

North American Basin Regional Drought Contingency Plan

Public Meeting
July 19, 2017



1. Introductions and Agenda Review

Today's Agenda

- 1 Introductions and Agenda Review
- 2 Public Comment
- 3 Overview of the North American Basin RDCP
- 4 Q&A
- 5 Review Schedule & Process

2. Public Comment

3. Overview of the North American Basin RDCP

What is an RDCP?

Drought contingency planning processes are structured to address the following questions:

- How will we recognize the next drought in the early stages?
- How will drought affect us?
- How can we protect ourselves from the next drought?

Proactive approach to building long-term resiliency to drought

\$200K planning grant from Reclamation Drought Response Program

North American Basin RDCP

GOAL to increase the resiliency of the region's water resources in the face of future climate and drought conditions.

PURPOSE is to develop (1) a prioritized list of actions to improve regional water supply reliability, and (2) recommendations for implementation

Study Participants:

- 5 water agencies with Reclamation water service and settlement contracts
- Water agencies in North American Basin
- RWA, Water Forum, DWR, Reclamation

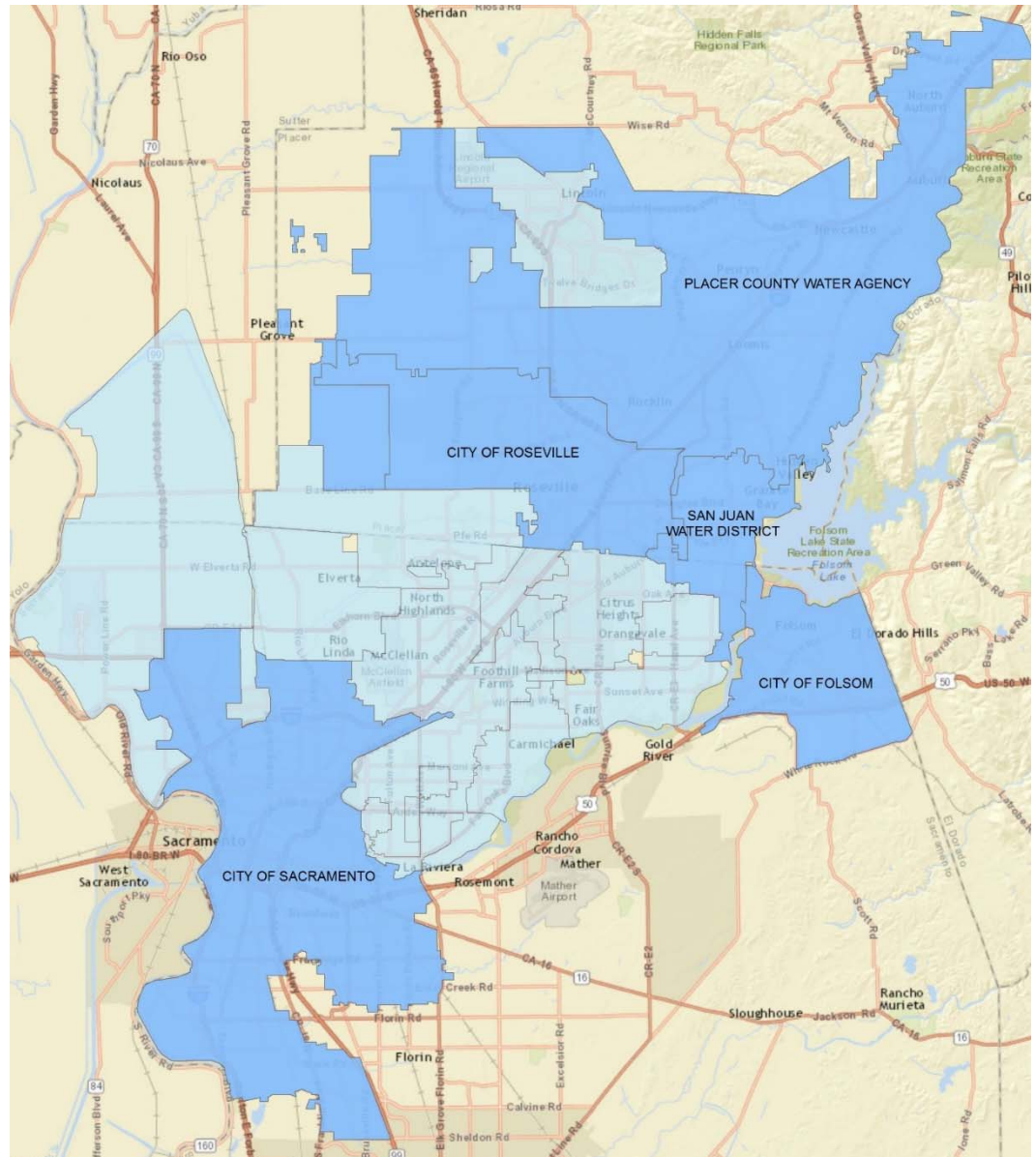
NAB RDCP Planning Area

Partners:

