



STORM DRAINAGE SYSTEM

Storm Drainage System

The Storm Drainage System Program designs and constructs drainage improvement projects in areas of the City with a demonstrated need of flood protection for Houston and its residents. The Storm Water Drainage System includes collection of rainfall runoff via roadside ditches and/or streets with underground pipe (storm sewer) and the conveyance of storm water via off-road channels and underground structures to a receiving system and detention structures designed manage the rate of flow into a receiving system. The receiving system can be a bayou, tributary channel, or another storm sewer. The program includes investments in channel and detention capacity made in partnership with the Harris County Flood Control District.

The Capital Improvement Plan (CIP) provides an estimate of delivery by fiscal year for the next five years. The FY 2022-2026 CIP includes \$927 million for Storm Drainage System improvements funded primarily through drainage fees assessed on non-exempted benefitted property and a dedication of ad valorem revenue to the Dedicated Drainage and Street Renewal Fund (DDSRF). An additional \$85 million of Water and Wastewater improvements are planned to accompany Storm Drainage System projects.

The Storm Drainage System Program consists of the following major components:

Capital Improvement Projects:

- The City uses objective criteria to develop a ranked list of the highest priority need areas across the City and prioritize candidate storm drainage projects based on their benefits and costs. Projects are developed in accordance with the City's design criteria to convey 2-year rainfall events within the collection system (roadside ditch and/or storm sewer) and reduce the risk of structural flooding during 100-year storm events. Properties within special flood hazard areas or the 100-year flood zone will be protected from localized event flooding, but may not be protected from flooding related to inadequate level of service of the receiving system.

Local Drainage Program (LDP) & Storm Water Action Team (SWAT) Projects:

- These programs address localized storm water drainage system problems including inadequate level of service due to underground storm sewer capacity, roadside ditch grade deterioration and encroachments, inlet capacity, and/or structural failure of the storm sewer or outfall. Engineering and construction are accomplished by work order contracts in order to address these problems quickly and cost effectively. The FY 2022-2026 CIP commits approximately \$148 million to these programs.

Storm Drainage System Projects deferred to future CIPs:

The following projects were previously listed in Adopted CIPs and will be prioritized for construction as additional funding is identified in future CIPs.

M-410007-0001	Gulfway Terrace Sec 1 Area
M-410019-0001	Sharpstown Area 2
M-410021-0001	Pinewood Village 2
M-410022-0001	Garden Oaks and Shepherd Park (East)
M-410027-0002	Richmond Plaza 1 (North)
M-410036-0002	Spring Shadows Area

Project Allocation	Fiscal Year Planned Appropriations					2022-2026
	2022	2023	2024	2025	2026	
Planning						
Acquisition-Land	7,180	1,280				8,460
Design	30,682	11,511	10,000	8,000	10,000	70,193
Construction	85,734	207,745	180,070	88,863	48,485	610,898
Equipment Acquisition						
Salary Recovery						
Other	72,173	70,796	28,000	38,000	28,000	236,968
Total Allocation	195,769	291,333	218,070	134,863	86,485	926,519
Source of Funds						
4042 - DDSRF CAPITAL FUND-DRAINAGE CHARGE	79,157	115,139	107,887	98,252	63,111	463,545
4046 - DDSRF CAPITAL FUND-AD VALOREM TAX	20,250	23,228	40,715	16,611	13,374	114,179
4510 - Contribution for Capital Projects	9,404	55,377	27,748			92,529
5000 - Federal Government - Grant Funded	26,373	10,000	10,000	10,000	10,000	66,373
5430 - Federal State Local - HPW Pass thru DDSR	60,586	87,589	31,720	10,000		189,895
8500 - HPW-W&S Syst Consolidated Constr Fd						
Total Funds	195,769	291,333	218,070	134,863	86,485	926,519

This project is 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.

