Barnes Park Multi-Benefit Stormwater Capture Project

Infrastructure Program
Call for Project Fiscal Year 2020-2021
Upper San Gabriel River
Romany Basilyous & David Lopez (City of Baldwin Park)
Katie Harrel (CWE)

Date: Tuesday, November 29th, 2022
Primary Objective: Capture, treat, and infiltrate runoff from an area of approximately 440 acres from the City of Baldwin Park.

Secondary Objectives: Include both recreational and educational enhancements and improvement to Barnes Park. There are two offsite areas that will receive flood mitigation improvements.

Project Status: Currently in design phase (90%)

Total SCW Funding Requested: $14,735,690

The multi-benefit infiltration project will enhance water quality in the Upper San Gabriel River by reducing and infiltrating storm drain discharges while improving Barnes Park.
Project Location
Existing Conditions

Open Field

Playground

Parking Lot

Flooded Areas
Project Details

- San Gabriel River
- Diversion Structure
- Park Expansion
- Project No. 9705
- 81-inch RCP
- Diversion Pipe (typ.)
- Valve (typ.)
- Storm Drain (typ.)
- Flow Meter
- Pretreatment
- Subsurface Infiltration System
- Line A
  Sta 10+00
- Line B
  Sta 10+00
- Line C
  Sta 12+62.78
- Water Quality Inlet
  (Surface Diversion) (typ.)

- San Gabriel River
- Futsal Court
- Basketball Courts
- Storm Drain (typ.)
- Parking Lot Expansion
- Improved Playground Area
- Park Improvements
- Soccer/Sports Fields
- All Dog Area
- Small Dog Area
- Diagonal Street-Side Parking
Project Details

Offset Crown (Minimal to No Cross Fall Towards Inlet)

0% Slope Measured on Ribbon Gutter

0% Cross Fall 4 Feet from Inlet While Gutter Cross Fall > 9%

Flow Arrow (typical)

Add Inlet or Regrade Street and Intersection

Drainage Area Tributary to Yorktown Ribbon Gutter (17.8 acres or 23.5 total)

may be addressed by other recommendation (5.7 acres)

Detail to Left

City Storm Drain

Ex. Catch Basin (typical)

Drainage Area Tributary to Auckland and Syracuse Ribbon Gutters

0% Slope Measured on Ribbon Gutter

Add Inlet at Ribbon Gutter or Regrade Intersection

City Storm Drain

Ex. Catch Basin (typical)

Flow Arrow (typical)

Drainage Area Tributary to Auckland Ribbon Gutter (5.7 acres)
Summary of Project Benefits

• Disadvantage community benefits
  • Pollutant reduction
  • Increase recreational activities

• Protect/restore urban watershed health

• Reduce urban heat island

• Increase trees for CO2 reduction

• Flood risk mitigation

• Improved lighting and security cameras

• Park expansion, outdoor futsal court

• Park Improvements
  • New soccer fields
  • New basketball courts
  • Improved inclusive playground
  • All dog and small dog park
  • Educational signage
Project Status Update

- Current Project Phase: 90% Design Plans
- Modifications: optimized stormwater capture system and diversion expansion
- O&M and Vector Minimization Plans are in progress (drafted with Feasibility Study)
- CEQA completed November 2022
- Estimate start of construction: Fall 2023
- City may apply for SCWP funding for O&M following construction
## 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>Feasibility Study</td>
<td>$0 (completed)</td>
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<tr>
<td>Design</td>
<td>Complete Environmental Documentation</td>
<td>$470,000</td>
<td>December 2022</td>
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<tr>
<td>Design</td>
<td>100% Design, Planning, and Permitting; O&amp;M Plan</td>
<td>$854,000</td>
<td>Summer 2023</td>
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<tr>
<td>Construction</td>
<td>Construction, Construction Management, Inspection, and Testing</td>
<td>$14,755,691</td>
<td>Winter 2024</td>
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<tr>
<td>Construction</td>
<td>Park Enhancements</td>
<td>$1,640,000</td>
<td>Winter 2024</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$17,735,690</strong></td>
<td></td>
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</tbody>
</table>

