Ladera Heights – W Centinela Green Improvement

Infrastructure Program
Fiscal Year 2022-2023
Central Santa Monica Bay
Los Angeles County Public Works
Kara Plourde
This project will infiltrate stormwater into dry wells along W Centinela Ave in Ladera Heights and install permeable pavement & bioswales.

- **Primary Objective:** Stormwater Quality Improvement
- **Secondary Objectives:** Community Enhancement
- **Project Status:** Planning
- **Phases for which SCW funding is being requested:** Design Phase
- **Total Funding Requested:** $500,000
Project Location

Ladera Heights
**Project Location**

- Centinela Creek
- Unincorporated Community of Ladera Heights
- W Centinela Avenue between Springpark Ave and Sherbourne Dr
- Drainage Area = 307 acres
- Mostly residential and commercial
Project Background:

- Most downstream for County UA, large tributary area, feasibility
- Ballona Creek Watershed Management Plan (WMP)
Benefits:
Water Quality:
• Removing pollutants from stormwater

Community Enhancement:
• Increase vegetation
• Reduce heat island effect and increase shade
Project Details

Details
- 2 Diversion Points
- 67 drywells
- 13 pretreatment
- Bioswales
- Pervious pavement
- Trees
- Potential to capture 17 AF of runoff
## Cost & Schedule

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Cost</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Preliminary Engineering, PS&amp;E for stormwater components</td>
<td>$1,000,000</td>
<td>Late 2022</td>
</tr>
<tr>
<td>Construction</td>
<td>Construction and construction engineering for stormwater components</td>
<td>$9,500,000</td>
<td>Late 2024</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$10,500,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Annual Cost Breakdown

- **Annual Cost:** $1.1 M
- **Project Lifespan:** 50 years
- **Lifecycle Cost:** $38.5 M
## Funding Request

<table>
<thead>
<tr>
<th>Year</th>
<th>SCW Funding Requested</th>
<th>Phase</th>
<th>Efforts during Phase and Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$500,000.00</td>
<td>Design</td>
<td>Project Design</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$500,000.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Leveraged Funding: $500,000 (50%)
- Future SCW Funds: Construction
Preliminary Score

- Water Quality: 45 pts
- Water Supply: 8 pts
- Community Investment Benefits: 14 pts
- Nature Based Solutions: 5 pts
- Leveraged Funds and Community Support: 0 pts

Total: 72 pts
• **Water Quality Benefits**
  
  • Project will divert and treat wet weather runoff via:
    • Diversion Structures
    • Pretreatment Devices
    • Bioswales
    • Permeable Pavement
  
  • Tributary Area = 307 acres
  
  • Capacity = 17 acre-feet (85th percentile, 24-hour storm)
  
  • Pollutant Reduction (Zinc, Trash, Bacteria, etc)
  
  • Potential to expand the project to cover an additional 49 acres and treat additional area
Community Investment Benefits and Nature Based Solutions

• **Community Investment Benefits**
  - Improve localized flooding
  - Increase vegetation
  - Reduce heat island effect and increase shade

• **Nature Based Solutions**
  - Nature-based solutions are implemented through:
    - Bioswales with drought tolerant plants
      - Potential planting of new trees
    - Permeable paving strip
• **Leveraging Funds**
  - $500,000
    - County will supplement and match any Regional Funds with Municipal Funding
  - 50% funding matched
  - Other Potential Sources:
    - General funds, other grants

• **Community Support**
  - Met with Ladera Heights Civic Association, Ladera Heights Community Enhancement Corporation
  - Community outreach will be performed prior to commencing design and construction
  - Exploring alternative avenues for engagement
Project Location

Unincorporated Los Angeles County

City of Los Angeles

Inglewood

Legend
- Project Location
- Project Tributary Boundaries

Distance Scale: 0, 0.05, 0.1, 0.2, 0.3, 0.4 Miles
West Los Angeles College Soccer Field Basin Dry Well Project

Funding Program (Infrastructure Program)
Fiscal Year 2022-2023
Watershed Area: Central Santa Monica Bay
Project Lead: Los Angeles Community College District & BuildLACCD
Presenter: Daniel Apt, Olaunu (LACCD Stormwater Consultant)
The WLAC Soccer Field Basin Dry Well Project will integrate six (6) dry wells into the existing soccer field/stormwater detention basin.

