

# RECLAMATION

*Managing Water in the West*

## **CVP M&I Water Shortage Policy Review**

## **Stakeholder Workshop #6**

**February 10, 2012**  
2800 Cottage Way, Sacramento



U.S. Department of the Interior  
Bureau of Reclamation

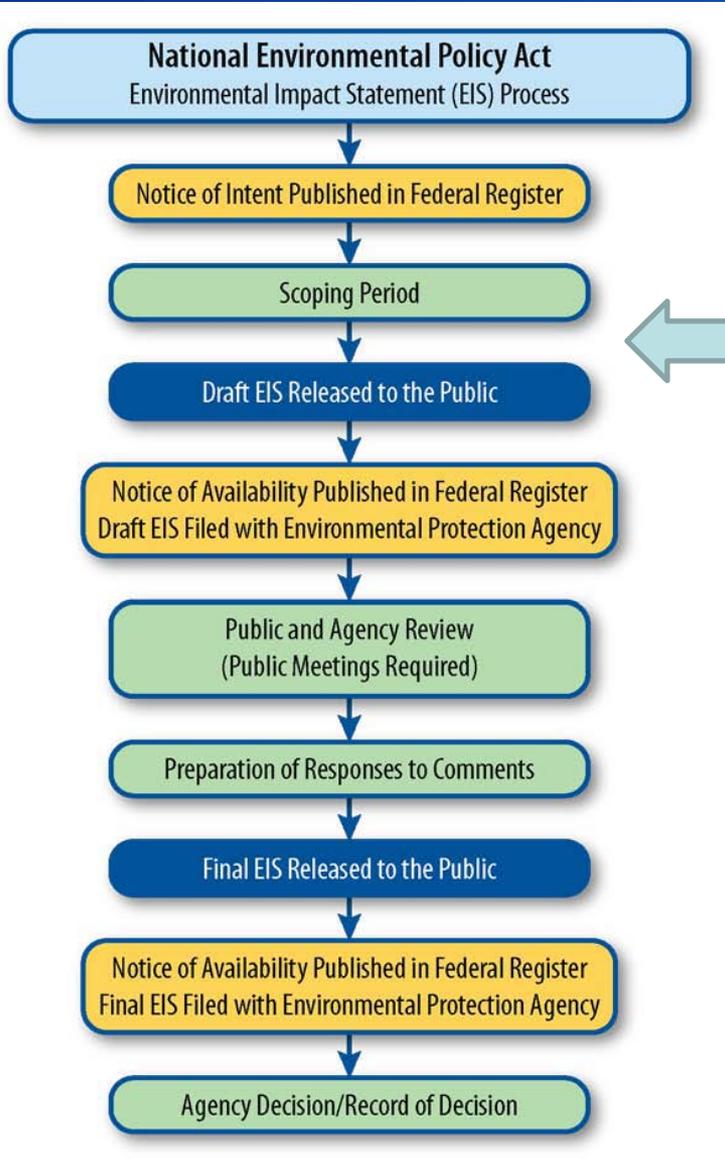
# Agenda

Time	Topic
9:30 – 9:45 am	Welcome & introductions, agenda review
9:45 – 10:00 am	Status of CVP M&I Water Shortage Policy EIS development
10:00 – 10:30 am	Selection and description of the No Action and Action Alternatives
10:30 – 11:15 am	Review proposed modeling analysis approach and input data
11:15 – 11:30 am	Review proposed environmental analyses & WSP EIS schedule
11:30 – 12:00 pm	Question and answer discussion, wrap up

# Status of CVP M&I Water Shortage Policy EIS

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# Status of CVP M&I Water Shortage Policy EIS



**We Are  
Currently Here**

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# Status of CVP M&I Water Shortage Policy EIS

National Environmental Policy Act  
Environmental Impact Statement (EIS) Process

Notice of Intent Published in Federal Register

Scoping Period

Draft EIS Released to the Public

Notice of Availability Published in Federal Register  
Draft EIS Filed with Environmental Protection Agency

Public and Agency Review  
(Public Meetings Required)

Preparation of Responses to Comments

Final EIS Released to the Public

Notice of Availability Published in Federal Register  
Final EIS Filed with Environmental Protection Agency

Agency Decision/Record of Decision

Public Draft EIS  
January 2013

Final EIS  
July 2013

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# M&I WSP EIS Alternatives

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# Alternatives to Be Considered and Analyzed in EIS

