$9,740		\$0	\$0	\$0	
Facilities	\$0	\$0	\$439	\$439		\$0	\$0	\$0	
Maintenance and Reliability	\$73,461,000	\$73,707,189	\$52,554,728	(\$21,152,461)	(29%)	\$72,084,000	\$72,065,871	(\$18,129)	(0%)
Sewage Treatment Systems	\$18,300,000	\$18,300,000	\$11,526,126	(\$6,773,874)	(37%)	\$17,336,000	\$17,336,000	\$0	0%
Support	\$0	\$0	\$755,167	\$755,167		\$0	\$0	\$0	
Surface Water Management	\$9,076,000	\$9,104,345	\$8,180,333	(\$924,012)	(10%)	\$13,628,000	\$13,628,000	\$0	0%
Systems Development	\$3,765,000	\$3,876,600	\$3,131,653	(\$744,947)	(19%)	\$6,095,000	\$6,095,000	\$0	0%
Total	\$104,602,000	\$104,988,134	\$76,245,917	(\$28,742,217)	(27%)	\$109,143,000	\$109,124,871	(\$18,129)	(0%)

* Prior Year variances compare Year-End Actuals to Revised Budget

** Current Year variances compare Revised Budget to Adopted Budget

Prior Year Variance Description

Main drivers of variance include:

Maintenance and Reliability

E10031—Phase 2 Pipe Rehab—Several projects have slower than anticipated construction start dates (\$14.5M)

E08401—Far North Nicolai—Redesign in response to neighborhood concerns resulted in slower than anticipated construction start (\$3.7M)

Treatment

E10033—CBWTP Biogas Utilization—Negotiations with NW Natural Gas have delayed project implementation (\$6.1M)

Surface Water Management

E10372—Culvert Replacement Phase 2—Bybee/Glenwood culvert delayed due to coordinating of construction by other agencies within the area (\$1.8M)

Systems Development

Various small projects are slightly under budget.

Current Year Variance Description

The only variance is in the Maintenance and Reliability program, reflecting savings from conversion of contract employees to full-time employees.



Table 2. FY 2015-16 CIP Budget vs. Expenditures

Program	Revised Budget (dollars)	Expenditures thru 7.25.16 (dollars)
SEWAGE TREATMENT		
Pump Station Improvements	4,000,000	4,469,296
Alder Pump Station Upgrade	0	532,947
Repair, Rehabilitation & Modifications	2,000,000	3,207,363
CBWTP Lagoon Reconstruction	3,300,000	1,283,309
CBWTP Digester Improvements	470,000	143,690
CBWTP Biogas Utilization	6,704,000	572,924
CBWTP Outfall Diffuser	100,000	64,822
CBWTP TWAS Piping Upgrade	526,000	6,099
CBWTP Improvements	0	565,497
TCWTP Headworks Improvements	1,000,000	119,038
TCWTP Secondary Process Improvements	200,000	29,742
TCWTP Improvements	0	142,139
Fiber Optic Expansion	0	271,545
Treatment Incidental	0	2,677
Sewage Treatment Program totals:	18,300,000	11,411,088
MAINTENANCE & RELIABILITY		
Maintenance Capital - Construction	230,000	820,537
Maintenance Capital - Contract	2,800,000	3,648,577
Eastside CSO Startup	0	872,941
Hollywood Stormwater Solutions	226,000	674,365
NWN: Far North Nicolai	4,500,000	830,847
NWN: Quimby & Raleigh	700,000	143,531
NWN: BCC Support Project	1,670,000	2,899,579
NWN: Central Tanner	100,000	0
NWN: Slabtown Sewer Replacement	0	386,939
NWN: Thurman St Reconstruction	0	18,578
T2R: SE Powell Recon & Green Streets	3,800,000	1,959,874
T2R: SE Clinton-Caruthers Improvements	50,000	213,126
T2R: SE Division Reconstruction	50,000	61,531
T2R: SE Hawthorne-Salmon Recon & Green Streets	4,500,000	3,410,662
T2R: Richmond Neighborhood Rehab & Green Streets	160,000	0
Alder: Sunnyside North Recon & Green Streets	809,000	247,900
Alder: Sunnyside East Recon & Green Streets	365,000	252,447
Wheeler WHE-04	300,000	569,092
Tryon SS: 1A TCWTP to Hwy 43	1,000,000	112,279
Fanno Basin Improvements	6,092,000	8,910,951
Burlingame Basin Inflow & Infiltration	3,436,000	247,080
Fanno Creek Inflow & Infiltration	350,000	148,352
OCIP	500,000	1,222,853
CSO Pressure Relief	300,000	288,088
Phase 2 Pipe Rehab	32,252,000	17,699,872
Phase 3 Pipe Rehab	3,121,000	3,719,293
Large Diameter Sewer Rehab	1,000,000	432,649
SE Interceptor Rehabilitation	3,500,000	566,054
Structural Rehab Taggart OF 30	650,000	432,135
Capital Maint-Non Process Facilities	1,000,000	784,692
Emergency projects	0	829,665
Maintenance Incidental	0	114,495
Maintenance & Reliability Program totals:	73,461,000	52,518,984

SURFACE WATER MANAGEMENT

JC: Community Restoration Partnership	100,000	28,824
JC: Springwater Wetland	100,000	7,079
JC: Brunkow	200,000	2,352
JC: Freeway Land Floodplain Restoration	50,000	0
JC: Oxbow	185,000	91,705
JC: Willing Seller - Land Acquisition	500,000	662,482
JC: other	0	135,315
FT: Beaverton Hillsdale Hwy	479,000	171,951
FT: SW 45th Ave Culvert	148,000	294,956
FT: Jackson Middle School Creek Daylite	173,000	70,574
FT: Boones Ferry Culvert	237,000	736,537
FT: Drainage Improvements	200,000	0
Oaks Bottom Floodplain Restoration	90,000	209,453
SE Platt Ave WQF	150,000	88,602
Watershed Investment Program	1,500,000	1,466,981
Grey to Green: Land Acquisition	2,000,000	1,561,997
Grey to Green: Green Streets	0	34,263
Grey to Green: Culverts	0	425,876
Culvert Replacement Phase 2	2,000,000	167,895
1% for Green Streets	0	532,394
Stephens Creek Phase 1	383,000	202,526
Columbia Slough Outfalls	581,000	399,888
Columbia Slough other	0	71,043
Balch Creek Trash Racks	0	83,095
Revegetation / Plant Establishment	0	256,885
Surface Water Incidental	0	28,231
Surface Water Management Program totals:	9,076,000	7,730,904

SYSTEMS DEVELOPMENT

Drainage Improvement	250,000	0
PBOT Interagency	350,000	210,011
Permit Reimbursement	45,000	59,319
S. Airport Pump Station	0	33,622
Party Sewers	2,000,000	2,137,911
Milwaukie Light Rail	120,000	78,447
Sewer Easements on Existing Sewers	50,000	0
SW Terwilliger Blvd Sewer Extension	250,000	178,955
Sewer Extentions for Septic Sys w/High Failure Risk	200,000	0
Systems Development Incidental	0	19,028
Systems Development Program totals:	3,265,000	2,717,293

CIP Miscellaneous (includes major software & furniture)	0	843,340
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Total:	104,102,000	75,221,609
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Table 3. FY 2015-16 Ongoing CIP Programs							
SAP Code	Name	FY 15-16 Actual (Year 1)	FY 16-17 Plan (Year 2)	FY 17-18 Plan (Year 3)	FY 18-19 Plan (Year 4)	FY 19-20 Plan (Year 5)	FY 20-21 Plan (Year 6)
E04661	Pump Station Improvements: Program to ensure the 97 pump stations are maintained in accordance with a scheduled plan to ensure pump station reliability.	4,469,296	4,000,000	4,000,000	4,000,000	4,000,000	5,000,000
E04861	Maintenance Capital - Construction: Rehab of existing sewer pipes in response to urgent but small-scale structural or hydraulic capacity deficiencies.	820,537	230,000	240,000	240,000	240,000	240,000
E04863	Maintenance Capital - Contract: Contracted repair and reconstruction of pipelines in the collection system approaching end of service life. Projects are prioritized based on the need to protect public health / property.	3,648,577	3,000,000	3,000,000	3,000,000	3,500,000	4,000,000
E04891	Treatment Plants Rehab; Repair & Modifications: Program for reinvestment in the treatment facilities to protect capital investment and enhance system reliability. It provides best management practice to prevent potential violations of NPDES permit.	3,207,363	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
E04894	Drainage Improvement: For stormwater improvements in association with LID or Public Work or urgent stormwater system rehab.	0	250,000	250,000	250,000	250,000	250,000
E04895	PBOT Interagency Reimbursement - BES design services for transportation projects.	210,011	350,000	350,000	350,000	350,000	350,000
E05219	Permit Reimbursement: Program to reimburse a developer for making public sewer available to another property per City Code Title 17.	59,319	250,000	45,000	45,000	45,000	45,000
E08748	Party Sewers: Program to address non-conforming sewers.	2,137,911	2,000,000	1,795,000	1,000,000	1,000,000	1,000,000
E08782	Watershed Investment Fund: Program for innovative watershed enhancements. Priority given to projects that leverage other funding sources, demonstrate new technologies, and/or address multiple watershed health goals.	1,466,981	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
E10263	Sewer Easements on Existing Sewers: To purchase legal easements for sewers located on private property.	0	50,000	50,000	50,000	50,000	50,000
E10491	Sewer Extensions for High Risk Septic Systems: For construction of small sanitary sewer extension projects to developed residential properties with septic systems.	0	100,000	100,000	1,000,000	100,000	100,000
E10594	Capital Maintenance - Non-process Facilities: Capital maintenance of BES-owned non-process facilities including the Water Pollution Control Lab, Materials Testing Lab, administration buildings at the Treatment Plants, and downtown office space.	784,692	680,000	975,000	1,500,000	2,000,000	500,000



Glossary for Project Profiles

Profile Element	Definition and Comments
Part A. Scope	
Description/Purpose:	Project scope or assets. What is the project?
Rationale: Plans/Studies & Specifics	Reason for project. Some projects have had plans, studies, analyses, Council or authorization for this project. Some specifics from those references to justify the project approval. Describes “why” we have started the project.
Major changes since start:	Summarize approved scope, schedule, and/or budget changes, life-to-date. This can be blank if there have been no changes.
Other info/ Coordination:	Include information such as agency coordination, grant funding, constraints or requirements on the project delivery.
Part B. Schedule	
Project opened:	Date the project number was assigned.
Initial planned comp:	This was the estimated completion date when the project number was assigned.
Current planned comp:	This is the current completion date as known on July 2016.
Part C. Cost Plan	
FY 15-16 plan:	Approved project budget.
FY 16-17 plan:	Consistent with the FY 16-17 Approved Budget.
Overall rate impact %:	Calculated % for CIP published July 2016. Formula: Project total ÷ \$35,000,000 ÷ 100.
Debt service estimate:	Estimated annual debt service for project. Calculation based on 20 years term at 7.1% financing rate.
Operations & Maintenance (O & M) Impact:	Dollars/year impact on operating budget.
Part D. Identification	
SAP #:	SAP capital project number for the project.
Program:	CIP program.
Part E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)	
Current Budget	Same as FY 15-16 plan.
FY 15-16 Expenditures	From program management data base as of July 25, 2016.
FY 16-17 Plan:	FY 16-17 Approved Budget.
FY 17-18 Plan:	FY 16-17 Approved Budget.
FY 18-19 Plan:	FY 16-17 Approved Budget.
FY 19-20 Plan:	FY 16-17 Approved Budget.
FY 20-21 Plan:	FY 16-17 Approved Budget.



Part F. Detailed Schedule with Gantt Chart (projects only)

Phase	Applicable phase of project management.
%	Percentage complete as of end of FY 15-16.
Dur	Length of time spent (or scheduled to be spent) in phase.
Finish	Confirmed end date OR projected end date.



Major Project Profile Index

CIP Program	SAP Code	Project	Project Total (\$)	Phase	Page
Sewage Treatment	E06072	CBWTP Lagoon Reconstruction	27,690,000	construction	16-17
Sewage Treatment	E10033	CBWTP Biogas Utilization	10,899,000	design	18-19
Sewage Treatment	E10582	TCWTP Headworks, Dry Weather Clarifier & Odor Control Improvements	38,522,000	pre-design	20-21
Maintenance & Reliability	E08401	Far North Nicolai Pipe Replacement	5,941,000	advertise	22-23
Maintenance & Reliability	E08402	NW Quimby & Raleigh Sewer (North Tanner)	904,000	closeout	24-25
Maintenance & Reliability	E09017	Balch Consolidated Conduit Support	3,174,000	closeout	26-27
Maintenance & Reliability	E08659	SE Powell Sewer Reconstruction & Greenstreets	5,598,000	construction	28-29
Maintenance & Reliability	E08668	SE Hawthorne-Salmon Sewer Reconstruction & Greenstreets	6,205,000	construction	30-31
Maintenance & Reliability	E10251	Tryon SS Protection: 1A TCWTP to Hwy 43	4,310,000	design	32-33
Maintenance & Reliability	E09051	SW 86th Ave Pump Station & Appurtenances (under E09045)	28,429,000	closeout	34-35
Maintenance & Reliability	E10121	SW Ventilation & Capacity Improvements (under E09045)	5,350,000	closeout	36-37
Maintenance & Reliability	E10030	SE Interceptor Rehabilitation	14,229,000	design	38-39
Maintenance & Reliability	E10332	Piedmont Sewer Rehabilitation (under E10031)	5,082,000	construction	40-41
Maintenance & Reliability	E10333	Sellwood-Moreland Sewer Rehabilitation (under E10031)	12,044,000	construction	42-43
Maintenance & Reliability	E10345	Rose City Park Sewer Rehabilitation (under E10031)	9,444,000	closeout	44-45
Maintenance & Reliability	E10357	Kenton Sewer Rehabilitation (under E10031)	3,920,000	closeout	46-47
Maintenance & Reliability	E10384	Hollywood-Grant Park (under E10031)	11,759,000	construction	48-49
Maintenance & Reliability	E10475	Powell Sewer Rehabilitation Phase 1 (under E10031)	14,287,000	construction	50-51
Maintenance & Reliability	E10482	Cured In Place Pipe 2014 (under E10031)	4,037,000	construction	52-53
Maintenance & Reliability	E10564	Humboldt Sewer Rehabilitation (under E10031)	4,000,000	construction	54-55
Maintenance & Reliability	E10367	Sunnyside North Sewer Reconstruction & Greenstreets	8,975,000	design	56-57
Maintenance & Reliability	E10220	Structural Rehabilitation Taggart - Outfall 30	14,805,000	design	58-59
Maintenance & Reliability	E10562	City-wide 2017 (under E10500)	11,543,000	design	60-61
Surface Water Mgmt.	E10372	Culvert Replacement Phase 2 - (Bybee-Glenwood)	4,428,000	advertise	62-63





CBWTP Lagoon Reconstruction

Project No. E06072

CBWTP Lagoon Reconstruction

A. Scope	
Description / Purpose:	Construct additional dikes in the existing lagoon to create more separation. The individual ponds will be lined with a monofill. Phase one construction is complete. Phase two will be constructed over the next three years.
Rationale: Plans/Studies & Specifics	This project involves the lining of the solids storage lagoon at the CBWTP. The existing lagoon is unlined and there are concerns the contents are seeping into the groundwater. In addition, lagoon solids pose a potential environmental liability to the City and should be removed.
Major changes since start:	There have been a number of schedule adjustments (planned delays) since the project was initiated in 1998. Budget increased due to higher amounts of material for disposal than estimated.
Other info / Coordination:	

B. Schedule

Project Opened	7/1/1998
Initial planned comp	6/28/2002
Current planned comp	4/29/2022

C. Cost Plan

FY15-16 Plan:	\$27,690,131
FY16-17 Plan:	\$28,286,146
Debt Service Est:	\$2,008,316
Rate Impact:	0.81%
O & M Impact:	\$5,000

D. Identification

SAP#	E06072
Program:	SEWAGE TREATMENT

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign							
Design		\$98,109					
Advertising/NTP		\$88,387					
Construction		\$1,043,285					
Startup/Closeout		\$53,527					
Sum	\$27,690,131	\$1,283,309	\$2,740,000	\$2,900,000	\$4,700,000	\$640,000	\$110,000





CBWTP Biogas Utilization

Project No. E10033

CBWTP Biogas Utilization

A. Scope	
Description / Purpose:	The project scope is design and construct a gas treatment facility to treat available biogas for pipeline injection. The project also includes design and construction of an onsite renewable natural gas (RNG) fueling station for internal fleet.
Rationale: Plans/Studies & Specifics	Based on the alternative analysis recommendation and approval, the project scope was changed to gas treatment for vehicle use. The project will include design and construction of gas treatment, compression, storage, and fueling facilities, as well as consumption and/or sale of the product (vehicle fuel).
Major changes since start:	Project was initially proposed as an expansion to the on-site co-generation facility.
Other info / Coordination:	Working with Northwest Natural Gas.

