

COASTAL CONSERVANCY

Staff Recommendation
January 19, 2012

Los Angeles Rainwater Harvesting Project

Project No. 11-072
Project Manager: David Hayes

RECOMMENDED ACTION: Authorization to disburse up to \$714,600 to The River Project to develop the Los Angeles Rainwater Harvesting Project as part of the City of Los Angeles 'Green Streets Initiative' program.

LOCATION: City of Los Angeles, Los Angeles County

PROGRAM CATEGORY: Integrated Coastal and Marine Resources Protection

EXHIBITS

Exhibit 1: [Project Location](#)

Exhibit 2: [Area Map](#)

Exhibit 3: [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 disbursement of up to seven hundred fourteen thousand six hundred dollars (\$714,600) to The River Project to develop the Los Angeles Rainwater Harvesting Project, for water quality and conservation purposes subject to the condition that prior to disbursement of funds The River Project shall submit the following for the review and approval of the Executive Officer of the Conservancy:

1. A work program, including budget and schedule;
2. Evidence that The River Project has secured all of the remaining funds, or staff time commitments needed to complete the project.”

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:

LOS ANGELES RAINWATER HARVESTING PROJECT

1. The proposed project is consistent with the current Project Selection Criteria and Guidelines.
 2. The proposed authorization is consistent with the purposes and objectives of Chapters 5.5 of Division 21 of the Public Resources Code, regarding integrated coastal and marine resources protection.
 3. The River Project is a nonprofit organization existing under Section 501(c)(3) of the U.S. Internal Revenue Code, and whose principal charitable purposes are consistent with Division 21 of the Public Resources Code.”
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PROJECT SUMMARY:

The River Project (TRP) will implement the Los Angeles Rainwater Harvesting Project to facilitate widespread implementation of residential stormwater harvesting in the City of Los Angeles. The proposed project would contribute to the City’s long-term water supply goals of increased conservation and development of a more sustainable local supply. The water that is captured and infiltrated will further augment the San Fernando groundwater basin, which has historically provided between 10 and 15 percent of the City’s total water supply, as well as provide significant benefits for water quality at beaches throughout Los Angeles County.

This project will develop standard plans to guide homeowners installing stormwater harvesting improvements on their own property. The standard plans will be reviewed by a City of Los Angeles Technical Advisory Committee and will be tested at a minimum of twenty-four demonstration households. These demonstration sites will be monitored for two years, and data collected through this project will be used to document the costs and the benefits of future investments in these projects. Finally, the project will provide standard plans for inclusion in an updated version of the City’s Rainwater Harvesting Manual and as the City’s Green Residence Standards to be adopted and incorporated into the City’s “Green Streets Initiative” program. When completed the Green Residential Standard Plans can be replicated in the Los Angeles River watershed and communities elsewhere in the City of Los Angeles.

The standard plans will be developed for a variety of stormwater harvesting techniques, including: rain gardens,¹ French drains (which capture the storm water), dry wells, graywater systems, Hollywood driveways,² cisterns, lawn removal, native plants and edible landscapes. The plans will address Best Management Practice (BMPs), material types, availability, constructability, maintenance, and the cost for installation. Based upon the City’s technical review, the plans will be further developed to 80% preliminary standard plans. The plans will be user-friendly, designed for easy approval by the Planning Department, and made widely available through web, YouTube and other social media, including City department website links. A series of hands-on intensive workshops will also be provided by TRP to teach

¹ A rain garden is a landscaped, shallow depression that allows rain to be collected and seep naturally into the ground. This helps recharge the groundwater supply and prevents polluted runoff (nonpoint source pollution).

² Hollywood Driveways typically have a dividing strip of grass or other media in order to reduce the amount of impervious surface.

LOS ANGELES RAINWATER HARVESTING PROJECT

participants about watershed management, site evaluation, landscape design, soil science and mulching principles, native plants, irrigation, and maintenance.