- Primary Objective: Water Quality: Assist in compliance with the Small MS4 Permit
- Secondary Objectives: Water Quality: Helps to meet compliance with downstream TMDLs
- Project Status: Phases for which SCW funding is being requested:
  - Design & Construction
- Total Funding Requested:
  - $399,967
• Project Location: West Los Angeles College

• Watershed Area: Central Santa Monica Bay

• Capture Area: 36 acres

• Municipality Benefits
  • Water Quality improvement
  • Helps to meet compliance with downstream TMDLs through capture and infiltration of the 85th percentile storm event for the projects' drainage area.

• Disadvantaged Communities (DAC)
  • 1.25 Miles from WLAC
  • 55.2% of WLAC students received the College California College Promise Grant (low-income qualification)
Project Background

• Why was the Project Location selected?
  • Existing WLAC soccer field stormwater detention basin captures more than 50% of the WLAC campus.
  • Takes advantage of existing stormwater infrastructure.

• How was the Project developed?
  • LACCD is developing stormwater projects for all of its 9 campuses
  • The West Los Angeles College Soccer Field Basin Dry Well Project has the largest drainage area of 8 WLAC stormwater projects

• Which regional water management plan includes the proposed project?
  • Submitted to the GLAC IRWMP

• Description of benefits to municipality/municipalities
  • Water quality improvement
  • Assistance in meeting downstream TMDLs
  • Recharge of groundwater - Santa Monica Basin (Concurrence from City of Santa Monica)

• Description of how the Feasibility Study or Project Concept will provide Disadvantaged Community (DAC) Benefits
  • Infiltration of the dry weather/stormwater runoff of the 85th percentile 24-hour storm event
  • Provides 12-acre feet of annual water supply - recharge of groundwater in the Santa Monica Basin
  • Enhance playing field of an existing soccer field/stormwater detention basin
Project Concept Design
• Current site conditions – Existing soccer field stormwater detention basin
• Completed studies/analysis – Geotechnical report & Concept design/programming report
• Description of any alternatives considered – Evaluated distributed biofiltration
## Cost & Schedule

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<thead>
<tr>
<th>Phase</th>
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<th>Cost</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Planning and concept design costs associated with the WLAC Soccer Field Basin Dry Well Project</td>
<td>$23,334.50</td>
<td>04/20</td>
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<tr>
<td>Design</td>
<td>Design of the 6 dry wells, modifications to the basin outlet, and storm drain connections</td>
<td>$85,532.00</td>
<td>07/2022</td>
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<tr>
<td>Construction</td>
<td>Construction of the 6 dry wells, modifications to the basin outlet, and storm drain connections.</td>
<td>$714,406.00</td>
<td>02/2023</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$823,272.50</strong></td>
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</tr>
</tbody>
</table>

- Description of Annual Costs: Maintenance, operation, and monitoring costs
- Project Lifespan & Lifecycle Cost (Module Generated): $1,122,208.52
## Funding Request

<table>
<thead>
<tr>
<th>Year</th>
<th>SCW Funding Requested</th>
<th>Phase</th>
<th>Efforts during Phase and Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$42,745.00</td>
<td>Design</td>
<td>Design of the 6 dry wells, modifications to the basin outlet, and storm drain connections.</td>
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<td>2</td>
<td>$357,222.00</td>
<td>Construction</td>
<td>Construction of the 6 dry wells, modifications to the basin outlet, and storm drain connections.</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$399,967.00</td>
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<td></td>
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</tbody>
</table>

- Leveraged Funding amount and percent: $399,971.00 and 50%
- Description of future potential SCW funding requests, if applicable
  - No further funding requests for the WLAC Soccer Field Basin Dry Well Project
Preliminary Score

