

**Bureau of Development Services
Capital Improvement Plan Summaries**

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Special Projects

Information Technology Advancement Project (S00012)

Confidence Level: High

Total Project Cost: 11,840,828

Area: Citywide

Original Project Cost: 9,192,168

Objective: Replacement

Project Description

The Information Technology Advancement Project (ITAP) includes replacement of the bureau's permitting and case tracking software (TRACS). The project is funded by license and permit fee revenues.

Total Requirements	2,296,044	5,723,344	3,021,103	0	0	0	0	3,021,103
Operating and Maintenance Costs			186,676	194,852	203,502	212,660	222,230	

Bureau of Environmental Services

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Maintenance and Reliability

Maintenance Capital - Construction (E04861)

Confidence Level: Moderate

Total Project Cost: Ongoing **Area:** Citywide
Original Project Cost: Ongoing **Objective:** Replacement

Project Description

The sewage and drainage collection systems develop structural and capacity problems as development occurs and the system ages. This program addresses small deficiencies in the collection system using city maintenance crews and equipment. Individual activities are determined in response to problems identified by inspection and field investigations during the course of the year. Examples of work performed under this project include trash rack replacement, culvert replacement, sump and sediment manhole construction, manhole replacement, large spot repairs and small reconstructions, diversion modifications, deep underground repairs, and single-block sewer replacements. Project is funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	21,922,641	230,000	240,000	240,000	240,000	240,000	240,000	240,000	1,200,000
Operating and Maintenance Costs			0	0	0	0	0	0	

Maintenance Capital - Contract (E04863)

Confidence Level: Low

Total Project Cost: Ongoing **Area:** Citywide
Original Project Cost: Ongoing **Objective:** Replacement

Project Description

The Maintenance Capital-Contract program supports privately-contracted maintenance repair and reconstruction projects throughout the collection system. Due to the age of much of the inventory, structural failures or near failures, localized flooding, and hydraulic capacity problems often occur during the year. Many of these are discovered through the routine sewer inspection program. During any given fiscal year, subprojects are prioritized based on the criticality and condition of the facility and the need to protect public health and property. The project is funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	78,960,583	2,800,000	3,000,000	3,000,000	3,000,000	3,500,000	4,000,000	4,000,000	16,500,000
Operating and Maintenance Costs			0	0	0	0	0	0	

Beech Essex CP-K (E08386)

Confidence Level: Low

Total Project Cost: 1,469,000 **Area:** Northeast
Original Project Cost: 1,469,000 **Objective:** Replacement

Project Description

Construct approximately 1,540 linear feet of new pipe ranging in size from 12" to 30" to relieve basement flooding in a 33-acre project area of NE Portland generally bound by Russell, Vancouver, Thompson, and Borthwick. The project has a positive cost to benefit ratio (CBR) = 0.41. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	0	0	0	305,000	1,164,000	0	0	1,469,000
Operating and Maintenance Costs			0	0	0	0	0	0	

NWN: Far North Nicolai (E08401)

Confidence Level: High

Total Project Cost: 5,956,000 **Area:** Northwest
Original Project Cost: 3,770,000 **Objective:** Replacement

Project Description

This project constructs approximately 8,000 linear feet of pipe ranging in size from 8" to 30" to relieve basement sewer backups and address pipe condition and hydraulic capacity problems. Located in NW Portland, the project area is generally bound by Reed, Hwy 30, Thurman, and 28th. The project has a positive cost to benefit ratio (CBR) = 1.04. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	625,505	4,500,000	4,200,000	0	0	0	0	0	4,200,000
Operating and Maintenance Costs			0	0	0	0	0	0	

Bureau of Environmental Services

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
Maintenance and Reliability								
Beech-Essex CP-J (E08656)								
	Confidence Level: Low							
						Total Project Cost: 7,572,000	Area: Northeast	
						Original Project Cost: 7,572,000	Objective: Replacement	
Project Description								
Reduce the risk of basement back up to 351 parcels by constructing 11,800 linear feet of new capacity pipe and replace 3,700 linear feet of pipe in poor condition. Located in N/NE Portland, the project area is generally bound by Fargo, 7th, Sacramento, and Williams. The project has a positive cost to benefit ratio (CBR) = 0.51. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	0	0	0	0	0	58,000	916,000	974,000
Operating and Maintenance Costs			0	0	0	0	0	
TGD: SE Powell Recon/Green Streets (E08659)								
	Confidence Level: High							
						Total Project Cost: 5,600,000	Area: Southeast	
						Original Project Cost: 7,026,000	Objective: Replacement	
Project Description								
This project reconstructs approximately 5,300 linear feet of pipe including 1,790 LF in poor condition and 3,130 LF with inadequate capacity, and 365 LF of sewer extensions. This project also constructs 50 vegetated stormwater infiltration facilities. This project is a combination of three prior projects. Located in SE, there are two project areas generally bound (1) between Taggart and 7th and Rhone and 15th and (2) between 24th and 25th and Cora and Reynolds. This project is funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	998,648	3,800,000	3,700,000	92,000	90,000	0	0	3,882,000
Operating and Maintenance Costs			0	0	0	10,000	10,000	
TGD: SE Hawthorne Recon/Green Streets (E08668)								
	Confidence Level: High							
						Total Project Cost: 6,545,000	Area: Southeast	
						Original Project Cost: 2,216,000	Objective: Replacement	
Project Description								
This project combines E08671 and E08668 into a single construction project. Located in SE Portland, one area is generally bound by Madison, 41st, Clay, and 50th; the other is bound by Yamhill, 46th, Main, and 49th. Together the projects will rehab 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. This project is funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	1,512,195	4,500,000	2,200,000	50,000	50,000	0	0	2,300,000
Operating and Maintenance Costs			0	0	0	10,000	10,000	
Fanno Basin System Improvement (E09045)								
	Confidence Level: High							
						Total Project Cost: 82,600,000	Area: Southwest	
						Original Project Cost: 59,179,424	Objective: Replacement	
Project Description								
This group of projects will repair, replace, and expand the conveyance system in the Fanno Basin in SW Portland. Remaining work elements include expansion of the pump station and improvements to the main gravity sewer. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	70,429,718	6,092,000	1,100,000	0	0	0	0	1,100,000
Operating and Maintenance Costs			0	320,000	320,000	320,000	320,000	
SE Interceptor Rehabilitation (E10030)								
	Confidence Level: Low							
						Total Project Cost: 14,200,000	Area: Southeast	
						Original Project Cost: 8,322,000	Objective: Maintenance & Rep	
Project Description								
This project rehabilitates two sections of the SE Interceptor and will be constructed in two phases over multiple fiscal years: 2,038 linear feet of 72-in by 74-in horseshoe monolithic concrete sewer constructed in 1954, located at a depth of 41 to 53 feet, from the intersection of SE Grand and Pine north to NE Davis and west in NE Davis to NE 3rd; and 1,330 linear feet of 66 inch x 54 inch at a depth of approximately 30 feet located between SE Caruthers and SE 12th. This project is funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	674,275	3,500,000	500,000	3,500,000	0	0	0	4,000,000
Operating and Maintenance Costs			0	0	0	0	0	

Bureau of Environmental Services

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Maintenance and Reliability

Phase 2 Pipe Rehabilitation (E10031)

Total Project Cost: 126,000,000 **Area:** Citywide
Confidence Level: Moderate **Original Project Cost:** 123,000,000 **Objective:** Maintenance & Rep

Project Description

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 business risk exposure so that the pipes with the highest benefit (risk reduction) to cost ratios are to be done first. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	72,623,213	32,252,000	32,800,000	11,830,000	1,190,000	0	0	45,820,000
Operating and Maintenance Costs			0	0	0	0	0	

Stark HSS-17 (E10216)

Total Project Cost: 13,242,000 **Area:** Southeast
Confidence Level: Low **Original Project Cost:** 13,242,000 **Objective:** Replacement

Project Description

Replace pipes in poor structural condition and relieve street flooding and the risk of basement sewer backups to 304 properties in an area generally bound by NE Everett, SE/NE 32nd, SE Stark, and SE 21st. Replace 400 linear feet of poor condition pipe, upsize 10,500 linear feet of hydraulically deficient pipe, and construct new green street facilities to collect stormwater runoff from approximately 21 acres of impervious area. The project has a positive cost to benefit ratio (CBR) = 0.47. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	0	0	0	0	1,005,000	1,305,000	2,310,000
Operating and Maintenance Costs			0	0	0	0	0	

Wheeler WHE-04 (E10219)

Total Project Cost: 9,445,000 **Area:** Northeast
Confidence Level: Low **Original Project Cost:** 10,016,000 **Objective:** Replacement

Project Description

Construct improvements to relieve street flooding and basement sewer backups in an area generally bound by NE Brazee, NE 7th, NE San Rafael, and the Willamette River. The project will reduce the risk of basement sewer backup to 247 properties. The project has a positive cost to benefit ratio (CBR) = 1.18. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	120,172	300,000	515,000	4,000,000	4,200,000	0	0	8,715,000
Operating and Maintenance Costs			0	0	0	0	5,000	

Structural Rehab Taggart Outfall 30 (E10220)

Total Project Cost: 14,805,000 **Area:** Southeast
Confidence Level: Low **Original Project Cost:** 14,805,000 **Objective:** Maintenance & Rep

Project Description

This project includes structural rehabilitation of the Taggart Outfall, a 1906 combined sewer. The sewer ranges in size from 64 to 118 inches in diameter at depths of 20 to 65 feet. This project is funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	1,160,641	650,000	1,630,000	7,250,000	4,000,000	0	0	12,880,000
Operating and Maintenance Costs			0	0	0	0	0	

Owner Controlled Insurance Program Phase 4 (E10222)

Total Project Cost: 5,000,000 **Area:** Citywide
Confidence Level: Moderate **Original Project Cost:** 3,850,000 **Objective:** Efficiency

Project Description

Owner controlled insurance program for all construction projects over \$0.5 million. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	4,547,949	500,000	300,000	0	0	0	0	300,000
Operating and Maintenance Costs			0	0	0	0	0	

Bureau of Environmental Services
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Maintenance and Reliability

Tryon SS Protection 1A TCWTP to Hwy 43 (E10251) **Total Project Cost:** 4,200,000 **Area:** Undetermined
Original Project Cost: 1,900,000 **Objective:** Replacement
Confidence Level: Moderate

Project Description

Upgrade the Tryon Creek Sewer from the Tryon Creek wastewater treatment plant approximately 1,850 feet upstream into Tryon Creek State Park. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	1,174,791	1,000,000	1,000,000	1,700,000	0	0	0	2,700,000
Operating and Maintenance Costs			0	0	0	0	0	

Alder: Eastside Industrial Recon/Green Streets (E10366) **Total Project Cost:** 10,967,000 **Area:** Southeast
Original Project Cost: 10,967,000 **Objective:** Replacement
Confidence Level: Low

Project Description

Upsize pipe segments and install street, roof, and parking stormwater controls to relieve street flooding and basement sewer backup to 146 properties. Located in SE, the area is generally bound by Madison, 10th, Sherman, and 6th. The project has a positive cost to benefit ratio (CBR) = 0.29. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	0	0	249,000	1,605,000	3,676,000	5,437,000	10,967,000
Operating and Maintenance Costs			0	0	0	0	0	

Alder: Sunnyside North Recon/Green Streets (E10367) **Total Project Cost:** 8,975,000 **Area:** Southeast
Original Project Cost: 11,255,000 **Objective:** Replacement
Confidence Level: Low

Project Description

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 backup to 318 properties. Located in SE Portland, the project area is generally bound by Stark, 37th, Taylor, and 20th. This project must be completed prior to Sunnyside South. Some scope and budget moved to E10370 Sunnyside East. The three projects have a combined positive cost to benefit ratio (CBR) = 0.18. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	139,854	809,000	500,000	4,000,000	3,000,000	0	0	7,500,000
Operating and Maintenance Costs			0	0	0	20,000	20,000	

Alder: Sunnyside South Recon/Green Streets (E10368) **Total Project Cost:** 6,567,000 **Area:** Southeast
Original Project Cost: 6,567,000 **Objective:** Replacement
Confidence Level: Low

Project Description

Construct improvement to upsize pipe segments and install street, roof, and parking stormwater controls to relieve street flooding and basement sewer backup to 204 properties. Located in SE Portland, the project area is generally bound by Taylor, 45th, Hawthorne, and 29th. The project has a positive net benefit to cost ratio (nBCR) = 0.47. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	0	0	0	265,000	845,000	2,773,000	3,883,000
Operating and Maintenance Costs			0	0	0	0	0	

Alder: Ladd's Addition South Recon/Green Streets (E10369) **Total Project Cost:** 4,668,000 **Area:** Southeast
Original Project Cost: 4,668,000 **Objective:** Replacement
Confidence Level: Low

Project Description

Construct improvements to rehabilitate pipe segments that are in poor condition, upsize pipe segments, and install street, roof, and parking stormwater controls to relieve street flooding and basement sewer backup to 76 properties. The project area is generally bound by Market, 20th, Division, and 12th in SE Portland. The project has a positive cost to benefit ratio (CBR) = 0.20. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	0	0	0	234,000	554,000	1,972,000	2,760,000
Operating and Maintenance Costs			0	0	0	0	0	

Bureau of Environmental Services
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Maintenance and Reliability

Alder: Sunnyside East Recon/Green Streets (E10370) **Total Project Cost:** 4,390,000 **Area:** Southeast
Confidence Level: Low **Original Project Cost:** 2,879,000 **Objective:** Replacement

Project Description

Construct improvements to upsize pipe segments, and install street, roof, and parking stormwater controls to relieve street flooding and basement sewer backup to 90 properties. Located in SE Portland, the project area is generally bound by Stark, 45th, Taylor, and 37th. Some scope and budget transferred from E10367 Sunnyside North. The project has a positive cost to benefit ratio (CBR) = 0.56. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	282,097	365,000	2,200,000	1,500,000	0	0	0	3,700,000
Operating and Maintenance Costs			0	0	7,000	7,000	0	

Alder: Buckman East Recon/Green Streets (E10371) **Total Project Cost:** 7,191,000 **Area:** Southeast
Confidence Level: Low **Original Project Cost:** 7,191,000 **Objective:** Replacement

Project Description

Rehabilitate pipe segments that are in poor condition, upsize pipe segments, and install street, roof, and parking stormwater controls to relieve street flooding and basement sewer backup to 189 properties. Located in SE, the area is generally bound by Stark, 29th, Hawthorne, and 14th. The project has a positive cost to benefit ratio (CBR) = 0.28. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	0	0	300,000	890,000	2,974,000	3,027,000	7,191,000
Operating and Maintenance Costs			0	0	0	0	0	

Burlingame Basin Infiltration and Inflow (E10474) **Total Project Cost:** 13,950,000 **Area:** Southwest
Confidence Level: Low **Original Project Cost:** 13,950,000 **Objective:** Maintenance & Rep

Project Description

Reduce the stormwater flow into the sanitary sewers and eliminate sanitary sewer overflows in the Burlingame basin. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	5,697,965	3,436,000	1,100,000	1,070,000	2,650,000	1,000,000	2,000,000	7,820,000
Operating and Maintenance Costs			0	0	0	0	0	

TGD: Richmond Neighborhood Recon/Green Streets (E10489) **Total Project Cost:** 4,662,000 **Area:** Southeast
Confidence Level: Low **Original Project Cost:** 4,514,000 **Objective:** Replacement

Project Description

This project rehabilitates approximately 1,300 feet of pipe in poor condition, upsize pipe segments and install street stormwater controls to relieve street flooding and basement sewer backup for 143 properties. Located in SE, the area is generally bound by Hawthorne, 48th, Division, and 36th. The project has a positive cost to benefit ratio (CBR) = 0.13. This project is funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	160,000	0	0	625,000	1,930,000	2,042,000	4,597,000
Operating and Maintenance Costs			0	0	0	0	0	

Combined Sewer Overflow Pressure Relief (E10490) **Total Project Cost:** 1,048,295 **Area:** West
Confidence Level: Low **Original Project Cost:** 1,020,000 **Objective:** Efficiency

Project Description

The completed Willamette combined sewer overflow system is susceptible to hydraulic transients or pressure waves that can cause geysers well above ground level, causing public safety risks and damage to sewer and surrounding structures. This project will construct transient relief structures at the two remaining susceptible locations. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	198,295	300,000	750,000	100,000	0	0	0	850,000
Operating and Maintenance Costs			0	0	0	0	0	

Bureau of Environmental Services

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
Maintenance and Reliability								
Pipe Rehabilitation Phase 3 (E10500)								
Confidence Level: Low								
Project Description								
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. This project is an outgrowth of the Phase 2 program. This project is funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	2,158,750	3,121,000	7,784,000	18,395,000	31,485,000	25,085,000	22,126,000	104,875,000
Operating and Maintenance Costs			0	0	0	0	0	
Total Project Cost: 155,250,000 Area: Citywide								
Original Project Cost: 155,250,000 Objective: Maintenance & Rep:								
Large Diameter Sewer Rehabilitation (E10576)								
Confidence Level: Low								
Project Description								
This program will perform spot and whole pipe rehabilitation of large diameter (> 36 inches) sanitary and combined sewers that are currently in poor structural condition. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	4,843	1,000,000	600,000	1,350,000	1,470,000	3,700,000	6,000,000	13,120,000
Operating and Maintenance Costs			0	0	0	0	0	
Total Project Cost: 39,400,000 Area: Citywide								
Original Project Cost: 39,400,000 Objective: Maintenance & Rep:								
Capital Maintenance - Non-Process Facilities (E10594)								
Confidence Level: Low								
Project Description								
This program is for capital maintenance of BES-owned non-process facilities including the Water Pollution Control Lab, administration buildings at the treatment plants, and downtown office space. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	547,745	1,000,000	680,000	975,000	1,500,000	2,000,000	500,000	5,655,000
Operating and Maintenance Costs			0	0	0	0	0	
Total Project Cost: Ongoing Area: Citywide								
Original Project Cost: 11,250,000 Objective: Maintenance & Rep:								
NEW - NWN: Slabtown Sewer Replacement (E10663)								
Confidence Level: Low								
Project Description								
This project is a reconfiguration of portions of previously programmed work in Northwest Neighborhoods. The project is specifically targeted at the Conway Master Plan redevelopment area. Pipes in this area are typically 100-year old clay and under capacity. The project will increase pipe capacity to address risk of sewer backups to 67 properties between NW 13th and 21st and Pettygrove and Savier. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	194,854	0	7,000,000	2,600,000	0	0	0	9,600,000
Operating and Maintenance Costs			0	0	0	0	0	
Total Project Cost: 11,150,000 Area: Northwest								
Original Project Cost: 11,150,000 Objective: Replacement								
NWN: Central Tanner (E10693)								
Confidence Level: Low								
Project Description								
Replace 9,300 linear feet of existing 100- to 120-year old clay combined sewer pipes with larger pipes to increase hydraulic capacity in the area generally bound by NW Overton, 11th, Kearny, and 21st. Project will reduce the risk of street flooding at 35 locations and basement sewer backup risk to 112 parcels. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	0	100,000	0	300,000	900,000	2,000,000	4,000,000	7,200,000
Operating and Maintenance Costs			0	0	0	0	0	
Total Project Cost: 10,216,000 Area: Northwest								
Original Project Cost: 10,216,000 Objective: Replacement								

Bureau of Environmental Services Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Maintenance and Reliability

NWN: NW Thurman St Sewer (E10696) **Total Project Cost:** 2,604,000 **Area:** Northwest
Confidence Level: Low **Original Project Cost:** 2,542,000 **Objective:** Replacement

Project Description

Upsize 3,100 linear feet of existing 100-year combined sewer pipes to increase hydraulic capacity in the vicinity of NW Savier, Franklin, and Thurman. Project will reduce the risk of street flooding at 16 locations and basement sewer backup risk to 35 parcels. Timing of project is in response to six reported basement sewer backups since 2008. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	0	185,000	240,000	1,600,000	579,000	0	2,604,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Small Urgent Capacity Projects (E10808) **Total Project Cost:** Ongoing **Area:** Citywide
Confidence Level: Low **Original Project Cost:** Ongoing **Objective:** Replacement

Project Description

Program to address combined sewer capacity in areas where property owners have reported basement sewer backups and are outside of the boundary of a project currently in the Capital Improvement Program (CIP). Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	0	100,000	500,000	500,000	500,000	500,000	2,100,000
Operating and Maintenance Costs			0	0	0	0	0	

Sewage Treatment Systems

Pump Station Improvements (E04661) **Total Project Cost:** Ongoing **Area:** Citywide
Confidence Level: Moderate **Original Project Cost:** Ongoing **Objective:** Maintenance & Rep

Project Description

This is a continuing program to refurbish or upgrade pump stations that are not in compliance with present codes, are not operating in a reliable manner, need improvements because of growth in the receiving sewage basin, and/or are over 20 years old with out-of-date equipment. The approved Pump Station Improvement Plan guides the selection of projects. The City currently operates and maintains 98 pump stations. This program was developed to ensure these facilities are maintained in accordance with a scheduled plan to increase pump station reliability, reduce or avoid increases in maintenance costs, and avoid failures that could cause sewage to bypass to waterways. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	68,406,447	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	5,000,000	21,000,000
Operating and Maintenance Costs			5,000	5,000	5,000	5,000	5,000	

Repair, Rehabilitation, and Modification (E04891) **Total Project Cost:** Ongoing **Area:** Citywide
Confidence Level: Moderate **Original Project Cost:** Ongoing **Objective:** Maintenance & Rep

Project Description

The Repair, Rehabilitation, and Modifications program is to protect capital investments and to enhance system reliability at the Columbia and Tryon Creek sewage treatment facilities. It provides for best management practices to prevent violations of the NPDES permit. Both treatment plants are aging facilities and require regular repair, rehabilitation, and modifications. This program facilitates rapid and practical replacement of capital equipment and upgrade of aging facilities. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	59,645,621	2,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	20,000,000
Operating and Maintenance Costs			0	0	0	0	0	

Bureau of Environmental Services Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
Sewage Treatment Systems								
CBWTP Lagoon Reconstruction (E06072)								
Confidence Level: High								
Project Description								
Construct additional dikes in the existing lagoon to create more separation. The individual ponds will be lined with a monofill. Two separate phases are programmed in the 5-year CIP. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	20,784,121	3,300,000	2,740,000	2,900,000	4,700,000	640,000	110,000	11,090,000
Operating and Maintenance Costs			0	0	0	0	50,000	
<hr/>								
CBWTP Outfall Diffusers (E06923)								
Confidence Level: Low								
Project Description								
Extend the existing wet weather outfall diffuser to alleviate sediment accumulation in outfall pipe. Funded by bond proceeds repaid by sanitary and stormwater rates.								
Total Requirements	0	100,000	200,000	200,000	1,300,000	0	0	1,700,000
Operating and Maintenance Costs			0	0	0	0	0	
<hr/>								
CBWTP Secondary Treatment Expansion (E07947)								
Confidence Level: Low								
Project Description								
Expand secondary treatment capacity at the CBWTP to provide reliable treatment for BOD and TSS consistent with the NPDES permit for operating the plant. The project will add two new secondary clarifiers per the recommended phasing in the 1995 Facilities Plan and 2009 update. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	0	0	200,000	2,000,000	2,000,000	13,000,000	17,000,000	34,200,000
Operating and Maintenance Costs			0	0	0	0	0	
<hr/>								
CBWTP Biogas Utilization (E10033)								
Confidence Level: Low								
Project Description								
Construct a facility to beneficially reuse the remaining unused methane gas that is a bi-product of the treatment process. This project is expected to pay for itself over a 10 to 20 year period. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	531,409	6,704,000	950,000	8,550,000	0	0	0	9,500,000
Operating and Maintenance Costs			0	0	0	(50,000)	(50,000)	
<hr/>								
NEW - Alder Pump Station Upgrade (E10359)								
Confidence Level: Moderate								
Project Description								
This project originated in the Pump Station Improvement Program. Upgrade the pump station for projected future flows, and to integrate the pump station operation into the eastside CSO system operation. The project will also replace all mechanical, electrical, and controls equipment. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	687,946	0	1,430,000	2,860,000	0	0	0	4,290,000
Operating and Maintenance Costs			0	0	0	0	0	

Bureau of Environmental Services Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Sewage Treatment Systems

CBWTP Dewatering Improvements (E10365)

Confidence Level: Low

Total Project Cost: 15,481,000

Area: Citywide

Original Project Cost: 15,481,000

Objective: Efficiency

Project Description

The 2010 Columbia Boulevard Wastewater Treatment Plant Facilities Plan recommends improvements to the existing dewatering process to increase capacity and eliminate process bottlenecks. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	0	511,000	817,000	3,676,000	5,105,000	4,084,000	14,193,000
Operating and Maintenance Costs			0	0	0	0	0	

CBWTP Reuse System Replacement (E10483)

