Major Findings
## Preliminary Cost & Water Supply Estimates

*(note: analysis does not include common assumptions baseline)*

<table>
<thead>
<tr>
<th>Project</th>
<th>Capital Cost ($millions)</th>
<th>Storage Capacity (taf)</th>
<th>Water Supply (taf/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shasta Enlargement</td>
<td>$180 - $280</td>
<td>300 - 635</td>
<td>50 - 80</td>
</tr>
<tr>
<td>NODOS</td>
<td>$1,100 - $2,400</td>
<td>1,800</td>
<td>300 - 440</td>
</tr>
<tr>
<td>In-Delta</td>
<td>$700 - $800</td>
<td>217</td>
<td>120 - 140</td>
</tr>
<tr>
<td>Los Vaqueros</td>
<td>$807 - $1,300</td>
<td>200 - 400</td>
<td>100-165 (EWA)</td>
</tr>
<tr>
<td>Upper San Joaquin</td>
<td>$450 - $800</td>
<td>450 - 1,200</td>
<td>100 - 235</td>
</tr>
</tbody>
</table>
Shasta Lake Enlargement

- There are distinct breakpoints in costs with increasing dam heights.
## Shasta Lake Enlargement

<table>
<thead>
<tr>
<th>Height of Dam Raise (feet)</th>
<th>Increased Storage (TAF)</th>
<th>Dry Year Supplies (TAF/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.5</td>
<td>290</td>
<td>80</td>
</tr>
<tr>
<td>18</td>
<td>600</td>
<td>150</td>
</tr>
</tbody>
</table>
North of Delta Offstream Storage

• Construction of dams at Sites and Newville locations is technically feasible.

• No endangered plant and wildlife species that cannot be mitigated. Fewer potential environmental impacts at Sites Reservoir location than Newville Reservoir.

• Broad variety of water supply, water quality, and diversion management benefits.
North of Delta Offstream Storage
Preliminary Estimates of Benefits

- Water Supply
- Water Quality
- Reduce Sac. R. Diversion (Apr-Sep)
- Provide Fall Stability Flows
- Provide Spring Flows for Cottonwood

Benefits (taf)
In-Delta Storage

- Re-engineered In-Delta Storage Project construction and operation meets State feasibility requirements.

- Average annual water supply of 100 to 136 TAF/yr. Could also improve operational flexibility, water quality, habitat and seismic stability.

- Additional water quality field and modeling evaluations are necessary to refine project operations for organic carbon, dissolved oxygen, and temperature.
In-Delta Storage

Cost & Economic Benefit Estimates

• Capital Cost: $774 million
• Annual Cost: $60 million
• Annual Water Supply Benefits: $23 to $26 million
Los Vaqueros Reservoir Expansion

- Delta-Los Vaqueros Pipeline & Pump Station
- Central Delta Intake and Conveyance
- Existing Old River Pipeline
- Existing Transfer Pump Station and Forebay
- Existing Old River Fish Screen and Pump Station
- Dam and Recreation
- Existing Neroly Blending Facility
- Delta-Los Vaqueros Pipeline
- Delta-Los Vaqueros Pipeline & Pump Station
- EXISTING LOS VAQUEROS WATERSHED
- LV-SBA Pump Station & Pipeline
Los Vaqueros Reservoir Expansion

- Operate for Water Quality, Reliability and EWA
- Provide 250 TAF to meet drought shortages
- Provide 100 to 165 TAF/yr to EWA
- Lower total organic carbon by about one third, and chloride and bromide by about half during droughts
- Advisory vote passed March 2, 2004
Upper San Joaquin River Storage

- Six surface storage options appear technically feasible
- Average annual new water supply up to 235 TAF/yr
- Could contribute to:
  - Restoring the San Joaquin River
  - Improving water quality in the San Joaquin River
  - Increasing water supply reliability
- Regional interest in additional conjunctive management
Potential Storage Options

- Fine Gold Reservoir
- Temperance Flat Reservoir (3 sizes)
- Raise Friant Dam
- Yokohl Valley Reservoir
- Groundwater Basins