- PCWA, City of Folsom, City of Roseville, City of Sacramento, SJWD

Additional Agencies:

- California American WC
- Carmichael WD
- Citrus Heights WD
- City of Lincoln
- Del Paso Manor WD
- Fair Oaks WD
- Golden State WC
- Natomas Central MWC
- Orange Vale WC
- Rio Linda/Elverta CWD
- Sacramento County WA
- Sacramento Suburban WD



RDCP Six Required Elements

1. Drought Monitoring

- Establish data metrics to indicate drought conditions

2. Vulnerability Assessment

- Assess risks and impacts of current and future droughts

3. Mitigation Actions

- Identify & prioritize actions to mitigate vulnerabilities

4. Response Actions

- Identify & prioritize response actions to ongoing drought

5. Operational & Administrative Framework

- Define procedures for conducting drought monitoring, initiating mitigation and response actions

6. Update Process

- Define process for monitoring and updating the RDCP

RDCP Scope

Task 1 – Establish Drought Planning Task Force ✓

Task 2 – Develop Detailed Work Plan ✓

Task 3 – Develop Communications & Outreach Plan ✓

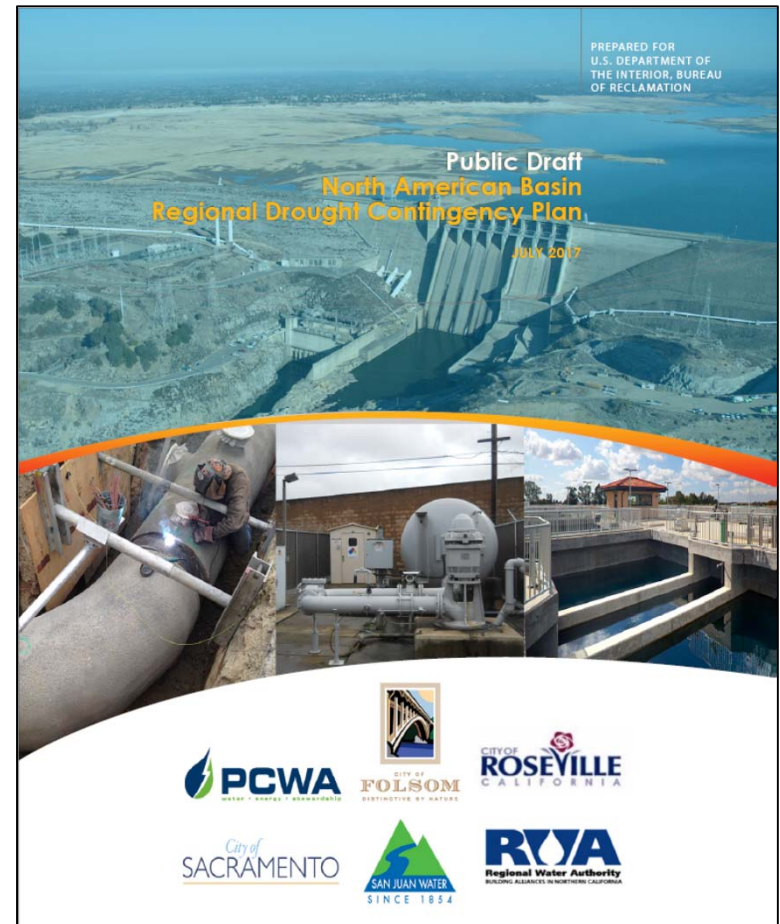
Task 4 – Develop Draft Regional Drought Contingency Plan ✓

