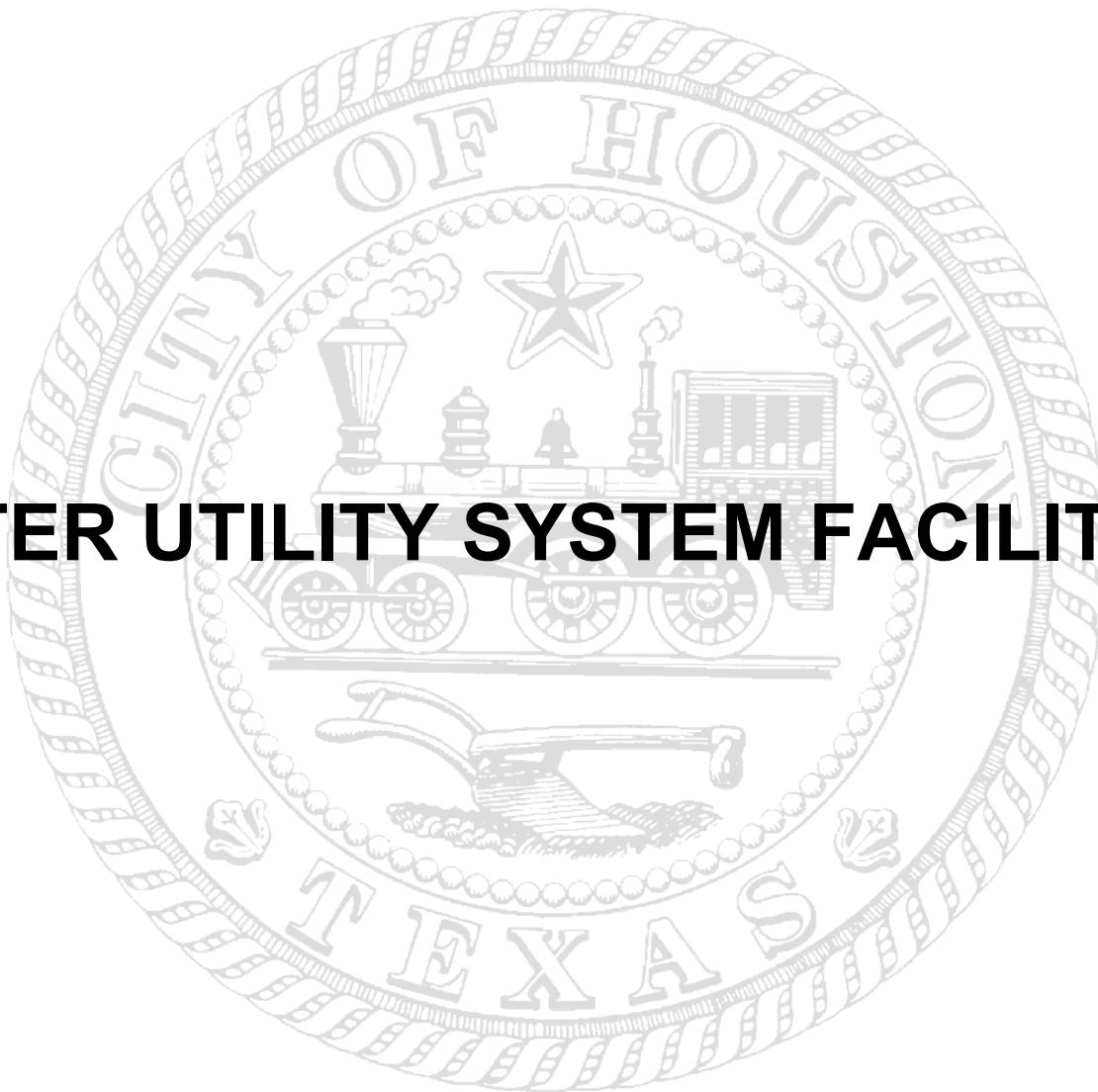


WATER UTILITY SYSTEM FACILITIES



Water Utility System

The Water Utility System delivers treated surface and ground water to customers through a series of storage tanks, pump stations, transmission and distribution mains. This potable water is sold to domestic, commercial, industrial, governmental and other customers in the Houston metropolitan area. In addition, untreated surface water is delivered for sale to governmental, industrial and agricultural customers. The System provides water to the residents of Houston as well as municipalities, municipal utility districts, and water authorities outside the City limits. The service population is approximately 4 million.

The System relies on 86% Surface Water and 14% Groundwater sources. Surface water is sourced from Lake Conroe and Lake Houston in the San Jacinto River System and Lake Livingston in the Trinity River System. In aggregate, these supplies are sufficient to meet the City's expected water demands beyond the year 2060. However, additional water supply strategies have been developed to meet the long-term needs. In addition, the System continues to shift its supply source from groundwater to surface water in accordance with state mandates.

The Capital Improvement Plan (CIP) provides an estimate of delivery by fiscal year for the next five years. The FY2019-2023 CIP includes approximately \$3.4 billion of Water Utility System improvements financed by a combination of pay-as-you-go, revenue bonds and proposed contributed capital.