B. Schedule	
Project Opened	5/24/2016
Initial planned comp	12/31/2013
Current planned comp	11/4/2020

C. Cost Plan	
FY15-16 Plan:	\$10,899,341
FY16-17 Plan:	\$10,899,341
Debt Service Est:	\$773,853
Rate Impact:	0.31%
O & M Impact:	\$0

D. Identification	
SAP#	E10033
Program:	T02 SEWAGE TREATMENT

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$455,000	\$1,687					
Design	\$821,166	\$570,492					
Advertising/NTP	\$59,900		\$25,000				
Construction	\$9,358,109	\$745	\$4,775,000	\$4,495,000			
Startup/Closeout	\$205,166			\$205,000			
Sum	\$10,899,341	\$572,924	\$4,800,000	\$4,700,000	\$0	\$0	\$0



Phase	%	Dur	Finish	2016	2017	2018	2019	2020
Design	50	7.6 mos	4/24/17					
Advertise-NTP		2.2 mos	5/10/17					
Construction		10 mos	8/9/18					
Startup/Closeout		19.1 mos	11/4/20					





TCWTP Headworks, Dry Weather Clarifier & Odor Control Improvements

Project No. E10582

TCWTP Headworks, Dry Weather Clarifier & Odor Control Improvements

A. Scope	
Description / Purpose:	TCWTP improvements are driven by a need to bring the headworks process up to current treatment and efficiency standards, increase peak flow hydraulic capacity, community needs, and an opportunity to improve the plant hydraulic profile.
Rationale: Plans/Studies & Specifics	The TCWTP Facilities Plan is the primary blueprint for updating the plant's infrastructure and bring it up to acceptable operating standards.
Major changes since start:	In very early design phase.
Other info / Coordination:	Project is jointly funded with Lake Oswego.

B. Schedule	
Project Opened	8/17/2014
Initial planned comp	11/15/2018
Current planned comp	1/19/2023

C. Cost Plan	
FY15-16 Plan:	\$38,522,427
FY16-17 Plan:	\$38,671,796
Debt Service Est:	\$2,745,698
Rate Impact:	1.10%
O & M Impact:	\$0

D. Identification	
SAP#	E10582
Program:	SEWAGE TREATMENT

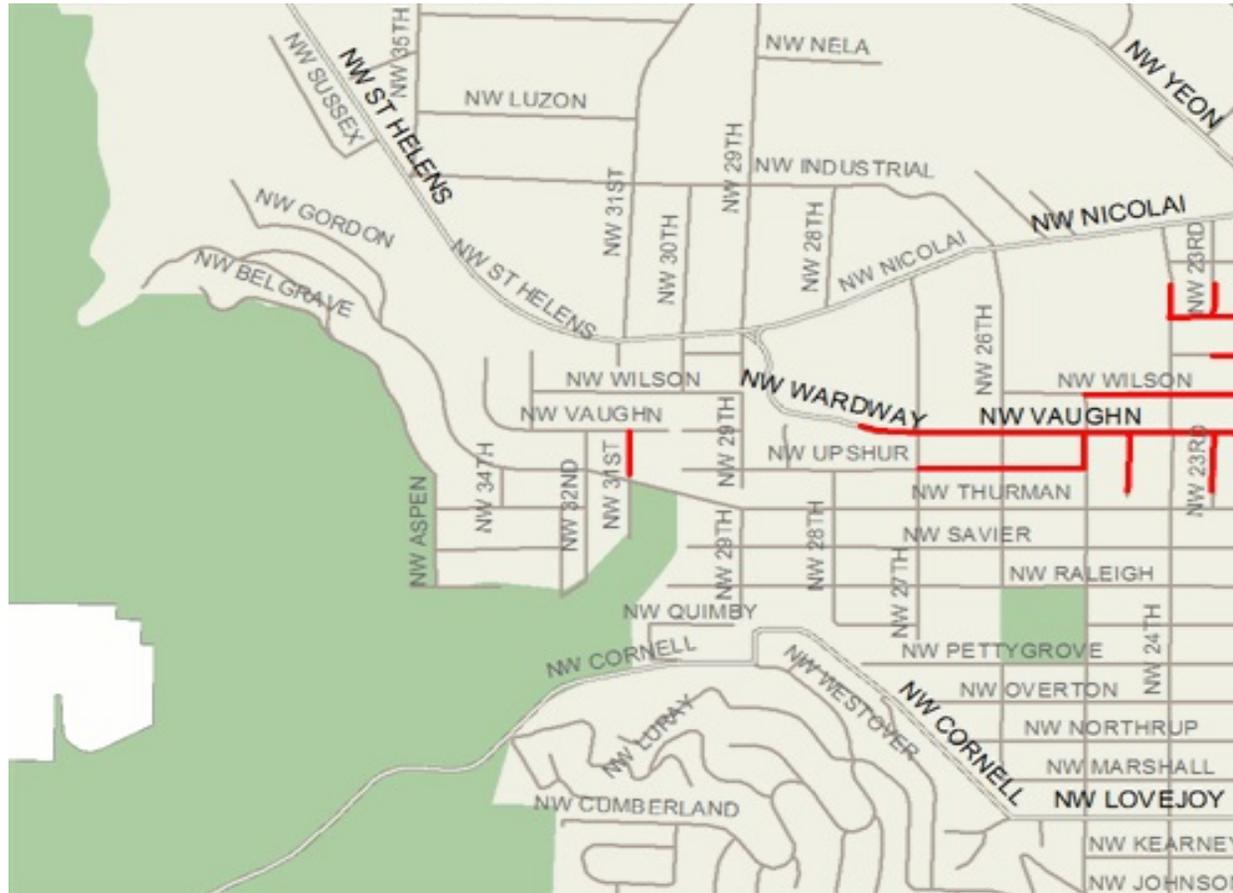
E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition	\$3,885,490						
Predesign	\$2,578,443	\$100,046					
Design	\$3,729,919	\$18,891	\$2,000,000	\$6,955,000			
Advertising/NTP	\$13,402	\$100		\$45,000			
Construction	\$28,214,542				\$12,000,000	\$14,000,000	\$2,750,000
Startup/Closeout	\$100,631						\$250,000
Sum	\$38,522,427	\$119,038	\$2,000,000	\$7,000,000	\$12,000,000	\$14,000,000	\$3,000,000



Phase	%	Dur	Finish	2015	2016	2017	2018	2019	2020	2021	2022	2023
Land Acquisition	40	47 mos	6/30/18									
Predesign	65	34.6 mos	6/20/17									
Design		15.4 mos	9/24/18									
Advertise-NTP		2.8 mos	12/19/18									
Construction		32 mos	7/28/21									
Startup/Closeout		18 mos	1/19/23									





Far North Nicolai Pipe Replacement
Project No. E08401

Far North Nicolai Pipe Replacement

A. Scope	
Description / Purpose:	Construct approximately 8,000 linear feet of pipe ranging in size from 8" to 30" to relieve basement sewer back ups, address pipe conditions, and alleviate hydraulic capacity problems. Located in NW Portland, the project area is generally bound by Reed, Hwy 30, Thurman, and 28th.
Rationale: Plans/Studies & Specifics	This project was a recommendation from the Northwest Neighborhoods Combined Sewer Relief Predesign. Increased hydraulic capacity will eliminate basement flooding from the 25-year storm.
Major changes since start:	Original scope reduced and budget lowered to \$6.0 M. Construction is underway with substantial completion scheduled for July 2017.
Other info / Coordination:	Extensive neighborhood involvement resulted in modifications to scope to reduce the amount of night work required.

B. Schedule	
Project Opened	1/25/2016
Initial planned comp	3/1/2010
Current planned comp	11/17/2017

C. Cost Plan	
FY15-16 Plan:	\$5,941,000
FY16-17 Plan:	\$5,966,000
Debt Service Est:	\$423,586
Rate Impact:	0.17%
O & M Impact:	\$0

D. Identification	
SAP#	E08401
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign							
Design	\$710,000	\$182,942					
Advertising/NTP	\$20,000	\$38,288					
Construction	\$5,177,000	\$609,618	\$4,200,000				
Startup/Closeout	\$34,000						
Sum	\$5,941,000	\$830,847	\$4,200,000	\$0	\$0	\$0	\$0



Phase	%	Dur	Finish	2012	2013	2014	2015	2016	2017	2018
Design	100	30.5 mos	1/25/16							
Advertise-NTP	100	4 mos	6/2/16							
Construction	18	12 mos	7/1/17							
Startup/Closeout		4 mos	11/17/17							





NW Quimby & Raleigh Sewer (North Tanner)

Project No. E08402

NW Quimby & Raleigh Sewer (North Tanner)

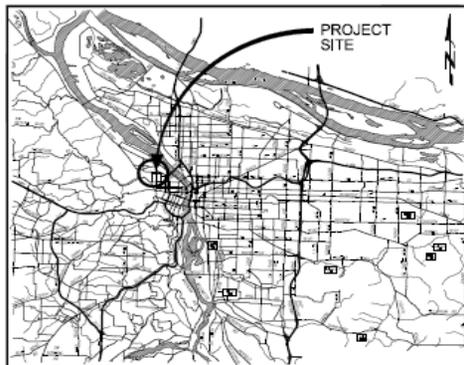
A. Scope	
Description / Purpose:	Upsize 6 pipe segments from 16 to 24" in NW Quimby & NW Raleigh between 21st and 22nd. The clay pipes were over 100 years old and too small resulting in potential sewer backups. The adjacent new development, part of the Conway Master Plan, is expected to increase this risk.
Rationale: Plans/Studies & Specifics	The current clay pipes, over 100 years old, were classified as too small per the 2012 Combined Sewer System Plan. With current conditions, 8 properties within the affected area have a 2 year risk of basement sewer backup, 10 properties have a five year risk, and 2 properties have a 10 year risk. The adjacent new development, part of the Conway Master Plan, is expected to increase this risk.
Major changes since start:	Construction was completed prior to completion of the adjacent development.
Other info / Coordination:	

B. Schedule	
Project Opened	5/15/2014
Initial planned comp	2/21/2011
Current planned comp	11/1/2015

C. Cost Plan	
FY15-16 Plan:	\$904,000
FY16-17 Plan:	\$1,079,000
Debt Service Est:	\$76,609
Rate Impact:	0.03%
O & M Impact:	\$0

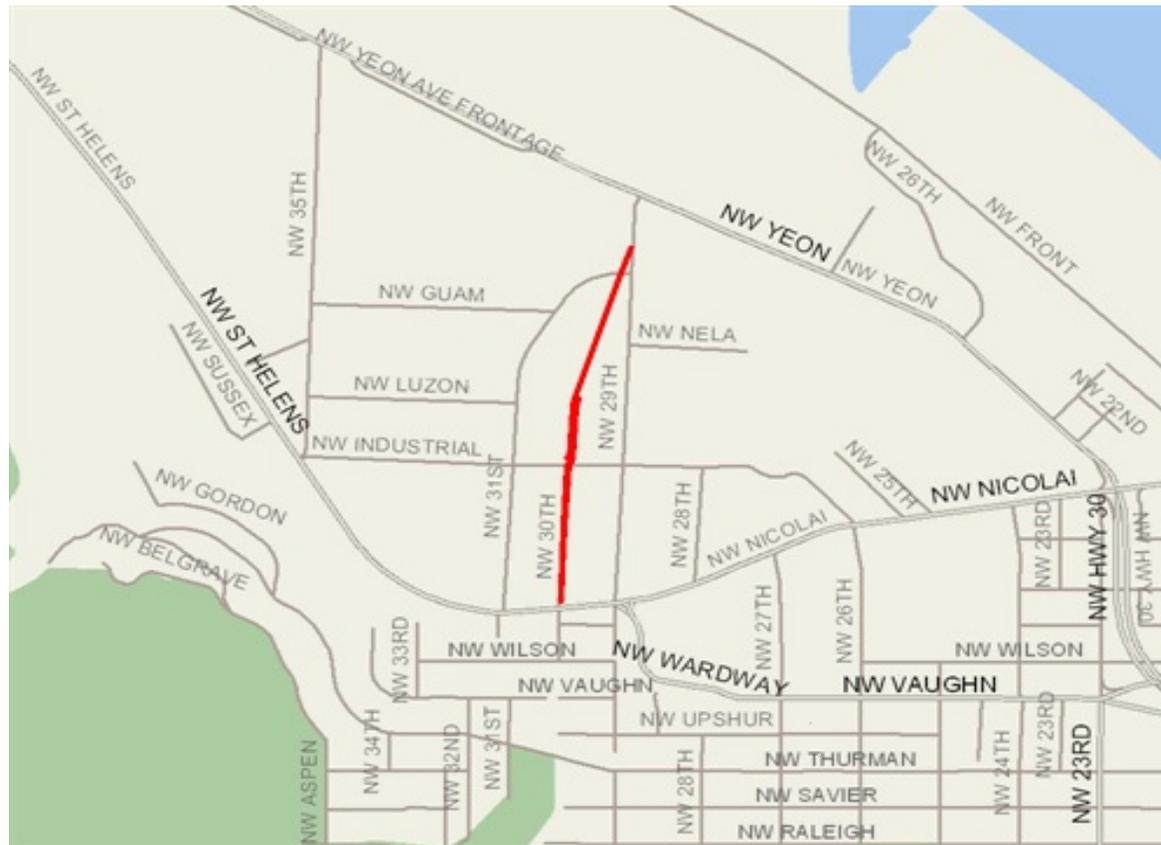
D. Identification	
SAP#	E08402
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$44,000						
Design	\$48,000						
Advertising/NTP	\$10,000						
Construction	\$791,000	\$139,818					
Startup/Closeout	\$11,000	\$3,713					
Sum	\$904,000	\$143,531	\$0	\$0	\$0	\$0	\$0



Phase	%	Dur	Finish	2015	2016	2017
Predesign	100	2 mos	7/3/14			
Design	100	8 mos	2/17/15	█		
Advertise-NTP	100	2 mos	4/3/15	█		
Construction	100	4 mos	7/27/15		█	
Startup/Closeout	100	3.5 mos	11/1/15			█





Balch Consolidation Conduit Support

Project No. E09017

Balch Consolidation Conduit Support

A. Scope	
Description / Purpose:	Construct improvements to replace pipes in poor structural condition and relieve street flooding and basement sewer backups. Located in NW Portland, the project area is generally bound by Yeon, 29th, Nicolai, and St. Helens Road.
Rationale: Plans/Studies & Specifics	Scope of this project is the remainder of the scope of the Original BCC Support Projects 1 & 2 (from the Northwest Neighborhoods Study) that was not incorporated into the Balch Consolidation Conduit (BCC) project. Project goal also includes diverting stormwater to the BCC and abandonment of a 54" sewer combined sewer between Nicolai Ave and 31st Avenue. Work also includes replacing flap gate to outfall to prevent backwater (Willamette River) from entering the GLI.
Major changes since start:	Construction is complete.
Other info / Coordination:	Required coordination with railroad.

