



STORM DRAINAGE SYSTEM

Storm Drainage System

The Storm Drainage Program designs and constructs capital improvement projects in order to provide increased levels of flood protection for Houston and its citizens. The Storm Drainage System collects storm water throughout the city and conveys it to the primary drainage channels and bayous which are the responsibility of the Harris County Flood Control District (HCFCD). The Program consists of the following major components:

Storm Drainage –

- The City has developed and is now using a tool that is based on a Geographic Information System (GIS) to evaluate and compare information citywide. This tool is named the Storm Water Enhanced Evaluation Tool or SWEET. The SWEET, uses objective criteria to develop a ranked list of the highest priority need areas across the city, and is also used to prioritize candidate storm drainage projects based on the benefit/cost. The projects selected for funding have the

highest numbers of benefited users for the least amount of cost. Each project will be designed to keep the localized drainage in the piping or sheet flow system to help protect structures from flooding during the 100-year rainfall event. Properties within a 100-year flood zone will be protected from local drainage flooding, but may not be protected from flooding until the Harris County Flood Control District bayous and tributaries can accommodate these heavy rainfall events.

Local Drainage –

- The Localized Drainage Improvements Program consists of small drainage improvement projects which can protect many homes from structural flooding. In many cases one section of pipe, a missing overflow section, or inadequate inlets are the only improvements needed to solve the problem. A simple solution will resolve the problems of an otherwise adequate system. On-call engineering and construction contracts will be used to address these problems quickly and cost effectively. The FY2014-2018 program totals approximately \$25 million.

Storm Drainage System

Local Drainage – continue

- In summary, the FY2014-2018 Storm Drainage Capital Improvements Program totals \$412 million that is funded primarily by the dedicated drainage and street renewal fund (DDSRF) as approved by the voters on November 2, 2010.

WBS Numbering System –

- A new WBS numbering system has been developed to better identify programmed projects that are a result of the Rebuild Houston methodology. Projects that already have been assigned WBS numbers in previous CIPs will continue to use those numbers.

New Number	Category
M-41XXXX	Storm Drainage
M-42XXXX	Local Drainage
M-43XXXX	Focused Drainage Projects

Project Allocation	Fiscal Year Planned Appropriations					2014-2018	Total
	2014	2015	2016	2017	2018		
Planning							
Acquisition-Land	4,083			450		4,533	4,533
Design	13,749	13,556	7,202	6,000	6,250	46,757	63,541
Construction	50,825	47,227	86,110	68,364	106,434	358,960	367,869
Equipment Acquisition	362					362	362
Salary Recovery							
Other	207	210	214	217	274	1,122	1,122
Total Allocation	69,226	60,993	93,526	75,031	112,958	411,734	437,427
Source of Funds							
4030 - Drainage Improvement CP Series H/K-DDRSF							1,808
4042 - Street & Trfc Control & Strm Drain DDSRF	63,706	57,031	83,825	61,003	81,667	347,232	371,117
4510 - Contribution for Capital Projects	1,805					1,805	1,805
8500 - PWE-W&S Syst Consolidating Constr Fd	3,715	3,962	9,701	14,028	31,291	62,697	62,697
Total Funds	69,226	60,993	93,526	75,031	112,958	411,734	437,427

**STORM DRAINAGE SYSTEM - Summary of Funds
2014-2018 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project	Fiscal Year Planned Appropriations					2014-2018
		2014	2015	2016	2017	2018	
M-0000NA	Contingencies						
	4042 - Street & Trfc Control & Strm Drain DDSRF	-1,914	336	477	3,994	-1,844	1,049
	Project Total	-1,914	336	477	3,994	-1,844	1,049
M-000247	Nottingham & Yorkshire Drainage & Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF					12,031	12,031
	8500 - PWE-W&S Syst Consolidating Constr Fd					2,520	2,520
	Project Total					14,551	14,551
M-000261	Buffalo Bayou Detention Basin						
	4042 - Street & Trfc Control & Strm Drain DDSRF				3,360		3,360
	Project Total				3,360		3,360
M-000263	Sherwood Forest Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF	4,181					4,181
	8500 - PWE-W&S Syst Consolidating Constr Fd	1,187					1,187
	Project Total	5,368					5,368
M-000265	Rampart Street Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF	5,314		8,620			13,934
	8500 - PWE-W&S Syst Consolidating Constr Fd	83		29			112
	Project Total	5,397		8,649			14,046
M-000271	Meyerland Area Drng & Paving, Sec 7 & 8						
	4042 - Street & Trfc Control & Strm Drain DDSRF	5,928					5,928
	8500 - PWE-W&S Syst Consolidating Constr Fd	814					814
	Project Total	6,742					6,742
M-000284	Airline Dr. Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF	1,574		16,305			17,879
	Project Total	1,574		16,305			17,879