Highlights of the Fiscal Year 2019 - 2023 Adopted CIP include:

- Continue funding the Luce Bayou Inter-basin Transfer project to move Trinity River water to Lake Houston. Required to meet state regulation requiring the conversion to surface water and growth of the region
- Continue funding the Design-Build contract for the 320 MGD expansion of the Northeast Water Purification Plant with regional water authority funding partners

- Continue to construct surface water transmission lines to access and deliver expanded treated surface water supplies for Houston and surrounding water authorities
- Continue funding for replacement of neighborhood water mains to improve fire protection, water quality, system reliability and assure compliance with Texas Commission on Environmental Quality (TCEQ) regulations
- Rehabilitate wells, ground storage tanks and pump stations as part of long range asset management

Project Allocation	Fiscal Year Planned Appropriations					2019-2023
	2019	2020	2021	2022	2023	
Planning						
Acquisition-Land	9,633	4,680	531	541	552	15,936
Design	71,336	25,733	12,866	3,539	6,046	119,519
Construction	964,257	649,458	798,151	528,993	275,740	3,216,600
Equipment Acquisition	6,690	8,621	8,795	8,969	9,151	42,225
Salary Recovery						
Other	7,233	3,792	3,522	4,105	4,160	22,812
Total Allocation	1,059,149	692,284	823,864	546,147	295,649	3,417,093
Source of Funds						
8319 - HPW-W & S Contributed CAP	2,960				41,400	44,360
8500 - HPW-W&S Syst Consolidated Constr Fd	254,591	144,435	211,091	257,843	143,363	1,011,322
8505 Prop W&S Cont.	442,009	422,790	422,791	249,830	96,089	1,633,509
8506 Proposed TWDB	68,069	65,110	65,110	38,474	14,798	251,561
8507 Water Auth NETL	188,415	37,574				225,989
8508 HPW NETL Constr	79,509	22,375				101,885
8509 Water Auth SETL	20,035		106,618			126,653
8510 HPW SETL Constr	3,561		18,254			21,815
Total Funds	1,059,149	692,284	823,864	546,147	295,649	3,417,093

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.

WATER UTILITY SYSTEM FACILITIES - Summary of Funds
2019-2023 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project		Fiscal Year Planned Appropriations					2019-2023
			2019	2020	2021	2022	2023	
S-000012	Southeast Water Purification Plant							
	8500 - HPW-W&S Syst Consolidated Constr Fd		247	13,572				13,819
	Project Total		247	13,572				13,819
S-000019	Emergency Needs for Water Utility							
	8500 - HPW-W&S Syst Consolidated Constr Fd		306	312	531	541	552	2,242
	Project Total		306	312	531	541	552	2,242
S-000020	Miscellaneous Water Needs							
	8500 - HPW-W&S Syst Consolidated Constr Fd		913	135	297	141	309	1,795
	Project Total		913	135	297	141	309	1,795
S-000035	Neighborhood Water Main Replacement							
	8500 - HPW-W&S Syst Consolidated Constr Fd		10,463	2,504	34,287	24,429	35,416	107,100
	Project Total		10,463	2,504	34,287	24,429	35,416	107,100
S-000056	East Water Purification Plant							
	8500 - HPW-W&S Syst Consolidated Constr Fd		25,510	10,946	5,751	16,230		58,437
	Project Total		25,510	10,946	5,751	16,230		58,437
S-000065	NE Water Purification Plant Expansion							
	8500 - HPW-W&S Syst Consolidated Constr Fd		14,119	13,505	13,505	7,980	3,069	52,180
	8505 Prop W&S Cont.		442,009	422,790	422,791	249,830	96,089	1,633,509
	8506 Proposed TWDB		68,069	65,110	65,110	38,474	14,798	251,561
	Project Total		524,197	501,405	501,406	296,285	113,956	1,937,250
S-000066	Northeast Water Purification Plant							
	8500 - HPW-W&S Syst Consolidated Constr Fd		10,200					10,200
	Project Total		10,200					10,200

WATER UTILITY SYSTEM FACILITIES - Summary of Funds
2019-2023 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project							2019-2023	
			2019	2020	2021	2022	2023		
S-000100	New / Replacement Ground Water Wells								
	8500 - HPW-W&S Syst Consolidated Constr Fd		3,611	1,732	997	6,384	12,034	24,757	
	Project Total		3,611	1,732	997	6,384	12,034	24,757	
S-00019A	Real Estate Annual Appropriation								
	8500 - HPW-W&S Syst Consolidated Constr Fd		4,590	4,680	531	541	552	10,894	
	Project Total		4,590	4,680	531	541	552	10,894	
S-000200	Water Well Renewal Program								
	8500 - HPW-W&S Syst Consolidated Constr Fd		3,764	4,529	3,915	5,031	3,864	21,103	
	Project Total		3,764	4,529	3,915	5,031	3,864	21,103	
S-000500	Water Improvements under M/N								
	8500 - HPW-W&S Syst Consolidated Constr Fd		14,213	9,270	22,399	11,585	24,006	81,473	
	Project Total		14,213	9,270	22,399	11,585	24,006	81,473	
S-000521	Water Main Replacement by Other Govt								
	8500 - HPW-W&S Syst Consolidated Constr Fd		5,907	2,440	1,400	1,400	1,400	12,547	
	Project Total		5,907	2,440	1,400	1,400	1,400	12,547	
S-000600	Water Storage Tank Rehabilitation								
	8500 - HPW-W&S Syst Consolidated Constr Fd		5,100	5,200	7,427	5,410	5,520	28,657	
	Project Total		5,100	5,200	7,427	5,410	5,520	28,657	
S-000700-A	Water Main Grid Extensions Program								
	8500 - HPW-W&S Syst Consolidated Constr Fd		8,541		3,183		3,312	15,036	
	Project Total		8,541		3,183		3,312	15,036	
S-000701	Lg Diameter Water Line Rehab								
	8500 - HPW-W&S Syst Consolidated Constr Fd		5,885	13,099	8,564	6,864		34,413	
	Project Total		5,885	13,099	8,564	6,864		34,413	

WATER UTILITY SYSTEM FACILITIES - Summary of Funds
2019-2023 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project							2019-2023	
			2019	2020	2021	2022	2023		
S-000702	Valve Replacement & Installation Program								
	8500 - HPW-W&S Syst Consolidated Constr Fd		4,080		4,244		4,416		12,740
	Project Total		4,080		4,244		4,416		12,740
S-000800	Sponsor Participation-Water Mains Prog.								
	8500 - HPW-W&S Syst Consolidated Constr Fd		1,020	1,040	2,122	2,164	2,208		8,554
	Project Total		1,020	1,040	2,122	2,164	2,208		8,554
S-000801	Utility System Infrastructure								
	8500 - HPW-W&S Syst Consolidated Constr Fd		510						510
	Project Total		510						510
S-000890	Lake Houston Dam Projects								
	8319 - HPW-W & S Contributed CAP							41,400	41,400
	8500 - HPW-W&S Syst Consolidated Constr Fd							13,800	13,800
	Project Total							55,200	55,200
S-000894	San Jacinto River Authority								
	8500 - HPW-W&S Syst Consolidated Constr Fd		596	1,352	419	824	841		4,033
	Project Total		596	1,352	419	824	841		4,033
S-000895	Trinity River Authority								
	8319 - HPW-W & S Contributed CAP		2,960						2,960
	8500 - HPW-W&S Syst Consolidated Constr Fd		6,906						6,906
	Project Total		9,865						9,865

**WATER UTILITY SYSTEM FACILITIES - Summary of Funds
2019-2023 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project							2019-2023	
			2019	2020	2021	2022	2023		
S-000900	Surface Water Transmission Program								
	8500 - HPW-W&S Syst Consolidated Constr Fd		118,205	36,702	66,677	122,401	21,531	365,516	
	8507 Water Auth NETL		188,415	37,574				225,989	
	8508 HPW NETL Constr		79,509	22,375				101,885	
	8509 Water Auth SETL		20,035		106,618			126,653	
	8510 HPW SETL Constr		3,561		18,254			21,815	
	Project Total		409,725	96,651	191,548	122,401	21,531	841,857	
S-000901	Condition Assessment and Rehabilitation								
	8500 - HPW-W&S Syst Consolidated Constr Fd		1,945	6,760		3,547		12,252	
	Project Total		1,945	6,760		3,547		12,252	
S-000956	Automatic Meter Reading Program								
	8500 - HPW-W&S Syst Consolidated Constr Fd		3,375	3,441	3,511	3,580	3,653	17,561	
	Project Total		3,375	3,441	3,511	3,580	3,653	17,561	
S-000958	Meter Replacement & Upgrade Program								
	8500 - HPW-W&S Syst Consolidated Constr Fd		3,315	5,179	5,284	5,388	5,498	24,664	
	Project Total		3,315	5,179	5,284	5,388	5,498	24,664	
S-001000	Pump Station Program								
	8500 - HPW-W&S Syst Consolidated Constr Fd		6,735	24,721	32,049			63,505	
	Project Total		6,735	24,721	32,049			63,505	
S-002015	Water Substitute Service Program								
	8500 - HPW-W&S Syst Consolidated Constr Fd		251	260	265	271	276	1,323	
	Project Total		251	260	265	271	276	1,323	
S-900001	Upgrades to 611 Walker								
	8500 - HPW-W&S Syst Consolidated Constr Fd		1,020	1,040	1,061	1,082	1,104	5,307	
	Project Total		1,020	1,040	1,061	1,082	1,104	5,307	

WATER UTILITY SYSTEM FACILITIES - Summary of Funds
2019-2023 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project							2019-2023
			2019	2020	2021	2022	2023	
	Total Appropriations:		1,059,149	692,284	823,864	546,147	295,649	3,417,093