El Monte Norwood Elementary School Stormwater Capture Project

Funding Program: Infrastructure Program
Fiscal Year 2023-2024
Watershed Area: Rio Hondo
Project Lead: Trust for Public Land
Presenter: Edna Robidas
Previously Awarded TRP: No
Project Overview

Creation of multi-benefit park with playground, native and drought tolerant plants, edible garden, & bioretention/ biofiltration BMPs.

- **Primary Objective**: Improve water quality locally, downstream, and within the Rio Hondo and San Gabriel River by reducing metal discharges
- **Secondary Objective**: Reducing bacterial discharges to downstream water bodies
- **Project Status**: SCW funding is being requested for Planning, Design, & Construction
- **Total Funding Requested**: $9,828,559
• The Project is in the City of El Monte. It is located within the Rio Hondo Watershed Area and borders the Upper San Gabriel Watershed Area.

• Total Capture Area: 61.2 acres
• Impervious Area: 28 acres

• Project and Project drainage area is in a DAC.
• Nearly 6,900 people live within a 10 minute walk of the Project, 25% of which are children under 20 years old.
• There are no other public green spaces within a half mile radius.
Project Background

• Project Location Selection: The site was identified through public outreach as a top priority for conversion to public open space.
  • It is a decommissioned school that has been closed to the public for over a decade besides for use of the softball fields by a local youth sports team.
  • It is in a residential area (4565 Cogswell Rd, El Monte) with no other public space within walking distance.
  • The surrounding disadvantaged community lacks public green space, trees, shade, and recreational facilities.
Project Background

• Project Development: Active San Gabriel Valley (ASGV) and Trust for Public Land (TPL) are partnering on public engagement and project development, along with the El Monte City School District (EMCSD).
  • ASGV will lead engagement.
  • TPL will lead design and construction; TPL is the SCWP applicant.
  • EMCSD is the property owner, and has been involved throughout project development.

• Water Management Plan: El Monte has an Individual Watershed Management Program and the Project aligns with its water quality objectives.
• Project benefits:
  • Stormwater capture & infiltration (rain gardens)
  • Downstream water quality improvement
  • Beautification
  • Recreational improvements
  • Shade and increasing pervious area

• Benefits to Disadvantaged Communities:
  • Reduce heat island effect
  • Improve walkability
  • Provide health benefits from recreation
  • Improve air quality (through new trees)
Partners

• Implementation partners
  • Active San Gabriel Valley (ASGV)
  • Trust for Public Land (TPL)

• Non-profit groups supporting the project:
  • Council for Watershed Health
  • Day One
  • Eco Urban Gardens
  • Nature for All
  • San Gabriel Valley Conservation Corps

• Letter of support - El Monte City School District (property owner)

• No junction connection to Los Angeles County Flood Control District facilities
Project Details: Current Site Conditions

• The existing site consists predominantly of asphalt and turf. There are no shade trees throughout the 6 acre site.

• A geotechnical study was conducted in Spring 2022 and indicates soils and infiltration rates conducive for on-site infiltration.
Project Details: Alternative 1
# Cost & Schedule

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Cost</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Environmental Documentation and Permitting</td>
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<td>06/2024</td>
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<tr>
<td>Design</td>
<td>Design plans, estimates, specifications</td>
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<td>Construction costs</td>
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<td>Bid/Award</td>
<td>Construction Administration</td>
<td>$1,134,065</td>
<td>10/2025</td>
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<tr>
<td>TOTAL</td>
<td>-</td>
<td>$9,828,560</td>
<td>-</td>
</tr>
</tbody>
</table>

- Annual Costs for maintenance ($23,540) and monitoring ($10,000)
- Project Lifespan: 30+ years
- Lifecycle Cost (module-generated): $10,455,204
## 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>$642,637</td>
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<td>Design, Permitting, and Environmental Documentation</td>
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<td>Design Plans, Specifications, and Estimates</td>
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<td>4</td>
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<td>Construction</td>
<td>Construction and Construction Administration</td>
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<tr>
<td>5</td>
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<td>-</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$9,828,559</strong></td>
</tr>
</tbody>
</table>
Score as confirmed by the Scoring Committee

The Scoring Committee confirmed this score on December 1, 2022.

