21st Century Stormwater Resource Management

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Chief of Watershed Protection
Riverside County Flood Control and Water Conservation District
1945 – District Formed

- Protect people and property from flood hazard
- Conserve and reclaim stormwater for beneficial use
Residents: 1.6 million

Watershed: 1,240 sq. mi.

Storm drains: ~700 miles

Channels & levees: ~250 miles

Dams: 7
Late 20th Century – Recognizing the need to adapt

- Endangered Species
- Stormwater Quality
- Climate Change
- Drought
- Funding Challenges
Today - Riverside County Flood Control and Water Conservation District

- Flood Hazard Reduction
- Water Quality
- Habitat Conservation
- Water Conservation
- Livable Communities
Multi-purpose, Multi-agency Projects
Lake Mathews Water Quality Master Drainage Plan

• **Purpose:**
  
  “...support watershed management, source water protection, and long-term land use planning....”

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Included?</th>
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<tbody>
<tr>
<td>TMDL</td>
<td></td>
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<tr>
<td>Stormwater Capture</td>
<td>✓</td>
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<tr>
<td>Water Supply</td>
<td>✓</td>
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<td>Habitat</td>
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<td>Recreation</td>
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<td>Water Quality</td>
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• **Partner Agencies:**
Flood Control Master Drainage Plans
Stormwater Management Plans
Partnerships to Repurpose Existing Flood Control Infrastructure

- Arlington Desalter Expansion
- Temescal Groundwater Basin Study
- Little Lake Basin Recharge Modification
- San Jacinto River Recharge Basins
- Santa Ana River Water Quality Treatment Alternatives Study
Promoting early and effective stormwater management planning

- Web-enabled Geodatabase
- TMDL Compliance Plans
- 303(d) listed waterbodies and NPDES Requirements
- Integrated Regional Water Management Plans
- Stormwater Management Plans
- Water Resource/Land Use Planner
- Multiple Species Habitat Conservation Plan
- Urban Water Management Plan
- Groundwater Management Plans
- Water Resource/Land Use Planner
Promoting Innovation and Experimentation

Low Impact Development Design Handbook

- 7 BMPs
- 150 pages (incl. Appendices)
Low Impact Development Testing and Demonstration Facility
Goal: Balanced, Effective Stormwater Resource Protection
Thank You!
Integrated Water Resource Planning

- Capture and recharge stormwater
- Conjunctive use of other supplies
- Multi-use, multi-benefit projects
Flooding of 1938
Automated Data Mining

- Site Specific
- Interactive
- Easy to Use
- Concise Results
Santa Ana River

- Biking/Hiking
- Wading/Swimming
- Water Supply Source
- Critical Habitat
Reorganization

- Watershed Protection Division created 2010
- Environmental Regulatory Services Division created 1995
Water Quality Management Planning for Development
Maintain or enhance floodplain function, riparian habitat and groundwater recharge
Moving towards Resilience
Mississippi River at St. Louis
1945 – District Formed
Resiliency – What happens when the assumptions change

Resiliency

- I got through it. What’s next? (Proactive)
- I am able to do this. (Flexible)
- I will do this. (Positive)
- What do I need to do? (Organized)
- Something is Up? (Proactive)
- What is it? (Focused)