65pts

- Water Quality: 45pts
- Water Supply: 10pts
- Community Investment Benefits: 5pts
- Nature Based Solutions: 5pts
- Leveraged Funds and Community Support: 0pts
• Primary mechanisms that achieve Water Quality and Water Supply Benefits claimed
  • Retention of the design storm volume (DSV), which is based on the 85th percentile 24-hour storm event.
• Wet/Dry runoff captured: 0.0049 cfs average dry weather
• Tributary Area: 36 acres
• Capacity: 3.3379 ac-ft
• Pollutant Reduction: 100.0 %
• Annual Water Supply Volume: 12.033 ac-ft
• Water Supply Use: water supply aquifer
• Water Supply and Water Quality Cost Effectiveness:
  • $4,991.43 per ac-ft
Community Investment Benefits and Nature Based Solutions

• Community Investment Benefits
  • Reduces stormwater volumes (3.3379 ac-ft) associated with WLAC to the greater Los Angeles storm drain system.
    • Reduced volume and rate of stormwater providing flood management and flood risk mitigation.
  • Enhanced recreational opportunity
    • Eliminates dry weather runoff causing wet grass and muddy conditions in the soccer field
  • Enhanced green space at a school site that can again be used for recreation
    • Eliminates dry weather runoff causing wet grass and muddy conditions in the soccer field

• Nature Based Solutions
  • Project implements natural processes through infiltration of stormwater and mimicking natural hydrology
Leveraging Funds and Community Support

• Leveraging Funds
  • The LACCD sustainable building program is funded mainly through bond measures
  • Most recently, Bond Measure CC was approved in 2016 for $3.3 billion allocated to improvement of facilities throughout the nine LACCD colleges
  • Leveraged funding amount: $399,971
  • Leveraged funding status: Commitment Received
  • 50% funding matched

• Community Support
  • West Los Angeles College Citizens' Oversight Committee
  • Planned outreach:
    • Coordination with WLAC faculty and student groups on campus to help develop educational signage for the project
    • Further coordination with the West Los Angeles College Citizens' Oversight Committee for targeted outreach of users of the WLAC soccer field
Questions?
Angeles Mesa Green Infrastructure Corridor Project

Funding Program (Infrastructure Program)
Fiscal Year 2022-2023
Central Santa Monica Bay
City of Los Angeles, LA Sanitation and Environment
Project Overview

This project aims to improve water quality, mitigate floods, and restore habitat within the Park Mesa Heights neighborhood and the Ballona Creek Watershed.

• Project Objectives:
  • Improve public health and habitat
  • Install several types of stormwater capture and increase permeability
  • Community investment with nature-based solutions

• Project Status: Feasibility Report completed and funding requested

• Funding request for: Planning, Design, Construction, Maintenance

• Total Funding Requested: $8.4M
• Capture Area: 162 Acres
• Land Use: Largely commercial and single-family households
• Watershed: Ballona Creek Watershed
• Council District: 8
• Neighborhood Council: Park Mesa Heights
• Nearby Projects: Destination Crenshaw, METRO Crenshaw Line
Project Background

• The Project location was selected because it is located within a disadvantaged community that has High Park Needs and the area currently has minimal existing stormwater and green infrastructure.

• Project has been developed with consideration to the neighboring Destination Crenshaw Project (including improvements along the METRO Crenshaw line).

Rendering of Green Street Elements “Before” and “After” on 11th Avenue
Project Details

Project to include:

- 2 diversion structures from City storm drains
- 30 drywells
- 120 new trees
- 3,000 sf of landscaping near Crenshaw High School
- 14,000 sf of bioswales and greenery
Regional Benefits:

- Capable of capturing 146 AF of runoff annually (67 AF of wet weather runoff and 79 AF of dry weather runoff).
- Removal of 71.4% of zinc, 84.6% of bacteria, and 100% of trash from captured runoff.
- Increased water infiltration to groundwater aquifers.
Benefits to a Disadvantaged Community:

- Improved flood management and flood risk mitigation with use of 30 drywells to capture runoff.

- An additional 120 trees and vegetated medians/landscape boxes to provide:
  - improved air quality,
  - reduction of heat island effect,
  - increased carbon sequestration of about 95 pounds of carbon per tree annually.