- Water Quality: 41 pts
- Water Supply: 12 pts
- Community Investment Benefits: 5 pts
- Nature Based Solutions: 0 pts
- Leveraged Funds and Community Support: 4 pts

Total: 62 pts
• Wet weather water quality benefits
• Tributary Area: 61.2 acres
• 24-hour storm capacity: 5.12 ac-ft
• Calculated 10-year Pollutant Reduction
  • Phosphorous = 89% and bacteria = 86.2%
  • They are considered priority pollutants for the San Gabriel River TMDL
• Annual Water Supply Volume: 25.76 ac-ft
• Water Supply Use (Main San Gabriel Groundwater Basin)

The Scoring Committee confirmed this score on December 1, 2022.
Community Investment Benefits and Nature Based Solutions

- Community Investment Benefits
  - Creating habitat and enhancing a park space.
  - Enhanced recreational opportunities.
  - Reduced local heat-island effect and increased shade.
  - Public health improvements.

- Nature Based Solutions
  - Natural processes implemented through infiltration.
  - Vegetation and addition of trees reduces the heat island effect.
  - Pervious pavement in lieu of impermeable blacktop.

The Scoring Committee confirmed this score on December 1, 2022.
Leveraging Funds and Community Support

• Community Support
  • Ongoing Community engagement since summer 2021
    • Conversations, surveys, stakeholder interviews, and an interactive community input web map.
  • ASGV collected over 500 surveys and 100 youth-oriented surveys
  • Letters were received from several non-profits
    • Day One
    • Eco Urban Gardens
    • Nature for All
  • ASGV and TPL will continue outreach as the Project progresses

The Scoring Committee confirmed this score on December 1, 2022.
Questions?

Edna Robidas
Trust for Public Land (TPL)

Larry Tortuya
CWE
Burke Heritage & Marengo Yard
Stormwater Capture Project

Funding Program - Infrastructure Program
Fiscal Year 2023-2024
Rio Hondo Watershed

Project Lead: City of Alhambra
Presenter: Merrill Taylor (Craftwater Engineering)
Previously Awarded TRP? - No
Project Overview

Regional and onsite stormwater capture and infiltration facility located beneath open space at Burke Heritage Park and Marengo Yard

• **Primary Objective**: Restore/rehabilitate park facilities while improving WQ within the Rio Hondo through nature-based stormwater management solutions
• **Secondary Objectives**: Incorporate onsite LID & public education
• **Project Status**: SCW funding request for Design & Construction
• **Total Funding Requested**: $4,424,118
**Project Location – Watershed Map**

- **Capture area jurisdiction:**
  - City of Alhambra
  - City of South Pasadena

- **Watershed Capture Area:**
  - 111 acres

<table>
<thead>
<tr>
<th>Land-use</th>
<th>Area (acres)</th>
<th>% of Impervious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Residential</td>
<td>35.7</td>
<td>76%</td>
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<tr>
<td>Commercial</td>
<td>0.4</td>
<td>0.8%</td>
</tr>
<tr>
<td>Institutional</td>
<td>2.6</td>
<td>5.6%</td>
</tr>
<tr>
<td>Secondary Roads &amp; Alleys</td>
<td>8.3</td>
<td>17.6%</td>
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</tbody>
</table>

**TOTAL** 111 100%
Project Location – Project Area & DAC Communities
Project Background

• Why was the Project Location selected?
  • Alhambra Stormwater Master Plan, passive park improvements, yard needs

• How was the Project developed?
  • Nature-based surface solutions and previous park plans/grants

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

• Description of benefits to municipality/municipalities
  • New park facilities, additional tree canopy, treat 85th percentile storm

• Description of benefits to Disadvantaged Communities
  • Not applicable
• Who are the implementation partners already identified?
  • City of Alhambra

• What communities or groups have expressed support for the project?
  • ActiveSGV

• Have you received a letter of concurrence from the municipality (if needed)
  • Yes. Led by the City of Alhambra

• Have you received a letter of concurrence from the Flood Control District (if needed)
  • Yes