Alternative	Current	Previous
<b>No Action</b>	Equal Ag and M&I Allocation	2005 EA M&I WSP
<b>Action Alt. #1</b>	100% M&I Allocation	Equal Ag and M&I Allocation
<b>Action Alt. #2</b>	Updated Working Draft M&I WSP	100% M&I Allocation
<b>Action Alt. #3</b>	M&I Stakeholder Recommended Alternative	Updated Working Draft M&I WSP
<b>Action Alt. #4</b>	N/A	M&I Stakeholder Recommended Alternative

# **No Action Alternative: Equal Ag and M&I Allocation**

- **Why the Equal Ag and M&I Allocation**
  - **Different than Preferred Alternative in 2005 M&I WSP EA**
  - **Responsive to M&I and Agricultural water service contractor comments**
  - **Provides a baseline that better evaluates effects of alternative water shortage policies**
  - **Reflects no preferential treatment of M&I, thus enabling evaluation of maximum possible impacts to both Ag and M&I contractors**

# **No Action Alternative: Equal Ag and M&I Allocation**

## **Key Elements:**

- **Assumes Reclamation does not have an adopted M&I WSP**
- **Delivery reductions to M&I and Agricultural contractors occur at same levels (% basis) during shortage conditions, reflecting CVP supply availability**
- **Operational preference for M&I contractor's unmet need is provided without a guarantee**

# No Action Alternative

## Shortage allocation and reliability:

Water Shortage Factor	Alternative Elements
<b>M&amp;I shortage allocation</b>	Tiered reduced deliveries shared equally between M&I and Agricultural contractors
<b>M&amp;I water reliability</b>	No minimum shortage levels, may reduce deliveries below unmet need
<b>Ag shortage allocation</b>	Tiered reduced deliveries shared equally between M&I and Agricultural contractors
<b>Ag water reliability</b>	Provides highest level of reliability to Agricultural contractors

# **No Action Alternative: Equal Ag and M&I Allocation**

## **EIS evaluation considerations**

- **Provides baseline for comparison of Action Alternatives (Alternative WSPs)**
- **Facilitates evaluation of:**
  - **No M&I WSP condition**
  - **No M&I WSP preferential treatment condition**
  - **Different elements of alternative water shortage policies (tradeoff analysis)**
  - **Maximum possible impacts to M&I water contractors**

# Action Alternative #1: 100% M&I Allocation

## Key Elements:

- M&I contractors receive 100% of their contract allocation until CVP supplies are unavailable
- Ag deliveries reduced to maintain 100% allocations to M&I contractors (tiered reductions correlated to reduced CVP water supply allocations).
- Target minimum M&I deliveries equal to their unmet need level.
- 100% M&I allocation may not be met in all years.

# Action Alternative #1: 100% M&I Allocation

## Shortage allocation and reliability:

Water Shortage Factor	Alternative Elements
<b>M&amp;I shortage allocation</b>	Provides full M&I allocation, provided CVP supplies available
<b>M&amp;I water reliability</b>	Provides higher level of reliability to M&I contractors
<b>Ag shortage allocation</b>	Deliveries based on available CVP supply after 100% M&I delivery
<b>Ag water reliability</b>	Provides lowest level of reliability to Agricultural contractors

# **Action Alternative #1: 100% M&I Allocation**

## **EIS evaluation considerations**

- **Facilitates evaluation of:**
  - **Effects of providing high level of reliability to M&I contractors**
  - **Maximum possible impacts to Agricultural water contractors**
- **Provides sideboard, i.e. - both possible WSP Alternatives and potential effects**

# **Action Alternative #2: Updated Working Draft M&I WSP**

## **Key elements:**

- **Water supply allocations reduced until deliveries are as close as possible to available supply using the following criteria:**
  - **Reduce Ag water deliveries to 75% without reducing M&I allocation.**
  - **Reduce Ag and M&I deliveries by the same percentage until Ag water service contractors reach 50% and M&I contractors reach 75%.**
  - **Reduce Ag deliveries until Ag service contractors reach 25% (M&I contractors stay unchanged at 75%).**

# **Action Alternative #2: Updated Working Draft M&I WSP**

## **Key elements:**

- **Criteria (continued):**
  - **Reduce Ag and M&I deliveries by the same percentage until Ag contractors reach 0% and M&I contractors reach 50%.**
  - **Reduce M&I to unmet need amounts, but no guarantee.**
- **Stanislaus and Friant Divisions are excluded**

