FY 2022 - 2026 Capital Improvement Program
Sewers and Storm Drains

Priority	Description	Total Estimated Costs	Appropriated Through FY 2021	Recommended FY 2022	Proposed FY 2023	Proposed FY 2024	Proposed FY 2025	Proposed FY 2026 and Beyond
1	Annual Sewer System Improvements and Capacity Upgrades - FY 2022-2026	5,000,000	0	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
2	Annual Storm Drain System Repair & Improvements - FY 2020-2024 (76913)	1,526,293	476,293	350,000	350,000	350,000	0	0
3	NPDES - Storm Drain Master Plan and Watershed Assessment (76914)	900,000	900,000	0	0	0	0	0
4	San Rafael Treatment Wetlands and Storm Water Capture (76291)	4,450,000	950,000	3,500,000	0	0	0	0
5	Modernization of Busch Garden and Rosemont Sewer Pump Stations (76917)	1,500,000	1,000,000	500,000	0	0	0	0
6	NPDES Rio Hondo Bacteria Load Reduction - Design Phase (76292)	2,700,000	1,200,000	0	0	0	0	1,500,000
7	El Mirador Tract Storm Drain - Planning Phase (76390)	911,400	610,302	0	0	0	0	301,098
	Total	16,987,693	5,136,595	5,350,000	1,350,000	1,350,000	1,000,000	2,801,098

FY 2022 - 2026 Capital Improvement Program
Sewers and Storm Drains
Annual Sewer System Improvements and Capacity Upgrades - FY 2022

Priority	Project No.	Description	Total Estimated Costs	Appropriated Through FY 2021	Recommended FY 2022	Proposed FY 2023	Proposed FY 2024	Proposed FY 2025	Proposed FY 2026 and Beyond
1		Annual Sewer System Improvements and Capacity Upgrades - FY 2022-2026							
		Sewer Facility Charge	5,000,000	0	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
	Total		5,000,000	0	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000

DESCRIPTION: This project provides for the systematic repair, rehabilitation, or replacement of the City's sewer collection system, and upgrades to existing pipes that are hydraulically deficient by relining to increase capacity. The system consists of 347 miles of sewer pipes ranging in size from six to 30 inches in diameter.

JUSTIFICATION: Although cleaned and repaired on a regular basis, the system is aged and suffers from a variety of defects. Pipes are subject to breakage from wear and tear, ground movement, improper installation, protruding house connections and chemical corrosion. Additionally, capacity and condition upgrades dictated by the Sewer Master Plan will implement improvements to accommodate current and future demands on the system.

SCHEDULE: Repair or rehabilitation of sewer will begin in FY 2022 as identified by annual inspection and evaluation.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with the Public Facilities Element Objective 5 of the General Plan by continuing to implement capital improvements which will maintain or rehabilitate infrastructure.

IMPACT ON THE NORTHWEST: Portions of this project are located in Northwest Pasadena which is an area that has been targeted for revitalization.

HISTORY: This project is part of an annual program and was created and initially funded in FY 2022.

Responsible Department:
Public Works Department

FY 2022 - 2026 Capital Improvement Program
Sewers and Storm Drains
Annual Storm Drain System Repair & Improvements - FY 2020-2024
76913

Priority	Project No.	Description	Total Estimated Costs	Appropriated Through FY 2021	Recommended FY 2022	Proposed FY 2023	Proposed FY 2024	Proposed FY 2025	Proposed FY 2026 and Beyond
2	76913	Annual Storm Drain System Repair & Improvements - FY 2020-2024							
	Sewer Fund		1,526,293	476,293	350,000	350,000	350,000	0	0
	Total		1,526,293	476,293	350,000	350,000	350,000	0	0

Damaged Storm Drain

DESCRIPTION: This project provides for the repair or replacement of the City's storm drain system and improvements of storm drain facilities at various locations throughout the City on an ongoing basis. The City owns approximately 34 miles of storm drain pipes (including 6,456 linear feet of corrugated metal pipe installed from 1925 -1953); over 1,300 catch basins; and hundreds of culverts. This program will be re-established in FY 2021 upon completion of the Storm Drain Master Plan.

JUSTIFICATION: The existing structures are an integral part of the City's storm drain system. Many of the pipes are in various stages of deterioration depending on their slope, age, and the type of soil surrounding them. Many of these elements are aged and require maintenance. Existing damaged, substandard or missing structures result in inefficient operation and create risk-prone facilities.

SCHEDULE: Repairs to storm drain infrastructure will be implemented as needed in FY 2022.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan in that the City is almost fully built and the drainage system elements, particularly older facilities, are subject to ongoing repair, replacement or modification.

IMPACT ON THE NORTHWEST: A portion of this project is located in Northwest Pasadena which is an area that has been targeted for revitalization.