TRP will work with at least two dozen homeowners to design individualized suites of rainwater harvesting and water conservation techniques on their properties (as a test in developing the standardized plans). The project, as authorized, will fund some materials and design assistance by TRP. Projects will be designed to be affordable for average homeowners, and will be designed and implemented by the residents themselves. Participating homeowners will be required to contribute the required labor on their project as well as another residence in order to build a community of rain harvesters. The actual installation of the rainwater harvesting materials will be provided by the landowners' efforts, or 'sweat equity'. Participating homeowners will commit to maintaining rain harvest projects for a minimum of two years, when post-project performance data collection by TRP will be completed. These techniques will include rain gardens, French drains (which capture the storm water), dry wells, graywater systems, Hollywood driveways, cisterns, lawn removal, native plants and edible landscapes.

The Los Angeles Rainwater Harvest project is one of the multi-benefit projects proposed by the Neighborhood Council from the Tujunga/Pacoima Watershed Plan and is supported by a variety of governmental agencies and non-profit organizations. (See Project Letters; Ex. 3)

TRP is a tax-exempt, 501(c) (3) nonprofit, dedicated to planning for natural resource protection, conservation, enhancement, and revitalization of rivers and watershed lands in Los Angeles County. TRP has been active in the Tujunga/Pacoima area for nearly a decade, undertaking such projects as Tujunga Wash Hydrodynamic Study, planning and interpretive work for the Taylor Yard/Rio de Los Angeles State Park, and for the Sepulveda Basin Habitat enhancement plan. Additionally, TRP has done extensive work on the Tujunga/Pacoima Watershed and produced a comprehensive management plan for the Tujunga Wash sub-watershed.

Site Description:

The Los Angeles Rainwater Harvesting project will take place in the Tujunga/Pacoima sub-watershed of the Los Angeles River. The heaviest rain volumes in the Los Angeles River Watershed tend to be concentrated in the upper Tujunga/Pacoima watershed, with rainfall averages above 15 inches/year. The soils with the highest percolation rates are also located in these foothills and along historic stream courses in the area. The project is sited in this upper watershed region to take advantage of its inherent qualities, and designed to enhance opportunities for localized capture and infiltration of storm water, reduce flood potential in the area, replace water-intensive non-native vegetation with native habitat, and increase conservation practices by homeowners.

Project History:

The River Project has been actively engaged in watershed restoration efforts in Los Angeles for a dozen years, working with the Coastal Conservancy on a variety of projects. With funding from the Coastal Conservancy, TRP undertook scientific studies to determine surface and ground water quality at Taylor Yard, now the site of Rio de Los Angeles State Park; assisted with restoration projects at Sepulveda Basin; and engaged in community

LOS ANGELES RAINWATER HARVESTING PROJECT

outreach and river greenway design for the Valleyheart Greenway along the Los Angeles River. TRP produced the “Hydrodynamic Study of the Tujunga Wash” with funding from the Coastal Conservancy in 2002, and the “Tujunga/Pacoima Watershed Plan” with funding from the CalFed Watershed Program in 2008, both of which have led to this project.

Additionally, characteristics of this project were identified in the recommendations from the Los Angeles Rain Barrel Harvest Project, as the next key step in developing a comprehensive and functional rainwater harvesting policy in the City of Los Angeles.

Consistent with the goals of The Los Angeles Rain Barrel project funded by the Santa Monica Bay Restoration Commission (SMBRC), this project is complimentary with a wider variety of rain harvesting techniques of the Rain Barrel Project; however the project location was outside of SMBRC’s jurisdiction. TRP solicited funding from the Coastal Conservancy because of our natural resource conservation work in the Los Angeles watershed.

