



# **Major Findings**

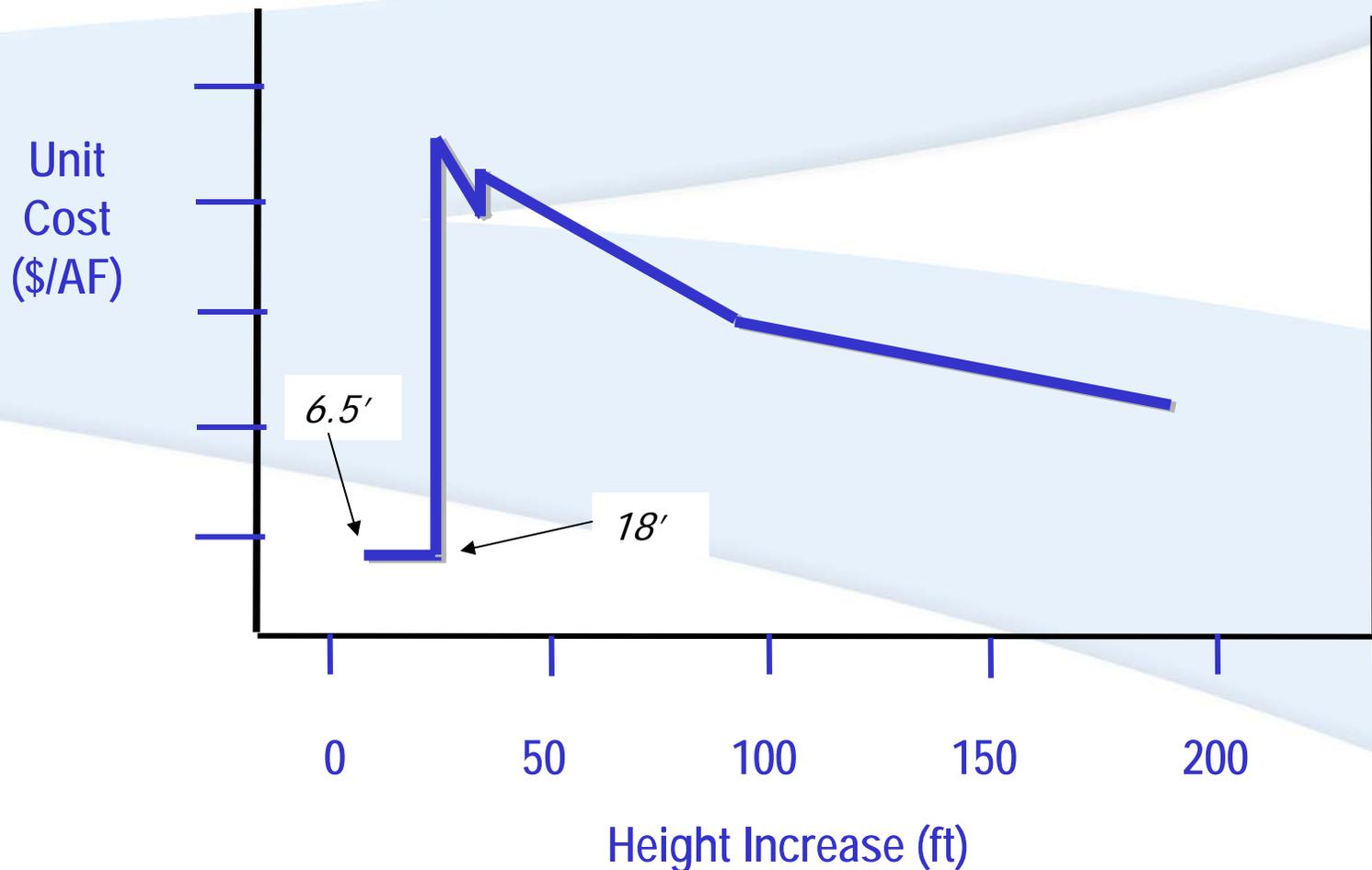
# Preliminary Cost & Water Supply Estimates

(note: analysis does not include common assumptions baseline)