• Have you yet engaged the appropriate vector control district about the project concept?
  • Yes
Project Details - Existing Conditions

Existing Conditions

- Infiltration Rate: 1.45 in/hr
- Depth to Groundwater: > 50 ft BGS
- Owner: City of Alhambra

*Feasibility, Geotechnical Investigation, and Stormwater Capture review done

*Alternative footprint sizes and diversion rates examined
Diversion Rate  | Storage Capacity | 24-Hour Capacity | Primary Pollutant Reduction (Zinc) | Secondary Pollutant Reduction (Copper)
--- | --- | --- | --- | ---
6 cfs | 0.14 ac-ft (46k Gal) | 11.37 ac-ft | 99.9% (17.2 lbs/yr) | 99.9% (6.4 lbs/yr)
• **Water Quality** improvement in the RH by treating stormwater and urban runoff

• **Nature-Based** creation of infiltrating bioretention and native vegetations

• **Park Recreational Enhancements** creating a new playground, paths, and picnic areas

• **Reduced Heat Island** native vegetation and 4 new shade trees throughout the park.
## Cost & Schedule

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Cost</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
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<tr>
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<td>12/2023</td>
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<tr>
<td>Construction</td>
<td>Construction capital costs, survey, administration and design support, construction management</td>
<td>$3,636,222</td>
<td>02/2026</td>
</tr>
</tbody>
</table>

### Annualized Costs

- **Maintenance Cost:** $280,000
- **Operation Cost:** $50,000
- **Monitoring Cost:** $25,000
- **Project Life Span:** 50

### Life-Cycle Costs

- **Life-Cycle Cost for Project:** $13,032,207
- **Annualized Cost for Project:** $543,147
## 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>$787,896</td>
<td>Design</td>
<td>Environmental Planning (CEQA) and Permitting, Community Outreach, Agency Project Management, and Professional Design Services (30/60/90/100)</td>
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<td>2</td>
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<td>4</td>
<td>$1,205,407</td>
<td>Construction</td>
<td>Construction capital costs, construction administration, and agency management</td>
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<tr>
<td>TOTAL</td>
<td>$4,424,118</td>
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<td></td>
</tr>
</tbody>
</table>

- Cost Share = $250,000 (Statewide Park Program)
- Future funding requests
  - $3,636,222 for Construction – Year 2 and beyond
Score as confirmed by the Scoring Committee

The Scoring Committee confirmed this score on 9 Nov 2022.

- Water Quality: 50 pts
- Water Supply: 10 pts
- Community Investment Benefits: 5 pts
- Nature Based Solutions: 2 pts
- Leveraged Funds and Community Support: 10 pts

Total: 67 pts
Water Quality & Water Supply Benefits

- **Primary Mechanisms**
  - Runoff/pollutant capture
  - Infiltration/Filtration

- **Wet weather project**

- **Tributary Area**: 111 acres

- **24 Hours Capacity**: 11.37 ac-ft

- **Pollutant Load Reduction**
  - Primary Pollutant (Zinc) – 99.9% (17.2 lbs-annual avg)
  - Secondary Pollutant (Copper) – 99.9% (6.4 lbs-annual avg)

- **Average Annual Capture for Water supply**: 6 ac-ft

- **Water Supply Use**:
  - *Groundwater recharge*

- **Water Supply Cost Effectiveness**: $90,524 per ac-ft

The Scoring Committee confirmed this score on 9 Nov 2022
• Community Investment Benefits
  • Creation of parks and wetlands
  • Enhanced recreational opportunities
  • Reduced heat island effect and increased shade
  • Increase the number of trees and vegetation

• Nature Based Solutions
  • Project creates surface bioretention basins to mimic natural hydrology and infiltration
  • Post construction plans include 4 additional native trees, various native shrubs, native compacted soil, and grasses
Leveraging Funds and Community Support

- **Leveraging Funds**
  - $250K – Statewide Park Program

- **Community Support**
  - City of Alhambra to continue to lead an active community outreach effort
  - Strong, local, community-Based Support
    - ActiveSGV

