Furman Park Stormwater Capture and Infiltration Project City of Downey | Regional Project Program



Overview

Project Description: Regional stormwater capture and infiltration system that will also improve utility and recreational facilities at a community park in Downey.

TotalProjectCost: \$14,325,670

SCW Funding Requested: \$12,325,670 for Design and Construction Cost Share: City intends to commit \$2,000,000 of municipal funds towards the project.

Benefits:

- Water quality: divert runoff and stormwater from nearby storm drain line, treat, and infiltrate into a subsurface 8.4ac-ft capacity storage infiltration facility. Project will address total zinc as the primary pollutant and bacteria as the secondary pollutant.
- Water supply: as part of the Montebello Forebay area, the project has the potential to capture and recharge 577.5ac-ft per year to the Central Basin aquifer.
- Disadvantaged Community: Furman Park is enjoyed by the local community and neighboring DAC communities. Measure S funds were utilized to improve turf, playground equipment, sports fields, and community utiliteis in July 2020. Funding request includes \$100,000 for a public outreach.
- **Nature-Based:** Using Measure S funds, the planned vegetated bioswale and permeable pavement at the parking lot were completed in July 2020. A recycled water line was also extended to the SW corner of the park in anticipation of recycled water irrigation. A bird and butterfly garden will be installed in the area above the underground storage facility.

Location



Coordinates: (33.953775, -118.137414)

High Soil Infiltration Rate:

- 18 in/hr at 10 ft
- 51 in/hr at 35 ft

Depth to Groundwater: > 51.5 ft

Montebello Forebay: project is in the Montebello Forebay area, which accounts for nearly half of total groundwater replenishment in the Central Basin.

Drainage Area



Total Drainage Area: 475 ac

Jurisdictions Included in Drainage Area:

- City of Downey: 394 ac
- City of Pico Rivera: 81 ac

Watershed: Lower Los Angeles River Watershed Management Group (LLAR WMG) identified Furman Park as a top priority site for construction of a regional BMP to achieve TMDL compliance targets. The LLAR WMG contributed **\$70,000** for the project's 10% design plan and preliminary design report.



Project Design:

Wet Weather: the full 85th percentile storm is being captured by the project as the diversion can capture peak flowrate and the storage and throughflow are large enough to capture full storm event volume.

Diversion: proposed flow rate of 50 cfs from BI0020 Storm Drain Line.

Pretreatment: hydrodynamic separator to remove sediment/trash larger than 2.4mm, remove 80% of particles 130 microns or larger, and remove hydrocarbons from captured runoff/stormwater before infiltration.

Infiltration Facility: 8.78 ac-ft storage reservoir with a storage depth of 4.5 ft, a freeboard depth of 1 ft, and a footprint of 1.87 acres.

Treatment and Discharge: in case of a storm event with volume larger than project design, a pump and filter system will lift water from the storage tank and discharge flow to an existing storm drain in the southwest area of the park. Estimated treatment rate is 16.8 cfs.

Dry wells: to be considered if feasible.

Community Benefits and Nature-Based Solutions



Community Benefits:

- Improve flood management: infiltration system will reduce stress on the storm drain system of an area close to the Rio Hondo and prone to flooding during large storm events.
- Enhance parkfacilities: removal and improvement of exercise equipment, addition of recycled water for irrigation, and new competition baseball fields.
- Create watershed educational opportunities: adjacent Rio Hondo Elementary School has opportunity to learn about stormwater. Birds and butterfly native garden will include educational signage.
- Additional **native Californian landscaping and bird and butterfly garden** will reduce heat island effect and increase shade and tree count.

Nature-Based Solutions:

- Using Measure S funds, the planned vegetated bioswale and permeable pavement have already been completed.
- Further native California landscaping planned for post-construction plans.