Confidence Level: Low

Total Project Cost: 3,950,000

Area: North

Original Project Cost: 3,950,000

Objective: Replacement

Project Description

Replace the reuse water system, installed in 1996, to provide reliable reuse treatment capacity at CBWTP. Upgrade the deep well pump controls and integrate them with the reuse system controls providing more consistent water supply and pressure for plant processes. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	0	0	0	0	414,000	420,000	834,000
Operating and Maintenance Costs			0	0	0	0	0	

TCWTP Headworks Improvements (E10582)

Confidence Level: Low

Total Project Cost: 38,524,000

Area: Southwest

Original Project Cost: 38,524,000

Objective: Replacement

Project Description

The TCWTP Facilities Plan Update has identified needed improvements 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. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	82,098	1,000,000	2,000,000	7,000,000	12,000,000	14,000,000	3,000,000	38,000,000
Operating and Maintenance Costs			0	0	0	0	0	

CBWTP Digester Improvements (E10616)

Confidence Level: High

Total Project Cost: 470,000

Area: North

Original Project Cost: 470,000

Objective: Maintenance & Repr

Project Description

Several small improvements to the digester complex, primarily to fully integrate the new digesters with the older digesters at CBWTP. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	163,333	470,000	270,000	0	0	0	0	270,000
Operating and Maintenance Costs			0	0	0	0	0	

TCWTP Secondary Process Improvements (E10694)

Confidence Level: Low

Total Project Cost: 6,160,000

Area: Southwest

Original Project Cost: 6,160,000

Objective: Maintenance & Repr

Project Description

Improve TCWTP secondary process treatment performance and reliability to ensure that current NPDES permit requirements and future Willamette Basin water quality standards are met. The timing of this project is dependent upon other improvements under E10582. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	0	200,000	780,000	2,220,000	2,910,000	0	0	5,910,000
Operating and Maintenance Costs			0	0	0	10,000	10,000	

Bureau of Environmental Services Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Sewage Treatment Systems

NEW - CBWTP Organic Waste Receiving Facility (E10804)	Total Project Cost: 4,838,000	Area: North
Confidence Level: Low	Original Project Cost: 4,838,000	Objective: Efficiency
Project Description		
Construct a facility to accept organic waste (commercial food wastes, fats, oils, and grease) and process the waste in the anaerobic digesters to produce biogas at the CBWTP. The biogas can be converted to renewable energy-electricity, heat, or vehicle fuel. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	0	0
Operating and Maintenance Costs	63,000	235,000
	245,000	2,776,000
	1,519,000	4,838,000

NEW - CBWTP Headworks Screens Improvements (E10805)	Total Project Cost: 9,805,000	Area: North
Confidence Level: Low	Original Project Cost: 9,805,000	Objective: Replacement
Project Description		
Replace the five existing bar screens in the Headworks with screens of smaller openings to protect the downstream processes. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	0	0
Operating and Maintenance Costs	98,000	384,000
	705,000	3,910,000
	3,899,000	8,996,000

NEW - CBWTP RAS Piping Upgrade (E10806)	Total Project Cost: 5,275,000	Area: North
Confidence Level: Low	Original Project Cost: 5,275,000	Objective: Replacement
Project Description		
Replacement of the return activated sludge (RAS) piping, diameters range from 12 to 30 inch. The pipes are more than 40 years old and experiencing increasing rate of failure resulting in the need for emergency repairs. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	0	0
Operating and Maintenance Costs	0	100,000
	584,000	404,000
	2,085,000	3,173,000

NEW - Inverness Pump Station Force Main (E10807)	Total Project Cost: 10,030,000	Area: Citywide
Confidence Level: Low	Original Project Cost: 10,030,000	Objective: Replacement
Project Description		
This multi-phase project will first address deficiencies in the 24-inch force main, re-direct flow from the 36-inch force main, and then address deficiencies in the 36-inch line. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	0	0
Operating and Maintenance Costs	94,000	401,000
	2,533,000	1,610,000
	726,000	5,364,000

Surface Water Management

JC: River Mile 9.6 Floodplain Restoration (E07158)	Total Project Cost: 1,300,000	Area: Southeast
Confidence Level: Low	Original Project Cost: 2,000,000	Objective: Expansion
Project Description		
Previously named Community Restoration Partnership. Provide floodplain restoration on multiple parcels along Johnson Creek near river mile 9.6. Approximately 9.5 acres of floodplain will be restored to reduce flooding, and improve water quality and ESA habitat. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	199,476	100,000
Operating and Maintenance Costs	200,000	800,000
	20,000	20,000
	0	1,040,000

Bureau of Environmental Services
Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
Surface Water Management								
JC: Springwater Wetland (E07383)								
Confidence Level: Low								
				Total Project Cost:	2,892,000		Area: Southeast	
				Original Project Cost:	535,000		Objective: Expansion	
Project Description								
Mitigate damage from flooding greater than the 10-year event and provide water quality and habitat benefits by restoring existing wetlands in the area. Passive recreational trails/facilities will be incorporated and coordinated with Portland Parks and Recreation. Funded by US Army Corps of Engineers and bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	393,384	100,000	128,000	657,000	0	0	0	785,000
Operating and Maintenance Costs			0	0	0	0	0	
JC: Brunkow (E08247)								
Confidence Level: Low								
				Total Project Cost:	1,600,000		Area: Southeast	
				Original Project Cost:	768,000		Objective: Efficiency	
Project Description								
Floodplain, wetland, and riparian restoration per the 2001 Johnson Creek Restoration Plan. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	20,443	200,000	100,000	370,000	0	0	0	470,000
Operating and Maintenance Costs			0	0	0	0	0	
JC: Freeway Land Floodplain Restoration (E08382)								
Confidence Level: Low								
				Total Project Cost:	8,630,000		Area: Southeast	
				Original Project Cost:	9,587,000		Objective: Efficiency	
Project Description								
Approximately 100 acres are required south of SE Foster Road to manage the 10-year nuisance flood and provide fish and wildlife habitat along approximately 1.5 miles of Johnson Creek. This project addresses the portion of the nuisance flood footprint on Freeway Land Company - the western portion of the 100 acres. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	86,101	50,000	0	50,000	100,000	100,000	100,000	350,000
Operating and Maintenance Costs			0	0	0	0	0	
JC: Oxbow (E08406)								
Confidence Level: Low								
				Total Project Cost:	1,235,000		Area: Southeast	
				Original Project Cost:	1,396,000		Objective: Replacement	
Project Description								
Improvements to increase flood storage and improve habitat at the Johnson Creek Oxbow. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	178,531	185,000	300,000	500,000	10,000	0	0	810,000
Operating and Maintenance Costs			0	0	0	0	3,000	
Oaks Bottom Culvert Replacement (E08576)								
Confidence Level: Moderate								
				Total Project Cost:	4,348,275		Area: Southeast	
				Original Project Cost:	6,695,000		Objective: Replacement	
Project Description								
Replace a 60" culvert and restore off-channel habitat. Project elements include a new box culvert or bridge; regrading, clearing and grubbing of channel; some channel excavation; cedar boles; and re-introduction of native vegetation and management of invasive noxious weeds. Funded by the US Army Corps of Engineers and bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	1,322,759	90,000	200,000	1,900,000	0	0	0	2,100,000
Operating and Maintenance Costs			0	0	0	0	0	

Bureau of Environmental Services

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Surface Water Management

FT: Beaverton Hillsdale Hwy (E08675)	Total Project Cost: 4,052,257	Area: Southwest
Confidence Level: Low	Original Project Cost: 1,040,000	Objective: Replacement
Project Description		
Construct stormwater treatment facilities to control flow and pollutants flowing into Fanno Creek from the 2.6 mile section of Beaverton-Hillsdale Hwy between SW Sunset and 65th Ave. Pollutants targeted for removal will be total suspended solids and phosphorous. This project will significantly address the City's regulatory obligation under the TMDL and benefit native cutthroat trout found in Fanno Creek. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	268,257	479,000
Operating and Maintenance Costs		500,000
		500,000
		1,000,000
		1,000,000
		784,000
		3,784,000

FT: SW 45th Ave Culvert (E08676)	Total Project Cost: 1,701,534	Area: Southwest
Confidence Level: Moderate	Original Project Cost: 610,000	Objective: Replacement
Project Description		
Construct a replacement for the 45th Ave culvert on Fanno Creek to increase capacity and provide fish passage. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	267,279	148,000
Operating and Maintenance Costs		1,115,000
		0
		0
		0
		0
		0

FT: Jackson Middle School Creek Daylight (E08680)	Total Project Cost: 1,709,397	Area: Southwest
Confidence Level: Low	Original Project Cost: 1,435,000	Objective: Replacement
Project Description		
Daylight a segment of Falling Creek and provide stormwater treatment for 100,000 square feet of impervious area. The project will help to restore riparian and floodplain habitat conditions. Project involves extensive coordination with Portland Schools and Portland Parks and Recreation. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	59,397	173,000
Operating and Maintenance Costs		1,136,000
		514,000
		0
		0
		0
		0

FT: Boones Ferry Culvert (E08682)	Total Project Cost: 3,410,000	Area: Southwest
Confidence Level: Moderate	Original Project Cost: 1,669,000	Objective: Replacement
Project Description		
Replace the Boones Ferry Culvert on Tryon Creek to increase capacity and provide fish passage. The project will include channel enhancement work to control the grade of the creek and protect streambanks and will protect an exposed 18-inch sewer line crossing the creek approximately 145 feet upstream of the culvert. In addition to limiting fish passage, the pipe is also in need of repair and it does not convey water consistent with BES stormwater design manual standards. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	540,229	237,000
Operating and Maintenance Costs		500,000
		2,000,000
		0
		0
		0
		0

FT: Water Quality Facility 2 (E08687)	Total Project Cost: 869,395	Area: Southwest
Confidence Level: Low	Original Project Cost: 869,395	Objective: Replacement
Project Description		
Construct four water quality facilities: two in Fanno Creek receiving stormwater runoff from nearly 14 acres and two in Tryon Creek receiving stormwater runoff from 35 acres. The Fanno Creek facilities will be located along Beaverton-Hillsdale Hwy. The Tryon facilities will be located along Barbur Blvd near SW 35th and north of I-5 near SW 30th. These facilities will improve water quality and provide flow attenuation. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	0	0
Operating and Maintenance Costs		278,000
		278,000
		72,000
		0
		628,000
		0
		10,000

Bureau of Environmental Services Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
Surface Water Management								
Watershed Investment Program (E08782)				Total Project Cost:		Ongoing	Area: Citywide	
Confidence Level: Moderate				Original Project Cost:		Ongoing	Objective: Efficiency	
Project Description								
This program funds watershed enhancements. Priority is given to projects that leverage other funding sources and/or address multiple watershed health goals. This project is funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	6,216,079	1,520,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000
Operating and Maintenance Costs			5,000	5,000	10,000	10,000	10,000	
Green Infrastructure: Land Acquisition (E08905)								
Confidence Level: Moderate				Total Project Cost:		23,850,000	Area: Citywide	
				Original Project Cost:		30,509,900	Objective: Efficiency	
Project Description								
This program is focused on protection and restoration of Portland's rivers and watersheds reflecting City Council's vision of how Portland should reduce the City's stormwater footprint. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	19,399,985	2,000,000	500,000	0	0	0	0	500,000
Operating and Maintenance Costs			0	0	0	0	0	
JC: Johnson Creek Willing Seller Phase 2 (E10040)								
Confidence Level: Moderate				Total Project Cost:		40,000,000	Area: Southeast	
				Original Project Cost:		40,000,000	Objective: Efficiency	
Project Description								
Acquisition of properties in four 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 in high risk areas to sell their property at fair market, creates projects that increase flood storage and conveyance capacity while enhancing fish and wildlife habitat, and creates wetlands and passive recreation activities. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	5,886,341	500,000	500,000	500,000	500,000	500,000	500,000	2,500,000
Operating and Maintenance Costs			0	0	0	0	0	
Culvert Replacement Phase 2 (E10372)								
Confidence Level: Moderate				Total Project Cost:		4,430,000	Area: Citywide	
				Original Project Cost:		3,800,000	Objective: Replacement	
Project Description								
Replace the two remaining culverts in Crystal Springs Creek in support of watershed health goals and commitments under the Endangered Species Act. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	1,521,129	2,000,000	2,000,000	0	0	0	0	2,000,000
Operating and Maintenance Costs			0	0	2,000	2,000	2,000	
FT: Drainage Shoulder Improvements (E10373)								
Confidence Level: Low				Total Project Cost:		4,622,460	Area: Southwest	
				Original Project Cost:		4,932,000	Objective: Replacement	
Project Description								
Convert high priority City maintained roadside ditches to swales in the Fanno and Tryon Creek watersheds. Up to 60,000 feet of roadside ditches will be converted to swales to manage stormwater runoff from impervious roadway and adjacent development. These priority roads were identified in the Fanno/Tryon Water Quality and TMDL Pre-Design. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	0	200,000	102,000	511,000	1,033,000	1,021,000	1,021,000	3,688,000
Operating and Maintenance Costs			0	0	0	5,000	10,000	

**Bureau of Environmental Services
Capital Improvement Plan Summaries**

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Surface Water Management

Watershed Land Acquisition Program (E10486)	Total Project Cost: 15,500,000	Area: Citywide
Confidence Level: Low	Original Project Cost: 15,500,000	Objective: Efficiency
Project Description Program targets the acquisition of 100 to 200 acres over five years to protect medium to high functioning natural resources in support of watershed health and stormwater management. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	0	0
Operating and Maintenance Costs	1,000,000	2,000,000
	2,000,000	2,000,000
	2,000,000	2,000,000
	2,000,000	9,000,000

Stephens Creek Ph 1 Improvements (E10488)	Total Project Cost: 13,650,000	Area: Southwest
Confidence Level: Low	Original Project Cost: 13,650,000	Objective: Efficiency
Project Description 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. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	189,609	383,000
Operating and Maintenance Costs	822,000	1,744,000
	572,000	2,011,000
	3,011,000	8,160,000

Columbia Slough Outfalls (E10563)	Total Project Cost: 24,708,000	Area: Northeast
Confidence Level: Low	Original Project Cost: 24,708,000	Objective: Mandated
Project Description This program is for construction of pollution controls for separated stormwater areas flowing through 220 city-owned Columbia Slough stormwater outfalls. The program focuses on the highest priority outfalls – those draining the most city-owned impervious area. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	656,857	581,000
Operating and Maintenance Costs	3,025,000	408,000
	2,078,000	1,817,000
	2,000,000	9,328,000

NEW - Culverts Phase 3 (E10809)	Total Project Cost: 14,400,000	Area: Citywide
Confidence Level: Low	Original Project Cost: 14,400,000	Objective: Replacement
Project Description Third phase of culverts replacements, consisting of five individual projects, to be constructed over multiple fiscal years. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	0	0
Operating and Maintenance Costs	0	50,000
	50,000	50,000
	50,000	0
	0	150,000

Systems Development

Drainage Improvement (E04894)	Total Project Cost: Ongoing	Area: Citywide
Confidence Level: Low	Original Project Cost: Ongoing	Objective: Expansion
Project Description The Drainage Improvement Project (DIP) provides assistance to projects initiated through Local Improvement District (LID) or Public Works Permits processes for oversizing of storm drainage facilities or upgrading of existing public downstream drainage systems. Oversizing increases capacity over the expected useful life of the facilities. It may also be used for small, urgent stormwater improvements. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.		
Total Requirements	6,280,983	250,000
Operating and Maintenance Costs	250,000	250,000
	250,000	250,000
	250,000	250,000
	0	1,250,000

Bureau of Environmental Services Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
Systems Development								
PBOT Interagency Reimbursement (E04895)				Total Project Cost:		Ongoing	Area: Citywide	
Confidence Level: Low				Original Project Cost:		Ongoing	Objective: Expansion	
Project Description								
This program provides for stormwater facility and sanitary sewer design, design review, and construction inspection services associated with street improvement projects initiated by PBOT. PBOT requests necessary services and reimburses BES for all costs of these services through an interagency agreement.								
Total Requirements	17,911,143	350,000	350,000	350,000	350,000	350,000	350,000	1,750,000
Operating and Maintenance Costs			0	0	0	0	0	
<hr/>								
Permit Reimbursement (E05219)				Total Project Cost:		Ongoing	Area: Citywide	
Confidence Level: Low				Original Project Cost:		Ongoing	Objective: Expansion	
Project Description								
This project allows a developer to be reimbursed for making public sewer available to another property, per City Code Title 17. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	2,440,539	45,000	250,000	45,000	45,000	45,000	45,000	430,000
Operating and Maintenance Costs			0	0	0	0	0	
<hr/>								
Party Sewers (E08748)				Total Project Cost:		Ongoing	Area: Citywide	
Confidence Level: Low				Original Project Cost:		Ongoing	Objective: Efficiency	
Project Description								
This program addresses existing "party sewers" – shared private sewer lines crossing private property (often without appropriate easements) or existing within the right-of-way. These sewers are older and generally have not been maintained. Over several years, this project will provide each property owner with direct access to a municipal sewer line or ensure that the property has acquired an easement for a separated private line. Most of the construction costs up to a capped amount will be reimbursed by property owners to the City through an LID assessment or through an in lieu of assessment line charge. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	9,476,085	2,000,000	2,000,000	1,795,000	1,000,000	1,000,000	1,000,000	6,795,000
Operating and Maintenance Costs			0	0	0	0	0	
<hr/>								
Sewer Easements on Existing Sewers (E10263)				Total Project Cost:		Ongoing	Area: Citywide	
Confidence Level: Low				Original Project Cost:		Ongoing	Objective: Replacement	
Project Description								
This project is for high priority sewer easement acquisition for existing sewers. The bureau regularly discovers locations where collection system assets are on private property without benefit of appropriate easements or other property interests. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	55,571	50,000	50,000	50,000	50,000	50,000	50,000	250,000
Operating and Maintenance Costs			0	0	0	0	0	
<hr/>								
SW Terwilliger Blvd Sanitary Sewer Extension (E10413)				Total Project Cost:		3,485,776	Area: Southwest	
Confidence Level: Moderate				Original Project Cost:		3,368,000	Objective: Expansion	
Project Description								
Eliminate the failing private pump station at Terwilliger and Powers by constructing approximately 6,400 feet of 8-inch gravity sanitary sewer from the existing pump station to a connection with the 30-inch concrete sewer near Hwy 43. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.								
Total Requirements	638,226	250,000	2,595,000	205,000	0	0	0	2,800,000
Operating and Maintenance Costs			0	0	0	0	0	

Bureau of Environmental Services Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Systems Development

Sewer Extensions for High Risk Septic (E10491)

Confidence Level: Low

Total Project Cost: Ongoing

Area: Citywide

Original Project Cost: Ongoing

Objective: Expansion

Project Description

This program will fund several projects for construction of numerous small sanitary sewer extension projects to provide sanitary sewer service to developed residential properties with septic systems. Projects will be prioritized based on risk. Funded by bond proceeds repaid by sanitary sewer and stormwater rates.

Total Requirements	122,861	200,000	100,000	100,000	1,000,000	100,000	100,000	1,400,000
Operating and Maintenance Costs			0	0	0	0	0	

Public Works Permit Projects (EP0000)

Confidence Level: Low

Total Project Cost: Ongoing

Area: Southeast

Original Project Cost: Ongoing

Objective: Expansion

Project Description

This ongoing, full-cost recovery project supports new development by providing for new public sewer system facilities through the public works permitting process. When proposed development creates the need for additional sewer system facilities, private developers are required to construct those facilities under this program. As part of the permit process, BES reviews and approves both plans and final construction for compliance with system standards. Facilities developed through this process are accepted as part of the City's sewerage system when completed and approved and thereafter maintenance and repair are provided by the City. Facilities must be developed to system standards in order to ensure that expensive future maintenance problems and service failures do not occur. All bureau costs are reimbursed by the developer.

Total Requirements	31,327,326	500,000	500,000	500,000	500,000	500,000	500,000	2,500,000
Operating and Maintenance Costs			0	0	0	0	0	

Bureau of Fire & Police Disability & Retirement

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Maintenance and Reliability

Database Capital Improvements (S00011)

Confidence Level: Complete

Total Project Cost: 583,382

Area: Citywide

Original Project Cost: 412,250

Objective: Replacement

Project Description

The rebuild of Fire & Police Disability & Retirement's (FPDR) FoxPro database in SQL server was completed in FY 2012-13. All expenses charged to this project in FY 2013-14 and beyond are for capital improvements to the new database. Capital expenses are estimated at \$35,000 to \$55,000 per year for the life of the forecast. The funding source for this project is the dedicated FPDR property tax levy.

Total Requirements	309,581	80,320	46,000	20,000	20,000	20,000	20,000	126,000
Operating and Maintenance Costs			36,427	45,000	49,000	51,000	51,000	

Office of Management & Finance
Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

BTS

IRNE Voice System Tech. Refresh (C00025)	Total Project Cost: 2,765,999	Area: Citywide
Confidence Level: Moderate	Original Project Cost: 2,766,000	Objective: Replacement
Project Description		
This Telecomm project includes the migration from, and ultimate retirement of, Lucent 5ESS as the primary voice switch. It also includes the migration to Avaya Communication Manager PBX, establishment of fault-tolerant architecture, and enhanced connectivity to Public Switched Telephone Network. Funding for this project will be from technology reserves.		
Total Requirements	0	2,182,490
Operating and Maintenance Costs	0	0

Replace Telecomm Management System (C00044)	Total Project Cost: 323,393	Area: Southeast
Confidence Level: Moderate	Original Project Cost: 294,000	Objective: Replacement
Project Description		
This project replaces StellarRad with a comprehensive and forward-looking Telecomm Management System. This system will serve to organize and streamline customer support and delivery processes, and will automate financial accounting functions. This project will be funded with bureau technology reserves.		
Total Requirements	1,609	321,784
Operating and Maintenance Costs	0	0

Wireless Network Expansion (C00046)	Total Project Cost: 838,282	Area: Citywide
Confidence Level: Moderate	Original Project Cost: 240,000	Objective: Expansion
Project Description		
Deploy WiFi network coverage in the Portland Building, 1900 Building, City Hall, and other facilities with a six-year replacement plan and funding model. Replace of existing secure and public Wi-Fi access points and expansion of secure and public Wi-Fi network coverage throughout the Police Bureau with a five-year replacement plan and funding model. This project is funded by interagency revenues.		
Total Requirements	341,307	496,975
Operating and Maintenance Costs	0	0

SAN Storage Expansion (C00047)	Total Project Cost: 8,557,360	Area: Citywide
Confidence Level: Low	Original Project Cost: 4,751,326	Objective: Expansion
Project Description		
Provide increased capacity of centralized storage and enterprise backup to meet demand from projects and existing data growth. Funding for this project will be from technology reserves.		
Total Requirements	4,260,554	3,652,400
Operating and Maintenance Costs	761,429	30,960

IRNE Const. - Fiber (C00049)	Total Project Cost: 1,045,655	Area: Citywide
Confidence Level: High	Original Project Cost: 742,906	Objective: Expansion
Project Description		
Place fiber optic cable bank to bank in bore buried under Willamette river, providing earthquake survivability of the Integrated Regional Network Enterprise (IRNE) by creating an eastside/westside connection not associated with an on-bridge placement. In addition, continue construction of fiber optic extensions to the IRNE system. This project is funded by interagency agreement revenues.		
Total Requirements	627,952	364,583
Operating and Maintenance Costs	157,703	0

Office of Management & Finance
Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

BTS

IRNE Net. Tech. Refresh (C00050)	Total Project Cost: 2,807,775		Area: Citywide
Confidence Level: Moderate	Original Project Cost: 653,316		Objective: Replacement
Project Description			
This project includes capital and lifecycle improvements to the existing Integrated Regional Network Enterprise (IRNE) infrastructure. Work includes capacity upgrades and end-of-life equipment replacement. Upgrades are needed in order to provide the capacity to meet current and future IRNE and wide area network bandwidth requirements and maintain reliability, functionality and vendor support. This project is funded by interagency revenues.			
Total Requirements	827,635	705,140	1,000,000
Operating and Maintenance Costs		25,000	25,000
			75,000
			75,000
			75,000
			75,000
			1,300,000

Enterprise Net. Tech. Refresh (C00055)	Total Project Cost: 3,828,686		Area: Citywide
Confidence Level: Moderate	Original Project Cost: 2,913,500		Objective: Replacement
Project Description			
This CIP establishes a six-year lifecycle replacement program for network switch and router equipment, providing a technology refresh for the City's computer network infrastructure. This project is funded by interagency agreement revenues.			
Total Requirements	2,614,386	300,000	218,800
Operating and Maintenance Costs			118,800
			108,900
			108,900
			358,900
			914,300

Remote Antenna Testing and Monitoring (C00058)	Total Project Cost: 75,000		Area: Southeast
Confidence Level: Low	Original Project Cost: 75,000		Objective: Replacement
Project Description			
This project will install sensors in 800 MHz radio antenna systems to allow Technology Services to test and monitor the antenna systems at sites without taking them offline. Funding for this project will be from technology reserves.			
Total Requirements	0	0	0
Operating and Maintenance Costs			75,000
			0
			0
			0
			0