B. Schedule	
Project Opened	7/22/2009
Initial planned comp	6/29/2012
Current planned comp	10/1/2016

C. Cost Plan	
FY15-16 Plan:	\$3,173,974
FY16-17 Plan:	\$3,173,974
Debt Service Est:	\$225,352
Rate Impact:	0.09%
O & M Impact:	\$0

D. Identification	
SAP#	E09017
Program:	MAINT & RELIABILITY

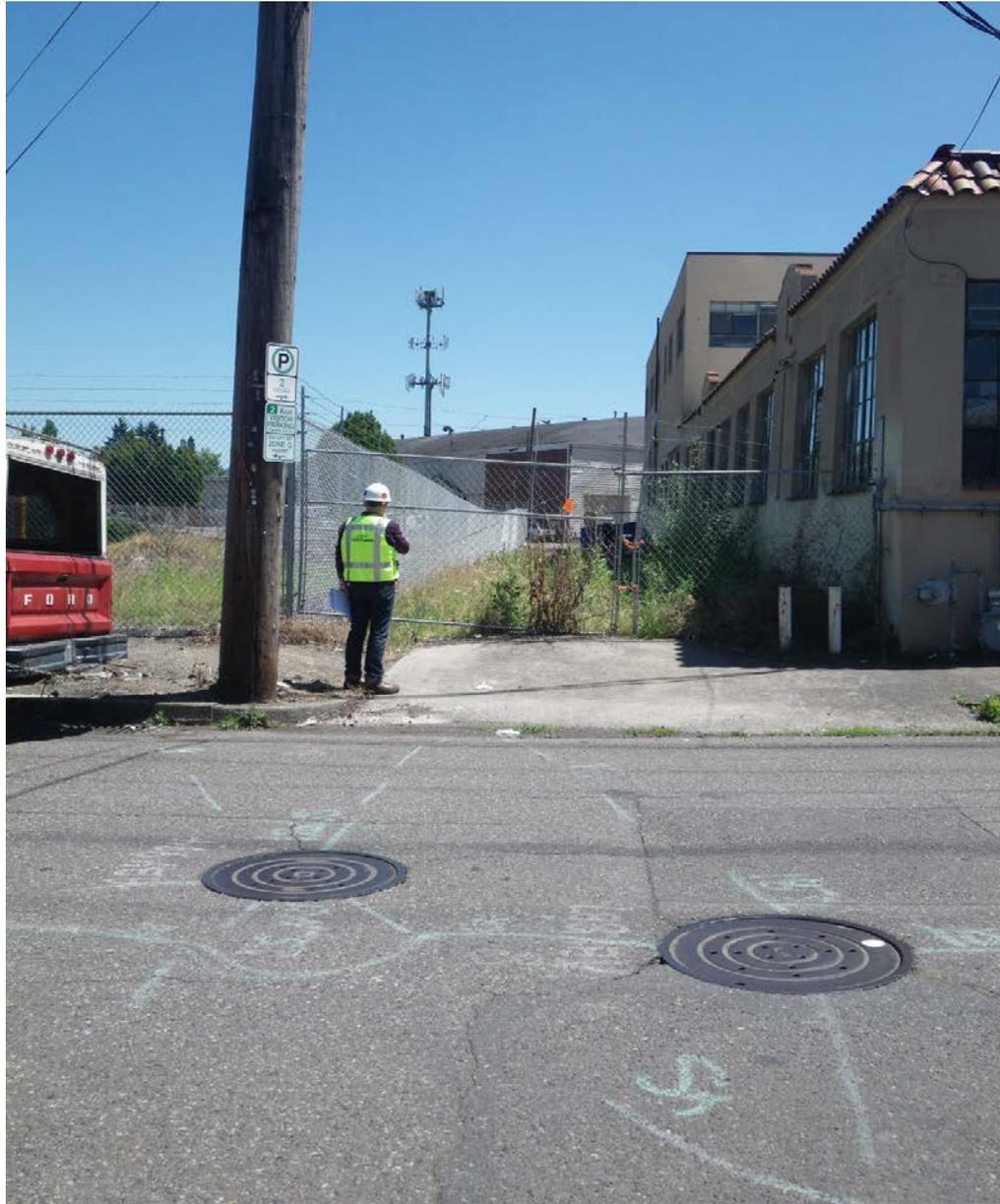
E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$120,175	\$3,377					
Design	\$275,917						
Advertising/NTP	\$30,000	\$154					
Construction	\$2,745,882	\$2,891,243					
Startup/Closeout	\$2,000	\$8,865					
Sum	\$3,173,974	\$2,903,639	\$0	\$0	\$0	\$0	\$0



Phase	%	Dur	Finish	2010	2011	2012	2013	2014	2015	2016
Predesign	100	38 mos	9/1/12	█						
Design	100	30 mos	2/27/15		█					
Advertise-NTP	100	4 mos	6/25/15						█	
Construction	100	8 mos	2/20/16							█
Startup/Closeout	75	7.5 mos	10/1/16							█





SE Powell Sewer Reconstruction & Greenstreets

Project No. E08659

SE Powell Sewer Reconstruction & Greenstreets

A. Scope	
Description / Purpose:	Reconstruct approximately 5,300 linear feet of pipe including 1,790 linear feet in poor condition and 3,130 linear feet with inadequate capacity, and 365 linear feet of sewer extensions. Also construct 50 vegetated stormwater infiltration facilities. Located in SE Portland, there are two project areas generally bound (1) between Taggart & 7th and Rhone & 15th and (2) between 24th & 25th and Cora & Reynolds.
Rationale: Plans/Studies & Specifics	This project merges TGD-01, TGD-02 and TGA-06. It will construct around 5,300 linear feet of proposed mainline pipe work from 8" to 24". Approx. 1,790 linear feet is condition-based only and 3,130 linear feet is capacity-related, with 365 linear feet of sewer extension main.
Major changes since start:	Construction is underway with substantial completion scheduled for June 2017.
Other info / Coordination:	

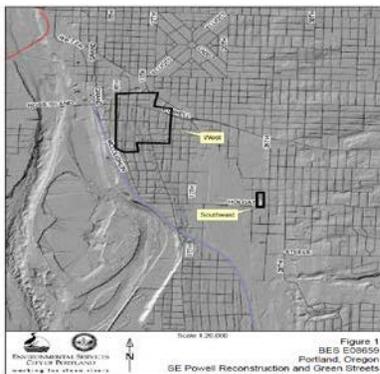
B. Schedule	
Project Opened	4/23/2012
Initial planned comp	5/30/2011
Current planned comp	8/1/2018

C. Cost Plan	
FY15-16 Plan:	\$5,598,180
FY16-17 Plan:	\$5,603,180
Debt Service Est:	\$397,826
Rate Impact:	0.16%
O & M Impact:	\$5,000

D. Identification	
SAP#	E08659
Program:	MAINT & RELIABILITY

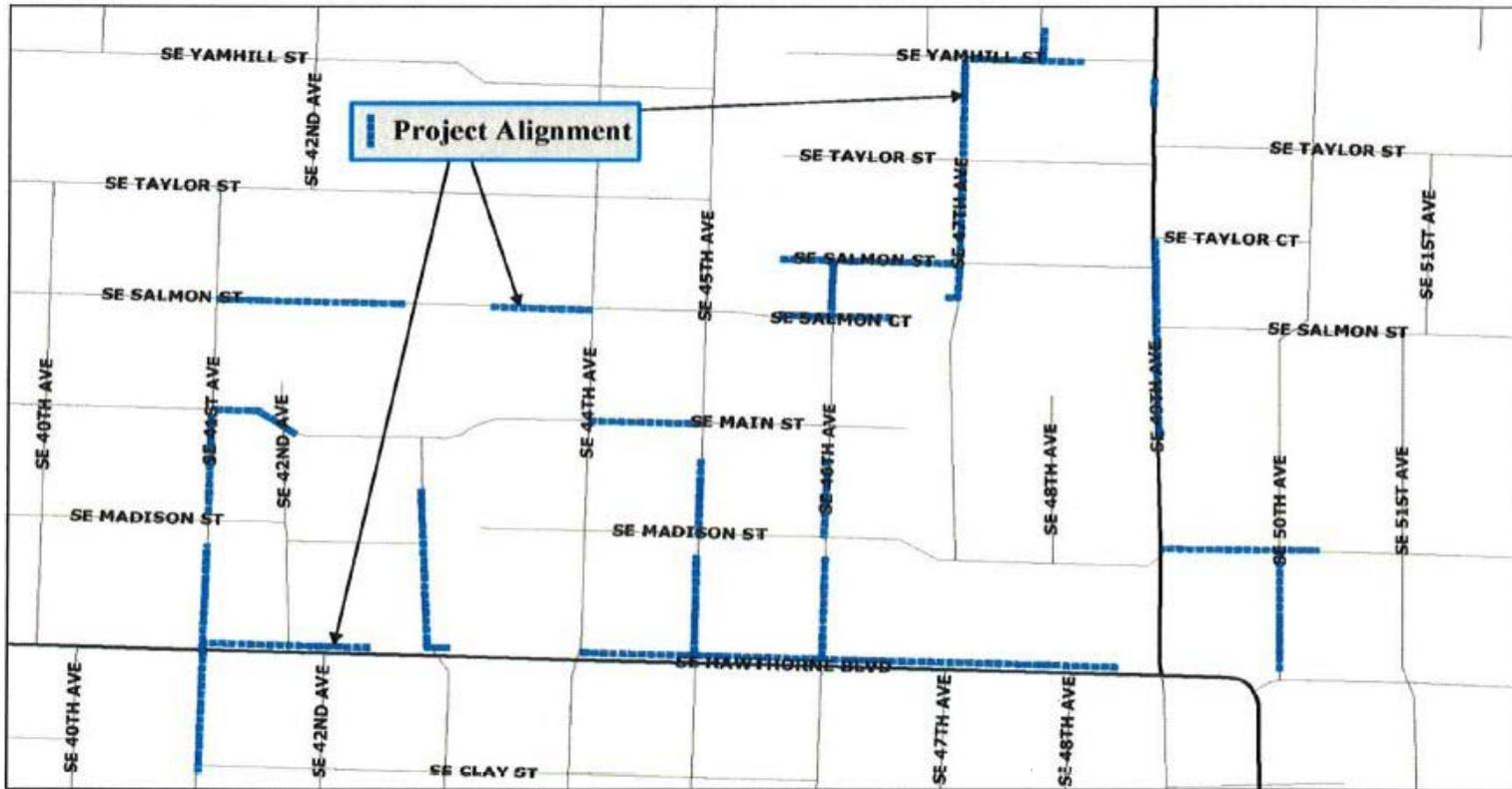
E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign		\$106					
Design	\$910,000	\$46,641	\$600,000				
Advertising/NTP	\$23,000	\$72,595					
Construction	\$4,635,180	\$1,839,886	\$3,000,000				
Startup/Closeout	\$30,000	\$645		\$92,000	\$90,000		
Sum	\$5,598,180	\$1,959,874	\$3,600,000	\$92,000	\$90,000	\$0	\$0



Phase	%	Dur	Finish	2012	2013	2014	2015	2016	2017	2018
Design	100	28 mos	11/10/15	█	█	█	█	█	█	█
Advertise-NTP	100	4 mos	2/29/16					█		
Construction	15	10 mos	12/27/16					█		
Startup/Closeout		21 mos	8/1/18						█	█





SE Hawthorne-Salmon Sewer Reconstruction & Greenstreets
Project No. E08668

SE Hawthorne-Salmon Sewer Reconstruction & Greenstreets

A. Scope	
Description / Purpose:	Project combines two previously planned projects into a single construction project. Located in SE Portland, one area is generally bound by Madison, 41st, Clay, and 50th; the other by Yamhill, 46th, Main, and 49th.
Rationale: Plans/Studies & Specifics	This project represents two areas identified from the Integrated Taggart D Pre-design Report that address sewer capacity, structural pipe integrity, and watershed health issues in this basin. Together the projects will rehabilitate 4,813 linear feet of pipe, install 28 stormwater facilities, plant 277 trees, and relieve basement backup risk to 111 parcels and street flooding at 21 manholes.
Major changes since start:	Construction is underway with substantial completion scheduled for November 2016.
Other info / Coordination:	

B. Schedule	
Project Opened	1/2/2014
Initial planned comp	12/5/2014
Current planned comp	3/19/2019

C. Cost Plan	
FY15-16 Plan:	\$6,205,000
FY16-17 Plan:	\$6,556,000
Debt Service Est:	\$465,476
Rate Impact:	0.19%
O & M Impact:	\$0

D. Identification	
SAP#	E08668
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign							
Design		\$98,109					
Advertising/NTP		\$88,387					
Construction		\$1,043,285					
Startup/Closeout		\$53,527					
Sum	\$27,690,131	\$1,283,309	\$2,740,000	\$2,900,000	\$4,700,000	\$640,000	\$110,000



Phase	%	Dur	Finish	2013	2014	2015	2016	2017	2018
Design	100	36 mos	7/10/15	[Gantt bar from 2013 to 2015]					
Advertise-NTP	100	4 mos	11/2/15			[Gantt bar in 2015]			
Construction	50	12.5 mos	11/14/16				[Gantt bar from 2015 to 2016]		
Startup/Closeout		28.5 mos	3/19/19					[Gantt bar from 2017 to 2018]	





Tryon SS Protection: 1A TCWTP to Hwy 43

Project No. E10251

Tryon SS Protection: 1A TCWTP to Hwy 43

A. Scope	
Description / Purpose:	Upgrade the Tryon Creek sewer from the Tryon Creek wastewater treatment plant approximately 1,867 feet upstream into Tryon Creek State Park. Based on the condition of the pipeline, support piers, and stream channel, upgrades will be made and the creek restored.
Rationale: Plans/Studies & Specifics	Tryon Sanitary Sewer enters the Tryon Creek Wastewater Treatment Plant as an elevated 30" sewer supported on piers. These piers are not designed to withstand a certain seismic events and are therefore at risk for failure during a large seismic event, posing a potential risk to adjacent property and Tryon Creek.
Major changes since start:	Significant increases to scope of the project to include the segment of pipe from Highway 43 to TCWTP. Most of the sewer is above grade. The increased scope also includes seismic upgrade. Project is currently on hold pending additional evaluation as part of the TCWTP Headworks Improvements.
Other info / Coordination:	The City of Lake Oswego also has an interceptor sewer entering the plant, a portion of which parallels the City of Portland's Tryon sewer. The City of Lake Oswego is currently working to retrofit their elevated sewer. Their design was completed in 2012.