HISTORY: This project is part of an annual program and was created and initially funded in FY 2020.

Responsible Department:
Public Works Department

FY 2022 - 2026 Capital Improvement Program
Sewers and Storm Drains
NPDES - Storm Drain Master Plan and Watershed Assessment
76914

Priority	Project No.	Description	Total Estimated Costs	Appropriated Through FY 2021	Recommended FY 2022	Proposed FY 2023	Proposed FY 2024	Proposed FY 2025	Proposed FY 2026 and Beyond
3	76914	NPDES - Storm Drain Master Plan and Watershed Assessment							
	Sewer Fund		900,000	900,000	0	0	0	0	0
	Total		900,000	900,000	0	0	0	0	0

Bioswale at the Rose Bowl

DESCRIPTION: This project provides for a multi-phase, comprehensive Storm Drain Master Plan that consists of the video inventory of approximately 34 miles of City owned storm drain mainlines, connector pipes, and catch basins, manholes and culverts; recommends a repair schedule of the existing system; and identifies conceptual locations, alignments, and sizes for new stormwater facilities and infiltration installations within the City. This project also provides for a comprehensive watershed analysis of the City to identify optimal locations for stormwater capture infrastructure. Drainage areas, soil characteristics, and wellhead protection zones will be mapped to determine where infiltration of stormwater and runoff is best sited. The Master Plan is a planning guide for locating and sizing stormwater and drainage facilities.

JUSTIFICATION: The City does not have a Storm Drain Master Plan and relies on a complaint-driven process to compile storm drain repairs rather than a systematic program of preventive maintenance. Additionally, the City is focused on sustainability of water supplies, and identifying locations where stormwater and runoff can be diverted from drains and used to recharge groundwater supplies. This action will assist in self-reliance on the City's water supply and National Pollutant Discharge Elimination System (NPDES) compliance and will assist the City in project proposals for Los Angeles County Safe Clean Water Program funds.

SCHEDULE: The citywide storm drain assessment will be completed in FY 2022.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with water-related policies in the Open Space & Conservation Element by seeking to recharge aquifers and enhance storm water quality by preventing pollution and/or trash from entering Los Angeles River and ocean.

IMPACT ON THE NORTHWEST: A portion of this project is located in Northwest Pasadena which is an area that has been targeted for revitalization.

HISTORY: This project was created in FY 2019 and was fully funded in FY 2021.

Responsible Department:
Public Works Department

FY 2022 - 2026 Capital Improvement Program
Sewers and Storm Drains
San Rafael Treatment Wetlands and Storm Water Capture
76291

Priority	Project No.	Description	Total Estimated Costs	Appropriated Through FY 2021	Recommended FY 2022	Proposed FY 2023	Proposed FY 2024	Proposed FY 2025	Proposed FY 2026 and Beyond
4	76291	San Rafael Treatment Wetlands and Storm Water Capture							
	Proposition 68		3,500,000	0	3,500,000	0	0	0	0
	Sewer Fund		950,000	950,000	0	0	0	0	0
	Total		4,450,000	950,000	3,500,000	0	0	0	0

Arroyo Seco Outfall

DESCRIPTION: This project provides for the construction of two wetland treatment basins and is a joint project between the City of Pasadena and South Pasadena. The first basin is located in South Pasadena just south of the San Pascual Avenue bridge over the Arroyo Seco and work will include native plant restoration, dry and wet weather water quality improvements, storm water infiltration, and storm water re-use. The Pasadena site is located at the confluence of San Rafael Creek and the Arroyo Seco at the City's southern border.

JUSTIFICATION: The National Pollutant Discharge Elimination System (NPDES) permit issued by the Regional Water Quality Control Board (RWQCB) requires the City to take steps necessary to reduce or eliminate pollution in stormwater runoff. In addition, the City is in a group of 18 agencies who participate in an Enhanced Watershed Management Program which addresses NPDES compliance issues as a watershed region rather than independently. Water in Arroyo Seco/Upper Los Angeles River regularly exceeds the Total Maximum Daily Load (TMDL) for bacteria and other pollutants set by the RWQCB. In order to achieve compliance for regulated pollutants, the Upper Los Angeles River Watershed agencies adopted a Load Reduction Strategy (LRS) which is a roadmap to compliance for the region as a whole. The LRS identifies the San Rafael Creek outfall at its confluence with the Arroyo Seco as a significant source of bacteria from dry weather flows and requires this discharge be diverted from the Arroyo Seco or otherwise eliminated by September 2023. This project will allow the City to achieve that goal and assist in meeting future mandates for other pollutants.

SCHEDULE: Design will continue in FY 2022.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with water-related policies in the Open Space and Conservation Element by enhancing storm water quality by preventing pollution and/or trash from entering Los Angeles and San Gabriel Rivers and ocean.