Task 5 – Prepare Final Regional Drought Contingency Plan

Task 6 – Reclamation Agreement Management

Draft Regional Drought Contingency Plan

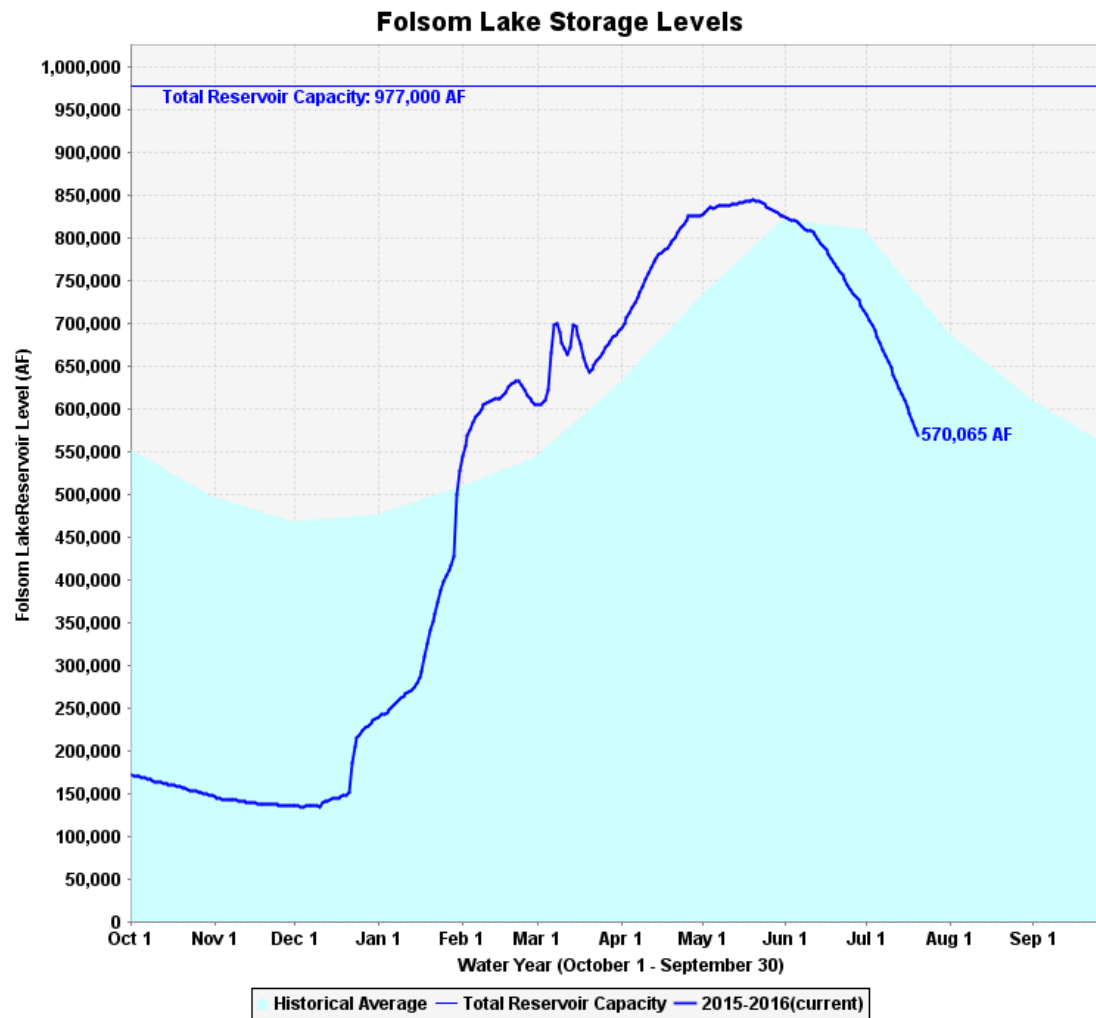
1. Introduction
2. Drought Monitoring
3. Vulnerability Assessment
4. Mitigation Actions
5. Response Actions
6. Operational and Administrative Framework and Update Process