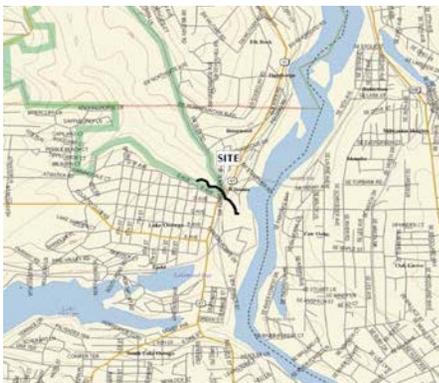
B. Schedule	
Project Opened	7/1/2010
Initial planned comp	7/2/2012
Current planned comp	12/22/2020

C. Cost Plan	
FY15-16 Plan:	\$4,310,000
FY16-17 Plan:	\$4,330,000
Debt Service Est:	\$307,430
Rate Impact:	0.12%
O & M Impact:	\$0

D. Identification	
SAP#	E10251
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition		\$648					
Predesign	\$340,000	\$103					
Design	\$1,180,000	\$108,468					
Advertising/NTP	\$10,000						
Construction	\$2,775,000		\$1,000,000	\$1,683,000			
Startup/Closeout	\$5,000			\$17,000			
Sum	\$4,310,000	\$109,219	\$1,000,000	\$1,700,000	\$0	\$0	\$0



Phase	%	Dur	Finish	2015	2016	2017	2018	2019	2020
Predesign	100	46 mos	9/24/14	█					
Design	30	40 mos	1/6/18		█	█			
Advertise-NTP		3.5 mos	4/18/18				█		
Construction		6 mos	10/17/18				█		
Startup/Closeout		2.5 mos	12/22/20					█	█





SW 86th Ave PS & Appurtenance

Project No. E09051

SW 86th Ave PS & Appurtenance (under E09045)

A. Scope	
Description / Purpose:	Construct a new pump station to expand Fanno Basin System pumping capacity.
Rationale: Plans/Studies & Specifics	The Fanno Creek Basin sewer collection and conveyance system includes a firm pumping capacity of 24 cubic feet/second, but needs additional firm pumping capacity (based on current modeling) to capture and convey flows that are generated in a 5-year storm event. A minimum firm pumping capacity of 47-cfs is required, and the planned SW 86th Ave PS & Appurtenances will provide the additional 23-cfs firm pumping capacity.
Major changes since start:	Construction is substantially complete.
Other info / Coordination:	Land use permits required from Washington County.

B. Schedule	
Project Opened	3/2/2009
Initial planned comp	6/30/2012
Current planned comp	8/11/2018

C. Cost Plan	
FY15-16 Plan:	\$28,429,281
FY16-17 Plan:	\$28,434,158
Debt Service Est:	\$2,018,825
Rate Impact:	0.81%
O & M Impact:	\$125,000

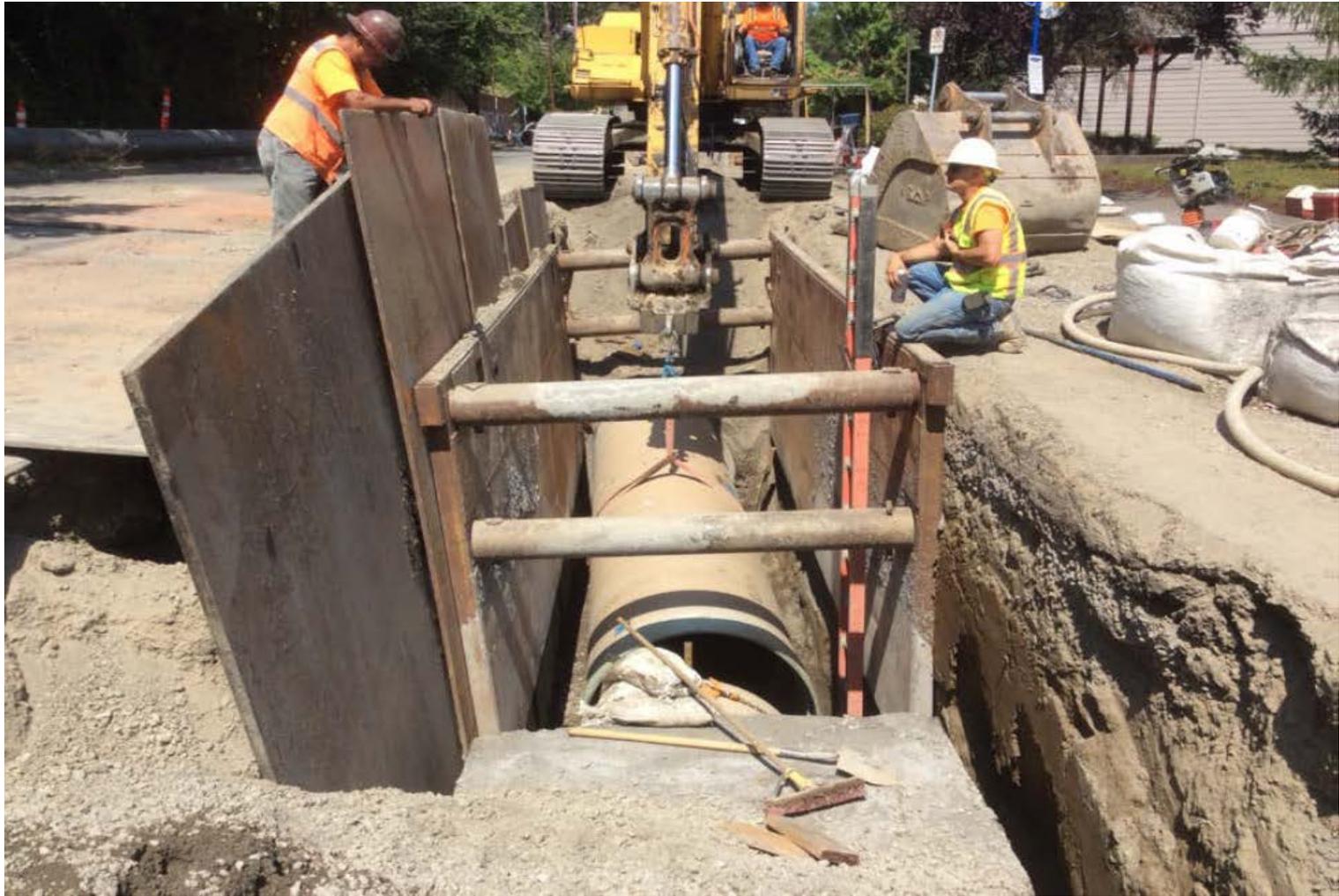
D. Identification	
SAP#	E09051
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition	\$2,250,000	\$23,729					
Predesign	\$871,483	\$613					
Design	\$4,912,623	\$36,917					
Advertising/NTP	\$43,846						
Construction	\$20,130,681	\$5,096,617	\$375,000				
Startup/Closeout	\$220,648	\$43,361	\$75,000				
Sum	\$28,429,281	\$5,201,237	\$450,000	\$0	\$0	\$0	\$0



Phase	%	Dur	Finish	2010	2011	2012	2013	2014	2015	2016	2017	2018
Land Acquisition	100	30 mos	8/9/11									
Predesign	100	31 mos	3/14/12									
Design	100	12 mos	3/4/13									
Advertise-NTP	100	5 mos	8/9/13									
Construction	95	37 mos	8/31/16									
Startup/Closeout		16 mos	8/11/18									





SW Ventilation and Capacity Improvements

Project No. E10121

SW Ventilation & Capacity Improvements (under E09045)

A. Scope	
Description / Purpose:	Construct an air treatment system with sufficient capacity and odor removal capabilities to treat expected odors generated from the Southwest Parallel Interceptor and Burlingame Trunk. Odors are anticipated once the upsized system begins to carry flows from the Fanno Basin Pump Station.
Rationale: Plans/Studies & Specifics	Constructed in two phases. Phase 1 constructed a parallel 24-inch diameter pipeline along Taylors Ferry Road and a 48-inch diameter pipeline along Virginia Avenue. The second phase constructed a 4,000 cubic feet per minute air ventilation facility, along with a 1,300 square foot rectangular concrete and masonry unit building at the intersection of SW Taylors Ferry Road and Virginia Avenue.
Major changes since start:	Construction is complete.
Other info / Coordination:	Extensive coordination with other city utilities.

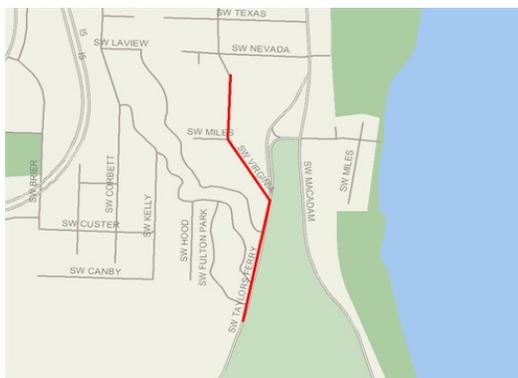
B. Schedule	
Project Opened	2/1/2011
Initial planned comp	10/8/2012
Current planned comp	3/30/2016

C. Cost Plan	
FY15-16 Plan:	\$5,350,489
FY16-17 Plan:	\$5,350,489
Debt Service Est:	\$379,885
Rate Impact:	0.15%
O & M Impact:	\$0

D. Identification	
SAP#	E10121
Program:	MAINT & RELIABILITY

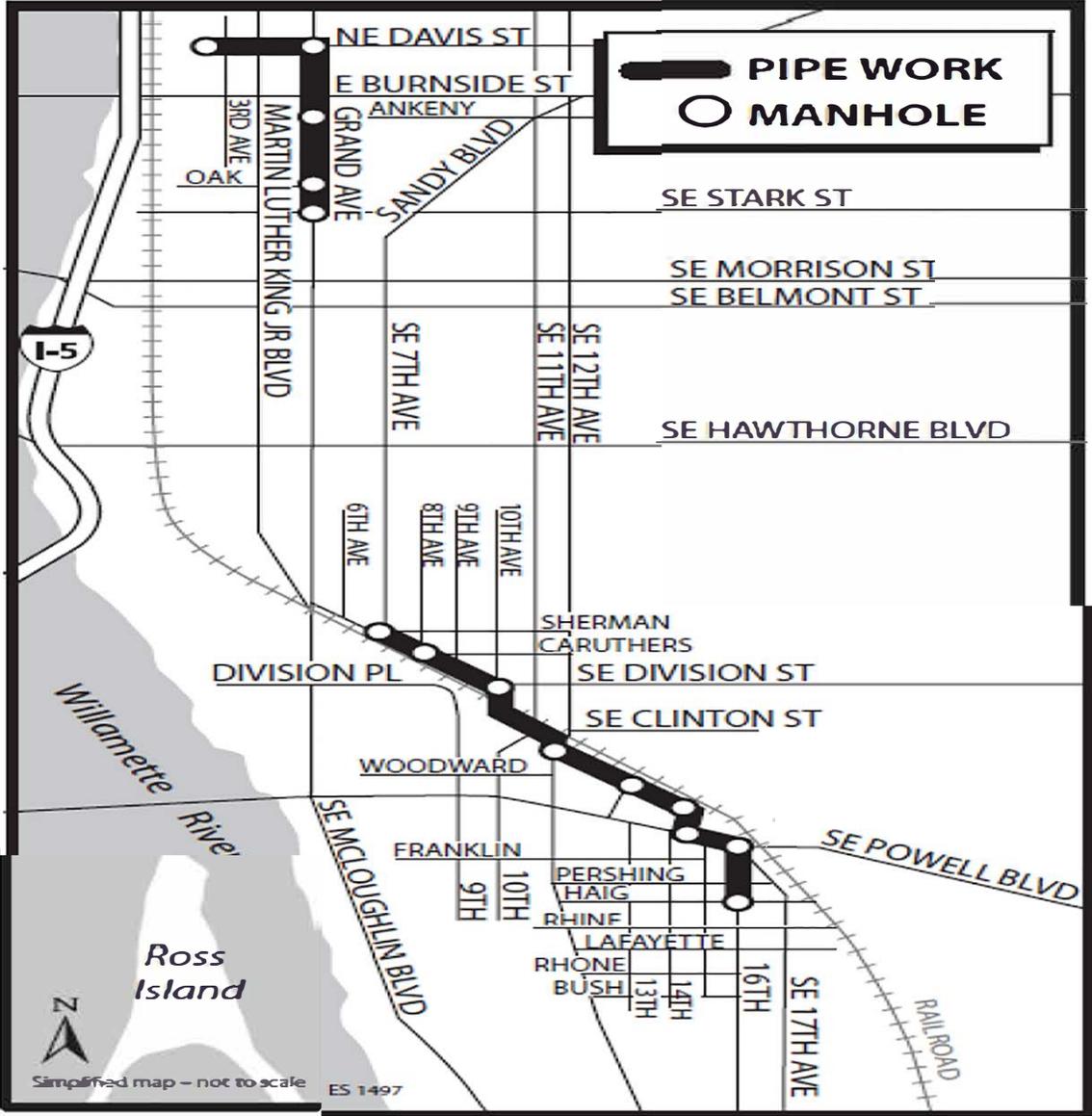
E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$172,000	\$514					
Design	\$900,000	\$15,438					
Advertising/NTP	\$18,792						
Construction	\$4,200,000	\$3,544,874					
Startup/Closeout	\$59,697	\$1,803					
Sum	\$5,350,489	\$3,562,629	\$0	\$0	\$0	\$0	\$0

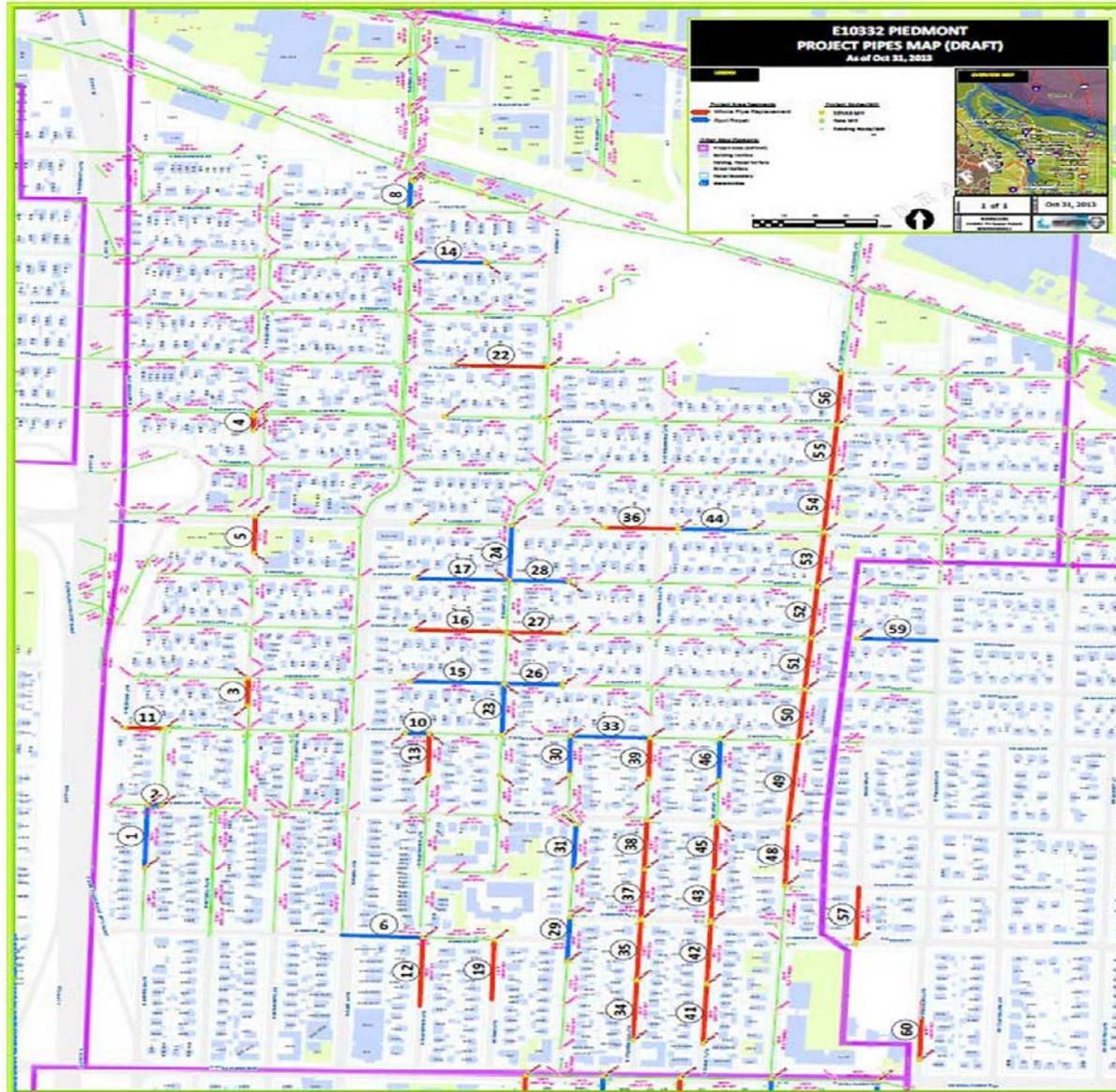


Phase	%	Dur	Finish	2012	2013	2014	2015	2016
Predesign	100	17 mos	11/30/12	█				
Design	100	19 mos	6/30/14		█			
Advertise-NTP	100	6.5 mos	1/15/15			█		
Construction	40	12 mos	1/20/16				█	
Startup/Closeout		3 mos	3/30/16					█





