

WASTEWATER TREATMENT FACILITIES



Wastewater Treatment Facilities

The Wastewater Treatment System (System) collects, conveys and processes wastewater from an estimated 3 million people, generated in a service area, which includes the City of Houston, several municipalities and unincorporated communities in the Houston metropolitan area. The system consists of over 6,100 miles of sanitary sewer lines, 324 miles of wastewater pressure force mains, over 380 sanitary lift stations and 40 wastewater treatment plants. The average daily wastewater flow through the system is estimated at 225 million gallons per day (MGD). As reflected by state permits, the effective treatment capacity of the system is 565 MGD.

The program of improvements provides for the continued upgrade of the System and compliance with the regulations issued by the Texas Commission on Environmental Quality (TCEQ) and the U.S. Environmental Protection Agency (EPA).

The Capital Improvement Plan (CIP) provides an estimate of delivery by fiscal year for the next five years. The delivery schedule is affected by unanticipated external forces outside of the control of the City, such as, regulatory requirements, private utilities, property acquisition, other agencies, outside funding partners, etc. However, the City remains committed to provide projects on schedule and within budget. This five-year CIP includes approximately \$964 million of improvements. It is financed by a combination of pay-as-you-go and revenue bonds.

Highlights of the Fiscal Year 2018 - 2022 CIP include:

A robust asset management program to maintain and extend service life of facilities including:

- Rehabilitate neighborhood sewers to improve service, remove excessive infiltration, prevent sanitary sewer overflows and eliminate sewage backups
- Renew and rehabilitate the city wide force main system and various lift stations

- Upgrade, rehabilitate or renew various wastewater treatment plants
- Evaluate and rehabilitate large diameter sewers
- Long Range Planning to evaluate consolidation of lift stations and/or wastewater treatment plants.

Project Allocation	Fiscal Year Planned Appropriations					2018-2022
	2018	2019	2020	2021	2022	
Planning						
Acquisition-Land						
Design	13,910	14,399	13,001	22,483	8,045	71,838
Construction	139,036	176,731	171,999	179,611	197,405	864,782
Equipment Acquisition						
Salary Recovery						
Other	32,054	-6,130		2,160	-450	27,634
Total Allocation	184,999	185,001	185,000	204,255	205,000	964,255
Source of Funds						
8500 - PWE-W&S Syst Consolidated Constr Fd	184,999	185,001	185,000	204,255	205,000	964,255
Total Funds	184,999	185,001	185,000	204,255	205,000	964,255

**WASTEWATER TREATMENT FACILITIES - Summary of Funds
2018-2022 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project	Fiscal Year Planned Appropriations					2018-2022
		2018	2019	2020	2021	2022	
R-000019	Emergency Needs for Wastewater Utility						
	8500 - PWE-W&S Syst Consolidated Constr Fd	1,018	1,038	1,059	1,080	1,102	5,297
	Project Total	1,018	1,038	1,059	1,080	1,102	5,297
R-000020	Miscellaneous Needs for Public Utility						
	8500 - PWE-W&S Syst Consolidated Constr Fd	122	1,214	657	130	132	2,255
	Project Total	122	1,214	657	130	132	2,255
R-000035	Wastewater Force Main Renewal						
	8500 - PWE-W&S Syst Consolidated Constr Fd	7,451	2,535	11,243	17,245	6,467	44,941
	Project Total	7,451	2,535	11,243	17,245	6,467	44,941
R-000265	Wastewater Treatment Plant Improvements						
	8500 - PWE-W&S Syst Consolidated Constr Fd	6,337	35,517	36,551	76,636	39,307	194,348
	Project Total	6,337	35,517	36,551	76,636	39,307	194,348
R-000266	Neighborhood Sewer Rehab Program						
	8500 - PWE-W&S Syst Consolidated Constr Fd	42,502	46,710	52,950	37,800	27,550	207,512
	Project Total	42,502	46,710	52,950	37,800	27,550	207,512
R-000267	Lift Station Renewal & Replacement						
	8500 - PWE-W&S Syst Consolidated Constr Fd	19,233	22,961	35,899	29,392	51,596	159,081
	Project Total	19,233	22,961	35,899	29,392	51,596	159,081
R-000298	Almeda Sims Wastewater Treatment Plant						
	8500 - PWE-W&S Syst Consolidated Constr Fd	533		12,708			13,241
	Project Total	533		12,708			13,241
R-000500	WW Improvements under M/N						
	8500 - PWE-W&S Syst Consolidated Constr Fd	19,153	9,756	4,589	1,483		34,980
	Project Total	19,153	9,756	4,589	1,483		34,980