VHF and 700 MHz NSPAC Repeater (C00060)	Total Project Cost: 600,000		Area: Southeast
Confidence Level: Moderate	Original Project Cost: 600,000		Objective: Efficiency
Project Description			
This project will install interoperable repeaters on VHF frequencies and 700 MHz frequencies at BTS radio sites. As the capabilities of radios have improved, there has been increased demand from City and non-City agencies for VHF and 700 MHz repeaters to support regional interoperable communications. Funding for this project will be from technology reserves.			
Total Requirements	0	0	175,000
Operating and Maintenance Costs			175,000
			125,000
			125,000
			0
			600,000

Radio Site Video Security Monitoring (C00061)	Total Project Cost: 225,000		Area: Southeast
Confidence Level: Moderate	Original Project Cost: 225,000		Objective: Efficiency
Project Description			
This project will install remote controllable video monitoring equipment at Technology Services radio sites. BTS radio sites are located as far away as Vancouver and Mt. Hood. The addition of video monitoring equipment will allow for remote (as opposed to on-site) monitoring in response to alarms, providing views of both site perimeters as well as building interiors. Funding for this project will be from technology reserves.			
Total Requirements	0	0	0
Operating and Maintenance Costs			75,000
			75,000
			75,000
			0
			225,000

Office of Management & Finance
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

BTS

Microwave Radio Upgrades for Spur Sites (C00062)	Total Project Cost:	625,000	Area: Southeast					
Confidence Level: Moderate	Original Project Cost:	625,000	Objective: Replacement					
Project Description								
BTS upgraded the main microwave loop with Aviat Eclipse radios. This project will upgrade the spur microwave links to an internet protocol (IP) based Eclipse radio with TDM (T1 - fiber optic line for digital transmission service) capabilities. There is a need for more IP bandwidth at sites, and this will help to improve BTS capabilities to provide it. This also allows for easier maintenance of the system by putting it all on a single platform. Funding for this project will be from technology reserves.								
Total Requirements	0	0	250,000	125,000	125,000	125,000	0	625,000
Operating and Maintenance Costs			0	0	0	0	0	

Cherwell Capability Expansion (C00063)	Total Project Cost:	696,401	Area: Citywide					
Confidence Level: Moderate	Original Project Cost:	50,000	Objective: Expansion					
Project Description								
This project will continue the BTS Support Center's build-out of the Cherwell Help Desk system, adding the following capabilities: automated password reset, pre-populate Avaya customer information, remote-control management tool integration, mobile device management integration, build-out workflows for business processes, templates, dashboards and reports, and ticket quality matrix. This expansion of functionality will assist the Help Desk in being more effective in servicing customers and enabling them to serve themselves. Funding for this project will be from technology reserves.								
Total Requirements	425,101	91,300	180,000	0	0	0	0	180,000
Operating and Maintenance Costs			0	0	0	0	0	

Smart Card Technology (C00070)	Total Project Cost:	300,000	Area: Southeast					
Confidence Level: Low	Original Project Cost:	300,000	Objective: Expansion					
Project Description								
This project is to implement Smart Card technology which will provide for dual authentication for mobile devices such as laptops and tablets. Smart Card technology would further secure sensitive City functions in compliance with Payment Card Industry (PCI), Personally Identifiable Information (PII), federal, state and local laws and regulations. Funding for this project will be from technology reserves.								
Total Requirements	0	0	0	100,000	100,000	50,000	50,000	300,000
Operating and Maintenance Costs				0	20,000	20,000	20,000	

Critical Security Controls Framework (C00071)	Total Project Cost:	650,000	Area: Southeast					
Confidence Level: Moderate	Original Project Cost:	650,000	Objective: Mandated					
Project Description								
This project will put into place an Information Security Framework to ensure compliance with various federal, state, local and industry rules, policies, regulations, and laws. This is required to ensure that the City has suitable cyber defenses to protect against unauthorized access of infrastructure and data. Existing mandates of compliance include but are not limited to the Payment Card Industry (PCI), Federal Tax Information (FTI), Criminal Justice Information Security (CJIS), Health Insurance Portability and Accountability Act (HIPPA), Oregon Identity Theft Protection Act, etc. This project will be funded with bureau technology reserves.								
Total Requirements	0	341,664	250,000	40,000	45,000	45,000	50,000	430,000
Operating and Maintenance Costs			0	150,000	150,000	150,000	150,000	

Office of Management & Finance
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

BTS

Enterprise Mobility Infrastructure (C00072) **Total Project Cost:** 686,200 **Area:** Citywide
Confidence Level: Low **Original Project Cost:** 87,500 **Objective:** Efficiency

Project Description

This phase of Enterprise Mobility includes a pilot project and implementation of mobile data management to manage the City's non-Windows 10 mobile devices. This will include work necessary for building out BTS capabilities with Netmotion to make it available Citywide. It also includes work supporting Police mobility to fully license the infrastructure to support smart phones and tablets in the Police Bureau to Criminal Justice Information Services (CJIS) Security Policy standards. Funding for this project will be from technology reserves.

Total Requirements	0	96,768	379,500	104,800	104,800	4,800	4,800	598,700
Operating and Maintenance Costs			86,775	69,275	69,275	49,275	49,275	

Mobile Application Management (C00074) **Total Project Cost:** 342,600 **Area:** Citywide
Confidence Level: Moderate **Original Project Cost:** 125,000 **Objective:** Efficiency

Project Description

This project establishes a Mobile Applications platform that will allow BTS to deliver mobile applications to City customers. The Citywide IT strategic plan identifies mobility as one of the highest priority initiatives. This platform will allow for standards based development, maintenance and consistent support across the enterprise. This project will be funded with bureau technology reserves.

Total Requirements	0	25,000	225,000	54,400	54,400	54,400	54,400	442,600
Operating and Maintenance Costs			0	15,000	15,000	15,000	15,000	

Replace Symantec Secure Web Gateways (C00075) **Total Project Cost:** 400,000 **Area:** Citywide
Confidence Level: High **Original Project Cost:** 38,000 **Objective:** Replacement

Project Description

This project will upgrade the BTS internet filtering system to prevent malicious software (malware) as well as restrict inappropriate access. In addition, this project will allow BTS to replace two Symantec secure web gateways in use in the Portland Police Bureau (PPB). Symantec Web Gateways are a City standard technology and are critical to aid in protecting the Police network from malware and other threats on the web. The devices protect the PPB from toxic web site access and from incoming malware embedded in web traffic. Funding for this project will be from technology reserves.

Total Requirements	0	100,000	0	0	0	300,000	0	300,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Data Center Colocation (C00077) **Total Project Cost:** N/A **Area:** Citywide
Confidence Level: Low **Original Project Cost:** N/A **Objective:** Replacement

Project Description

This project is a duplicate and will be merged with the Data Center Move and Disaster Recovery project during a FY 2016-17 supplemental budget.

Total Requirements	0	100,000	100,000	0	0	0	0	100,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Data Center Move and Disaster Recovery (C00080) **Total Project Cost:** 9,700,000 **Area:** Citywide
Confidence Level: Low **Original Project Cost:** 9,700,000 **Objective:** Replacement

Project Description

The City's primary data center currently resides in the Portland Building. The Portland Building's anticipated renovation has resulted in a need to move the data center to an appropriate co-location facility to ensure continuity of operations. This project will also allow for BTS to partner with a vendor outside of the region, providing BTS with disaster recovery facilities that can protect identified critical systems and data. This project will be funded through interagency agreements based on bureau use of the data center.

Total Requirements	0	0	2,000,000	6,000,000	1,700,000	0	0	9,700,000
Operating and Maintenance Costs			0	0	0	0	0	

Office of Management & Finance
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

BTS

NEW - Comm Center Data Center Remediation (C00081) **Total Project Cost:** 705,000 **Area:** Citywide
Original Project Cost: 705,000 **Objective:** Growth
Confidence Level: Low

Project Description

The BTS Comm Center has power issues that have resulted in lack of full power redundancy for existing equipment and a lack of power capacity that will prevent additional equipment from being installed. The lack of redundancy exposes critical production systems to risk of an outage. This project will upgrade the Comm data center environment to have disparate and redundant power paths through at least two generators and UPS systems to provide dual power paths to all equipment within the room. Cooling systems will be powered so that the failure of any one leg of power will not reduce cooling capacity below the required minimum for the equipment. Funding for this project will be from technology reserves.

Total Requirements	0	0	0	445,000	90,000	170,000	0	705,000
Operating and Maintenance Costs			0	10,000	10,000	10,000	10,000	

CityFleet

Replace and Construct Fueling Stations (F00004) **Total Project Cost:** 13,620,155 **Area:** Central City
Original Project Cost: 13,620,155 **Objective:** Replacement
Confidence Level: Low

Project Description

Based on results from a recently completed Citywide project ranking process, the City of Portland has identified a need to replace aging fueling system infrastructure at five locations across the city. These locations include SW First and Jefferson garage, Interstate Yard, Mt Tabor Yard, Columbia Blvd Wastewater Treatment Plant, and Penumbra Kelly Building. The total cost of these replacements is estimated at \$9.7 million (low confidence). Additionally, the Bureau of Emergency Management has identified a need to increase emergency preparedness by developing fueling sites on the west side of the Willamette and east of Highway 205. These projects are estimated at \$3.9 million (low confidence). The program will be funded through cash received from the General Fund in FY 2014-15 (\$1.2M) and a debt financing (\$12.4M).

Total Requirements	511,986	4,506,719	1,383,934	8,278,110	3,446,125	0	0	13,108,169
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Office of Management and Finance Replacement (FVCF17) **Total Project Cost:** 1,359,097 **Area:** Citywide
Original Project Cost: 1,359,097 **Objective:** Replacement
Confidence Level: High

Project Description

Scheduled vehicle and equipment replacement for several divisions in the Office of Management & Finance including Printing & Distribution, Bureau of Technology Services, CityFleet, and Facilities Services. This project is funded by interagency revenues.

Total Requirements	0	0	211,562	332,309	405,401	203,153	206,672	1,359,097
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Bureau of Development Services Replacement (FVDS17) **Total Project Cost:** 152,064 **Area:** Citywide
Original Project Cost: 152,064 **Objective:** Replacement
Confidence Level: High

Project Description

Scheduled replacement of vehicles and equipment for the Bureau of Development Services. This project is funded by interagency revenues.

Total Requirements	0	0	40,229	0	0	111,835	0	152,064
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Fire Bureau Replacement (FVFR17) **Total Project Cost:** 1,864,472 **Area:** Citywide
Original Project Cost: 1,864,472 **Objective:** Replacement
Confidence Level: High

Project Description

Scheduled replacement of vehicles and equipment for the Fire Bureau. This project is funded by interagency revenues.

Total Requirements	0	0	558,034	301,981	295,546	133,364	575,547	1,864,472
Operating and Maintenance Costs			0	0	0	0	0	

Office of Management & Finance
Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
CityFleet								
NEW - Golf Replacement (FVGF17)								
	Confidence Level: High		Total Project Cost: 1,372,761			Area: Citywide		
			Original Project Cost: 1,372,761			Objective: Replacement		
Project Description								
Scheduled replacement of vehicles and equipment for Golf. This project is funded by interagency revenues.								
Total Requirements	0	0	41,561	232,742	565,177	105,477	427,804	1,372,761
Operating and Maintenance Costs			0	0	0	0	0	
NEW - Parks Replacement (FVPK17)								
	Confidence Level: High		Total Project Cost: 6,529,484			Area: Citywide		
			Original Project Cost: 6,529,484			Objective: Replacement		
Project Description								
Scheduled replacement of vehicles and equipment for the Parks Bureau. This project is funded by interagency revenues.								
Total Requirements	0	0	2,090,262	1,727,475	645,581	985,704	1,080,462	6,529,484
Operating and Maintenance Costs			0	0	0	0	0	
NEW - Police Replacement (FVPL17)								
	Confidence Level: High		Total Project Cost: 17,483,670			Area: Citywide		
			Original Project Cost: 17,483,670			Objective: Replacement		
Project Description								
Scheduled replacement of vehicles and equipment for the Portland Police Bureau. The project is funded by interagency revenues.								
Total Requirements	0	0	3,170,600	4,270,923	1,693,783	4,433,004	3,915,360	17,483,670
Operating and Maintenance Costs			0	0	0	0	0	
NEW - PBOT Replacement (FVTR17)								
	Confidence Level: High		Total Project Cost: 14,469,960			Area: Citywide		
			Original Project Cost: 14,469,960			Objective: Replacement		
Project Description								
Scheduled replacement of vehicles and equipment for Portland Bureau of Transportation. This project is funded by interagency revenues.								
Total Requirements	0	0	4,681,193	2,480,936	3,121,119	2,476,047	1,710,665	14,469,960
Operating and Maintenance Costs			0	0	0	0	0	
Citywide Projects								
Radio System Replacement (S00008)								
	Confidence Level: Optimal		Total Project Cost: 43,350,948			Area: Citywide		
			Original Project Cost: 45,197,000			Objective: Replacement		
Project Description								
This project covers the study, development and eventual replacement of the 800 MHz Radio System, and assumes no inclusion of Regional and/or State participation. A sustainment plan is under development; net operations and maintenance costs will be determined as part of this process. Sources of funding for this project include the General Fund and funds from the Public Safety GO Bond sales.								
Total Requirements	27,855,489	14,306,756	2,472,732	0	0	0	0	2,472,732
Operating and Maintenance Costs			0	0	0	0	0	

Office of Management & Finance
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Citywide Projects

Enterprise Asset Management Pilot (S00030)	Total Project Cost: 1,600,000	Area: Citywide
Confidence Level: Moderate	Original Project Cost: 1,600,000	Objective: Efficiency
Project Description		
This is a pilot project for an intergrated Asset Management solution, which includes the implementation of the SAP Plant Maintenance (Work Order System) and Flexible Real Estate modules. The Facilities Services assets will be the pilot of the functionality. Implementation of the functionality will leverage the investment in SAP by saving money on external individual applications and improve efficiency by bringing all city facilities data into SAP. This project is funded by interagency revenues.		
Total Requirements	0	1,600,000
Operating and Maintenance Costs	0	0

Facilities

PCC Roof Project and Seismic Upgrades (B00017)	Total Project Cost: 4,091,519	Area: Southeast
Confidence Level: Moderate	Original Project Cost: 2,976,210	Objective: Maintenance & Rep
Project Description		
This project will provide structural upgrades throughout the entire facility to bring it to current seismic code for a essential facility status. It will replace select HVAC and UPS units and address structural requirements to support replaced units. The project replaces select portions of the roof and building envelope to address historic leaking issues. This project has three funding components: a cash transfer from the Bureau of Emergency Communication, the PCC major maintenance component of the building's rental rate, and a General Fund Capital Set-aside award.		
Total Requirements	94,887	3,935,133
Operating and Maintenance Costs	0	0

NEW - Portland Building Reconstruction Project (B00018)	Total Project Cost: 195,000,000	Area: Southwest
Confidence Level: Moderate	Original Project Cost: 195,000,000	Objective: Maintenance-Preser
Project Description		
In October 2015, Council approved Resolution #37158 in which OMF was directed to complete the Portland Building Reconstruction project by the year 2020 for a cost not to exceed \$195 million. This project is funded using \$10,450,083 in cash, and \$184,549,917 in debt financing.		
Total Requirements	0	192,476,669
Operating and Maintenance Costs	0	0

NEW - Kerby Garage Upgrade Interior Lighting (B00024)	Total Project Cost: 62,733	Area: North
Confidence Level: Moderate	Original Project Cost: 62,733	Objective: Sustainability
Project Description		
Facilities resource management has identified a number of sustainability projects for FY 2016-17. This project will replace approximately 200 fluourescent light fixtures in Kerby Garage with energy-efficient LEDs and add controls in areas not in use 24 hours a day, 7 days a week. This project is funded through major maintenance. Facilities collects major maintenance funds from Fleet each fiscal year and maintains a reserve balance on their behalf for major maintenance projects.		
Total Requirements	0	61,733
Operating and Maintenance Costs	0	0

Office of Management & Finance
Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Facilities

NEW - Kelly Building Lighting Upgrade (B00025)	Total Project Cost:	38,560	Area:	East
Confidence Level: Moderate	Original Project Cost:	38,560	Objective:	Sustainability
Project Description				
Facilities resource management has identified a number of sustainability projects for FY 2016-17. This project will replace interior and exterior incandescent lighting, exterior HIDs, and interior and garage fluorescent lighting at the Kelly Building with high-performance LEDs. This project is funded through the major maintenance component of the rental rate charged to tenants of the building.				
Total Requirements	0	0	37,560	0
Operating and Maintenance Costs		0	0	0
				37,560

NEW - PCC Upgrade Exterior Lighting (B00026)	Total Project Cost:	20,430	Area:	Southeast
Confidence Level: Moderate	Original Project Cost:	20,430	Objective:	Sustainability
Project Description				
Facilities resource management has identified a number of sustainability projects for FY 2016-17. This project will replace 22 high intensity discharge light fixtures outside of the Portland Communications Center with energy-efficient LEDs. This project is funded through the major maintenance component of the rental rate charged to tenants of the building.				
Total Requirements	0	0	19,430	0
Operating and Maintenance Costs		0	0	0
				19,430

NEW - PCC Upgrade Interior Lighting (B00027)	Total Project Cost:	38,560	Area:	Southeast
Confidence Level: Moderate	Original Project Cost:	38,560	Objective:	Sustainability
Project Description				
Facilities resource management has identified a number of sustainability projects for FY 2016-17. This project will replace existing fluorescent lighting in the Portland Communications Center with energy-efficient LEDs. It will also add controls to the lobby area to shut down lights when not in use. This project is funded through the major maintenance component of the rental rate charged to tenants of the building.				
Total Requirements	0	0	37,560	0
Operating and Maintenance Costs		0	0	0
				37,560

NEW - North Precinct - Install Solar Panels (B00028)	Total Project Cost:	269,376	Area:	North
Confidence Level: Moderate	Original Project Cost:	269,376	Objective:	Sustainability
Project Description				
This project will install solar panels at North Precinct in order to increase energy efficiency. This project is funded through the major maintenance component of the rental rate charged to tenants of the building.				
Total Requirements	0	0	266,241	0
Operating and Maintenance Costs		0	0	0
				266,241

NEW - North Precinct Parking Lot Lighting Upgrade (B00029)	Total Project Cost:	52,426	Area:	Northeast
Confidence Level: Moderate	Original Project Cost:	52,426	Objective:	Sustainability
Project Description				
Facilities resource management has identified a number of sustainability projects for FY 2016-17. This project will upgrade existing parking lot lighting at North Precinct to more energy efficient LEDs. This project is funded through the major maintenance component of the rental rate charged to tenants of the building.				
Total Requirements	0	0	46,566	0
Operating and Maintenance Costs		0	0	0
				46,566

Office of Management & Finance
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Facilities

NEW - RVS- Interior/Exterior Lighting Upgrade (B00030)	Total Project Cost:	94,410	Area:	Northwest
Confidence Level: Moderate	Original Project Cost:	94,410	Objective:	Sustainability
Project Description				
Facilities resource management has identified a number of sustainability projects for FY 2016-17. This project will replace parking lot and building light fixtures with energy efficient LEDs at the Police Rivergate vehicle storage facility. This project is funded through the major maintenance component of the rental rate charged to tenants of the building.				
Total Requirements	0	0	83,857	0
Operating and Maintenance Costs			0	0

NEW - Police Training - Columbia Slough Trail (B00031)	Total Project Cost:	100,000	Area:	Northeast
Confidence Level: Moderate	Original Project Cost:	100,000	Objective:	Maintenance-Preser
Project Description				
This project will use major maintenance funding to install a pedestrian trail at the rear of the Police Training Complex along the Columbia Slough. The Columbia Slough Watershed Council will determine the preferred approach for installation sometime in 2016.				
Total Requirements	0	0	0	100,000
Operating and Maintenance Costs			0	0

NEW - Daycare Center Relocation (B00032)	Total Project Cost:	387,248	Area:	Southwest
Confidence Level: High	Original Project Cost:	387,248	Objective:	Replacement
Project Description				
This project relocates the City's child development/care center from the Portland Building to a larger space on the first floor of the Crown Plaza Building at 1500 SW First Avenue, where the City has signed a ten year lease. The project constructs tenant improvements, a large portion of which the landlord is paying for. The project will be completed prior to the Portland Building reconstruction project's construction work starting to ensure the continued provision of daycare services. The project is funded through an improvement allowance from the property owner, Facilities Services Operating Fund reserves, and one-time interagency charges to tenant bureaus in the Portland Building, City Hall, and the 1900 Building.				
Total Requirements	0	0	387,428	0
Operating and Maintenance Costs			0	0

NEW - VMC Roof Replacement (S00033)	Total Project Cost:	2,500,000	Area:	Central City
Confidence Level: Moderate	Original Project Cost:	2,500,000	Objective:	Replacement
Project Description				
This project will replace the VMC roof as a needed improvement to the facility. The VMC suffers from significant deferred maintenance and has not seen capital investment since the original construction over 60 years ago. Repair needs are addressed on an urgency and public safety basis with the roof replacement occurring FY 2016-17. The project is funded by the annual repair budget from the SVVAF fund.				
Total Requirements	0	0	2,500,000	0
Operating and Maintenance Costs			0	0

NEW - Providence Park Roof Replacement (S00034)	Total Project Cost:	500,000	Area:	Southwest
Confidence Level: Moderate	Original Project Cost:	500,000	Objective:	Replacement
Project Description				
This project will replace half of the facility roof at Providence Park, which was not included in the earlier renovation projects that occurred in the last 15 years. The project is funded by the annual repair budget from the SVVAF fund.				
Total Requirements	0	0	0	500,000
Operating and Maintenance Costs			0	0

Portland Bureau of Transportation

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Asset Management

Road Rehabilitation Program (Paving Preservation), CW (T00055)

Confidence Level: Low

Total Project Cost: 1,500,000

Area: Citywide

Original Project Cost: 14,000,000

Objective: Maintenance-Preser

Project Description

The City utilizes a Pavement Management System (PMS) to coordinate and set priorities for pavement asset maintenance and rehabilitation. The city optimizes project selection by coordinating with the Active Transportation program to incorporate multi-modal improvements and other safety related elements. Current funding for this program is only provided when available General Fund surplus dollars are allocated. Projects identified for improvement include: NE 122nd Ave (I-84 Ramps to Skidmore); SW Oak St (SW Naito Pkwy to SW 10th Ave); East Burnside (20th Ave to 32nd Ave) along with various safety improvements such as corner ADA ramps, median islands and rapid flashing beacons, along East and West Burnside and along SE 122nd Avenue. Ongoing General Fund support is allocated for "Out of the Mud" to improve unpaved streets.

Total Requirements	0	2,856,745	1,500,000	0	0	0	0	0	1,500,000
Operating and Maintenance Costs			0	0	0	0	0	0	

Signal Communication System, CW (T00057)

Confidence Level: Moderate

Total Project Cost: 300,000

Area: Citywide

Original Project Cost: 600,000

Objective: Replacement

Project Description

This is a continuing program to install cable or add wireless routers to connect individual traffic signals to the central control computer. Central control allows improvements for traffic signal timing and allows monitoring of malfunctioning signals to speed necessary repairs which improves traffic flow and safety, and reduces air pollution and fuel consumption. This work complements ODOT's freeway management system work. The project is funded by General Transportation Revenue.

Total Requirements	0	50,000	50,000	50,000	50,000	50,000	50,000	50,000	250,000
Operating and Maintenance Costs			0	0	0	0	0	0	

Signal Reconstruction, CW (T00058)

Confidence Level: Moderate

Total Project Cost: 4,188,096

Area: Citywide

Original Project Cost: 3,420,000

Objective: Replacement

Project Description

The project is a continuing program to replace aging traffic signal infrastructure that subjects the City to liability or unsafe operations. The annual gap in capital repair, rehabilitation, replacement of aging traffic signal assets is \$18.4 million. The project is funded by General Transportation Revenue.

Total Requirements	0	309,550	2,187,382	349,609	349,609	349,609	349,609	349,609	3,585,818
Operating and Maintenance Costs			0	0	0	0	0	0	

Bridges/Overpasses (T00208)

Confidence Level: Low

Total Project Cost: 10,626,909

Area: Citywide

Original Project Cost: 1,677,659

Objective: Replacement

Project Description

This project is a continuing program to replace or rehabilitate some of the City's poor condition and weight restricted bridges, which currently prohibits the movement of freight and transit within the City. Past projects included N Lombard Road over Columbia Slough (BR-105), completed in 2012; NE 21st Avenue over Columbia Slough (BR-08), completed in 2012; and NW Thurman Bridge over Balch Creek (BR-15), completed in 2014. Funding is General Transportation Revenue. Future projects include Willamette Boulevard Viaduct (BR-7), NE Glisan Street Bridge (BR-33), and N Interstate Viaduct (BR-152).

