Options to Address Potential Impacts to Robles Diversions
Dam Removal Initial Option Overview

• IO-05 (Temporary Upstream Disposal of Fine Sediment) & IO-06 (Downstream Slurry & Temporary Upstream Disposal of Fine Sediment)
  – Would limit fine sediment mobilization by removal and/or temporary stabilization
  – Results in relatively low impact to Casitas diversions at Robles

• IO-01 (Containment Berm with High Flow Bypass) through IO-04 (Gated Notches)
  – Would use storm flows to mobilize fine sediments (including organics) downstream
  – Results in potential impact to Casitas diversions
Accumulated Fine Sediment Mobilization

- **Increased suspended sediment concentrations**
  - Casitas has been able to divert during high suspended sediment concentrations (during large storm events)
  - Can lead to temporary increase in maintenance within canal or lake

- **Increased organic material concentrations**
  - Eutrophication, fish kill & formation of undesirable chemical compounds in Casitas
  - Undesirable tastes & odors in water supply
  - Increased treatment costs
  - Lake Casitas was recently treated with Pak27 and has employed an aeration system (2005)
Options to Address Impact:

1. Diversion Replacement (full or partial)
   a) Matilija Creek Diversion
   b) NF Matilija Creek Diversion
   c) Matilija Creek & NF Matilija Creek Diversion

2. Treatment Technologies
   a) Modifications at Robles (add'l screening)
   b) Modification of Robles-Casitas Canal (filtration, etc.)
   c) Add’l Treatment at Lake Casitas
   d) Add’l Treatment at WT Plant

3. Replacement Supply (full or partial)
   a) Infiltration galleries
   b) Water transfers
   c) Desalination

4. Re-use & Conservation
   a) Re-use/Recycling
   b) Conservation
1. Diversion Replacement (full or partial)

- **1a:** Matilija Creek Diversion to Robles-Casitas Canal
- **1b:** NF Matilija Creek Diversion to Robles-Casitas Canal
- **1c:** Matilija Creek Diversion to NF Matilija Creek Diversion to Robles-Casitas Canal

**Pros:**
- No increase in fine sediment/organics to Lake
- Could fully replace potential lost diversion volume

**Cons:**
- High capital cost
- Potential conflict with some dam removal options (mobilization vs. diversion flow)
- Potential right-of-way issues
- Habitat impacts at new diversion
1. Diversion Replacement (full or partial)

- 1a: Matilija Creek Diversion to Robles-Casitas Canal
- 1b: NF Matilija Creek Diversion to Robles-Casitas Canal
- 1c: Matilija Creek Diversion to NF Matilija Creek Diversion to Robles-Casitas Canal
2. Treatment Technologies

- 2a: Screening/filtration/ flocculation improvements at Robles
- 2b: Sedimentation/flocculation along Robles-Casitas Canal
- 2c: Additional Lake Casitas treatment (chemicals, aeration, etc.)
- 2d: Additional WT Plant treatment

Pros:
- Long-term system improvements
- Potentially less expensive than some options
- No conflict with dam removal options
- Can be adaptively managed

Cons:
- Secondary impacts from chemical treatment
- Potential right-of-way issues
3. Replacement Supply

- **3a:** Infiltration galleries
- **3b:** Water Transfers
  - Water transfers from MWD
  - Additional pumping from adjacent groundwater basins
- **3c:** Desalination plant

**Pros:**
- Long-term system improvements (3a & 3c provide future system flexibility)
- No conflict with dam removal options
- Transfers can be adaptively managed

**Cons:**
- High cost
- Source availability (3b) not confirmed, and could be weather dependent
- Potential right-of-way issues
4. Re-use & Conservation

- 4a: Water re-use from WWTP
- 4b: Conservation
  - Fallowing
  - Rate re-structuring
  - Other conservation inducing measures

Pros:
- Long-term system improvements (provide future system flexibility)
- No conflict with dam removal options
- Environmentally friendly
- Bond Funding available
- Conservation can be adaptively managed

Cons:
- Rate structure viability not confirmed
- Limited re-use in summer
- Potential regulatory and/or public concerns/issues
## Options Overview

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<tr>
<th>ID</th>
<th>Options Description</th>
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<th>Improves Existing Infrastructure</th>
<th>Adaptive Management</th>
<th>Potential Cost</th>
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Next Steps

• Refine impact assessment
• Refine options to match specific alternative impacts
• Develop cost-effective combinations to address potential impacts