Assessing the Los Angeles River Watershed

Dr. Nancy L.C. Steele
Executive Director
Council for Watershed Health

Southern California Water Dialogue – September 2012
A Vision for 2025:
Sustainable Greater Los Angeles

Managing at the watershed scale for economic vitality, social and environmental health

• Clean waters
• Reliable local water supplies
• Restored native habitats
• Ample parks & open spaces
• Integrated flood protection
• Revitalized rivers & communities
“It is impossible to develop effective environmental policy unless it is based on sound scientific information.”

Millennium Ecosystem Assessment
Kofi Annan, 2000
UN Secretary General
Los Angeles County

- 88 cities
- 10 million people
- 4,058 mi$^2$
- Ave. rainfall ~14"
- Mediterranean-climate
Current Work

- Santa Ana River Integrated Regional Planning
- California Water Plan Update – focus on Santa Ana
- Los Angeles River Indicators of Watershed Health

“Southern California is a critical component to the economy of the United States and the world, and the people and environment of the region are intimately linked together. Routine, collaborative and structured assessments of condition of our economy, society, and ecology provide an important feedback into our efforts at improving human well-being.”
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Urban Waters Federal Partnership

Vision: *Through our partnership, we will revitalize the urban waters and the communities that surround them, transforming overlooked assets into treasured centerpieces and drivers of urban revival*

- Eleven Federal Partners
Urban Waters Federal Partnership
Los Angeles Watershed

- **Federal partners plus:**

- **State Agencies:** LARWQCB, MRCA, RMC, Coastal Conservancy, etc.

- **Local Government:** Glendale, Los Angeles, Long Beach, Signal Hill, Gateway Cities COG, LAUSD, LAC Flood Control District, etc.

- **NGOs:** Arroyo Seco Foundation, Council for Watershed Health, Friends of the Los Angeles River, LA Conservation Corps, LA River Expeditions, LA River Revitalization Corp, the River Project, TreePeople, Trust for Public Land, Urban Rivers Institute, Urban Semillas, etc.
Urban Waters Federal Partnership: Los Angeles Watershed

The Los Angeles River Watershed Partnership will work to protect, restore and revitalize the Los Angeles River Watershed. The Partnership will use the mission, vision and principles of the national Urban Waters Federal Partnership to guide this work:

• Promote clean urban waters
• Reconnect people to their waterways
• Water conservation
• Use urban water systems as a way to promote economic revitalization and prosperity
• Encourage community involvement through active partnerships
• Be open and honest, listening to communities
• Focus on measuring results and evaluation to fuel future success
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Indicators of Watershed Health
Los Angeles River

Describe ecosystem services and economic & social conditions

- Develop and refine indicators and metrics
- Produce “report card” of progress towards management goals for ecosystem services and economic & social condition
Regional Foundation for Benchmarking

- City of Santa Monica
- Heal the Bay Beach Report Card
- UCLA IOES
- Santa Monica Bay Restoration Commission
- Council for Watershed Health
Benchmarking Goals

- Efficient
- Responsive
- Trusted
- Received
- Effective
Efficient

- Regular + rigorous = $$$
- Solutions
  - Existing data / analyses
  - Collaborative processes
  - Indicator selection
Responsive

- Necessary part of the decision-making process
- Respond to multiple management goals
- Can be broadly or narrowly focused
- Conflicts with trend analysis

- Were actions or policies implemented?
- Did they achieve their intended results?
- Have new factors arisen?
Trusted

- Authoritative source
- Third party – can self assessment work?
- Also applies to data quality
Received

- Theme
  - Appeal to core concerns
- Words
  - Words that work
- Transfer
  - Medium, mode, messenger
- Ask
  - Simple, soon, it matters

VITAL SIGNS
Effective

- Explicitly linked to public interests
- Information people want or need
- Is there evidence of change?
So. Cal Regional Assessment Framework

- Essential Watershed Attributes
- Responsive to Regional Goals
- Primary Focus on Ecosystem Functions & Conditions
So. Cal Regional Assessment Framework

- Broad-consensus about watershed goals
- Each goal coupled with scenario-based objectives and indicators
- Metrics > Indicators > Goals
# So. Cal Regional Assessment Framework

