

WASTEWATER TREATMENT FACILITIES



Wastewater Treatment Facilities

The Wastewater Treatment 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 approximately 6,500 miles of sanitary sewer lines, over 441,000 services connections, over 380 sanitary lift stations, 40 wastewater treatment plants, and three major sludge treatment facilities. The average daily wastewater flow through the system is estimated at 222 million gallons per day (MGD) (284 MGD 12-month maximum). As reflected by state permits, the effective treatment capacity of the system is 565 MGD. The permitted capacity of plants is a part of the wastewater system treatment capacity that ranges from 0.15 MGD for the smallest plant to 200 MGD for the 69th Street Wastewater Plant.

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 City of Houston rehabilitates approximately 115 miles of pipe each year, or about 2% of the System.

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, private utilities, property acquisition, other agencies, outside funding partners, etc. However, the City makes every attempt to deliver a good product in a timely manner. This five-year CIP includes \$925 million of improvements. It is financed by a combination of pay-as-you-go and revenue bonds.

Highlights of the Fiscal Year 2017 - 2021 CIP include:

- Compliance with TCEQ citywide Agreed Order will continue through Fiscal Year 2017 construction projects

- 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

Project Allocation	Fiscal Year Planned Appropriations					2017-2021
	2017	2018	2019	2020	2021	
Planning						
Acquisition-Land						
Design	11,341	13,885	9,622	10,127	18,968	63,943
Construction	158,643	155,432	170,959	173,191	158,139	816,364
Equipment Acquisition		310				310
Salary Recovery						
Other	15,016	15,373	4,419	1,682	7,893	44,383
Total Allocation	185,000	185,000	185,000	185,000	185,000	925,000
Source of Funds						
4042 - Street & Trfc Control & Strm Drain DDSRF						
8500 - PWE-W&S Syst Consolidated Constr Fd	133,000	130,000	123,000	133,000	185,000	704,000
Proposed TWDB (8500)	52,000	55,000	62,000	52,000		221,000
Total Funds	185,000	185,000	185,000	185,000	185,000	925,000

**WASTEWATER TREATMENT FACILITIES - Summary of Funds
2017-2021 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project	Fiscal Year Planned Appropriations					2017-2021
		2017	2018	2019	2020	2021	
R-000019	Emergency Needs for Wastewater Utility						
	8500 - PWE-W&S Syst Consolidated Constr Fd	1,125	1,000	1,000	1,000	1,000	5,125
	Project Total	1,125	1,000	1,000	1,000	1,000	5,125
R-000020	Miscellaneous Needs for Public Utility						
	8500 - PWE-W&S Syst Consolidated Constr Fd	2,430	8,430	1,170	620		12,650
	Project Total	2,430	8,430	1,170	620		12,650
R-000035	Wastewater Force Main Renewal						
	8500 - PWE-W&S Syst Consolidated Constr Fd	9,756	1,587	7,916	8,417	21,718	49,394
	Project Total	9,756	1,587	7,916	8,417	21,718	49,394
R-000265	Wastewater Treatment Plant Improvements						
	8500 - PWE-W&S Syst Consolidated Constr Fd	29,470	48,192	26,727	60,977	38,333	203,699
	Project Total	29,470	48,192	26,727	60,977	38,333	203,699
R-000266	Neighborhood Sewer Rehab Program						
	8500 - PWE-W&S Syst Consolidated Constr Fd					41,000	41,000
	Proposed TWDB (8500)	45,000	55,000	55,000	45,000		200,000
	Project Total	45,000	55,000	55,000	45,000	41,000	241,000
R-000267	Lift Station Renewal & Replacement						
	8500 - PWE-W&S Syst Consolidated Constr Fd	13,355	12,188	11,720	31,544	15,600	84,407
	Project Total	13,355	12,188	11,720	31,544	15,600	84,407
R-000298	Alameda Sims Wastewater Treatment Plant						
	8500 - PWE-W&S Syst Consolidated Constr Fd	1,800	1,000	4,800	5,000	9,000	21,600
	Project Total	1,800	1,000	4,800	5,000	9,000	21,600
R-000500	WW Improvements under M/N						
	8500 - PWE-W&S Syst Consolidated Constr Fd	19,078	13,650	5,244	3,029	9,526	50,527
	Project Total	19,078	13,650	5,244	3,029	9,526	50,527

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2017-2021 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project						2017-2021	
		2017	2018	2019	2020	2021		
R-000509	69th Street Wastewater Treatment Plant							
	8500 - PWE-W&S Syst Consolidated Constr Fd	16,000	15,300	31,418			62,718	
	Project Total	16,000	15,300	31,418			62,718	
R-000521	Sewer Line Replacement by Other Govt							
	8500 - PWE-W&S Syst Consolidated Constr Fd		900			9,000	9,900	
	Project Total		900			9,000	9,900	
R-000536	Wastewater Treatment Plant Consolidation							
	8500 - PWE-W&S Syst Consolidated Constr Fd	30,120	16,770	16,600	2,250	29,800	95,540	
	Project Total	30,120	16,770	16,600	2,250	29,800	95,540	
R-000800	Collection System-Sponsor Participation							
	8500 - PWE-W&S Syst Consolidated Constr Fd		5,000				5,000	
	Project Total		5,000				5,000	
R-000801	Sewer Service to Unserved Areas							
	8500 - PWE-W&S Syst Consolidated Constr Fd	7,428					7,428	
	Project Total	7,428					7,428	
R-002011	Neighborhood Sewer Systems Improvements							
	4042 - Street & Trfc Control & Strm Drain DDSRF	1,500					1,500	
	8500 - PWE-W&S Syst Consolidated Constr Fd	1,500	4,910	13,730	17,160	8,156	45,456	
	Project Total	3,000	4,910	13,730	17,160	8,156	46,956	
R-002013	Large Diameter Sewer (LDS) Rehab							
	Proposed TWDB (8500)	7,000		7,000	7,000		21,000	
	Project Total	7,000		7,000	7,000		21,000	
R-002015	Wastewater Substitute Service Program							
	8500 - PWE-W&S Syst Consolidated Constr Fd	3,500	4,350	3,500	4,350	3,500	19,200	
	Project Total	3,500	4,350	3,500	4,350	3,500	19,200	

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2017-2021 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project						2017-2021	
		2017	2018	2019	2020	2021		
R-NA0000	Wastewater Contingencies							
	4042 - Street & Trfc Control & Strm Drain DDSRF	-1,500					-1,500	
	8500 - PWE-W&S Syst Consolidated Constr Fd	-2,562	-3,277	-825	-1,347	-1,633	-9,644	
	Project Total	-4,062	-3,277	-825	-1,347	-1,633	-11,144	
	Total Appropriations:	185,000	185,000	185,000	185,000	185,000	925,000	