

Enhancing Biodiversity and Water Quality in Los Angeles: Expanding Application of the Greenway Concept




UCLA

Institute of the Environment and Sustainability

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Client: Westwood Greenway Inc.

Advisor: Edith de Guzman



What would you do if a developer wanted to build a parking lot on vacant land in your neighborhood?



Urbanization in Los Angeles



Impacts:



Water Quality



Biodiversity





Marvin Braude
Mulholland
Gateway Park

Skirball Cultural Center

Westridge-Canyonback
Wilderness Park

UCLA

Franklin
Canyon Park,
Mountains
Recreation...

LAUREL CANYON

Greystone Mansion

West
Hollywood

FAIRFAX

Beverly Hills

Will Rogers
State
Historic Park

BRENTWOOD

WESTWOOD

Westwood
Greenway

Los Angeles County
Museum of Art

The Underground
Museum
Temporarily closed

Will Rogers
State Beach

PACIFIC
PALISADES

Santa Monica

Clover Park

MAR VISTA

CLARKDALE

CULVER - WEST

Westfield Culver City

Culver City

Kenneth
Hahn State
Recreation
Area

CRENSHAW

LEIM

Venice Beach

VENICE

Ladera Heights

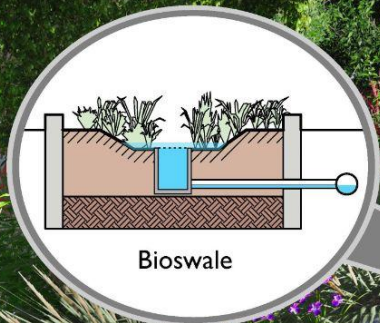
Edward
Vincent
Park



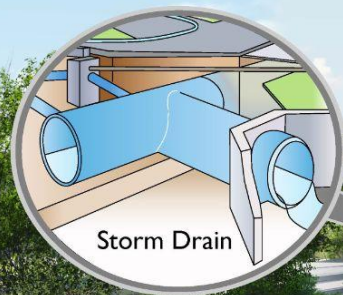


WESTWOOD GREENWAY

The Westwood Greenway Project is designed to capture urban runoff water from approximately 2,400 acres in the surrounding community. It showcases bioswale treatment of polluted water. On the north side, water from the existing storm drain is intercepted by the low flow diversion structure and circulates through the hydrodynamic separator, preventing larger particles from entering the lift station.



Bioswale



Storm Drain

The water is then pumped above ground where it runs through sand filters for additional removal of sediment before entering a vegetated bioswale flowing west toward the Westwood/Rancho Park Station. From there, the water flows into an underground pipe crossing beneath the tracks to a lift station. Together with stormwater from Westwood Boulevard, it is pumped into the south bioswale flowing east, which you see nearby. The cleaned water returns to the storm drain under Overland Avenue to complete its journey to the sea.

Research objectives

Quantify
impacts on
water quality
and
biodiversity

Identify modes
to apply the
Greenway
concept across
Los Angeles

Increase
visibility of the
Greenway
concept



2022

Biodiversity at the Westwood Neighborhood Greenway



Advisor: Edith de Guzman

UCLA IoES Westwood Greenway Practicum Team: Cassandra Kays, Claire Villegas, Cortney Kleczka, Daniela Lopez, Danielle Hoekstra, Alé Pulido, and Lynsea May Southwick