<table>
<thead>
<tr>
<th>G O A L S</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To sustainably manage local water supplies for human and natural communities</strong></td>
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<td>To meet human needs and enhance conditions of watersheds and their ecosystems</td>
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*Council for Watershed Health*
So. Cal Regional Assessment

- Indicator Selection
  - Based from Goals & Objectives
  - Using expert opinion & regulatory end points
  - ~70 potential indicators on draft list
  - Multiple metrics for each
So. Cal Regional Assessment

- Each Goal was interrogated for principle objectives
  - To sustainably manage local water supplies for human and natural communities.
  - Maximum safe recharge of native water supply to groundwater basins
  - Groundwater safe for drinking
  - Increased safe yields from groundwater basins
  - Reduced water demands and reliance on imports for the region
  - Improved efficiency of water use
  - Recycled water provided for maximum benefit of people and ecosystems
  - Water Quality Objectives are attained in all surface waters
  - The health of human and aquatic communities are not compromised by surface water quality

- Objectives are expressed as desirable endpoints or states

- Objectives suggest metrics
Distance-to-Target Scoring

- Measure condition against a standard
- Create value by providing a scale
- Scores can sum to a grade
- Allows indicator and regional comparisons
Foot printing
Pilot Assessment: Arroyo Seco
Pilot Assessment: How Healthy Is the Arroyo Seco Watershed?

- Report Card
- Consumable results
- Stakeholder familiarity / buy-in
- Comparability
- Scores vs Grades

<table>
<thead>
<tr>
<th>Goal</th>
<th>Indicators</th>
<th>Condition</th>
<th>Trend</th>
<th>Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>To sustainably manage local water supplies for human and natural communities.</td>
<td>Per capita water use</td>
<td>94</td>
<td>Not Assessed</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Healthy Surface Waters</td>
<td>60</td>
<td>Not Assessed</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Rain reaching groundwater</td>
<td>59</td>
<td>Not Assessed</td>
<td>Moderate</td>
</tr>
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<td>To have widespread community awareness and deep civic engagement in the protection and improvement of watersheds.</td>
<td>Local Government Action</td>
<td>44</td>
<td>Not Assessed</td>
<td>Moderate</td>
</tr>
<tr>
<td>To conserve and restore a diversity of native habitats to support fish and wildlife.</td>
<td>Presence of Native Wildlife</td>
<td>59</td>
<td>Not Assessed</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Protected Native Habitats</td>
<td>60</td>
<td>Not Assessed</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Habitat Intactness</td>
<td>57</td>
<td>Not Assessed</td>
<td>High</td>
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<td>To restore or simulate natural disturbance processes that balance benefits for human and natural communities.</td>
<td>Storm Flow Pattern</td>
<td>55</td>
<td>Not Assessed</td>
<td>Moderate/High</td>
</tr>
<tr>
<td></td>
<td>Wildfire Pattern &amp; Intensity</td>
<td>75</td>
<td>Not Assessed</td>
<td>High</td>
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<td>To meet human needs and enhance the quality of life by improving the conditions of watersheds and their ecosystems.</td>
<td>Aquatic Recreation</td>
<td>82</td>
<td>Not Assessed</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Vegetated Residential Area</td>
<td>83</td>
<td>Not Assessed</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Equitable Park Access</td>
<td>55</td>
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<td>Moderate</td>
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Overall Score: 65.25
Essential Attributes

Aggregation & Comparison

- Arroyo Seco can aggregate into a Los Angeles River Assessment
- Arroyo Seco can be compared to other watersheds

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<th>Direct Measure(s)</th>
<th>Related Measure(s)</th>
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<td>To sustainably manage local water supplies for human and natural communities.</td>
<td>Per capita water use</td>
<td>Baseline</td>
<td>Intake and treatment capacity</td>
</tr>
<tr>
<td></td>
<td>Healthy Surface Waters</td>
<td>Inventory of wetlands</td>
<td>Drainage assessment and management</td>
</tr>
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<td>Runoff reaching groundwater</td>
<td>Runoff monitoring</td>
<td>Groundwater quality monitoring</td>
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<td>Storm Flow Pattern, Wildlife Pattern &amp; intensity</td>
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Working together we can achieve the vision

Dr. Nancy L.C. Steele - Executive Director
nancy@watershedhealth.org
LA's Clean Water Story:
Celebrating 40 Years of the Clean Water Act

October 9, 2012
Japanese American National National Museum

cleanwatercelebration.org

Partners: