

WATER UTILITY SYSTEM FACILITIES



Water Utility System

The Water Utility System (System) relies on both surface and ground water supplies. Surface water is taken 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 supplies must be developed to meet our long-term needs. In addition, the System continues to shift its supply source from groundwater to surface water in accordance with state mandates. The System provides water to the citizens of Houston as well as customers outside the City limits. The service population is approximately 4 million.

The System delivers treated surface and ground water to customers through a series of storage tanks, pump stations and transmission and distribution mains. This potable water is sold to domestic, commercial, industrial, governmental and other customers in the Houston metropolitan area. Untreated surface water is delivered for sale to governmental, industrial and agricultural customers.

The Water Utility System Capital Improvements Program (CIP) continues to focus on replacing aging water infrastructure and meeting the demands of new growth. This is accomplished through localized projects, such as, replacement of inadequate water lines in neighborhoods and upgrading/improving the City's water transmission and treatment system.

The five-year program includes \$973 million under the Water category and \$72 million under Street and Traffic and Storm Drainage categories for a total of approximately \$1.35 billion. It is financed by a combination of pay-as-you-go, revenue bonds and contributed capital.

Highlights of the FY2014-2018 CIP include:

- 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.

Water Utility System

Highlights of the FY2014-2018 CIP include - continued:

- Upgrade and optimize East, Southeast, and Northeast Water Purification Plants.
- Implement Luce Bayou Inter-basin Transfer from Trinity River to Lake Houston to meet demand caused by regulation requiring the conversion to surface water.
- Rehabilitate wells and ground storage tanks.
- Continue to construct surface water transmission lines to provide a reliable surface water supply for Houston and surrounding water authorities and communities.
- Rehabilitate and upgrade pump stations.

Project Allocation	Fiscal Year Planned Appropriations					2014-2018	Total
	2014	2015	2016	2017	2018		
Planning							
Acquisition-Land	4,600	2,138				6,738	7,613
Design	42,658	13,937	51,460	51,561	13,373	172,989	342,157
Construction	124,910	151,975	178,798	210,240	95,012	760,935	1,642,159
Equipment Acquisition	3,833	3,535	3,595	3,595	3,650	18,208	31,452
Salary Recovery							5,523
Other	3,844	4,191	1,930	1,579	2,773	14,317	14,317
Total Allocation	179,845	175,776	235,783	266,975	114,808	973,187	2,043,221
Source of Funds							
8319 - PWE-W & S Contributed CAP	13,523	18,542	44,264	88,863	24,885	190,077	288,967
8500 - PWE-W&S Syst Consolidating Constr Fd	166,322	157,234	191,519	178,112	89,923	783,110	1,754,254
Total Funds	179,845	175,776	235,783	266,975	114,808	973,187	2,043,221

**WATER UTILITY SYSTEM FACILITIES - Summary of Funds
2014-2018 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project	Fiscal Year Planned Appropriations					2014-2018
		2014	2015	2016	2017	2018	
S-000012	Southeast Water Purification Plant						
	8500 - PWE-W&S Syst Consolidating Constr Fd	10,510		9,495	4,900		24,905
	Project Total	10,510		9,495	4,900		24,905
S-000019	Emergency Needs for Water Utility						
	8500 - PWE-W&S Syst Consolidating Constr Fd	2,000	1,000	1,000	1,000	1,000	6,000
	Project Total	2,000	1,000	1,000	1,000	1,000	6,000
S-000020	Miscellaneous Water Needs						
	8500 - PWE-W&S Syst Consolidating Constr Fd	1,483	526	520	526	520	3,575
	Project Total	1,483	526	520	526	520	3,575
S-000035	Neighborhood Water Main Replacement						
	8500 - PWE-W&S Syst Consolidating Constr Fd	35,183	33,599	39,819	41,281	32,306	182,188
	Project Total	35,183	33,599	39,819	41,281	32,306	182,188
S-000037	Corrosion Prevention and Rehabilitation						
	8500 - PWE-W&S Syst Consolidating Constr Fd	2,100	2,136	2,174			6,410
	Project Total	2,100	2,136	2,174			6,410
S-000056	East Water Purification Plant						
	8500 - PWE-W&S Syst Consolidating Constr Fd	30,693	17,335	32,874			80,902
	Project Total	30,693	17,335	32,874			80,902
S-000066	Northeast Water Purification Plant						
	8319 - PWE-W & S Contributed CAP	6,871		40,122	35,000		81,993
	8500 - PWE-W&S Syst Consolidating Constr Fd	11,870		7,256			19,126
	Project Total	18,741		47,378	35,000		101,119
S-000067	Luce Bayou Inter-Basin Transfer						
	8500 - PWE-W&S Syst Consolidating Constr Fd			14,391	15,750		30,141
	Project Total			14,391	15,750		30,141