SPECIAL CONSIDERATION: This project is an unfunded State mandate for the City. Construction cost to be determined upon development of design. This is a joint project with the City of South Pasadena and Paadena is the lead agency.

HISTORY: This project was created in FY 2019 and fully funded in FY 2022. The Concept Study was completed in FY 2019. The name was changed from "NPDES Arroyo Seco Bacteria Load Reduction" in FY 2022.

Responsible Department:
Public Works Department

FY 2022 - 2026 Capital Improvement Program
Sewers and Storm Drains
Modernization of Busch Garden and Rosemont Sewer Pump Stations
76917

Priority	Project No.	Description	Total Estimated Costs	Appropriated Through FY 2021	Recommended FY 2022	Proposed FY 2023	Proposed FY 2024	Proposed FY 2025	Proposed FY 2026 and Beyond
5	76917	Modernization of Busch Garden and Rosemont Sewer Pump Stations							
	Sewer Fund		1,500,000	1,000,000	500,000	0	0	0	0
	Total		1,500,000	1,000,000	500,000	0	0	0	0

Rosemont Sewer Pump Station

DESCRIPTION: This project provides for mechanical, structural, and electrical upgrades of the Busch Garden and Rosemont sewer pump stations.

JUSTIFICATION: The City of Pasadena manages three sewer pump stations that pump waste up to a higher elevation for deposit into the City's gravity sewer system. As part of the FY 2019 Sewer Master Plan process, all three pump stations were inspected to current standards. Rockwood pump station was constructed in 2016, but Rosemont and Busch Garden pump stations are each over 70 years old and require upgrades to station housing, generators, ventilation systems, SCADA communications, and site access. These upgrades will decrease the possibility of sanitary sewer overflows, shorten response time with updated communications features, increase worker safety and ensure uninterrupted wastewater flow.

SCHEDULE: Construction will begin in FY 2022.

RELATIONSHIP TO THE GENERAL PLAN: The project is consistent with the Land Use Element Policy 10.16 (Infrastructure) by designing, constructing, maintaining, and improving Pasadena's infrastructure to conserve and reduce impacts to the natural environment; and Policy 16.2 (Service Adequacy) by periodically reviewing the impacts of major physical, environmental, economic and social changes and identifying their implications in meeting the service needs of Pasadena's residents.

IMPACT ON THE NORTHWEST: The Rosemont Sewer Pump Station is located in Northwest Pasadena which is an area that has been targeted for revitalization.

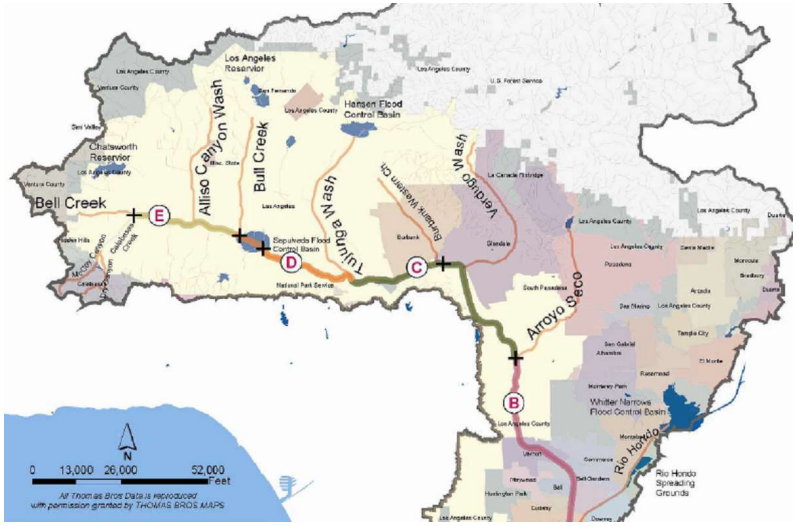
HISTORY: This project was created and initially funded in FY 2021 and fully funded in FY 2022.

Responsible Department:
Public Works Department

FY 2022 - 2026 Capital Improvement Program
Sewers and Storm Drains
NPDES Rio Hondo Bacteria Load Reduction - Design Phase
76292

Priority	Project No.	Description	Total Estimated Costs	Appropriated Through FY 2021	Recommended FY 2022	Proposed FY 2023	Proposed FY 2024	Proposed FY 2025	Proposed FY 2026 and Beyond
6	76292	NPDES Rio Hondo Bacteria Load Reduction - Design Phase							
	Sewer Fund		1,200,000	1,200,000	0	0	0	0	0
	Unfunded		1,500,000	0	0	0	0	0	1,500,000
	Total		2,700,000	1,200,000	0	0	0	0	1,500,000

Los Angeles River Watershed



DESCRIPTION: This project provides for the dry-weather bacterial discharges to the Eaton, Alhambra and Rubio washes, all of which impact significant Pasadena watershed areas and drain to the Rio Hondo. Of approximately 190 outfalls to the Rio Hondo, 10 outfalls with Pasadena drainage showed a high loading of E. coli and must be mitigated to be in compliance with bacterial Total Maximum Daily Load (TMDL) and regional water quality objectives.

