Funded Projects

Overview

The Wastewater Services Capital Improvement Program (CIP) provides for the planning, design and construction of improvements to the City's wastewater collection, conveyance and treatment (WWTP) systems. The CIP is essential to help provide Gresham customers sustainable, reliable and affordable wastewater collection, conveyance and treatment services that are protective of the environment and public health. In addition, while preserving the existing infrastructure investment, the CIP provides capacity for future growth, as a catalyst for the economic viability of the community.

The Wastewater Services Division uses a scoring system and an asset management tool known as Business Risk Exposure (BRE). BRE helps prioritize CIP projects based on the asset condition and the consequences of failure for the asset. BRE scores range from 1 to 25, with 25 being the highest priority for action.

Highlights

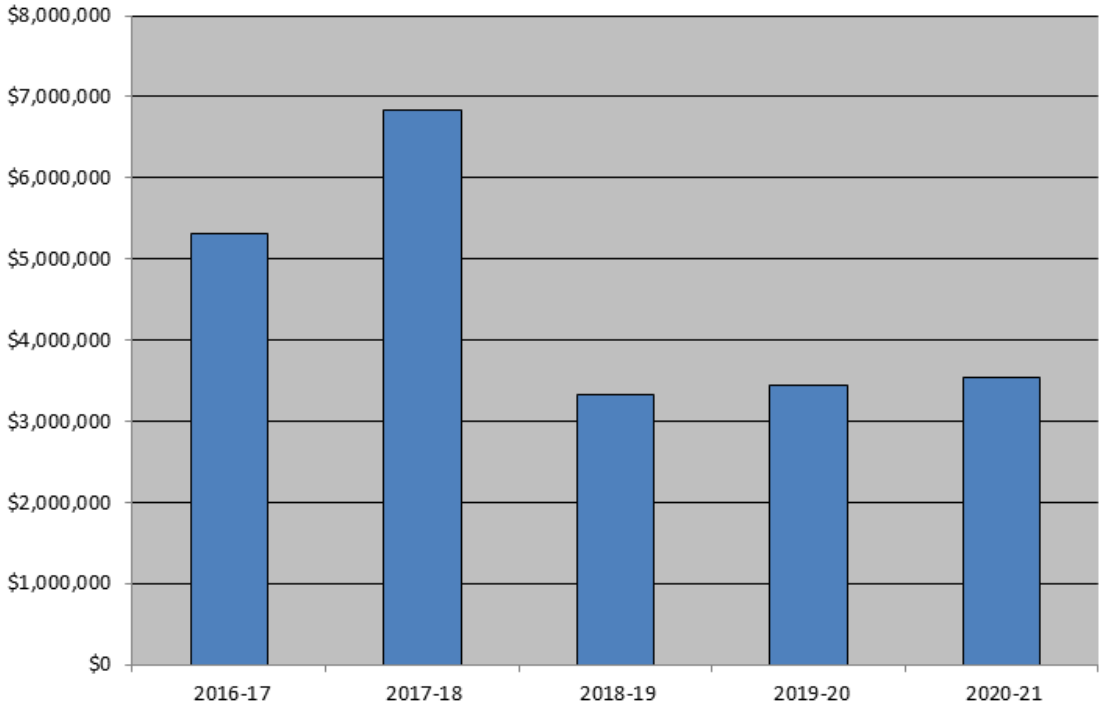
Key projects within the current CIP include:

1. Unanticipated (#317700) and planned (#318400)) repair and replacement projects for the collection system;
2. Unanticipated (#309700) and planned (#317400) repair and replacement projects for the treatment plant;
3. Collection system projects #315000 – McKinley Sewer Extension and #319600 – Kelley Creek Trunk Easements which will provide for capacity and growth in Pleasant Valley;
4. WWTP Solids Process Improvements (#316400) recommended by 2011 Master Plan to ensure long term biosolids treatment options;
5. Refurbishment and replacement of aging equipment at the treatment plant (#319400 – Lower Blower Building and #319700 – Barscreen replacement);

6. Construction of a Vactor Decant Station (#319300) at the treatment plant that will allow for the safe and efficient disposal of wet solids from vactor trucks and the wastewater treatment plant processes.

These projects will help address many ongoing and future operational and maintenance concerns as well as provide system capacity for growth.

Wastewater Expenditure Graph By Fiscal Year



Wastewater Funded Summary								
Project	Project Name	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
300200	I & I Control Program	383,824	333,282	343,280	353,578	364,185	375,111	2,153,260
309700	WWTP Maintenance Project	534,602	392,980	404,769	416,912	429,419	442,302	2,620,984
315000	McKinley Sewer Extension	801,860	0	0	0	0	0	801,860
316400	WWTP Solids Process Improvements	387,988	673,056	3,066,144	0	0	0	4,127,188
317400	WWTP Asset Replacement and Refurbishment (R&R) Proj	540,258	720,000	537,624	553,753	570,366	587,477	3,509,478
317700	Collection System Asset Refurbishment and Replacement	1,384,648	584,609	602,147	620,211	638,817	657,982	4,488,414
318400	1950's Failing Pipe Rehabilitation/Maint. Program	2,852,688	1,111,272	1,350,611	1,391,129	1,432,863	1,475,849	9,614,412
318500	WWTP FOG Recycling Facility, Phase 2	326,743	0	0	0	0	0	326,743
319100	East Basin Trunk Upgrade Phase II	1,358,036	0	0	0	0	0	1,358,036
319300	Vactor Decant Station	346,368	653,632	0	0	0	0	1,000,000
319400	WWTP Lower Blower Building Refurbishment	1,204,221	0	0	0	0	0	1,204,221
319600	Kelley Creek Trunk Easements	251,476	0	0	0	0	0	251,476
319700	WWTP Lower Plant Barscreen Replacement	1,350,000	202,500	0	0	0	0	1,552,500
319800	WWTP Operations and Maintenance Evaluation	182,400	0	0	0	0	0	182,400
319900	WWTP Master Plan Update	0	285,000	0	0	0	0	285,000
320000	Biological Biogas Treatment System	0	110,000	524,000	0	0	0	634,000
320100	Asset Management Software	0	50,000	0	0	0	0	50,000
320700	Wastewater Mainline Extension	0	200,000	0	0	0	0	200,000
Grand Total		**11,905,112**	**5,316,331**	**6,828,575**	**3,335,583**	**3,435,650**	**3,538,721**	**34,359,972**

Wastewater Funded Summary by Resource							
Description	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**Total**
Debt-SDC	631,778	0	0	0	0	0	631,778
Grant	215,000	0	0	0	0	0	215,000
Operating	4,153,929	1,834,414	867,280	353,578	364,185	375,111	7,948,497
Repair/Replacement Reserves	6,904,405	3,481,917	5,961,295	2,982,005	3,071,465	3,163,610	25,564,697
Grand Total	**11,905,112**	**5,316,331**	**6,828,575**	**3,335,583**	**3,435,650**	**3,538,721**	**34,359,972**