Total Requirements	0	826,524	1,014,724	124,724	124,724	124,724	124,724	124,724	1,513,620
Operating and Maintenance Costs			0	0	0	0	0	0	

Street Light Replacement, CW (T00211)

Confidence Level: Moderate

Total Project Cost: 4,777,654

Area: Citywide

Original Project Cost: 838,827

Objective: Replacement

Project Description

This project is a continuing program to replace failing street light infrastructure throughout the city. Street lighting replacement reduces both the City's energy costs and its carbon footprint. The annual gap in capital repair, rehabilitation, replacement of aging street lights is \$4.1 million. Funding is provided by General Transportation Revenue.

Total Requirements	0	1,229,609	529,609	229,609	229,609	229,609	229,609	229,609	1,448,045
Operating and Maintenance Costs			0	0	0	0	0	0	

**Portland Bureau of Transportation
Capital Improvement Plan Summaries**

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Asset Management

NEW - Oak St. Naito-10th Ave, SW (T00318) **Total Project Cost:** 1,043,000 **Area:** Southwest
Confidence Level: Low **Original Project Cost:** 1,043,000 **Objective:** Maintenance & Rep

Project Description

This project is Roadway Surfacing Rehabilitation work funded through one-time General Fund resources. Projects in this program are selected for rehabilitation through the City's Pavement Management System (PMS). The goal of the PMS is to maintain the pavement surface in fair or better condition and avoid more expensive reconstruction. Work typically includes grinding, paving and corner sidewalk ramp construction to meet ADA standards.

Total Requirements	0	0	496,816	0	0	0	0	496,816
Operating and Maintenance Costs			0	0	0	0	0	

Naito Pkwy: I-405 - Jefferson, SW (T00339) **Total Project Cost:** 1,000,000 **Area:** Southwest
Confidence Level: Low **Original Project Cost:** 1,000,000 **Objective:** Maintenance-Safety

Project Description

This project addresses a long-standing need to repave/reconstruct SW Naito south of the Jefferson Street to I-405. SW Naito to the north was reconstructed in 2007. Funding is provided by the Oregon Department of Transportation as part of a Jurisdictional Transfer completed in 2010.

Total Requirements	0	26,000	285,000	715,000	0	0	0	1,000,000
Operating and Maintenance Costs			0	0	0	0	0	

Lighting Efficiency Program, CW (T00359) **Total Project Cost:** 17,500,000 **Area:** Citywide
Confidence Level: Moderate **Original Project Cost:** 17,500,000 **Objective:** Replacement

Project Description

This project is the first phase of an effort to retrofit outdoor lighting in the City with energy efficient Light Emitting Diode (LED) technology. Funding for the project was approved by City Council in December 2012 and implementation is scheduled to start in April 2014. The retrofit of the street lighting will reduce the energy consumption of each fixture by more than 50%, resulting in a net cost savings to the City over the life of the project. Funding for the project is through general obligation bonds backed by General Fund transfers that are currently made to PBOT.

Total Requirements	5,672,245	4,500,000	5,500,000	1,827,755	0	0	0	7,327,755
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Willamette Blvd Semi-Viaduct @ MP 2.3, N (T00466) **Total Project Cost:** 590,000 **Area:** North
Confidence Level: Moderate **Original Project Cost:** 590,000 **Objective:** Maintenance & Rep

Project Description

PBOT Bridge #007, N Willamette Blvd semi-viaduct was built in 1941 and currently is at 74 years old, with normal bridge service life being 75 years. The bridge is classified by the Federal National Bridge Inventory (NBI) as structurally deficient and is weight restricted to less than legal trucks by PBOT. The bridge is located on an emergency response route. The weight restriction could delay the response time of fire trucks which exceed the weight limit. This project proposes that the existing bridge be replaced with a more stable structure that is able to withstand potential earth movement and heavier truck loads. The bridge will be replaced with a retaining wall structure, thus eliminating a bridge and future maintenance liability from the City's inventory. This project is funded by one-time General Fund resources.

Total Requirements	41,832	170,729	314,041	0	0	0	0	314,041
Operating and Maintenance Costs			0	0	0	0	0	

**Portland Bureau of Transportation
Capital Improvement Plan Summaries**

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Asset Management

NEW - Broadway Dr Wall E of House #980, SW (T00467) **Total Project Cost:** 300,000 **Area:** Southwest
Confidence Level: Moderate **Original Project Cost:** 300,000 **Objective:** Maintenance & Rep

Project Description

Retaining wall #128 is located adjacent 980 SW Broadway Drive. The wall is approximately 80 feet long, with a maximum height of eight feet. There is no recorded age for the wall, but it appears to be in excess of 50-60 years old. The wall is in significant danger of failing, and is already significantly leaning forward away from plumb. In addition to supporting the two narrow travel lanes on Broadway Drive, the wall also directly supports a 6 inch CI water main that serves properties on Broadway Drive. This project is funded by one-time General Fund resources.

Total Requirements	27,429	0	157,408	0	0	0	0	157,408
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Burnside: W 24th-E Cesar Chavez (T00500) **Total Project Cost:** 2,516,673 **Area:** West
Confidence Level: Low **Original Project Cost:** 2,516,673 **Objective:** Replacement

Project Description

This project is roadway surfacing rehabilitation work funded through one-time General Fund resources for pavement maintenance and safety. Projects in this program are selected for rehabilitation through the city's Pavement Management System (PMS). The goal of the PMS is to maintain the pavement surface in fair or better condition to avoid more expensive reconstruction. Work typically includes grinding, paving, and corner sidewalk ramp construction to meet ADA standards. This project will also include pedestrian crossing improvements at various intersections. Construction will begin in spring 2016.

Total Requirements	0	0	2,108,184	0	0	0	0	2,108,184
Operating and Maintenance Costs			0	0	0	0	0	

NEW - 122nd Ave: I-84 Ramp-Skidmore, NE (T00501) **Total Project Cost:** 3,767,889 **Area:** Northeast
Confidence Level: Low **Original Project Cost:** 3,767,889 **Objective:** Mandated

Project Description

This project is Roadway Surfacing Rehabilitation work funded through a one-time General Fund budget surplus. Projects in this program are selected for rehabilitation through the city's Pavement Management System (PMS). The goal of the PMS is to maintain the pavement surface in fair or better condition and avoid more expensive reconstruction. Work typically includes grinding, paving, and corner sidewalk ramp construction to meet Americans with Disabilities Act (ADA) standards. This project will also include signal upgrades to meet ADA standards. Construction will begin in Spring 2016.

Total Requirements	3,920	0	2,395,789	0	0	0	0	2,395,789
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Glisan St at 90th Ave, NE (T00507) **Total Project Cost:** 975,800 **Area:** Northeast
Confidence Level: Low **Original Project Cost:** 975,800 **Objective:** Replacement

Project Description

PBOT Bridge #033, NE Glisan at 90th Ave was built in 1911, and currently stands at 104 years old. The bridge is classified by the Federal NBI as functionally obsolete and is weight restricted to legal trucks by PBOT. Heavy freight cannot use the bridge and must detour around for access to and from I-84. Glisan is currently classified as a Preferred City Truck Route, but at this location it is weight restricted. The bridge is also located on an emergency response route. The weight restriction could delay the response time of fire trucks which exceed the weight limit. Repairing this bridge will allow heavier vehicles to resume access. This project is funded by one-time General Fund resources.

Total Requirements	15,583	0	627,593	0	0	0	0	627,593
Operating and Maintenance Costs			0	0	0	0	0	

Portland Bureau of Transportation

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Asset Management

NEW - Taylors Ferry Rd. Rockslide Abatement, SW (T00508)

Total Project Cost: 600,000 **Area:** Southwest
Original Project Cost: 600,000 **Objective:** Replacement

Confidence Level: Low

Project Description

In 2002, large boulders were spilling out of a rock slope outcrop west of the Fulton Park Blvd intersection along Taylors Ferry Road, presenting a potential safety hazard to drivers. Concrete barriers were placed in the roadway to contain the spill, and this effectively reduced this two lane section of west bound Taylors Ferry Rd to a one lane section. These barriers are still in place today as boulders have continued to fall. The solution is an engineered rock containment system at the project site so the closed inside lane can be re-opened to traffic. This project is funded by one-time General Fund resources.

Total Requirements	316	0	425,825	0	0	0	0	425,825
Operating and Maintenance Costs			0	0	0	0	0	

Economic Vitality

Columbia Blvd/MLK Blvd, N (T00024)

Total Project Cost: 3,850,187 **Area:** Northeast
Original Project Cost: 2,486,234 **Objective:** Efficiency

Confidence Level: Low

Project Description

This project was identified in the 2006 Freight Master Plan as a Tier One project. It includes construction of a right turn lane from NE Columbia Blvd to NE Martin Luther King Jr. Blvd and installation of a new traffic signal. The project is currently in the right-of-way acquisition process with construction expected to begin in spring 2016. Funding is primarily federal grants with local match.

Total Requirements	573,566	1,348,958	1,850,716	0	0	0	0	1,850,716
Operating and Maintenance Costs			0	0	0	0	0	

Parking Machines (T00387)

Total Project Cost: 4,200,000 **Area:** Citywide
Original Project Cost: 5,100,000 **Objective:** Expansion

Confidence Level: Low

Project Description

Purchase and install paystations in existing meter districts, including the replacement of single space meters or additional paystations to expand the paid parking. Project will be funded with bond proceeds to be repaid with parking meter revenues.

Total Requirements	0	2,420,000	300,000	1,000,000	500,000	0	0	1,800,000
Operating and Maintenance Costs			0	0	0	0	0	

Columbia Blvd: Cully Blvd & Alderwood Rd, NE (T00451)

Total Project Cost: 5,527,760 **Area:** Northeast
Original Project Cost: 5,527,760 **Objective:** Efficiency

Confidence Level: Low

Project Description

This project will construct a traffic signal at the intersection of NE Alderwood Rd and NE Columbia Blvd. The project will also include evaluation and preliminary design of a paired traffic signal at NE Cully Blvd. This project is funded through the ODOT Enhance program and will begin design in 2016, with construction scheduled for 2018. The project is a joint project with the Port of Portland.

Total Requirements	0	313,083	442,158	5,085,602	0	0	0	5,527,760
Operating and Maintenance Costs			0	0	0	0	0	

Portland Bureau of Transportation

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Economic Vitality

Going to the Island Freight Improvements, N (T00452)

Confidence Level: Low

Total Project Cost: 557,250

Area: North

Original Project Cost: 557,250

Objective: Efficiency

Project Description

The proposed project will construct and install Infrastructure Technology Services (ITS) infrastructure (communication network, new traffic controllers, CCTV cameras, travel time monitoring devices, and vehicle/pedestrian detectors). The project will provide for support of advanced control strategies such as transit signal priority and freight. This project is funded by a federal grant.

Total Requirements	0	32,450	111,450	445,800	0	0	0	557,250
Operating and Maintenance Costs			0	0	0	0	0	

St. Johns Truck Strategy, Ph. II, N (T00453)

Confidence Level: Low

Total Project Cost: 3,346,126

Area: North

Original Project Cost: 3,346,126

Objective: Efficiency

Project Description

This project will improve freight mobility on N Columbia Way and N Lombard and provide traffic calming improvements on N Fessenden and N St. Louis. The project is funded through Regional Flexible Funds and will begin design in 2016, with construction in 2017.

Total Requirements	0	445,200	834,200	2,511,926	0	0	0	3,346,126
Operating and Maintenance Costs			0	0	0	0	0	

South Rivergate Freight Project, N (T00458)

Confidence Level: Low

Total Project Cost: 11,916,743

Area: North

Original Project Cost: 11,916,743

Objective: Efficiency

Project Description

This project will improve the intersection on N Lombard and N Rivergate Blvd to facilitate freight movement to the Rivergate Industrial District. If other funding can be identified the project will also begin preliminary engineering for a new overcrossing on Rivergate Blvd. The project is funded through Regional Flexible Funds.

Total Requirements	0	0	1,716,743	4,200,000	6,000,000	0	0	11,916,743
Operating and Maintenance Costs			0	0	0	0	0	

Columbia Blvd ITS, N/NE (T00459)

Confidence Level: Low

Total Project Cost: 557,227

Area: Northeast/Southeast

Original Project Cost: 390,059

Objective: Efficiency

Project Description

The proposed project will construct and implement Infrastructure Technology Services (ITS) infrastructure along N/NE Columbia Boulevard. The project will install equipment and integrate these devices with the City's, ODOT's, and Tri-Met's Transportation Operations Centers. This project is part of the larger City and Regional Advanced Traffic Management System (ATMS), and provides the minimum project elements that will yield significant benefits in the corridor. The proposed project will improve the City's ability to monitor and control traffic. An exploration of emerging data from the private sector will be considered to determine whether there are new techniques that can be used to deliver priority at traffic signals. It will also improve control and monitoring of heavy freight. This project is funded by a federal grant.

Total Requirements	0	100,059	557,227	0	0	0	0	557,227
Operating and Maintenance Costs			0	0	0	0	0	

Bond: Gibbs-River Pkwy, SW (T00461)

Confidence Level: Low

Total Project Cost: 9,700,000

Area: Southwest

Original Project Cost: 9,700,000

Objective: Efficiency

Project Description

This project will design and construct an extension of Bond St. from SW Gibbs to River Parkway. The project is funded by the Portland Development Commission. Construction began in Spring of 2016.

Total Requirements	28,601	945,000	4,915,592	4,134,408	0	0	0	9,050,000
Operating and Maintenance Costs			0	0	0	0	0	

Portland Bureau of Transportation

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Economic Vitality

NEW - 10th and Yamhill Parking Garage (T00487)

Confidence Level: Low

Total Project Cost: 22,424,872

Area: Southwest

Original Project Cost: 22,424,872

Objective: Replacement

Project Description

As part of the City's SmartPark Garage System, the 10th & Yamhill Garage lends vital support to the downtown retail core. The building is a seven-story building with 27,000 square feet of leasable retail space at or near the ground level and 799 parking spaces on floors two through seven. Since 2004 a series of reports have been developed outlining the condition of the building and needed improvements. In 2014, PDC and PBOT hired FFA Architecture and Interiors, Inc. to review the existing reports and develop a list improvements required to address deferred building maintenance and improve the retail space. This project is funded by a combination of resources from the Portland Development Commission, bonds, and PBOT contingency.

Total Requirements	0	0	6,196,131	15,678,741	0	0	0	0	21,874,872
Operating and Maintenance Costs			0	0	0	0	0	0	

SW Corridor Transit Project (T00505)

Confidence Level: Low

Total Project Cost: 1,089,789

Area: Southwest

Original Project Cost: 700,000

Objective: Growth

Project Description

The Southwest Corridor Plan is a comprehensive approach to achieving community visions through integrated land use and transportation planning. It incorporates high capacity transit alternatives, multimodal projects and adopted local land use visions. Accompanying it is a shared investment strategy that includes key investments in roadways, active transportation, parks, trails and natural. The plan is currently exploring Bus Rapid Transit and Light Rail Transit alternatives for several alignments that connect the Portland Central City, Southwest Portland, Tigard, and Tualatin prior to development of a Draft Environmental Impact Statement. The General Fund is the source of the City's match contribution for the planning phase of the project.

Total Requirements	0	739,789	300,000	0	0	0	0	0	300,000
Operating and Maintenance Costs			0	0	0	0	0	0	

NEW - 47th Ave: Columbia-Cornfoot, NE (T00539)

Confidence Level: Low

Total Project Cost: 4,597,044

Area: Northeast

Original Project Cost: 4,597,044

Objective: Efficiency

Project Description

This project will fully reconstruct the freight street in concrete from north of Columbia Blvd. to south of Cornfoot Rd. and add sidewalks and bike lanes on both sides in conjunction with Parks' Whitaker Ponds project. This project is funded by a combination of SDCs and LID revenues from the Parks bureau.

Total Requirements	0	0	2,765,955	1,831,089	0	0	0	0	4,597,044
Operating and Maintenance Costs			0	0	0	0	0	0	

Health & Livability

LID Street Design (T00031)

Confidence Level: Low

Total Project Cost: 753,400

Area: Citywide

Original Project Cost: 1,473,922

Objective: Replacement

Project Description

This is a placeholder for future Local Improvement District (LID) projects to be budgeted in the CIP after City Council approves property owners' request to form an LID to design, construct and finance transportation and stormwater infrastructure improvements. All project funding will be provided by the owners of benefiting properties.

Total Requirements	0	174,000	178,500	400,900	0	0	0	0	579,400
Operating and Maintenance Costs			0	0	0	0	0	0	

Portland Bureau of Transportation

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
Health & Livability								
Pre-LID Street Design (T00033)								
	Confidence Level: Low							
					Total Project Cost:	180,000	Area: Citywide	
					Original Project Cost:	150,000	Objective: Replacement	
Project Description								
The costs of scoping and estimating LID projects are recovered at final assessment after completion of the project, but pre-LID estimates for projects that do not move forward cannot be recovered from property owners in the absence of constructing transportation and stormwater infrastructure improvements. It is not known beforehand whether an LID will move forward. However, those that do move forward provide considerable leverage to PBOT and advance Citywide objectives. These projects scope and estimate street, sidewalk, and stormwater improvements Citywide that require property owners to provide LID funding. Funding is from General Transportation Revenues.								
Total Requirements	0	30,000	30,000	30,000	30,000	30,000	30,000	150,000
Operating and Maintenance Costs			0	0	0	0	0	
Federal and State Program Match Fund (T00066)								
	Confidence Level: Low							
					Total Project Cost:	4,882,764	Area: Citywide	
					Original Project Cost:	4,882,764	Objective: Efficiency	
Project Description								
This program provides local matching funds for grants for up to approximately four to six project that may be awarded to the City through the state and federal programs for development, design, and construction of capital improvements. The program is funded by General Transportation Revenues.								
Total Requirements	0	0	312,994	0	1,190,529	1,283,457	1,283,457	4,070,437
Operating and Maintenance Costs			0	0	0	0	0	
Bike Parking, CW (T00133)								
	Confidence Level: Low							
					Total Project Cost:	420,000	Area: Citywide	
					Original Project Cost:	308,000	Objective: Expansion	
Project Description								
The need for bike parking has been identified in the Portland Bicycle Plan for 2030. This project will provide ongoing additional bicycle parking capacity and associated improvements in the right-of-way. The project is funded by the Bicycle Parking Fund (development fees).								
Total Requirements	0	70,000	70,000	70,000	70,000	70,000	70,000	350,000
Operating and Maintenance Costs			0	0	0	0	0	
PDC Small Projects (T00167)								
	Confidence Level: Low							
					Total Project Cost:	400,000	Area: Citywide	
					Original Project Cost:	500,000	Objective: Efficiency	
Project Description								
This is a placeholder for small neighborhood transportation improvement projects, which may be identified and funded by PDC during the budget year.								
Total Requirements	0	200,000	200,000	0	0	0	0	200,000
Operating and Maintenance Costs			0	0	0	0	0	
Red Electric Trail, SW (T00274)								
	Confidence Level: Low							
					Total Project Cost:	2,337,320	Area: Southwest	
					Original Project Cost:	1,929,183	Objective: Replacement	
Project Description								
This project is the result of the 2007 Red Electric Trail Planning Study. The purpose of this phase of the project is to design and construct off-street and on street trail connections for pedestrians and cyclists between SW Bertha Court and SW Capitol Highway. Funding is primarily federal with local match from Portland Parks and Recreation.								
Total Requirements	90,532	354,946	971,557	900,000	0	0	0	1,871,557
Operating and Maintenance Costs			0	0	0	0	0	

**Portland Bureau of Transportation
Capital Improvement Plan Summaries**

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Health & Livability

OR99W: SW 19th Ave to SW 26th - Barbur Blvd Demo (T00333) **Total Project Cost:** 1,999,331 **Area:** Southwest
Confidence Level: Low **Original Project Cost:** 2,000,000 **Objective:** Maintenance-Safety

Project Description

This project will implement strategically selected improvements in the Demonstration Project Area recommended in the Barbur Boulevard Streetscape Plan, adopted by City Council in 1999. The project is focused on improving pedestrian and bicycle safety, connectivity, accessibility, and transit access. It will build critical missing gaps in the sidewalks and bike lanes along SW Barbur Blvd, rationalize driveways, make minor improvements to existing signalized intersections, and provide two new enhanced crossings for pedestrians and cyclists to access transit and destinations along or across SW Barbur Blvd. The project will begin design in 2016 with construction scheduled for 2017. Funding for the project is provided by a federal grant along with a match paid for by general transportation revenues.

Total Requirements	0	132,245	435,477	1,111,445	378,180	0	0	1,925,102
Operating and Maintenance Costs			0	0	0	0	0	

Couch Ct: 3rd Ave-Couch St LID, NE (T00360) **Total Project Cost:** 473,132 **Area:** Northeast
Confidence Level: Moderate **Original Project Cost:** 473,132 **Objective:** Efficiency

Project Description

Construct new one-way westbound street connection from NE Couch St. to NE 3rd Ave. to provide new access and improved circulation for the new Burnside Bridgehead development. This project is funded by an LID.

Total Requirements	21,305	331,738	275,171	0	0	0	0	275,171
Operating and Maintenance Costs			0	0	0	0	0	

East Portland Access Transit (T00383) **Total Project Cost:** 4,472,481 **Area:** East
Confidence Level: Low **Original Project Cost:** 4,472,000 **Objective:** Replacement

Project Description

This project combines pedestrian improvements on outer SE Division to assist with accessing transit with bikeway crossing improvements on the 130's Neighborhood Greenway. Project elements include sidewalk infill and crossing improvements on the route of the 130's Neighborhood Greenway. The overall goal of the project is to make accessing transit stops in east Portland safer and easier for both pedestrians and cyclists. The project is funded through federal and state grants and is matched by PBOT sidewalk infill and neighborhood greenways funding. Construction began in the spring of 2016.

Total Requirements	415,891	782,283	3,202,722	0	0	0	0	3,202,722
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Cook at Vancouver LID, N (T00392) **Total Project Cost:** 991,864 **Area:** North
Confidence Level: Moderate **Original Project Cost:** 991,864 **Objective:** Replacement

Project Description

This project constructs three new traffic signals at N. Vancouver & Cook (new), N. Vancouver & Fremont (upgraded with left turn signal), and N. Williams & Fremont. In addition, the project works on underground utilities on N/NE Fremont St. between NE Cleveland Ave. and N. Vancouver Ave. Construction on this project is completed. This project is funded by a combination of LID revenues and General Transportation Revenue.

Total Requirements	329,281	0	334,841	0	0	0	0	334,841
Operating and Maintenance Costs			0	0	0	0	0	

Portland Bureau of Transportation

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Health & Livability

NEW - Bancroft - Hood - Macadam / Moody Ave., SW (T00412)

Total Project Cost: 598,365 **Area:** Southwest

Confidence Level: Low

Original Project Cost: 598,365 **Objective:** Efficiency

Project Description

This project will reduce the number of signal phases at the SW Bancroft St. / SW Hood Ave. / SW Macadam Ave. intersections by one phase to improve capacity and replace the existing traffic signal; realign Lowell St. between Macadam and Moody Avenues; and extend SW Moody Avenue south from SW Bancroft St. to SW Macadam Ave. via Hamilton Ct. SDCs are paying for this project.

Total Requirements	0	0	152,867	0	0	0	0	152,867
Operating and Maintenance Costs			0	0	0	0	0	

Marine Drive Path: NE 112th Ave-185th Ave Sec. (T00437)

Total Project Cost: 1,094,898 **Area:** Northeast

Confidence Level: Low

Original Project Cost: 1,077,000 **Objective:** Efficiency

Project Description

The project will upgrade an existing signalized crossing at 112th to a pedestrian hybrid beacon, construct buffered bike lanes from NE 112th to just west of NE 122nd with one signalized street crossing, construct an off-street trail between proposed signal crossing east to 122nd, and install a new signalized crossing at NE 138th and well head #15, off-street trail improvements at Well Head #15, and new off street trail from the PLDAB site to NE 185th Ave. This project is funded through federal funds. Construction will begin in the Summer of 2016.

Total Requirements	101,355	330,992	905,980	0	0	0	0	905,980
Operating and Maintenance Costs			0	0	0	0	0	

45th & California LID, SW (T00450)

Total Project Cost: 811,276 **Area:** Southwest

Confidence Level: Moderate

Original Project Cost: 628,600 **Objective:** Efficiency

Project Description

The project will construct: a sanitary sewer and southbound bike lane on SW 45th Avenue from Vermont to California; an upsized replacement water main and fire hydrant on SW California Street; and sidewalks on SW 45th, Vermont and California in coordination with the SW 46th & Florida street vacation. This project is funded by a Local Improvement District (LID).

Total Requirements	123,513	503,032	258,144	206,563	0	0	0	464,707
Operating and Maintenance Costs			0	0	0	0	0	

Powell-Division High Capacity Transit (T00465)

Total Project Cost: 8,454,000 **Area:** Southeast

Confidence Level: Low

Original Project Cost: 1,007,894 **Objective:** Growth

Project Description

The purpose of this project is to begin implementation of recommendations from the Powell-Division Transit and Development Project planning effort led by Metro with Tri-Met, ODOT, Multnomah County, Portland, and Gresham. The project will provide a more robust, rapid, and reliable transit connection between Portland and Gresham on inner Powell Blvd transitioning to outer Division, including improved service and new station areas. Design and a National Environmental Policy Act (NEPA) review process was expected to begin in FY 2015-16, with early construction activities in FY 2017-18, and anticipated service opening in FY 2020-21. Project partners will likely seek Small Starts federal funding to leverage local matching funds, which, for the City of Portland, are expected to be Transportation System Development Charge revenues.