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CIP No.	Project						2014-2018
		2014	2015	2016	2017	2018	
M-000285	Garden Oaks and Shepherd Forest Drainage						
	4042 - Street & Trfc Control & Strm Drain DDSRF	1,783	14,243				16,026
	8500 - PWE-W&S Syst Consolidating Constr Fd		415				415
	Project Total	1,783	14,658				16,441
M-000286	Pleasantville/Glendale Drainage & Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF			9,254			9,254
	8500 - PWE-W&S Syst Consolidating Constr Fd			2,065			2,065
	Project Total			11,319			11,319
M-000287	Wirt Road Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF		5,297				5,297
	8500 - PWE-W&S Syst Consolidating Constr Fd		847				847
	Project Total		6,144				6,144
M-000288	Easthaven Blvd(Bryant to Ledge) Drainage						
	4042 - Street & Trfc Control & Strm Drain DDSRF	4,492					4,492
	8500 - PWE-W&S Syst Consolidating Constr Fd	680					680
	Project Total	5,172					5,172
M-000289	Minnetex/Almeda Genoa Drainage & Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF			6,373			6,373
	8500 - PWE-W&S Syst Consolidating Constr Fd			4,416			4,416
	Project Total			10,789			10,789
M-000290	Montrose/ Midtown Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF	8,496					8,496
	4510 - Contribution for Capital Projects	1,805					1,805
	8500 - PWE-W&S Syst Consolidating Constr Fd	576					576
	Project Total	10,877					10,877

STORM DRAINAGE SYSTEM - Summary of Funds
2014-2018 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project						2014-2018
		2014	2015	2016	2017	2018	
M-000291	Sagemont Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF	3,933					3,933
	Project Total	3,933					3,933
M-000293	Binglewood, Inwood Forest, & Oak Forest						
	4042 - Street & Trfc Control & Strm Drain DDSRF	152		4,846			4,998
	Project Total	152		4,846			4,998
M-000294	Cullen Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF	387	11,312				11,699
	8500 - PWE-W&S Syst Consolidating Constr Fd		2,700				2,700
	Project Total	387	14,012				14,399
M-000295	Scott Street Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF	1,097		9,443			10,540
	8500 - PWE-W&S Syst Consolidating Constr Fd			1,498			1,498
	Project Total	1,097		10,941			12,038
M-001010	Wycliffe Drive (Chatterton to Melronome)						
	4042 - Street & Trfc Control & Strm Drain DDSRF	792		2,682			3,474
	8500 - PWE-W&S Syst Consolidating Constr Fd			969			969
	Project Total	792		3,651			4,443
M-001013	Willow Waterhole Area Drng and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF	4,554					4,554
	8500 - PWE-W&S Syst Consolidating Constr Fd	375					375
	Project Total	4,929					4,929

**STORM DRAINAGE SYSTEM - Summary of Funds
2014-2018 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project						2014-2018
		2014	2015	2016	2017	2018	
M-410001	Woodshire Area Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF	1,527			11,374		12,901
	8500 - PWE-W&S Syst Consolidating Constr Fd				4,249		4,249
	Project Total	1,527			15,623		17,150
M-410002	Potomac & Nantucket Area Drng and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF	1,104			8,846		9,950
	8500 - PWE-W&S Syst Consolidating Constr Fd				2,460		2,460
	Project Total	1,104			11,306		12,410
M-410003	Roosevelt, Edel Plaza, Little York Acres						
	4042 - Street & Trfc Control & Strm Drain DDSRF	485			2,223		2,708
	8500 - PWE-W&S Syst Consolidating Constr Fd				834		834
	Project Total	485			3,057		3,542
M-410004	Little York, Courlandt Mdws, York Mdws						
	4042 - Street & Trfc Control & Strm Drain DDSRF	664			4,546		5,210
	8500 - PWE-W&S Syst Consolidating Constr Fd				2,252		2,252
	Project Total	664			6,798		7,462
M-410005	Spring Shadows (North)						
	4042 - Street & Trfc Control & Strm Drain DDSRF	917			8,674		9,591
	8500 - PWE-W&S Syst Consolidating Constr Fd				718		718
	Project Total	917			9,392		10,309
M-410006	Arlington Heights Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF	788	2,149		4,558	12,641	20,136
	8500 - PWE-W&S Syst Consolidating Constr Fd				3,515	9,287	12,802
	Project Total	788	2,149		8,073	21,928	32,938