RDCP Sections – Drought Monitoring

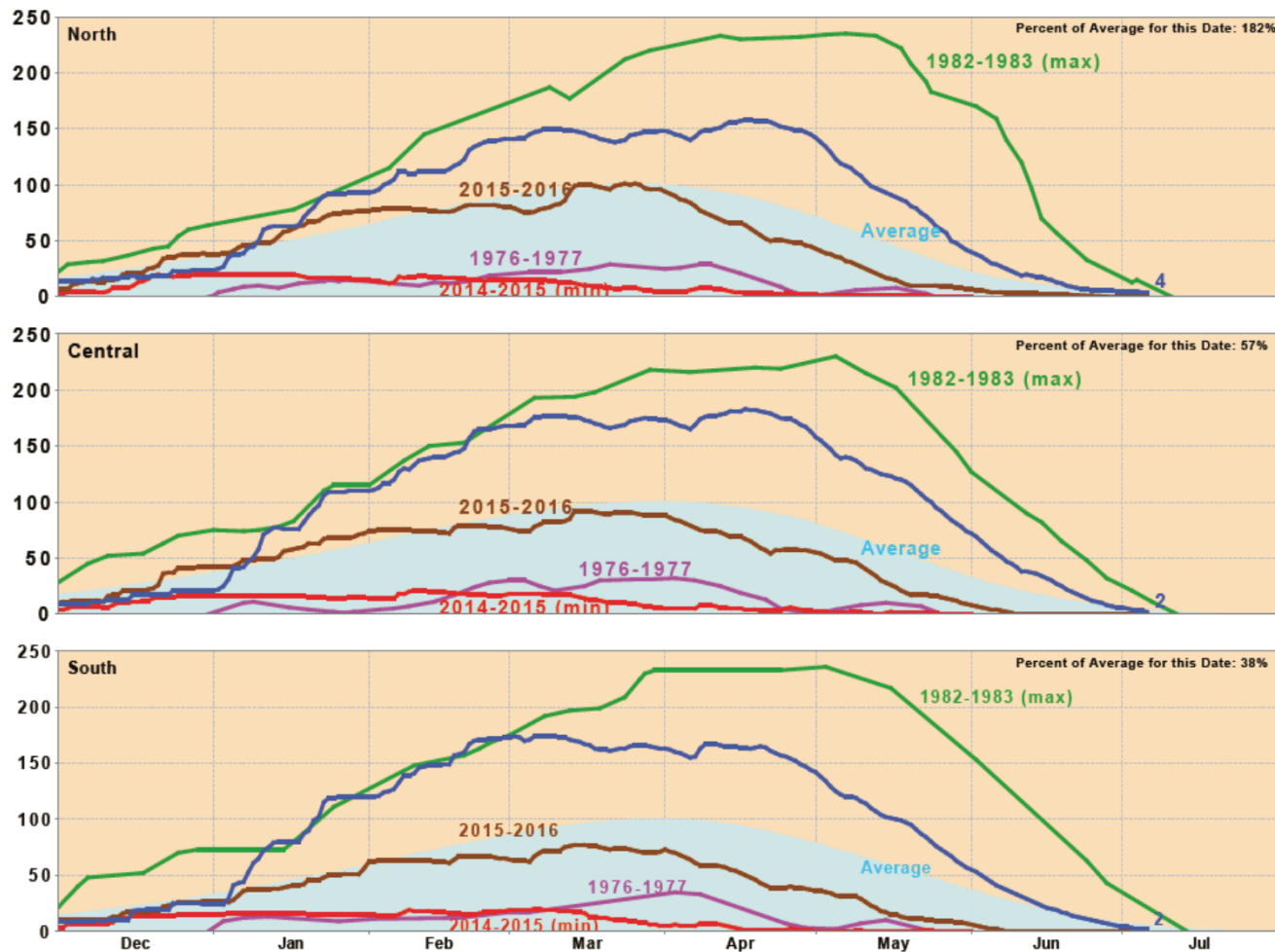
- Introduction
- Indicators and Indices
- Triggers
- Process for Determining Shortage Conditions

