COASTAL CONSERVANCY

Staff Recommendation
June 15, 2017

SAN FERNANDO VALLEY STORMWATER CAPTURE PROJECT

Project No. 17-011-01
Project Manager: Kara Kemmler

RECOMMENDED ACTION: Authorization to disburse up to $4,000,000 to the City of Los Angeles for design, implementation and monitoring of the San Fernando Valley Stormwater Capture Project at five sites in the San Fernando Valley in the City of Los Angeles, Los Angeles County.

LOCATION: Public right-of-ways in the San Fernando Valley, City of Los Angeles, Los Angeles County

PROGRAM CATEGORY: Integrated Coastal and Marine Resource Protection

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EXHIBITS

Exhibit 1: Project Location

Exhibit 2: Site Maps

Exhibit 3: Photos

Exhibit 4: Project Letters

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31220 of the Public Resources Code:

"The State Coastal Conservancy hereby authorizes the disbursement of up to four million dollars ($4,000,000) to the City of Los Angeles ("the grantee") for design, implementation and monitoring of the San Fernando Valley Stormwater Capture Project at five sites in the San Fernando Valley in the City of Los Angeles, subject to the following conditions:

1. Prior to the disbursement of funds, the grantee shall submit for the review and written approval of the Conservancy's Executive Officer a work program, including budget and schedule; names and qualifications of any contractors to be retained for project work; and a signage plan for the project acknowledging Conservancy funding.
2. Prior to commencement of construction, the grantee shall submit final construction plans and evidence that all necessary permits and approvals have been obtained."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed authorization is consistent with Chapter 5.5 regarding improving and protecting coastal and marine water quality and habitats (Section 31220).
2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines."

PROJECT SUMMARY:

Staff recommends that the Conservancy authorize up to $4,000,000 to the City of Los Angeles (City) for design, implementation and monitoring of the San Fernando Valley (SFV) Stormwater Capture Project at five sites in the San Fernando Valley in the City of Los Angeles, Los Angeles County.

SFV Stormwater Capture Project consists of the installation of green infrastructure, including permeable paving, bioswales, trees, and infiltration galleries, within the public right-of-ways along five city streets. See Exhibits 1-3 and Site Description section below. The primary purpose of the project is stormwater capture and infiltration to increase groundwater replenishment of the San Fernando Basin to advance water security, water self-reliance, and integrated water management goals. By removing asphalt, installing permeable paving and bioswales, and planting trees and native vegetation, the project will improve the health and permeability of local soils thus increasing groundwater recharge, reducing stormwater runoff, alleviating local flooding, reducing "first flush" pollution and improving water quality downstream. The project also includes water quality monitoring via groundwater monitoring wells, flow meters, and series of level-loggers that will be installed in the green streets to quantify water quality and water supply benefits.

Stormwater (urban runoff) is a major source of water-quality degradation in rivers, lakes, aquifers and at beaches in the City, all of which serve natural and socioeconomic functions. Stormwater runoff has the potential of introducing pollutants (pathogens, bacteria, trash, oil and grease, suspended solids, metals, gasoline and other toxics) to the storm water conveyance system and, ultimately, the receiving water body. The diminishing water quality in water bodies receiving urban storm runoff is pervasive in the City. One of the primary objectives for this project, therefore, is to remove pathogens and nutrients from the existing surface street runoff that ultimately discharge into the Los Angeles River. An equally insidious threat posed by stormwater is that of urban flooding and this project will help to stem local flooding.

"One Water LA" is a program developed by the City to provide an integrated approach for water supply, wastewater treatment, and stormwater management. It is a long-term commitment to ensure LA's water future through collaboration, integration and public involvement, and it includes the One Water LA 2040 Plan that will be completed in 2017. Managing stormwater as a resource is essential to a sustainable water future. The proposed project will add water to the San

Fernando Basin, augmenting the City's local water supply during a severe drought emergency. When implemented, this project will capture 494 acre-feet per year of stormwater to recharge the local aquifer, the equivalent of a year's worth of water for approximately 1,200 single-family households.