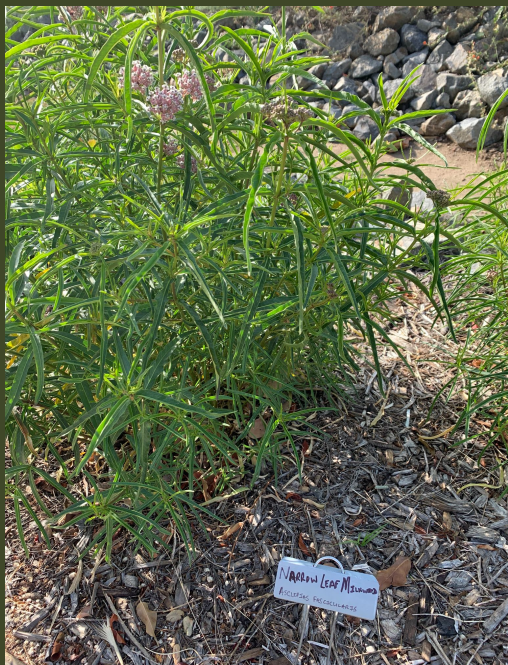
Malaise Traps



BioBlitz

Habitat quality: 4/5

Increase in species density and volunteer natives



Narrow Leaf Milkweed
(*Asclepias fascicularis*)



California Poppy
(*Eschscholzia californica*)



Hummingbird Sage
(*Salvia spathacea*)

Habitat variety: 4.5/5

High variety of volunteer natives



Recommendations



Elderberry
(*Sambucus nigra*)



Western Chokecherry
(*Prunus virginiana*)

Edge effects: 3.75/5

Impact of Metro traffic and local pets



Offsite connectivity: 4/5

Culverts between north and south side, stream connectivity, holes in fence





Fiery Skipper
(*Hyphila phyleus*)



Western Lady Beetle
(*Cycloneda polita*)



Gulf Fritillary
(*Dione vanillae*)



Song Sparrow
(*Melospiza melodia*)



Allen's Hummingbird
(*Selasphorus sasin*)



Cabbage White (*Physa*
rapae)



Mourning Cloak
(*Nymphalis antiopa*)



Coyote
(*Canis latrans*)



Dry-weather

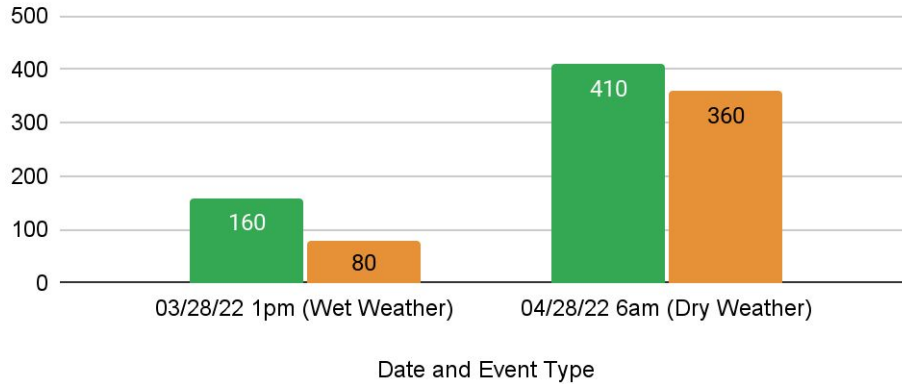


Wet-weather

Water Quality: Hardness & TDS

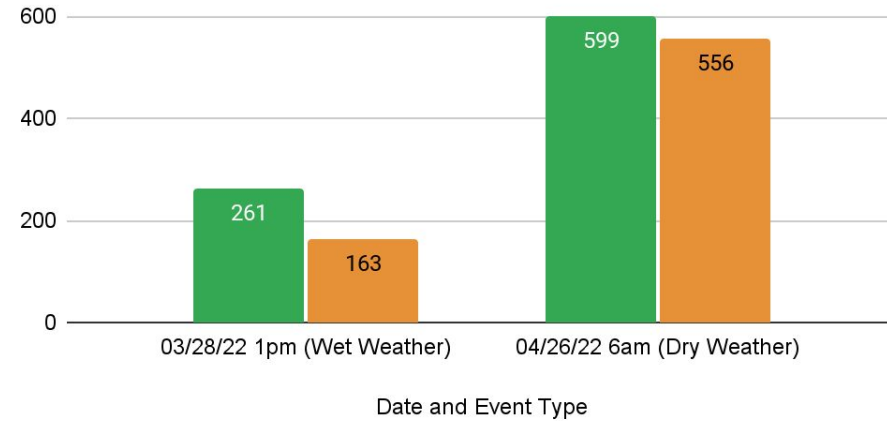
Hardness

■ Influent (N. Pump) Concentration (ppm)
■ Effluent (S. Drain) Concentration (ppm)