Indicators and Indices



Indicators and Indices

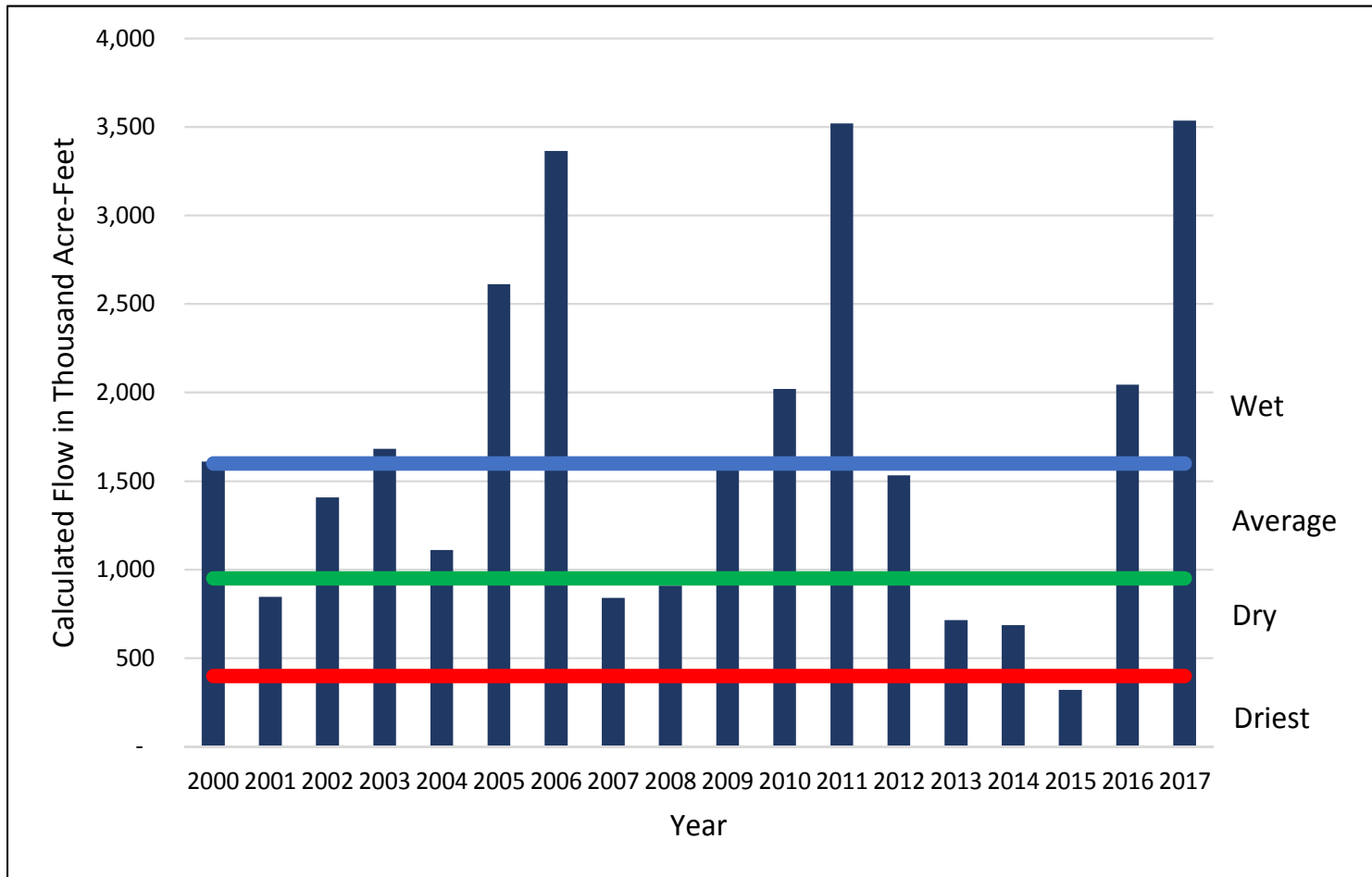
California Snow Water Content, July 6, 2017, Percent of April 1 Average