The project will also advance climate change resilience and improve quality of life in disadvantaged communities. Two of the five sites are part of the Mayor's Great Streets Initiative. Mayor Garcetti launched the Great Streets Initiative in 2013 to help Angelenos reimagine neighborhood centers. The goals of the Great Streets Initiative include improving access and mobility, greater community engagement, improving environmental resilience, safer and more secure communities, and improving public health. As part of the Great Streets program, the Mayor's office will be implementing separate projects that will focus on active transportation improvements, such as bike lanes, and community revitalization, including tree planting, at the two "Great Streets" sites, Lankershim Blvd. and Van Nuys Blvd. These projects will serve as companion projects to this stormwater-driven project. The urban greening, including trees, for the other three sites will be a part of this project. The removal of asphalt and installation of swales vegetated with native plants and trees will lower surface and air temperatures by providing shade and evapotranspiration thus reducing the urban heat island ("UHI") effect and encourage walking and biking thus improving public health and quality of life. The proposed project in concert with the Great Streets projects will transform five deteriorated streets in high-density residential neighborhoods into healthier, greener spaces.

The project is a partnership between City of Los Angeles Department of Water and Power (LADWP) and City of Los Angeles Department of Public Works Bureau of Sanitation (LASAN). The project at all five locations will be operated, maintained and monitored by LASAN. LASAN is committed to environmental stewardship and sustainability for the future of the City.

Site Description: The proposed project will improve public right-of-ways owned by the City in five locations in the San Fernando Valley (Exhibit 1). In order from north to south, the project will include the following streets:

- Glenoaks and Filmore
- Van Nuys Blvd. from Laurel Canyon to San Fernando
- Branford Street from Laurel Canyon to Pacoima Wash
- Agnes Avenue from Vanowen to Kittridge
- Lankershim Blvd. from Chandler to Victory

The underlying soil type is mostly Tujunga Fine Sandy Loam in the SFV area of the City, which is conducive to infiltration. The local land use in these five locations include strip development, commercial, industrial, low-rise apartments, and single-family residences. The project will serve to capture and treat runoff from 350 acres of tributary area. The five sites included in this project have been identified as having the greatest potential for implementation and water supply cost benefit.

The project locations are all within a disadvantaged area of the SFV. The California Environmental Protection Agency's CalEnviroScreen has determined that this part of the SFV is

one of the most disadvantaged areas in the state in terms of poverty, unemployment, and exposure to environmental health hazards such as toxic sites, poor air quality, groundwater contamination, and other sources of pollution. The City now faces confounding threats in the face of global climate change. For instance, the past five years of drought have taken a heavy toll on the City's water supply. The City relies heavily on imported water to meet its needs, which in turn exacerbates climate change effects by increasing energy consumption for water delivery. The City experiences detrimental impacts from the UHI effect and this area of the SFV experiences an annual average of 54 extreme heat days per year of 95º F or above. Studies predict that the number of extreme heat days will double by mid-century (Hall 2013). The urban greening components of this project which will help combat the UHI effects and improve water security, which are critical steps toward enhancing the quality of life for this area.

Project History: The Conservancy has previously funded two projects led by LASAN to address stormwater management issues. In 2010, LASAN completed the reconstruction of the existing parkways on both sides of Riverdale Avenue between Crystal Street and its terminus at the south side of the Los Angeles River. Parkway swales were created to capture and treat urban runoff from 14.6 acres of residential land with the dual benefit of irrigating the parkway plants and infiltrating the runoff, thereby protecting the river from pollutants in the runoff. The Rainwater Harvesting Downspout Disconnection Program was a pilot program to reduce stormwater runoff from private properties. The downspouts installed rerouted residential roof runoff from the stormwater collection system to onsite pervious areas. The program targeted two neighborhoods and resulted in more than 600 residential and commercial disconnects to either pervious areas, rain barrels or planter boxes. The SFV Stormwater Capture Project is another endeavor by the City to further enhance their larger stormwater management regime with the added goal of recharging the aquifer to improve self-reliance.

PROJECT FINANCING

Coastal Conservancy	**$4,000,000**
Los Angeles Dept of Water and Power	$15,000,000
Project Total	**$19,000,000**

The expected source of funding for this authorization is the fiscal year 2016/17 appropriation to the Conservancy from the "Water Quality, Supply, and Infrastructure Improvement Act of 2014" (Proposition 1, Division 26.7 of the Water Code, § 79700 *et seq.*). Funds appropriated to the Conservancy derive from Chapter 6 (commencing with Section 79730) and may be used "for multi-benefit water quality, water supply, and watershed protection and restoration projects for the watersheds of the state" (§ 79731). Section 79732(a) identifies thirteen specific purposes of Chapter 6; the proposed project will help achieve four of the purposes:

- Protect and increase the economic benefits arising from healthy watersheds, fishery resources and in-stream flow (subsection (a)(1))
- Implement watershed adaptation projects to reduce the impacts of climate change on California's communities and ecosystems (subsection (a)(2))

- Protect and restore rural and urban watershed health to improve watershed storage capacity, forest health, protection of life and property, storm water resource management, and greenhouse gas reduction (subsection (a)(9))
- Reduce pollution or contamination of rivers and coastal waters, prevent and remediate contamination, and protect or restore natural system functions that contribute to water supply, water quality, or flood management (subsection (a)(11)).

