

The seal of the City of Houston, Texas, is a circular emblem. It features a central illustration of a steam locomotive with smoke rising from its chimneys, positioned on a set of tracks. Above the locomotive is a five-pointed star. Below the locomotive is a large anchor. The entire central scene is enclosed within a circular border containing the words "CITY OF HOUSTON" at the top and "TEXAS" at the bottom, separated by small decorative elements.

# **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 FY2023-2027 CIP includes approximately \$2.7 billion of Wastewater Treatment System improvements financed by a combination of pay-as-you-go and revenue bonds.

## Highlights of the Fiscal Year 2023-2027 CIP:

- A robust asset management program to maintain and extend service life of facilities and satisfy Consent Decree commitments 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
- Advance the consolidation of lift stations and/or wastewater treatment plants.



Project Allocation	Fiscal Year Planned Appropriations					2023-2027
	2023	2024	2025	2026	2027	
Planning						
Acquisition-Land						
Design	28,495	86,379	38,475	37,150	37,150	227,649
Construction	384,805	555,675	413,573	556,758	528,050	2,438,861
Equipment Acquisition	31,000					31,000
Salary Recovery						
Other	9,440	3,400	3,400	3,400	3,400	23,040
<b>Total Allocation</b>	<b>453,740</b>	<b>645,454</b>	<b>455,448</b>	<b>597,308</b>	<b>568,600</b>	<b>2,720,550</b>
<b>Source of Funds</b>						
8500 - HPW-W&S Syst Consolidated Constr Fd	453,740	645,454	455,448	597,308	568,600	2,720,550
<b>Total Funds</b>	<b>453,740</b>	<b>645,454</b>	<b>455,448</b>	<b>597,308</b>	<b>568,600</b>	<b>2,720,550</b>

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**  
**2023-2027 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project		Fiscal Year Planned Appropriations					2023-2027	
			2023	2024	2025	2026	2027		
<b>R-000019</b>	<b>Emergency Needs for Wastewater Utility</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		1,104	1,000	1,000	1,000	1,000	5,104	
	<b>Project Total</b>		1,104	1,000	1,000	1,000	1,000	5,104	
<b>R-000020</b>	<b>Miscellaneous Needs for Public Utility</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		3,144	2,200	2,200	2,200	2,200	11,944	
	<b>Project Total</b>		3,144	2,200	2,200	2,200	2,200	11,944	
<b>R-000035</b>	<b>Wastewater Force Main Renewal</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		3,456	25,200	11,500	11,500	11,500	63,156	
	<b>Project Total</b>		3,456	25,200	11,500	11,500	11,500	63,156	
<b>R-000265</b>	<b>Wastewater Treatment Plant Improvements</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		119,091	147,326	90,625	72,000	72,000	501,043	
	<b>Project Total</b>		119,091	147,326	90,625	72,000	72,000	501,043	
<b>R-000266</b>	<b>Neighborhood Sewer Rehab Program</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		96,000	90,000	90,000	90,000	90,000	456,000	
	<b>Project Total</b>		96,000	90,000	90,000	90,000	90,000	456,000	
<b>R-000267</b>	<b>Lift Station Renewal &amp; Replacement</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		86,327	38,200	51,000	77,000	51,000	303,527	
	<b>Project Total</b>		86,327	38,200	51,000	77,000	51,000	303,527	
<b>R-000298</b>	<b>Alameda Sims Wastewater Treatment Plant</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd			1,500	1,325			2,825	
	<b>Project Total</b>			1,500	1,325			2,825	
<b>R-000500</b>	<b>WW Improvements under M/N</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		23,618	30,591	16,791	2,708		73,708	
	<b>Project Total</b>		23,618	30,591	16,791	2,708		73,708	

**WASTEWATER TREATMENT FACILITIES - Summary of Funds**  
**2023-2027 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project							2023-2027	
			2023	2024	2025	2026	2027		
<b>R-000509</b>	<b>69th Street Wastewater Treatment Plant</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		41,000	11,040	11,700			63,740	
	<b>Project Total</b>		41,000	11,040	11,700			63,740	
<b>R-000521</b>	<b>Sewer Line Replacement by Other Govt</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		7,232	1,400	1,400	1,400	1,400	12,832	
	<b>Project Total</b>		7,232	1,400	1,400	1,400	1,400	12,832	
<b>R-000536</b>	<b>Wastewater Treatment Plant Consolidation</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		44,683	176,516	69,978	252,500	252,500	796,177	
	<b>Project Total</b>		44,683	176,516	69,978	252,500	252,500	796,177	
<b>R-000800</b>	<b>Collection System-Sponsor Participation</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		2,208	2,000	2,000	2,000	2,000	10,208	
	<b>Project Total</b>		2,208	2,000	2,000	2,000	2,000	10,208	
<b>R-002011</b>	<b>Neighborhood Sewer Systems Improvements</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		3,000	101,481	88,929	68,000	68,000	329,410	
	<b>Project Total</b>		3,000	101,481	88,929	68,000	68,000	329,410	
<b>R-002013</b>	<b>Large Diameter Sewer (LDS) Rehab</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		10,500	10,000	10,000	10,000	10,000	50,500	
	<b>Project Total</b>		10,500	10,000	10,000	10,000	10,000	50,500	
<b>R-002015</b>	<b>Wastewater Substitute Service Program</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		5,884	6,000	6,000	6,000	6,000	29,884	
	<b>Project Total</b>		5,884	6,000	6,000	6,000	6,000	29,884	
<b>R-900001</b>	<b>Upgrades to CUS-Owned Support Facilities</b>								
	8500 - HPW-W&S Syst Consolidated Constr Fd		6,493	1,000	1,000	1,000	1,000	10,493	
	<b>Project Total</b>		6,493	1,000	1,000	1,000	1,000	10,493	
<b>Total Appropriations:</b>			453,740	645,454	455,448	597,308	568,600	2,720,550	



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