SE Interceptor Rehabilitation
Project No. E10030



Piedmont Sewer Rehabilitation

Project No. E10332

Piedmont Sewer Rehabilitation (under E10031)

A. Scope	
Description / Purpose:	This project will design and construct public sewer rehabilitation in severely deteriorated pipes in the Humbolt and Piedmont neighborhoods with most of the work occurring within the street.
Rationale: Plans/Studies & Specifics	This project is part of the Sewer Structural Rehab Phase 2 program to address pipes with the highest likelihood of failure within the next ten years.
Major changes since start:	Construction is underway with substantial completion scheduled for September 2016.
Other info / Coordination:	Project involves extensive community outreach.

B. Schedule	
Project Opened	4/23/2014
Initial planned comp	10/31/2015
Current planned comp	2/2/2017

C. Cost Plan	
FY15-16 Plan:	\$5,081,644
FY16-17 Plan:	\$4,476,697
Debt Service Est:	\$317,845
Rate Impact:	0.13%
O & M Impact:	\$0

D. Identification	
SAP#	E10332
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$125,697						
Design	\$725,947						
Advertising/NTP	\$20,000	\$29,810					
Construction	\$4,200,000	\$1,695,157	\$1,060,000				
Startup/Closeout	\$10,000	\$2,368	\$10,000				
Sum	\$5,081,644	\$1,727,335	\$1,070,000	\$0	\$0	\$0	\$0



Phase	%	Dur	Finish	2015	2016	2017	2018	2019	2020
Predesign	100	8 mos	4/30/14						
Design	100	16 mos	8/11/15	■					
Advertise-NTP	100	5 mos	1/4/16		■				
Construction	75	8.5 mos	9/13/16		■	■			
Startup/Closeout		5 mos	2/2/17			■			





Sellwood-Moreland Sewer Rehabilitation

Project No. E10333

Sellwood-Moreland Sewer Rehabilitation (under E10031)

A. Scope	
Description / Purpose:	Rehabilitate sewers in 20 blocks of the Sellwood and Moreland neighborhoods. The sewers that will be rehabilitated are suffering severe deterioration and are at the end of their useful life. Most of the work is within the right-of-way. Manholes and inlets will be replaced. Service branches will be replaced from the sewer main to the curb line.
Rationale: Plans/Studies & Specifics	This project is part of the Sewer Structural Rehab Phase 2 program to address pipes with the highest likelihood of failure within the next ten years.
Major changes since start:	Construction is complete.
Other info / Coordination:	Project involves extensive community outreach.

B. Schedule	
Project Opened	12/13/2012
Initial planned comp	1/31/2015
Current planned comp	9/1/2016

C. Cost Plan	
FY15-16 Plan:	\$12,044,257
FY16-17 Plan:	\$12,114,476
Debt Service Est:	\$860,128
Rate Impact:	0.35%
O & M Impact:	\$0

D. Identification	
SAP#	E10333
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition		\$1,232					
Predesign	\$205,000						
Design	\$1,018,694	\$33,006					
Advertising/NTP	\$10,000	\$31,808					
Construction	\$10,800,563	\$4,649,414					
Startup/Closeout	\$10,000	\$45,075					
Sum	\$12,044,257	\$4,760,534	\$0	\$0	\$0	\$0	\$0



Phase	%	Dur	Finish	2012	2013	2014	2015	2016
Land Acquisition	100	29 mos	10/1/14					
Predesign	100	7 mos	11/30/12					
Design	100	19 mos	6/15/14					
Advertise-NTP	100	4 mos	10/20/14					
Construction	100	17.5 mos	3/25/16					
Startup/Closeout	100	5 mos	9/1/16					





Rose City Park Sewer Rehabilitation

Project No. E10345

Rose City Park Sewer Rehabilitation (under E10031)

A. Scope	
Description / Purpose:	Sewer rehabilitation in 40 blocks of the Rose City Park neighborhood, most in the right of way. The sewers that will be rehabilitated are suffering severe deterioration and are at the end of their useful life. The sewers will be rehabilitated by replacement or by lining, depending on their condition and location. The objective is to restore service life to the asset efficiently and with minimal disruption.
Rationale: Plans/Studies & Specifics	This project is part of the Sewer Structural Rehab Phase 2 program to address pipes with the highest likelihood of failure within the next ten years.
Major changes since start:	Construction is complete.
Other info / Coordination:	Project involves extensive community outreach.

B. Schedule	
Project Opened	5/1/2012
Initial planned comp	2/28/2015
Current planned comp	8/31/2015

C. Cost Plan	
FY15-16 Plan:	\$9,443,792
FY16-17 Plan:	\$9,422,241
Debt Service Est:	\$668,979
Rate Impact:	0.27%
O & M Impact:	\$0

D. Identification	
SAP#	E10345
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$247,992						
Design	\$850,000						
Advertising/NTP	\$20,000						
Construction	\$8,310,000	\$1,004,809					
Startup/Closeout	\$15,800	\$41,336					
Sum	\$9,443,792	\$1,046,145	\$0	\$0	\$0	\$0	\$0



Phase	%	Dur	Finish	2011	2012	2013	2014	2015	2016
Predesign	100	2 mos	11/30/12		█				
Design	100	14 mos	1/31/14			█			
Advertise-NTP	100	4 mos	5/20/14				█		
Construction	95	14 mos	6/30/15				█	█	
Startup/Closeout		2 mos	8/31/15						█





Kenton Sewer Rehabilitation

Project No. E10357

Kenton Sewer Rehabilitation (under E10031)

A. Scope	
Description / Purpose:	Sewer rehabilitation in the Kenton neighborhood in over 15 blocks scattered throughout the neighborhood. Most of the work is within the public ROW. The sewers that will be rehabilitated are suffering severe deterioration and are at the end of their useful life. The sewers will be rehabilitated by replacement or by lining, depending on their condition and location. The objective is to restore service life to the asset efficiently and with minimal disruption.
Rationale: Plans/Studies & Specifics	This project is part of the Sewer Structural Rehab Phase 2 program to address pipes with the highest likelihood of failure within the next ten years.
Major changes since start:	Construction is complete.
Other info / Coordination:	Project involves extensive community outreach.

B. Schedule	
Project Opened	1/1/2012
Initial planned comp	1/31/2015
Current planned comp	12/31/2015

C. Cost Plan	
FY15-16 Plan:	\$3,920,000
FY16-17 Plan:	\$4,144,047
Debt Service Est:	\$294,227
Rate Impact:	0.12%
O & M Impact:	\$0

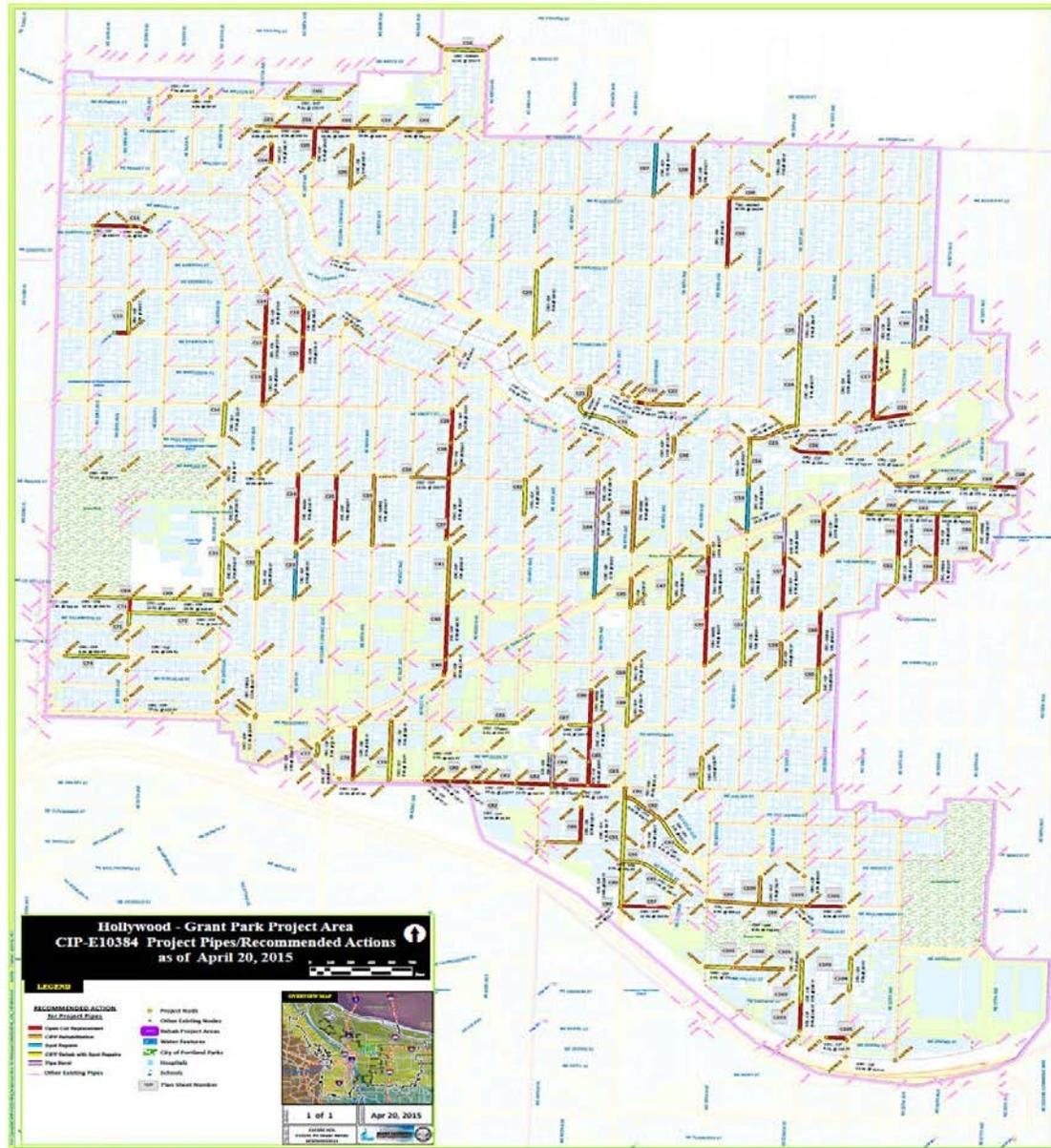
D. Identification	
SAP#	E10357
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$88,000						
Design	\$571,000	\$9,939					
Advertising/NTP	\$10,000						
Construction	\$3,241,000	\$769,719					
Startup/Closeout	\$10,000	\$14,883					
Sum	\$3,920,000	\$794,542	\$0	\$0	\$0	\$0	\$0



Phase	%	Dur	Finish	2012	2013	2014	2015	2016
Predesign	100	14 mos	2/28/13	█				
Design	100	14 mos	4/30/14		█			
Advertise-NTP	100	4 mos	9/2/14			█		
Construction	85	14 mos	10/31/15			█	█	
Startup/Closeout		2 mos	12/31/15				█	





Hollywood-Grant Park
Project No. E10384

Hollywood-Grant Park (under E10031)

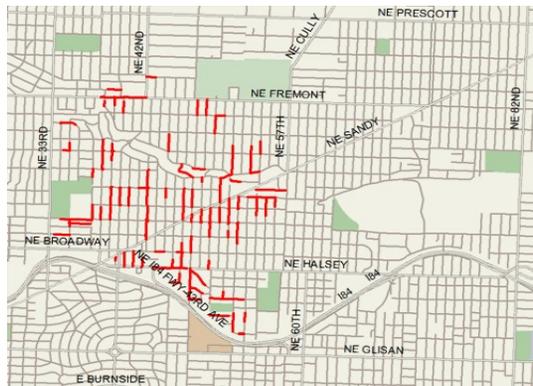
A. Scope	
Description / Purpose:	This project will design and construct sewer rehabilitation in the Grant Park and Hollywood neighborhoods. The sewers that will be rehabilitated are suffering severe deterioration and are at the end of their useful life. The sewers will be rehabilitated by replacement or by lining, depending on their condition and location. The objective is to restore service life to the asset efficiently and with minimal disruption.
Rationale: Plans/Studies & Specifics	This project is part of the Sewer Structural Rehab Phase 2 program to address pipes with the highest likelihood of failure within the next ten years.
Major changes since start:	Construction is underway with substantial completion scheduled for April 2017.
Other info / Coordination:	Project involves extensive community outreach.