- Annual maintenance: $33,636; annual operation: $3,364; annual monitoring: $32,400 (total annual cost = $69,400)
- Project Lifespan & Lifecycle Cost: 50 years, $18,983,596
- Data on this slide is per SCWP application/reporting (pending final costs)
- Total project cost includes $3,100,000 contribution from Proposition 68
## SCW Funding Allocations

<table>
<thead>
<tr>
<th>Year</th>
<th>SCW Funding</th>
<th>Phase</th>
<th>Efforts during Phase and Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY20-21</td>
<td>$1,000,000</td>
<td>Design</td>
<td>Environmental documentation; 100% design, planning, and permitting; O&amp;M Plan development; Stakeholder and community outreach/engagement activities</td>
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<tr>
<td>FY21-22</td>
<td>$1,500,000</td>
<td>Design</td>
<td>Same as above</td>
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<td>FY22-23</td>
<td>$7,400,000</td>
<td>Design/Construction</td>
<td>Construction (including contingencies) and construction management</td>
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<tr>
<td>FY23-24 (Projected)</td>
<td>$4,835,690</td>
<td>Construction</td>
<td>Construction (including contingencies), construction management, inspection, testing, and park enhancements</td>
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<td><strong>TOTAL</strong></td>
<td><strong>$14,735,690</strong></td>
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</tbody>
</table>

- SCW Funding received to date: $2,500,000
- Leveraged Funding: Prop 68 ($3,100,000)
- May apply for O&M Funding once the project is completed
- Lifespan 50 years & Lifecycle cost of $18,983,596
Bassett High School Multi-Benefit Stormwater Capture Project

Infrastructure Program
Call for Project Fiscal Year 2020-2021
Upper San Gabriel River
Los Angeles County Public Works
Joseph Venzon, P.E.

Date: 11/29/2022
Project Overview

The Bassett High School Multi-Benefit Stormwater Capture Project is a proposed regional project led by the County of Los Angeles in partnership with Bassett Unified School District to construct a regional, multi-benefit, stormwater capture project at Bassett High School in the City of La Puente. The Project’s objectives are to improve water quality, increase water conservation through groundwater recharge, increase recreational opportunities, and provide educational outreach to the community.

- Primary Objective: Water Quality
- Secondary Objectives: Water Supply, Community Investment, Nature-Based Solutions, Funds and Community
- Project Status: Planning (Completed), Design, & Construction
- Total SCW Funding Requested: $31.2M
• Drainage Area
  • 1,146 acres

• Jurisdictions
  • Baldwin Park
  • Industry
  • La Puente
  • West Covina
  • Unincorporated County
Project Location

- City of La Puente
- Disadvantaged Community
Bassett High School
• 8 diversion locations
• 18,200 ft diversion lines
• 1 potential pump at Bassett Park
• Infiltration gallery at school
Project Details

- Multi-use Sports Field within Bassett High School
- Corner Community Passive Park
- Low Impact Development
Summary of Project Benefits

• Water Quality
  • Capturing and Treating the 85\textsuperscript{th} percentile, 24-hour storm: 50.4 ac-ft
  • Removing more than 95% of zinc and copper

• Water Supply
  • Capturing and Infiltrating 513 ac-ft/year
  • Increase water supply to the San Gabriel Basin
• Community Investment
  • Enhance new recreational opportunities
  • Create green space at a school
  • Plant tree canopies

• Nature Based Solutions
  • Install bioswales
  • Utilize native and/or drought tolerant plants

• Leveraging Funds
  • Funding match

• Community Support
  • Project Partnership
  • Coordination with the School/School District
  • Coordination with Amigos De Los Rios (Emerald Necklace Project)
Project Status Update

- Current Project Phase: *Design*
- Summary of Project modifications, concerns, delays:
  - *O&M for Corner Passive Park*
- Has CEQA been completed? *No*
- Estimated Start of Construction: *Late 2024*
- If applicable, when is project expected to apply for SCW funding for future phases (i.e. Construction):
  - *Apply for O&M Year 27-28.*
## Cost & Schedule

