Equitable Integrated Planning for Watershed-Wise Resilient Recovery

Danielle V. Dolan
Water Program Director
Local Government Commission

SCAG Energy & Environment Committee
Thursday, November 4, 2021; 10:30 AM
Local Government Commission
Leaders for Livable Communities
Outline

1. CA's Natural Drought-Fire-Flood Cycle
   a. Exacerbated by climate change
   b. Current conditions
   c. Inequity: Most severely impacted, least capacity to respond

2. Collision With Traditional Governance Models & Planning Processes
   a. Lack of alignment, integration
   b. Single-issue, reactionary, Ill-prepared to respond
   c. Exacerbated by Covid-19

3. What We Need Instead
   a. Coordinated planning
   b. Long-term preparedness

4. How We Get There
   a. Regional Implementation
   b. Supporting Resources
Drought-Fire-Flood Cycle
Not “natural disasters;’ part of California’s natural system.
Reinforcing Feedback Loop

- Drought and fire intensification are intrinsically linked
- COVID financial impacts were only exacerbated by fires
- 3 of the past 4 years have cost $10 billion annually in damages
Current Conditions: Fire

TOP 20 LARGEST CALIFORNIA WILDFIRES

Current Conditions: Fire

Photo: Scar from Bear Fire at the entrance of the Grapevine (I5); July 2021
Current Conditions: Flood

SAN FRANCISCO (AP) — A powerful atmospheric river storm that swept through California set rainfall records and helped douse wildfires. But it remained to be seen how much of a dent it made in the state's drought.
Inequity
How equity intersects water & planning...

Equity

Water

Land Use

Access

Influence

Impact
Governance & Planning
Predominant Culture of Water Management & Planning

- Groundwater
- Aquatic Habitat
- Climate Change
- Surface Water
- Water Use Efficiency
- Public Water Supply
- Water Quality
- Flood Control
- Environmental Justice
- Water Rights
- Endangered Species
- Water Transfers
- Recreation
- Wetlands
- Economics
- Agriculture
- Wild and Scenic Rivers
- Land Use
- Predominant Culture of Water Management & Planning
Institutionalized Isolation = Lack of Alignment & Integration
Single-Issue Planning Despite Interdependent Impacts...
... Leads to Inability to Respond to Compounding Challenges...

- Population Growth
- Rising Temperatures
- Drought
- Flood
- Fire
- Housing Competition
- Increased Cost of Resources
- Water Scarcity
... Unintended Consequences, and Reactionary “solutions.”
We must plan for continued growth...

Southern California must plan for 1.3 million new homes in the next decade, Newsom says

Inland Empire homeless population rises

High rents in Riverside, San Bernardino counties contribute to ‘homelessness crisis’

Trump has directed his administration to tackle homelessness in California
What We Need:

*Coordinated, Regional, Preparedness*
Integrated planning and management on the watershed scale.
Achieving long-term preparedness requires systemic integration, coordination, and leadership.

Statewide Recommendations

- Upgrade existing infrastructure before building new.
- Coordinate land, water, flood, fire & climate planning.
- Align data and analytics for regional land use & water.
- Multi-solve through local green infrastructure.
1. Promote cross-sector coordinated planning and management of land use, water management, flood mitigation, and climate adaptation.
2. Ensure state, regional, and local investments are directed toward multisolving green infrastructure projects developed at local scales with robust community engagement.
3. Prioritize infrastructure investments that support existing communities, especially those experiencing disadvantages, before new development.
4. Require additional sophistication in growth projections and coordinated planning for both land use planning and water management agencies.
How We Get There
Integration strategies applied at the regional or local scale.
Regional Recommendations

- **Advocate for water access & affordability** for underserved communities
- **Develop local leadership** in the water and land use sectors
- **Provide venues** for regional leaders to collaborate on water & land use projects
- **Build political will** for alignment between equity, water, and land use

ACHIEVE water and land use integration
Additional Resources
Pilot Program: Bringing *Growing Water Smart* to CA

1. Community Assessment
2. Workshop
3. Action Plan
4. Technical Assistance

www.lgc.org
CivicSpark

- CivicSpark is Governor’s Initiative AmeriCorps program addressing environmental & social equity challenges through public sector capacity building
- 2021-22 CivicSpark Partner Application Now Open
Fundingresource.org

I want funding for...