**STORM DRAINAGE SYSTEM - Summary of Funds
2022-2026 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project		Fiscal Year Planned Appropriations					2022-2026
			2022	2023	2024	2025	2026	
M-000247	Nottingham & Yorkshire Area							
	4046 - DDSRF CAPITAL FUND-AD VALOREM TAX						13,374	13,374
	8500 - HPW-W&S Syst Consolidated Constr Fd						5,374	5,374
	Project Total						18,748	18,748
M-000294	Cullen Drainage and Paving							
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR						12,924	12,924
	8500 - HPW-W&S Syst Consolidated Constr Fd						1,855	1,855
	Project Total						14,779	14,779
M-000295	Scott Street Drainage and Paving							
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR						10,277	10,277
	8500 - HPW-W&S Syst Consolidated Constr Fd						1,267	1,267
	Project Total						11,543	11,543
M-410002	Potomac & Nantucket Area Drng and Paving							
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR						13,201	13,201
	8500 - HPW-W&S Syst Consolidated Constr Fd						3,001	3,001
	Project Total						16,202	16,202
M-410005	Spring Shadows (North)							
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR						14,785	14,785
	Project Total						14,785	14,785
M-410006	Arlington Heights Area							
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		7,530				10,297	17,827
	4046 - DDSRF CAPITAL FUND-AD VALOREM TAX		5,250					5,250
	8500 - HPW-W&S Syst Consolidated Constr Fd		4,798				4,918	9,716
	Project Total		17,578				15,215	32,793

STORM DRAINAGE SYSTEM - Summary of Funds
2022-2026 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project							2022-2026	
			2022	2023	2024	2025	2026		
M-410008	Freeway Manor South Area								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR				11,338			11,338	
	8500 - HPW-W&S Syst Consolidated Constr Fd				1,444			1,444	
	Project Total				12,782			12,782	
M-410010	Freeway Manor: North of Edgebrook								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR				17,601			17,601	
	8500 - HPW-W&S Syst Consolidated Constr Fd				3,888			3,888	
	Project Total				21,489			21,489	
M-410013	Melrose Park Area								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR					4,556		4,556	
	Project Total					4,556		4,556	
M-410014	Wynnewood Acres Area								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		140				140		
	5430 - Federal State Local - HPW Pass thru DDSR		12,162				12,162		
	Project Total		12,302				12,302		
M-410015	Magnolia Park Area								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR	2,004	7,121		8,199			17,324	
	8500 - HPW-W&S Syst Consolidated Constr Fd		3,409		5,187			8,596	
	Project Total	2,004	10,530		13,386			25,920	
M-410016	Westridge and Braes Terrace Area								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR			7,342			7,342		
	8500 - HPW-W&S Syst Consolidated Constr Fd			11,063			11,063		
	Project Total			18,405			18,405		

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CIP No.	Project							2022-2026	
			2022	2023	2024	2025	2026		
M-410019	Sharpstown Area 2								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		2,122					2,122	
	Project Total		2,122					2,122	
M-410023	Richmond Plaza (South) Area								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR			9,600				9,600	
	8500 - HPW-W&S Syst Consolidated Constr Fd			6,000				6,000	
	Project Total			15,600				15,600	
M-410024	Southland Area								
	4046 - DDSRF CAPITAL FUND-AD VALOREM TAX				12,291			12,291	
	8500 - HPW-W&S Syst Consolidated Constr Fd				1,362			1,362	
	Project Total				13,653			13,653	
M-410025	Inwood Forest Area								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		338	8,894				9,231	
	8500 - HPW-W&S Syst Consolidated Constr Fd			6,509				6,509	
	Project Total		338	15,403				15,741	
M-410028	Westbury Area								
	4046 - DDSRF CAPITAL FUND-AD VALOREM TAX				13,425			13,425	
	8500 - HPW-W&S Syst Consolidated Constr Fd				9,165			9,165	
	Project Total				22,590			22,590	
M-410029	Chateau Forest West Area								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR			7,193				7,193	
	8500 - HPW-W&S Syst Consolidated Constr Fd			8,235				8,235	
	Project Total			15,428				15,428	