- Reduction in pollutants from local runoff (84.6% of bacteria and 100% of trash).

- Increased educational opportunities about stormwater and water resources, including educational signage near schools.

- LAUSD Safe Route 2 School Analysis was considered and incorporated.
Preliminary Score

79pts

- Water Quality: 50
- Water Supply: 10
- Community Investments: 10
- Nature Based Solutions: 5
- Leveraged Funds and Community Support: 4

Total: 79 points
85th percentile storm volume: 8.2 AF

With project capital cost of $8.18M, water quality effectiveness results in 1.002 AF/$-Million

84.6% primary pollutant load (bacteria) and 100% secondary pollutant load (trash) reduction

146 AF/yr of water capture

Water supply cost effectiveness of $3,221/AF
Community Investment Benefits and Nature Based Solutions

Community Investment Benefits

• Improved flood mitigation, restoration of parks, enhanced recreational opportunities, increasing shade (approximately 60,000 sf of new canopy), carbon sequestration, and greening at schools

Nature Based Solutions

• Parkway planters, trees, and other green street elements will be designed following natural processes to slow water and allow infiltration to the aquifer
• Drywells will use the natural process of infiltration of water to the aquifer
• An increase in native vegetation, with vegetated areas incorporating CA-native plants and CA-friendly vegetation
Leveraging Funds and Community Support

Leveraging Funds
• At this time, the City has not identified potential funding opportunities outside of the SCW program

Community Support
• Letters of support have been received from the City of LA’s Council District 8 and from Destination Crenshaw
• The City has hosted 3 community outreach webinars (Oct. 25, Nov. 10, Nov.13) and briefed Crenshaw High School
• Project information has been published on the Park Mesa Heights NC website, through Nextdoor campaigns, and LASAN social media
## Cost & Schedule

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Cost</th>
<th>Estimated Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Engineering, Legal, &amp; Administrative (ELA)</td>
<td>$43,550</td>
<td>03/2022</td>
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<tr>
<td>Design</td>
<td>ELA</td>
<td>$1,000,000</td>
<td>06/2023</td>
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<tr>
<td>Construction</td>
<td>Construction of BMPs</td>
<td>$7,137,882</td>
<td>10/2026</td>
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<tr>
<td>Monitoring</td>
<td>Annual Cost of $30k for First 4 years</td>
<td>$120,000</td>
<td>10/2027</td>
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<tr>
<td>O&amp;M</td>
<td>First year of annual O&amp;M is requested for FY26/27</td>
<td>$100,000</td>
<td>-</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$8,401,432</strong></td>
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</tbody>
</table>

- Project Lifespan of 50 years
- Annualized Life-Cycle Cost of $274,273/year
## Funding Request

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</thead>
<tbody>
<tr>
<td>1</td>
<td>$573,550</td>
<td>Planning, Design, and Monitoring</td>
<td>Preliminary design and baseline monitoring, YR1-FY22/23</td>
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<tr>
<td>2</td>
<td>$530,000</td>
<td>Design and Monitoring</td>
<td>Final design and baseline monitoring, YR2-FY23/24</td>
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<td>3</td>
<td>$3,598,941</td>
<td>Construction and Monitoring</td>
<td>Start of construction, continued monitoring, YR3-FY24/25</td>
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<tr>
<td>4</td>
<td>$3,598,941</td>
<td>Construction and Monitoring</td>
<td>Construction completion, project effectiveness monitoring, and long-term O&amp;M, YR4-FY25/26</td>
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<tr>
<td>5</td>
<td>$100,000</td>
<td>First year of regular O&amp;M</td>
<td>Operation and Maintenance, YR5+</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$8,401,432</strong></td>
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</table>
Edward Vincent Jr. Park
Stormwater Improvements Project

Infrastructure Program
Fiscal Year 2022-2023
Central Santa Monica Bay Watershed Area
Project Lead: City of Inglewood
Presenter: Brenda Ponton, Woodard & Curran
Project Overview

Multi-benefit stormwater improvements project at Edward Vincent Jr. Park in City of Inglewood using infiltration and bioretention best management practices.