# Action Alternative #2: Updated Working Draft M&I WSP

## Shortage allocation and reliability:

Water Shortage Factor	Alternative Elements
<b>M&amp;I shortage allocation</b>	Tiered reduced deliveries based on drop down tables from current draft policy
<b>M&amp;I water reliability</b>	Provides unmet need through current CVP operations, no guarantee
<b>Ag shortage allocation</b>	Tiered reduced deliveries based on drop down tables from current draft policy
<b>Ag water reliability</b>	Provides similar level of reliability as existing conditions, not specific to permanent crops

# **Action Alternative #2: Updated Working Draft M&I WSP**

## **EIS evaluation considerations**

- **Facilitates evaluation of:**
  - **Providing increased level of reliability to M&I water contractors**
  - **Frequency of unmet need deliveries under current CVP operational conditions**
- **The effects of these alternative will likely fall between the No Action Alternative and Action Alternative #1 (100% Allocation to M&I).**

# **Action Alternative #3: M&I Stakeholder Recommended Alternative**

## **Key elements:**

- **Represents M&I Contractors Suggested Alternative**
- **Similar to Action Alternative #2, with the major difference being that this alternative targets minimum unmet need deliveries (higher reliability)**
- **May require modification to CVP operations, i.e., would provide increased carryover to reserve water in storage to meet ensuing year unmet needs of M&I contractors.**

# Action Alternative #3: M&I Stakeholder Recommended Alternative

## Shortage allocation and reliability:

Water Shortage Factor	Alternative Elements
<b>M&amp;I shortage allocation</b>	Tiered reduced deliveries based on drop down tables from current draft policy
<b>M&amp;I water reliability</b>	Provides enhanced unmet need deliveries through CVP operational changes
<b>Ag shortage allocation</b>	Tiered reduced deliveries based on drop down tables from current draft policy
<b>Ag water reliability</b>	Provides similar level of reliability as existing conditions, not specific to permanent crops

# **Action Alternative #3: M&I Stakeholder Recommended Alternative**

## **EIS evaluation considerations**

- **May require modification to CVP operations, i.e., would provide increased carryover to reserve water in storage to meet ensuing year unmet needs of M&I contractors.**
- **Facilitates tradeoff analysis between average year delivery and dry year M&I water supply reliability**

# **Action Alternative #3: M&I Stakeholder Recommended Alternative**

## **EIS evaluation considerations**

- **Facilitates evaluation of tradeoffs of higher M&I deliveries and reduced deliveries to Ag contractors and possible reduced environmental releases (Bay-Delta).**
- **Effects of this alternative will likely fall between the No Action Alternative and Action Alternative #1 (100% Allocation to M&I).**

# Proposed Modeling Analysis Approach

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# Proposed Modeling Analysis Approach

- **Project alternatives will be analyzed using these analytical tools:**
  - Hydrologic (project operations)
  - Hydrodynamic
  - Temperature
  - Hydropower
  - Economic
- **Simulation of each alternative will be compared to derive effects**

# Model Interaction

## CVP Contractor Data

- Contract Amount
- Demand
- PH&S
- Alternative Supplies
- Other

## CVP Allocation Criteria

- Alternative specific

## Hydrologic Analysis

CalSim II

## CalSim II Output

- CVP Contractor water delivery
- SWP Contractor water delivery
- Reservoir storages
- River flows
- Delta boundary conditions

