

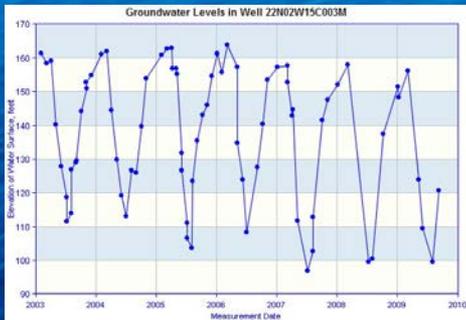


DEPARTMENT OF
WATER RESOURCES

California Water Plan Update 2013

Groundwater Content Enhancement

Plenary Meeting
September 12, 2012



Water Plan Update 2013

Groundwater Content Enhancement

Objective

Expand information about statewide and regional groundwater conditions

to

better inform groundwater management actions

through

compilation and summarization of data and analysis



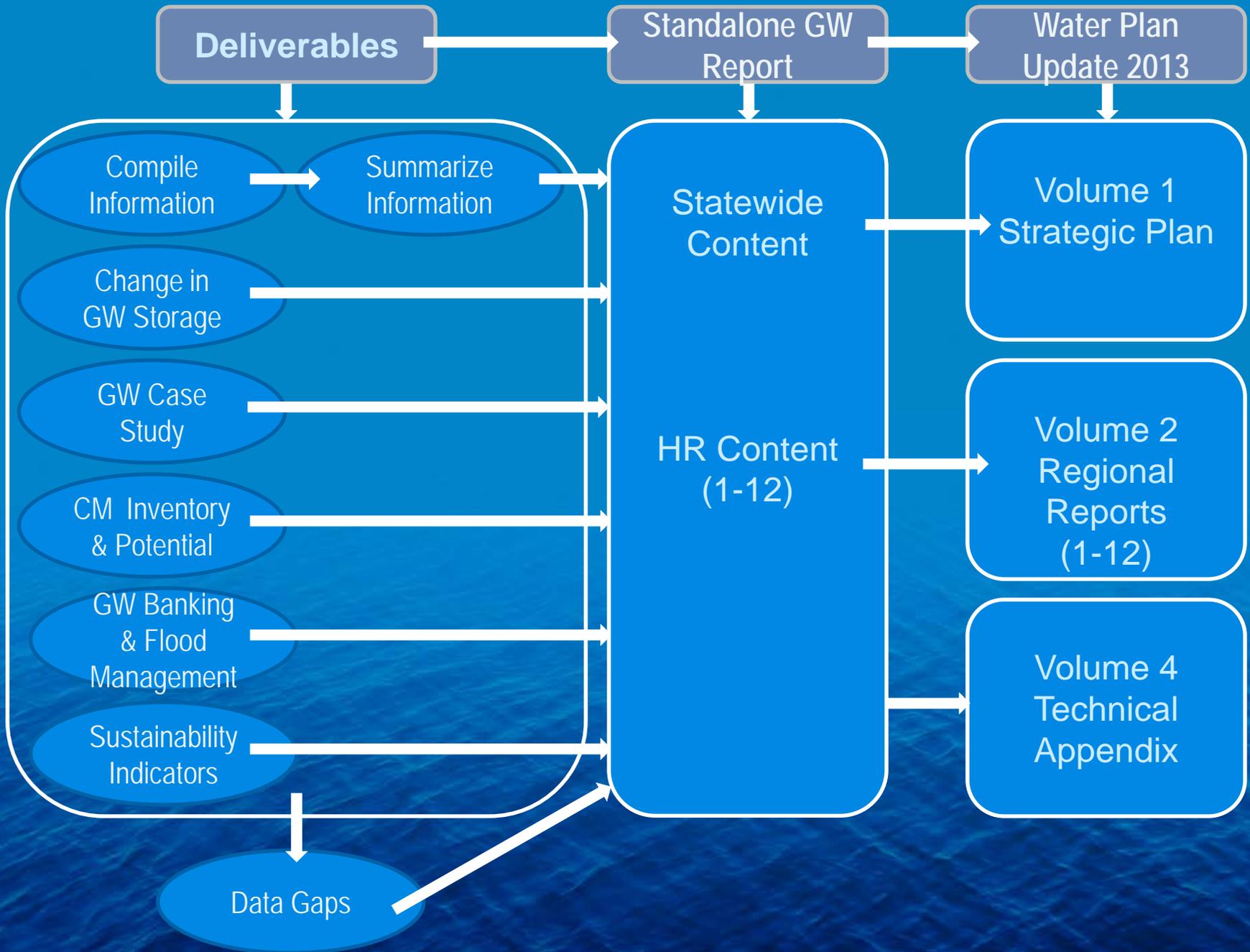
Water Plan Update 2013

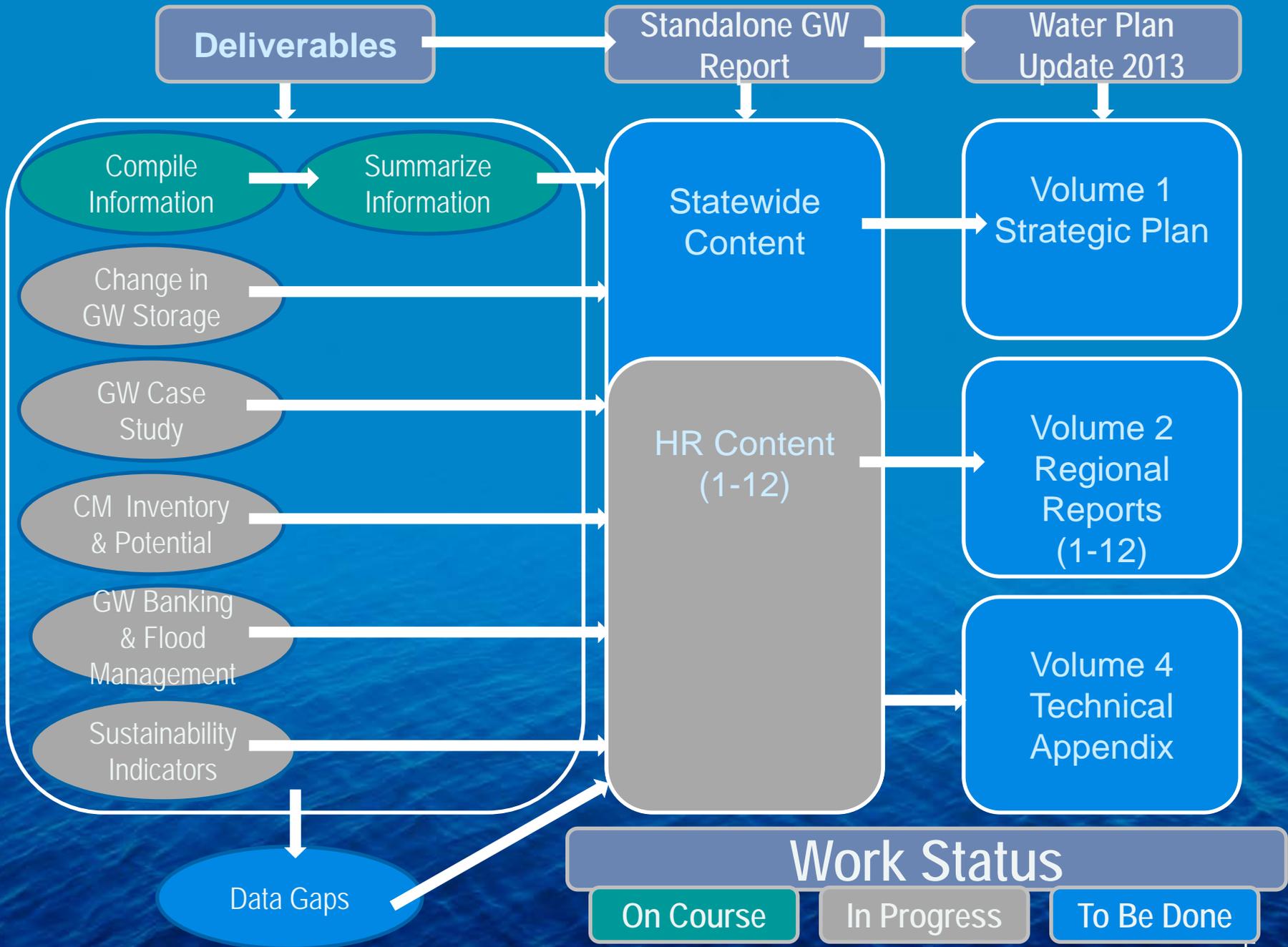
Groundwater Content Enhancement

Premise

1. Existing water laws and regulations are in place
2. Deliverables are based on the best existing and available data, information, and analyses