- Primary Objective: Improve water quality
- Secondary Objectives: Provide community investments through enhancing park amenities and providing educational opportunities
- Project Status: Planning complete; Requesting Design Phase funding
- Total Funding Requested: $4,270,000
Project Background

- Project included as signature regional project in Ballona Creek Enhanced Watershed Management Program (EWMP)
- Captures 85th percentile, 24-hr storm volume for the 895-acre drainage area
- Water quality benefits:
  - Reduces metals, bacteria, and trash in the Centinela Creek and Ballona Creek Estuary
- Community benefits:
  - Vegetation and shade trees
  - Reintroduction of historical creek feature
  - Enhanced recreational opportunities (e.g., new trails, new field)
  - Public safety through addressing daylighted portion of the storm drain
  - Educational opportunities for local schools and park visitors
- Park improvements will directly benefit the local disadvantaged community
Project Details

- Concept includes:
  - 3 diversions
  - Infiltration gallery
  - Small lift station
  - Dry creek channel
  - Bioretention area with trash capture and sediment forebay

- Geotechnical investigations completed during the Feasibility Study
• Additional surface improvements:
  • New field
  • Native vegetation
  • Shade trees
  • New trails
  • Boardwalk
  • Seating areas
  • Educational signage
## Cost & Schedule

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<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>Agency Project Management, CEQA Documentation, Permitting, Design (30/60/90/100), Pre-Construction Monitoring, Outreach During Design</td>
<td>$4,270,000</td>
<td>06/2025</td>
</tr>
<tr>
<td>Construction</td>
<td>Project Management, Construction Management, Engineering Services during Construction, Outreach, Project Construction</td>
<td>$42,424,000</td>
<td>03/2028</td>
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<tr>
<td><strong>TOTAL</strong></td>
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<td><strong>$46,694,000</strong></td>
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- Annual O&M: $819,920
- Post-Construction Monitoring (3 years): $329,700
- Project Lifespan: 50 years
- Lifecycle Cost: $66.5M
# Funding Request

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>$1,035,000</td>
<td>Design</td>
<td>Pre-Construction Monitoring, Outreach During Design, Preliminary (30%) Design, Agency Project Mgmt.</td>
</tr>
<tr>
<td>2</td>
<td>$2,610,000</td>
<td>Design</td>
<td>Pre-Construction Monitoring, Outreach During Design, CEQA Documentation, 60% Design, 90% Design, Agency Project Mgmt.</td>
</tr>
<tr>
<td>3</td>
<td>$625,000</td>
<td>Design</td>
<td>Pre-Construction Monitoring, Outreach During Design, 100% Design, Permitting</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$4,270,000</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Future Safe, Clean Water Program funding request anticipated for Construction Phase
Water Quality & Water Supply Benefits

- Primary Mechanisms: Infiltration and bioretention
- Wet Weather
- Tributary Area: 895 acres
- 24-hr Capacity: 34.3 acre-feet
- Water Quality Cost Effectiveness: 0.81
- Long-Term Pollutant Reduction:
  - 86.2% load reduction in Zinc (197 lbs)
  - 84.5% load reduction in *E. coli* (1.99e+14)
- Annual Water Supply Volume: N/A
Community Investment Benefits and Nature Based Solutions

• Community Investment Benefits
  • Improves flood management
  • Enhances parks and creates habitat
  • Improves public access to waterways
  • Enhances and creates new recreational opportunities
  • Reduces heat island effect/increases shade
  • Increases trees and native vegetation

• Nature Based Solutions
  • Mimics natural processes to slow, detain, capture, and infiltrate water in a manner that protects and enhances habitat and usable open space
  • Utilizes natural materials including soils and native vegetation
Leveraging Funds and Community Support

- **Leveraging Funds**
  - No funds leveraged for Design Phase

- **Community Support**
  - Strong community support demonstrated through support letters
  - Outreach is planned for initial stages of design to engage community on park amenities concepts
  - Outreach and engagement plan includes:
    - Community engagement events
    - Surveys, flyers, and posters
    - Webpage development
    - Social media postings and newsletter updates
Questions?