

**Regional Phase I MS4 NPDES Permit  
Order No. R4-2021-0105  
NPDES No. CAS004004**

**Watershed Management Program Progress Report Form  
Reporting Period [7/1/2021-12/31/2021]**

<b>Watershed Management Program Name</b>	Upper Santa Clara River
<b>Participating Permittee(s)</b>	Los Angeles County Flood Control District Santa Clarita Unincorporated LA County
<b>Date of Watershed Management Program Progress Report</b>	6/15/2022
<b>Initial Approval Date of Watershed Management Program (according to Table 12 or Part IX.G.3 of the Order)</b>	4/7/2016 (Revised 6/30/2021)

Note that Permittees will not be able to propose modifications to their WMP in the Watershed Management Program Progress Report Form. Any modification(s) shall be requested in writing explaining the nature of the proposed modification and justification for consideration by the Los Angeles Water Board [*Order – IX.C and IX.E.2*].

1.1 **Watershed Control Measure Milestone Progress.** Summarize the progress on all Watershed Control Measure requirements and dates for their achievement (milestones) identified in your WMP that were required to be achieved by the end of this Reporting Period. The milestones for specific projects may be reported as cumulative number of projects to be implemented (e.g., “Recipes for Compliance”; installation of prescribed volume of BMP capacity by a certain date; Percent Load Reduction of bacteria pollutant by a certain date), cumulative storm volume addressed<sup>1</sup> by control measures (e.g., LID, new/re-development projects, regional projects), or other metric. However, progress must be reported as percent completion of the selected milestone metric. If any milestones were not achieved, give a clear description of the action/milestone, explain the delay in control measure implementation, and provide the revised action/milestone. The summary must also include a list of (a) Permittees and non-Permittees collaborated with for achievement of milestones, (b) funding sought, (c) funding obtained, (d) technical assistance received (e.g., through the Safe Clean Water Program Watershed Area Steering Committee), (e) additional local community co-benefits such as clean streets (including, without limitation, street sweeping, litter abatement, etc.), more parks and green spaces, reduced heat island effect, reduced flooding, water supply augmentation, neighborhood beautification, and job creation, and (f) other co-benefits and resources accruing to disadvantaged communities as identified on CalEnviroScreen<sup>2</sup>. The format for this item is a text box but you are encouraged to provide this information in an appropriate format as an attachment with spreadsheets, graphs, and/or other elements that would concisely convey the required information.

The Upper Santa Clara River (USCR) Enhanced Watershed Management Program (EWMP) Group (USCR EWMP Group), which is comprised of the County of Los Angeles (County), Los Angeles County Flood Control District (LACFCD), and the City of Santa Clarita (City), submitted a draft updated EWMP to the Los Angeles Regional Water Quality Control Board (Regional Board) on June 30, 2021. The draft updated EWMP did not identify any Watershed Control Measure requirements with dates for their achievement (milestones) that occurred during the current Reporting Period (July 1, 2021 through December 31, 2021). As such, progress towards milestones in the form of percent completion is not provided within this submittal but will be provided during future submittals when milestones occur during the covered Reporting Period. The following sections provide a summary of (a) Permittees and non-Permittees collaborated with for achievement of future milestones, (b) funding sought, (c) funding obtained, (d) technical assistance received (e.g., through the Safe Clean Water Program [SCWP] Watershed Area Steering Committee), (e) additional local community co-benefits such as clean streets (including, without limitation, street sweeping, litter abatement, etc.), more parks and green spaces, reduced heat island effect, reduced flooding, water supply augmentation, neighborhood beautification, and job creation, and (f) other co-benefits and resources accruing to disadvantaged communities as identified on CalEnviroScreen.

<sup>1</sup> Includes the volume of water captured, infiltrated, retained, treated, diverted or otherwise addressed by a watershed control measure.