Statewide Percent of April 1: 2%

Statewide Percent of Average for Date: 56%

Indicators and Indices



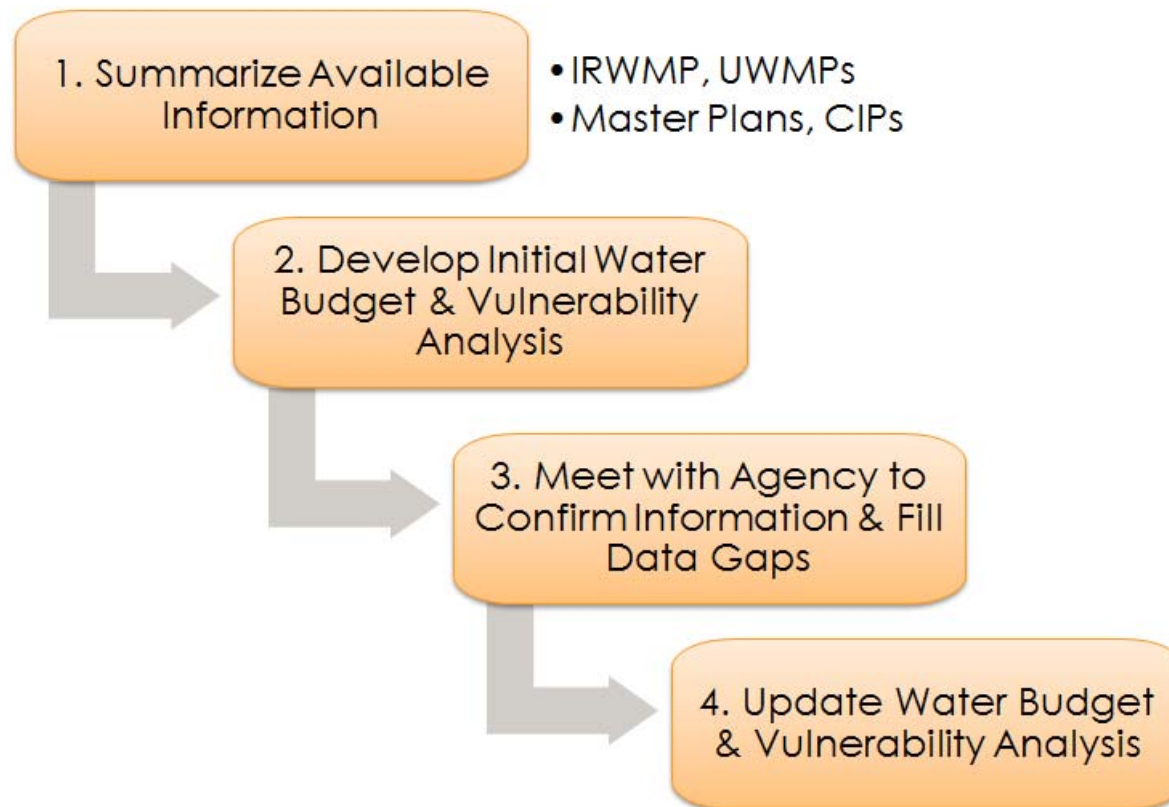
Indicators, Indices, and Triggers

Indicator/Index	Timing of Reporting	Threshold Value
Folsom Reservoir Storage	October 1 December 1	<300,000 acre-feet <200,000 acre-feet
Central Sierra Nevada Snowpack	February 1 March 1 April 1 May 1	<50% of average for February 1 <50% of average for March 1 <50% of average for April 1 <50% of average for May 1
Unimpaired Inflow into Folsom Reservoir	February 15 March 15 April 15 May 15	<950,000 acre-feet <950,000 acre-feet <950,000 acre-feet <950,000 acre-feet

RDCP Sections – **Vulnerability Assessment**

- Vulnerability Assessment Approach
- Vulnerability Assessment Outcomes

Vulnerability Assessment Approach



Outcomes: Overall Vulnerabilities



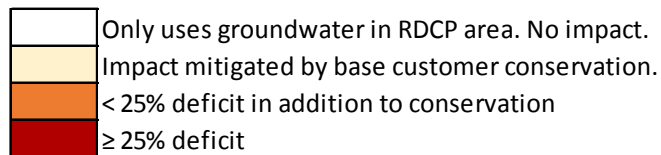
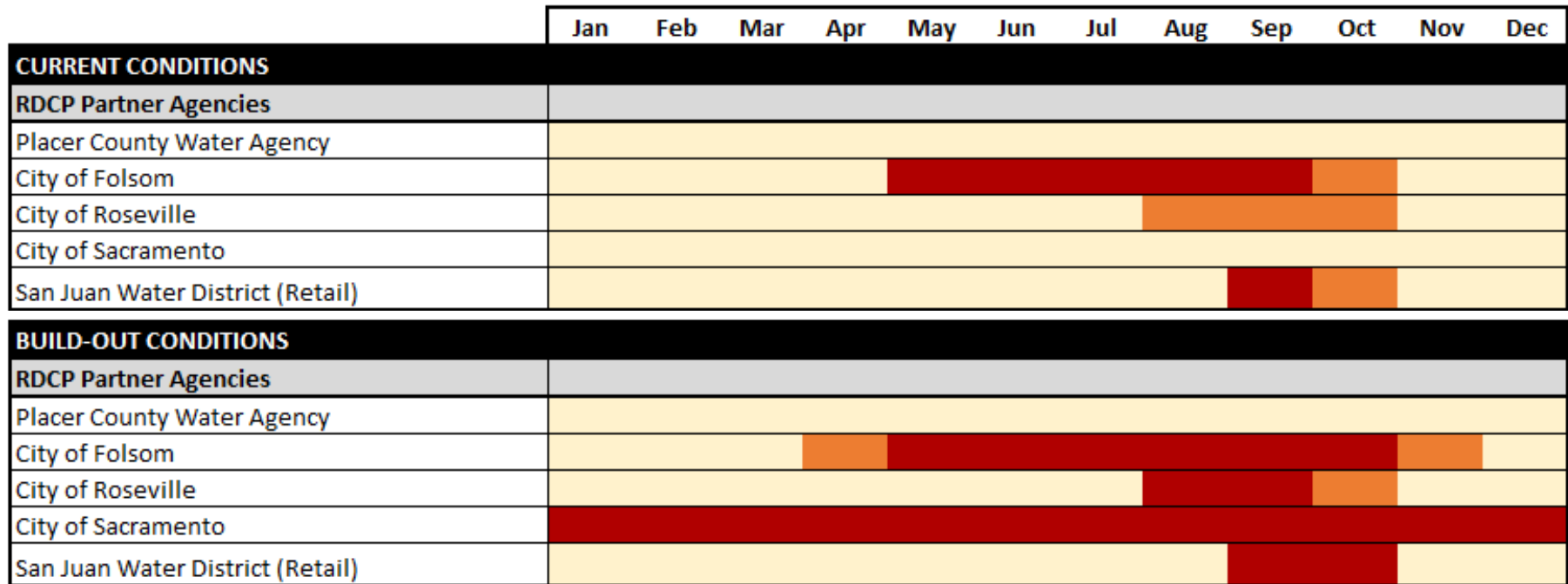
Outcomes: Drought-Specific Water Supply Vulnerabilities