Total Requirements	0	1,007,894	1,167,768	1,000,000	3,250,000	1,769,000	200,000	7,386,768
Operating and Maintenance Costs			0	0	0	0	0	

Portland Bureau of Transportation

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Health & Livability

NEW - 86th Ct. & Steele St LID, SE (T00496) **Total Project Cost:** 729,476 **Area:** Southeast
Confidence Level: Moderate **Original Project Cost:** 729,476 **Objective:** Replacement

Project Description

It has been determined that the garage requires a series of improvements beyond standard maintenance activities. The project will include: upgraded of the interior and exterior street level storefronts, replacement of the HVAC system, modernization of the elevators, replacement of the stairs, major maintenance of the garage. This project is funded by LID revenues

Total Requirements	23,078	0	426,407	0	0	0	0	426,407
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Dolph Ct & Spring Garden St. LID, SW (T00499) **Total Project Cost:** 783,540 **Area:** Southwest
Confidence Level: Low **Original Project Cost:** 783,540 **Objective:** Replacement

Project Description

This project constructs sidewalk and partial street improvements along Portland Parks & Recreation's frontages in conjunction with construction of the new Spring Garden Park. This project is funded by LID revenues

Total Requirements	14,636	0	725,000	0	0	0	0	725,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - 20th Ave: Raleigh-Upshur LID, NW (T00502) **Total Project Cost:** 7,086,368 **Area:** Northwest
Confidence Level: Low **Original Project Cost:** 7,086,368 **Objective:** Efficiency

Project Description

This project constructs a new street connection from NW Raleigh St. to NW Upshur St. underneath the US-30 ramp; reconfigures the NW 23rd & Vaughn / US-30 ramp intersection, including sidewalks and bike lanes, in conjunction with the XPO Logistics (formerly Con-way) Master Plan and planned redevelopment. This project is funded by LID revenues.

Total Requirements	20,820	0	1,599,536	5,179,765	0	0	0	6,779,301
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Gravel Street Program (T00540) **Total Project Cost:** 6,072,682 **Area:** Citywide
Confidence Level: Low **Original Project Cost:** 6,072,682 **Objective:** Replacement

Project Description

This project is a local streets program utilizing funding to subsidize shared street LIDs and provide deferral options for low income/fixd income based upon Council-adopted street plans such as Errol Heights, Cully NA, Division-Midway, Tryon-Stephens Creek Watershed, and Woodstock NA. Funding can leverage private development, property funded-LIDs, and other external agency revenue while keeping costs low and providing a basic level of improvement for underserved areas. PBOT is moving forward with a test project on SW 19th: Taylor's Ferry to Marigold, which will pave SW 19th to Shared Street Standard and incorporate stormwater conveyance. The project is in partnership with BES where BES is fully funding a stormwater facility at SW 19th and Taylor's Ferry. The project was bid on in January 2016 and began construction in spring of 2016. The project will be replicated on a larger scale in the Errol Heights area of Brentwood-Darlington in conjunction with BES. PBOT moved forward on a demonstration project in Errol Heights during FY 2015-16 which will result in construction in FY 2016-17 to pave several streets and incorporate regional stormwater solutions in this underserved area.

Total Requirements	0	0	452,635	1,059,776	1,059,776	1,059,776	1,059,776	4,691,739
Operating and Maintenance Costs			0	0	0	0	0	

Portland Bureau of Transportation

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Local Street Design

Public Work Permits (TI0000)

Confidence Level: Low

Total Project Cost: 10,400,000

Area: Citywide

Original Project Cost: 4,382,514

Objective: Expansion

Project Description

The Public Works Permit project provides for the plan review and construction engineering on all new and remodeled residential, commercial, and industrial projects. All engineering and plans work is performed by private sector professional engineers. The project is funded with fees paid by developers.

Total Requirements	0	1,450,000	1,750,000	1,800,000	1,800,000	1,800,000	1,800,000	8,950,000
Operating and Maintenance Costs			0	0	0	0	0	

Safety

Sellwood Bridge, SE (T00056)

Confidence Level: Low

Total Project Cost: 89,064,275

Area: Southeast

Original Project Cost: 392,500

Objective: Replacement

Project Description

The Sellwood Bridge project is a Multnomah County project with the City of Portland serving as a partnering agency. The project will replace the Sellwood Bridge and modify the west side interchange to accommodate pedestrians, bicyclists, motor vehicles, and transit operations. The project is in the construction phase, anticipated to be complete in 2016. The project is funded by local and federal transportation funds.

Total Requirements	72,164,275	16,924,000	16,400,000	0	0	0	0	16,400,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Street Repair & Safety Improvement Prgm (T00177)

Confidence Level: Low

Total Project Cost: 64,000,000

Area: Citywide

Original Project Cost: 64,000,000

Objective: Maintenance & Rep

Project Description

Voters in Portland approved a temporary Street Repair and Safety Program in May of 2016 to finance street repair and safety improvements. The program will provide for pavement repair, signal modernization, more crosswalks and safety beacons, better and safer access to school, and transit and community services for Portland's kids, senior and families. The program is funded by a temporary 10% gas tax approved by the voters and a heavy vehicle use fee passed by Council ordinance.

Total Requirements	0	0	2,294,688	0	0	0	0	2,294,688
Operating and Maintenance Costs			0	0	0	0	0	

20s Bikeway: Harney-Lombard, NE/SE (T00338)

Confidence Level: Low

Total Project Cost: 3,353,690

Area: Northeast/Southeast

Original Project Cost: 2,338,000

Objective: Maintenance-Safety

Project Description

This project implements a major north-south bicycle route in the Bicycle Master Plan, adopted by City Council in 1998 and updated in 2010. The project will fill in a major missing link in the bicycle network, connecting existing north and south of the project to provide a continuous bicycle facility from the north end of the city to the south. Major elements of the project include crossing improvements at major street intersections and traffic calming to reduce traffic volumes and speeds on local streets. Funding for the project comes from a federal Metropolitan Transportation Improvements Program grant. Construction is expected to begin in fall of 2016.

Total Requirements	958,359	1,191,252	418,571	0	0	0	0	418,571
Operating and Maintenance Costs			0	0	0	0	0	

Portland Bureau of Transportation

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Safety

Foster Rd: Powell Blvd - 90th Ave, SE (T00382)

Confidence Level: Low

Total Project Cost: 5,667,784

Area: Southeast

Original Project Cost: 3,250,000

Objective: Maintenance-Safety

Project Description

SE Foster Road has experienced numerous problems, including safety ones, since the completion of the Foster Road Transportation and Streetscape Plan in 2003 and is identified as a high crash corridor. The SE Foster Road Safety and Sidewalk Enhancement Project will introduce bicycle lanes along Foster Road, while preserving space for a potential future streetcar, widened sidewalks in Lents, street trees and ADA curb ramps, curb extensions, crossing improvements at targeted locations, and street trees and street lighting throughout the corridor. Funding for this project comes from Regional Flexible Funds and Urban Renewal Funds from the Portland Development Commission. Design began in 2015, with construction scheduled for 2017.

Total Requirements	0	700,000	3,614,789	1,152,995	0	0	0	0	4,767,784
Operating and Maintenance Costs			0	0	0	0	0	0	

Active Transportation Improvements (T00385)

Confidence Level: Low

Total Project Cost: 3,400,000

Area: Citywide

Original Project Cost: 5,642,422

Objective: Efficiency

Project Description

The project continues pedestrian and bicycle safety improvements throughout the city by providing the following: crossing improvements at busier streets, speed reduction on neighborhood streets, neighborhood safety improvements, sidewalk and bicycle network infill, and safety improvements on the pedestrian and bicycle network. The funding for this program is a combination of General Transportation Revenues, which leverage grants from other City and regional agencies, as well as state and federal dollars.

Total Requirements	0	2,511,915	900,000	600,000	600,000	600,000	600,000	600,000	3,300,000
Operating and Maintenance Costs			0	0	0	0	0	0	

Burgard Rd at Time Oil Rd, N (T00386)

Confidence Level: Low

Total Project Cost: 2,635,000

Area: Citywide

Original Project Cost: 2,635,000

Objective: Expansion

Project Description

This is a priority project in the Freight Master Plan and implements the St Johns Truck Strategy by reinforcing the Burgard/Lombard street segment as the designated freight route in north Portland. This phase of the project will focus improvements along the Time Oil/Burgard intersection to improve sight distance and mainline system performance, reduce travel delays and vehicular conflicts between trucks and autos, and improve ingress/egress to the NW Container Service property. This project will widen the existing roadway and include two 12-foot travel lanes, as well as one 14-foot left turn lane with two left turn pockets to accommodate truck turning movements onto northbound N Time Oil Rd and into the NW Container Services site. This project is funded through federal funds, with construction beginning in the spring of 2016.

Total Requirements	177,405	603,103	1,919,899	0	0	0	0	0	1,919,899
Operating and Maintenance Costs			0	0	0	0	0	0	

Central City Multi-Modal Safety Projects (T00414)

Confidence Level: Low

Total Project Cost: 6,129,750

Area: Central City

Original Project Cost: 6,618,001

Objective: Efficiency

Project Description

This project will identify and implement specific projects in the downtown area to improve bicycle and pedestrian safety and encourage greater use of active transportation in the downtown core. The project is funded through Regional Flexible Funds, with planning activities beginning in winter 2016.

Total Requirements	5,877	481,196	896,256	4,918,244	0	0	0	0	5,814,500
Operating and Maintenance Costs			0	0	0	0	0	0	

Portland Bureau of Transportation

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
Safety								
Southwest Portland in Motion, SW (T00454)				Total Project Cost:		303,132	Area: Southwest	
Confidence Level: Low				Original Project Cost:		303,132	Objective: Efficiency	
Project Description								
This project will evaluate active transportation needs in SW Portland and propose a prioritized program of improvements. The project is funded by Regional Flexible Funds and will begin in 2016.								
Total Requirements	0	303,132	151,632	0	0	0	0	151,632
Operating and Maintenance Costs			0	0	0	0	0	
East Portland Access to Employment (T00455)								
Confidence Level: Low				Total Project Cost:		5,870,072	Area: East	
				Original Project Cost:		5,870,072	Objective: Efficiency	
Project Description								
This project will provide bicycle and pedestrian improvements in east Portland to improve access to transit. Specific improvements include the 150s Neighborhood Greenway and sidewalk infill improvements. The project is funded through the Regional Economic Opportunity Fund. The project will begin development in 2015, with construction scheduled for 2017.								
Total Requirements	0	267,000	2,226,817	3,643,255	0	0	0	5,870,072
Operating and Maintenance Costs			0	0	0	0	0	
Halsey/Weidler: 103rd - 113th, NE (T00456)								
Confidence Level: Low				Total Project Cost:		1,692,898	Area: Northeast	
				Original Project Cost:		470,900	Objective: Efficiency	
Project Description								
The project will improve selected intersections in the corridor with curb extensions and other enhancements. The project is funded by the Portland Development Commission, with construction beginning in spring 2016.								
Total Requirements	3,611	300,900	1,462,846	0	0	0	0	1,462,846
Operating and Maintenance Costs			0	0	0	0	0	
Downtown I-405 Ped Safety Imp, SW (T00457)								
Confidence Level: Low				Total Project Cost:		2,240,094	Area: Southwest	
				Original Project Cost:		2,240,094	Objective: Efficiency	
Project Description								
This project will provide pedestrian safety improvements at several key intersections in the vicinity of I-405. The project is funded by the ODOT Enhance funds. Design will begin in 2016, with construction in 2018.								
Total Requirements	0	254,534	357,520	1,882,574	0	0	0	2,240,094
Operating and Maintenance Costs			0	0	0	0	0	
Connect Cully, NE (T00460)								
Confidence Level: Low				Total Project Cost:		3,337,373	Area: Northeast	
				Original Project Cost:		3,337,372	Objective: Efficiency	
Project Description								
This project will provide sidewalk improvements on bikeway improvements along NE Killingsworth St and NE 72nd Ave, in the Cully neighborhood. The project is funded by Transportation Enhance funds and will begin design in 2016, with construction scheduled for 2017.								
Total Requirements	0	235,432	640,924	2,084,778	526,670	0	0	3,252,372
Operating and Maintenance Costs			0	0	0	0	0	

**Portland Bureau of Transportation
Capital Improvement Plan Summaries**

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Safety

Hwy Safety Improvement Prgm (HSIP) & Safety Ops CW (T00463)

Confidence Level: Low

Total Project Cost: 4,452,505

Area: Citywide

Original Project Cost: 5,201,372

Objective: Efficiency

Project Description

The program goal for Highway Safety Improvement Program (HSIP) is to reduce fatal and serious injury crashes on all public roads, driven by safety data. Projects include safety features such as signals, crosswalks, and pedestrian beacons. This is a federally funded project managed by ODOT, with ODOT paying the difference between the total project cost and the funds allocated in the City's Adopted Budget directly to contractors.

Total Requirements	0	236,192	3,099,873	195,636	0	0	0	3,295,509
Operating and Maintenance Costs			0	0	0	0	0	

NEW - 122nd Safety Improvements, SE/NE (T00504)

Confidence Level: Low

Total Project Cost: 4,690,000

Area: Northeast/Southeast

Original Project Cost: 4,690,000

Objective: Efficiency

Project Description

This projects constructs safety improvement in conjunction with improved Tri-Met services, including sidewalk improvements on SE Holgate and pedestrian crossing improvements on SE and NE 122nd Ave. This project is funded by one-time General Fund resources.

Total Requirements	0	0	4,135,806	0	0	0	0	4,135,806
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Burnside St: 8th-24th, W (T00538)

Confidence Level: Low

Total Project Cost: 1,973,327

Area: West

Original Project Cost: 1,973,327

Objective: Efficiency

Project Description

This project includes pedestrian safety and crossing Improvements on W Burnside between 8th and 24th. This project is funded through one-time General Fund resources.

Total Requirements	0	0	1,591,086	0	0	0	0	1,591,086
Operating and Maintenance Costs			0	0	0	0	0	

Portland Fire & Rescue
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Acquisitions

Apparatus Replacement (R00002)

Confidence Level: High

Total Project Cost: 21,020,000

Area: Citywide

Original Project Cost: 19,800,000

Objective: Replacement

Project Description

This project provides for the replacement of Portland Fire & Rescue's emergency response apparatus. In November 2010, the citizens of Portland approved a general obligation bond in the amount of \$72.4 million, of which \$19.8 million is dedicated to fire apparatus replacement. The bond proceeds were the primary funding source for the replacement of fire apparatus through FY 2015-16. Frontline fire engines and trucks are replaced after 15 years, or 120,000 miles, and then are kept in reserve status for an additional five years. The FY 2015-16 budget funded the procurement of two brush units and completed the payments for three ladder trucks, two air light rehab units and nine engines. Funding sources include \$19.8 million in bond proceeds and \$1.22 million in federal grants.

Total Requirements	1,359,000	13,666,392	1,698,249	0	0	0	0	1,698,249
Operating and Maintenance Costs			0	0	0	0	0	

Portland Parks & Recreation

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Acquisitions

Non Central City Park Acquisitions Program (P10003)

Confidence Level: Moderate

Total Project Cost: Ongoing

Area: Citywide

Original Project Cost: Ongoing

Objective: GRO: New

Project Description

SDC funded park acquisition program in the non-Central City area. Funded by System Development Charges.

Total Requirements	0	500,000	725,000	500,000	500,000	500,000	500,000	2,725,000
Operating and Maintenance Costs			595	612	630	649	668	

Central City Park Acquisition (P10005)

Confidence Level: Moderate

Total Project Cost: Ongoing

Area: Citywide

Original Project Cost: Ongoing

Objective: GRO: New

Project Description

SDC funded park acquisition program in the Central City area. Funded by System Development Charges.

Total Requirements	0	500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	7,500,000
Operating and Maintenance Costs			716	738	761	783	806	

Buildings & Pools

Capital Equipment Reserve (P00094)

Confidence Level: Optimal

Total Project Cost: Ongoing

Area: Citywide

Original Project Cost: Ongoing

Objective: Maintenance-Preser

Project Description

Funds for replacement of specialized park equipment and machinery. Funded through an allocation from the Portland Parks & Recreation operating budget.

Total Requirements	401,334	0	199,000	99,000	99,000	99,000	99,000	595,000
Operating and Maintenance Costs			0	0	0	0	0	

Computer Hardware Equipment Reserve (P00426)

Confidence Level: High

Total Project Cost: 297,000

Area: Citywide

Original Project Cost: 297,000

Objective: Maintenance-Preser

Project Description

Reserve for purchase of information technology hardware. Funded by prior year allocations from Portland Parks & Recreation operating budget.

Total Requirements	198,339	0	50,000	0	0	0	0	50,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Mt. Scott Community Center Roof Repair (P00741)

Confidence Level: High

Total Project Cost: 2,570,000

Area: Southeast

Original Project Cost: 2,570,000

Objective: Replacement

Project Description

This project repairs the roof over Mt. Scott Community Center, including the pool. Numerous active leaks have resulted in customer health/safety impacts; these have been temporarily repaired but eventually this leaking could cause longer-term damage to the building. Replacement will likely trigger some seismic upgrades and insufficient or non-existent worker fall protection, which if not corrected, could result in an OSHA violation. This project will be funded by one-time General Fund resources.

Total Requirements	0	0	2,570,000	0	0	0	0	2,570,000
Operating and Maintenance Costs			0	0	0	0	0	

Portland Parks & Recreation
Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Buildings & Pools

NEW - Peninsula Pool Shallowing (P10482)	Total Project Cost: 500,000	Area: Northeast
Confidence Level: Moderate	Original Project Cost: 500,000	Objective: Expansion
Project Description Renovate the existing pool shell to provide more shallow water and make it more usable by children and those who are not strong swimmers. Partially funded by System Development Charge fees.		
Total Requirements	0	500,000
Operating and Maintenance Costs	0	0

Major Maintenance (P20072)	Total Project Cost: Ongoing	Area: Citywide
Confidence Level: High	Original Project Cost: Ongoing	Objective: Maintenance-Preser
Project Description The funding addresses capital maintenance projects with an ongoing budget appropriation. Current budget includes funding held for emergency projects in FY 2015-16 and an allocation for ADA maintenance projects starting in 2016. Funded with General Fund major maintenance allocation.		
Total Requirements	1,077,780	2,670,676
Operating and Maintenance Costs	0	0

Minor/Major Maintenance Sidewalk Repair (P20113)	Total Project Cost: Ongoing	Area: Citywide
Confidence Level: High	Original Project Cost: Ongoing	Objective: Maintenance & Repa
Project Description Repair sidewalks where needed. Funded by General Fund major maintenance allocation.		
Total Requirements	333,444	500,000
Operating and Maintenance Costs	0	0

NEW - Creston Pool Drop Slide Replacement (P20470)	Total Project Cost: 101,250	Area: Southeast
Confidence Level: High	Original Project Cost: 101,250	Objective: Replacement
Project Description Drop slides are in poor condition, and have been patched numerous times. Stairs are rusting and falling apart. Will need to be removed by Summer 2016 if not replaced. Funded with the bureau's General Fund major maintenance allocation.		
Total Requirements	0	101,250
Operating and Maintenance Costs	0	0

NEW - Montavilla Pool Drop Slide Replacement (P20471)	Total Project Cost: 101,250	Area: Northeast
Confidence Level: High	Original Project Cost: 101,250	Objective: Replacement
Project Description Drop slides are in poor condition, and have been patched numerous times. Stairs are rusting and falling apart. Will need to be removed by Summer 2016 if not replaced. Funded with the bureau's General Fund major maintenance allocation.		
Total Requirements	0	101,250
Operating and Maintenance Costs	0	0

Portland Parks & Recreation

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Buildings & Pools

NEW - Matt Dishman Pool Filter Replacement (P20473)	Total Project Cost: 198,000	Area: Northeast
Confidence Level: High	Original Project Cost: 198,000	Objective: Replacement
Project Description		
Pool filters are past their useful life and failing. Internal mechanics have been replaced twice over the last 15 years and recent assessment found that the filters are in danger of imminent failure, which would close the pool. Funded with the bureau's General Fund major maintenance allocation.		
Total Requirements	0	198,000
Operating and Maintenance Costs	0	0

NEW - Alberta Park Restroom Upgrades (P20476)	Total Project Cost: 136,600	Area: Northeast
Confidence Level: Moderate	Original Project Cost: 136,600	Objective: Maintenance & Rep:
Project Description		
Renovate east and west restrooms in Alberta Park. West needs new roof, fixtures, general repair. East needs roof repair, fixtures. Replaces CIP 2286, projects were split out. Include new gutters, downspouts. Funded with the bureau's General Fund major maintenance allocation.		
Total Requirements	0	136,600
Operating and Maintenance Costs	0	0

NEW - Northgate Park Restroom Upgrades (P20477)	Total Project Cost: 10,550	Area: North
Confidence Level: Moderate	Original Project Cost: 10,550	Objective: Maintenance & Rep:
Project Description		
Repair restroom at Northgate Park. Repair roof, doors, tile. Replaces CIP 2286, projects were split out. Funded with the bureau's General Fund major maintenance allocation.		
Total Requirements	0	10,550
Operating and Maintenance Costs	0	0

NEW - Cathedral Park Restroom Renovation (P20478)	Total Project Cost: 351,000	Area: North
Confidence Level: Moderate	Original Project Cost: 351,000	Objective: Maintenance & Rep:
Project Description		
Replace main structural beams that are rotting, replace lights, faucet, sink with energy efficient fixtures. Funded with the bureau's General Fund major maintenance allocation.		
Total Requirements	0	351,000
Operating and Maintenance Costs	0	0

NEW - Pier Pool Mechanical System Upgrades (P20479)	Total Project Cost: 1,640,000	Area: North
Confidence Level: Moderate	Original Project Cost: 1,640,000	Objective: Replacement
Project Description		
Replacement of mechanical systems at Pier Pool. This includes replacement of all the plumbing as well as the pumps, motors, pipes, strainer baskets, chemical controllers, sanitation systems and sand filters. Additionally, install a UV system to help with the sanitation of the pool water. Funded with the bureau's General Fund major maintenance allocation.		
Total Requirements	0	670,443
Operating and Maintenance Costs	0	0

Portland Parks & Recreation
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Buildings & Pools

Bloomington Park Restroom (P30101)	Total Project Cost:	421,842	Area:	East
Confidence Level: High	Original Project Cost:	426,383	Objective:	Replacement
Project Description				
Renovate the existing restroom. Demolish walls and partitions and reconfigure interior spaces to provide ADA-compliant restrooms; preserve storage closet; provide new plumbing, drainage system and ADA-compliant fixtures; and reconfigure roof drainage system. Improve amount of natural light to the interior if possible. Replace steep path between the playground and SE Steele; repair other ADA non-compliant path-of-travel issues; replace curb ramp at SE Steele to be compliant. Funded by general obligation bonds, passed in November 2014.				
Total Requirements	0	170,553	144,693	106,596
Operating and Maintenance Costs			0	0
				0
				251,289

Couch Park Loo (P30102)	Total Project Cost:	577,388	Area:	Northwest
Confidence Level: High	Original Project Cost:	577,388	Objective:	Growth
Project Description				
Add a Portland Loo near the existing restroom building. Convert the existing restroom to maintenance and recreation support functions only. Extend water, electrical, and sanitary sewer systems to serve new Loo. Correct ADA deficiencies in the pavement immediately surrounding the restroom building and Loo. Refer to the Couch Park Playground project for ADA path-of-travel corrections to NW Glisan and NW Hoyt. Funded by general obligation bonds, passed in November 2014.				
Total Requirements	0	230,955	57,739	288,694
Operating and Maintenance Costs			0	0
				0
				346,433

Colonel Summers Park Loo (P30103)	Total Project Cost:	810,887	Area:	Southeast
Confidence Level: High	Original Project Cost:	717,468	Objective:	Growth
Project Description				
Add a Portland Loo. Work with stakeholders to determine the new location and disposition of the existing restroom building. Provide water, electrical and sanitary sewer systems to serve the new Loo. Funded by general obligation bonds, passed in November 2014.				
Total Requirements	122	0	286,987	251,114
Operating and Maintenance Costs			0	0
			0	17,500
				17,500
				810,765

Ed Benedict Park Loo (P30104)	Total Project Cost:	633,800	Area:	East
Confidence Level: High	Original Project Cost:	633,800	Objective:	Growth
Project Description				
Improve restroom options near the skatepark facility. Work with stakeholders to determine the best solution, whether it be adding a new Loo, upgrading existing restrooms, or adding a Loo to another park that currently has none. Plumbing to the SE 102nd Ave. restroom needs to be upsized to a larger line size. If a new Loo is the preferred option, then this project will need to provide water, electrical, and sanitary sewer systems to serve it. Funded by general obligation bonds passed in November 2014.				
Total Requirements	0	0	31,927	255,416
Operating and Maintenance Costs			0	0
			0	346,457
				0
				17,500
				17,500
				633,800