PROJECT FINANCING

Coastal Conservancy	\$714,600
City of Los Angeles	\$27,000
Total Project Costs	<u>\$741,600*</u>

Funding for this project is anticipated to come from the fiscal year 2009/10 appropriation of the Safe Drinking Water, Water Quality and Supply, Flood Control Protection Bond Act of 2006 (“Proposition 84”). Proposition 84 authorizes the use of these funds for projects that prevent contamination and degradation of coastal waters and watersheds consistent with the Conservancy’s enabling legislation. (Public Resources Code Section 75060(a)). The proposed project is consistent with the Conservancy’s legislation, Division 21 of the Public Resources Code; as described below (Public Resources Code Section 75074).

*Not shown in the project financing is a commitment of valuable senior staff time for consultation with the Technical Advisory Committee; from the Los Angeles Department of Water and Power (\$12,000 in funds or materials plus staff time up to \$13,000), Generation Water (\$15,000); from the City Bureau of Sanitation, the Department of Building and Safety and the Department of Planning (staff time of up to \$85,000). The estimated staff service contribution is approximately \$98,000, in addition to the \$27,000 in funds, materials and rebates reflected in the project financing table. Although there is interest throughout the City departments, as evidenced by the attached support letters, its ability to help fund this project is limited to in-kind services and a rebate program now under consideration. This is an important contribution to achieving the overall goals of this project, to ensure that the residential rainwater harvesting methods meet a standard that is acceptable to City departments and is supported by a user friendly permitting process.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

This project would be undertaken pursuant to Chapter 5. of the Conservancy's enabling legislation, Division 21 of the Public Resources Code, regarding integrated coastal and marine resources protection. Section 31220(a) authorizes the Conservancy to undertake and award grants for projects that meet one or more criteria of Section 31220(b). Consistent with Section 31220(b) (7), the proposed project will help reduce the impact of population and economic pressures on coastal and marine resources. The retrofit of residential areas will help reduce storm-water run-off into the Los Angeles River and it will serve as a model for the City as a whole.

Section 31220(c) requires that projects funded under Section 31220 be consistent with the Integrated Watershed Management Program established under Section 30947, local watershed management plans, if available, and water quality control plans adopted by the State Water Resources Control Board and regional water quality control boards; and include a monitoring and evaluation component. As discussed in detail below under "Consistency with Local Watershed Management Plan/State Water Quality Control Plan," the proposed project is consistent with local and state watershed plans. In addition, the project includes a monitoring and evaluation component.

CONSISTENCY WITH CONSERVANCY'S 2007 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 6, Objective 6.F** of the Conservancy's 2007 Strategic Plan, the proposed project will improve water quality to benefit coastal resources, and promote conservation water resource policies concerning urban watershed runoff for beneficial uses and provide funding for projects that address pollution cleanup and prevention, using best-management practices.

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 June 4, 2009, 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. **Support of the public:** The project has broad support. City Council District 6, the community partners such as Panorama City Neighborhood Council, and nonprofit advocates including TreePeople and Green LA support the project for its multi-beneficial aspects and the fact that it will provide homeowners throughout the region with the tools to implement a variety of water smart projects on their own. See Project Letters, Exhibit 3.

LOS ANGELES RAINWATER HARVESTING PROJECT

4. **Location:** This project is located in the Tujunga/Pacoima Wash watershed which drains to the Los Angeles River. Its location serves well as a model for the upper Los Angeles River watershed and when completed will benefit coastal resources by treating runoff and reducing the amount of runoff and pollution that reaches the coast. Perhaps even more important, the project will result in a scalable approach to harvesting and conserving rainwater for the entire upper Los Angeles River region.
5. **Need:** Without the Conservancy's funding assistance the City of Los Angeles would not have the resources to develop the prototype Rain Harvest standards. This comprehensive approach advances the Los Angeles Rain Barrel project concepts of rainwater harvesting to a variety of best management practices for residential retrofits that includes field tested methods standardized acceptable by city agencies. The initial labor intensive recruitment and training workshops, field work, and social media materials could not be performed by city staff. Without Conservancy funding, this timely and scalable project would not occur for an undetermined time.
6. **Greater-than-local interest:** The project will help improve water quality, and recharge a huge groundwater basin that drains the entire San Fernando Valley. The project is designed to be replicated throughout the Los Angeles River Watershed, the City of Los Angeles and provide significant benefits for water quality at beaches throughout Los Angeles County.
7. **Sea level rise vulnerability:** The project area is located within the Los Angeles river watershed, at an elevation of approximately 814 feet above sea level, and not subject to tidal influences.