1. Low Reservoir Storage
2. Low Flows in River
3. CVP Allocation Shortages
4. Water Rights Curtailments

Relative Impacts Associated with Drought-Specific Water Supply Vulnerabilities

Agency	Low Reservoir Storage	Low Flows in Rivers	CVP Allocation Shortages	Water Right Curtailments
RDCP Partners				
Placer County Water Agency	● ■		● ■	● ■
City of Folsom	● ■		● ■	● ■
City of Roseville	● ■		● ■	
City of Sacramento		● ■		● ■
San Juan Water District (Retail)	● ■		● ■	● ■
Other Agencies in RDCP Area				
California American Water – Placer County ⁺	● ■		● ■	● ■
California American Water – Sacramento County				
Carmichael Water District				● ■
Citrus Heights Water District ⁺	● ■		● ■	● ■
City of Lincoln ⁺	● ■		● ■	● ■
Del Paso Manor Water District ⁺⁺				
Fair Oaks Water District ⁺	● ■		● ■	● ■
Golden State Water Company-Arden [*]				
Orange Vale Water Company ⁺	● ■		● ■	● ■
Rio Linda/Elverta Community Water District [*]				
Sacramento County Water Agency [*]				
Sacramento Suburban Water District	● ■			● ■
Key: CVP = Central Valley Project, RDCP = Regional Drought Contingency Plan, M&I = municipal and industrial, * = only uses groundwater in RDCP area, + = not CVP contractors, but may be impacted indirectly through shortage allocations from the wholesaling agency Likelihood to Occur: <blank> = Unlikely or Not Applicable ● = Low ● = Moderate ● = High Magnitude of Impact: <blank> = No Impact or Not Applicable ■ = Low ■ = Moderate ■ = High				

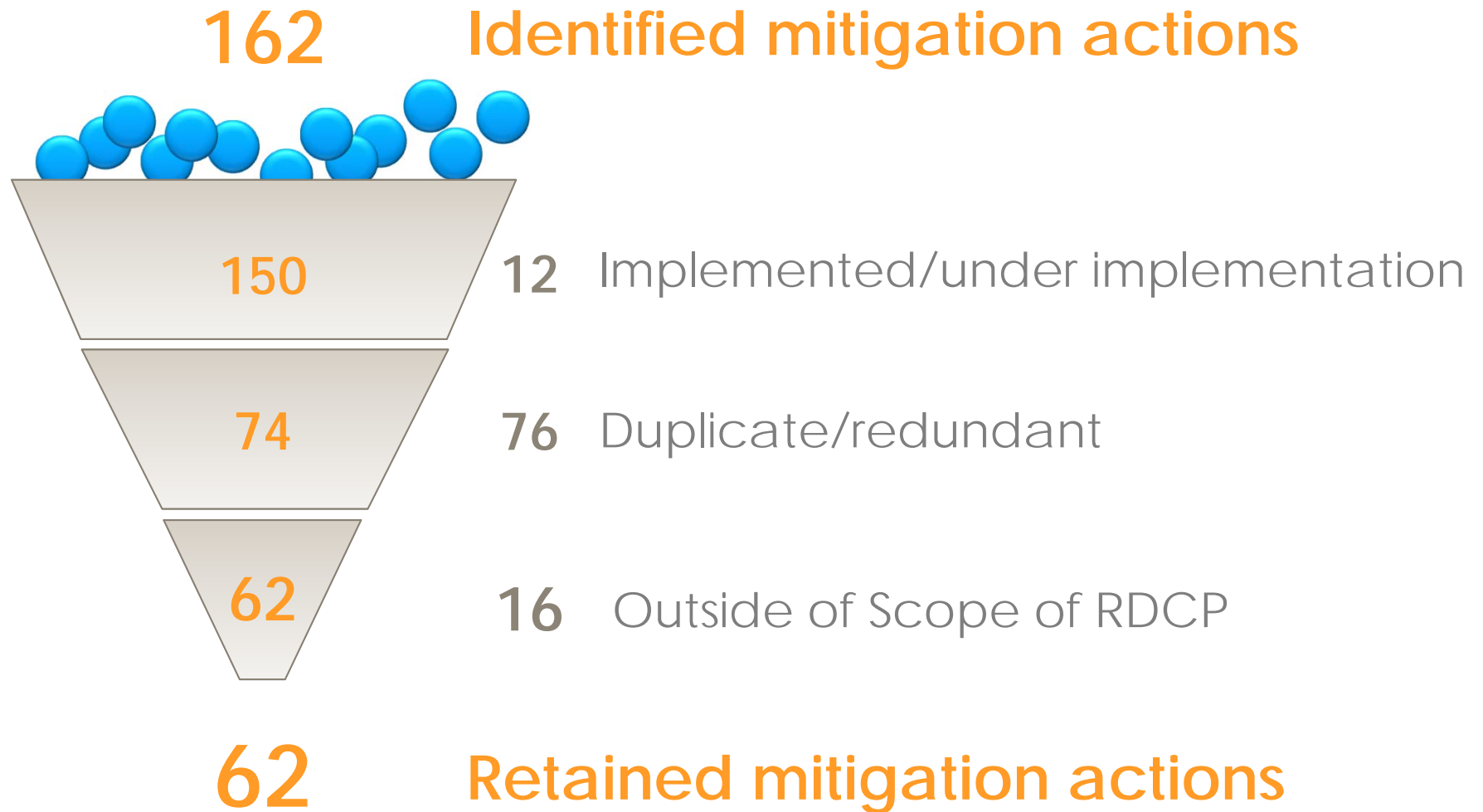
Monthly Deficits During Highly Restricted Supply Scenario



