Four EWMPs led by City of Los Angeles: 
Upper Los Angeles River, Ballona Creek, Santa Monica Bay, and 
Dominguez Channel

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Overview of City-led EWMPs

Key Topics for EWMP Updates:
- Regional BMP Planning
- Financial Strategy
City-led EWMPs

- Upper LA River: 18 agencies
- Ballona Creek: 8 agencies
- Santa Monica Bay: 5 agencies
- Dominguez Channel: 9 agencies (including recent additions: Carson and Lawndale)
EWMP Implementation Strategies

**BMP Type Distribution**

- **Santa Monica Bay J2/3**: 30% LID, 70% Regional BMPs
- **Dominguez Channel**: 10% LID, 25% Green Streets, 65% Regional BMPs
- **Ballona Creek**: 13% LID, 17% Green Streets, 70% Regional BMPs
- **Upper Los Angeles River**: 10% LID, 23% Green Streets, 66% Regional BMPs

**Total BMP Storage**
- **311** acre-feet (Santa Monica Bay J2/3)
- **1,191** acre-feet (Dominguez Channel)
- **2,080** acre-feet (Ballona Creek)
- **5,193** acre-feet (Upper Los Angeles River)

**34 Rose Bowls of Storage**
Annual Average Stormwater Capture

- Upper LA River: 75,000 ac-ft (60%)
- Ballona Creek: 30,000 ac-ft (24%)
- Dominguez Channel: 15,000 ac-ft (12%)
- Santa Monica Bay: 5,000 ac-ft (4%)

Amount consumed by 1.1 million people
EWMP Revisions

- A total of approx 200 comments received on four EWMPs
- Typically requests for more information or clarification
- Separate presentation will cover RAA comments

Key Topics for EWMP revisions common to four EWMPs:
  - Regional BMP Planning
  - Financial Strategy
Regional BMP Planning

- Signature Regional Projects are cornerstone of EWMP
- Many additional details on projects were provided
  - Targeted storm size
  - Drainage areas for contributing jurisdictions
  - Near-term milestones for project planning / design
- Additional evaluation of potential funding sources
# Additional Details on Signature Regional BMPs

## Table 4-1 Summary of Signature Projects

<table>
<thead>
<tr>
<th>Regional Project</th>
<th>Responsible EWMP Group Members in Design Drainage Area¹</th>
<th>BMP Type</th>
<th>Design Drainage Area³ (acres)</th>
<th>Available BMP Volume (AF)</th>
<th>Recommended BMP Volume (AF)</th>
<th>Approximate Rainfall Event Depth Captured Based on Recommended Volume² (inch)</th>
<th>Retains the 85th Percentile, 24-Hour Storm Event?</th>
<th>Total Capital Cost Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rancho Park Golf Course and Cheviot Hills Recreation Center</td>
<td>Los Angeles, (Beverly Hills, County of Los Angeles)</td>
<td>Surface and Subsurface Retention &amp; Infiltration</td>
<td>359</td>
<td>403</td>
<td>11.6</td>
<td>1.2</td>
<td>Yes</td>
<td>$4,374,000</td>
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<tr>
<td>La Cienega Park</td>
<td>Beverly Hills, Los Angeles, (West Hollywood)</td>
<td>Subsurface Retention &amp; Infiltration</td>
<td>578</td>
<td>51.3</td>
<td>24</td>
<td>1.0</td>
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<td>Culver Boulevard Median</td>
<td>Culver City, Los Angeles</td>
<td>Subsurface Retention &amp; Infiltration</td>
<td>829</td>
<td>33.7</td>
<td>29.2</td>
<td>0.6</td>
<td>No ⁴</td>
<td>$16,550,000</td>
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<tr>
<td>Edward Vincent Junior Park</td>
<td>Inglewood, Los Angeles, County of Los Angeles</td>
<td>Biofiltration and Wetlands</td>
<td>983</td>
<td>63</td>
<td>45.7</td>
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<tr>
<td>Lafayette Park</td>
<td>Los Angeles</td>
<td>Subsurface Retention &amp; Infiltration</td>
<td>637</td>
<td>25</td>
<td>18</td>
<td>0.5</td>
<td>No</td>
<td>$27,681,000</td>
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<tr>
<td>Poinsettia Park</td>
<td>Los Angeles, West Hollywood</td>
<td>Subsurface Retention &amp; Infiltration</td>
<td>1,379</td>
<td>15.5</td>
<td>10.1</td>
<td>0.2</td>
<td>No</td>
<td>$13,523,000</td>
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<tr>
<td>Queen Anne Recreation Center</td>
<td>Los Angeles</td>
<td>Subsurface Retention &amp; Infiltration</td>
<td>3,067</td>
<td>42</td>
<td>11.6</td>
<td>0.1</td>
<td>No</td>
<td>$33,165,000</td>
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<tr>
<td>Plummer Park</td>
<td>Los Angeles, West Hollywood</td>
<td>Subsurface Retention &amp; Infiltration</td>
<td>283</td>
<td>7.2</td>
<td>7.2</td>
<td>0.7</td>
<td>No</td>
<td>$12,508,000</td>
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<tr>
<td>Ladera Park</td>
<td>County of Los Angeles</td>
<td>Subsurface Retention &amp; Infiltration</td>
<td>110</td>
<td>7.0</td>
<td>5.3</td>
<td>1.0</td>
<td>Yes</td>
<td>$7,008,000</td>
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<tr>
<td>Westside Water Quality Improvement Project, Phase 2</td>
<td>Santa Monica, Los Angeles</td>
<td>Subsurface Retention &amp; Harvest for Irrigation and Indoor Flushing</td>
<td>2,736</td>
<td>TBD</td>
<td>TBD</td>
<td>0.8+ (Anticipated)</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>

