

WASTEWATER TREATMENT FACILITIES



Wastewater Treatment System

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 approximately 6,200 miles of sanitary sewer lines, including over 300 miles of wastewater pressure force mains, over 380 sanitary lift stations and 39 wastewater treatment plants. The average daily wastewater flow through the system is estimated at 250 million gallons per day (MGD). As reflected by state permits, the effective treatment capacity of the system is 564 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). A number of the projects included in this chapter implement commitments under the Consent Decree between the City of Houston, EPA, and TCEQ, as approved by the United States District Court on March 31, 2021.

The Capital Improvement Plan (CIP) provides an estimate of delivery by fiscal year for the next five years. The FY 2022-2026 CIP includes approximately \$1.46 billion of Wastewater Treatment System improvements financed by a combination of pay-as-you-go and revenue bonds.

Highlights of the FY 2022-2026 CIP:

- 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 citywide 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					2022-2026
	2022	2023	2024	2025	2026	
Planning						
Acquisition-Land						
Design	11,450	5,568	6,650	7,150	6,650	37,468
Construction	303,157	458,834	227,435	209,984	172,308	1,371,719
Equipment Acquisition		21,000				21,000
Salary Recovery						
Other	11,021	8,808	3,400	3,400	3,400	30,029
Total Allocation	325,628	494,210	237,485	220,534	182,358	1,460,216
Source of Funds						
8500 - HPW-W&S Syst Consolidated Constr Fd	325,628	494,210	237,485	220,534	182,358	1,460,216
Total Funds	325,628	494,210	237,485	220,534	182,358	1,460,216

Some projects in this section are related to the impact of Hurricane Harvey DR4332 and it is the City's intent to seek reimbursement from the Federal Emergency Management Agency (FEMA) and any other eligible sources for such expenditures, with the FEMA share being 90% of eligible costs.

WASTEWATER TREATMENT FACILITIES - Summary of Funds
2022-2026 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project		Fiscal Year Planned Appropriations					2022-2026
			2022	2023	2024	2025	2026	
R-000019	Emergency Needs for Wastewater Utility							
	8500 - HPW-W&S Syst Consolidated Constr Fd		1,082	1,104	1,000	1,000	1,000	5,186
	Project Total		1,082	1,104	1,000	1,000	1,000	5,186
R-000020	Miscellaneous Needs for Public Utility							
	8500 - HPW-W&S Syst Consolidated Constr Fd		141	144	250	250	250	1,034
	Project Total		141	144	250	250	250	1,034
R-000035	Wastewater Force Main Renewal							
	8500 - HPW-W&S Syst Consolidated Constr Fd		22,059	11,000	11,000	11,000	11,000	55,059
	Project Total		22,059	11,000	11,000	11,000	11,000	55,059
R-000265	Wastewater Treatment Plant Improvements							
	8500 - HPW-W&S Syst Consolidated Constr Fd		41,505	93,873	11,000	26,200	11,000	183,578
	Project Total		41,505	93,873	11,000	26,200	11,000	183,578
R-000266	Neighborhood Sewer Rehab Program							
	8500 - HPW-W&S Syst Consolidated Constr Fd		48,690	49,680	50,000	50,000	50,000	248,370
	Project Total		48,690	49,680	50,000	50,000	50,000	248,370
R-000267	Lift Station Renewal & Replacement							
	8500 - HPW-W&S Syst Consolidated Constr Fd		103,981	44,903	37,000	63,000	50,000	298,884
	Project Total		103,981	44,903	37,000	63,000	50,000	298,884
R-000298	Almeda Sims Wastewater Treatment Plant							
	8500 - HPW-W&S Syst Consolidated Constr Fd		25,834	1,325				27,159
	Project Total		25,834	1,325				27,159
R-000500	WW Improvements under M/N							
	8500 - HPW-W&S Syst Consolidated Constr Fd		6,056	30,787	25,285	12,184	2,708	77,020
	Project Total		6,056	30,787	25,285	12,184	2,708	77,020

WASTEWATER TREATMENT FACILITIES - Summary of Funds
2022-2026 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project							2022-2026
			2022	2023	2024	2025	2026	
R-000509	69th Street Wastewater Treatment Plant							
	8500 - HPW-W&S Syst Consolidated Constr Fd		43,740				43,740	
	Project Total		43,740				43,740	
R-000521	Sewer Line Replacement by Other Govt							
	8500 - HPW-W&S Syst Consolidated Constr Fd		2,801	6,600	1,400	1,400	1,400	13,601
	Project Total		2,801	6,600	1,400	1,400	1,400	13,601
R-000536	Wastewater Treatment Plant Consolidation							
	8500 - HPW-W&S Syst Consolidated Constr Fd		76,065	130,145	72,550	27,500	27,000	333,259
	Project Total		76,065	130,145	72,550	27,500	27,000	333,259
R-000800	Collection System-Sponsor Participation							
	8500 - HPW-W&S Syst Consolidated Constr Fd		2,164	2,208	2,000	2,000	2,000	10,372
	Project Total		2,164	2,208	2,000	2,000	2,000	10,372
R-002011	Neighborhood Sewer Systems Improvements							
	8500 - HPW-W&S Syst Consolidated Constr Fd		529	53,259	11,500	11,500	11,500	88,288
	Project Total		529	53,259	11,500	11,500	11,500	88,288
R-002013	Large Diameter Sewer (LDS) Rehab							
	8500 - HPW-W&S Syst Consolidated Constr Fd		7,574	7,500	7,500	7,500	7,500	37,574
	Project Total		7,574	7,500	7,500	7,500	7,500	37,574
R-002015	Wastewater Substitute Service Program							
	8500 - HPW-W&S Syst Consolidated Constr Fd		4,707	5,884	6,000	6,000	6,000	28,591
	Project Total		4,707	5,884	6,000	6,000	6,000	28,591
R-900001	Upgrades to CUS-Owned Support Facilities							
	8500 - HPW-W&S Syst Consolidated Constr Fd		4,500	1,000	1,000	1,000	1,000	8,500
	Project Total		4,500	1,000	1,000	1,000	1,000	8,500
	Total Appropriations:		325,628	494,210	237,485	220,534	182,358	1,460,216



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