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2014-2018 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project						2014-2018	
		2014	2015	2016	2017	2018		
S-0000NA	Water Contingencies							
	8500 - PWE-W&S Syst Consolidating Constr Fd	2,344	2,691	430	79	1,273	6,817	
	Project Total	2,344	2,691	430	79	1,273	6,817	
S-000100	New / Replacement Ground Water Wells							
	8500 - PWE-W&S Syst Consolidating Constr Fd	2,340	4,859	4,828	5,011		17,038	
	Project Total	2,340	4,859	4,828	5,011		17,038	
S-000200	Water Well Renewal Program							
	8500 - PWE-W&S Syst Consolidating Constr Fd	575	3,564	4,215	3,675	3,726	15,755	
	Project Total	575	3,564	4,215	3,675	3,726	15,755	
S-000521	Water Main Replacement by Other Govt							
	8500 - PWE-W&S Syst Consolidating Constr Fd	2,060		3,100			5,160	
	Project Total	2,060		3,100			5,160	
S-000600	Water Storage Tank Rehabilitation							
	8500 - PWE-W&S Syst Consolidating Constr Fd	6,405	5,278	4,828	7,310	4,968	28,789	
	Project Total	6,405	5,278	4,828	7,310	4,968	28,789	
S-000700-A	Water Main Grid Extensions Program							
	8500 - PWE-W&S Syst Consolidating Constr Fd	4,368	3,198	398	427	248	8,639	
	Project Total	4,368	3,198	398	427	248	8,639	
S-000701	Lg Diameter Water Line Rehab							
	8500 - PWE-W&S Syst Consolidating Constr Fd	5,592	3,315	5,781	3,418	3,465	21,571	
	Project Total	5,592	3,315	5,781	3,418	3,465	21,571	
S-000702	Valve Replacement & Installation Program							
	8500 - PWE-W&S Syst Consolidating Constr Fd	2,665	3,798	3,865	2,803	2,845	15,976	
	Project Total	2,665	3,798	3,865	2,803	2,845	15,976	

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2014-2018 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project						2014-2018	
		2014	2015	2016	2017	2018		
S-000800	Sponsor Participation-Water Mains Prog.							
	8500 - PWE-W&S Syst Consolidating Constr Fd	500	500	500	500	500	2,500	
	Project Total	500	500	500	500	500	2,500	
S-000890	Lake Houston Water Supply Projects							
	8500 - PWE-W&S Syst Consolidating Constr Fd	1,500		10,000	15,000		26,500	
	Project Total	1,500		10,000	15,000		26,500	
S-000900	Surface Water Transmission Program							
	8319 - PWE-W & S Contributed CAP	6,652	18,542	4,142	53,863	24,885	108,084	
	8500 - PWE-W&S Syst Consolidating Constr Fd	12,682	63,285	18,069	56,054	19,383	169,473	
	Project Total	19,334	81,827	22,211	109,917	44,268	277,557	
S-000901	Condition Assessment and Rehabilitation							
	8500 - PWE-W&S Syst Consolidating Constr Fd	8,200					8,200	
	Project Total	8,200					8,200	
S-000902	Raw Water Transmission Lines							
	8500 - PWE-W&S Syst Consolidating Constr Fd	920		6,035		9,315	16,270	
	Project Total	920		6,035		9,315	16,270	
S-000956	Automatic Meter Reading Program							
	8500 - PWE-W&S Syst Consolidating Constr Fd	2,275	631	642	635	650	4,833	
	Project Total	2,275	631	642	635	650	4,833	
S-000958	Meter Replacement & Upgrade Program							
	8500 - PWE-W&S Syst Consolidating Constr Fd	558	2,904	2,953	2,960	3,000	12,375	
	Project Total	558	2,904	2,953	2,960	3,000	12,375	
S-001000	Pump Station Program							
	8500 - PWE-W&S Syst Consolidating Constr Fd	18,188	8,316	17,502	16,538	6,210	66,754	
	Project Total	18,188	8,316	17,502	16,538	6,210	66,754	

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CIP No.	Project						2014-2018	
		2014	2015	2016	2017	2018		
S-002015	Water Substitute Service Program							
	8500 - PWE-W&S Syst Consolidating Constr Fd	1,311	299	844	245	514	3,213	
	Project Total	1,311	299	844	245	514	3,213	
Total Appropriations:		179,845	175,776	235,783	266,975	114,808	973,187	