CALIFORNIA GROUNDWATER UPDATE
CWP 2013 Groundwater Content Enhancement
Draft Abbreviated Outline

1. INTRODUCTION
2. FINDINGS
3. RECOMMENDATIONS
4. METHODS and ASSUMPTIONS
5. STATEWIDE GROUNDWATER UPDATE
 - 5.1. Statewide Groundwater Supply and Development
 - 5.2. Statewide Groundwater Use
 - 5.3. Statewide Groundwater Monitoring Efforts
 - 5.4. Statewide Aquifer Conditions
 - 5.5. Statewide Groundwater Management Activities
 - 5.6. Case Studies of Groundwater Management
 - 5.7. Integrated Multi-benefit Groundwater Management Opportunities
 - 5.8. Statewide Groundwater Budget and Indicators of Sustainability
 - 5.9. Groundwater Data Gap Analysis
6. HYDROLOGIC REGION GROUNDWATER UPDATE
 - 6.1. North Coast Hydrologic Region
 - 6.1.1. North Coast Groundwater Supply and Development
 - 6.1.2. North Coast Groundwater Use
 - 6.1.3. North Coast Groundwater Monitoring Efforts
 - 6.1.4. North Coast Aquifer Conditions
 - 6.1.5. North Coast Groundwater Management Activities
 - 6.1.6. North Coast Integrated (multibenefit) Groundwater Management Opportunities
 - 6.1.7. North Coast Groundwater Budget and Sustainability Indicators
 - 6.1.8. North Coast Groundwater Data Gap Analysis
 - 6.2. San Francisco Hydrologic Region...(subsections similar to North Coast)
 - 6.3. Central Coast Hydrologic Region...(subsections similar to North Coast)
 - 6.4. South Coast Hydrologic Region...(subsections similar to North Coast)
 - 6.5. Sacramento River Hydrologic Region...(subsections similar to North Coast)
 - 6.6. San Joaquin River Hydrologic Region...(subsections similar to North Coast)
 - 6.7. Tulare Lake Hydrologic Region...(subsections similar to North Coast)
 - 6.8. North Lahontan Hydrologic Region...(subsections similar to North Coast)
 - 6.9. South Lahontan Hydrologic Region...(subsections similar to North Coast)
 - 6.10. Colorado River Hydrologic Region...(subsections similar to North Coast)
 - 6.11. Sacramento-San Joaquin Delta...(subsections similar to North Coast)
 - 6.12. Mountain Counties Area...(subsections similar to North Coast)
7. REFERENCE
8. GLOSSARY
9. APPENDIX (Change in Storage Technical Memorandum)

Draft
Standalone
Groundwater Report
Outline
(Included in Volume 4)



Standalone GW Report

Table of Contents

1. GW Supply & Development

Alluvial Aquifers
Fractured Rock
Aquifer
Well Infrastructure
& Distribution
Priority Basins

2. Groundwater Use

3. GW Monitoring Efforts

GW Level
GW Quality
Land Subsidence
Remote
Sensing/Satellite
Groundwater
Modeling

4. Aquifer Conditions

GW Occurrence & Movement
GW Levels
GW Level Trends
Change in Storage
GW Quality Land
Subsidence

5. GW Mgm Activities

GW Mgm Plans
GW Ordinances
Court Adjudications
Other GW Mgm
Planning

6. Case Studies

7. Integrated GW Management

8. GW Budget & Sustainability

9. Data Gap Analysis

Standalone GW Report

1. GW Supply & Development

Alluvial Aquifers
Fractured Rock
Aquifer
Well Infrastructure
& Distribution
Priority Basins