Wastewater Funded Resource Detail

Project	Project Name	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
300200	I & I Control Program	Operating	383,824	333,282	343,280	353,578	364,185	375,111	2,153,260
300200 Total			383,824	333,282	343,280	353,578	364,185	375,111	2,153,260
309700	WWTP Maintenance Project	Repair/Replace	534,602	392,980	404,769	416,912	429,419	442,302	2,620,984
309700 Total			534,602	392,980	404,769	416,912	429,419	442,302	2,620,984
315000	McKinley Sewer Extension	Operating	801,860	0	0	0	0	0	801,860
315000 Total			801,860	0	0	0	0	0	801,860
316400	WWTP Solids Process Improvements	Repair/Replace	387,988	673,056	3,066,144	0	0	0	4,127,188
316400 Total			387,988	673,056	3,066,144	0	0	0	4,127,188
317400	WWTP Asset Replacement and Refurbishment (R&R) Prc	Repair/Replace	540,258	720,000	537,624	553,753	570,366	587,477	3,509,478
317400 Total			540,258	720,000	537,624	553,753	570,366	587,477	3,509,478
317700	Collection System Asset Refurbishment and Replacemen	Repair/Replace	1,384,648	584,609	602,147	620,211	638,817	657,982	4,488,414
317700 Total			1,384,648	584,609	602,147	620,211	638,817	657,982	4,488,414
318400	1950's Failing Pipe Rehabilitation/Maint. Program	Repair/Replace	2,852,688	1,111,272	1,350,611	1,391,129	1,432,863	1,475,849	9,614,412
318400 Total			2,852,688	1,111,272	1,350,611	1,391,129	1,432,863	1,475,849	9,614,412
318500	WWTP FOG Recycling Facility, Phase 2	Grant	215,000	0	0	0	0	0	215,000
		Operating	111,743	0	0	0	0	0	111,743
318500 Total			326,743	0	0	0	0	0	326,743
319100	East Basin Trunk Upgrade Phase II	Debt-SDC	380,302	0	0	0	0	0	380,302
		Operating	977,734	0	0	0	0	0	977,734
319100 Total			1,358,036	0	0	0	0	0	1,358,036
319300	Vactor Decant Station	Operating	346,368	653,632	0	0	0	0	1,000,000
319300 Total			346,368	653,632	0	0	0	0	1,000,000
319400	WWTP Lower Blower Building Refurbishment	Repair/Replace	1,204,221	0	0	0	0	0	1,204,221
319400 Total			1,204,221	0	0	0	0	0	1,204,221
319600	Kelley Creek Trunk Easements	Debt-SDC	251,476	0	0	0	0	0	251,476
319600 Total			251,476	0	0	0	0	0	251,476
319700	WWTP Lower Plant Barscreen Replacement	Operating	1,350,000	202,500	0	0	0	0	1,552,500
319700 Total			1,350,000	202,500	0	0	0	0	1,552,500
319800	WWTP Operations and Maintenance Evaluation	Operating	182,400	0	0	0	0	0	182,400
319800 Total			182,400	0	0	0	0	0	182,400
319900	WWTP Master Plan Update	Operating	0	285,000	0	0	0	0	285,000
319900 Total			0	285,000	0	0	0	0	285,000
320000	Biological Biogas Treatment System	Operating	0	110,000	524,000	0	0	0	634,000
320000 Total			0	110,000	524,000	0	0	0	634,000
320100	Asset Management Software	Operating	0	50,000	0	0	0	0	50,000
320100 Total			0	50,000	0	0	0	0	50,000
320700	Wastewater Mainline Extension	Operating	0	200,000	0	0	0	0	200,000
320700 Total			0	200,000	0	0	0	0	200,000
Grand Total			11,905,112	5,316,331	6,828,575	3,335,583	3,435,650	3,538,721	34,359,972

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300200: I & I Control Program

Description: This on-going analysis is to reduce the excessive stormwater inflow and infiltration (I&I) into the sanitary sewer system. The project includes flow monitoring, smoke and dye testing to identify illicit connections and high I&I areas, pipe repair, pressure grouting, and other methods to reduce I&I. I&I Control includes sustainability/energy conservation projects within the collection system.

Justification: The project will reduce costs to service users by reducing I&I rather than processing it thorough the treatment plant or increasing the collection system capacity. The project ensures compliance with the National Pollutant Discharge Elimination System Permit.

Type of project: Repair and rehabilitation of facilities and utilities.

City Wide Project

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Operating	383,824	333,282	343,280	353,578	364,185	375,111	2,153,260
Resources Total		**383,824**	**333,282**	**343,280**	**353,578**	**364,185**	**375,111**	**2,153,260**
Expenses	Design/Const Admin	42,912	58,324	60,074	55,828	62,640	41,937	321,715
	Construction	287,177	228,299	235,147	254,328	250,559	280,658	1,536,168
	Admin (14%)	53,735	46,659	48,059	43,422	50,986	52,516	295,377
Expenses Total		**383,824**	**333,282**	**343,280**	**353,578**	**364,185**	**375,111**	**2,153,260**

309700: WWTP Maintenance Project

Description: This project funds unanticipated repair and replacement of Wastewater Treatment Plant and pump station equipment and processes that are not scheduled for replacement under the WWTP Asset R&R CIP 317400. It includes contractual reimbursement to Veolia for repair and replacement items over $5,000. This project also includes contractual reimbursables, such as construction related expenses and other items as required by the contract. The project is located in the North Gresham Neighborhood District.

Justification: The criticality and Business Risk Exposure (BRE) for this project varies with the asset to be repaired or replaced. In almost all instances, the condition of the asset would be 4 (poor) or more (1 is new condition, 5 is worst condition). The condition score is high because only assets needing immediate attention are on this project list.

Type of project: Repair and rehabilitation of facilities and utilities.

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Repair/Replacement Reserves	534,602	392,980	404,769	416,912	429,419	442,302	2,620,984
Resources Total		**534,602**	**392,980**	**404,769**	**416,912**	**429,419**	**442,302**	**2,620,984**
Expenses	Design/Const Admin	91,952	68,943	71,011	65,828	67,803	70,768	436,305
	Construction	367,806	275,776	284,049	299,884	301,497	317,216	1,846,228
	Admin (14%)	74,844	48,261	49,709	51,200	60,119	54,318	338,451
Expenses Total		**534,602**	**392,980**	**404,769**	**416,912**	**429,419**	**442,302**	**2,620,984**

315000: McKinley Sewer Extension

Description: This project will decommission the existing Hunter's Highland lift station by providing a gravity sewer to the existing Pleasant Valley Interceptor. It will provide 8" sewer service up McKinley Road into Gresham Pleasant Valley.

Justification: This project will eliminate a lift station, reducing operational and maintenance costs associated with sewerage lift stations and extend the current reach of sewer service in Gresham Pleasant Valley to promote development.

Type of Project: Design and construction of facilities and utilities for operational and cost efficiencies.

Estimated Dollars:

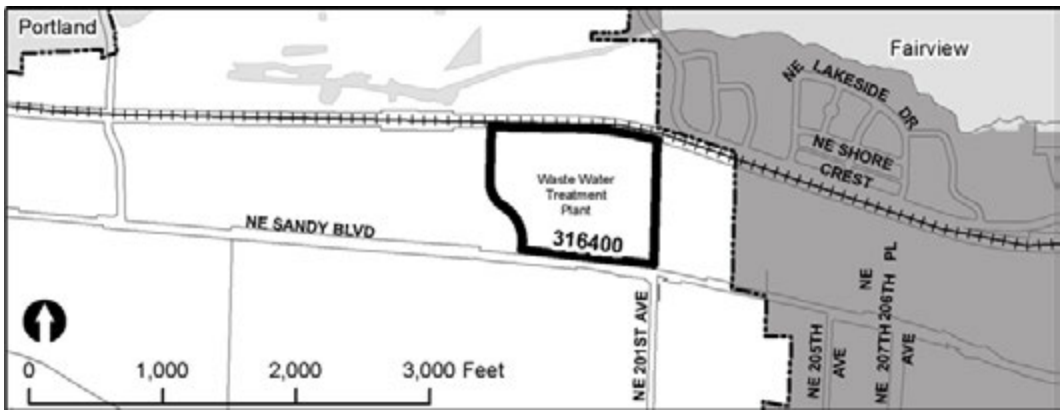
Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Operating	801,860	0	0	0	0	0	801,860
Resources Total		**801,860**	**0**	**0**	**0**	**0**	**0**	**801,860**
Expenses	Design/Const Admin	113,325	0	0	0	0	0	113,325
	Construction	553,295	0	0	0	0	0	553,295
	Property Acq	22,980	0	0	0	0	0	22,980
	Admin (14%)	112,260	0	0	0	0	0	112,260
Expenses Total		**801,860**	**0**	**0**	**0**	**0**	**0**	**801,860**

316400: WWTP Solids Process Improvements

Description: This project constructs the design and construction of solids processing improvements at the Gresham WWTP. The 2011 WWTP Master Plan identified that the improvements are needed in order to ensure long term biosolids treatment options. This project will design and construct new solids dewatering equipment and associated solids process improvements. Portions of this project may be funded by CIP 317400 funds as appropriate.

Justification: As needed to increase the solids dewatering capabilities of the WWTP for land application and reuse. This project will also decrease the amount of biosolids that need to be hauled to an application site and defer future biosolids storage improvements. The management (treatment, storage, transportation and land application) of biosolids which does not follow the requirements of the City's NPDES permit can result in a fine from the DEQ.

Type of Project: Design and construction of WWTP facilities.



Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Repair/Replacement Reserves	387,988	673,056	3,066,144	0	0	0	4,127,188
Resources Total		**387,988**	**673,056**	**3,066,144**	**0**	**0**	**0**	**4,127,188**
Expenses	Design/Const Admin	66,734	590,400	0	0	0	0	657,134
	Construction	266,936	0	2,689,600	0	0	0	2,956,536
	Admin (14%)	54,318	82,656	376,544	0	0	0	513,518
Expenses Total		**387,988**	**673,056**	**3,066,144**	**0**	**0**	**0**	**4,127,188**

317400: WWTP Asset Replacement and Refurbishment (R&R) Project

Description: This is an ongoing project that designs and constructs the R&R of assets at the WWTP and WW pumping stations that are scheduled per the asset management plan. Wastewater's newly completed Asset Management Program has developed a comprehensive asset inventory, asset condition and long range asset replacement planning methodology. This methodology will ensure that the City is appropriately planning, evaluating and replacing Assets to ensure the lowest life cycle cost at an appropriate level of service with adequate long range funding for the projects. This project contributes eligible R&R funding to CIP's 318500, 316400 , 319400, and 319700. (CIP# 309700 is in response to unanticipated asset failures, such as repairing air line leaks, replacing flow meters, replacing digester mixers, repairing rolling stock and other unanticipated items as needed.)

Justification: The Business Risk Exposure (BRE) for this project is 18.9, and is based on an asset condition score of 4.2 (poor) and a consequence of failure score of 4.5 (high). The condition score is poor or high and is from the WWTP Asset Replacement Plan. The consequence of failure score is high and is because these projects impact WWTP performance and permit compliance.

Type of project: Repair and rehabilitation of facilities and utilities.

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Repair/Replacement Reserves	540,258	720,000	537,624	553,753	570,366	587,477	3,509,478
Resources Total		**540,258**	**720,000**	**537,624**	**553,753**	**570,366**	**587,477**	**3,509,478**
Expenses	Design/Const Admin	92,924	123,840	78,600	87,435	98,103	101,046	581,948
	Construction	371,698	495,360	393,000	398,313	392,412	404,184	2,454,967
	Admin (14%)	75,636	100,800	66,024	68,005	79,851	82,247	472,563
Expenses Total		**540,258**	**720,000**	**537,624**	**553,753**	**570,366**	**587,477**	**3,509,478**

317700: Collection System Asset Refurbishment and Replacement Project

Description: This project replaces operationally deficient and localized sections of the collection and conveyance system as needed in response to breakdowns. This localized repair or replacement strategy extends the useful life of pipeline assets that typically wouldn't be replaced until the expected (i.e.75 year) useful life of the asset has been reached. This project contributes eligible R&R funds to CIP 318400.

Justification: The Business Risk Exposure (BRE) for this project is 20, and is based on an asset condition score of 5 (poorest) and a consequence of failure score of 4 (high). This CIP is used to repair areas where the system is on the verge of failure and the high condition score represents this situation. If the projects repaired by this CIP are left, failures can lead to loss of service, backups and possibly spills. SSO's or sanitary sewer overflows, are prohibited by the DEQ and may result in a fine or penalty.

Type of project: Construction.

City Wide Project

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Repair/Replacement Reserves	1,384,648	584,609	602,147	620,211	638,817	657,982	4,488,414
Resources Total		**1,384,648**	**584,609**	**602,147**	**620,211**	**638,817**	**657,982**	**4,488,414**
Expenses	Design/Const Admin	202,436	70,153	72,258	97,928	109,877	73,562	626,214
	Construction	988,361	432,611	445,588	446,117	439,506	492,303	3,244,486
	Admin (14%)	193,851	81,845	84,301	76,166	89,434	92,117	617,714
Expenses Total		**1,384,648**	**584,609**	**602,147**	**620,211**	**638,817**	**657,982**	**4,488,414**

318400: 1950's Pipe Rehabilitation/Maint. Program

Description: This ongoing project completes systematic pipeline rehabilitation and maintenance projects as identified from the Sanitary Sewer Evaluation Study project, or subsequently as determined from ongoing collection system condition assessment. It addresses operational ongoing and anticipated operational concerns, primarily with the oldest sanitary sewer lines (circa 1950s) around downtown Gresham, reducing long term operational and maintenance costs. The majority of this work will likely implement a combination of open trench, pipe bursting, and "cure-in-place" pipe lining methods. (CIP 317700 is in response to already deficient and localized sections of conveyance system).

Justification: The Business Risk Exposure (BRE) for this project is 16 (medium), and is based on an asset condition score of 4 (poor) and a consequence of failure score of 4 (high). These assets have all passed their industry standard lifespan. The assets also have developed visually confirmed physical failures. The failure of these assets can lead to loss of service, backups and possibly spills.

Type of Project: Repair and rehabilitation of pipeline facilities.

City Wide Project

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Repair/Replacement Reserves	2,852,688	1,111,272	1,350,611	1,391,129	1,432,863	1,475,849	9,614,412
Resources Total		**2,852,688**	**1,111,272**	**1,350,611**	**1,391,129**	**1,432,863**	**1,475,849**	**9,614,412**
Expenses	Design/Const Admin	375,354	166,691	202,591	219,652	246,452	165,000	1,375,740
	Construction	2,127,004	789,003	958,934	1,000,637	985,810	1,104,230	6,965,618
	Admin (14%)	350,330	155,578	189,086	170,840	200,601	206,619	1,273,054
Expenses Total		**2,852,688**	**1,111,272**	**1,350,611**	**1,391,129**	**1,432,863**	**1,475,849**	**9,614,412**

318500: WWTP FOG Recycling Facility, Phase 2

Description: This project will construct additional Fat's Oils and Grease (FOG) receiving facilities and additional power generation facilities at the Gresham WWTP.

Justification: The FOG waste that haulers are collecting from restaurant grease traps and grease interceptors could be transported locally to the Gresham WWTP, injected in the existing digesters and increase the biogas production that can be used to produce energy. This Phase II of the project will evaluate the grease availability and market conditions, the increase in biogas production, and construct the appropriately sized power generating facilities. The feasibility study concluded that the WWTP could generate more power than it uses and become energy Net-Zero with the completion of both phases of this project. The anticipated power production would save the City approximately $250,000 per year in avoided power costs and the FOG tipping fess would generate approximately $250,000 per year in revenue.

Type of Project: Design and construction of new facilities

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Grant	215,000	0	0	0	0	0	215,000
	Operating	111,743	0	0	0	0	0	111,743
Resources Total		**326,743**	**0**	**0**	**0**	**0**	**0**	**326,743**
Expenses	Design/Const Admin	56,200	0	0	0	0	0	56,200
	Construct/Reimburse	230,400	0	0	0	0	0	230,400
	Admin (14%)	40,143	0	0	0	0	0	40,143
Expenses Total		**326,743**	**0**	**0**	**0**	**0**	**0**	**326,743**

319100: East Basin Trunk Upgrade Phase 2

Description: This project will correct surcharged areas of sewer line upstream of Burnside just north of SE 3rd Street. Additional capacity should be provided by upsizing of sewer line from 15" to 18, and 18" to 21". The East Basin Trunk also serves the Springwater area and is currently flowing at capacity. Using pipe bursting methods to increase the pipes will alleviate current flow as well as prepare the system for anticipated development in the Springwater area. The project has been broken out into three phases. This is the second phase of the project.

Justification: This project provides sewerage system capabilities for transmitting current and projected sewerage flows.

Type of Project: Construction of facilities and utilities for growth and to correct deficiencies.

Estimated Dollars:

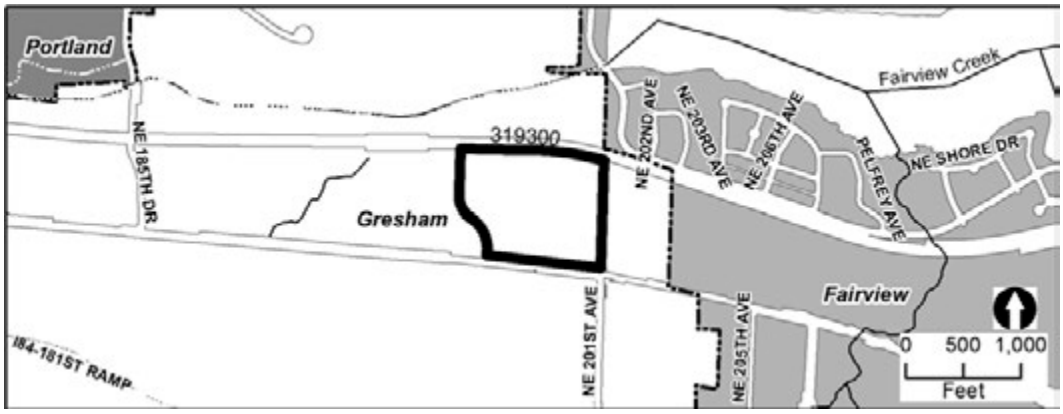
Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Debt-SDC	380,302	0	0	0	0	0	380,302
	Operating	977,734	0	0	0	0	0	977,734
Resources Total		**1,358,036**	**0**	**0**	**0**	**0**	**0**	**1,358,036**
Expenses	Design/Const Admin	233,580	0	0	0	0	0	233,580
	Construction	957,600	0	0	0	0	0	957,600
	Admin (14%)	166,856	0	0	0	0	0	166,856
Expenses Total		**1,358,036**	**0**	**0**	**0**	**0**	**0**	**1,358,036**

319300: Vactor Decant Station

Description: This project is intended to improve the vactor truck waste disposal process. The work will require a new covered dump site to be constructed and purchase of new drop boxes to retain and dewater haul waste from the vactor truck. Site will have capacity to dispose of standard vactor waste from the sewer as well as clean material from vacuum excavation. The site will need to allow simple and safe dumping from the vactor truck. New drop boxes will act as de-watering devices for dumped materials. The site will be located at the wastewater treatment plant.