Example from Ballona Creek Watershed
Example Project Moving Forward:
Upper LA River (La Canada Flintridge)

Foothill Boulevard Link Greenbelt Project

Creates a pedestrian-oriented passageway along La Canada Flintridge’s main thoroughfare integrated with stormwater Best Management Practices (BMPs)
Example Project Moving Forward: Upper LA River (City of LA)

Avalon Green Alley Network—LID Demonstration Project

Uses existing public alley right-of-ways in a high-density, highly disadvantaged neighborhood to combine stormwater capture and infiltration practices with aesthetic beautification.
Example Project Moving Forward: Upper LA River (LA County)

Roosevelt Park BMP Project

Retrofits existing parkland to combine stormwater infiltration practices with fostered public engagement through recreation, education, and outreach benefits.
Example Project Moving Forward: Ballona Creek (LA County)

- **Ladera Park Regional BMP**
- Would capture design storm from 100+ acres
- Includes demonstration garden adjacent to recreational areas
Example Project Moving Forward: Santa Monica Bay (City of Santa Monica)

- Civic Auditorium and Courthouse (Infiltration)
- Memorial Park (Harvest and Use)
Example Project Moving Forward: Dominguez Channel (City of LA)

- Machado Lake Ecosystem Rehabilitation Project

Project will restore water quality and beneficial uses to the Machado Lake watershed through a combination of stormwater BMPs, habitat restoration, lake treatment and public use structures.
Example Project Moving Forward: Dominguez Channel (Carson)

- Carriage Crest Park Regional BMP
- Would capture ~1100 acres of watershed, including runoff from Carson, Uninc County, Los Angeles, and Torrance
Additional Planning Effort Example: City of LA Capital Improvement Program (CIP)

- Stormwater CIP: short-term (5 yrs) details on projects and coordination with other infrastructure projects
- Expanded CIP in Dec 2015 identified $1.5B in specific projects for early EWMP milestones
  - Signature regional projects
  - Distributed green streets
  - Rainwater capture & water supply
  - Flood control needs
Financial Strategy
Revised Financial Strategy

- Expanded Information on Potential Funding Sources
  - Loans
  - Federal and State Grants
  - Traditional Fee Based Programs
  - Innovative Regional Funding Sources

- Prioritized Strategy based on Funding Sources
  - Evaluated near and long-term feasibility
  - Applicability to BMP types
  - Potential Availability of Funding
## Summary of Funding Options

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>Estimate Annual Available Funding</th>
<th>Scope/ Scale</th>
<th>Potential/ Feasibility</th>
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</thead>
<tbody>
<tr>
<td>Clean Water State Revolving Fund</td>
<td>&gt;$100M</td>
<td>●</td>
<td>High</td>
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<tr>
<td>Federal/ State Grants</td>
<td>$1-5M</td>
<td>●</td>
<td>Moderate</td>
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<tr>
<td>Service Related Fees</td>
<td>$1-25M</td>
<td>●</td>
<td>High</td>
</tr>
<tr>
<td>Property Based Fees</td>
<td>$5-100M</td>
<td>●</td>
<td>Moderate</td>
</tr>
<tr>
<td>Special Assessment Districts</td>
<td>$5-100M</td>
<td>●</td>
<td>Moderate</td>
</tr>
<tr>
<td>Water Quality Trading</td>
<td>$1-25M</td>
<td>●</td>
<td>Low</td>
</tr>
<tr>
<td>Public Private Partnerships</td>
<td>$1-5M</td>
<td>●</td>
<td>Low</td>
</tr>
<tr>
<td>Sales Tax Measure</td>
<td>$1-25M</td>
<td>●</td>
<td>Low</td>
</tr>
<tr>
<td>Environmental Impact Fees</td>
<td>$1-25M</td>
<td>●</td>
<td>Low</td>
</tr>
</tbody>
</table>

Example from Ballona Creek Watershed
Financial Strategy: Future Steps

- Move Forward with Individual Strategies

- Collaborate on an array of regional strategies:
  - Follow on from LA County Stormwater Funding Options Report (Farfsing and Watson)
  - Funding pursuits at the local, state and federal levels
  - Pursue source control options (e.g., zinc in tires)

- Increase Public Support
Closing Remarks

- EWMPs represent a major leap in stormwater planning
- Revisions have further improved the EWMPs
- Efforts already underway to move forward with projects including pursuit of funding
- Looking forward to EWMP approval and transition to implementation phase
Questions?

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