- Active Transportation
- Affordable Housing
- Drinking Water
- Parks
- Public Transit and Shared Mobility
- Stormwater
- Street Repair
- Wastewater Management

Clean Water State Revolving Fund - California State Water Resources Control Board

<table>
<thead>
<tr>
<th>Who is Eligible</th>
<th>What it Funds</th>
<th>When to Apply</th>
<th>Available Funds</th>
<th>Award Size</th>
<th>Level of Effort to Apply</th>
<th>Competitiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cities, towns, districts, or other public bodies, nonprofit, federally recognized tribes or state tribes (must have jurisdiction over disposal of sewage, industrial wastes, or other wastes).</td>
<td>Construction of publicly-owned treatment facilities such as wastewater treatment, local sewers, sewer interceptors, water reclamation and distribution, stormwater treatment, combined sewers, or landfill leachate treatment. Implementation of nonpoint source pollution in agriculture, forestry, urban areas, mines, hydroelectric, and wetlands.</td>
<td>Applications are accepted on a continuous basis.</td>
<td>Average $570 million/year. Grant maximum of $100 million.</td>
<td>Small, Medium, and Large</td>
<td>Medium to High</td>
<td>23 out of 95 proposals funded (2017).</td>
</tr>
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More Information

Local Government Commission
Leaders for Livable Communities

www.lgc.org
To help advance equitable, integrated planning & resilient recovery...
“While the pandemic has tested our resilience at all scales and in countless ways, California can use its proven adaptability to achieve true and long term resilience through integrated wildfire and watershed management across the state.”

Danielle V. Dolan
Water Program Director
ddolan@lgc.org
EXTRA SLIDES
California is moving toward a more holistic approach to managing our water and land resources as the 21st century unfolds. This perspective recognizes the interconnectivity between our traditionally fragmented sectors.

In 2005, the California Legislature passed new laws that enable communities to join together to adopt Integrated Regional Water Management (IRWM) policies and practices. This comprehensive planning approach considers water and related land resources as an interconnected regional system rather than as a combination of fragmented parts.

Local jurisdictions across the state convene as Regional Water Management Groups to implement their plans. Anticipated and realized benefits of IRWM include improved cost-effectiveness and outcomes for planning and management of water quality and supply, as well as better distribution of water between ecosystem and human use.

While water management and land-use planning remain highly fragmented across the nation, many states are moving toward this more integrated approach, especially when setting new state-level policies, regulations, and guidelines.
### Research Stats

#### Expert Interviews

<table>
<thead>
<tr>
<th>Expert Category</th>
<th>Local / Regional</th>
<th>Statewide</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFWI Members</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Water Expert</td>
<td>8</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Land Use Expert</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Water &amp; Land Use Expert</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>25</strong></td>
<td><strong>14</strong></td>
<td><strong>39</strong></td>
</tr>
</tbody>
</table>

- **39 Experts Interviewed**
- **5 Regional Profiles**
- **4 Statewide Recommendations**
- **3 Focus Groups**
- **70 Documents Reviewed**
- **4 Regional Recommendations**
- **10 Case Studies**
- **1 Statewide Summary**
## California Water-Land Use Guidebook

### Growing Water Smart: The Water-Land Use Nexus Guidebook

**Ensuring a Prosperous Future and Healthy Watersheds Through Integrated Water Resources and Land Use Planning**

<table>
<thead>
<tr>
<th>INTERVENTION POINT</th>
<th>MECHANISMS</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning &amp; Policy Making</td>
<td>Water Plans, General Plans, Capital Improvement Plans</td>
<td>Establishes goals and objectives for managing the intersection of natural resources and the built environment.</td>
</tr>
<tr>
<td>Pre-Development</td>
<td>Water Adequacy Laws, Water Supply Assessments, Written Verifications</td>
<td>Links new development to water supply planning.</td>
</tr>
<tr>
<td>At Development Review</td>
<td>Zoning and Subdivision Regulations, Annexation Policies, Planned Development Policies, Development Agreements</td>
<td>Determines what water resource management, conservation and efficiency requirements are applied to development.</td>
</tr>
<tr>
<td>At Building &amp; Construction</td>
<td>Building, Plumbing and Landscaping Codes</td>
<td>Links new development to water supply planning.</td>
</tr>
<tr>
<td>Post-Occupancy Education</td>
<td>Conservation &amp; Efficiency Incentives, Outdoor Watering Restrictions, Water Budgets &amp; Auditing</td>
<td>Empowers and incentivizes homeowners and renters to reduce water consumption.</td>
</tr>
</tbody>
</table>
Example:

Adequate Forest Management

- Forest management and wildfire-response training
- Coordination
- Local Engagement
- Alignment
- Regional Collaboratives
- Joint Stewardship
Fuel Load Reductions

Proactive steps can be taken now to reduce the amount of combustible materials that would carry and exacerbate fire.