Glenwood Park Restroom (P30105)	Total Project Cost:	391,488	Area:	East
Confidence Level: High	Original Project Cost:	395,678	Objective:	Replacement
Project Description				
Renovate existing restroom. Reconfigure interior spaces to add square footage to the ADA stall. Renovate floor in ADA stall to slope to drain within ADA tolerances. Enlarge drain and check trap, replace siding. Provide fully accessible path from SE 89th by repairing three sections of ADA non-compliant asphalt paving. Add natural light to the interior if possible. Funded by general obligation bonds, passed in November 2014.				
Total Requirements	0	59,352	134,297	197,839
Operating and Maintenance Costs			0	0
				0
				0
				332,136

Portland Parks & Recreation

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
Buildings & Pools								
Ventura Park Loo (P30115)								
	Confidence Level: High				Total Project Cost: 714,758		Area: East	
					Original Project Cost: 720,105		Objective: Growth	
Project Description								
Install a new Portland Loo. Location will be near the play area on the site of the former water feature, and provide water, electrical and sanitary sewer systems to serve it. Provide ADA-compliant connections to the sidewalk and the play area. Funded by general obligation bonds, passed in November 2014, with additional funding from System Development Charge fees.								
Total Requirements	0	288,042	73,176	353,662	0	0	0	426,838
Operating and Maintenance Costs			0	0	17,500	17,500	17,500	
Wilkes Park Loo (P30116)								
	Confidence Level: High				Total Project Cost: 546,681		Area: East	
					Original Project Cost: 498,513		Objective: Growth	
Project Description								
Install a new Portland Loo. Work with stakeholders to select the best location near the play area, but out of the Beech right-of-way. Provide water, electrical and sanitary sewer systems to serve it and ADA-compliant connections to the sidewalk and the play area. Funded by general obligation bonds, passed in November 2014, with additional funding from System Development Charge fees.								
Total Requirements	1,008	224,331	322,350	0	0	0	0	322,350
Operating and Maintenance Costs			0	17,500	17,500	17,500	17,500	
Developed Parks								
Fulton Pump Station (P00530)								
	Confidence Level: Optimal				Total Project Cost: 161,335		Area: Central City	
					Original Project Cost: 161,335		Objective: Growth	
Project Description								
Park oversight during the construction of the new Fulton Pump Station led by the Water Bureau. Funded by revenue from the sale of Willamette Park property to the Water Bureau.								
Total Requirements	42,890	104,586	13,859	0	0	0	0	13,859
Operating and Maintenance Costs			0	0	0	0	0	
Halprin Parks Restoration - LID (P00721)								
	Confidence Level: Moderate				Total Project Cost: 2,100,000		Area: Central City	
					Original Project Cost: 2,100,000		Objective: Maintenance & Rep	
Project Description								
Restore the Halprin Park, Lovejoy, Keller and Pettygrove Parks. Funded by a to-be-established Local Improvement District.								
Total Requirements	22,094	177,906	117,000	0	0	0	0	117,000
Operating and Maintenance Costs			0	0	0	0	0	
Non Central City Park Development Program (P10001)								
	Confidence Level: Moderate				Total Project Cost: Ongoing		Area: Citywide	
					Original Project Cost: Ongoing		Objective: GRO: New	
Project Description								
SDC funded park development in the non-Central City. Projects to be determined.								
Total Requirements	0	3,198,034	3,938,000	6,400,000	0	0	0	10,338,000
Operating and Maintenance Costs			32,396	33,368	34,369	35,400	36,462	

Portland Parks & Recreation

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Developed Parks

Central City Park Development (P10002)	Total Project Cost: Ongoing	Area: Central City						
Confidence Level: Moderate	Original Project Cost: Ongoing	Objective: GRO: New						
Project Description SDC funded park development in the Central City. Projects to be determined.								
Total Requirements	0	949,000	1,000,000	1,000,000	4,000,000	1,500,000	0	7,500,000
Operating and Maintenance Costs			33,775	34,788	35,832	36,907	38,014	

Thomas Cully Park Development Phase 2 (P10440)	Total Project Cost: 3,975,000	Area: Northeast						
Confidence Level: Moderate	Original Project Cost: 3,975,000	Objective: GRO: New						
Project Description Phase 2 of the development of Thomas Cully Park. Phase 1 of this project is being funded by Metro through a grant to the "Let Us Build Cully Park!" Verde. Phase 2 is funded by Park's System Development Charges, along with a grant from Department of Environmental Quality and Land and Water Conservation.								
Total Requirements	634,092	1,596,482	705,000	0	0	0	0	705,000
Operating and Maintenance Costs			0	0	0	0	0	

Gateway Green Development (P10454)	Total Project Cost: 2,000,000	Area: East						
Confidence Level: High	Original Project Cost: 2,000,000	Objective: GRO: New						
Project Description Design work on the Gateway Green project in order to be ready for permitting and construction when the Metro grant is available in early 2016. Funded by one-time General Fund discretionary resources.								
Total Requirements	26,586	250,000	150,000	0	0	0	0	150,000
Operating and Maintenance Costs			0	0	0	0	0	

Beech Park Development (P10458)	Total Project Cost: 11,000,000	Area: East						
Confidence Level: Moderate	Original Project Cost: 7,900,000	Objective: GRO: New						
Project Description Phase 1: Develop property to a basic level: earthwork, paths, irrigated lawn and landscaping, benches, utilities and drainage. Sports fields, BMX, skatespot, plaza and wall seating will be developed in Phase 2. Funding provided by System Development Charges.								
Total Requirements	420,375	3,000,000	5,000,000	3,950,000	0	0	0	8,950,000
Operating and Maintenance Costs			0	0	49,512	49,512	49,512	

Gateway Urban Plaza Development (P10460)	Total Project Cost: 8,000,000	Area: East						
Confidence Level: Moderate	Original Project Cost: 5,750,000	Objective: GRO: New						
Project Description Gateway property development per the Gateway Master Plan. The park includes an urban plaza with an interactive water feature, seating areas, pathways, picnic areas, skate/bike feature, adventure-inspired play area, open flexible lawn area, restroom, stormwater facilities, and other typical park amenities. Funded by System Development Charges.								
Total Requirements	293,446	3,000,000	5,000,000	0	0	0	0	5,000,000
Operating and Maintenance Costs			0	0	142,440	142,440	142,440	

Portland Parks & Recreation
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Developed Parks

Spring Garden Park Master Plan Implementation (P10468)

Confidence Level: Moderate

Total Project Cost: 3,400,000

Area: Southwest

Original Project Cost: 1,500,000

Objective: GRO: New

Project Description

Implement 2002 Spring Garden Park Master Plan. Project includes a new play area with some nature-based features; seating, drinking fountain and water line at Spring Garden Park. Funded by System Development Charge fees.

Total Requirements	37,337	1,000,000	1,900,000	0	0	0	0	1,900,000
Operating and Maintenance Costs			0	0	32,988	32,988	32,988	

Rocky Butte-Masonry (P20376)

Confidence Level: Moderate

Total Project Cost: 166,000

Area: Northeast

Original Project Cost: 166,000

Objective: Maintenance-Preser

Project Description

Fund restoration of masonry and rock walls at historic overlook at Rocky Butte. Age and ongoing use as a climbing wall, for which for which it was not designed, have caused deterioration. This project will replace/repaint mortar and grout to match historic details and repair concrete cap rails matching historic elements as needed. Structural analysis currently underway will provide total scope of need. Funded by General Fund major maintenance allocation.

Total Requirements	0	0	0	0	166,000	0	0	166,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Peninsula Park Rose Garden Brick Renovation (P20475)

Confidence Level: Moderate

Total Project Cost: 110,067

Area: North

Original Project Cost: 110,067

Objective: Replacement

Project Description

The 102 year old brick area in the rose garden is sinking, heaving, and the bricks are deteriorating. Repair brickwork in partnership with Friends of Peninsula Park Rose Garden to prevent the historical asset from further deterioration. Funded with the bureau's General Fund major maintenance allocation.

Total Requirements	0	0	0	0	110,067	0	0	110,067
Operating and Maintenance Costs			0	0	0	0	0	

Bond Pioneer Courthouse Square Improvements (P30080)

Confidence Level: High

Total Project Cost: 10,000,000

Area: Central City

Original Project Cost: 10,000,000

Objective: Replacement

Project Description

Replace failing structures, fix leaks and cracks, make improvements at a high-use park. Project scoping is in process. Funded by general obligation bonds, passed in November 2014.

Total Requirements	27,870	4,000,000	4,000,000	2,000,000	0	0	0	6,000,000
Operating and Maintenance Costs			0	0	0	0	0	

International Rose Garden ADA (P30126)

Confidence Level: High

Total Project Cost: 1,918,484

Area: Central City

Original Project Cost: 2,148,458

Objective: Replacement

Project Description

Address the most important accessibility issues from the parking area to the main destination at the International Rose Garden park. Funded by general obligation bonds, passed in November 2014.

Total Requirements	10,384	859,383	1,059,101	0	0	0	0	1,059,101
Operating and Maintenance Costs			0	0	0	0	0	

**Portland Parks & Recreation
Capital Improvement Plan Summaries**

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Golf

NEW - RedTail Golf Course 7th Hole Redesign (P00207)	Total Project Cost: 15,000	Area: Southwest						
Confidence Level: Moderate	Original Project Cost: 15,000	Objective: Replacement						
Project Description Redesign the 7th hole at RedTail Golf Course. Funded by Golf fees.								
Total Requirements	0	0	15,000	0	0	0	0	15,000
Operating and Maintenance Costs			0	0	0	0	0	

Green Infrastructure

Riverview Property Restoration (P00650)	Total Project Cost: 250,000	Area: Southwest						
Confidence Level: High	Original Project Cost: 250,000	Objective: GRO: New						
Project Description Restoration of newly acquired land in southwest Portland. Funded by mitigation funding from Multnomah County for the Sellwood Bridge project.								
Total Requirements	107,739	142,261	40,000	0	0	0	0	40,000
Operating and Maintenance Costs			0	0	0	0	0	

Leach Botanical Garden Phase 3 (P00664)	Total Project Cost: 2,290,000	Area: East						
Confidence Level: Moderate	Original Project Cost: 1,343,000	Objective: Maintenance-Preser						
Project Description Initial design work on renovation of Leach Botanical Garden. Funded by the Portland Development Commission and System Development Charges.								
Total Requirements	259,758	900,000	640,000	0	0	0	0	640,000
Operating and Maintenance Costs			0	0	0	0	0	

Lan Su Chinese Garden Zither Lake (P00723)	Total Project Cost: 668,000	Area: Central City						
Confidence Level: High	Original Project Cost: 668,000	Objective: Maintenance & Rep						
Project Description Repair the 9,000 square foot pond, Lake Zither, which is leaking and requires replacement of the pond liner, at the Lan Su Classical Chinese Garden. Funded by one-time Portland Development Commission funding.								
Total Requirements	0	668,000	32,614	0	0	0	0	32,614
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Waterfront Park Bioswale Reconfiguration (P20472)	Total Project Cost: 33,150	Area: Central City						
Confidence Level: High	Original Project Cost: 33,150	Objective: Replacement						
Project Description Existing stormwater facility is being used for trash and human waste. Need to reconfigure with a facility that will not be used as a toilet area. Funded with the bureau's General Fund major maintenance allocation.								
Total Requirements	0	0	33,150	0	0	0	0	33,150
Operating and Maintenance Costs			0	0	0	0	0	

Portland Parks & Recreation
Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
Recreation Features								
Lents Tennis Court Restoration (P00310)								
	Confidence Level: Moderate			Total Project Cost: 175,000		Area: East		
				Original Project Cost: 175,000		Objective: Maintenance-Preser		
Project Description Resurfacing, crack repair, and fencing upgrades to restore courts at Lents Park. Funded by the General Fund major maintenance allocation.								
Total Requirements	0	0	0	175,000	0	0	0	175,000
Operating and Maintenance Costs			0	0	0	0	0	
NEW - Willamette Park Dog off Leash (P00702)								
	Confidence Level: High			Total Project Cost: 393,000		Area: Central City		
				Original Project Cost: 393,000		Objective: Replacement		
Project Description Relocation of the existing dog off-leash area as indicated in the 2012 Park Guidance Plan. Funded by Willamette Park parking meter revenue.								
Total Requirements	50,029	189,006	50,000	0	0	0	0	50,000
Operating and Maintenance Costs			0	0	0	0	0	
NEW - Lents Sport Field (P00733)								
	Confidence Level: Moderate			Total Project Cost: 90,000		Area: East		
				Original Project Cost: 90,000		Objective: Replacement		
Project Description Under Armour Foundation, Inc. will develop and reconstruct a playing field, including the installation, improvement or enhancement of existing structures and lighting facilities. This project is funded by a donation through the Under Armour Foundation, Inc.								
Total Requirements	0	0	24,356	0	0	0	0	24,356
Operating and Maintenance Costs			0	0	0	0	0	
NEW - Duniway Field Improvements (P00734)								
	Confidence Level: High			Total Project Cost: 90,000		Area: Central City		
				Original Project Cost: 90,000		Objective: Replacement		
Project Description Under Armour Foundation, Inc. will develop and reconstruct a playing field, including the installation, improvement or enhancement of existing structures and lighting facilities, and new parking. This project is funded by a donation through the Under Armour Foundation, Inc.								
Total Requirements	0	0	24,356	0	0	0	0	24,356
Operating and Maintenance Costs			0	0	0	0	0	
NEW - Kingsley Community Garden (P00739)								
	Confidence Level: High			Total Project Cost: 50,000		Area: Northwest		
				Original Project Cost: 50,000		Objective: Growth		
Project Description Develop a new community garden at Kingsley Park funded by \$25,000 in General Fund and \$25,000 from the Friends of Kingsley Community Garden.								
Total Requirements	0	0	50,000	0	0	0	0	50,000
Operating and Maintenance Costs				11,293	11,609	11,935	12,269	

Portland Parks & Recreation

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Recreation Features

Fernhill Splash Pad (P10432)								
Confidence Level: Optimal								
				Total Project Cost:	500,000		Area: Northeast	
				Original Project Cost:	250,000		Objective: GRO: New	
Project Description								
Construction of a new splash pad water feature at Fernhill Park. Funded by Parks System Development Charges.								
Total Requirements	0	500,000	470,000	0	0	0	0	470,000
Operating and Maintenance Costs			0	12,460	12,460	12,460	12,460	

Colonel Summer Park Splash Pad Installation (P10473)								
Confidence Level: Moderate								
				Total Project Cost:	500,000		Area: Southeast	
				Original Project Cost:	500,000		Objective: GRO: Expand	
Project Description								
Convert a wading pool to a splash pad at Colonel Summer Park. Funded by System Development Charges.								
Total Requirements	0	500,000	150,000	0	0	0	0	150,000
Operating and Maintenance Costs			0	12,460	12,460	12,460	12,460	

Knott Park Sports Field Safety Improvements (P20434)								
Confidence Level: High								
				Total Project Cost:	174,000		Area: East	
				Original Project Cost:	174,000		Objective: Maintenance & Repr	
Project Description								
Safety improvement projects at Knott Park. Project will include deep tine aerate, top dress, overseed, and perform complete irrigation tune-ups consisting of product change-out and placement modifications, grading, and irrigation improvements. Funded by general fund major maintenance allocation.								
Total Requirements	0	0	0	0	174,000	0	0	174,000
Operating and Maintenance Costs			0	0	0	0	0	

Wallace Park Sport Field Safety Improvements (P20435)								
Confidence Level: High								
				Total Project Cost:	26,000		Area: Northwest	
				Original Project Cost:	26,000		Objective: Maintenance & Repr	
Project Description								
Safety improvement projects at Wallace Park. Project will include deep tine aerate, top dress, overseed, and perform complete irrigation tune-ups consisting of product change-out and placement modifications. Funded by General Fund major maintenance allocation.								
Total Requirements	0	0	0	0	26,000	0	0	26,000
Operating and Maintenance Costs			0	0	0	0	0	

Fernhill Sports Field Safety Improvements (P20436)								
Confidence Level: High								
				Total Project Cost:	26,000		Area: Northeast	
				Original Project Cost:	26,000		Objective: Maintenance & Repr	
Project Description								
Safety improvement projects at Fernhill Sports Field. Project will include deep tine aerate, top dress, overseed, and perform complete irrigation tune-ups consisting of product change-out and placement modifications. Funded by General Fund major maintenance allocation.								
Total Requirements	0	20,000	6,000	0	0	0	0	6,000
Operating and Maintenance Costs			0	0	0	0	0	

Portland Parks & Recreation

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	5-Year
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	Total
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	

Recreation Features

Ed Benedict Park Sports Field Safety Imp. (P20437) **Total Project Cost:** 26,000 **Area:** East
Confidence Level: High **Original Project Cost:** 26,000 **Objective:** Maintenance & Rep:

Project Description

Safety improvement projects at Ed Benedict Park Sports Field. Project will include deep tine aerate, top dress, overseed, and perform complete irrigation tune-ups consisting of product change-out and placement modifications. Funded by General Fund major maintenance allocation.

Total Requirements	0	20,000	6,000	0	0	0	0	6,000
Operating and Maintenance Costs			0	0	0	0	0	

Hancock Park Play Area Safety and ADA (P20439) **Total Project Cost:** 123,000 **Area:** Northeast
Confidence Level: Moderate **Original Project Cost:** 123,000 **Objective:** Replacement

Project Description

Replace older swing sets at Hancock Park. Includes adding an ADA swing set, improved ADA access, and proper footprint sizing. These swing sets are deteriorating and are beyond their useful life. Funded by General Fund major maintenance allocation.

Total Requirements	0	0	0	123,000	0	0	0	123,000
Operating and Maintenance Costs			0	0	0	0	0	

Couch Park Playground (P30001) **Total Project Cost:** 1,633,516 **Area:** Northwest
Confidence Level: High **Original Project Cost:** 1,633,516 **Objective:** Replacement

Project Description

Replace play structures and correct adjacent ADA deficiencies at Couch Park. The new playground will be designed for the current location, largely consistent with the recent master plan. Remove and protect existing play structure and boulders for use in this or another playground. Demolish existing wood chip surface, subsurface drainage features, west side concrete ramp into play area, and existing fencing. Provide and install new play equipment with rubberized surfacing, flush concrete perimeter curb, subsurface drainage system, and new fencing or other barriers to separate the playground from the street and Dog Off Leash Area. In addition, correct ADA deficiencies by replacing the brick plaza walkway between NW Glisan and Hoyt to provide a safe, accessible path to and from the streets and the restroom. Funded by general obligation bonds, passed in November 2014.

Total Requirements	28,626	653,406	163,352	816,758	0	0	0	980,110
Operating and Maintenance Costs			0	0	0	0	0	

Creston Park Playground (P30002) **Total Project Cost:** 806,287 **Area:** Southeast
Confidence Level: High **Original Project Cost:** 774,642 **Objective:** Replacement

Project Description

Remove outdated structures and replace with safe and updated play equipment at Creston Park. Demolish existing wood chip surface, subsurface drainage features, and concrete aprons surrounding playground. Protect the big trees and lights. Provide and install new play equipment with rubberized surfacing, flush concrete perimeter curbs and apron, and subsurface drainage system. Provide an ADA-accessible path to the playground and the swings from the park's west parking lot. Provide an ADA compliant drinking fountain and benches. Funded by general obligation bonds, passed in November 2014.

Total Requirements	5,828	297,857	136,109	372,321	0	0	0	508,430
Operating and Maintenance Costs			0	0	0	0	0	

Portland Parks & Recreation

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Recreation Features

Kenton Park Playground (P30003)

Total Project Cost: 968,947 **Area:** North
Original Project Cost: 968,947 **Objective:** Replacement

Confidence Level: High

Project Description

Replace play equipment and amenities near the restroom at Kenton Park. Remove and replace outdated, inaccessible play structures, picnic tables, benches, a drinking fountain, and pavement adjacent to the restroom. Provide new rubberized play surfacing, drainage and curbs. Address unstable soil and foundation situation by conducting a geotechnical analysis and implementing recommended measures. Remove ADA non-compliant curb ramp and asphalt pavement from N. Delaware Avenue to the play area and restroom location; install an accessible path between the street, restroom and play area. Funded by general obligation bonds, passed in November 2014.

Total Requirements	0	0	390,562	341,742	236,643	0	0	968,947
Operating and Maintenance Costs			0	0	0	0	0	

Lents Park Playground (P30004)

Total Project Cost: 1,471,908 **Area:** Southeast
Original Project Cost: 1,483,962 **Objective:** Replacement

Confidence Level: High

Project Description

Remove and replace the wooden play structures at Lents Park. Using the current perimeter retaining walls, update the play opportunities in the playground and the circulation between the upper and lower levels of the play area to be accessible. Replace inaccessible picnic tables, benches, and the drinking fountain and pavements serving play area and restroom. Re-use newer and ADA-compliant play equipment and picnic tables. Remove old drainage system and wood chip surfacing. Replace subsurface drainage and provide accessible rubberized play surfacing. Preserve all healthy trees. Create an ADA accessible pathway to the playground from the ADA parking lot. Replace ADA non-compliant curb ramp and asphalt pavements connecting SE Steele with restroom and playground and restripe parking area on Steele for ADA compliance. Funded by general obligation bonds, passed in November 2014.

Total Requirements	8,851	593,585	148,396	729,927	0	0	0	878,323
Operating and Maintenance Costs			0	0	0	0	0	

Lynchview Park Playground (P30005)

Total Project Cost: 3,205,030 **Area:** East
Original Project Cost: 3,205,030 **Objective:** Replacement

Confidence Level: High

Project Description

Add new a new playground to the park to accommodate a wide range of play for children of all ages at Lynchview Park. Install rubberized surfacing, benches, picnic table and trash receptacle, and an ADA-compliant pathway that connects to a new ADA parking stall and the park entrances. Install new drinking fountain, shade trees and naming sign. Funded by general obligation bonds, passed in November 2014, with additional funding from the System Development Charge fees.

Total Requirements	0	0	505,507	1,111,568	1,587,955	0	0	3,205,030
Operating and Maintenance Costs			0	0	0	35,000	35,000	

North Park Blocks Playground (P30006)

Total Project Cost: 1,598,656 **Area:** Central City
Original Project Cost: 1,611,496 **Objective:** Replacement

Confidence Level: High

Project Description

Update the play area at North Park Blocks. Remove and replace two aging play structures and a swing set plus the existing rubberized surfacing within the existing footprint of the play area. Move the lights to just outside the play area to provide more room for play equipment. Remove and replace the buckled, out-of-compliance walkways from the SW and NE corners to the play area. Funded by general obligation bonds, passed in November 2014.

Total Requirements	2,595	644,598	161,150	792,908	0	0	0	954,058
Operating and Maintenance Costs			0	0	0	0	0	

Portland Parks & Recreation
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Recreation Features

Ventura Park Playground (P30007)

Total Project Cost: 1,103,719 **Area:** East
Confidence Level: High **Original Project Cost:** 1,112,758 **Objective:** Replacement

Project Description

Update the play area Ventura Park. Remove and replace outdated, inaccessible play structures; play surface; subsurface drainage system and perimeter curbs and walls; pavements buckled by tree roots including bench pads and bike rack pad. Remove four problematic trees. Remove non-ADA-compliant curb ramp and landing at parking lot. Re-install benches and bike rack. Protect remaining trees and lighting. Install larger play area with rubberized surfacing and subsurface drainage system. Funded by general obligation bonds, passed in November 2014.

Total Requirements	0	445,103	111,276	547,340	0	0	0	658,616
Operating and Maintenance Costs			0	0	0	0	0	

Argay Tennis Court (P30100)

Total Project Cost: 1,067,533 **Area:** East
Confidence Level: High **Original Project Cost:** 1,076,239 **Objective:** Replacement

Project Description

Rebuild and upgrade all four existing tennis courts at Argay Park. Open two closed courts and upgrade lighting. Replace all fencing, nets and the stanchions. Rebuild the playing surface, which is necessary to eliminate substantial cracking and differential settlement. Replace wood planking on the existing player benches and drinking fountain. Funded by general obligation bonds, passed in November 2014.

Total Requirements	0	430,496	376,684	260,353	0	0	0	637,037
Operating and Maintenance Costs			0	0	0	0	0	

Reike Synthetic Turf (P30107)

Total Project Cost: 2,173,057 **Area:** Southwest
Confidence Level: High **Original Project Cost:** 2,187,822 **Objective:** Replacement

Project Description

Renovate synthetic playing field at Reike Park. Demolish existing field and perform geotechnical investigation to identify drainage and subsidence issues; correct geotechnical issues; install sub-base and drainage system; install new synthetic field with furnishings, curbing and accessible pathway to/from school and along sidelines. Install conduit so lighting can be considered in a future phase. Funded by general obligation bonds, passed in November 2014.

