California Water Plan Update 2013

Groundwater Content Enhancement

Groundwater Caucus Meeting
April 12, 2012
Groundwater Workteam

Region Offices and Headquarter

**Headquarter**
- Lew Moeller
- Mary Scruggs
- Evelyn Tipton
- Eric Senter
- Jose Alarcon
- Karandev Singh

**Northern Region Office**
- Kelly Staton
- Bill Ehorn
- Roy Hull
- Jon Mulder

**North Central Region Office**
- Chris Bonds
- Mark Nordberg
- Bill Brewster
- Mark Souverville
- Mike O’Connor

**South Central Region Office**
- Dane Mathis
- Mike McKenzie
- John Kirk
- Mike McGinnis

**Southern Region Office**
- Bob Pierotti
- Tim Ross
- Jack Tung
Groundwater
Workteam Leads and Caucus Chairs

Workteam Lead
• Abdul Khan

Workteam Co-lead
• Dan McManus

GW Caucus Chair
• Tim Parker

Groundwater Caucus
• > 60 members
• Other Caucus participants

GW Caucus Co-chair
• Vicki Kretsinger
Objective

Expand information about statewide and regional groundwater conditions

to

better inform groundwater management actions

through

compilation and summarization of data and analysis
Groundwater Content Enhancement

In summary

Paint a picture about California’s groundwater

- Aquifer system
- Groundwater conditions
- Groundwater management practices

Identify gaps

- Data
- Monitoring
- Management

Make recommendations

- GW mgmt guidelines & BMPs
- GW mgmt plan acceptance process
- GW mgmt plan reporting
- State agency policy alignment
- Resource needs for analysis
Key Changes
Since Water Plan Update 2009
GW Content in CWP Regnl Reports

Current State of the Region

- Setting
  - Watersheds
  - Groundwater Aquifers
  - Ecosystems
  - Climate
  - Demographics
  - Land Use patterns
  - Tribal Communications

- Regional RMS Conditions
  - Water in the Environment
  - Water Governance
  - Water Supplies
  - Water Uses
  - Project Operations
  - Surface Water Quality
  - Groundwater Quality
  - Groundwater Level
  - Trends and Issues
  - Near Coastal Issues
  - Flood Management

Current Relationships with Other Regions & States

Implementation Activities (2009-2013)
- Drought Contingency Plans
- RMS
- Water Governance
- State Funding Received
- Local Investment
- Water Cons Act of 2009 (SB x7-7)
- Interregional and Interstate Activities
GW Content in CWP Regnl Reports

Looking to the Future

- Future Conditions
  - Future Scenarios
  - Climate Change
  - *Interregional and Interstate Planning Activities*
  - Flood Risk Characterization

- Future Vision
  - Regional Future Vision
  - Tribal Objectives/Vision
  - Relevant Statewide Interests & Objectives

Regional Water Planning & Mgm

- IRWM Coordination & Planning Accomplishments
- Challenges
- Drought & Flood Planning

Resource Mgmnt Strategies

- Strategy Availability
  - *Regional Strategies*

Groundwater Content
Document Walk-through
CALIFORNIA’s GROUNDWATER UPDATE 2013
Statewide Outline

1. INTRODUCTION
   1.1. Overview of Historical Groundwater Content in California Water Plan
   1.2. Scope and Intent of the Groundwater Update 2013
   1.3. Report Organization

2. FINDINGS

3. RECOMMENDATIONS

4. STATEWIDE GROUNDWATER UPDATE
   4.1. Statewide Groundwater Supply and Development
       Alluvial Aquifers
       Fractured-Rock Aquifers
       Well Infrastructure and Distribution
       Priority Basins
   4.2. Statewide Groundwater Use
       (Report GW Use by HR, use type, and for alluvial vs. fractured aquifer regions)
   4.3. Statewide Groundwater Monitoring Efforts
       Groundwater Level Monitoring
       Groundwater Quality Monitoring
       Land Subsidence Monitoring
       Remote Sensing/Satellite Monitoring
       Groundwater Modeling
   4.4. Statewide Aquifer Conditions
       Groundwater Occurrence and Movement
       Depth to Groundwater
       Groundwater Elevations
       Groundwater Level Trends
       Change in Groundwater Storage
       Spring 2005 to Spring 2010 Change in Aquifer Storage Using Groundwater Level Data Analysis
       Change in Aquifer Storage using GRACE Data Analysis
       Change in Aquifer Storage using Groundwater Modeling
       Groundwater Quality
       Land Subsidence
   4.5. Statewide Groundwater Management
       Groundwater Management Plans
       Groundwater Management Plan Assessment
       Basin Management Objectives
       Mapping
       Monitoring Protocols
       Voluntary Components
Draft Standalone Groundwater Report – Statewide Content (Included in Volume 4)

California’s GW Update 2013

- Bulletin 116-2003 Suggested Components
- ACWA/DWR Survey - Key Factors for Success
- ACWA/DWR Survey - Key Factors Impeding Success
- ACWA/DWR Survey - Groundwater Basin Sustainability

Groundwater Ordinances
- Special Act Districts
- Court Adjudications

Other Groundwater Management Planning Efforts
- Integrated Regional Water Management Plans
- Urban Water Management Plans
- Agricultural Water Management Plans

4.6. Statewide Case Studies of Groundwater Management

4.7. Statewide Conjunctive Management Assessment

Conjunctive Management Survey
- Project Initiation
- Project Administration
- Project Goals and Objectives
- Capital Cost for Project Development
- Annual Operating Costs of Projects
- Project Capacity
- Water Source
- Put and Take Capacity
- Project Constraints

4.8. Statewide Sustainability Indicators

4.9. Statewide Groundwater Gap Analysis

4.10. References
Groundwater Content
Enhancement
Contact Information

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Next Steps / Announcements
<table>
<thead>
<tr>
<th>Region</th>
<th>Date</th>
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<tbody>
<tr>
<td>Colorado Hydrologic Region</td>
<td>April 26, 2013</td>
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<tr>
<td>Tulare Lake Hydrologic Region</td>
<td>May 3, 2013</td>
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<td>South Lahontan Hydrologic Region</td>
<td>May 10, 2013</td>
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<td>DWR Admin Draft</td>
<td>May 31, 2013</td>
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<td>Remaining Hydrologic Regions</td>
<td>May 17 – Jun 14, 2013</td>
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Groundwater Content Enhancement
Announcements

Change in Storage Tool /Tech Memo Webinar – **to be reconfirmed**

May 29, 2013
1:00 - 3:30 PM

Basin Prioritization Webinar – **date to be announced later**

No date fixed