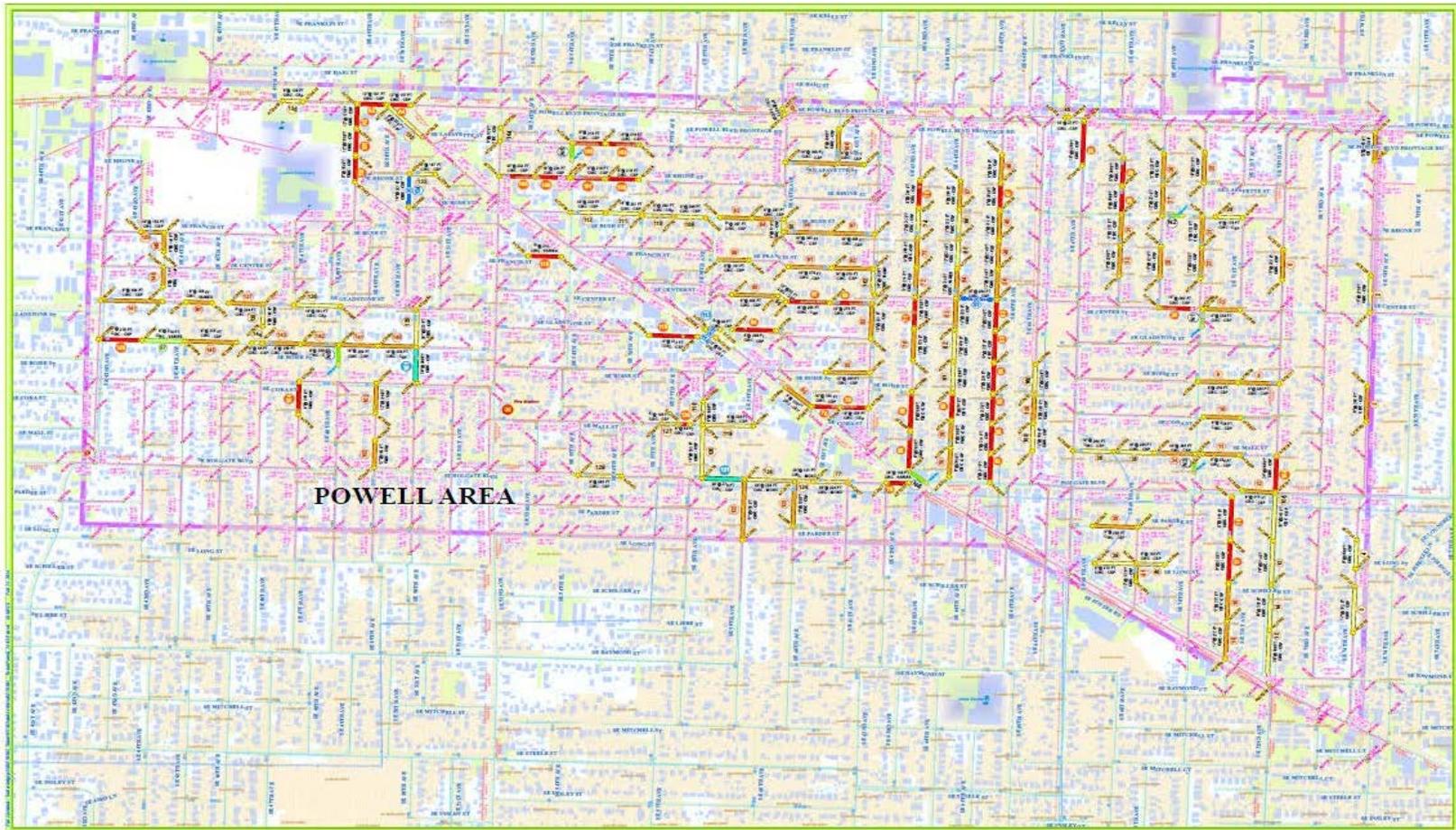
B. Schedule	
Project Opened	12/1/2013
Initial planned comp	2/28/2017
Current planned comp	8/15/2017

C. Cost Plan	
FY15-16 Plan:	\$11,759,289
FY16-17 Plan:	\$13,788,205
Debt Service Est:	\$978,963
Rate Impact:	0.39%
O & M Impact:	\$0

D. Identification	
SAP#	E10384
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition		\$8,471					
Predesign	\$28,789	\$80					
Design	\$840,000	\$9,902					
Advertising/NTP	\$15,000	\$54,472					
Construction	\$10,843,500	\$6,253,607	\$7,850,000				
Startup/Closeout	\$32,000		\$150,000				
Sum	\$11,759,289	\$6,326,532	\$8,000,000	\$0	\$0	\$0	\$0





Powell Sewer Rehabilitation Phase 1

Project No. E10475

Powell Sewer Rehabilitation Phase 1 (under E10031)

A. Scope	
Description / Purpose:	The Powell project in SE Portland will repair or replace approximately 18,000 ft of 8" to 30" combination and sanitary sewer. The project area is bounded by I-84 Fwy on the north, SE Holgate/Foster Blvd on the south, SE 42th Ave on the west and SE 68th Ave on the east.
Rationale: Plans/Studies & Specifics	This project is part of the Sewer Structural Rehab Phase 2 program to address pipes with the highest likelihood of failure within the next ten years.
Major changes since start:	Construction is underway with substantial completion scheduled for April 2017.
Other info / Coordination:	Project involves extensive community outreach.

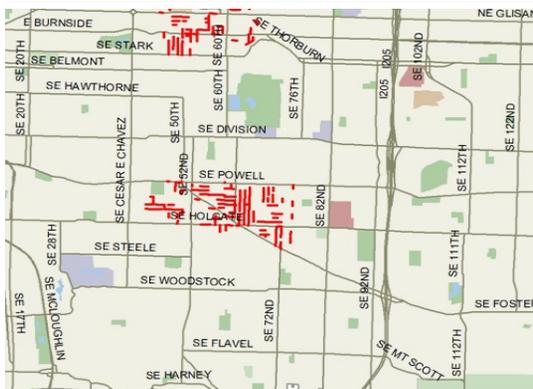
B. Schedule	
Project Opened	9/1/2012
Initial planned comp	10/12/2015
Current planned comp	3/24/2017

C. Cost Plan	
FY15-16 Plan:	\$14,286,764
FY16-17 Plan:	\$14,286,764
Debt Service Est:	\$1,014,360
Rate Impact:	0.41%
O & M Impact:	\$0

D. Identification	
SAP#	E10475
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$178,322	\$577					
Design	\$1,403,742	\$296,593					
Advertising/NTP	\$55,000	\$31,090					
Construction	\$12,614,700	\$142,249	\$8,000,000				
Startup/Closeout	\$35,000		\$2,000,000				
Sum	\$14,286,764	\$470,509	\$10,000,000	\$0	\$0	\$0	\$0



Phase	%	Dur	Finish	2012	2013	2014	2015	2016	2017
Predesign	100	11 mos	7/31/13						
Design	100	28 mos	11/23/15						
Advertise-NTP	100	2 mos	1/27/16						
Construction	20	13 mos	2/8/17						
Startup/Closeout		1.5 mos	3/24/17						





Cured in Place Pipe 2014

Project No. E10482

Cured in Place Pipe 2014 (under E10031)

A. Scope	
Description / Purpose:	Rehabilitate approximately 20,000 linear feet of sewer pipe, in sites spread across the city, using the Cured-In-Place-Pipe construction method.
Rationale: Plans/Studies & Specifics	This project is part of the Sewer Structural Rehab Phase 2 program to address pipes with the highest likelihood of failure within the next ten years.
Major changes since start:	Construction is underway with substantial completion scheduled for November 2016.
Other info / Coordination:	Project involves extensive community outreach.

B. Schedule	
Project Opened	10/1/2012
Initial planned comp	3/1/2015
Current planned comp	1/4/2015

C. Cost Plan	
FY15-16 Plan:	\$4,036,759
FY16-17 Plan:	\$4,131,566
Debt Service Est:	\$293,341
Rate Impact:	0.12%
O & M Impact:	\$0

D. Identification	
SAP#	E10482
Program:	MAINT & RELIABILITY

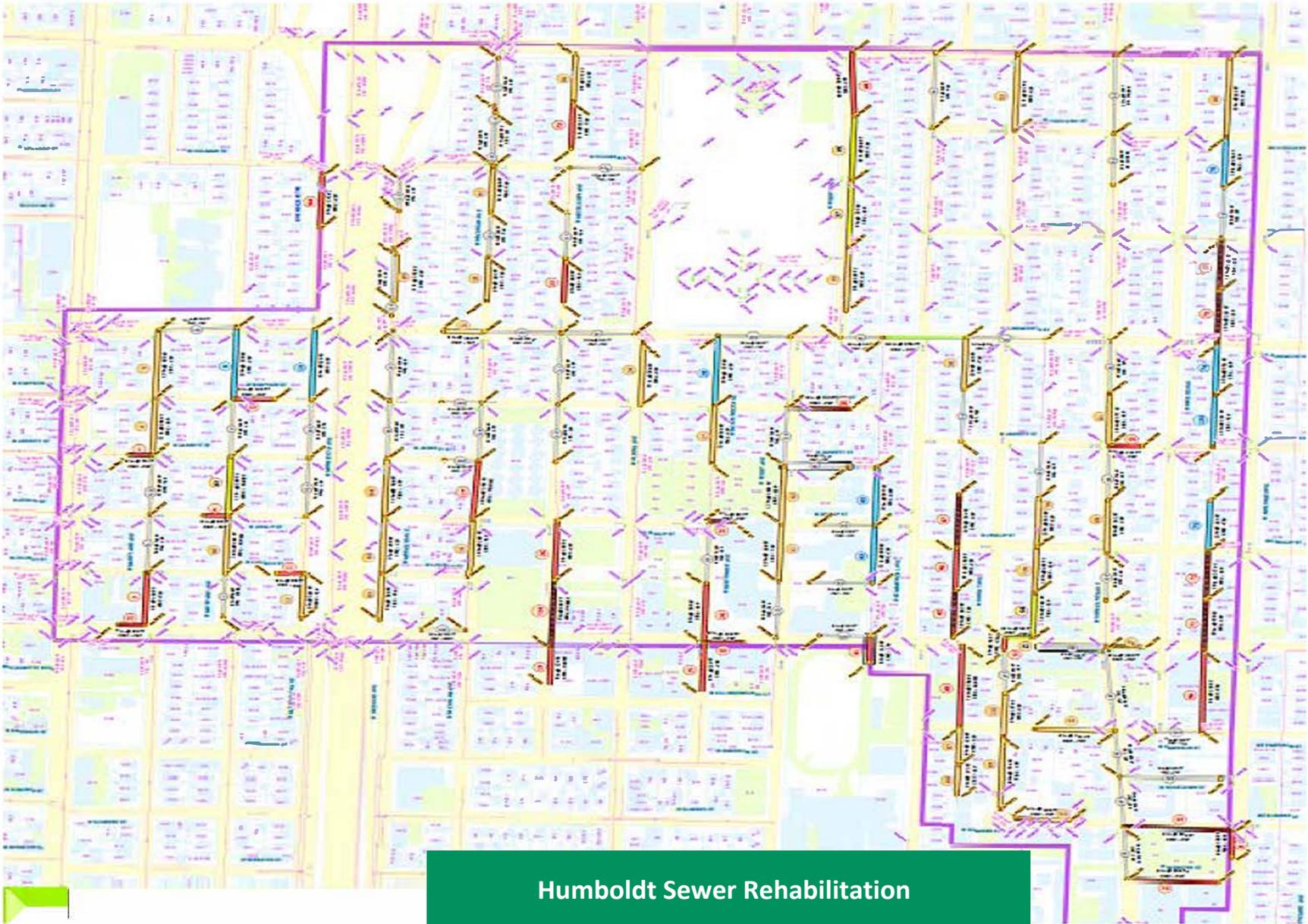
E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$211,759						
Design	\$300,000						
Advertising/NTP	\$10,000						
Construction	\$3,500,000	\$933,877					
Startup/Closeout	\$15,000	\$2,560					
Sum	\$4,036,759	\$936,437	\$0	\$0	\$0	\$0	\$0



Phase	%	Dur	Finish	2012	2013	2014	2015
Predesign	100	3 mos	12/31/12	█			
Design	100	15 mos	3/31/14		█		
Advertise-NTP	100	4 mos	8/6/14			█	
Construction	100	4 mos	11/22/14				█
Startup/Closeout	95	2 mos	1/4/15				█





Humboldt Sewer Rehabilitation
Project No. E10564

Humboldt Sewer Rehabilitation (under E10031)

A. Scope	
Description / Purpose:	The Humboldt Sewer Rehabilitation project will design and construct public sewer pipe replacement (or rehabilitation) for severely deteriorated pipe in Portland's Humboldt neighborhood.
Rationale: Plans/Studies & Specifics	This project is part of the Sewer Structural Rehab Phase 2 program to address pipes with the highest likelihood of failure within the next ten years.
Major changes since start:	Project is in the Advertise phase.
Other info / Coordination:	Project involves extensive community outreach.

B. Schedule	
Project Opened	1/15/2014
Initial planned comp	6/30/2017
Current planned comp	11/3/2017

C. Cost Plan	
FY15-16 Plan:	\$4,000,000
FY16-17 Plan:	\$4,285,712
Debt Service Est:	\$304,286
Rate Impact:	0.12%
O & M Impact:	\$0

D. Identification	
SAP#	E10564
Program:	MAINT & RELIABILITY

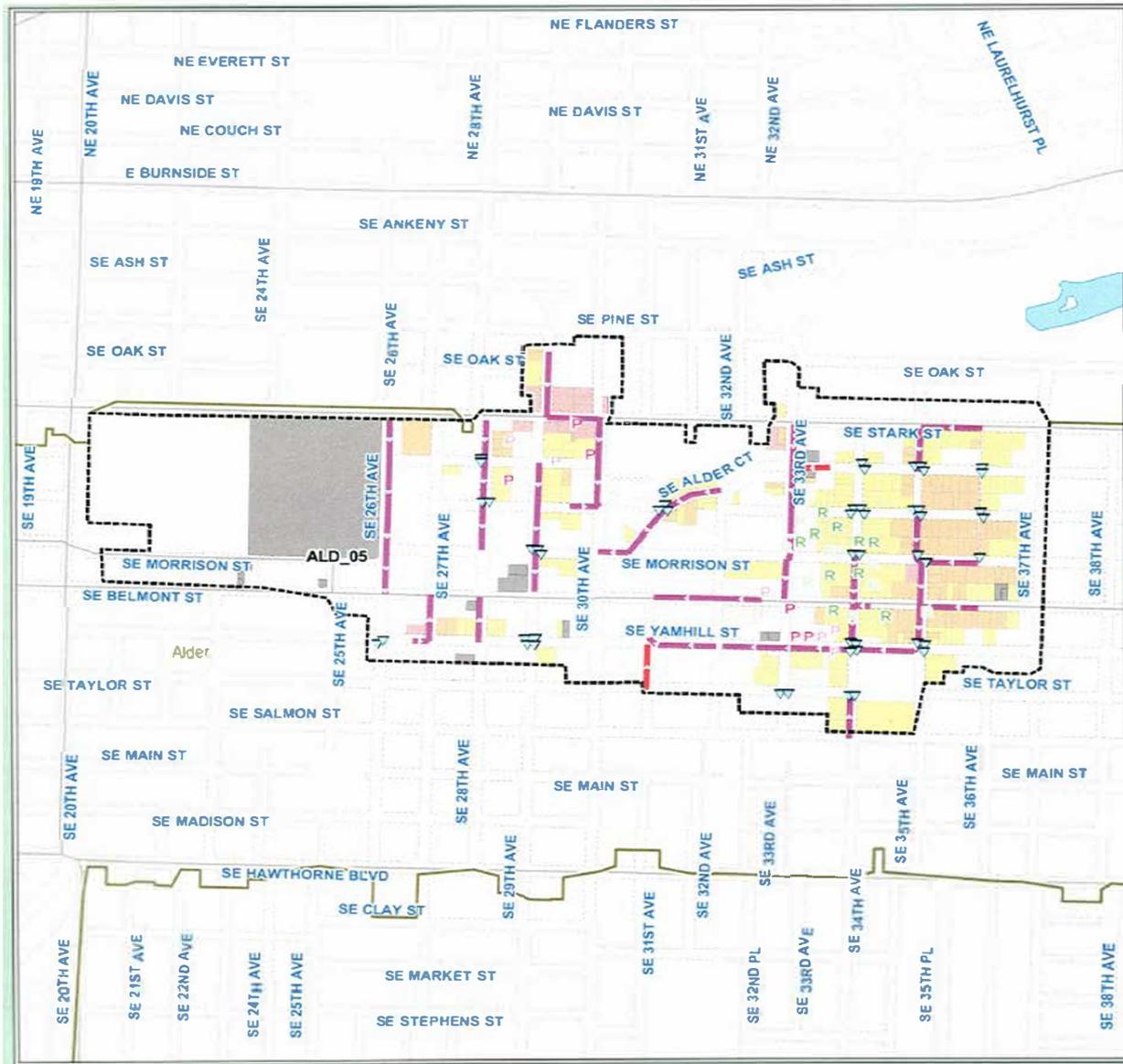
E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition	\$0	\$583					
Predesign	\$50,000	\$626					
Design	\$430,000	\$307,365					
Advertising/NTP	\$10,000	\$5,495					
Construction	\$3,500,000	\$18,462	\$1,500,000	\$1,500,000			
Startup/Closeout	\$10,000						
Sum	\$4,000,000	\$332,531	\$1,500,000	\$1,500,000	\$0	\$0	\$0