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<th>Phase</th>
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<th>Cost</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning (Project Concept Development)</td>
<td>Preliminary Design Plans, Permitting and environmental compliance, Coordination and preparation of lease and partnership agreements</td>
<td>$1,200,900</td>
<td>September 30, 2022</td>
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<tr>
<td>Design</td>
<td>60%, 90% and Final Design Plans, Specifications and Estimates</td>
<td>$1,799,100</td>
<td>June 3, 2024</td>
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<tr>
<td>Construction</td>
<td>Bid, Award, Advertise, Groundbreaking activities</td>
<td>$59,400,000</td>
<td>April 27, 2027</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$62,400,000</strong></td>
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</tbody>
</table>

- Description of Annual Costs: *O&M of Stormwater Capture System and Community Passive Park*
- Project Lifespan: 50 years
- Life Cycle Cost: $67,400,000 ($100,000 per year for O&M and TPCE)
### SCW Funding Allocations

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<tbody>
<tr>
<td>FY20-21</td>
<td>$3,000,000</td>
<td>Planning</td>
<td>Additional Geotechnical Studies, Preliminary Design Plans, Project Concept Report</td>
</tr>
<tr>
<td>FY21-22</td>
<td>$7,200,000</td>
<td>Planning</td>
<td>Final Concept Report, Community Outreach, Partnership Coordination, O&amp;M Coordination</td>
</tr>
<tr>
<td>FY22-23</td>
<td>$7,000,000</td>
<td>Design</td>
<td>60% Design, Environmental Documentation, Community Outreach</td>
</tr>
<tr>
<td>FY23-24 (Projected)</td>
<td>$4,000,000</td>
<td>Design</td>
<td>90% and Final Design Plans, Community Outreach</td>
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<tr>
<td>FY24-25 (Projected)</td>
<td>$10,000,000</td>
<td>Construction</td>
<td>Advertise, Bid &amp; Award</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$62,400,000</strong></td>
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</table>

- SCW Funding received to date: $10,200,000
- Leveraged Funding amount and percent, if applicable: 50%
- Description of future potential SCW funding requests, if applicable: O&M
Questions?

Joseph Venzon, P.E.
Pedley Spreading Grounds
Pond Enhancements

Infrastructure Program
Call for Project Fiscal Year 2020-2021
Upper San Gabriel River
East San Gabriel Valley Watershed Management Group
(City of San Dimas, City of Claremont, City of Pomona, City of La Verne)
Jonathan Abelson

November 29, 2022
Project Overview

This project proposes to deepen the ponds of a spreading grounds to accommodate local urban runoff.

- **Primary Objective**: Increase water supply for Cities of Pomona and Claremont
- **Secondary Objectives**: Provide a parklet parcel to spark community education and house native vegetation
- **Project Phases**: Planning, Design and Construction
- **Total SCW Funding Requested**: $2,825,900.00
• Located at 1691 Longwood Avenue, Claremont, CA
• Upper San Gabriel River Watershed Area
Existing and Additional Drainage Areas

- Existing Drainage Area: 21 acres
- Additional Drainage Area: 375 acres
- Serves Claremont and Pomona
- No Disadvantaged Community Benefit
Project Details

Existing Concrete Plug

Flow Monitoring System

Basin Regrading

Regrading of Basins

Construction of panell panel with native landscaping and educational signage

Demolition of existing wall at junction structure

Installation of a mechanical slide gate to control flows

Addition of flow meter to 18" pipe

Addition of pretreatment structure and flow meter to 20" 42" pipe

Pretreatment Structure

Mechanical Slide Gate
Current Site Conditions

- Uncompacted soils and unclear boundaries between basins
- Geotechnical analysis completed in 2022
- Surveying completed in 2022
- CCTV of Mills Ave storm drain completed in 2022
- Potholing investigations ongoing
Summary of Project Benefits

• Water Quality (50 points – No change)
  • 32.46 ac-ft/1.8 million = 18.03 Cost Effectiveness (20 pts)
  • 100% Primary (Copper) /Secondary (Zinc) Pollutant Removals (30 pts)