The Scoring Committee confirmed this score on 9 Nov 2022
Merced Avenue Stormwater Capture Project

Funding Program - Infrastructure Program
Fiscal Year 2023-2024
Rio Hondo Watershed

Project Lead: City of El Monte
Presenter: Oliver Galang (Craftwater Engineering) on behalf of the City of El Monte

Previously Awarded TRP? - No
Project Overview

New bicycle/pedestrian path and subsurface culvert & infiltrating bioswale starting at Merced Ave and ending at the Rio Hondo confluence

- **Primary Objective:** Improve WQ within the Rio Hondo watershed through nature-based stormwater management solutions with improving a channel corridor with bicycle/pedestrian facilities and adjacent green street
- **Secondary Objectives:** Public education & decreased impervious surfaces
- **Project Status:** SCW funding request for Design & Construction
- **Total Funding Requested:** $9,799,210
- Capture area jurisdiction: City of El Monte
- Watershed Capture Area: 670 acres

<table>
<thead>
<tr>
<th>Land-use</th>
<th>Area (acres)</th>
<th>% of Impervious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Residential</td>
<td>67.8</td>
<td>14.9%</td>
</tr>
<tr>
<td>Multi-Family Residential</td>
<td>35.9</td>
<td>7.9%</td>
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<tr>
<td>Commercial</td>
<td>126.0</td>
<td>27.7%</td>
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<tr>
<td>Institutional</td>
<td>85.1</td>
<td>18.7%</td>
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<tr>
<td>Industrial</td>
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<tr>
<td>Highways &amp; Interstates</td>
<td>32.3</td>
<td>7.1%</td>
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<tr>
<td>Secondary Roads &amp; Alleys</td>
<td>103.7</td>
<td>22.8%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>455</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Project Background

• Why was the Project Location selected?
  • Identified for City efforts to increase access to recreational opportunities while providing new WQ improvements to Rio Hondo & disadvantaged community support

• How was the Project developed?
  • Site diversion and layout alternatives, community input, and incorporation of potential stormwater features

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

• Description of benefits to municipality/municipalities
  • New bicycle/pedestrian path, increased tree canopy and habitat, treat wet-weather flows

• Description of benefits to Disadvantaged Communities
  • Better community connectivity and recreational facilities
Partners

• Who are the implementation partners already identified?
  • City of El Monte

• What communities or groups have expressed support for the project?
  • ActiveSGV, El Monte School District, Southern California Association of Governments, Los Angeles County Metropolitan Transportation Authority, Los Angeles County Bicycle Coalition, City of South El Monte, Congressmember Grace Napolitano

• Have you received a letter of concurrence from the municipality (if needed)
  • Yes. Led by the City of El Monte

• Have you received a letter of concurrence from the Flood Control District (if needed)
  • City of El Monte channel, therefore, LACFCD concurrence is not required

• Have you yet engaged the appropriate vector control district about the project concept?
  • Yes
Project Details - Existing Conditions

Existing Conditions

• Dry-Weather Flow = 0.017 cfs
• Infiltration Rate: 1.0 in/hr
• Owner: City of El Monte

*Feasibility and Stormwater Capture review done
*Alternative footprint sizes and diversion rates examined
Project Details - Site Plan

Merced Ave Linear Park
Stream Naturalization
Project Details | Linear Park Schematic Diagram

Merced Ave Linear Park

- Existing GARVEY Storm Drain (48" RCP)
- Existing MERCED Storm Drain (30" RCP)
- Overflow to Adjacent Concrete Drainage Ditch
- Bioretention Basins
- Bike/Pedestrian Path
**Project Details | Schematic Diagram, Stream Naturalization**

<table>
<thead>
<tr>
<th>Diversion Rate</th>
<th>Storage Capacity</th>
<th>24-Hour Capacity</th>
<th>Primary Pollutant Reduction (Zinc) Dry-Weather</th>
<th>Secondary Pollutant Reduction (Copper) Dry-Weather</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 cfs</td>
<td>0.17 ac-ft</td>
<td>0.97 ac-ft</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