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

# Shasta Lake Enlargement

- There are distinct breakpoints in costs with increasing dam heights



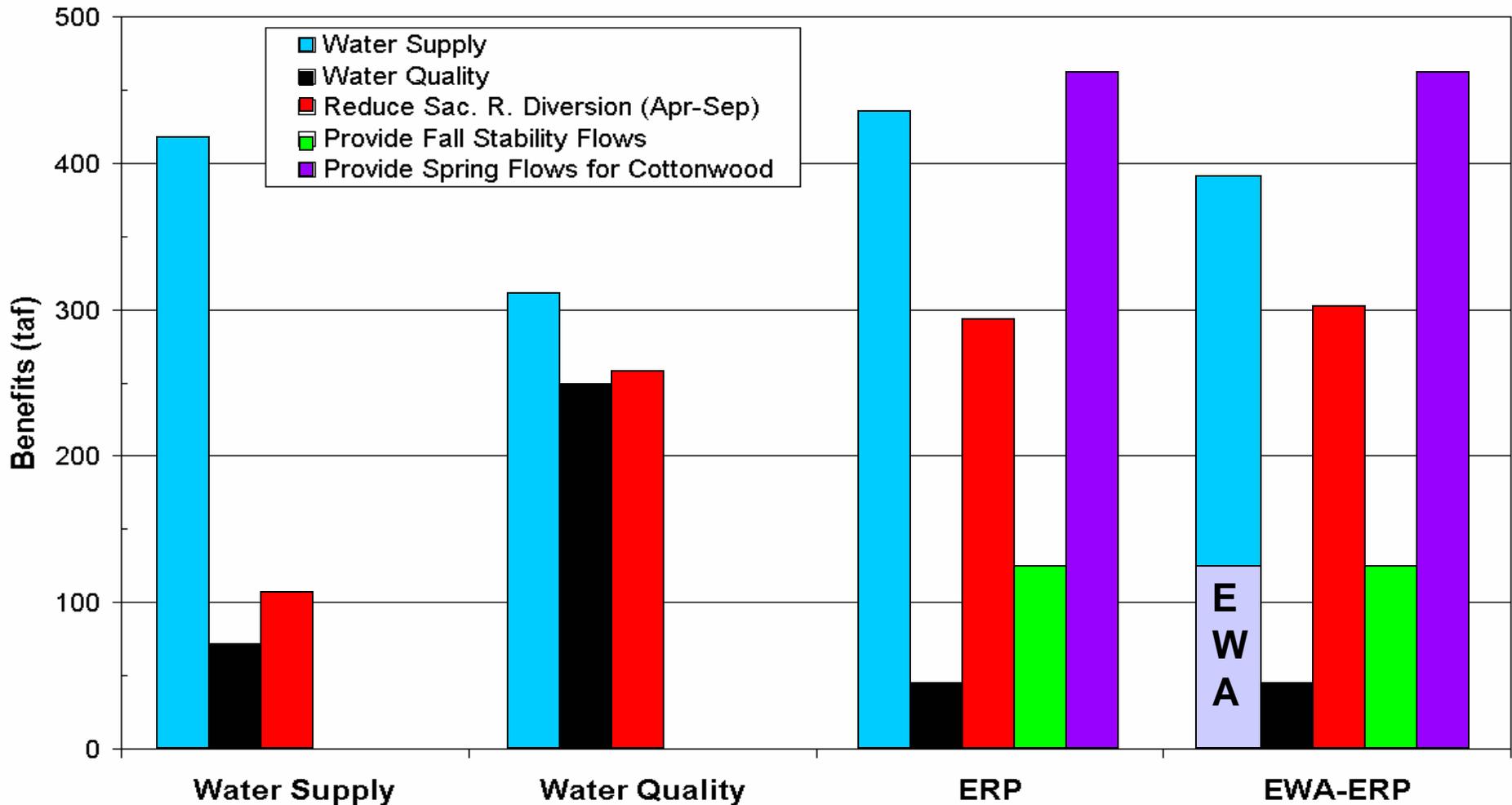
# Shasta Lake Enlargement

Height of Dam Raise (feet)	Increased Storage (TAF)	Dry Year Supplies (TAF/year)
6.5	290	80
18	600	150