• Water Supply (18 points – increase from 0 pts)
  • Annual Life Cycle Cost $107,065.62 / Annual Average Capture Volume 169.14 ac-ft = $633/ac-ft (13 pts)
  • 169.14 ac-ft (100-200 ac-ft/yr) (5 pts) - (increase from 23.75 ac-ft)

• Community Investment Benefits (2 pts – No change)
  • Enhance benefits by decreasing impact of non-point source pollutants
  • Improving flood management
  • Improvement of adjacent parklet with native vegetation and educational signage

• Nature Based Solutions (5 points – No change)
  • Implements infiltration, a natural process to slow, detain, capture and infiltrate water

• Leveraging Funds (0 points – No change)
  • None

• Community Support (4 points – No change)
  • Support from Industrial Environmental association

• Total Score: 79 points (due to increase of Water Supply Benefits)
  • Original Score: 61 points
• Current Project Phase: Environmental Documentation, Design

• Estimated Start of Construction: Summer 2023
Diversion Modifications

- Controlled through a flow control structure with a manually-operated mechanical slide gate.
- Smart cover flow meters will be installed at key manholes to monitor flows within the storm drain.
Water Supply/Capture Area Modifications

• Water supply will increase from 23.75 acre-feet to 169.14 acre-feet per year.

• Field investigations confirmed connectivity to 375-acre drainage area once existing concrete plug is removed.

• 375-acre drainage area is proposed to be diverted to the Pedley Spreading Grounds rather than the 45.8 acre drainage area originally proposed.
Additional Status Updates

• CEQA
  • Initial Study planned to be completed 1/15/2023
  • No deferred plans
## Cost & Schedule

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<th>Phase</th>
<th>Cost</th>
<th>Completion Date</th>
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<tbody>
<tr>
<td>Design</td>
<td>$502,180 ($256,900)</td>
<td>5/5/2023 (5/1/2022)</td>
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<td>Permitting</td>
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<td>5/5/2023 (12/1/2022)</td>
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<tr>
<td>Construction</td>
<td>$2,323,720 ($2,569,000)</td>
<td>1/1/2025</td>
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</table>

- **Annual Costs** - $20,000 (Maintenance), $10,000 (Operation), $10,000 (Monitoring)
- **Project Lifespan**: 30 years
- **Lifecycle Cost**: $3,573,240.04
# SCW Funding Allocations

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<th>Phase</th>
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</thead>
<tbody>
<tr>
<td>FY20-21</td>
<td>$102,760</td>
<td>Planning</td>
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<tr>
<td>FY21-22</td>
<td>$154,140</td>
<td>Planning/Design</td>
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<tr>
<td>FY22-23</td>
<td>$1,330,180</td>
<td>Design/Construction</td>
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<tr>
<td>FY23-24</td>
<td>$1,212,120</td>
<td>Construction</td>
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<tr>
<td>(Projected)</td>
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<tr>
<td>FY24-25</td>
<td>$26,700</td>
<td>Construction</td>
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</tr>
<tr>
<td>(Projected)</td>
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<tr>
<td>TOTAL</td>
<td>$2,825,900</td>
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</tbody>
</table>

- SCW Funding received to date: $1,587,090
- Leveraged Funding amount: None
Questions?

Jonathan Abelson
Wingate Park
Regional EWMP Project
Infrastructure Program
Call for Project Fiscal Year 2020-2021
Upper San Gabriel River
City of Covina
Michael Flores Jr & Rafael Fajardo (City of Covina)
Katie Harrel (CWE)

Date: Tuesday, November 29, 2022
Project Overview

The multi-benefit infiltration project will enhance Wingate Park and improve water quality in the Upper San Gabriel River by reducing stormwater discharges.

• **Primary Objective:** Capture, treat, and infiltrate runoff from an area of approximately 1,100 acres from the cities of Covina, Glendora, San Dimas, as well as unincorporated LA County.

• **Secondary Objectives:** The project will include recreational and educational enhancements at the park.