Justification: This new facility will provide a safe and efficient disposal site for wet solids from vactor truck waste and WWTP processes.

Type of Project: Design and construction of wastewater facilities.



Estimated Dollars:

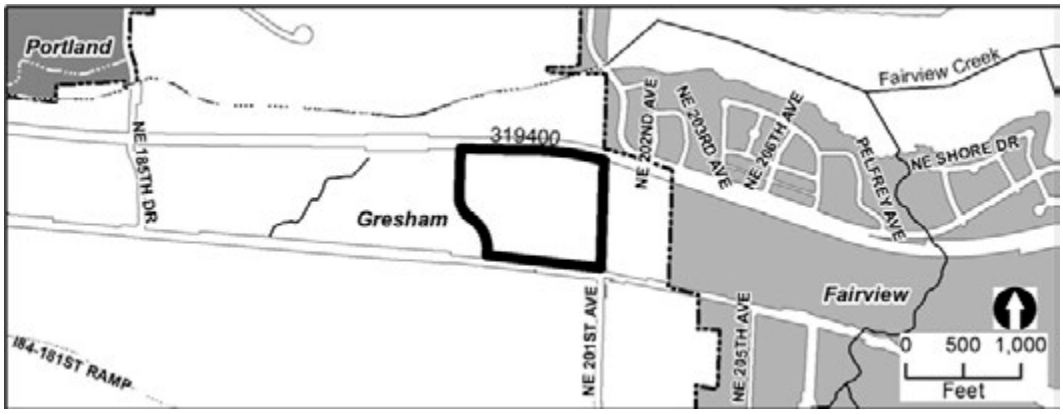
Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Operating	346,368	653,632	0	0	0	0	1,000,000
Resources Total		**346,368**	**653,632**	**0**	**0**	**0**	**0**	**1,000,000**
Expenses	Design/Const Admin	148,938	56,212	0	0	0	0	205,150
	Construction	148,938	505,912	0	0	0	0	654,850
	Admin (14%)	48,492	91,508	0	0	0	0	140,000
Expenses Total		**346,368**	**653,632**	**0**	**0**	**0**	**0**	**1,000,000**

319400: WWTP Lower Blower Building Refurbishment

Description: This project constructs the refurbishment of the Wastewater Treatment Plant Lower Blower building. The 2013 Wastewater Division Asset Management Plan identified that much of the equipment in the building is nearing 30 years old and the building itself is nearing 50 years old and should be upgraded in order to maintain a low risk of asset failures. This project will replace the existing antiquated pumping equipment, including controls and instrumentation and refurbish the building interior, including hvac systems, paint and doors.

Justification: Based on asset management's Business Risk Exposure (BRE) scoring system, which prioritizes projects based on condition score and consequence of failure score for the asset. These two scores range from 1 to 5 each, with 1 being best condition or lowest consequence of failure and 5 being worst condition or highest consequence of failure. The two scores are multiplied together, resulting in the final BRE score, ranging from 1 to 25, with 25 being the highest priority for action. The Business Risk Exposure (BRE) for this project is 16 and is based on an average asset condition score of 4 (poor)and a consequence of failure score of 4 (high). The condition scores are high and are need of immediate attention. The consequence of failure score is also high because these assets affect treatment plant performance and NPDES permit compliance.

Type of Project: Repair and rehabilitation of facilities and utilities.



Estimated Dollars:

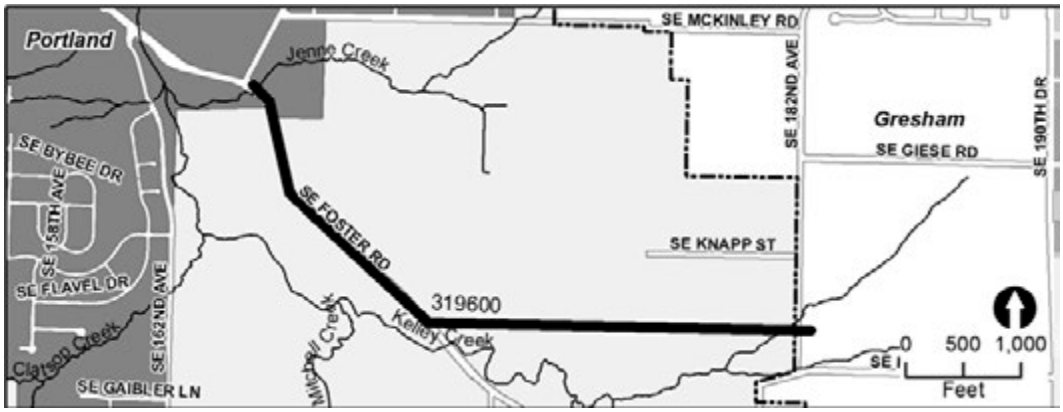
Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Repair/Replacement Reserves	1,204,221	0	0	0	0	0	1,204,221
Resources Total		**1,204,221**	**0**	**0**	**0**	**0**	**0**	**1,204,221**
Expenses	Design/Const Admin	207,126	0	0	0	0	0	207,126
	Construction	828,504	0	0	0	0	0	828,504
	Admin (14%)	168,591	0	0	0	0	0	168,591
Expenses Total		**1,204,221**	**0**	**0**	**0**	**0**	**0**	**1,204,221**

319600: Kelley Creek Trunk Easements

Description: This project will acquire easements for the Kelley Creek Trunk Sewer from Jenne & Foster Road to the Pleasant Valley Grade School. This location will serve as the point of discharge for the identified "Phase 1" development area within the Pleasant Valley urban growth area.

Justification: This project is needed to provide the new Pleasant Valley urban area with wastewater conveyance infrastructure to allow for growth. The Kelley Creek Trunk Sewer will provide sewer service for an estimated 520 dwelling units to be constructed using the Pleasant Valley Plan District zoning requirements.

Type of Project: Design and Construction of facilities and utilities for growth.



Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Debt-SDC	251,476	0	0	0	0	0	251,476
Resources Total		**251,476**	**0**	**0**	**0**	**0**	**0**	**251,476**
Expenses	Design/Const Admin	17,000	0	0	0	0	0	17,000
	Property Acq	203,576	0	0	0	0	0	203,576
	Admin (14%)	30,900	0	0	0	0	0	30,900
Expenses Total		**251,476**	**0**	**0**	**0**	**0**	**0**	**251,476**

319700: WWTP Lower Plant Barscreen Replacement

Description: This project replaces the Barscreens in the Lower Plant Headworks Building at the WWTP. Barscreens remove trash and debris from the waste stream to protect and improve the performance of primary and secondary treatment processes. Portions of this project may be funded by CIP 317400 funds as appropriate.

Justification: The existing Lower Plant Barscreens were installed in 1990 and have reached the end of their useful life. As part of our Asset Management Program, a Condition Assessment of major assets is performed every year. The Lower Plant Barscreens have been determined to be in poor condition and at high risk of failure without intervention. If one or both of these assets failed, the capacity of the WWTP would be severely reduced.

Type of project: Repair and rehabilitation of facilities and utilities.

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Operating	1,350,000	202,500	0	0	0	0	1,552,500
Resources Total		**1,350,000**	**202,500**	**0**	**0**	**0**	**0**	**1,552,500**
Expenses	Design/Const Admin	270,000	34,830	0	0	0	0	304,830
	Construction	891,000	139,320	0	0	0	0	1,030,320
	Admin (14%)	189,000	28,350	0	0	0	0	217,350
Expenses Total		**1,350,000**	**202,500**	**0**	**0**	**0**	**0**	**1,552,500**

319800: WWTP Operations and Maintenance Evaluation

Description: This project will evaluate options for operation and maintenance of the City WWTP.