Additional Criteria

8. **Resolution of more than one issue:** This project will help resolve local water quality issues, serve as a model for regional water quality and supply, and will encourage planting native plants and thereby creating wildlife habitat. Additionally, it will provide a helpful "Green Residential Standard Plans" for city review of several rainwater harvesting methods. The plans will be designed for easy approval by the Los Angeles Planning Department, and other City departments which addresses one of the primary factors that currently prevents homeowners from installing rainwater harvesting methods other than rain barrels on their properties.
9. **Innovation:** This project demonstrates an innovative and comprehensive approach to solving several issues at once by: providing public access to "how-to" workshops for homeowners and resulting in a variety of model residential retrofits for do-it-yourself homeowners.
10. **Readiness:** The River Project is prepared to begin as soon as a grant agreement is finalized. The Technical Advisory Committee from the City departments is also ready to commence work on the project.
11. **Realization of prior Conservancy goals:** "See "Project History"
13. **Cooperation:** The project is collaboration between City of Los Angeles Department of Water and Power, Department of Public Works, Bureau of Sanitation, Department of Building and Safety and the Department of Planning, State Water Resources Control Board and the non-profit The River Project.

LOS ANGELES RAINWATER HARVESTING PROJECT

14. **Vulnerability from climate change impacts other than sea level rise:** Preliminary weather scenarios are projected for increased cycles of drought and wet periods within the Southern California area, including Tujunga/Pacoima Watershed. Increased drought periods would potentially reduce the amount of rain that can be stored in surface impoundments and subsequently infiltrated groundwater basins. Climate change is likely to impact the amount of imported water available to use within Southern California as well. Increased storm intensities could potentially exceed the capacity of existing flood protection system within the watershed and the rain gardens and other landscape treatments would ameliorate that impact to some degree.

The heaviest rain volumes in the Los Angeles River Watershed tend to be concentrated in the upper Tujunga/Pacoima watershed. Moreover, the soils with the highest percolation rates, are located in the foothills and along historic stream courses and finally, the San Fernando Groundwater Basin underlies the project area, and recent analysis indicates that there is underutilized storage water capacity within the basin.

15. **Minimization of greenhouse gas emissions:** The residential projects are small in nature and will be performed by individual homeowners using hand tools with little or no emissions.

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

The project is consistent with the Los Angeles River Restoration Master Plan, adopted by the City in 2007. The project addresses seven of the nine goals of The River Project's "Tujunga/Pacoima Watershed Plan" (2007) and assists with the goals of the greater Los Angeles IRWMP (2008); the City's Water Supply Action Plan "Securing LA's Water Supply" (2008); Los Angeles Bureau of Sanitation (LABOS) "Water Quality Compliance Master Plan for Urban Runoff" (2009), and "Climate LA: Municipal Program Implementing the Green LA Climate Action Plan" (2008). The Proposed Rainwater Harvest Project is a project listed in the "Tujunga/Pacoima Watershed Plan" (Section 8.2).

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 (CCR) Section 15307 and 15308 because the development of the rainwater harvesting standards by the various City departments are designed to assure the maintenance, restoration, or enhancement of a natural resource and the process involves procedures for protection of the environment. With respect to the projects to be monitored by The River Project, the residential projects are categorically exempt pursuant to 14 CCR section 15304 (minor alterations to land) in that the residential projects involve minor, private alterations in the condition of land and vegetation which do not involve removal of healthy, mature, scenic trees. Additionally the proposed project is characterized as gardening or landscaping, including the replacement of existing conventional landscaping with water efficient landscaping, and therefore also exempt under 14 CCR Section 15304(b). Upon approval, staff will file a Notice of Exemption.