The proposed project was selected through the fourth-round competitive grant process under the Conservancy's *Proposition 1 Grant Program Guidelines* adopted in June 2015 (see Section 79706(a)). The proposed project meets each of the evaluation criteria in the Proposition 1 Guidelines as described in further detail in this "Project Financing" section, the "Project Summary" section above and in the "Consistency with Conservancy's Project Selection Criteria & Guidelines" section below of this staff recommendation.

In addition to the funding listed above for design and implementation of the project, the City will be committing an estimated $12 to $15 million for operations and maintenance for the life of the project at all five sites, as well as for monitoring.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed project will be undertaken pursuant to Chapter 5.5 regarding improving and protecting coastal and marine water quality and habitats (Section 31220).

Section 31220(a) permits the Conservancy to provide grants for coastal watershed and coastal water quality, sediment management, and resources protection projects, if the projects meet one or more of the objectives detailed in Section 31220(b). Pursuant to Sections 31220(b)(1) and (7), the Conservancy is authorized to undertake a project or award a grant for a project that reduces contamination of waters within the coastal zone or marine waters and that reduces the impact of population and economic pressures on coastal and marine resources. The SFV Stormwater Capture Project will implement stormwater runoff capture and infiltration BMPs in five locations in the Upper Los Angeles River watershed. As such, the proposed project will help improve water quality of coastal waters downstream, alleviate local flooding and increase water supply in the San Fernando Groundwater Basin, reducing the impacts of dense population in the Los Angeles River Watershed.

As also required by Section 31220(a), Conservancy staff has consulted with the State Water Resources Control Board to ensure consistency with Chapter 3 (commencing with Section 30915) of Division 20.4 of the Public Resources Code. In addition, consistent with Section 31220(c) the proposed project will include a monitoring and evaluation component and is consistent with regional, local or State watershed management and water quality plans or programs, as described in the "Consistency with Local Watershed Management Plan/State Water Quality Control Plan" section, below.

CONSISTENCY WITH CONSERVANCY'S 2013-2018 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S), AS REVISED JUNE 25, 2015:

Consistent with **Goal 7, Objective F** of the Conservancy's 2013-2018 Strategic Plan, implementing the proposed project will reduce greenhouse gases (GHGs) by converting impermeable surfaces to stormwater capture galleries at five sites which will recharge the local groundwater basin and reduce the City's reliance on imported water thereby reducing energy consumption associated with the delivery of water. The energy required to pump groundwater in Los Angeles is at 580 kWh per acre-foot, but the energy required to deliver water to southern California via the State Water Project is as much as 3,236 kWh per acre-foot (NRDC, 2004). This electricity consumption indirectly results in GHG emissions due to fossil fuels that are often used to generate that electricity. The rate of GHG emissions per unit of electricity generated, or the CO2 emission factor, depends on the mix of fuels used to supply the electricity grid, a mix that varies across the state. The Los Angeles Department of Water and Power fuel mix relies more on coal and less on natural gas, hydropower, and nuclear power than the rest of the state. As a result, its average emission rate is higher. The estimated recharge volume is 494 acre-feet per year, which would result in an estimated reduction of 700 metric tons of CO2 per year, the equivalent of taking approximately 140 cars off the road.

Also consistent with **Goal 7, Objective G**, the proposed project will include tree and vegetation planting to reduce the urban heat island effect and provide multiple benefits such as enhanced storm water management and an improved quality of life.

Additionally, the proposed project is consistent with two of the major efforts outlined in the 2013-2018 Strategic Plan for the South Coast program to "collaborate with the City and County of Los Angles on green infrastructure projects to address water quality and supply issues" and "implement tree planting and other multi-benefit projects which reduce the heat island effect in urban areas."