2. Groundwater Use

3. GW Monitoring Efforts

GW Level
GW Quality
Land Subsidence
Remote
Sensing/Satellite
Groundwater
Modeling

4. Aquifer Conditions

GW Occurrence & Movement
GW Levels
GW Level Trends
Change in Storage
GW Quality Land
Subsidence

5. GW Mgm Activities

GW Mgm Plans
GW Ordinances
Court Adjudications
Other GW Mgm
Planning

6. Case Studies

7. Integrated GW Management

8. GW Budget & Sustainability

9. Data Gap Analysis

Work Status

On Course

In Progress

To Be Done

Table of Contents

Hydrologic Region Report
(draft outline with groundwater content)

- Summary and Recommendations ← (Groundwater Content)
- Current State of the Region
 - Watersheds
 - Groundwater Aquifers ←
 - Ecosystems
 - Climate
 - Demographics
 - Land Use Patterns
 - Tribal Communities
- Regional Resource Management Conditions
 - Water in the Environment ←
 - Water Governance ←
 - Water Supplies ←
 - Water Uses ←
 - Project Operations
 - Surface Water Quality
 - Groundwater Quality
 - Aquifer Conditions and Issues ←
 - Near Coastal Issues
 - Flood Management
- Current Relationships with Other Regions and States
- Implementation Activities (2009-2013)
 - Drought Contingency Plans ←
 - Resource Management Strategies ←
 - Water Governance ←
 - State Funding Received
 - Local Investment
 - Water Conservation Act of 2009 (SB x7-7) Implementation Status and Issues
 - Interregional and Interstate Activities
- Looking to the Future
 - Future Conditions
 - Future Scenarios
 - Interregional and Interstate Planning Activities ←
 - Flood Risk Characterization
 - Future Vision
 - Regional Future Vision
 - Tribal Objectives/Vision
 - Relevant Statewide Interests and Objectives
- Regional Water Planning and Management
 - Integrated Regional Water Management Coordination and Planning ←
 - Accomplishments ←
 - Challenges ←
 - Drought and Flood Planning
- Resource Management Strategies
 - Strategy Availability
 - Regional Strategies ←
- References

**Draft Water Plan
Update 2013
Hydrologic Region
Report Outline
and
Groundwater
Content
(Included in Volume 2)**



GW Content in Regional Reports

1. Current State of the Region

Watersheds
Groundwater Aquifers
Ecosystems
Climate
Demographics
Land Use patterns
Tribal Communications

2. Regional RMS Conditions

Water in the Environment
Water Governance
Water Supplies
Water Uses
Project Operations
Surface Water Quality
Groundwater Quality
Aquifer Conditions and Issues
Near Coastal Issues
Flood Management

3. Relationships with Other Regions & States Implementation Activities

Drought Contingency Plans
RMS
Water Governance
State Funding Received
Local Investment
Water Cons Act of 2009 (SB x7-7)
Implementation
Interregional and Interstate Activities