Total Requirements	287	328,173	765,738	1,079,146	0	0	0	1,844,884
Operating and Maintenance Costs			0	0	0	0	0	

Transmission/Terminal Storage

Washington Park (W01402)

Total Project Cost: 170,100,000 **Area:** West
Confidence Level: Low **Original Project Cost:** 61,132,686 **Objective:** Mandated

Project Description

The project will plan, design, and construct a new seismically resilient buried reservoir to replace open Reservoir #3 at Washington Park. This project is part of compliance with the federal LT2 mandate to replace the open reservoirs. It is assumed that Reservoir #4 will be used as the overflow detention, dechlorination, and stormwater structure. The buried reservoir would be topped with a reflecting pond and historical features will be protected as much as possible. In FY 2016-17, this project will begin construction. Confidence level has been reduced to low given the geotechnical requirements. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	14,062,747	4,510,000	31,000,000	50,000,000	31,000,000	19,000,000	4,500,000	135,500,000
Operating and Maintenance Costs			0	0	0	0	0	

Portland Parks & Recreation

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Transmission/Terminal Storage

Terminal Reservoirs (WBTTTR)

Total Project Cost: Ongoing **Area:** Southeast
Confidence Level: Optimal **Original Project Cost:** Ongoing **Objective:** Mandated

Project Description

The Terminal Reservoirs program includes conveying water from the supply facilities to the retail distribution system. Major assets in this program include the the terminal reservoirs, such as those at Powell Butte, Kelly Butte, and Washington Park. The program provides for the rehabilitation, replacement, and expansion of smaller reservoir system assets. The program funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	235,000	110,000	110,000	110,000	110,000	110,000	550,000
Operating and Maintenance Costs			0	0	0	0	0	

Utilities, Roads & Trails

Ventura Park New Irrigation System (P00316)

Total Project Cost: 130,000 **Area:** East
Confidence Level: Moderate **Original Project Cost:** 130,000 **Objective:** Replacement

Project Description

Replace existing irrigation system and add central controls at Ventura Park. Funding provided by the General Fund major maintenance allocation.

Total Requirements	0	0	130,000	0	0	0	0	130,000
Operating and Maintenance Costs			0	0	0	0	0	

Bridge Inventory & Assessment (P00336)

Total Project Cost: 1,100,000 **Area:** Citywide
Confidence Level: Moderate **Original Project Cost:** 1,100,000 **Objective:** Maintenance-Safety

Project Description

Inventory, assess, and report on bridges in the entire park system prior to implementing improvements, with special attention paid to bridges on Springwater Corridor. There is a priority to assess pedestrian and vehicular bridges. Funding is provided by the General Fund major maintenance allocation.

Total Requirements	17,127	132,873	150,000	200,000	350,000	100,000	150,000	950,000
Operating and Maintenance Costs			0	0	0	0	0	

Washington Park West Parking Lot Improvements (P00699)

Total Project Cost: 450,000 **Area:** Northwest
Confidence Level: Moderate **Original Project Cost:** 450,000 **Objective:** Maintenance & Rep

Project Description

Oregon Zoo parking lot improvements. Funded by Washington Park parking meter revenue. Total project costs will be budgeted in out years after meter revenues are realized.

Total Requirements	0	50,000	50,000	388,943	0	0	0	438,943
Operating and Maintenance Costs			0	0	0	0	0	

Willamette Park Pathways (P00703)

Total Project Cost: 983,113 **Area:** Central City
Confidence Level: Moderate **Original Project Cost:** 983,113 **Objective:** GRO: Expand

Project Description

Trail circulation improvements per Redevelopment Plan. Funded by revenue from the sale of property to the Water Bureau for the new Fulton Pump Station.

Total Requirements	0	635,825	317,000	0	0	0	0	317,000
Operating and Maintenance Costs			0	0	0	0	0	

Portland Parks & Recreation

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Utilities, Roads & Trails

Washington Park Stormwater (P00704)	Total Project Cost: 2,500,000	Area: Northwest
Confidence Level: High	Original Project Cost: 480,000	Objective: Replacement
Project Description		
Phase I, installation of stormwater line from Zoo parking lot to Highway 26, is complete. Phase II is getting underway and includes the design and construction of a stormwater retention planter at the South Entry. Funded by Washington Park parking meter revenue.		
Total Requirements	52,233	300,000
Operating and Maintenance Costs		100,000
		80,000
		500,000
		1,000,000
		0
		1,680,000

Mt. Scott Community Center HVAC (P00713)	Total Project Cost: 818,000	Area: Southeast
Confidence Level: High	Original Project Cost: 818,000	Objective: Replacement
Project Description		
Replace and upgrade the Mt. Scott Community Center's Heating, Ventilation, and Air Conditioning (HVAC) system. Funded by one-time General Fund discretionary resources.		
Total Requirements	0	818,000
Operating and Maintenance Costs		500,000
		0
		0
		0
		0
		500,000

Westmoreland Park Skavone Stadium Lighting (P00724)	Total Project Cost: 828,000	Area: Southeast
Confidence Level: High	Original Project Cost: 828,000	Objective: Replacement
Project Description		
Replace Westmoreland Park-Sckavone Stadium lighting. Funded by one-time General Fund discretionary.		
Total Requirements	0	828,000
Operating and Maintenance Costs		600,000
		0
		0
		0
		0
		600,000

Marine Drive Trail Gaps (P10021)	Total Project Cost: 3,804,563	Area: Northeast
Confidence Level: Moderate	Original Project Cost: 3,804,563	Objective: GRO: New
Project Description		
Complete several remaining gaps in the Marine Drive trail system which connects the I-205 bike route with Kelley Point Park. Grant match funding provided by System Development Charges. The project is funded by a grant PP&R gave to the Portland Bureau of Transportation (PBOT) to complete. The total project cost of \$3,804,563 reflects both the bureau's portion of costs in addition to the grant funding that is budgeted in PBOT's budget.		
Total Requirements	44,631	149,434
Operating and Maintenance Costs		110,563
		0
		0
		0
		0
		110,563

Springwater Corridor Sellwood Gap (P10231)	Total Project Cost: 1,270,009	Area: Southeast
Confidence Level: Moderate	Original Project Cost: 1,270,009	Objective: GRO: Expand
Project Description		
Grant awarded to build remaining one mile Springwater trail gap from SE 19th Avenue to SE Linn. This is a combination rail with trail. Funded by a Federal Grant through ODOT and System Development Charge fees.		
Total Requirements	155,123	224,959
Operating and Maintenance Costs		1,000,000
		0
		0
		0
		0
		6,000

Portland Parks & Recreation

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Utilities, Roads & Trails

April Hill Park Trail Match (P10445)

Total Project Cost: 360,000 **Area:** Southwest
Confidence Level: Moderate **Original Project Cost:** 50,000 **Objective:** GRO: Expand

Project Description

System Development Charges is providing match funding for construction supervision for a private/public development of a trail at April Hill Park.

Total Requirements	30,763	29,237	300,000	0	0	0	0	300,000
Operating and Maintenance Costs			3,125	3,125	3,125	3,125	3,125	

Whitaker Ponds Access Improvements (P10467)

Total Project Cost: 1,959,075 **Area:** Northeast
Confidence Level: Moderate **Original Project Cost:** 1,268,655 **Objective:** GRO: Expand

Project Description

Develop access and circulation entryway, as recommended in 2012 conceptual plan for the proposed entry at Whitaker Ponds. Funded by a grant from Metro and match funding from System Development Charges.

Total Requirements	94,418	1,205,979	1,864,657	0	0	0	0	1,864,657
Operating and Maintenance Costs			0	37,000	37,000	37,000	37,000	

Mt Tabor Park South Access Trail (P10472)

Total Project Cost: 550,000 **Area:** Southeast
Confidence Level: Moderate **Original Project Cost:** 500,000 **Objective:** GRO: Expand

Project Description

Develop access and circulation entryway on the south side of Mt Tabor. Funded by System Development Charges.

Total Requirements	0	500,000	400,000	0	0	0	0	400,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Southwest Portland Trail Expansion (P10475)

Total Project Cost: 1,277,000 **Area:** Southwest
Confidence Level: High **Original Project Cost:** 500,000 **Objective:** GRO: Expand

Project Description

Construct off-street multi-use trail segment from SW Cameron Road to Alpenrose Dairy property. Important segment in Red Electric trail route. Parks has applied for Oregon Connect VI grant. System Development Charges fees will provide the match funding on this project.

Total Requirements	0	500,000	300,000	0	0	0	0	300,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Portland Childrens Museum DDC Replacement (P20453)

Total Project Cost: 136,094 **Area:** Northwest
Confidence Level: Moderate **Original Project Cost:** 136,094 **Objective:** Replacement

Project Description

Replace existing Walker DDC with new Automated Logic direct digital control system. Existing system uses outdated hardware and is becoming unstable. Funded by the General Fund major maintenance allocation

Total Requirements	0	0	0	136,094	0	0	0	136,094
Operating and Maintenance Costs			0	0	0	0	0	

Portland Parks & Recreation

Capital Improvement Plan Summaries

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
Utilities, Roads & Trails								
NEW - St Johns Community Center DDC Replacement (P20454)								
Confidence Level: Moderate								
Total Project Cost:					90,951		Area: North	
					Original Project Cost: 90,951		Objective: Replacement	
Project Description								
Replace existing Walker DDC with new Automated Logic direct digital control system. Existing system uses outdated hardware and is becoming unstable. Funded by the General Fund major maintenance allocation.								
Total Requirements	0	0	90,951	0	0	0	0	90,951
Operating and Maintenance Costs			0	0	0	0	0	
NEW - Hillside Community Center DDC Replacement (P20455)								
Confidence Level: Moderate								
Total Project Cost:					56,428		Area: Northwest	
					Original Project Cost: 56,428		Objective: Replacement	
Project Description								
Replace existing Walker DDC with new Automated Logic direct digital control system. Existing system uses outdated hardware and is becoming unstable. Funded by the General Fund major maintenance allocation.								
Total Requirements	0	0	0	56,428	0	0	0	56,428
Operating and Maintenance Costs			0	0	0	0	0	
NEW - Washington Park Sewer Replacement (P20456)								
Confidence Level: Moderate								
Total Project Cost:					2,394,708		Area: Northwest	
					Original Project Cost: 1,497,600		Objective: Replacement	
Project Description								
The 10,000 plus feet of sanitary and stormwater pipe in Washington Park has been in service for over 50 years. The piping is failing and causing sewage spills, backed-up restroom facilities, and contamination issues. This project will reline all piping to extend the life. Funded by General Fund Major Maintenance allocation.								
Total Requirements	0	0	1,060,000	254,823	0	1,079,885	0	2,394,708
Operating and Maintenance Costs			0	0	0	0	0	
NEW - Leif Erikson Culvert Repairs (P20457)								
Confidence Level: Moderate								
Total Project Cost:					492,000		Area: Northwest	
					Original Project Cost: 345,000		Objective: Replacement	
Project Description								
Replace six culverts identified as failing or at risk of failure, entering into an interagency agreement with BES. BES to provide 50% match from Watershed Investment Fund. Parks' portion is funded by the General Fund major maintenance allocation.								
Total Requirements	0	0	147,000	172,500	172,500	0	0	492,000
Operating and Maintenance Costs			0	0	0	0	0	
NEW - Leif Erikson Roadbed Failure at MP 6.8 - Repair (P20474)								
Confidence Level: High								
Total Project Cost:					247,500		Area: Northwest	
					Original Project Cost: 247,500		Objective: Maintenance & Rep	
Project Description								
The roadbed has failed at Mile Post 6.8 on Leif Erikson. It is difficult to maintain safe access for PP&R or emergency vehicles in this area. Failure area is marked with caution tape. This is a major artery of Forest Park, and needed access for the Fire Bureau. Funded with the bureau's General Fund major maintenance allocation.								
Total Requirements	0	0	247,500	0	0	0	0	247,500
Operating and Maintenance Costs			0	0	0	0	0	

Portland Parks & Recreation
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	5-Year
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	Total
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	

Utilities, Roads & Trails

Maple Trail Bridge Replacment (P30025)	Total Project Cost:	554,382	Area:	Northwest				
Confidence Level: High	Original Project Cost:	570,195	Objective:	Replacement				
Project Description								
Replace bridge and bridge abutments on Maple Trail. The crossing site may need to be slightly relocated to ensure a healthy stream system, and some trail realignment and stream-bank restoration may be needed as part of the permit process. Fully restore the existing trail approaches from construction impacts. Funded by general obligation bonds, passed in November 2014.								
Total Requirements	0	228,078	42,765	283,540	0	0	0	326,305
Operating and Maintenance Costs			0	0	0	0	0	

Macleay Park Trail Bridges (P30026)	Total Project Cost:	972,458	Area:	Northwest				
Confidence Level: High	Original Project Cost:	972,458	Objective:	Replacement				
Project Description								
Repair or replace two to four bridges on the Lower Macleay Trail. Several large landslides and fallen trees have significantly damaged the Lower Macleay Trail and four bridges. The exact crossing configurations may need to be realigned to protect the stream system, and some trail realignment and stream-bank restoration may be needed as part of the permit process. Fully restore the existing trail approach from construction impacts. Funded by general obligation bonds, passed in November 2014.								
Total Requirements	0	388,983	72,934	510,541	0	0	0	583,475
Operating and Maintenance Costs			0	0	0	0	0	

Springwater Corridor Bridges (P30027)	Total Project Cost:	2,348,830	Area:	Southeast				
Confidence Level: High	Original Project Cost:	2,348,830	Objective:	Replacement				
Project Description								
Repair bridge and stabilize trail. Springwater Corridor trail has six remaining trestle bridges that are 70 to 100 years old. These bridges' support structures are original and in need of replacement. Funded by general obligation bonds, passed in November 2014.								
Total Requirements	0	0	650,716	473,248	1,224,866	0	0	2,348,830
Operating and Maintenance Costs			0	0	0	0	0	

Lynchview Park Irrigation (P30106)	Total Project Cost:	179,777	Area:	East				
Confidence Level: High	Original Project Cost:	179,777	Objective:	Replacement				
Project Description								
Replace non-functioning irrigation system at Lynchview Park. New system to provide area-specific irrigation system which will provide a high level of water efficiency utilizing a weather based central irrigation control platform. Includes irrigation for sports fields and playground area, backflow, controller, Maxicom, and all accessory plumbing. Funded by general obligation bonds, passed in November 2014.								
Total Requirements	0	0	27,245	63,572	88,960	0	0	179,777
Operating and Maintenance Costs			0	0	0	0	0	

**Portland Water Bureau
Capital Improvement Plan Summaries**

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Customer Service

Security and Emergency Mgt (WBCSSE)

Confidence Level: Optimal

Total Project Cost: Ongoing **Area:** Undetermined
Original Project Cost: Ongoing **Objective:** Maintenance & Rep

Project Description

The bureau is committed to increasing flexibility and preparedness to meet future security challenges, to enhance security throughout the water system, and to modernize security practices and infrastructure. Projects funded by this budget will include physical security improvements to major and smaller facilities as well as improved security in the overall water distribution system and control and communications system. In FY 2016-17, the funding requested is for any needed replacement of surveillance equipment. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	313,000	66,000	66,000	66,000	66,000	66,000	330,000
Operating and Maintenance Costs			0	0	0	0	0	

Distribution

Fulton Pump Station Improvements (W01358)

Confidence Level: High

Total Project Cost: 17,375,500 **Area:** Southwest
Original Project Cost: 11,647,000 **Objective:** Replacement

Project Description

The 2006 Burlingame Service Area Supply Facility Master Plan recommended that the existing Fulton Pump Station be replaced or rehabilitated to mitigate the risk of an extended outage due to failure. Major studies recommending this project include the Burlingame Service Area Supply Facilities Master Plan (2006), the Distribution System Master Plan (2007), and the Fulton Pump Station Improvements Project Basis of Design Report (2007). This project replaced the 12-million-gallon per day Fulton Pump Station with a new facility located in Willamette Park. In FY 2016-17, this project will complete construction. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	5,430,416	7,030,000	4,215,000	0	0	0	0	4,215,000
Operating and Maintenance Costs			0	0	0	0	0	

Interstate Facility Rehabilitation (W01400)

Confidence Level: High

Total Project Cost: 49,370,000 **Area:** Central City
Original Project Cost: 49,383,000 **Objective:** Replacement

Project Description

This project built two new buildings to replace the 85-year-old PWB Maintenance Building, which served as the main office and warehouse. Site improvements to the 11-acre campus improved vehicle and employee circulation and brought the property up to current code requirements for stormwater management and landscaping as well as seismic resiliency. Master planning from 2000 –2006 developed the baseline requirements for current and long-term needs. In FY 2016-17, this project will be completed and closed out. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	43,901,214	5,298,000	400,000	0	0	0	0	400,000
Operating and Maintenance Costs			0	0	0	0	0	

Greenleaf Pump Station (W01446)

Confidence Level: Low

Total Project Cost: 1,710,000 **Area:** Northwest
Original Project Cost: 1,710,000 **Objective:** Replacement

Project Description

Greenleaf Pump Station will be improved to allow for the demolition of the Penridge Tank. Parts of the Penridge tank are corroded and PWB recommends the Greenleaf pump station improvements in lieu of replacing the tank. The station will be fitted with energy-efficient pumps for normal distribution needs and two large pumps for fire protection. In FY 2016-17, this project will complete design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	243,370	300,000	140,000	1,000,000	40,000	0	0	1,180,000
Operating and Maintenance Costs			0	0	0	0	0	

**Portland Water Bureau
Capital Improvement Plan Summaries**

Capital Program Project	Prior Years Capital	FY 2015-16 Revised Budget	FY 2016-17 Adopted Budget	FY 2017-18 Estimated Budget	FY 2018-19 Estimated Budget	FY 2019-20 Estimated Budget	FY 2020-21 Estimated Budget	5-Year Total
----------------------------	---------------------------	---------------------------------	---------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------------------------	-----------------

Distribution

Willamette River Pipe Crossing (W01590)	Total Project Cost:	56,150,000	Area: Central City					
Confidence Level: Low	Original Project Cost:	57,000,000	Objective: Replacement					
Project Description								
The project provides for the replacement of major pipelines to strengthen the transmission link between Powell Butte and the service areas west of the Willamette River, including downtown and the storage reservoirs at Washington Park. The project will include construction of a new seismically strengthened river crossing to replace one or two of the existing Willamette River crossings, and new transmission piping on both sides of the Willamette River. In FY 2016-17, this project will continue design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.								
Total Requirements	805,229	250,000	2,520,000	12,450,000	39,700,000	100,000	0	54,770,000
Operating and Maintenance Costs			0	0	0	0	0	

SW Nevada and Macadam (W01665)	Total Project Cost:	660,000	Area: Southwest					
Confidence Level: Optimal	Original Project Cost:	690,000	Objective: Replacement					
Project Description								
This project replaced 370 feet of 12-inch main in SW Nevada Street with an eight-inch main, from Macadam Avenue west to Fulton Pump Station. The previous 12-inch steel main was installed in 1942 and was in poor condition. This replacement is being coordinated with the Fulton Pump Station Replacement project (W01358) which will impact the existing distribution mains in Nevada Street. Work was required in Macadam Avenue in order to abandon the existing distribution main in Nevada Street, and limit the extent of customer water outages. In FY 2016-17, this project will close out. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.								
Total Requirements	65,902	584,000	5,000	0	0	0	0	5,000
Operating and Maintenance Costs			0	0	0	0	0	

Cornell Road Services to Macleay (W01682)	Total Project Cost:	830,000	Area: Northwest					
Confidence Level: Low	Original Project Cost:	830,000	Objective: Expansion					
Project Description								
Portland Water Bureau agreed to construct a new water main and activate about 10 service accounts for property owners receiving water from a water main owned by Parks and constructed in 1931. This project will replace this main with about 1.5 miles polyethylene plastic main in Cornell Road from Skyline Boulevard. In FY 2016-17, the project will begin construction. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.								
Total Requirements	77,510	107,000	652,000	1,000	0	0	0	653,000
Operating and Maintenance Costs			0	0	0	0	0	

SE Flavel St from Henderson (W01840)	Total Project Cost:	640,000	Area: Southeast					
Confidence Level: Optimal	Original Project Cost:	640,000	Objective: Replacement					
Project Description								
Two existing sections of dead-end 4-inch mains were replaced with 1,800 feet of 12-inch and 8-inch mains to stop leaks, improve water quality, and enhance water available to suppress fires. In FY 2016-17, the project will close out. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.								
Total Requirements	54,458	443,000	5,000	0	0	0	0	5,000
Operating and Maintenance Costs			0	0	0	0	0	

Portland Water Bureau
Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Distribution

SW Bancroft Terr near Terwilliger (W01841)					Total Project Cost:	490,000	Area:	Southwest
	Confidence Level: Low				Original Project Cost:	490,000	Objective:	Replacement
Project Description								
The existing two-inch galvanized main has had nine recorded leaks, with five occurring in the last three years. Abandoning the main and easement reduces risk of leaks and property damage. The project will install about 800 feet of main. In FY 2016-17, this project will complete construction and close. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.								
Total Requirements	98,100	78,000	306,000	0	0	0	0	306,000
Operating and Maintenance Costs			0	0	0	0	0	

N Jantzen Ave west of Pavilion (W01842)					Total Project Cost:	1,290,000	Area:	North
	Confidence Level: Low				Original Project Cost:	1,290,000	Objective:	Replacement
Project Description								
This replacement main is recommended for following reasons: (1) as many as six nonstandard services lack complete documentation and documented backflow devices, (2) the nonstandard services have leak histories and other possible undocumented private connections, (3) the asbestos-concrete main (while not affecting water quality) requires specialized training and personal protection for repairs. This project will correct services without backflow devices and replace approximately 2,200 ft. of substandard asbestos-concrete and plastic water lines. The project will also install six fire hydrants. In FY 2016-17, this program will complete design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.								
Total Requirements	49,685	59,000	1,135,000	15,000	0	0	0	1,150,000
Operating and Maintenance Costs			0	0	0	0	0	

Council Crest Tank Roof (W01848)					Total Project Cost:	700,000	Area:	Southwest
	Confidence Level: Low				Original Project Cost:	700,000	Objective:	Replacement
Project Description								
Council Crest Tank is the highest-elevation tank in southwest Portland and serves approximately 1,300 customers with no backup gravity supply. Due to corrosion of the exposed structure, there is a risk of roof collapse from the effects of an earthquake or an ice or wind storm. Roof failure could result in a long-term boil water notice, frequent outages, and reactive repair costs. This project will replace the Council Crest Tank roof and upper wall shell. In FY 2016-17, this project will continue design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.								
Total Requirements	0	155,000	163,000	442,000	0	0	0	605,000
Operating and Maintenance Costs			0	0	0	0	0	

SW Flower Terrace at Dosch (W01865)					Total Project Cost:	541,000	Area:	Southwest
	Confidence Level: Low				Original Project Cost:	550,000	Objective:	Replacement
Project Description								
The existing four-inch main is in poor condition and has had two leaks in the past seven years. The repair crew has recommended replacement. This project will replace 1,490 feet of four-inch cast iron main with six-inch main, renew 35 one-inch services, and install three hydrants. In FY 2016-17, this project will begin construction. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.								
Total Requirements	10,520	60,000	458,000	23,000	0	0	0	481,000
Operating and Maintenance Costs			0	0	0	0	0	

**Portland Water Bureau
Capital Improvement Plan Summaries**

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Distribution

NEW - SW Vista Ave from Spring St to Laurel St (W01880) **Total Project Cost:** 866,000 **Area:** Southwest

Confidence Level: Low **Original Project Cost:** 866,000 **Objective:** Maintenance & Rep:

Project Description
The existing 8-inch main has had six recorded leaks with four occurring in the last two years. Maintenance and Construction recommends replacement. Cast iron pipe is more brittle than ductile iron pipe and therefore is more likely to break. Bureau management decided to extend replacement to other sections of a similar age. This project will replace approximately 1,600 feet of mains, various hydrants and services. In FY 2016-17, the project will continue design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	12,359	0	493,000	298,000	0	0	0	791,000
Operating and Maintenance Costs			0	0	0	0	0	

Verde Vista PS Improvements (W01883) **Total Project Cost:** 1,040,000 **Area:** Southwest

Confidence Level: Low **Original Project Cost:** 1,040,000 **Objective:** Maintenance & Rep:

Project Description
This project increases system reliability to the Northwest Hills of Portland, by providing the pumping capacity to meet future peak-day demands for the Northwest Hills Service Area when Hoyt Pump Station supply is out of service. Improvements will allow the bureau to deliver water to the Pittock and Calvary tanks, and the existing Burnside Pump Station allowing it to be decommissioned. The Verde Vista station will be fitted with two additional pumps and piping improvements. In FY 2016-17, the project will continue design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	65,000	65,000	100,000	800,000	65,000	0	1,030,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Penridge Mains (W02004) **Total Project Cost:** 2,530,000 **Area:** Northwest

Confidence Level: Low **Original Project Cost:** 2,530,000 **Objective:** Replacement

Project Description
This project will replace approximately 8,000 feet of existing main and renew 41 1-inch domestic services and install seven hydrants. This work will allow the Penridge Tank to be removed from service without further diminishing already substandard fire flows. The Greenleaf Pump Station is being replaced in a separate project. In FY 2016-17, the project will begin design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	0	300,000	230,000	2,000,000	0	0	2,530,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Willamette Blvd Bridge Main Replacement (W02005) **Total Project Cost:** 4,500,000 **Area:** North

Confidence Level: Low **Original Project Cost:** 4,500,000 **Objective:** Replacement

Project Description
The 20-inch pipeline on the N. Willamette Boulevard Bridge is the primary supply to approximately 5,000 services in North Portland and to the St. John's pipeline crossing of the Willamette River. Both the existing 20-inch pipeline on the bridge and the bridge are in poor condition. The pipeline is vulnerable to failure due to condition and also due to a seismic event. This project will install 950 feet of 24-inch pipe in 42-inch casing, plus an additional 200 feet of un-cased 24-inch pipe to connect to the existing system. The bureau will abandon the existing 20-inch pipeline crossing the Willamette Boulevard Bridge. In FY 2016-17, the project will begin design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	0	250,000	860,000	440,000	2,670,000	280,000	4,500,000
Operating and Maintenance Costs			0	0	0	0	0	

Portland Water Bureau

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Distribution

Distribution Mains (WBDIDM)

Total Project Cost: Ongoing **Area:** Citywide
Confidence Level: Optimal **Original Project Cost:** Ongoing **Objective:** Replacement

Project Description

The bureau is committed to improving maintenance of the water system infrastructure, including repairs, replacements and upgrades. This program supports rehabilitation and replacement of substandard mains; expansion due to private lands development; increased water supply for fire protection; improved water quality; and water system upgrades due to local improvement districts and street improvements. The Portland Water Bureau uses a risk-based, reliability-centered approach to identify, catalog, and prioritize projects to ensure minimal disruption to customers. Distribution main replacements also include appurtenances such as fire hydrants, valves, pressure regulators, service branches, and other facilities. Small projects, under \$125,000, are normally completed by bureau personnel. Projects with construction estimates of more than \$125,000 are typically put out for bid. Many projects in this program provide for the relocation and adjustment of water facilities to accommodate storm drainage and sewer pipelines constructed by the Bureau of Environmental Services, roadway configuration changes, pavement overlays, and bridge improvements for the Portland Bureau of Transportation and the Oregon Department of Transportation. Other bureaus reimburse a portion of the costs based on the age of the existing water facility. In FY 2016-17, the bureau expects to work on about 50 minor distribution mains projects. Recently, there has been an increase in the number of petition mains supporting new development. Also, the bureau expects to complete design of several larger mains including NW Saltzman Rd Main Replacement and SW Commonwealth Ave East of Cross. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, other construction fund revenues such as system development charges and interest earnings, and interagency revenues.