<sup>2</sup> <https://oehha.ca.gov/calenviroscreen>

**a. Permittees and non-permittees collaborating with for achievement of future milestones**

USCR EWMP Group member agencies have collaborated with each other to develop the EWMP, collaborate on project opportunities, achieve future milestones and conduct monitoring, reporting, and studies related to local waterways. The City has been working with the California Department of Pesticide Regulation to address a sub-drainage area found to have elevated levels of pesticides related to managing ants. Collaborating efforts with consultants from Apply Responsibly and the University of California, Riverside Integrated Pest Management Program, all partners coordinated multiple efforts to reduce or eliminate pesticides in this area.

**b. Funding sought**

Each USCR EWMP Group member agency sought funding from each agency's General Fund, the SCWP Municipal Program, and the Proposition 1 Round 1 Integrated Regional Water Management Implementation Grant (Prop 1 IRWM) from the California Department of Water Resources. The USCR EWMP Group member agencies also sought funding from the SCWP Regional Program through the Santa Clara River Watershed Area Steering Committee. The City sought funding from the City's Stormwater Pollution Prevention Fee, a utility fee levied upon all property owners within the City.

**c. Funding obtained**

The USCR EWMP Group member agencies' stormwater programs are primarily self-funded through each agency's internal funding. The County's compliance with the Municipal Separate Storm Sewer System (MS4) Permit is primarily funded by the County's General Fund monies while the City has a separate Stormwater Pollution Prevention Fee. The SCWP Municipal Program has supplemented the individual programs; however, the funds are not sufficient to sustain the individual programs as prescribed. The Hasley Canyon Park Stormwater Improvement Project led by the County was awarded \$2.89M through the SCWP Regional Program and \$1.0M through Prop 1 IRWM. The Newhall Park Project led by the City was awarded \$1.8M through the SCWP Regional Program and \$3.0M through Prop 1 IRWM.

**d. Technical assistance received (e.g., through the Safe Clean Water Program Watershed Area Steering Committee)**

The City applied for funding through the SCWP Technical Resource Program and received \$300,000 to assist funding the additional feasibility work needed to help make the Via Princessa Park Infiltration Project a viable candidate for future SCWP regional funding.

**e. Additional local community co-benefits**

**Clean Streets**

Clean streets have a positive impact on communities and water quality. Dirt and debris found on streets is composed of particles that arise from motor vehicles, local soils, and road pavement that can contain pollutants. Removal of these particles through street sweeping has proven to be an effective way to reduce pollutant loads that enter the MS4 system. Cleaner streets have been shown to help areas lower crime rates, boost local businesses and economies, promote healthier behavior, and improve physical and mental health (Pepper 2015).

The USCR EWMP Group member agencies continue to implement enhanced street sweeping as part of their overall pollution-reduction strategy within the USCR watershed. The County conducts street sweeping at a frequency greater than that required by the NPDES Permit. Priority A streets are swept by the City on a weekly basis throughout the year, while all other streets are swept monthly. In addition, during the rainy season, the City increases the frequency so that all streets are swept on a weekly basis to limit and reduce pollutants from entering the storm drain system. The City's erosion and sediment control ordinance requires all construction projects to implement best management practices to prevent sediment from leaving the site and entering the street, gutters, and storm drains.

**Parks and green space**

Parks and green space provide vital areas for recreation that mitigate stormwater runoff and improve air quality. Urban green spaces also contribute important habitats to maintain wildlife biodiversity (Aronson et al. 2017). Parks and green space have also shown the ability to improve general mood and attitude, reduce stress, and improve mindfulness and creativity (Wolf 2017).

The Hasley Canyon Park Stormwater Improvement Project led by the County plans to implement a demonstration garden which will replace passive park grass. Within the City, the Via Princessa Park Infiltration Project will be a new park in the Canyon Country area which will provide both active and passive recreation for an underserved community. The new park will also feature green space and a walking trail along the perimeter. Additionally, the City's low impact development (LID) ordinance requires developers to install LID solutions to comply with the development standards which includes bioswales, tree wells, and other natural features that adds to the greenery found throughout the City. The City also has an active open-space acquisition and preservation program to purchase parcels of land in and around the City to maintain a natural buffer and a rural character.