Table of Contents

Groundwater Content

GW Content in Regional Reports

4. Looking to the Future

Future Conditions

Future Scenarios

*Interregional and Interstate
Planning Activities*

Flood Risk Characterization

Future Vision

Regional Future Vision

Tribal Objectives/Vision

Relevant Statewide Interests &
Objectives

Regional Water Planning & Mgm

*Integrated Regional Water Mgm
Coordination & Planning
Accomplishments*

Challenges

Drought & Flood Planning

5. Resource Mgm Strategies

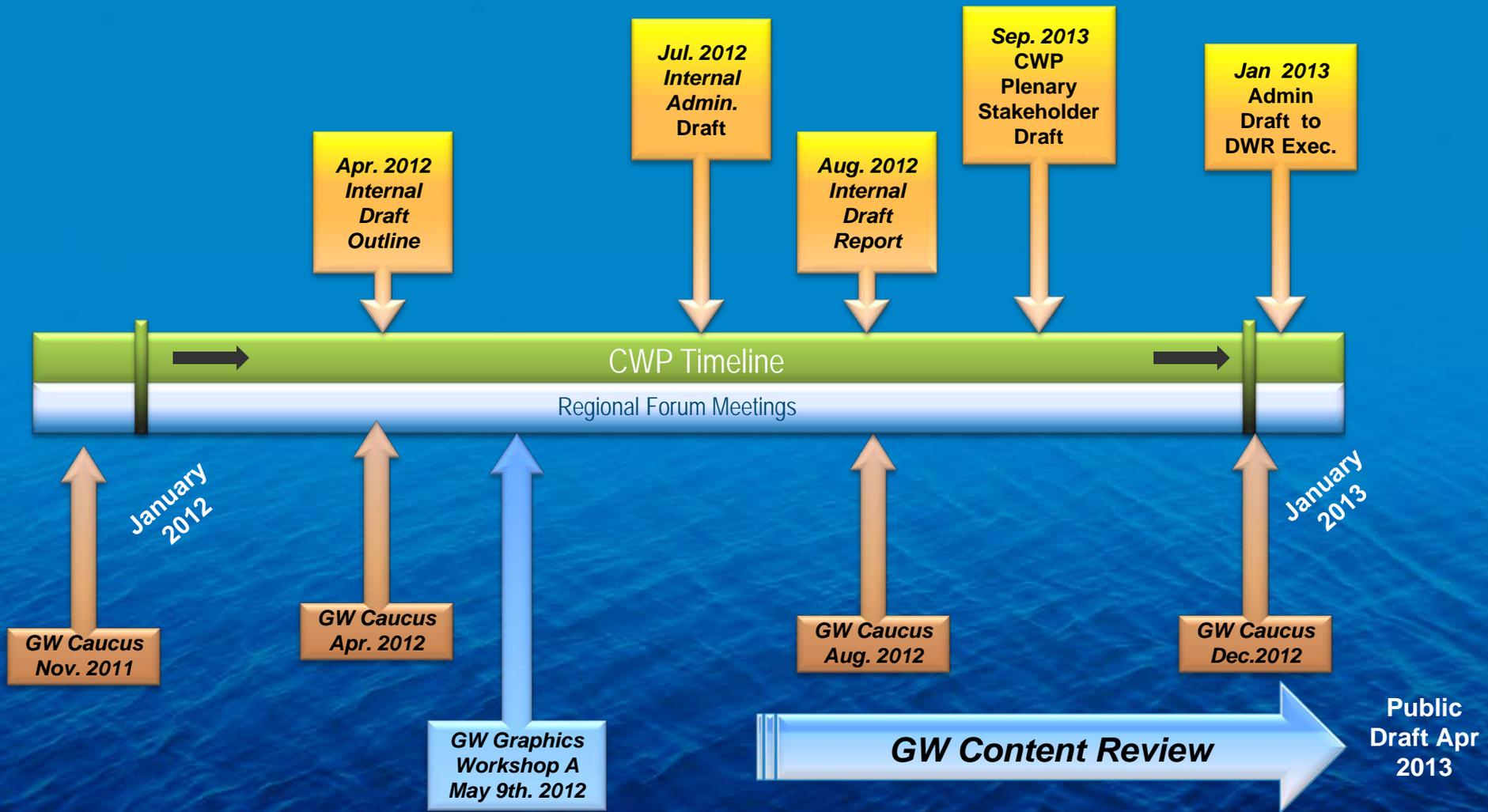
Strategy Availability

Regional Strategies

Groundwater Content

CWP Plan Update 2013

Partial Timeline and Deliverables



Groundwater Content – Timeline

(Will be Available at DWR Life Ray Site)

Preliminary Draft of Stand-alone
Groundwater Report



Sep/2012

Preliminary Draft of Water Plan Vol. 2
Regional Reports



Oct/2012

Groundwater Content Enhancement Contact Information

Abdul Khan



akhan@water.ca.gov

Dan McManus



mcmanus@water.ca.gov



Groundwater Content Enhancement

Rest of Today's Presentations

Kelly Staton / Roy Hull
DWR

Summarizing
Groundwater Information

Bill Brewster
DWR

Change in Groundwater
Storage

John Kirk / Mark Nordberg
DWR

Conjunctive Management
and Water Banking

Tim Parker / Vicki Kretsinger
PAC Caucus Rep & GRA

Aug 22 Caucus Recap:
Case Study Concepts