Total Dissolved Solids (TDS)

■ Influent (N. Pump) Concentration ■ Effluent (S. Drain) Concentration

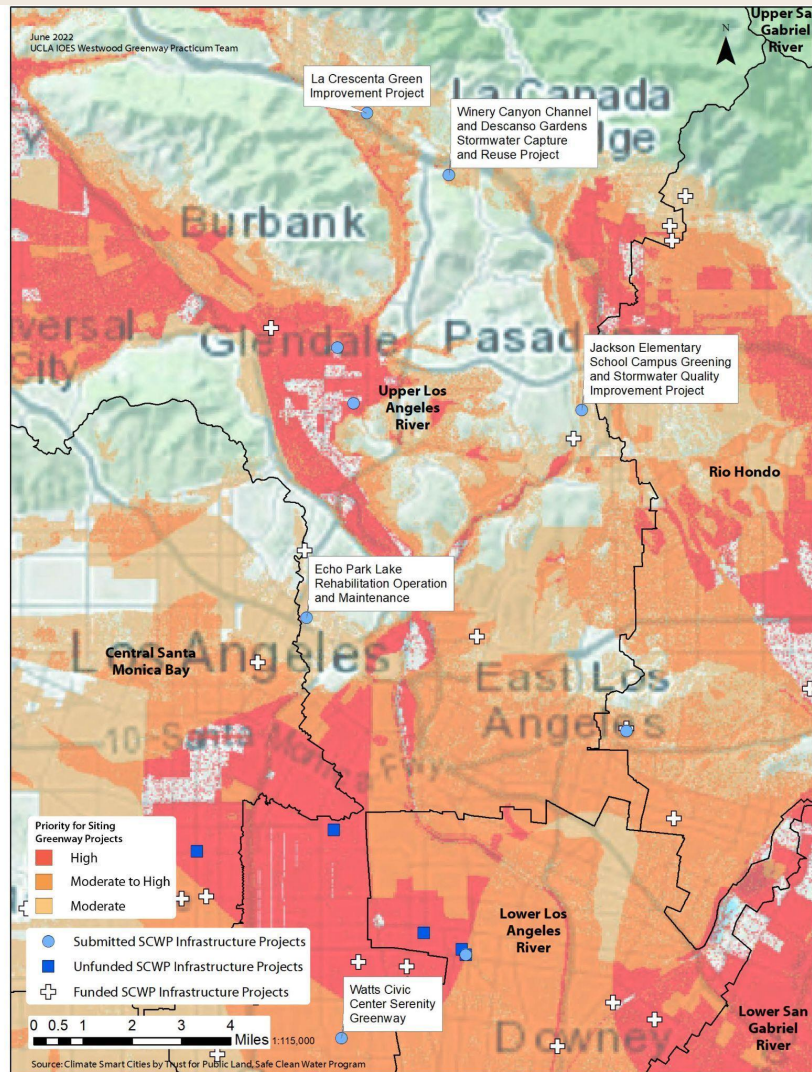


LA COUNTY'S

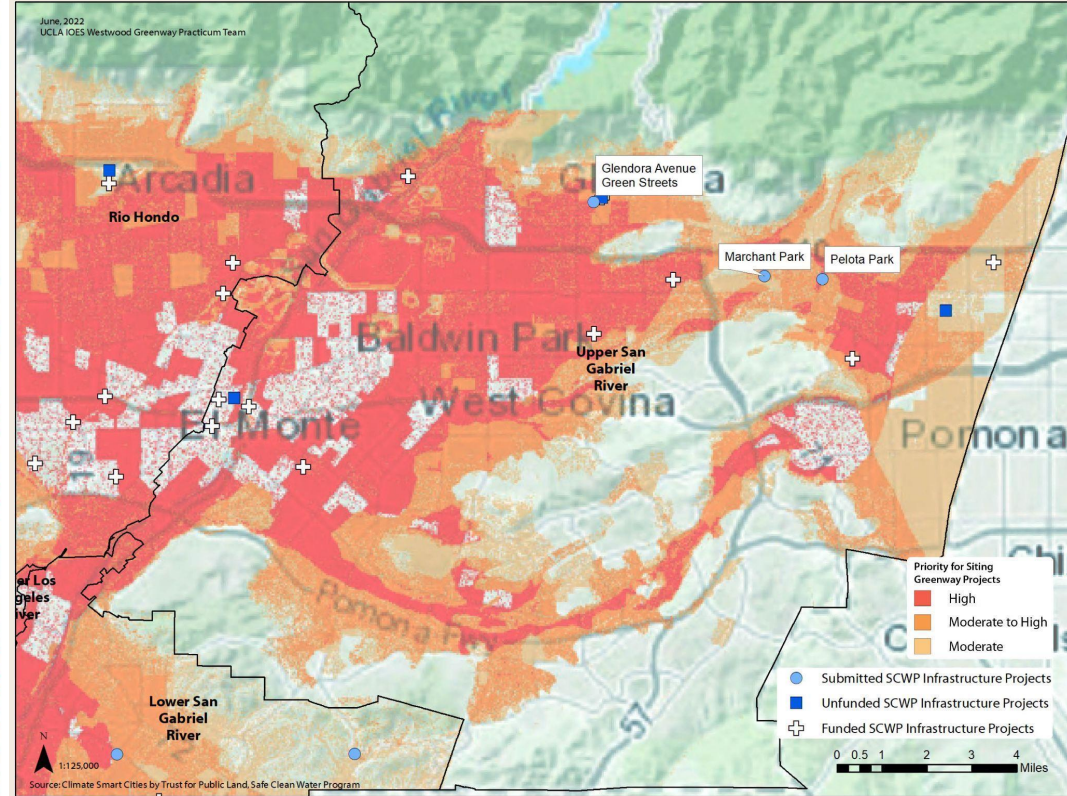
Safe Clean Water Program

1 — 2

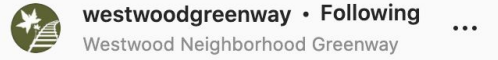
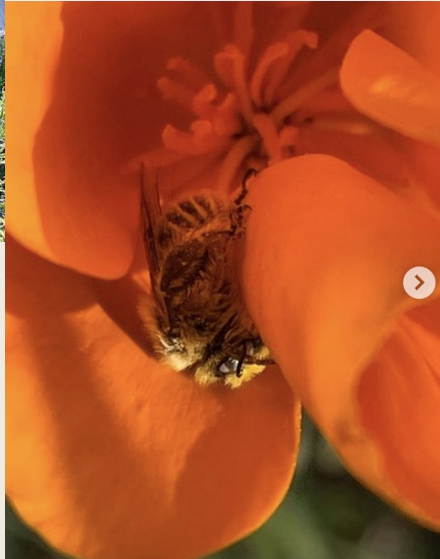
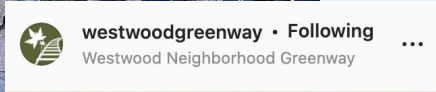
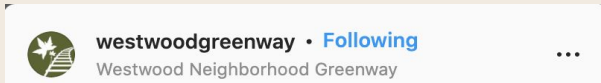
Focused on projects that capture, clean, and recycle stormwater



Upper San Gabriel



← Upper LA River



Earth Day Weeding Party



Join us at the greenway
April 23, 2022 from 1-2 pm

Engagement Plan

Goals

Resources

Partnerships

Future content



Thank you!

Questions?

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<https://westwoodgreenway.org/>