Phase	%	Dur	Finish	2014	2015	2016	2017
Predesign	100	7 mos	8/4/14	█			
Design	100	26 mos	9/23/16		█		
Advertise-NTP	100	3 mos	12/16/16			█	
Construction	30	9 mos	9/22/17				█
Startup/Closeout		1.5 mos	11/3/17				█





Sunnyside North Sewer Reconstruction & Greenstreets
Project No. E10367

Sunnyside North Sewer Reconstruction & Greenstreets

A. Scope	
Description / Purpose:	Construct improvements to rehabilitate pipe segments in poor condition, upsize pipe segments and install street, roof and parking stormwater controls to relieve street flooding and basement sewer backups. Located in SE Portland, the project area is generally bound by Stark, 37th, Taylor, and 20th.
Rationale: Plans/Studies & Specifics	This project is within the Alder basin in SE Portland. It is one of six Alder basin projects in the Capital Improvement Program. These projects represent a programmatic approach to addressing basement sewer backup risk in the Alder basin. These projects were developed through the 2011 Combined Sewer System Plan. The total capital cost of these six projects is approximately \$40 million.
Major changes since start:	Project is in design.
Other info / Coordination:	

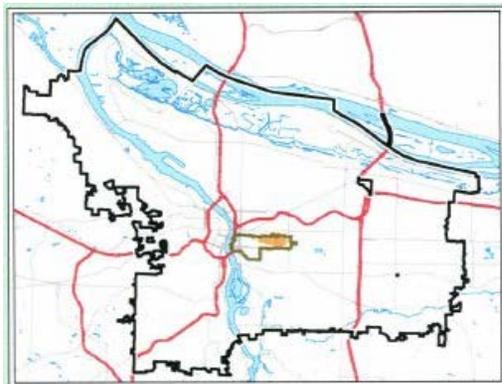
B. Schedule	
Project Opened	7/1/2015
Initial planned comp	6/30/2017
Current planned comp	8/27/2021

C. Cost Plan	
FY15-16 Plan:	\$8,975,400
FY16-17 Plan:	\$8,975,400
Debt Service Est:	\$637,253
Rate Impact:	0.26%
O & M Impact:	\$0

D. Identification	
SAP#	E10367
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$759,250	\$104,181					
Design	\$759,950	\$143,719					
Advertising/NTP							
Construction	\$7,391,700		\$500,000	\$4,000,000	\$3,000,000		
Startup/Closeout	\$64,500						
Sum	\$8,975,400	\$247,900	\$500,000	\$4,000,000	\$3,000,000	\$0	\$0



Phase	%	Dur	Finish	2015	2016	2017	2018	2019	2020	2021
Predesign	100	6.5 mos	7/7/16	█						
Design	10	15 mos	10/3/17		█					
Advertise-NTP		4 mos	2/3/18			█				
Construction		18 mos	8/2/19				█			
Startup/Closeout		25 mos	8/27/21						█	





Structural Rehabilitation Taggart - Outfall 30

Project No. E10220

Structural Rehabilitation Taggart - Outfall 30

A. Scope	
Description / Purpose:	The Taggart combined sewer outfall is a brick sewer, constructed in 1906 to serve the Taggart basin. Previous to 2011, this sewer flowed to the river. In 2011, a majority of the flow was directed to the Eastside CSO Consolidation Tunnel. This sewer had a high consequence of failure due to its size and depth. Two particular reaches would be extremely difficult to repair if they failed; the potential damage caused by a failure could be very high due to the peak flow rates and high volume of runoff.
Rationale: Plans/Studies & Specifics	The reach from the outfall to the SE Interceptor overflow structure ranges in diameter from 116 to 118 inches, with depths from 30 feet to 63 feet, and carries approximately 900 cfs of runoff from the 25 year design storm. The upstream reach in SE 16th Avenue ranges in size from 64 to 90 inches in diameter, at depths of 20 to 29 feet, and carries approximately 460 cfs of flow from the 25 year storm.
Major changes since start:	60% design complete.
Other info / Coordination:	

B. Schedule	
Project Opened	6/1/2012
Initial planned comp	12/30/2014
Current planned comp	11/30/2018

C. Cost Plan	
FY15-16 Plan:	\$14,805,000
FY16-17 Plan:	\$15,180,000
Debt Service Est:	\$1,077,780
Rate Impact:	0.43%
O & M Impact:	\$0

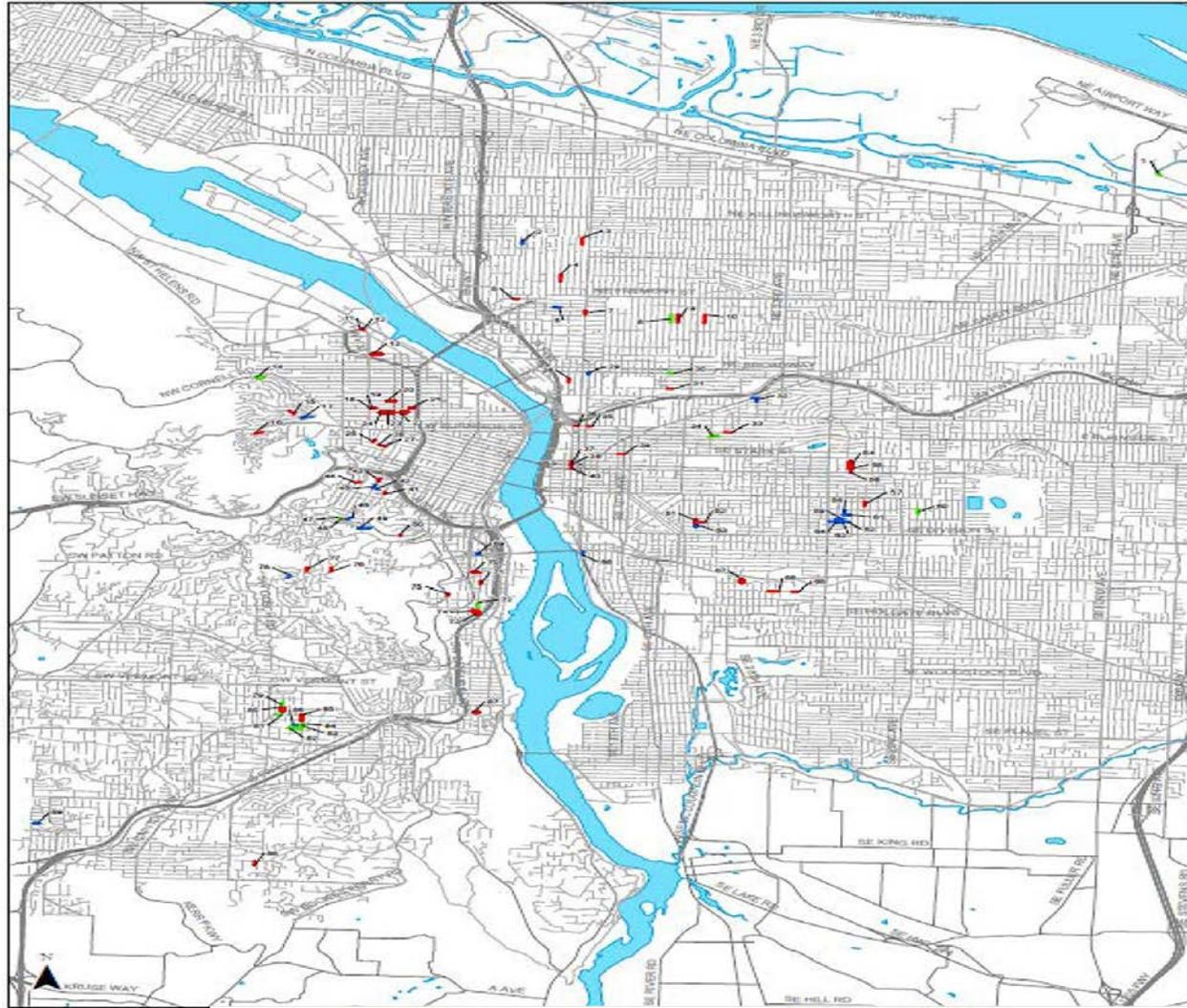
D. Identification	
SAP#	E10220
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign		\$214,652					
Design	\$1,931,000	\$213,619	\$1,630,000	\$720,000			
Advertising/NTP							
Construction	\$12,820,000	\$3,864		\$6,530,000	\$4,000,000		
Startup/Closeout	\$54,000						
Sum	\$14,805,000	\$432,135	\$1,630,000	\$7,250,000	\$4,000,000	\$0	\$0



Phase	%	Dur	Finish	2013	2014	2015	2016	2017	2018
Predesign	100	40 mos	6/17/16						
Design	30	19 mos	11/4/16						
Advertise-NTP		4 mos	3/13/17						
Construction		16 mos	7/20/18						
Startup/Closeout		4 mos	11/30/18						





CITY OF PORTLAND
 BUREAU OF ENVIRONMENTAL SERVICES

PIPES INCLUDED IN CITY-WIDE SCOPE

REHAB TECHNOLOGY
 — OPEN-CUT/PIPE BURST WHOLE-PIPE
 — CIPP WHOLE-PIPE
 — SPOT REPAIR

City-wide 2017
 Project No. E10562

City-wide 2017 (under E10500)

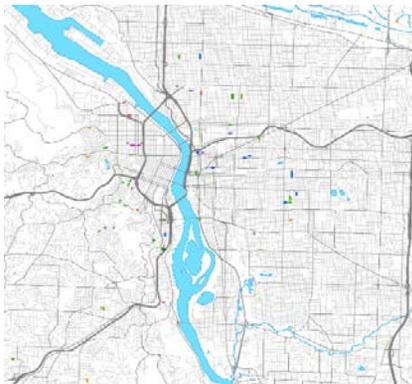
A. Scope	
Description / Purpose:	The City-wide Sewer Rehabilitation Project will design and construct public sewer pipe rehabilitation and/or replacement of deteriorated pipe outside of Phase 2 Rehab project geographical project boundaries.
Rationale: Plans/Studies & Specifics	This project is part of the Sewer Structural Rehab Phase 2 program to address pipes with the highest likelihood of failure within the next ten years.
Major changes since start:	Project is moving into final design.
Other info / Coordination:	Project involves extensive community outreach.

B. Schedule	
Project Opened	10/12/2013
Initial planned comp	2/29/2016
Current planned comp	12/22/2019

C. Cost Plan	
FY15-16 Plan:	\$11,543,000
FY16-17 Plan:	\$11,578,552
Debt Service Est:	\$822,077
Rate Impact:	0.33%
O & M Impact:	\$0

D. Identification	
SAP#	E10562
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$240,000	\$2,252					
Design	\$1,409,000	\$809,099					
Advertising/NTP	\$41,000						
Construction	\$9,812,000		\$3,750,000	\$6,240,000			
Startup/Closeout	\$41,000			\$10,000			
Sum	\$11,543,000	\$811,350	\$3,750,000	\$6,250,000	\$0	\$0	\$0



Phase	%	Dur	Finish	2015	2016	2017	2018	2019	2020
Predesign	100	21 mos	6/30/15	█					
Design	60	16 mos	11/1/16		█				
Advertise-NTP		4.5 mos	3/8/17			█			
Construction		18 mos	9/11/18			█	█		
Startup/Closeout		15.5 mos	12/22/19					█	



*** = Culvert**



Culvert Replacement Phase 2 - Bybee Glenwood

Project No. E10372

Culvert Replacement Phase 2 (Bybee/Glenwood)

A. Scope	
Description / Purpose:	This is an umbrella project to remove the highest priority culverts in the city, following the "Grey to Green" culvert program. Project areas are located in the Crystal Springs Creek and will support watershed health goals and commitments under the Endangered Species Act.
Rationale: Plans/Studies & Specifics	This project/program encompasses the following secondary projects: Bybee, Glenwood, and Railroad Culverts. They are expected to improve water quality and better manage runoff and erosion.
Major changes since start:	Construction of the last of the culverts in Crystal Springs (Bybee/Glenwood) is now underway with substantial completion scheduled for fall 2016.
Other info / Coordination:	Construction was delayed due to coordination with other construction projects.

B. Schedule	
Project Opened	10/1/2012
Initial planned comp	6/30/2016
Current planned comp	6/1/2019

C. Cost Plan	
FY15-16 Plan:	\$4,428,000
FY16-17 Plan:	\$154,000
Debt Service Est:	\$10,934
Rate Impact:	0.00%
O & M Impact:	\$0

D. Identification	
SAP#	E10372
Program:	SURFACE WATER MGMT

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition	\$20,000	\$2,049					
Predesign							
Design	\$671,000	\$93,997					
Advertising/NTP	\$11,000	\$34,310					
Construction	\$3,711,000	\$37,539	\$2,000,000				
Startup/Closeout	\$15,000						
Sum	\$4,428,000	\$167,895	\$2,000,000	\$0	\$0	\$0	\$0



Phase	%	Dur	Finish	2012	2013	2014	2015	2016	2017
Land Acquisition	100	29 mos	2/15/15						
Design	100	38 mos	11/9/15						
Advertise-NTP	100	5 mos	4/5/16						
Construction	100	7 mos	11/1/16						
Startup/Closeout	98	3 mos	2/10/17						



Major Program Profile Index

CIP Program	SAP Code	Program	Total Budget	Phase	Page
Maintenance & Reliability	E09045	Fanno Basin System Improvements	87,508,000	various	65
Maintenance & Reliability	E10031	Sewer Structural Rehab Phase 2	132,198,000	various	66
Maintenance & Reliability	E10035	Fanno Creek Infiltration and Inflow	6,860,000	various	67
Maintenance & Reliability	E10474	Burlingame Basin Infiltration and Inflow	7,700,000	various	68
Maintenance & Reliability	E10500	Sewer Structural Rehab Phase 3	125,000,000	various	69
Maintenance & Reliability	E10576	Large Diameter Sewer Rehab	85,000,000	predesign	70
Surface Water Management	E08905	Grey to Green Land Acquisition	26,469,000	land acquisition	71
Surface Water Management	E10040	Johnson Creek: Willing Seller Phase 2	43,000,000	land acquisition	72
Surface Water Management	E10488	Stephens Creek Phase 1 Improvements	3,450,000	predesign	73
Surface Water Management	E10563	Columbia Slough Outfalls	23,996,000	various	74

Programs are a suite of projects to address a specific issue where the exact methodology has not been defined. Scopes are refined as individual projects are established

The following projects had a fiscal year budget over \$500,000, but don't lend themselves to the summary sheet format.

Maintenance & Reliability	E10222	Owner Controlled Insurance Program Phase IV	Insurance for construction projects over \$500,000.
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Fanno Basin System Improvements

A. Scope	
Description / Purpose:	Improvements to the sanitary system serving the Fanno Basin to increase pumping and conveyance capacity in the Fanno Basin Pump Station and Pressure Line system. Includes cost of temporary diversion to Clean Water Services.
Rationale: Plans/Studies & Specifics	Upon thorough risk analysis, several portions of the sewer system in Fanno Basin were determined to be under capacity; this has led to system failures.
Major changes since start:	Scope and budget have evolved with additional engineering, site assessments, and system needs.
Other info / Coordination:	Extensive and effective coordination with Clean Water Services, Oregon Department of Environmental Quality, and neighborhood associations. Land use approvals were obtained through Washington County.

