Water Sources and Reliability Challenges

Los Angeles Aqueduct

Colorado River Aqueduct

Delta

Sierra Mountains

State Water Project

Local Groundwater, Conservation, Recycled Water, Stormwater Capture
Water Supply Planning Efforts

2015 Urban Water Management Plan

- Recycled Water Master Planning Documents (2012)
- Water Conservation Potential Study
- Water Conservation Potential Study (ongoing)
- Groundwater System Improvement Study
- Mayor’s ED5 & Sustainable City pLAN (2015)
- Stormwater Capture Master Plan (2015)
Sustainable City pLAn & 2015 UWMP Goals

Fiscal Year 2012 - 16 Average Total Production: 540,400 AFY

- MWD 64%
- Los Angeles Aqueduct 20%
- Groundwater 14%
- Recycled Water 2%

Fiscal Year 2039 - 40 Average Total Production: 675,700 AFY

- Los Angeles Aqueduct 42%
- Groundwater 24%
- Conservation 16%
- MWD 11%
- Recycled Water 7%

*Does not include 118,034 AF of historical conservation*
Centralized vs. Distributed Capture

**Centralized**
- Dam Improvements
- Spreading Basins

**Distributed**
- Dry Wells
- Cisterns
- Green Streets
- Sub-regional
Water Recycling in Upper Los Angeles River Watershed

- Donald C. Tillman Water Reclamation Plant
  - Sepulveda Basin Sports Complex Water Recycling Project
  - Groundwater Replenishment Project
- Los Angeles / Glendale Reclamation Plant
  - Downtown Water Recycling Project
  - Eastside Water Recycling Project
- Burbank Water Reclamation Plant
  - North Hollywood Water Recycling Project
# Current and Planned City of LA Projects that May Affect LA River Flows

<table>
<thead>
<tr>
<th>No.</th>
<th>Projects</th>
<th>Estimated River Flow Impact (AFY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>US Army Corps of Engineers ARBOR Project</td>
<td>3,000 to 6,500</td>
</tr>
<tr>
<td>2</td>
<td>Sepulveda Sports Complex Water Recycling Project</td>
<td>56</td>
</tr>
<tr>
<td>3</td>
<td>Eastside Water Recycling Project</td>
<td>465</td>
</tr>
<tr>
<td>4</td>
<td>Increase number of LADWP recycled water customers</td>
<td>398</td>
</tr>
<tr>
<td>5</td>
<td>Expanded recycled water use through recirculation of Sepulveda Basin flow through lakes</td>
<td>up to 25,000 (22 MGD)</td>
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<tr>
<td>6</td>
<td>LAR Dry-Weather Bacteria Compliance Approach for Segment B</td>
<td></td>
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<tr>
<td>7</td>
<td>Enhanced Watershed Management Plan for Upper LAR</td>
<td>Will reduce dry weather flows to LAR to zero</td>
</tr>
<tr>
<td>8</td>
<td>Projects to enhance recharge capacity in the San Fernando Groundwater Basin (SFB)</td>
<td></td>
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</tbody>
</table>

AFY = acre-feet/year
# City of LA Project Concepts that May Affect LA River Flows

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<td>9</td>
<td>LAR Recharge into LA Forebay Concept</td>
<td>up to 25,000 (22 MGD)</td>
</tr>
<tr>
<td>10</td>
<td>LA/Glendale Water Reclamation Plant to Headworks Reservoir Concept</td>
<td>up to 6,000</td>
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<tr>
<td>11</td>
<td>Upper LAR to DCTWRP</td>
<td>4,500 to 5,600</td>
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<tr>
<td>12</td>
<td>DCTWRP to SFB Injection Wells</td>
<td>up to 15,000</td>
</tr>
<tr>
<td>13</td>
<td>DCTWRP to Los Angeles Aqueduct Filtration Plant</td>
<td>up to 15,000</td>
</tr>
<tr>
<td>14</td>
<td>DCTWRP to LADWP Distribution System</td>
<td>up to 15,000</td>
</tr>
<tr>
<td>15</td>
<td>Increase recycled water demand beyond 2015 UWMP</td>
<td>16,400 to 45,400</td>
</tr>
</tbody>
</table>

AFY = acre-feet/year
Purpose
To identify considerations, assumptions, and areas of future study necessary to determine optimal flow conditions in the LA River.

These conditions would balance the City’s water supply needs with the River’s water-dependent uses and regulatory requirements.
Process For LA River Low Flow Study

1. Review of Historical LA River Ecological Surveys
2. Low Flow Analysis
3. ARBOR Project Flow Evaluation
4. LA River Water Storage Potential

Reviews, Study evaluations, Modeling Results, & Outcomes

One Water LA 2040 Plan
Los Angeles River

- 51 miles – Headwaters to the Ocean
- Hydrologic mile-by-mile modeling
- Three sites modeled in more detail
  - Los Feliz
  - Taylor Yard
  - Willow Street
LA River Dry Weather Flow Analysis

Study Sites:
1. DCT
2. BUR
3. LAG

Flow Rate (cfs)
Outflow to Ocean

River Mile
City Limit

Total Flow

Study Sites
LA River Dry Weather Flow Analysis

River Mile

Flow Rate (MGD)

Flow Rate (cfs)

DCT  BUR  LAG

City Limit

Outflow to Ocean

Total Flow  Losses to ET  WRPs  Incidental Urban Runoff  Upwelling
LA River Dry Weather Flow Analysis

River Mile

Flow Rate (MGD)

Flow Rate (cfs)

Total Flow  Losses to ET  WRPs  Incidental Urban Runoff  Upwelling

City Limit  Outflow to Ocean
LA River Dry Weather Flow Analysis

Total Flow  Losses to ET  WRPs  Incidental Urban Runoff  Upwelling

River Mile

Flow Rate (MGD)

Flow Rate (cfs)

City Limit

Outflow to Ocean

Flow Rate (MGD)

Flow Rate (cfs)
LA River Dry Weather Flow Analysis

Flow Rate (MGD)

Flow Rate (cfs)

River Mile

City Limit

Outflow to Ocean

Flow Components:
- Total Flow
- Losses to ET
- WRPs
- Incidental Urban Runoff
- Upwelling

LA River Dry Weather Flow Analysis
Next Steps

– Collaborative cumulative environmental impact analysis
– Planned and/or potential projects
– Participate in development of LA County’s – LA River Master Plan Update
– Future City of Los Angeles 1211 Petition
Thank You

Questions?

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