**WASTEWATER TREATMENT FACILITIES - Summary of Funds
2018-2022 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project						2018-2022	
		2018	2019	2020	2021	2022		
R-000509	69th Street Wastewater Treatment Plant							
	8500 - PWE-W&S Syst Consolidated Constr Fd	18,579	30,102	1,059		3,306	53,046	
	Project Total	18,579	30,102	1,059		3,306	53,046	
R-000521	Sewer Line Replacement by Other Govt							
	8500 - PWE-W&S Syst Consolidated Constr Fd	4,937					4,937	
	Project Total	4,937					4,937	
R-000536	Wastewater Treatment Plant Consolidation							
	8500 - PWE-W&S Syst Consolidated Constr Fd	23,664	22,012	3,283	10,584	47,007	106,550	
	Project Total	23,664	22,012	3,283	10,584	47,007	106,550	
R-000800	Collection System-Sponsor Participation							
	8500 - PWE-W&S Syst Consolidated Constr Fd	8,857	1,038	1,059	2,160	2,204	15,318	
	Project Total	8,857	1,038	1,059	2,160	2,204	15,318	
R-000801	Sewer Service to Unserved Areas							
	8500 - PWE-W&S Syst Consolidated Constr Fd	11,690					11,690	
	Project Total	11,690					11,690	
R-002003	Northside Sewer Relief Tunnel Rehab							
	8500 - PWE-W&S Syst Consolidated Constr Fd					3,637	3,637	
	Project Total					3,637	3,637	
R-002011	Neighborhood Sewer Systems Improvements							
	8500 - PWE-W&S Syst Consolidated Constr Fd	3,109	1,277	7,528	14,407	12,673	38,994	
	Project Total	3,109	1,277	7,528	14,407	12,673	38,994	
R-002013	Large Diameter Sewer (LDS) Rehab							
	8500 - PWE-W&S Syst Consolidated Constr Fd	7,126	12,456	12,708	7,560	7,714	47,564	
	Project Total	7,126	12,456	12,708	7,560	7,714	47,564	

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2018-2022 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project						2018-2022	
		2018	2019	2020	2021	2022		
R-002015	Wastewater Substitute Service Program							
	8500 - PWE-W&S Syst Consolidated Constr Fd	3,563	4,515	3,707	4,698	3,857	20,340	
	Project Total	3,563	4,515	3,707	4,698	3,857	20,340	
R-900001	Upgrades to 611 Walker Mech, Elect							
	8500 - PWE-W&S Syst Consolidated Constr Fd	1,018	1,038	1,059	1,080	1,102	5,297	
	Project Total	1,018	1,038	1,059	1,080	1,102	5,297	
R-950000	New PWE NE Quadrant Bldg							
	8500 - PWE-W&S Syst Consolidated Constr Fd	7,126					7,126	
	Project Total	7,126					7,126	
R-NA0000	Wastewater Contingencies							
	8500 - PWE-W&S Syst Consolidated Constr Fd	-1,018	-7,168	-1,059		-2,654	-11,899	
	Project Total	-1,018	-7,168	-1,059		-2,654	-11,899	
	Total Appropriations:	184,999	185,001	185,000	204,255	205,000	964,255	