Justification: The City's current WWTP Operations and Maintenance contract with Veolia Water will expire on June 30, 2017. Before the contract expires, this project will evaluate the historical performance of the contract and recommend options for WWTP Operations and Maintenance beginning in FY17-18.

Type of project: Consulting studies related to city services.

Study/Analysis

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Operating	182,400	0	0	0	0	0	182,400
Resources Total		**182,400**	**0**	**0**	**0**	**0**	**0**	**182,400**
Expenses	Design/Const Admin	160,000	0	0	0	0	0	160,000
	Admin (14%)	22,400	0	0	0	0	0	22,400
Expenses Total		**182,400**	**0**	**0**	**0**	**0**	**0**	**182,400**

319900: WWTP Master Plan Update

Description: This project will evaluate and update the 2011 WWTP Master Plan Update by evaluating revisions to the City's NPDES wastewater discharge permit (i.e. new and/or more stringent water quality discharge limits) and process capacities and use. The update will identify additional WWTP capital improvements necessary for compliance with permit conditions and the impact of growth. This project serves the Cities of Gresham, Fairview and Wood Village.

Justification: This project is needed to ensure the WWTP will meet changing water quality permit conditions and growth as regulated by local and federal agencies (DEQ and EPA).

Type of project: Engineering or architectural studies related to city services.

Study/Analysis

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Operating	0	285,000	0	0	0	0	285,000
Resources Total		**0**	**285,000**	**0**	**0**	**0**	**0**	**285,000**
Expenses	Design/Const Admin	0	250,000	0	0	0	0	250,000
	Admin (14%)	0	35,000	0	0	0	0	35,000
Expenses Total		**0**	**285,000**	**0**	**0**	**0**	**0**	**285,000**

320000: Biological Biogas Treatment System

Description: This project replaces the existing iron sponge media biogas treatment system at the wastewater treatment plant with a biological biogas treatment system. The treated biogas is used to operate two cogeneration engines that provide all the power for the wastewater treatment plant. The new treatment system will significantly reduce operating costs for biogas treatment. Portions of this project may be funded by CIP 317400 funds as appropriate.

Justification: The existing biogas treatment system was installed in 2005 and has reached the end of its useful life. In addition, new biogas treatment technology has made it possible to significantly reduce operating costs associated with the system. It is anticipated that the new system will save approximately $60,000 per year in operating costs.

Type of project: Repair and rehabilitation of facilities and utilities.

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Operating	0	110,000	524,000	0	0	0	634,000
Resources Total		**0**	**110,000**	**524,000**	**0**	**0**	**0**	**634,000**
Expenses	Design/Const Admin	0	18,920	90,128	0	0	0	109,048
	Construction	0	75,680	360,512	0	0	0	436,192
	Admin (14%)	0	15,400	73,360	0	0	0	88,760
Expenses Total		**0**	**110,000**	**524,000**	**0**	**0**	**0**	**634,000**

320100: Asset Management Software

Description: This project funds the purchase and implementation of a computerized maintenance management system (CMMS) for asset management of our public works-type assets. This will be a commercial-off-the-shelf software purchase that will integrate existing and legacy City data and systems. The software will provide a single platform to allow City staff to record and monitor the condition and cost of its assets, initiate and track work orders, develop capital projects, and project future budgetary requirements.

Justification: Asset management software is essential to help ensure millions of dollars of assets are being planned, designed, installed, maintained and retired in the most cost-efficient way. Implementation of asset management software is consistent with the City's 2014 Technology Strategic Plan.

Type of project: Asset management tracking software.

City Wide Project

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Operating	0	50,000	0	0	0	0	50,000
Resources Total		**0**	**50,000**	**0**	**0**	**0**	**0**	**50,000**
Expenses	Design/Const Admin	0	43,850	0	0	0	0	43,850
	Admin (14%)	0	6,150	0	0	0	0	6,150
Expenses Total		**0**	**50,000**	**0**	**0**	**0**	**0**	**50,000**

320700: Wastewater Mainline Extension

Description: This project constructs wastewater mainlines with associated laterals on an as needed basis for in-fill situations. Currently identified possible project is at SE 282nd Avenue and SE Welch Road; for this project to go forward, the formation of a reimbursement district would be required.

Justification: This project is to meet the immediate needs of citizens with failed or failing septic systems. The properties involved are within the urban growth boundary.

Type of project: Construction of facilities and utilities.

City Wide Project

Estimated Dollars:

Funds	Description	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Resources	Operating	0	200,000	0	0	0	0	200,000
Resources Total		**0**	**200,000**	**0**	**0**	**0**	**0**	**200,000**
Expenses	Design/Const Admin	0	10,000	0	0	0	0	10,000
	Construction	0	165,400	0	0	0	0	165,400
	Admin (14%)	0	24,600	0	0	0	0	24,600
Expenses Total		**0**	**200,000**	**0**	**0**	**0**	**0**	**200,000**

Wastewater Unfunded and Future Summary

Project	Project Name	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Total
312000	WWTP UV Disinfection	0	0	0	0	0	0	3,008,661
313500	Upper Kelly Creek Trunk Upgrade	0	0	0	0	0	0	1,857,596
313600	Lower Kelly Creek Trunk Upgrade	0	0	0	0	0	0	2,020,050
314100	Johnson Creek - Springwater Trunk	0	0	0	0	0	0	992,589
314200	Johnson Creek - Heiney Trunk A	0	0	0	0	0	0	1,339,292
314300	Johnson Creek - Heiney Trunk B	0	0	0	0	0	0	106,800
314700	Upsize Johnson Creek Interceptor	0	0	0	0	0	0	203,505
315400	Upper Plant Secondary Clarifier No. 5	0	0	0	0	0	0	13,411,845
316000	Upper Plant Aeration Basin No. 5	0	0	0	0	0	0	9,831,990
316100	Anaerobic Digester No. 3	0	0	0	0	0	0	12,967,500
316500	Linneman Pump Station Parallel Force Main, Phase 2	0	0	0	0	0	0	2,894,500
319200	East Basin Trunk Upgrade Phase III	0	0	0	0	0	0	1,702,526
320200	Linneman Pump Station Capacity Upgrade	0	0	0	0	0	0	1,000,000
320300	WWTP Asset Replacement and Refurbishment (R&R) Project (Y	0	0	0	0	0	0	14,879,131
320400	1960's Pipe Rehabilitation/Maint. Program	0	0	0	0	0	0	41,073,140
320500	Collection System Trunk Assessment	0	0	0	0	0	0	2,000,000
320600	Collection System Trunk Replacement	0	0	0	0	0	0	95,393,615
Grand Total		**0**	**0**	**0**	**0**	**0**	**0**	**204,682,740**

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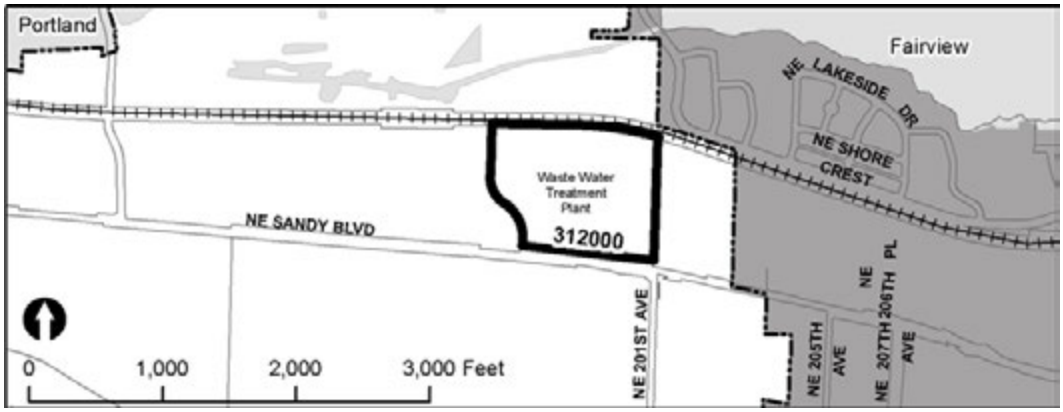
312000: WWTP UV Disinfection

Description: This project constructs additional wastewater disinfection capacity at the Wastewater Treatment Plant (WWTP). The project is located in the North Gresham Neighborhood District.

Justification: The project will expand the current WWTP disinfection process to accommodate increased wastewater flows. The 2011 Wastewater Master Plan Update identified the need for additional disinfection capacity and it proposed installation of a UV disinfection process. Timing for this project is contingent upon several factors including State and Federal environmental regulations and is anticipated to begin in 2027.

Type of Project: Construction of facilities and utilities for growth and new NPDES permit requirements.



Estimated Dollars:

Funds	Description	Total
Resources	Operating	3,008,661
Resources Total		**3,008,661**
Expenses	Design/Const Admin	527,835
	Construction	2,111,341
	Admin (14%)	369,485
Expenses Total		**3,008,661**

313500: Upper Kelly Creek Trunk Upgrade

Description: This project would increase the capacity of the system in the problem area and reduce the amount of inflow entering the system.

Justification: This project provides sewerage system capabilities for transmitting current and projected sewerage flows.

Type of Project: Construction of facilities and utilities for growth and to correct deficiencies.

Estimated Dollars:

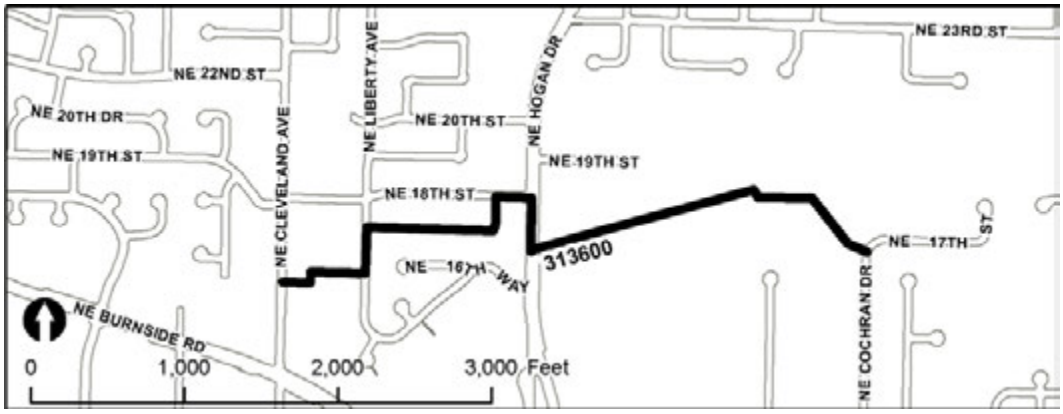
Funds	Description	Total
Resources	Operating	928,798
	SDC	928,798
Resources Total		**1,857,596**
Expenses	Design/Const Admin	244,420
	Construction	1,385,050
	Admin (14%)	228,126
Expenses Total		**1,857,596**

313600: Lower Kelly Creek Trunk Upgrade

Description: This project would increase the capacity of the system in the problem area and reduce the amount of inflow entering the system.

Justification: This project provides sewerage system capabilities for transmitting current and projected sewerage flows.

Type of Project: Construction of facilities and utilities for growth and to correct deficiencies.



Estimated Dollars:

Funds	Description	Total
Resources	Operating	1,353,433
	SDC	666,617
Resources Total		**2,020,050**
Expenses	Design/Const Admin	265,796
	Construction	1,506,178
	Admin (14%)	248,076
Expenses Total		**2,020,050**

314100: Johnson Creek - Springwater Trunk

Description: This project will upsize an existing 12" sanitary sewer line to a 24" diameter line to meet increased flow demands as identified in the Wastewater Masterplan.

Justification: This project is needed to provide adequate wastewater conveyance capacity for growth.

Type of Project: Design and construction of facilities and utilities for growth.

Estimated Dollars:

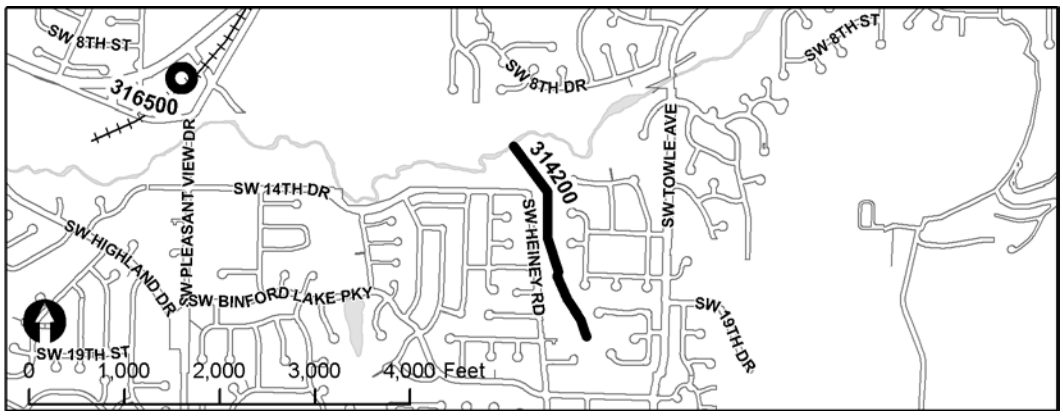
Funds	Description	Total
Resources	SDC	992,589
Resources Total		**992,589**
Expenses	Design/Const Admin	130,604
	Construction	740,088
	Admin (14%)	121,897
Expenses Total		**992,589**

314200: Johnson Creek – Heiney Trunk A

Description: This project will upsize an existing 10" sanitary sewer line to a 12" line and upsize an existing 12" sanitary sewer to a 15" diameter line to meet increased flow demands as identified in the wastewater masterplan.

Justification: This project is needed to provide adequate wastewater conveyance capacity for growth.

Type of Project: Design and construction of facilities and utilities for growth.



Estimated Dollars:

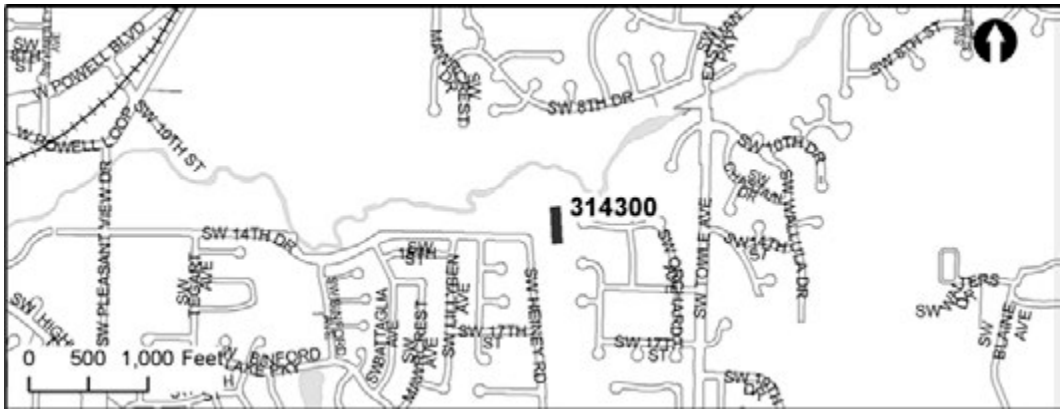
Funds	Description	Total
Resources	SDC	1,339,292
Resources Total		**1,339,292**
Expenses	Design/Const Admin	176,223
	Construction	998,595
	Admin (14%)	164,474
Expenses Total		**1,339,292**

314300: Johnson Creek – Heiney Trunk B

Description: This project will upsize an existing 10" sanitary sewer line to a 15" diameter line to meet increased flow demands as identified in the Wastewater Masterplan.

Justification: This project is needed to provide adequate wastewater conveyance capacity for growth.

Type of Project: Design and construction of facilities and utilities.



Estimated Dollars:

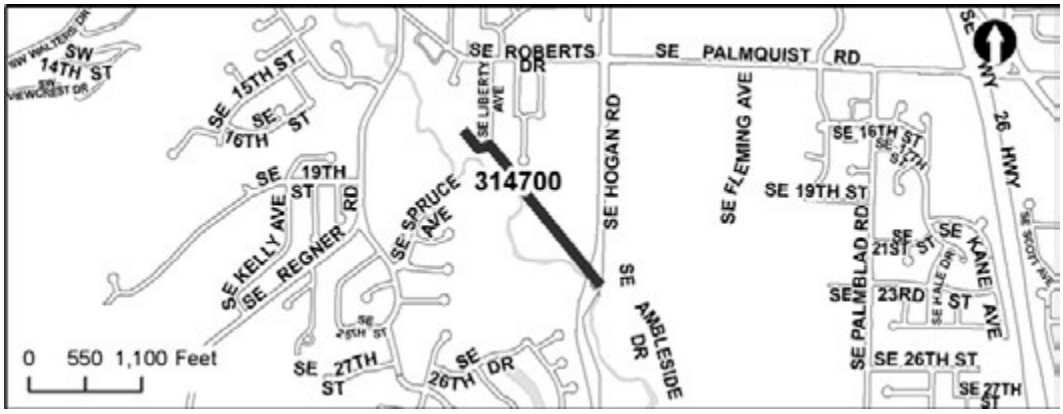
Funds	Description	Total
Resources	SDC	106,800
Resources Total		**106,800**
Expenses	Design/Const Admin	9,284
	Construction	84,400
	Admin (14%)	13,116
Expenses Total		**106,800**

314700: Upsize Johnson Creek Interceptor

Description: This project will upsize approximately 2100 feet of the existing Johnson Creek interceptor from 15" to 21" diameter pipe. The pipe segment is located between Regner Rd. and Hogan Rd. This will provide necessary wastewater conveyance capacity to serve the proposed SE Gresham Urban Growth Boundary expansion.

Justification: This project is needed to ensure adequate wastewater conveyance capacity will be available to serve the proposed SE Gresham Urban Growth Boundary expansion.

Type of Project: Design and construction of facilities and utilities for growth.



Estimated Dollars:

Funds	Description	Total
Resources	Operating	203,505
Resources Total		**203,505**
Expenses	Design/Const Admin	26,777
	Construction	151,736
	Admin (14%)	24,992
Expenses Total		**203,505**

315400: Upper Plant Secondary Clarifier No. 5

Description: This project will design & construct a new secondary clarifier No. 5 at the WWTP. As identified in the March 2011 WWTP Master Plan Update following construction, this project would provide increased WWTP capacity and redundancy as needed for projected growth and increased flows to the WWTP.

Justification: This project would provide increased WWTP capacity to provide treatment for projected growth and increased flows to the WWTP. In addition, the project is needed to provide a redundant secondary clarifier to the existing clarifier No. 4. Currently, failure of secondary No. 4 would result in not meeting NPDES permit requirements.

Type of Project: Design and construction of facilities for growth.

Estimated Dollars:

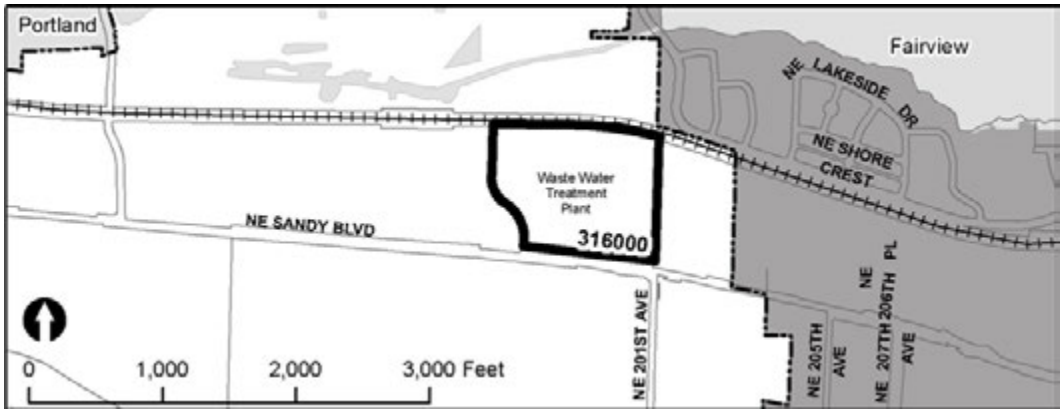
Funds	Description	Total
Resources	Debt-SDC	10,729,476
	Operating	2,682,369
Resources Total		**13,411,845**
Expenses	Design/Const Admin	312,363
	Construction	11,216,771
	Admin (14%)	1,882,711
Expenses Total		**13,411,845**

316000: Upper Plant Aeration Basin No. 5

Description: This project will construct Upper Plant Aeration Basin No. 5 as identified in the March 2011 Master Plan Update. The new basin will be similar in size to the existing basin 4. New blowers will be added in the existing upper plant blower building.

Justification: The project will be required in anticipation of future ammonia nitrogen limits in the WWTP NPDES Permit. The new limit would require an approximate 7.3 day SRT in the aeration basins at projected future flows.

Type of Project: Construction of new WWTP Processes.



Estimated Dollars:

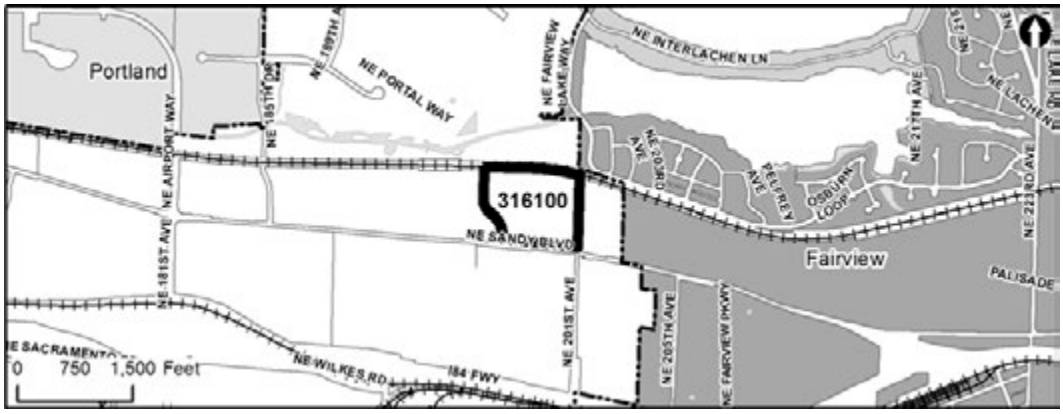
Funds	Description	Total
Resources	SDC	9,831,990
Resources Total		**9,831,990**
Expenses	Design/Const Admin	1,724,910
	Construction	6,899,642
	Admin (14%)	1,207,438
Expenses Total		**9,831,990**

316100: Anaerobic Digester No. 3

Description: This project constructs a new anaerobic digester and new belt filter press as identified in the March 2011 WWTP Master Plan Update currently estimated to begin in 2030.

Justification: The project is needed to ensure that a 20-day SRT at average daily flow is achieved. In addition, the increased digester treatment capacity will need to be complimented with one additional belt press for solids dewatering.

Type of Project: Construction of new WWTP Processes.



Estimated Dollars:

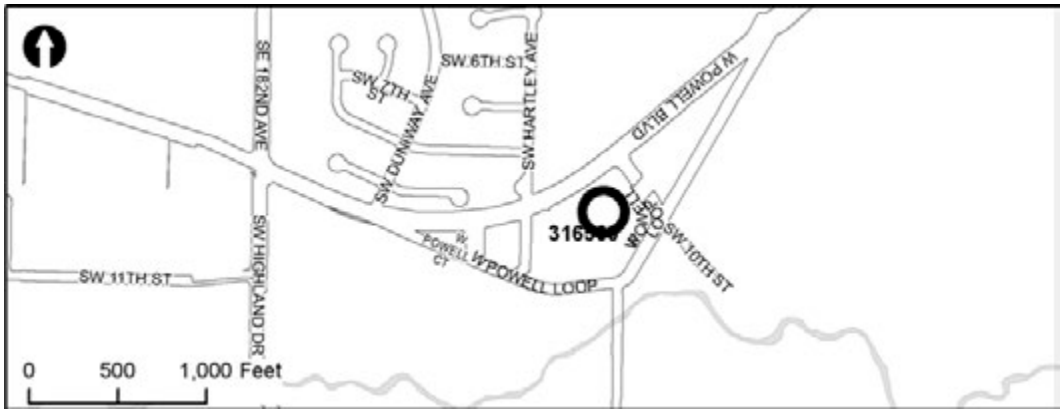
Funds	Description	Total
Resources	SDC	12,967,500
Resources Total		**12,967,500**
Expenses	Design/Const Admin	2,275,000
	Construction	9,100,000
	Admin (14%)	1,592,500
Expenses Total		**12,967,500**

316500: Linneman Pump Station Parallel Force Main, Phase 2

Description: This project constructs additional capacity at the Linneman Pump Station as identified in the 2005 Linneman Pump Station Master Plan. The project consists of a new parallel force main to the pump station.