Total Requirements	0	11,873,650	14,276,000	16,499,000	13,650,000	15,735,000	20,000,000	80,160,000
Operating and Maintenance Costs			0	0	0	0	0	

Field Support (WBDIFS)

Total Project Cost: Ongoing **Area:** Citywide
Confidence Level: Optimal **Original Project Cost:** Ongoing **Objective:** Maintenance & Rep

Project Description

This program funds the supplies, equipment, and facilities that the bureau field crews use to maintain and operate the water system. The bureau's fleet of construction equipment and vehicles are managed through this program. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	3,246,000	3,855,000	3,932,000	3,932,000	3,976,000	3,976,000	19,671,000
Operating and Maintenance Costs			0	0	0	0	0	

Hydrants (WBDIHY)

Total Project Cost: Ongoing **Area:** Citywide
Confidence Level: Optimal **Original Project Cost:** Ongoing **Objective:** Replacement

Project Description

There are approximately 16,000 fire hydrants connected to the Portland water system. These hydrants allow Portland the flexibility and preparedness to meet the challenge of a fire emergency through coordination with the Portland Fire & Rescue Bureau. This subprogram replaces fire hydrants that are nonstandard or no longer repairable to increase efficiency. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges, interagency reimbursements and interest earnings.

Total Requirements	0	1,812,500	1,369,000	1,369,000	1,369,000	1,369,000	1,369,000	6,845,000
Operating and Maintenance Costs			0	0	0	0	0	

Meters (WBDIME)

Total Project Cost: Ongoing **Area:** Citywide
Confidence Level: Optimal **Original Project Cost:** Ongoing **Objective:** Replacement

Project Description

The bureau has thousands of meters that monitor the quantity of water flowing through the system. The bureau purchases about 8,500 meters annually. These meters are tools to effectively and efficiently manage the allocation of costs of service to public agencies, commercial enterprises, and other non-residential customers. The bureau is also installing automated meter-reading devices and non-skid access lids where applicable. The bureau objective is to maintain metering devices to read within 3% of actual values. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, BES contribution, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	1,092,000	1,139,000	1,139,000	1,139,000	1,139,000	1,139,000	5,695,000
Operating and Maintenance Costs			0	0	0	0	0	

**Portland Water Bureau
Capital Improvement Plan Summaries**

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Distribution

Pump Stations and Tanks (WBDIPT) **Total Project Cost:** Ongoing **Area:** Citywide

Confidence Level: Optimal **Original Project Cost:** Ongoing **Objective:** Replacement

Project Description
This program maintains a large variety of infrastructure consisting of water storage tanks, pumps, and pump and control facilities. The bureau uses a reliability-centered maintenance analysis to prioritize projects in these areas. The focus for this program continues to be the replacement of the remote telemetry units at over 140 remote sites. The existing units are over 15 years old and are becoming obsolete. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	757,000	1,413,000	788,000	1,610,000	3,286,000	3,286,000	10,383,000
Operating and Maintenance Costs			0	0	0	0	0	

Services (WBDISV) **Total Project Cost:** Ongoing **Area:** Citywide

Confidence Level: Optimal **Original Project Cost:** Ongoing **Objective:** Maintenance & Rep

Project Description
A service is the connection between the water main and any given customer's service meter. Service connections are always performed by bureau crews. This program funds installation and upgrade of about 1,000 water service connections annually. The funds facilitate construction of replacement water services requested by customers for new development as well as redevelopment. A fee is collected for new service requests to partially reimburse the bureau's costs. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges, interagency revenue, and interest earnings.

Total Requirements	0	4,957,500	4,545,000	4,545,000	4,545,000	4,545,000	4,545,000	22,725,000
Operating and Maintenance Costs			0	0	0	0	0	

Regulatory Compliance

NEW - Water Quality Lab Remodel (W01836) **Total Project Cost:** 450,000 **Area:** Central City

Confidence Level: Low **Original Project Cost:** 450,000 **Objective:** Expansion

Project Description
The conditions of the Bull Run Treatment Variance require Portland to maintain an ongoing monitoring program for Cryptosporidium. To date, the Water Bureau has been meeting the BRTV monitoring conditions by shipping water samples across the country to accredited private contract laboratories--of which only a handful exist. It has become increasingly challenging to meet the bureau's weekly monitoring requirements, combined with the projected decline in the commercial Cryptosporidium lab industry, it is necessary for the bureau to secure its own in-house capabilities and expertise in order to ensure ongoing compliance. This project will create an in-house laboratory section within the existing Water Quality Laboratory at Interstate to support the requirements of the Bull Run Treatment Variance. In FY 2016-17, the project will complete design and construction. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	0	400,000	50,000	0	0	0	450,000
Operating and Maintenance Costs			0	0	0	0	0	

Water Quality and Regulatory (WBRCRC) **Total Project Cost:** Ongoing **Area:** Undetermined

Confidence Level: High **Original Project Cost:** Ongoing **Objective:** Mandated

Project Description
The bureau recognizes the Bull Run Watershed as a diverse ecosystem. The bureau is committed to preserving this habitat and complying with federal regulations using practical, locally driven solutions. Many of the projects in this subprogram respond to the Clean Water Act and Endangered Species Act, including the implementation of the Bull Run Habitat Conservation Plan as adopted by City Council and approved by the National Marine Fisheries Service. Consistent with Habitat Conservation Plan commitments, this program funds easements, purchases land, and supports projects jointly conducted with other watershed partners. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	958,500	1,964,000	2,328,000	2,278,000	2,278,000	2,278,000	11,126,000
Operating and Maintenance Costs			0	0	0	0	0	

Portland Water Bureau

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Supply

Groundwater Electrical Supply (W01371) **Total Project Cost:** 2,350,000 **Area:** Northeast
Confidence Level: High **Original Project Cost:** 2,200,000 **Objective:** Maintenance & Rep:

Project Description

The 2000 Portland Water Bureau System Vulnerability Analysis and later reports identified a vulnerability for electrical failures at PWB's Groundwater Pump Station. The cost of a possible transformer failure is significant, mainly due to the time needed for transformer replacement. The 2009 Portland Water Bureau Groundwater Pump Station 115kV/4160V Electrical Systems Vulnerability Reduction document studied alternatives for addressing the risk. Other major studies that addressed this issue are the 2008 Groundwater Vulnerability to Flooding and Electrical Outages Project Concept Report and the 2008 Suggestions for Additional Groundwater Vulnerability Reduction Assessment. This project consists of design and construction of a new high-voltage transformer and other components to complete a double-ended electrical substation at the Groundwater Pump Station. It will also include a new main breaker replacement and purchase of selected spare components. In FY 2016-17, this project will begin construction. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	349,959	500,000	525,000	0	0	0	0	525,000
Operating and Maintenance Costs			0	0	0	0	0	

Road 10 MP 4.6 - 6.2 (W01825) **Total Project Cost:** 1,280,000 **Area:** Citywide
Confidence Level: Low **Original Project Cost:** 1,280,000 **Objective:** Maintenance & Rep:

Project Description

This segment of Road 10 is part of the primary access to the bureau's Headworks facility. It also provides a secondary egress from the watershed, should the main route be blocked. This important road assessed as in "poor" condition and the road width does not meet the current design standard. This project will grind existing pavement, restore road subgrade, pave, and stripe two miles of Road 10. The road will be brought up to current standards for width using fill and walls to add an average of two feet of width to the segment. Approximately six culverts will be replaced with aluminum alloy pipe. In FY 2016-17, this project will begin construction. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	41,709	121,000	858,000	0	0	0	0	858,000
Operating and Maintenance Costs			0	0	0	0	0	

Road 10 MP 3.0 - 4.6 (W01826) **Total Project Cost:** 1,346,000 **Area:** Citywide
Confidence Level: Moderate **Original Project Cost:** 1,120,000 **Objective:** Maintenance & Rep:

Project Description

This road is in poor condition and the road width does not meet the current design standard. It is another segment of Road 10 that is part of the primary access road to the bureau's Headworks facility. It is used regularly by heavy vehicles delivering supplies and by bureau staff reporting to work daily. This project will grind existing pavement, restore road subgrade, pave, and stripe 1.6 miles of Road 10. The road will be brought up to current standards for width using fill and walls to add an average of three feet of width to the segment. Approximately nine culverts will be replaced. In FY 2016-17, this project will complete construction. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	136,812	160,000	1,165,000	0	0	0	0	1,165,000
Operating and Maintenance Costs			0	0	0	0	0	

Road 10R MP 28.77 to 31.85 (W01874) **Total Project Cost:** 2,100,000 **Area:** Undetermined
Confidence Level: Low **Original Project Cost:** 2,100,000 **Objective:** Maintenance & Rep:

Project Description

This segment of Road 10 provides access from Bull Run Lake to secondary egress from the watershed, should the main route be blocked. This secondary road is considered at the low end of "fair" condition with a remaining service life of approximately five years. This project is recommended by the 2012 Bull Run Roads Asset Management Plan. This project will grind existing pavement, restore road subgrade, reconstruct turnouts, pave, and stripe 3.08 miles of Road 10. The road meets the design width for this Class B segment; however several failures have occurred in turnouts designed to accommodate passing vehicles. The road condition assessment indicates the average width of this road meets the design standard, however isolated widening may be required. Current condition ratings indicate one culvert will be replaced. Culvert inspection during design may indicate the need to replace more. In FY 2016-17, this project will begin design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	60,000	200,000	740,000	1,100,000	0	0	2,040,000
Operating and Maintenance Costs			0	0	0	0	0	

**Portland Water Bureau
Capital Improvement Plan Summaries**

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Supply

Road 10H MP 10.95 to 12.56 (W01875) **Total Project Cost:** 1,250,000 **Area:** Undetermined
Confidence Level: Low **Original Project Cost:** 822,000 **Objective:** Maintenance & Rep

Project Description

This segment of Road 10 provides access from Headworks to secondary egress from the watershed, should the main route be blocked. This secondary road is at the low end of fair condition and the road width does not meet the current design standard for this Class A road. This project is recommended by the 2012 Bull Run Roads Asset Management Plan. This project will grind existing pavement, restore road subgrade, pave, and stripe 1.61 miles of Road 10. The road condition assessment indicates the average width of this road meets the design standard, however isolated widening may be required. Current condition ratings indicate one culvert will also be replaced. Culvert inspection during design may indicate a need to replace more. In FY 2016-17, this project will complete design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	120,000	161,000	1,018,000	0	0	0	1,179,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Dam 1 Needle Valve Replacement (W02001) **Total Project Cost:** 3,260,000 **Area:** Undetermined
Confidence Level: Low **Original Project Cost:** 3,260,000 **Objective:** Replacement

Project Description

The needle flow control valves are 89 years old and were refurbished 24 years ago. The valves are antiquated, leaky, difficult to open and close, and pose a risk to operator safety. This project will replace the three existing needle valves, actuators, and control panels at Dam 1 with new jet-flow gate valves or fixed-cone valves. In FY 2016-17, the project will begin design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	0	370,000	2,430,000	460,000	0	0	3,260,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Headworks Septic System Replacement (W02003) **Total Project Cost:** 475,000 **Area:** Undetermined
Confidence Level: Low **Original Project Cost:** 475,000 **Objective:** Replacement

Project Description

The Headworks septic system currently does not meet the current requirements on site wastewater disposal. The Headworks Facilities Plan includes two projects that would require replacement of the existing septic system. Replacing the septic system now will prepare the Headworks site for future replacement of Headworks facilities, provide a system that is reliable and meets current state requirements, and eliminate a drain field close to the river. This project will replace the existing septic system (tank and drain field) at Headworks with a new subsurface sewage disposal system including a pump station, force main, and drain field at Kaiser Park. In FY 2016-17, the project will begin design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	0	65,000	410,000	0	0	0	475,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Microwave Communications System (W02021) **Total Project Cost:** 2,214,000 **Area:** Undetermined
Confidence Level: Low **Original Project Cost:** 2,214,000 **Objective:** Replacement

Project Description

The bureau microwave equipment is obsolete and parts are no longer available from the manufacturer. In addition, the Bureau of Technology Services recommends changing the system to increase the reliability and bandwidth. In the past year, there have been two equipment failures on the Council Crest tower, which has resulted in data loss. This project will replace existing microwave communications equipment on seven towers and facilities throughout the system with new equipment. In FY 2016-17, the project will begin construction. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	0	518,000	1,626,000	0	0	0	2,144,000
Operating and Maintenance Costs			0	0	0	0	0	

Portland Water Bureau

Capital Improvement Plan Summaries

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Supply

Bull Run Watershed (WBSUBR)

Total Project Cost: Ongoing **Area:** Undetermined
Confidence Level: Optimal **Original Project Cost:** Ongoing **Objective:** Maintenance & Rep

Project Description

The Bull Run Watershed provides one of the highest quality drinking water sources in the United States. The bureau is committed to updating the Bull Run Watershed protection and maintenance procedures and agreements based on the 2007 Bull Run Agreement with the Mt. Hood National Forest. Funds in this program maintain, improve, and protect the watershed roads and facilities. Many of these facilities are between 50 and 70 years old. Projects address the proper functioning of watershed assets, such as the dams and the intake and treatment facilities. Proper functioning of these assets helps the bureau to continue to operate an unfiltered system. In FY 2016-17, the bureau will continue discussions about the formal land exchange with the U.S. Forest Service. The proposed land exchange would convey approximately 2,800 acres of National Forest System land to the City of Portland in exchange for approximately 2,500 acres of City-owned lands within the Bull Run Watershed Management Unit. The purpose of the proposed land exchange is to create a better alignment of land ownership responsibilities with the respective missions of the agencies. The proposed exchange would consolidate City holdings to lands surrounding the two water supply reservoirs and associated infrastructure. The U.S. Department of Agriculture Forest Service would acquire forested uplands that are valuable for natural resource protection and ecosystem management. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	243,600	392,000	96,000	2,278,000	3,417,000	3,500,000	9,683,000
Operating and Maintenance Costs			0	0	0	0	0	

Groundwater (WBSUGW)

Total Project Cost: Ongoing **Area:** Northeast
Confidence Level: Optimal **Original Project Cost:** Ongoing **Objective:** Efficiency

Project Description

The Columbia South Shore Well Field is Portland's alternative supply of water should the Bull Run Watershed supply be interrupted for any reason. The well field's primary use is to supplement the bureau peak demand in summers. If flow from Bull Run source must be interrupted or augmented due to storm-caused turbidity, drought conditions, or other causes, then the bureau pumps groundwater. The groundwater supply also allows the bureau to continue to operate without constructing and operating a filtration facility. Projects funded in this program improve the maintenance of this aging infrastructure, including repairs, selective replacements, and upgrades. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue and other construction fund revenues, such as system development charges and interest earnings.

Total Requirements	0	718,500	515,000	570,000	570,000	570,000	1,000,000	3,225,000
Operating and Maintenance Costs			0	0	0	0	0	

Support

Planning (WBASPL)

Total Project Cost: Ongoing **Area:** Undetermined
Confidence Level: Optimal **Original Project Cost:** Ongoing **Objective:** Efficiency

Project Description

This program consists of general planning studies for projects needed to improve the operation of the water system. These include pressure zone adjustments, facility modifications, and system element studies. In FY 2016-17, the bureau will finalize a large-scale water system seismic analysis. The bureau will also continue studies on topics such as water quality, tank and pump station issues, groundwater upgrades, and Bull Run supply elements. The project funding is from water sales revenue.

Total Requirements	0	2,184,000	2,278,000	2,848,000	2,848,000	2,848,000	2,848,000	13,670,000
Operating and Maintenance Costs			0	0	0	0	0	

Transmission/Terminal Storage

Washington Park (W01402)

Total Project Cost: 170,100,000 **Area:** West
Confidence Level: Low **Original Project Cost:** 61,132,686 **Objective:** Mandated

Project Description

The project will plan, design, and construct a new seismically resilient buried reservoir to replace open Reservoir #3 at Washington Park. This project is part of compliance with the federal LT2 mandate to replace the open reservoirs. It is assumed that Reservoir #4 will be used as the overflow detention, dechlorination, and stormwater structure. The buried reservoir would be topped with a reflecting pond and historical features will be protected as much as possible. In FY 2016-17, this project will begin construction. Confidence level has been reduced to low given the geotechnical requirements. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	14,062,747	4,510,000	31,000,000	50,000,000	31,000,000	19,000,000	4,500,000	135,500,000
Operating and Maintenance Costs			0	0	0	0	0	

**Portland Water Bureau
Capital Improvement Plan Summaries**

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Transmission/Terminal Storage

Rockwood PUD Meter (W01489)

Confidence Level: High **Total Project Cost:** 530,000 **Area:** East
Original Project Cost: 530,000 **Objective:** Efficiency

Project Description

This project will design and construct a replacement meter vault outside of the traffic lanes to reduce risk. The existing vault houses a wholesale meter with instrumentation and requires the closure of multiple lanes to access. Due to width and height restrictions, the business case identifies a high risk exposure to injury to staff working in the vault. The new vault will be in the parking lane and sidewalk area, and will contain a check valve. Piping will be installed to reconnect the supply main to the distribution main. In FY 2016-17, this project will complete construction. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	79,990	200,000	5,000	0	0	0	0	5,000
Operating and Maintenance Costs			0	0	0	0	0	

Tabor Reservoir Adjustments (W01524)

Confidence Level: High **Total Project Cost:** 8,152,700 **Area:** Southeast
Original Project Cost: 6,406,994 **Objective:** Mandated

Project Description

This project has made adjustments to piping, structures, and other features at Mt. Tabor in order to move storage elsewhere and physically disconnect the open reservoirs from the public water system for compliance with the federal LT2 rule. The adjustments were arranged around the historical structures to avoid damage. The project does not include disposition of the reservoirs after they have been disconnected from the public water system. In FY 2016-17, this project will continue construction. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	1,793,621	3,337,000	2,800,000	159,000	0	0	0	2,959,000
Operating and Maintenance Costs			0	0	0	0	0	

NEW - Gresham Conduit 2 Trestle Upgrades (W02006)

Confidence Level: Low **Total Project Cost:** 1,150,000 **Area:** Citywide
Original Project Cost: 1,150,000 **Objective:** Maintenance & Rep

Project Description

This project will install 13 ring girders and scour protection on both the El Camino and Beaver Creek trestles. These improvements mitigate Conduit 2 failure risks due to seismic and flooding events, which will improve the bureau's supply resiliency due to natural disasters. In FY 2016-17, the project will begin design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	0	250,000	655,000	230,000	0	0	1,135,000
Operating and Maintenance Costs			0	0	0	0	0	

Conduits and Transmission Mains (WBTTCT)

Confidence Level: Optimal **Total Project Cost:** Ongoing **Area:** Undetermined
Original Project Cost: Ongoing **Objective:** Maintenance & Rep

Project Description

The conduits that bring water to Portland from the Bull Run watershed are pipes 56 to 72 inches in diameter. This program funds repairs, replacements, and upgrades to improve availability and accuracy of metered data from wholesale connections. Service to the City's wholesale customers is a key reason for the bureau's commitment to improve maintenance of this aging infrastructure. In future years, the bureau plans to rehabilitate four to five miles of conduits each year at an estimated cost of \$4 to \$5 million dollars per mile. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	126,000	1,104,000	2,848,000	5,684,000	15,645,000	15,645,000	40,926,000
Operating and Maintenance Costs			0	0	0	0	0	

**Portland Water Bureau
Capital Improvement Plan Summaries**

Capital Program	Prior	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Project	Years	Revised	Adopted	Estimated	Estimated	Estimated	Estimated	5-Year
	Capital	Budget	Budget	Budget	Budget	Budget	Budget	Total

Transmission/Terminal Storage

Terminal Reservoirs (WBTTTR)

Confidence Level: Optimal **Total Project Cost:** Ongoing **Area:** Southeast
Original Project Cost: Ongoing **Objective:** Mandated

Project Description

The Terminal Reservoirs program includes conveying water from the supply facilities to the retail distribution system. Major assets in this program include the terminal reservoirs, such as those at Powell Butte, Kelly Butte, and Washington Park. The program provides for the rehabilitation, replacement, and expansion of smaller reservoir system assets. The program funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	235,000	110,000	110,000	110,000	110,000	110,000	110,000	550,000
Operating and Maintenance Costs			0	0	0	0	0	0	

Treatment

Headworks Generator Improvements (W01860)

Confidence Level: Low **Total Project Cost:** 1,670,000 **Area:** Citywide
Original Project Cost: 1,670,000 **Objective:** Replacement

Project Description

The Headworks Facilities Plan recommended a new emergency generator, switchgear, and site electrical panels. The existing generator does not have sufficient capacity for current electrical needs. These improvements to the Headworks emergency generator, switchgear, and site electrical panels will provide the greatest risk reduction by mitigating three high-risk conditions. This recommended project will improve or replace the Headworks generator, fuel storage tank, and associated site electrical components. In FY 2016-17, this project will complete design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	43,556	285,500	300,000	890,000	145,000	0	0	0	1,335,000
Operating and Maintenance Costs			0	0	0	0	0	0	

NEW - Chlorine Scrubber Replacement (W02002)

Confidence Level: Low **Total Project Cost:** 485,000 **Area:** Citywide
Original Project Cost: 485,000 **Objective:** Replacement

Project Description

This project will replace the existing liquid media chlorine scrubber with a new dry media chlorine scrubber at Headworks facility. The new dry scrubber unit reduces maintenance costs and considerably lowers the risk of a safety issue. In FY 2016-17, the project will begin design. The project funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	0	85,000	400,000	0	0	0	0	485,000
Operating and Maintenance Costs			0	0	0	0	0	0	

Treatment (WBTMTM)

Confidence Level: Optimal **Total Project Cost:** Ongoing **Area:** Undetermined
Original Project Cost: Ongoing **Objective:** Mandated

Project Description

The Treatment Program provides for meeting or exceeding the federal and state requirements for a public water system utilizing an unfiltered surface water source as well as a groundwater source. The program funding is from a combination of net proceeds from revenue bond sales, water sales revenue, and other construction fund revenues such as system development charges and interest earnings.

Total Requirements	0	100,000	55,000	55,000	548,000	10,952,000	10,952,000	22,562,000
Operating and Maintenance Costs			0	0	0	0	0	