● Thinning
● Biomass Removal
● Controlled Burns
  ○ Tribal Ecological Knowledge (TEK)
Case Studies

Cultural Burns as Fuel Reduction

- Kuruk Tribe’s Study on Barriers to the Expansion of Cultural Burning
- Yurok Cultural Fire Management Council
  - Fuel reduction through cultural burns

Santa Ana Watershed Forest First Program

- Collaborative partnership
- Valuation of Economic Benefits
- Funded tree thinning
Whenever you say “yes” to something, you’re saying “no” to something else.
A Different Approach

Cross Sector Collaboration

Elected Officials

Community Planners

Water Resource Managers

Environmental Planners
It all comes down to agencies and plans.
What are the integration leverage points for a local government?
Water in General Plans

Mandated elements:

• Land Use
• Open Space
• Conservation
• Housing
• Circulation
• Noise
• Safety
Land Use Planners & Watershed Management

Department of Water Resources map of IRWM regions
Streamlined Processes & Integrated Projects

• Projects that “Multi-solve”
  – Equity
  – Public Health
  – Habitat
  – Water Quality
  – Water Quantity
  – Housing
  – Transportation
Integrating Green Infrastructure
Climate Action Planning

#1 Baseline Inventory
#2 Adopt Target
#3 Forecast Emissions
#4 Strategy Selection
#5 Funding & Implementation
#6 Monitor & Track Progress

Climate Action Resource Guide from California Air Resources Board
Coordinated Data

- Population Growth
- Water Supply
- Development
- Land Use Patterns
Holy Fire Flooding Video

https://www.youtube.com/watch?v=zTwsdAvQCDg
A New Way of Thinking
Our Collective Water Use
In Practice: Integrated Regional Water Management
the planning & funding program
Traditionally, we thought of water as “good” or “bad” - beneficial or harmful.

This divide is echoed in the infrastructure we built (think back to the social-ecological system).
Pipes and Pumps

Peaked roofs, paved schoolgrounds

Concrete streams

Left us aliens on the landscape
Key Considerations for effective virtual engagement

1 Embrace the Virtual World, Embrace Humanity

Resist the urge to simply convert an in-person event to a virtual one. It's almost apples and oranges; you will need to completely re-evaluate the engagement – the structure, interactions and results – as a whole.

What would you normally do in an in-person setting, and how can you provide a similar experience or value in the virtual environment?

- Flip charts and stickies vs. virtual white-board, comment box.
- Small-group discussions in physical space vs. virtual breakout rooms.
- Informal networking and talking with one another during breaks vs. providing prompts for individuals to connect one-on-one via chat:
  *Find someone whom you don't know and private-chat
City of Richmond Environmental Initiatives

CriteriaSpark
North Bay Area Region, 2015-2016

Project Overview

**Energy Efficiency & Clean Energy**
- Benchmark, Report & Analyze City Facilities’ Energy Performance
- Richmond High School 3 Stream Recycling Program
- Community Sign-up Workshops for Free Home Solar Systems
- New Recycling Facilities Along Public Right-of-Ways & High-Use Parks
- New Organic Recycling Program at Richmond’s Community Centers
- New Recycling Program at the 144 Unit Affordable Housing Nevin Apartment Complex

**Zero Waste**
- Richmond High School 3 Stream Recycling Program
- New Recycling Facilities Along Public Right-of-Ways & High-Use Parks
- New Organic Recycling Program at Richmond’s Community Centers
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Outcomes & Achievements

- Benchmarked energy and resource consumption to determine costs and improve energy efficiency at 10 Community Centers, 3 Brontos, and 7 Fire Stations.
- Led outreach, developed promotional materials, and organized two community sign-up workshops for the home solar systems. A total of 62 households attended and 25 applications were submitted.
- Implemented organics recycling in 3 Community Centers.
- Coordinated informational/recycling presentations for 2 Community Center Summer Youth Camps.
- Implemented recycling program at the 144 Unit Affordable Housing Nevin Apartment Complex.
- The Governor’s Office of Planning and Research selected the City of Richmond for a Best Practices Pilot Project: Phase 1.
- Led City Council approval of $415,300 recycling enhancement & public art project on 210 City trash bins starting October 2016.
- Designed and procured 7,700 bilingual reusable bags to promote recycling and foster civic pride.
- The CDP selected the City of Richmond to be included as a case study in the CDP cities global report on financing/Incentives for urban sustainability projects.