### **Reduced heat island effect**

The heat island effect occurs when urban structures, which absorb and re-emit more of the sun's heat, replace natural landscapes, such as forests and waterbodies. Replacing natural landscapes with urban structures causes urban air temperatures to increase higher than the surrounding environment. Additionally, the reduction of green space reduces the number of trees that provide shading, which increases the air temperature. Trees and plants reduce the air temperature through a process called evapotranspiration where plants release water to the surrounding air dissipating ambient heat. The heat island effect can be reduced by planting trees and vegetation and implementing green roofs, cool roofs/pavements, etc. (USEPA 2008).

The feasibility study for the Via Princessa Park Infiltration Project led by the City will look into the potential to reduce the heat island effect by planting trees throughout the parks. Additionally, the City's LID ordinance requires developers to install LID that include rain gardens, bioswales, tree wells, and other natural features in areas that would otherwise be paved.

### **Reduce flooding**

Within urban areas, impervious surfaces are the major contributors to stormwater runoff. Due to climate change, the frequency of extreme precipitation events is likely to increase in future years. Green infrastructure projects, such as increasing green spaces, reducing impervious surfaces, and building stormwater retention facilities, reduce the risk of flooding in urban areas by allowing stormwater to infiltrate the soil thereby reducing runoff.

The USCR EWMP Group's stormwater capture projects slow and infiltrate stormwater runoff and provide storage to divert flows from nearby storm drains which will increase the downstream storm drain capacity for more stormwater during rain events. As such, during rain events, these projects will improve flood management in the area. The City's LID ordinance also requires developers to install LID that include infiltration requirements to capture and infiltrate stormwater that would have otherwise been sent to the storm drain system, thereby reducing the chance of flooding downstream as determined by the Federal Emergency Management Agency (FEMA).

FEMA National Flood Insurance Rating System rewards the stormwater infiltration benefits of plans like the USCR EWMP. If cities take actions to reduce flooding risk, then people who have to get flood insurance receive discounted rates. The City of Santa Clarita addresses goes through a certification process to document all the actions that the City does to reduce flood risk.

Specifically, in the FEMA manual that guides the certification process, there is criteria for infiltration in Stormwater 450:

“By completing watershed master plans, communities can examine the potential impact of unmitigated development on streams and structures throughout the watershed. Once these impacts are known, a comprehensive program, including more specific development regulations, can be created to prevent adverse impacts. This will prevent an increase in flood damage or stream erosion, reductions in groundwater recharge or water quality, and loss of habitat. ... Developing and implementing a watershed management master plan that analyzes the combined effects of existing and expected development and redevelopment on drainage throughout the watershed and also includes a plan of action to address current and expected problems.”

The City of Santa Clarita has submitted these elements for certification with FEMA. As a result, property owners who have to purchase flood insurance get a discount, in part because of the USCR EWMP.

### **Water supply augmentation**

With droughts becoming more frequent in California, urban stormwater is increasingly being considered as a viable water source to augment water supply. The Santa Clarita Valley depends on local groundwater for about half of its water supply (on average). Studies have shown that stormwater capture is a cost-effective water supply option (Diringer et al. 2020). Green infrastructure projects, such as bioswales, permeable pavement, rain gardens, spreading grounds, and green streets, can infiltrate stormwater and recharge groundwater supplies. The Santa Clarita Valley formed a Groundwater Sustainability Agency (SCVGSA). During the reporting period, the SCVGSA was developing a comprehensive Groundwater Sustainability Plan that discusses augmenting local groundwater recharge by way of utilizing water sources such as captured storm water, surplus imported water, and recycled water to meet multiple goals within the watershed including reducing stormwater runoff, increasing the use of recycled water, and augmenting groundwater supplies to prepare for drought situations (SCVGSA GSP, page ES-25).