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on October 2, 2014, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Promotion and implementation of state plans and policies:**
    a. *California Water Action Plan.* The proposed project will result in a project that helps achieve California Water Action Plan Action #2 Increase Regional Self-Reliance by increasing local water supply via groundwater recharge, and Action #8 Increase Flood Protection by providing runoff capture and alleviating local flooding.

b. The proposed project will implement the *California @ 50 Million: The Environmental Goals and Policy Report* (Governor's Office of Planning and Research, 2015) by developing mechanisms to reduce storm water run-off and enhance groundwater recharge, promote climate change resilience, and develop healthy, equitable, and sustainable communities.

c. *CA Climate Adaptation Strategy: Safeguarding California*. The proposed project is consistent with this 2014 plan because the proposed project will advance the following strategies under Water: preparing California for flooding by reducing impermeable surface area and restoring the natural functions that slow, spread, capture, and/or infiltrate floodwaters throughout a watershed; and promoting groundwater recharge and storage by recharging the SFGB at five locations.

4. **Support of the public:** The proposed project has support from locally elected officials as well as environmental and community organizations, including Mayor Eric Garcetti, The Trust for Public Land, and Los Angeles Conservation Corps.

5. **Location:** The proposed project is located in the San Fernando Valley in the City of Los Angeles outside of the coastal zone. The five sites lie in the LA River Watershed and will have beneficial impacts to water quality in the coastal watershed system.

6. **Need:** Conservancy funding is needed in order to implement fully the project at all five locations. Without Conservancy funds, the proposed project will be implemented on a smaller scale until additional funds are secured. Meanwhile, the opportunity to capture stormwater for reuse would be lost.

7. **Greater-than-local interest:** The State of California has adopted multiple plans and policies addressing the need to design and restore for resiliency against drought, climate change and increased population pressure on water resources. As described above in Criterion 3, the proposed project serves to address water supply and flooding issues as promoted by various state plans and policies to ensure the security of the state's water future. The sheer amount of water transported to LA from elsewhere in the state makes recharge of the local aquifer a benefit to the entire state of California.

8. **Sea level rise vulnerability:** The proposed project sites are all located more than twenty miles inland of the coast and are not vulnerable to sea level rise.

Additional Criteria

10. Resolution of more than one issue: The proposed project is a multi-benefit urban greening project that will address several issues associated with climate change including improving water quality and supply, attenuating urban heat island effects, and improving quality of life for communities in a disadvantaged area in Los Angeles.

11. Leverage: See the "Project Financing" section above.

14. Readiness: The City is ready to undertake the proposed project immediately and has already begun planning for two of the five sites using already secured funding from LADWP.

15. Realization of prior Conservancy goals: See "Project History" section above.

18. Vulnerability from climate change impacts other than sea level rise: The project will restore permeability and utilize drought tolerant trees and plants in vegetated swales to

address the impacts of climate change in the watershed including degraded water quality, diminished water supply and increasing temperatures.

19. **Minimization of greenhouse gas emissions:** The proposed project will reduce greenhouse gases (GHGs) by converting impermeable surfaces to stormwater capture galleries at five sites, which will recharge the local groundwater basin and reduce the City's reliance on imported water thereby reducing energy consumption associated with the delivery of water. The estimated recharge volume is 494 acre-feet per year, which would result in an estimated reduction of 700 metric tons of CO2 per year, the equivalent of taking approximately 140 cars off the road.

CONSISTENCY WITH LOCAL WATERSHED MANAGEMENT PLAN/ STATE WATER QUALITY CONTROL PLAN:

The San Fernando Valley Stormwater Capture Project will help implement the Upper Los Angeles River Watershed Management Group's Enhanced Watershed Management Program (EWMP) approved by the Los Angeles Regional Water Quality Control Board. The EWMP includes the Stormwater Capture Master Plan, a regional planning effort to identify opportunities to increase stormwater capture throughout the City. The State Water Resources Control Board (Water Board) has concluded that the EWMP meets the requirements of the *Storm Water Resource Plan Guidelines,* December 15, 2015 prepared by the Water Board pursuant to the Stormwater Resources Planning Act, Water Code section 10560 et seq.

COMPLIANCE WITH CEQA:

The proposed project is categorically exempt from review under the California Environmental Quality Act (CEQA) pursuant to 14 California Code of Regulations Sections 15301 and 15303. Section 15301 exempts repair, maintenance and minor alteration of existing public structures, facilities and topographical features involving no expansion of use. This exemption applies because the project consists of repair, maintenance and minor alteration of the rights of way of five public streets. The project will improve the stormwater management for these five streets with no expansion of use. Section 15303 exempts construction and location of limited numbers of new, small facilities or structures. This exemption applies to the installation of infiltration galleries (small underground water collection systems) in the rights of way of the five streets.

Upon approval, staff will file a Notice of Exemption for this project.