JUSTIFICATION: The National Pollutant Discharge Elimination System (NPDES) permit issued by the Regional Water Quality Control Board requires the City to take steps necessary to reduce and/or eliminate pollution in stormwater runoff. The City is one of 18 agencies that participate in an Enhanced Watershed Management Program (EWMP) group to regionally address NPDES compliance issues in the Upper Los Angeles River. The TMDL is a number that represents the assimilative capacity of a receiving water to absorb a pollutant. A Load Reduction Strategy (LRS) allows the EWMP to focus on priority outfalls in the Rio Hondo tributary to address TMDL compliance. Of the 11 agencies that contribute to the Rio Hondo watershed area, Los Angeles County led an effort to provide a regional solution rather than addressing multiple priority outfalls. The Regional Board accepted a proposal to address Rio Hondo TMDL compliance through three structural projects and a series of Minimum Control Measures to prevent additional bacterial loading.

SCHEDULE: Design of this project will continue in FY 2022 and is being managed by San Gabriel Council of Governments.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with water-related policies in the Open Space & Conservation Element by enhancing storm water quality by preventing pollution and/or trash from entering Los Angeles and San Gabriel Rivers and ocean and by increasing the efficiency of water use among Pasadena residents, and commercial and industrial organizations.

SPECIAL CONSIDERATION: This project will be managed by San Gabriel Council of Governments and represents Pasadena's portion of the total project cost. Construction cost to be determined upon design development.

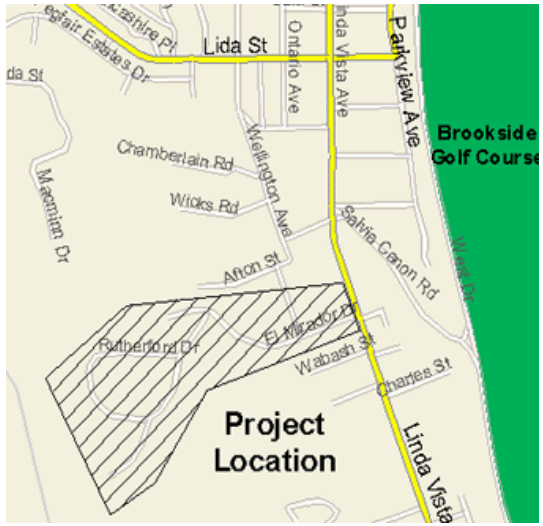
HISTORY: This project was created and initially funded in FY 2019.

Responsible Department:
Public Works Department

FY 2022 - 2026 Capital Improvement Program
Sewers and Storm Drains
El Mirador Tract Storm Drain - Planning Phase
76390

Priority	Project No.	Description	Total Estimated Costs	Appropriated Through FY 2021	Recommended FY 2022	Proposed FY 2023	Proposed FY 2024	Proposed FY 2025	Proposed FY 2026 and Beyond
7	76390	El Mirador Tract Storm Drain - Planning Phase							
		Private Capital	610,302	610,302	0	0	0	0	0
		Unfunded	301,098	0	0	0	0	0	301,098
		Total	911,400	610,302	0	0	0	0	301,098

El Mirador Tract Storm Drain



DESCRIPTION: The developer of the El Mirador Tract (No. 41465) did not complete all of the storm drain requirements for this subdivision. This project provides for the completion of the storm drain system per the Los Angeles County Public Works Department's standards, which includes construction of debris barriers, modification of debris basins and storm drains, and miscellaneous punch list work as well as easement preparation and processing.

JUSTIFICATION: Completion of this storm drain system will eliminate flooding during rainstorms and will control the potential debris resulting from a fire or flood cycle. This system will be maintained by the County when completed.

SCHEDULE: The current scope of this project will be reviewed and reassessed in coordination with the Los Angeles County Flood Control District and a new cost estimate will be developed. Scheduling will depend on the results of this review.

RELATIONSHIP TO THE GENERAL PLAN: This project is consistent with the Public Facilities Element of the General Plan by enhancing the delivery of a high level of public services as a means of maintaining or improving the City's urban environment and raising the quality of life for its residents. It is also consistent with the Mobility Element by providing drainage systems for new development.

HISTORY: This project was created in FY 1993. Through litigation, the City was awarded a judgment and the private funds were received in FY 2000.

Responsible Department:
Public Works Department