B. Schedule	
Project Opened	8/1/2006
Initial planned comp	12/31/2010
Current planned comp	6/30/2017

C. Cost Plan	
FY15-16 Plan:	\$87,507,793
FY16-17 Plan:	\$82,621,316
Debt Service Est:	\$5,866,113
Rate Impact:	2.36%
O & M Impact:	

D. Identification	
SAP#	E09045
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition	\$3,045,628	\$75,359					
Predesign	\$16,425,662	\$1,127					
Design	\$10,080,686	\$112,192					
Advertising/NTP	\$144,727	\$2,379					
Construction	\$56,636,363	\$8,674,730	\$995,000				
Startup/Closeout	\$1,174,727	\$45,164	\$105,000				
Sum	\$87,507,793	\$8,910,951	\$1,100,000	\$0	\$0	\$0	\$0



Sewer Structural Rehab Phase 2

A. Scope	
Description / Purpose:	This program includes structural rehabilitation of critical combined and sanitary sewers that are at the end of their economic life and have the highest consequence of failure. The pipes have been prioritized based on their business risk exposure so that the pipes with the highest benefit (risk reduction) to cost ratios are to be done first.
Rationale: Plans/Studies & Specifics	Pipes are identified from inspections, field assessments and experience (including history of spot repairs), non-conforming sewers identification, and from advanced modeling. Individual project scopes are vetted through a technical review process. Several large projects are profiled in the major project section of this report.
Major changes since start:	Sewer system assessments identified a greater need for rehabilitation services than original expected. This caused the overall program schedule to be extended due to longer periods for initiating projects and the need to procure consulting services (to augment in-house design staff). With more rehabilitation project experience, delivery schedules are becoming more predictable.
Other info / Coordination:	These projects require extensive community involvement.

B. Schedule	
Project Opened	7/1/2010
Initial planned comp	6/30/2015
Current planned comp	1/31/2019

C. Cost Plan	
FY15-16 Plan:	\$132,197,595
FY16-17 Plan:	\$122,572,438
Debt Service Est:	\$8,702,643
Rate Impact:	3.50%
O & M Impact:	

D. Identification	
SAP#	E10031
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition		\$58,655					
Predesign	\$2,511,189	\$61,059					
Design	\$12,099,592	\$1,545,354	\$3,000,000	\$1,000,000			
Advertising/NTP	\$291,728	\$173,795					
Construction	\$116,898,166	\$15,731,887	\$27,630,000	\$10,705,000	\$1,190,000		
Startup/Closeout	\$396,920	\$125,671	\$2,170,000	\$125,000			
Sum	\$132,197,595	\$17,696,421	\$32,800,000	\$11,830,000	\$1,190,000	\$0	\$0



Fanno Creek Infiltration and Inflow

A. Scope	
Description / Purpose:	Focused effort to resolve localized basement and surface flooding and reduce the risk of sanitary sewer overflows at the Fanno Pump Station. This project will improve services to detect and remove infiltration and inflow (I&I) on private property. Targeted conveyance improvements will address pipe capacity problems that cannot be resolved with only I&I reductions.
Rationale: Plans/Studies & Specifics	Early action projects under this program include: sewer lateral rehabilitation in Upper Hillsdale Basin and sewer lateral rehab in Pendleton & 45th Basin.
Major changes since start:	
Other info / Coordination:	Project involves extensive coordination with individual property owners.

B. Schedule	
Project Opened	7/1/2010
Initial planned comp	5/30/2013
Current planned comp	6/30/2022

C. Cost Plan	
FY15-16 Plan:	\$6,860,000
FY16-17 Plan:	\$6,779,892
Debt Service Est:	\$481,372
Rate Impact:	0.19%
O & M Impact:	

D. Identification	
SAP#	E10035
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition	\$18,000	\$108					
Predesign	\$561,840	\$96,654					
Design	\$676,237						
Advertising/NTP	\$23,500						
Construction	\$5,522,923	\$18,661					
Startup/Closeout	\$57,500	\$5,913					
Sum	\$6,860,000	\$121,337	\$0	\$0	\$0	\$0	\$0



Burlingame Basin Infiltration and Inflow

A. Scope	
Description / Purpose:	Program to reduce stormwater flows into the sanitary sewers to reduce combined-sewer overflows in the Burlingame Sewer Basin (SW Portland).
Rationale: Plans/Studies & Specifics	Established to comply with mutual order between BES and Oregon Department of Environmental Quality. Approved budget is for first phase of pilot projects.
Major changes since start:	Program includes a series of pilot projects to determine primary source of stormwater - i.e. whether from private party into laterals or mainlines. This data will inform future phases.
Other info / Coordination:	Extensive coordination with private property owners.

B. Schedule	
Project Opened	3/10/2011
Initial planned comp	6/30/2016
Current planned comp	12/4/2019

C. Cost Plan	
FY15-16 Plan:	\$7,700,000
FY16-17 Plan:	\$12,001,788
Debt Service Est:	\$852,127
Rate Impact:	0.34%
O & M Impact:	

D. Identification	
SAP#	E10474
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition	\$102,000	\$10,279					
Predesign	\$450,000	\$112,621					
Design	\$1,009,000	\$85,236					
Advertising/NTP	\$35,800						
Construction	\$6,019,200	\$16,636	\$1,100,000	\$1,040,000	\$2,650,000	\$1,000,000	\$2,000,000
Startup/Closeout	\$84,000	\$3,867		\$30,000			
Sum	\$7,700,000	\$228,640	\$1,100,000	\$1,070,000	\$2,650,000	\$1,000,000	\$2,000,000



Sewer Structural Rehab Phase 3	
A. Scope	
Description / Purpose:	Structural rehabilitation of critical combined and sanitary sewers that are at the end of their economic life and have the highest consequence of failure.
Rationale: Plans/Studies & Specifics	This project includes structural rehabilitation of critical combined and sanitary sewers that are at the end of their economic life and have the highest consequence of failure. The pipes have been prioritized based on their business risk exposure so that the pipes with the highest benefit (risk reduction) to cost ratios are to be done first.
Major changes since start:	Management directed staff to focus only on pipes likely to fail within the next 10 years and to leave more risk in the ground.
Other info / Coordination:	These projects require extensive community outreach.

B. Schedule	
Project Opened	10/12/2013
Initial planned comp	6/30/2023
Current planned comp	8/31/2024

C. Cost Plan	
FY15-16 Plan:	\$125,000,000
FY16-17 Plan:	\$125,000,000
Debt Service Est:	\$9,987,843
Rate Impact:	4.02%
O & M Impact:	

D. Identification	
SAP#	E10500
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition		\$7,009					
Predesign		\$1,473,783					
Design		\$2,285,561	\$3,033,000	\$2,043,000	\$725,000		\$3,200,000
Advertising/NTP		\$6,123	\$265,000	\$194,000	\$247,000		
Construction		\$9,514	\$7,468,000	\$20,148,000	\$27,337,000	\$24,998,000	\$18,926,000
Startup/Closeout			\$18,000	\$10,000	\$176,000	\$87,000	
Sum	\$125,000,000	\$3,781,990	\$10,784,000	\$22,395,000	\$28,485,000	\$25,085,000	\$22,126,000



Large Diameter Sewer Rehab

A. Scope	
Description / Purpose:	This program will perform spot and whole pipe rehabilitation of large diameter (> 36 inches in diameter) sanitary and combined sewers that are currently in poor structural condition.
Rationale: Plans/Studies & Specifics	These pipes were identified and prioritized in the System Plan – Combined and Sanitary Sewer Elements, March 2012. The recommendations from the system plan were updated to include the results of most recent large diameter CCTV inspections.
Major changes since start:	Project is in early stages of implementation.
Other info / Coordination:	

B. Schedule	
Project Opened	7/1/2015
Initial planned comp	2027
Current planned comp	2027

C. Cost Plan	
FY15-16 Plan:	\$85,000,000
FY16-17 Plan:	\$85,000,000
Debt Service Est:	\$2,641,200
Rate Impact:	1.06%
O & M Impact:	

D. Identification	
SAP#	E10576
Program:	MAINT & RELIABILITY

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign		\$232,832					
Design		\$46,920	\$120,000	\$270,000	\$294,000		
Advertising/NTP		\$2,702					
Construction		\$150,196	\$480,000	\$1,080,000	\$1,176,000	\$3,700,000	\$6,000,000
Startup/Closeout							
Sum	\$85,000,000	\$432,649	\$600,000	\$1,350,000	\$1,470,000	\$3,700,000	\$6,000,000



Grey to Green Land Acquisition

A. Scope	
Description / Purpose:	The Land Acquisition program protects key natural resource areas throughout the City, leveraging funding by working with Portland Parks, Metro, Trust for Public Land and other stakeholders. The 5-year goal was to acquire 420 acres using approximately \$23 million in BES funding. To date, the program has acquired 467 acres.
Rationale: Plans/Studies & Specifics	Acquisitions protect forest canopy, tributaries, drainageways and other resources that provide water quality, storm drainage, and hydrologic functions related to BES's stormwater services, regulations and goals under the Portland Watershed Management Plan.
Major changes since start:	Schedule has been extended to focus on the highest priority acquisitions - this includes 50 acres/9 properties currently under negotiation. These negotiations are expected to be completed by early 2017, when the program will transition to the Watershed Land Acquisition Program. This program will have a new budget and schedule to operate through fiscal year 2022.
Other info / Coordination:	Significant collaboration with key partners to leverage funds and achieve mutual goals.

B. Schedule	
Project Opened	7/1/2008
Initial planned comp	6/30/2013
Current planned comp	7/31/2019

C. Cost Plan	
FY15-16 Plan:	\$26,469,149
FY16-17 Plan:	\$22,931,984
Debt Service Est:	\$1,628,171
Rate Impact:	0.66%
O & M Impact:	

D. Identification	
SAP#	E08905
Program:	SURFACE WATER MGMT

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition	\$26,469,149	\$1,407,639	\$500,000				
Predesign		\$3,314					
Design		\$147,531					
Advertising/NTP							
Construction		\$5,832					
Startup/Closeout		\$638					
Sum	\$26,469,149	\$1,564,954	\$500,000	\$0	\$0	\$0	\$0



Johnson Creek: Willing Seller Phase 2

A. Scope	
Description / Purpose:	Acquisition of properties in 4 target areas of high value for floodplain restoration. The properties are land banked until enough contiguous property has been acquired to proceed with restoration. Program allows residents within high risk areas (i.e. 100-year floodplain) to sell their property at fair market. Projects are then identified that increase flood storage and conveyance capacity while enhancing fish and wildlife habitat, and/or create wetlands and passive recreation opportunities.
Rationale: Plans/Studies & Specifics	The Johnson Creek Willing Seller Program was created in 1997 to support the Johnson Creek Restoration Plan. Flood events and reduced functionality of the natural floodplain prompted the creation of this program. Goals for this program include converting these properties into functional floodplain assets, which serve to protect nearby residents.
Major changes since start:	To date, approximately 267 acres have been acquired in the 100-year floodplain. Approximately 55 acres remain for acquisition.
Other info / Coordination:	Phase 2 was established in response to SAP requirements.

B. Schedule	
Project Opened	10/1/2009
Initial planned comp	6/28/2019
Current planned comp	unknown

C. Cost Plan	
FY15-16 Plan:	\$43,000,000
FY16-17 Plan:	\$43,000,000
Debt Service Est:	\$655,380
Rate Impact:	0.26%
O & M Impact:	

D. Identification	
SAP#	E10040
Program:	SURFACE WATER MGMT

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)

Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition	\$42,949,000	\$662,406	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Predesign	\$15,000						
Design	\$15,000	\$986					
Advertising/NTP							
Construction	\$20,000						
Startup/Closeout	\$1,000						
Sum	\$43,000,000	\$663,392	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000



Stephens Creek Phase 1 Improvements

A. Scope	
Description / Purpose:	Address stormwater issues in the Stephens Creek subwatershed: (1) unmanaged stormwater discharge from existing impervious surfaces; (2) pollution reduction and detention of stormwater; (3) restoration of ecological functions of riparian and wetland areas; and (4) Energy dissipation at outfalls causing erosion and excess sediment loading.
Rationale: Plans/Studies & Specifics	Opportunities to provide pollution reduction and detention for stormwater from new impervious area are constrained due to landslide hazards, narrow right-of-way, and lack of infiltration capacity, which has limited development opportunities and hindered mobility improvements in the right-of-way. Riparian areas and wetlands have been negatively impacted by altered flow regimes and are not providing their historic ecological function.
Major changes since start:	Capital projects are in very early stages of implementation.
Other info / Coordination:	Successful stormwater management will likely involve public-private partnerships.

B. Schedule	
Project Opened	10/1/2013
Initial planned comp	6/30/2018
Current planned comp	1/1/2021

C. Cost Plan	
FY15-16 Plan:	\$3,450,000
FY16-17 Plan:	\$4,305,940
Debt Service Est:	\$305,722
Rate Impact:	0.12%
O & M Impact:	

D. Identification	
SAP#	E10488
Program:	SURFACE WATER MGMT

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition	\$440,000					\$467,000	
Predesign	\$155,000	\$48,715					
Design	\$511,000	\$153,811	\$437,000	\$183,000			
Advertising/NTP	\$15,000		\$25,000				
Construction	\$2,300,000		\$360,000	\$1,561,000	\$566,000	\$1,533,000	\$3,000,000
Startup/Closeout	\$29,000				\$6,000	\$11,000	\$11,000
Sum	\$3,450,000	\$202,526	\$822,000	\$1,744,000	\$572,000	\$2,011,000	\$3,011,000



Columbia Slough Outfalls

A. Scope	
Description / Purpose:	A Record of Decision from the OR Department of Environmental Quality, requires the City of manage storm water quality from the public right of way at publicly owned stormwater outfalls along the Columbia Slough.
Rationale: Plans/Studies & Specifics	A Pre-Design identified the highest priority outfalls. This program will address those outfalls in separate CIP projects over a number of years.
Major changes since start:	Management of stormwater at Outfall 77a is complete. Work on Outfalls 100 and 104b is currently underway.
Other info / Coordination:	Successful stormwater control will likely involve public-private partnerships.

B. Schedule	
Project Opened	11/10/2011
Initial planned comp	6/30/2021
Current planned comp	6/30/2020

C. Cost Plan	
FY15-16 Plan:	\$23,996,300
FY16-17 Plan:	\$23,618,983
Debt Service Est:	\$1,676,948
Rate Impact:	0.67%
O & M Impact:	

D. Identification	
SAP#	E10563
Program:	SURFACE WATER MGMT

E. Project Actual and FY Plans Breakout (numbers may not add up due to rounding)							
Phase	Current Budget	FY16 Expenditures	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Land Acquisition							
Predesign	\$406,000	\$3,666					
Design	\$3,843,500	\$152,298	\$275,000	\$408,000	\$300,000	\$200,000	\$400,000
Advertising/NTP	\$54,600	\$546	\$20,000		\$21,000		
Construction	\$19,665,200	\$279,737	\$2,720,000		\$1,757,000	\$1,607,000	\$1,600,000
Startup/Closeout	\$27,000	\$5,656	\$10,000			\$10,000	
Sum	\$23,996,300	\$441,904	\$3,025,000	\$408,000	\$2,078,000	\$1,817,000	\$2,000,000





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