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CIP No.	Project							2022-2026
			2022	2023	2024	2025	2026	
M-410031	72 In. SWT line Midtown/Montrose							
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		1,467					1,467
	Project Total		1,467					1,467
M-410032	West Alabama 72 in. SWT							
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		519					519
	Project Total		519					519
M-410033	Avalon Place							
	4046 - DDSRF CAPITAL FUND-AD VALOREM TAX			2,804				2,804
	Project Total		2,804					2,804
M-410035	Northside High School Area							
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		3,544	566				4,110
	4046 - DDSRF CAPITAL FUND-AD VALOREM TAX					16,611		16,611
	8500 - HPW-W&S Syst Consolidated Constr Fd					1,636		1,636
	Project Total		3,544	566		18,247		22,357
M-410038	Central Park Area							
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR			3,711				3,711
	Project Total		3,711					3,711
M-410039	Cottage Grove East Area							
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		2,638	12,955				15,593
	4046 - DDSRF CAPITAL FUND-AD VALOREM TAX			5,424				5,424
	8500 - HPW-W&S Syst Consolidated Constr Fd		500	5,043				5,543
	Project Total		3,138	23,422				26,560
M-420126	Local Drainage Program (LDP)							
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		12,000	12,000	12,000	12,000	12,000	60,000
	Project Total		12,000	12,000	12,000	12,000	12,000	60,000

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CIP No.	Project							2022-2026	
			2022	2023	2024	2025	2026		
M-420HUD	CDBG Disaster Recovery Program								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		1,143					1,143	
	5000 - Federal Government - Grant Funded		16,373					16,373	
	Project Total		17,515					17,515	
M-430006	Storm Water Action Team (SWAT)								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		17,500	17,500	17,500	17,500	17,500	87,500	
	Project Total		17,500	17,500	17,500	17,500	17,500	87,500	
M-430100	Pre-Engineering for Storm Water Drainage								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		2,000		2,000		2,000	6,000	
	Project Total		2,000		2,000		2,000	6,000	
M-430220	Project Mgmt. Incl. Testing & Inspection								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		6,000	1,700	1,700	1,700	1,700	12,800	
	Project Total		6,000	1,700	1,700	1,700	1,700	12,800	
M-430241	Stormwater Pump Station & Flood Warning								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		3,597		1,000	1,000	1,000	6,597	
	4510 - Contribution for Capital Projects		1,771					1,771	
	5430 - Federal State Local - HPW Pass thru DDSR		10,370	1,000	1,000			12,370	
	Project Total		15,738	1,000	2,000	1,000	1,000	20,738	
M-430296	Regional Stormwater Detention								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		2,367	2,355	2,420	17,355	17,355	41,852	
	4046 - DDSRF CAPITAL FUND-AD VALOREM TAX		15,000	15,000	15,000			45,000	
	4510 - Contribution for Capital Projects		2,126		27,748			29,874	
	5000 - Federal Government - Grant Funded		10,000	10,000	10,000	10,000	10,000	50,000	
	5430 - Federal State Local - HPW Pass thru DDSR		2,948		30,720			33,668	
	Project Total		32,442	27,355	85,888	27,355	27,355	200,395	

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2022-2026 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project							2022-2026	
			2022	2023	2024	2025	2026		
M-430800	Developer Participation								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		1,000	3,000	3,000	3,000	3,000	13,000	
	Project Total		1,000	3,000	3,000	3,000	3,000	13,000	
M-43E101	HMGP North Canal Project								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		3,742	13,844				17,586	
	4510 - Contribution for Capital Projects			55,377				55,377	
	5430 - Federal State Local - HPW Pass thru DDSR		2,068	54,492				56,560	
	Project Total		5,810	123,713				129,523	
M-43HCFC	Harris County Flood Control Dist Agrmnt								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		5,506					5,506	
	4510 - Contribution for Capital Projects		5,506					5,506	
	5430 - Federal State Local - HPW Pass thru DDSR		33,038		10,000			43,038	
	Project Total		44,051		10,000			54,051	
M-450500	Storm Water Improvements Under R/S								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR			10,699				10,699	
	5430 - Federal State Local - HPW Pass thru DDSR			32,097				32,097	
	Project Total			42,796				42,796	
M-500001	Future Design								
	4042 - DDSRF CAPITAL FUND-DRAINAGE CHAR		4,000	4,000	4,000	4,000	4,000	20,000	
	Project Total		4,000	4,000	4,000	4,000	4,000	20,000	
M-NA0000	Funding Offset								
	8500 - HPW-W&S Syst Consolidated Constr Fd		-5,298	-29,196	-29,924	-14,862	-5,374	-84,654	
	Project Total		-5,298	-29,196	-29,924	-14,862	-5,374	-84,654	
	Total Appropriations:		195,769	291,333	218,070	134,863	86,485	926,519	



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