# **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.

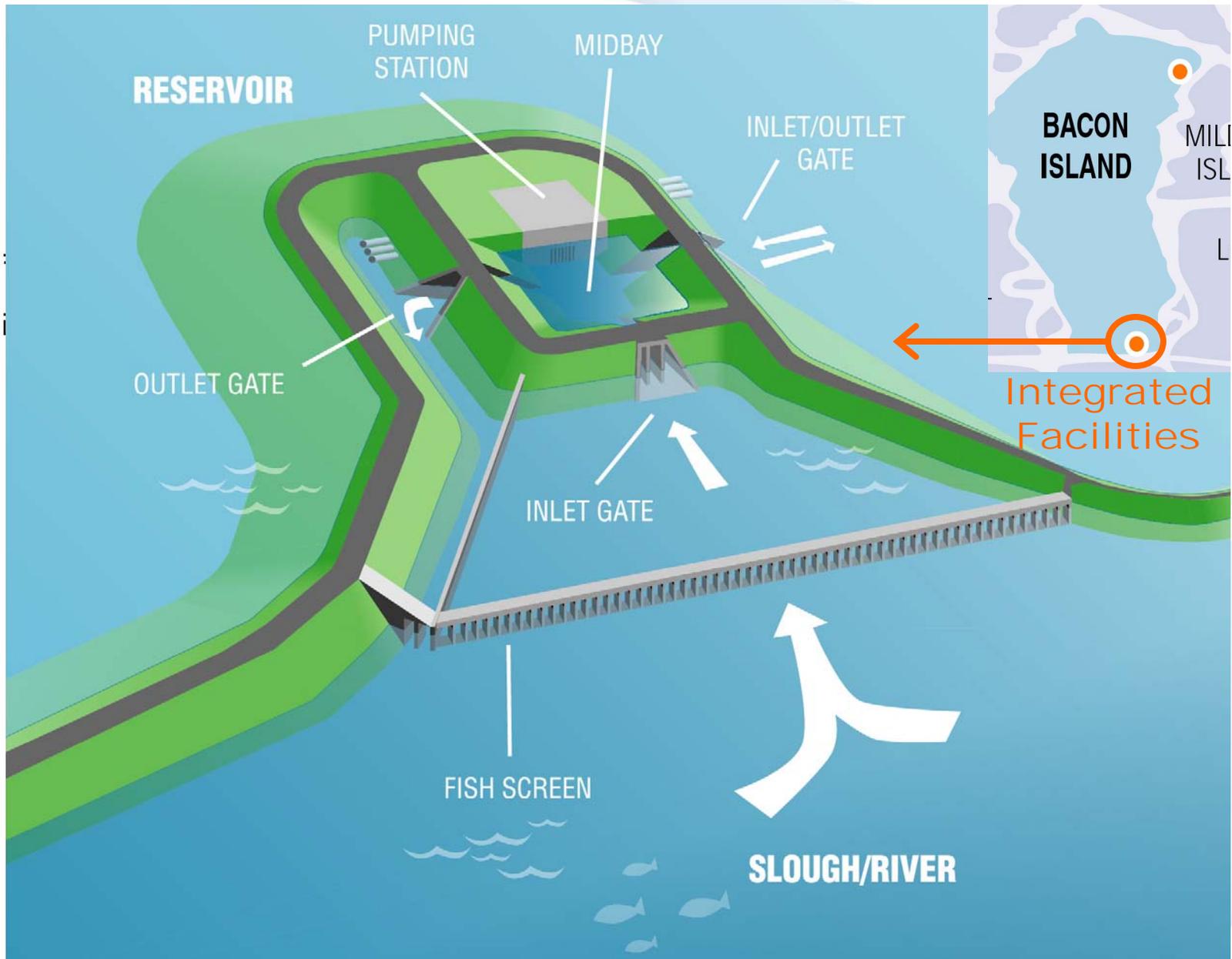
# North of Delta Offstream Storage Preliminary Estimates of Benefits