## Hydropower Analysis

CVP/SWP hydropower models

## Economic Analysis

## Delta Hydrodynamics

DSM2

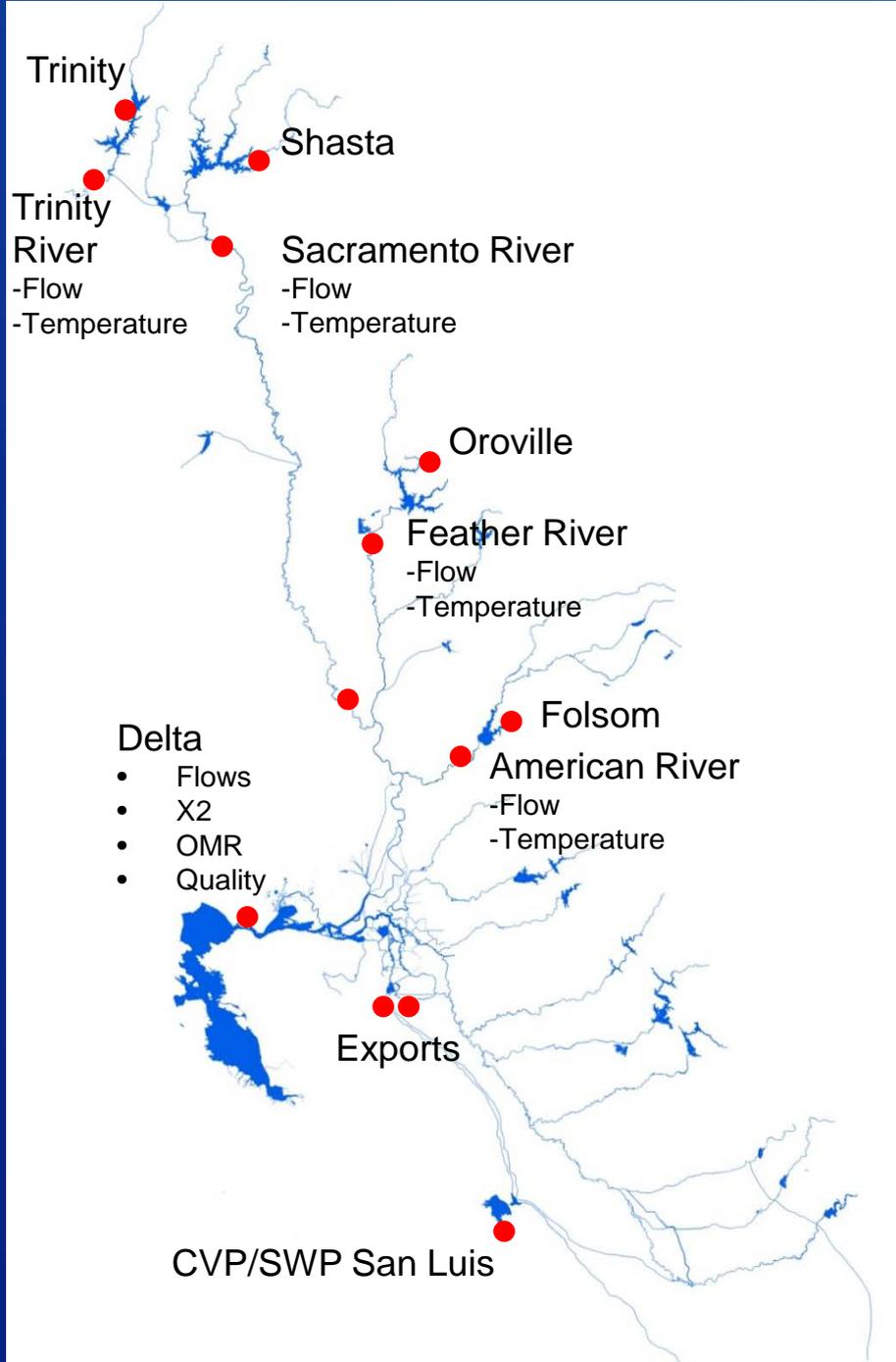
## Temperature Analysis

Temperature models

## Fishery Analysis

Water Quality  
Delta Flows

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# Key Model Outputs

- **CVP M&I contractor delivery**
  - Shasta
  - Folsom
  - Delta
  - South of Delta
- **CVP AG delivery**
  - North of Delta
  - South of Delta
- **SWP south of Delta delivery**

# Modeling Analysis

- **Status of model development:**
  - CalSim II has been enhanced to better represent CVP M&I contractors
  - Initial model simulations have been performed for project alternatives
    - Refinement of input data is ongoing
    - Refinement of model assumptions is ongoing

# Input Data

- **Developed from Urban Water Management Plans and Reclamation data**
- **For each contractor subject to the M&I WSP, handout summarizes:**
  - **Maximum contract amount**
  - **M&I historical use**
  - **Projected 2030 M&I demand**
  - **Estimated 2030 PH&S value**
  - **2030 non-CVP supplies**
- **Review for your agency and provide feedback**

# Environmental Analyses & EIS Schedule

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# Proposed Environmental Analyses

- Surface water
- Biological resources
- Cultural resources
- Hydrology
- Groundwater
- Climate change
- Land use
- Hazardous materials & waste
- Air quality
- Water quality
- Safety
- Visual resources
- Indian Trust Assets
- Environmental justice
- Recreation
- Socioeconomics, including real estate and agriculture

# M&I WSP EIS Timeline

- **Effects Analysis: October 2011 – December 2012**
- **Draft EIS Public Review: January – March 2013**
- **Final EIS: March – July 2013**

**Q&A Period**

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# Next Steps

- Provide input & comments by February 24, 2012 to:
  - Michael Inthavong, [Minthavong@usbr.gov](mailto:Minthavong@usbr.gov)
- Updates and new information available on M&I WSP Website:-  
<http://www.usbr.gov/mp/cvp/mandi/index.html>

**Thank you**

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