• **Project Status:** 100% Design Plans

• **Total SCW Funding Requested:** $24,177,675
Existing Conditions

Open Field

Channel at Diversion

Parking Lot

Playground
Project Details

- Grouted Rock Replacement
- Access Ramp
- Diversion Pipe 42-inch RCP
- Replace Concrete
- Low Flow Bypass
- Grate Inlet Diversion
- Subsurface Infiltration System
- Infiltration Wells (typical) (to enhance Infiltration)
- Flow Meter
- Gate Valve
- Pretreatment
- Diversion Pipe (42-inch RCP)
- SEE DETAIL HEREON
- Charter Oak Wash
- MTD 196 (48-inch RCP)
- Cienega-Clarendon Storm Drain Line A 69-inch RCP
Summary of Project Benefits

• Park improvements
• Walking trail with LID features
• New soccer field
• New inclusive playground area inspired by nature
• Improved parking lot
• Improved water quality/recharge
• Energy efficient lighting
• Drought tolerant landscaping
• Flood risk mitigation
• Educational signage
• Current Project Phase: 100% Design Plans
  • Construction pending funding disbursement
• Modifications: bioswale converted to LID features (same benefits)
• O&M and Vector Minimiziation Plans were included with application/reporting
• CEQA completed (4/15/22)
• Estimate start of construction:
  • November 2023 (if funding is obtained)
<table>
<thead>
<tr>
<th>Phase</th>
<th>Description</th>
<th>Cost</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Preliminary Engineering and Feasibility</td>
<td>(incurred prior to SCWP)</td>
<td>Completed</td>
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<tr>
<td>Design</td>
<td>Final Design, CEQA, &amp; Project Management</td>
<td>$2,787,425</td>
<td>Completed</td>
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<td>Design</td>
<td>Permits &amp; Approvals, Construction Drawings, Bid &amp; Award, Project Management</td>
<td>Fall 2023 (pending funding)</td>
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<td>Construction</td>
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<td>$21,390,250</td>
<td>Summer 2025 (18 months)</td>
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<tr>
<td>O&amp;M</td>
<td>Operation and Monitoring</td>
<td>Pending (not below)</td>
<td>Ongoing</td>
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<tr>
<td><strong>TOTAL</strong></td>
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<td><strong>$24,177,675</strong></td>
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</table>

- Annual maintenance: $33,636; annual operation: $3,364; annual monitoring: $32,400 (total annual cost = $69,400)
- Project Lifespan & Lifecycle Cost: 50 years, $26,771,992
- Data on this slide is per SCWP application/reporting (pending final costs)
- Completion dates shown are assuming FY24-25 funds are provided in FY23-24
## SCW Funding Allocations

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<th>SCW Funding</th>
<th>Phase</th>
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<tbody>
<tr>
<td>FY22-23</td>
<td>$6,630,084</td>
<td>Construction</td>
<td>Construction and Construction Management</td>
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<td>FY23-24 (Projected)</td>
<td>$7,130,084</td>
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<td>FY24-25 (Projected)</td>
<td>$8,580,082</td>
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<td>Construction and Construction Management</td>
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<td><strong>TOTAL</strong></td>
<td><strong>$22,340,250</strong></td>
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- SCW Funding received to date: $1,837,425 ($6,630,084 pending)
- May apply for O&M funding once the project is completed
### SCW Funding Reallocation Request

<table>
<thead>
<tr>
<th>Year</th>
<th>SCW Funding</th>
<th>Phase</th>
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<td>$6,630,084</td>
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<td>Construction and Construction Management</td>
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<tr>
<td>FY24-25</td>
<td>$0</td>
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<td>(Projected)</td>
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<tr>
<td>TOTAL</td>
<td>$22,340,250</td>
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</table>

- City would like to start construction, while full funding is required in advance (construction is delayed while the City waits for funding)
- City would like to ask the WASC to consider reallocating funds so that the remaining allocation can be obtained earlier
Questions?

Katie Harrel

Michael Flores Jr.

Rafael Fajardo