# **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 Proposed Facilities

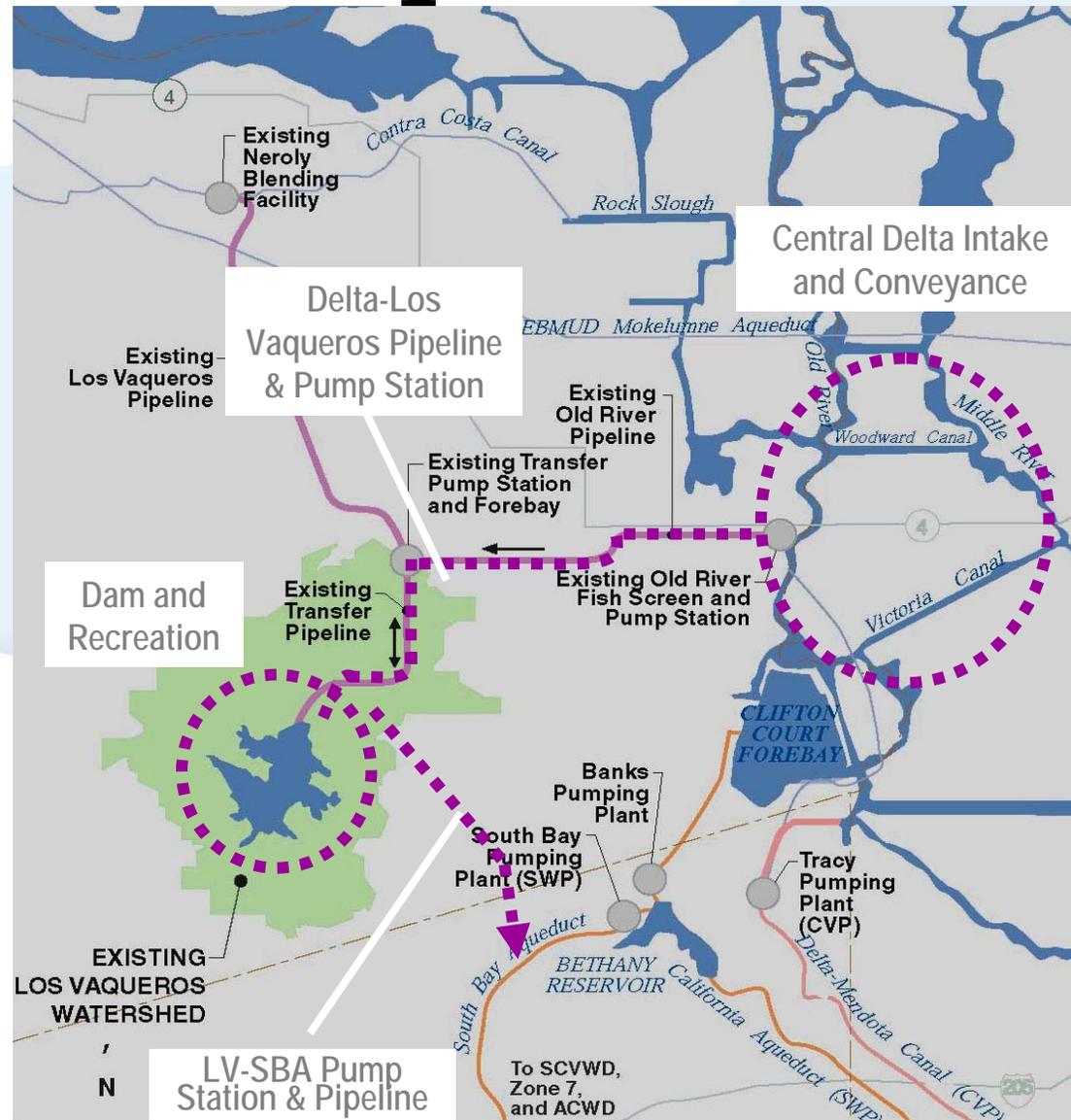


# **In-Delta Storage**

## **Cost & Economic Benefit Estimates**

- **Capital Cost: \$774 million**
- **Annual Cost: \$60 million**
- **Annual Water Supply**  
**Benefits: \$23 to \$26 million**

# Los Vaqueros Reservoir Expansion



# **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