The Hasley Canyon Stormwater Improvement Park led by the County will divert flows into infiltration galleries and increase the local water supply by recharging the groundwater in the Santa Clara River Valley Groundwater Basin. Additionally, the Via Princessa Park and Newhall Park infiltration projects led by the City are being designed to divert stormwater flows into water infiltration galleries after pre-treatment. The water is held and allowed to slowly percolate into the ground and replenish the local aquifers. Groundwater accounts for approximately half of the City’s local water supply, and these projects will reduce dependency on the State Water Project. The City’s LID ordinance requires

developers to install LID that includes infiltration features that capture stormwater that would have otherwise been sent to the storm drain system. Instead, the water is allowed to soak into the soil and replenish the local aquifers.

### **Neighborhood beautification**

Green infrastructure projects provide many water quality and quantity benefits, but can also serve to beautify neighborhoods. Neighborhood beautification through the addition of trees, vegetated medians, green space, and parks can positively affect the surrounding neighborhoods. Neighborhoods with higher levels of green space have been associated with improved mental health through lower levels of depression, stress, and anxiety (Beyer et al. 2014). Additionally, neighborhoods with green common spaces increase opportunities for outdoor activities and social interactions, which can support the development of social ties within communities (Kuo et al. 1998).

The County-led Hasley Canyon Park Stormwater Improvement Project will provide recreational benefits for the community and preserve the existing recreational and aesthetic benefits of the parks. Additional benefits for the Hasley Canyon Park Stormwater Improvement Project will include a walking path around the main field, a demonstration garden, California native/drought tolerant landscaping, bioswales, fitness stations, benches, and a shade shelter next to the existing children's playground.

In the City, the proposed Via Princessa Park project will provide new recreational benefits for an underserved community. This project will include shade trees and a walking path around the main fields and will utilize native and drought tolerant landscaping throughout the project. The City's LID ordinance requires developers to install multiple LID solutions to comply with the development standards. Throughout the City, there are development projects that have incorporated bioswales, infiltration trenches, tree wells, and porous pavers that act not only as stormwater treatment but enhance the beauty of the neighborhood. Additionally, enhanced street sweeping provides the benefit of keeping the City streets free of litter, debris, and leaves especially during the fall season.

### **Job creation**

The designing, planning, development, and construction of green infrastructure projects generates job creation across diverse economic sectors. With the passing of the SCWP, the program is projected to create 6,530 direct construction jobs and 1,347 direct operations and maintenance (O&M) jobs over the span of 30 years (Zerolnick 2018). The need for green infrastructure projects will increase with climate change and aging infrastructure. Many of the green infrastructure projects will generate jobs with good wages and career pathways while also improving regional economic development (Gordon et al. 2011).

To implement the USCR EWMP Group's stormwater capture projects and stormwater pollution prevention programs, jobs across multiple sectors are needed. All County projects will adhere to the County's local and targeted worker hiring program requirements intended to enhance local job growth. Additionally, the City uses an outside consultant to remove the invasive weed *Arundo donax* from the Santa Clara River. The project can only be accomplished by hand labor and specialized machinery. The City ensures that these projects pay prevailing wage and enhance local job growth. Any business having a working address within City limits get a 10% preference for contracts to support local jobs and businesses.

**f. Disadvantaged Community co-benefits**

Disadvantaged communities (DACs) are disproportionately affected by the changing climate (Smith et al. 2014). The implementation of green infrastructure projects provides a multi-benefit strategy to foster development in a sustainable manner, increase resiliency to climate change, improve ecological connectivity, and create healthier communities. Neighborhoods where green infrastructure is both productive and easily accessible have been shown to offer significant benefits for disadvantaged communities, such as increased opportunities for social connectivity (Anderson et al. 2021). Additionally, green spaces, such as parks and community gardens, provide public places for people to gather, exercise, and connect with nature. These green spaces provide critical health, social, and environmental benefits to disadvantaged neighborhoods (Kramer 2014).