RDCP Sections – **Mitigation Actions**

- Mitigation Actions Development Approach
- Mitigation Actions Evaluation Outcomes
- Addressing Future Threats













Screening of Mitigation Actions



Retained Mitigation Actions

Structural	38 actions	<ul style="list-style-type: none">• Intertie• GW Well Rehabilitation• GW Well New Installation• GW Well Injection• SW Treatment• SW Storage• Diversion• Booster pump/ Pressure Reduction• Recycled Water
Non-Structural	24 actions	<ul style="list-style-type: none">• Water transfers• Wheeling• Banking• Modify Contracts/POU• Federal Action & Collaboration

Summary of Retained Mitigation Actions

Mitigation Action Category		Number of Actions	Total Capital Cost Preliminary Estimates (\$ million)
Structural			
Intertie		13	\$70 - \$100
Groundwater Well <ul style="list-style-type: none"> Rehabilitation New Installation Injection 		7	\$80 - \$160
Surface Water Treatment		2	\$300 - \$400
Surface Water Storage		2	\$500 - \$2,500
Diversion		2	\$500 - \$2,000
Booster Pump/ Pressure Reduction		5	\$2.5 - \$4
Recycled Water		7	\$30 - \$100
Non-Structural			
Water transfers		8	n/a
Wheeling		2	n/a
Banking		3	n/a
Modify Contracts/Place of Use		6	n/a
Federal Action and Collaboration		5	n/a



Key: n/a = not assessed



Environmental Sector Mitigation Actions

- Lower American River Modified Flow Management Standard
- Folsom Dam Temperature Management Improvements

Addressing Future Threats

- Climate Change
- Population Growth
- Delta Water Quality Control Plans
- California WaterFix

RDCP Sections – Response Actions

- Introduction
- Water Agency Response Actions
 - Water Shortage Contingency Plans
- Regional Response Actions

Water Agency Response Actions

- Each agency has its own water shortage contingency plan (WSCP) to reflect unique supply characteristics
- Despite variability, the stages of implementing WSCPs were effective in achieving desired level of reduced customer demands during recent drought
- Revised WSCP standards coming from State

Regional Response Actions

- Increased coordination between local water agencies.
- Increased media buys to support the coordinated public outreach messages.
- Designated regional media contact for drought-related water conservation inquiries.
- Increased data collection at the regional level to track water savings and weather data for inclusion in regular RWA issued press releases.

RDCP Sections – Operational & Administrative Framework + Update Process

- Purpose and Scope
- Development of Operational and Administrative Framework
- Operational and Administrative Framework
- Funding and Financing
- Financing Mitigation and Response Actions

4. Q&A

5. Review Schedule & Process

Schedule & Process

Draft RDCP	July 14
➔ Draft RDCP Public Comment Period	July 14 – August 16 ➔
Final RDCP	September 2017
DPTF Meeting	September 2017

Please send comments to Rob Swartz
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