Justification: This project will provide the needed capacity for additional growth in the Johnson Creek Basin, including the Pleasant Valley and Springwater areas.

Type of Project: Construction of new facilities.



Estimated Dollars:

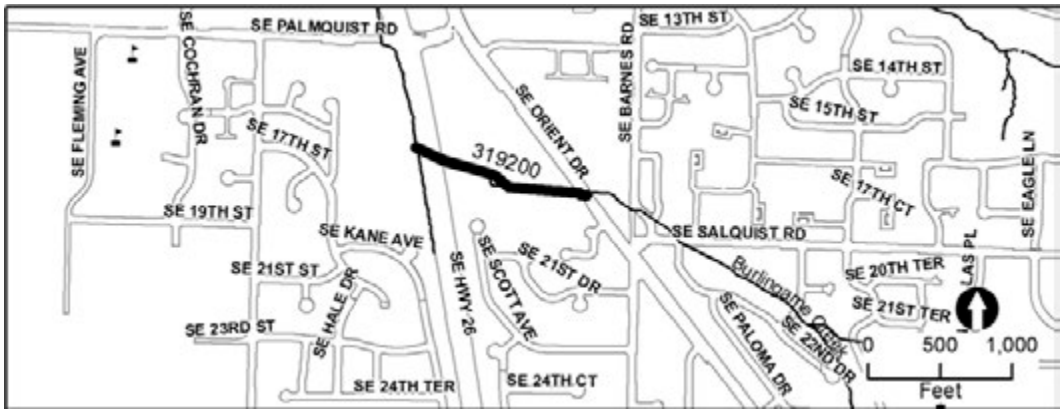
Funds	Description	Total
Resources	SDC	2,894,500
Resources Total		**2,894,500**
Expenses	Design/Const Admin	497,854
	Construction	1,991,416
	Admin (14%)	405,230
Expenses Total		**2,894,500**

319200: East Basin Trunk Upgrade Phase 3

Description: This project will correct surcharged areas of sewer line upstream of Burnside just north of SE 3rd Street. Additional capacity should be provided by upsizing of sewer line from 10" to 12“, 12” to 15”“, 15” to 18”. The East Basin Trunk also serves the Springwater area and is currently flowing at capacity. Using pipe bursting methods to increase the pipes will alleviate current flow as well as prepare the system for anticipated development in the Springwater area. The project has been broken up into three phases and this is the last phase.

Justification: This project provides sewerage system capabilities for transmitting current and projected sewerage flows.

Type of Project: Construction of facilities and utilities for growth and to correct deficiencies.



Estimated Dollars:

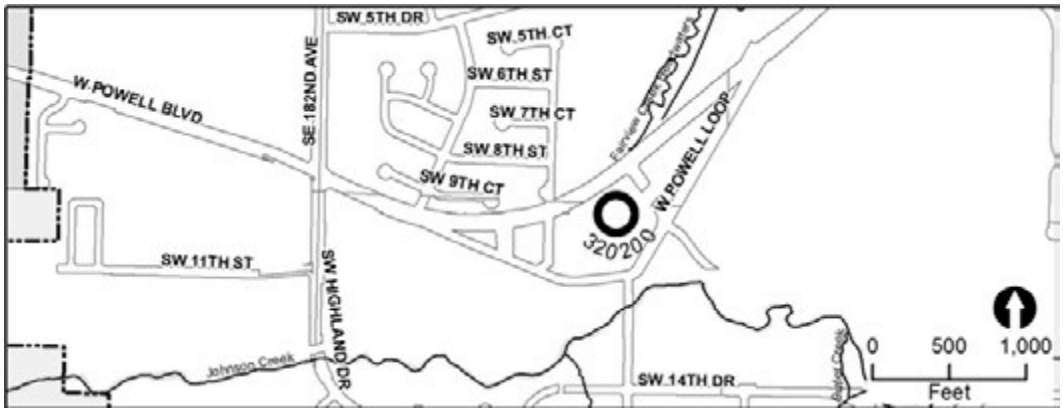
Funds	Description	Total
Resources	Debt-SDC	476,773
	Operating	1,225,753
Resources Total		**1,702,526**
Expenses	Design/Const Admin	174,147
	Construction	1,319,297
	Admin (14%)	209,082
Expenses Total		**1,702,526**

320200: Linneman Pump Station Capacity Upgrade

Description: This project constructs additional capacity at the Linneman Pump Station as identified in the 2005 Linneman Pump Station Master Plan. The project consists of adding additional pumps at the pump station.

Justification: This project will provide the needed capacity for additional growth in the Johnson Creek Basin, including the Pleasant Valley and Springwater areas.

Type of Project: Construction of new facilities.



Estimated Dollars:

Funds	Description	Total
Resources	SDC	1,000,000
Resources Total		**1,000,000**
Expenses	Design/Const Admin	172,000
	Construction	688,000
	Admin (14%)	140,000
Expenses Total		**1,000,000**

320300: WWTP Asset Replacement and Refurbishment (R&R) Project (Yrs 6-20)

Description: This is an ongoing project that designs and constructs the R&R of assets at the WWTP and WW pumping stations that are scheduled per the asset management plan. Wastewater's newly completed Asset Management Program has developed a comprehensive asset inventory, asset condition and long range asset replacement planning methodology. This methodology will ensure that the City is appropriately planning, evaluating and replacing Assets to ensure the lowest life cycle cost at an appropriate level of service with adequate long range funding for the projects. This project is funded at $800,000 in year 6 escalated 3% per year thru year 20.

Justification: This project provides the needed funding for anticipated asset replacement and refurbishment as identified in the long range WWTP Asset Replacement Plan.

Type of Project: Repair and rehabilitation of facilities and utilities.

Estimated Dollars:

Funds	Description	Total
Resources	Repair/Replacement	14,879,131
Resources Total		**14,879,131**
Expenses	Design/Const Admin	2,559,210
	Construction	10,236,843
	Admin (14%)	2,083,078
Expenses Total		**14,879,131**

320400: 1960's Pipe Rehabilitation/Maint. Program

Description: This ongoing project completes systematic pipeline rehabilitation and maintenance projects as identified from the Sanitary Sewer Evaluation Study project, or subsequently as determined from ongoing collection system condition assessment. It addresses operational ongoing and anticipated operational concerns, primarily with the oldest sanitary sewer lines (circa 1960s) around downtown Gresham, reducing long term operational and maintenance costs. The majority of this work will likely implement a combination of open trench, pipe bursting, and "cure-in-place" pipe lining methods. (CIP 317700 is in response to already deficient and localized sections of conveyance system).

Justification: These assets have all passed their industry standard lifespan. The assets also have developed visually confirmed physical failures. The failure of these assets can lead to loss of service, backups and possibly spills.

Type of Project: Repair and rehabilitation of pipeline facilities.

City Wide Project

Estimated Dollars:

Funds	Description	Total
Resources	Operating	41,073,140
Resources Total		**41,073,140**
Expenses	Design/Const Admin	5,404,361
	Construction	30,624,709
	Admin (14%)	5,044,070
Expenses Total		**41,073,140**

320500: Collection System Trunk Assessment

Description: This program will provide assessment of the large trunk lines of the sanitary sewer collection system. These lines (generally larger than 30 inch diameters) cannot be inspected with the City's standard CCTV inspection program. The program will provide laser and sonar as well as CCTV inspection to provide a thorough condition assessment of the City's large trunk lines.

Justification: This program will provide the City the condition of the uninspected large trunk lines. The data from this inspection will be used by asset management software to prioritize the replacement/repair of the sanitary trunk sewer system.

Type of Project: Construction of facilities and utilities for growth and to correct deficiencies.

Study/Analysis

Estimated Dollars:

Funds	Description	Total
Resources	Operating	2,000,000
Resources Total		**2,000,000**
Expenses	Design/Const Admin	1,754,386
	Admin (14%)	245,614
Expenses Total		**2,000,000**

320600: Collection System Trunk Replacement

Description: This program will follow the Collection System Trunk Assessment Program. The level of repair/replacement will be determined by the findings of the assessment. Line cleaning may also be covered by this program.

Justification: This project provides sewerage system capabilities for transmitting current and projected sewerage flows.

Type of Project: Construction of facilities and utilities for growth and to correct deficiencies.

City Wide Project

Estimated Dollars:

Funds	Description	Total
Resources	Operating	95,393,615
Resources Total		**95,393,615**
Expenses	Design/Const Admin	12,551,792
	Construction	71,126,818
	Admin (14%)	11,715,005
Expenses Total		**95,393,615**