The City participates in WaterTalks, a public program that provides a series of events to increase community involvement in sustainable water planning. The program is designed to ensure that the health, safety, welfare, and resiliency of lower-income community members are considered when making regional water resource management decisions. WaterTalks also includes the California State University's Water Resources and Policies Initiative (WRPI), which is responsible for involving communities in the USCR region. WaterTalks is funded through Proposition 1, which sets aside 10% of funds (\$9.8M) to planning and outreach in environmentally distressed communities. The City has two projects, Via Princessa Park and Newhall Memorial Park, currently in planning design that will provide benefits to DACs nearby. Since 2016, the Upper Santa Clara River IRWM Region has partnered with the Ventura County and Greater Los Angeles County IRWM Regions to implement a Disadvantaged Community Involvement Program (DACIP) that allocates Proposition 1 funding for outreach, partnering, and local capacity building through technical assistance that will ensure the opportunity for involvement in planning efforts.



### References

- Anderson, V., Gough, W. A., & Agic, B. (2021). Nature-based equity: an assessment of the public health impacts of green infrastructure in Ontario Canada. *International Journal of Environmental Research and Public Health*, 18(11), 5763.
- Aronson, M. F., Lepczyk, C. A., Evans, K. L., Goddard, M. A., Lerman, S. B., MacIvor, J. S., ... & Vargo, T. (2017). Biodiversity in the city: key challenges for urban green space management. *Frontiers in Ecology and the Environment*, 15(4), 189-196.
- Beyer, K. M., Kaltenbach, A., Szabo, A., Bogar, S., Nieto, F. J., & Malecki, K. M. (2014). Exposure to neighborhood green space and mental health: evidence from the survey of the health of Wisconsin. *International journal of environmental research and public health*, 11(3), 3453-3472.
- Diringer, S. E., Shimabuku, M., & Cooley, H. (2020). Economic evaluation of stormwater capture and its multiple benefits in California. *Plos one*, 15(3), e0230549.
- Gordon, E., Hays, J., Pollack, E., Sanchez, D., Walsh, J., & Lewis, M. (2011). *Water works: rebuilding infrastructure, creating jobs, greening the environment*. Economic Policy Institute.
- Kramer, M. (2014). *Enhancing sustainable communities with green infrastructure*. Office of Sustainable Communities, US Environmental Protection Agency: Washington, DC, USA, 61.
- Kuo, F. E., Sullivan, W. C., Coley, R. L., & Brunson, L. (1998). Fertile Ground for Community: Inner-City Neighborhood Common Spaces. *American Journal of Community Psychology*, 26(6), 823–851.
- Pepper, G. (2015). *Cleaner, healthier streets: possible approaches and likely benefits: An evidence review written for the Newcastle City Council Public Health team*.
- Santa Clarita Valley Groundwater Sustainability Agency (SCVGSA). *Santa Clara River Valley East Groundwater Subbasin Groundwater Sustainability Plan*. January 2022. <https://scvgsa.org/wp-content/uploads/2022/02/Santa-Clara-River-Valley-East-Groundwater-Subbasin-GSP.pdf>
- Smith, K.; Woodward, A.; Campbell-Lendrum, D.; Chadee, D.; Honda, Y.; Liu, Q.; Olwoch, J.; Revich, B.; Sauerborn, R.; Aranda, C. (2014). Human health: Impacts, adaptation, and co-benefits. In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*; Field, C.B., Barros, V.R., Dokken, D.J., Mach, K.J., Mastrandrea,

M.D., Bilir, T.E., Chatterjee, M., Ebi, K.L., Estrada, Y.O., Genova, R.C., et al., Eds.; Cambridge University Press: Cambridge, UK; New York, NY, USA, 2014; pp. 709–754.

U.S. Department of Homeland Security, Federal Emergency Management Agency (FEMA). (2017). National Flood Insurance Program Community Rating System Coordinator's Manual. FIA-15/2017. [https://www.fema.gov/sites/default/files/documents/fema\\_community-rating-system\\_coordinators-manual\\_2017.pdf](https://www.fema.gov/sites/default/files/documents/fema_community-rating-system_coordinators-manual_2017.pdf)

U.S. Environmental Protection Agency. (2008). Reducing urban heat islands: Compendium of strategies. Draft. <https://www.epa.gov/heat-islands/heat-island-compendium>.

Wolf, K. (2017). The health benefits of small parks and green spaces. *Parks & Recreation*. 52 (4): 28-29., 52(4), 28-29.