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CIP No.	Project						2014-2018	
		2014	2015	2016	2017	2018		
M-410007	Gulf Terrace Sec 1, Acre Homes Area							
	4042 - Street & Trfc Control & Strm Drain DDSRF		1,369		222	8,396	9,987	
	8500 - PWE-W&S Syst Consolidating Constr Fd					5,577	5,577	
	Project Total		1,369		222	13,973	15,564	
M-410008	Freeway Manor: South of Edgebrook Dr.							
	4042 - Street & Trfc Control & Strm Drain DDSRF		1,379		118	9,407	10,904	
	8500 - PWE-W&S Syst Consolidating Constr Fd					4,668	4,668	
	Project Total		1,379		118	14,075	15,572	
M-410009	Briar Meadow Subdivision Area							
	4042 - Street & Trfc Control & Strm Drain DDSRF			1,141		8,336	9,477	
	8500 - PWE-W&S Syst Consolidating Constr Fd					3,100	3,100	
	Project Total			1,141		11,436	12,577	
M-410010	Freeway Manor: North of Edgebrook							
	4042 - Street & Trfc Control & Strm Drain DDSRF		1,776		110	13,453	15,339	
	8500 - PWE-W&S Syst Consolidating Constr Fd					5,243	5,243	
	Project Total		1,776		110	18,696	20,582	
M-410290	Gillette Trunk-line Improvements							
	4042 - Street & Trfc Control & Strm Drain DDSRF	858	773	11,526		8,473	21,630	
	8500 - PWE-W&S Syst Consolidating Constr Fd			724		896	1,620	
	Project Total	858	773	12,250		9,369	23,250	
M-420126	Local Drainage Program (LDP)							
	4042 - Street & Trfc Control & Strm Drain DDSRF	4,755	5,000	5,000	5,000	5,000	24,755	
	Project Total	4,755	5,000	5,000	5,000	5,000	24,755	

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CIP No.	Project						2014-2018	
		2014	2015	2016	2017	2018		
M-430100	Pre-Engineering for Storm Water Drainage							
	4042 - Street & Trfc Control & Strm Drain DDSRF	1,750	2,000	2,250	2,500	2,750	11,250	
	Project Total	1,750	2,000	2,250	2,500	2,750	11,250	
M-430101	Miscellaneous and Emergency Needs							
	4042 - Street & Trfc Control & Strm Drain DDSRF	207	210	214	217	274	1,122	
	Project Total	207	210	214	217	274	1,122	
M-430220	Storm Drainage Program Support							
	4042 - Street & Trfc Control & Strm Drain DDSRF	1,500	1,500	1,500	1,500	1,500	7,500	
	Project Total	1,500	1,500	1,500	1,500	1,500	7,500	
M-430241	Stormwater Pump Station & Flood Warning							
	4042 - Street & Trfc Control & Strm Drain DDSRF	3,382	3,110	2,944	2,511		11,947	
	Project Total	3,382	3,110	2,944	2,511		11,947	
M-430296	Mitigation Program for Capital Imp.							
	4042 - Street & Trfc Control & Strm Drain DDSRF	4,500	6,077	750	750	750	12,827	
	Project Total	4,500	6,077	750	750	750	12,827	
M-430800	Developer Participation							
	4042 - Street & Trfc Control & Strm Drain DDSRF	500	500	500	500	500	2,500	
	Project Total	500	500	500	500	500	2,500	
	Total Appropriations:	69,226	60,993	93,526	75,031	112,958	411,734	