- **Bioswale**
- **Existing Box Culvert**
- **Culvert Discharge to Rio Hondo**

**Stream Naturalization**
Project Benefits

- **Water Quality** improvement in the Rio Hondo by treating stormwater and urban runoff
- **Nature-Based** creation of filtering bioretention and native vegetation
- **Improved Access to Waterways** adding a new natural stream in channel location
- **Park Recreational Enhancements** creating new pedestrian and bicycle path
- **Reduced Heat Island** native vegetation and 104 new shade trees throughout the park
# Cost & Schedule

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Cost</th>
<th>Completion Date</th>
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<tbody>
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<td>Design</td>
<td>Environmental Planning (CEQA/NEPA) and Permitting, Public Outreach during design, Final Design (30/60/90/100), Project Management</td>
<td>$1,529,990</td>
<td>02/2024</td>
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<tr>
<td>Construction</td>
<td>Construction capital costs, survey, administration and design support, construction management</td>
<td>$12,902,545</td>
<td>04/2026</td>
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</tbody>
</table>

**Annualized Costs**

- **Maintenance Cost:** $280,000
- **Operation Cost:** $50,000
- **Monitoring Cost:** $25,000
- **Project Life Span:** 50

**Life-Cycle Costs**

- **Life-Cycle Cost for Project:** $23,025,087
- **Annualized Cost for Project:** $959,622
<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>$1,068,059</td>
<td>Design</td>
<td>Environmental Planning (CEQA) and Permitting, Community Outreach, Agency Project Management, and Professional Design Services (30/60/90/100)</td>
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<td>4</td>
<td>$2,903,717</td>
<td>Construction</td>
<td>Construction capital costs, construction administration, and agency project management</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>$9,799,210</td>
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</tr>
</tbody>
</table>

- **Cost Share** = $4,633,284 (Caltrans Clean California Local Grant) - >25%
- Future funding requests
  - $355,000 for Operations & Maintenance – Year 5 and beyond
Score as confirmed by the Scoring Committee

The Scoring Committee confirmed this score on 9 Nov 2022.

Water Quality: 63 pts
Water Supply: 12 pts
Community Investment Benefits: 5 pts
Nature Based Solutions: 40 pts
Leveraged Funds and Community Support: 0 pts
• **Primary Mechanisms**
  - Runoff/pollutant capture
  - Infiltration

• **Dry** weather project

• **Tributary Area**: 670 acres

• **24 Hours Capacity**: 0.97 ac-ft

• **Pollutant Load Reduction (Dry-Weather)**
  - Primary Pollutant (Zinc) – 100%
  - Secondary Pollutant (Copper) – 100%

• **Average Annual Capture for Water supply**: 0 ac-ft

• **Water Supply Use**:
  - N/A

• **Water Supply Cost Effectiveness**: N/A

The Scoring Committee confirmed this score on 9 Nov 2022
Community Investment Benefits and Nature Based Solutions

- **Community Investment Benefits**
  - Creation of parks and wetlands
  - Enhanced recreational opportunities
  - Reduced heat island effect and increased shade
  - Increase the number of trees and vegetation

- **Nature Based Solutions**
  - Project utilizes infiltration to put runoff into soils
  - Project creates surface bioswale to mimic natural hydrology
  - Post construction plans include 104 additional native trees, various native shrubs, native compacted soil, and grasses

The Scoring Committee confirmed this score on 9 Nov 2022
Leveraging Funds and Community Support

- **Leveraging Funds**
  - $4.6M from Caltrans Clean California Grant Program
  - >25% Cost Share

- **Community Support**
  - City of El Monte to continue to lead an active community outreach effort
  - Participated in community events w/ storyboards, animations, and multi-lingual fact sheets
    - City’s Farmers Market
  - Strong, local, community-Based Support
    - ActiveSGV
    - El Monte City School District
    - Southern California Association of Governments
    - Los Angeles County Bicycle Coalition
    - Los Angeles County Metropolitan Transportation Authority
    - City of South El Monte
    - Congressmember Grace Napolitano

The Scoring Committee confirmed this score on 9 Nov 2022
Questions?

Oliver Galang, PE
Craftwater Engineering, Inc
On behalf of the City of El Monte