Zerolnick, J. (2018). *Liquid Assets: How Stormwater Infrastructure Builds Resilience, Health, Jobs, & Equity*. LAANE: A New Economy For All.

1.2 **Watershed Control Measures Completed.** Complete Table 1a, on an Excel spreadsheet. Include all watershed control measures (aside from minimum control measures specified in Part VIII of the Order) in the Watershed Management Program completed since the effective date of the Order for Ventura County Permittees, since March 28, 2014 for the City of Long Beach, and since December 28, 2012 for other Los Angeles County Permittees. This table is cumulative—i.e., the table should include all the control measures completed from the time of the aforementioned dates to the end of this reporting period. Structural control measures as well as non-structural control measures (e.g., enhanced MCMs such as incentive programs, outreach and conservation programs, etc.) should be included in this table. If information is not available for a particular field, the field should indicate “Not Applicable” (N/A)[*Order –IX*].

**PLEASE SEE EXCEL ATTACHMENT FOR TABLE 1A.**

1.2a) Additional Information. Provide additional information regarding the Watershed Control Measures completed (e.g., other compliance metrics and a list of (a) Permittees and non-Permittees collaborated with for achievement of milestones, (b) funding sought, (c) funding obtained, (d) technical assistance received (e.g., through the Safe Clean Water Program Watershed Area Steering Committee), (e) additional local community co-benefits such as clean streets (including, without limitation, street sweeping, litter abatement, etc.), more parks and green spaces, reduced heat island effect, reduced flooding, water supply augmentation, neighborhood beautification, and job creation, and (f) other co-benefits and resources accruing to disadvantaged communities as identified on CalEnviroScreen).

Please refer to Section 1.1 for a summary of all Watershed Control Measures completed. Please see Excel attachment for additional information for specific Watershed Control Measures completed.

1.3 **Watershed Control Measures Planned and In Progress**. Complete Table 1b, on an Excel spreadsheet. Include all watershed control measures (aside from minimum control measures specified in Part VIII of the Order) in the Watershed Management Program that are planned and in progress. Structural control measures as well as non-structural control measures (e.g., enhanced MCMs such as incentive programs, outreach and conservation programs, etc.) should be included in this table. If information is not available for a particular field, the field should indicate “Not Applicable” (N/A) [*Order – IX*].

**PLEASE SEE EXCEL ATTACHMENT FOR TABLE 1B.**

1.3a) **Additional Information**. Provide additional information regarding the Watershed Control Measures planned and in progress (e.g., other compliance metrics and a list of (a) Permittees and non-Permittees collaborated with for achievement of milestones, (b) funding sought, (c) funding obtained, (d) technical assistance received (e.g., through the Safe Clean Water Program Watershed Area Steering Committee), (e) additional local community co-benefits such as clean streets (including, without limitation, street sweeping, litter abatement, etc.), more parks and green spaces, reduced heat island effect, reduced flooding, water supply augmentation, neighborhood beautification, and job creation, and (f) other co-benefits and resources accruing to disadvantaged communities as identified on CalEnviroScreen).

Please refer to Section 1.1 for a summary of all Watershed Control Measures planned and in progress. Please see Excel attachment for additional information for specific Watershed Control Measures planned and in progress.

1.4 **Water Body Pollutant Combination (WBPC) Compliance**. Complete Table 1c on an Excel spreadsheet for all WBPCs identified in the Watershed Management Program. If information is not available for a particular field, the field should indicate “Not Applicable” (N/A) [*Order – X*].

**PLEASE SEE EXCEL ATTACHMENT FOR TABLE 1C.**

1.5 **Additional Information**. Attach any additional information or reports pertinent to the WMP to this report. Provide a brief summary of these attachments below.

Responses to Section 1.2, 1.3, and 1.4 may be found in the Excel file attached to this Watershed Management Program Progress Report Form. Certification statements for the USCR EWMP Group are also attached to this Watershed Management Program Progress Report Form.

Section 1.1 is web-posted at the following link: [wramps2.org](http://wramps2.org)