Highlights

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CivicSpark member Erin Bowers worked with supporting COS’s new water conservation program through the development of a comprehensive water conservation and irrigation analysis tool to identify and prioritize potential water saving opportunities at County facilities. The tool uses basic information provided by facility managers to estimate potential water savings from plumbing fixture upgrades, advanced water treatment for cooling towers, and replacing ornamental turf with drought tolerant landscaping. In addition to estimating water savings, the analysis tool quantifies the co-benefits associated with water conservation projects, including cost savings and GHG emissions reductions. After the Governor’s April 1st Executive Order on the drought, Erin also used the tool to help analyze the financial impact of the emergency water use regulations on the County’s building portfolio and identify new priorities for water conservation projects.

More than just a drop in the bucket...

- The water conservation cost-benefit analysis tool was used to estimate the potential water savings at all County-owned facilities. The results suggest a total potential savings of 10-15% from proposed upgrades, or 195-280 million gallons annually. This represents $1.1M in avoided costs and more than 300 KTCO2 of GHG emissions reductions annually.

Creating lasting change...

- The County water use analysis led to the following recommendations:
  - Prohibit the installation of new ornamental turf at all County facilities unless non-potable water is used for irrigation and encourage drought tolerant landscaping.
  - Replace all noncompliant plumbing fixtures in County-owned buildings by 5/1/2015.
  - Upgrade water treatment systems to conserve water in cooling towers, if applicable.
  - Implement a Countywide behavioral water conservation outreach program.

www.lgc.org
CALIFORNIA
GROWING WATER SMART
THE WATER-LAND USE NEXUS GUIDEBOOK

ENSURING A PROSPEROUS FUTURE AND
HEALTHY WATERSHEDS THROUGH INTEGRATED
WATER RESOURCES AND LAND USE PLANNING.

BABBITT CENTER
FOR LAND AND WATER POLICY
A Center of the Lincoln Institute of Land Policy

SONORAN INSTITUTE
Local Government Commission
Leaders for Livable Communities
State Action

Our forest techniques are not cutting it!

- AB 78 Climate Catalyst Revolving Loan Fund
- Wildfire and Forest Resilience Action Plan
- Governor’s 2021-2022 budget
Engaging a Multi-Disciplinary Audience

- Air Quality
- Agriculture
- Biodiversity and Habitat Conservation
- Forestry
- Equity and Justice
- Emergency Management
- Energy
- Ocean and Coastal Management
- Planning and Urban Design
- Public Health
- Transportation
- Water
Agencies

Local
- Water agencies
  - Cities/Counties
  - Special Districts
- Regional Water Management Groups
- Groundwater Sustainability Agencies

Local Government
- City
- County
- Local Area Formation Commissions

Regional
- Metropolitan Planning Organizations
- Council of Governments
<table>
<thead>
<tr>
<th>Planning Documents</th>
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<tbody>
<tr>
<td><strong>Local</strong></td>
</tr>
<tr>
<td><strong>Water</strong></td>
</tr>
<tr>
<td>● Urban Water Management Plan</td>
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<tr>
<td>● Stormwater Management Plan</td>
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<tr>
<td>● Groundwater Management Plan (Non-SGMA)</td>
</tr>
<tr>
<td><strong>Regional</strong></td>
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<tr>
<td><strong>Water</strong></td>
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<tr>
<td>● Integrated Regional Water Management Plans</td>
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<td>● Groundwater Sustainability Plans</td>
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<td>● Stormwater Resource Plan</td>
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<td><strong>Land-Use</strong></td>
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<td><strong>Local</strong></td>
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<tr>
<td>● General Plan</td>
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<td>● Community Plan</td>
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<td>● Specific Plan</td>
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<td>● Local Hazard Mitigation Plans</td>
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<tr>
<td><strong>Regional</strong></td>
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<tr>
<td><strong>Land-Use</strong></td>
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<tr>
<td>● Regional Blueprints/Greenprints</td>
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<tr>
<td>● Sustainable Community Strategies</td>
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