STORAGE PROPOSALS ISSUE SUMMARY

Issue papers for six Central Valley surface storage proposals and a general description of CALFED's approach to groundwater conjunctive use are attached. The six surface storage proposals are among the twelve projects selected by CALFED for further consideration through an initial screening process. These papers are summarizied below:

Shasta Lake Enlargement

Description: Shasta Lake could be enlarged by 290 TAF by raising Shasta Dam 6.5 feet at an estimated cost of $170 million. Benefits would include increased cold water reserves for downstream fishery benefits, enhanced flexibility to maintain instream flows and water quality, and improved water supply reliability. About 2,000 acres of habitat would be inundated, including a portion of the McCloud River that is protected under California law. Some candidate species for State and federal listing and species of special concern would be affected.
Recommendation: Secure federal authorization for USBR to complete a feasibility study and NEPA/CEQA review. Congressional write-in for authorization will be required to maintain schedule. Resolve potential conflicts with California law regarding state/CALFED participation.

Sites Reservoir

Description: Sites Reservoir, with a storage capacity of 1.8 MAF, would serve as an offstream storage reservoir filled primarily through pumped diversions from the Sacramento River and its tributaries. Costs are estimated at $870 to $1,400 million, depending on choice of conveyance facilities. This new storage could provide improved water supply reliability, enhanced operational flexibility for managing fisheries and water quality, and improved Sacramento River diversion management. Footprint impacts appear to be minimal, with the most significant loss of wildlife habitat being about 900 acres of oak-woodland and up to 70 acres of potential fairy shrimp habitat.
Recommendation: Develop cooperative agreements with GCID and other parties interested in sponsoring this project. Secure state funding to complete DWR feasibility study and NEPA/CEQA review. Resolve fairy shrimp sampling issues immediately.

Delta Wetlands

Description: Delta Wetlands would convert two Delta islands (Webb Tract and Bacon Island) comprising 11,000 acres into surface storage facilities and two islands (Bouldin Island and Holland Tract) comprising 9,000 acres to habitat. Together, the two storage islands would provide 238 TAF of new storage capacity. Cost of the project is estimated at $650 million. Delta wetlands would provide improved flexibility for managing Delta fisheries and water quality problems. Potential increases in TOC content of water stored on peat soil Delta islands must be further evaluated.
Recommendation: Determine requirements for additional NEPA/CEQA review for implementation of Delta Wetlands by a CALFED agency. Formulate purchase/lease options and determine approach. Identify lead agency and resolve potential TOC-related water quality concerns.

Los Vaqueros Reservoir Enlargement

Description: Los Vaqueros Reservoir is an offstream storage facility located near the Delta in Contra Costa County. The existing Los Vaqueros Reservoir has a storage capacity of 100 TAF and could be enlarged to 1,065 TAF. Cost for an enlargement to 400 TAF is estimated at about $700 million. An expanded Los Vaqueros might be interconnected with the Mokelumne, Hetch Hetchy, and/or South Bay Aqueducts to store and distribute high quality water from a variety of sources throughout the Bay Area. The expanded reservoir would inundate up to 3,340 acres of

grasslands, woodlands, riparian and terrestrial wildlife habitat, including existing Los Vaqueros Reservoir mitigation land.
Recommendation: Identify project sponsors and develop cooperative agreements. Initiate DWR/USBR reconnaissance study as a component of a Bay Area regional blending study.

Millerton Lake Enlargement

Description: Millerton Lake is located on the San Joaquin River near Fresno. Friant Dam could be raised to enlarge Millerton lake to a capacity of up to 1,240 TAF. The estimated cost of the project is high, at about $1,600. This project could provide improved water supply reliability, enhanced flexibility to maintain instream flows and water quality in the San Joaquin River, improved ability to manage San Joaquin Valley conjunctive use operations and/or regional water transfers, and flood control benefits. About 3,500 acres would be inundated, including wildlife habitat and wetlands. State or federal listed and candidate wildlife species could be affected. Two PG&E powerhouses would also be inundated.
Recommendation: Identify project sponsors and develop cooperative agreements. Initiate DWR/USBR reconnaissance study as a component of a Bay Area regional blending study.

Ingram Canyon Reservoir

Description: Ingram Canyon Reservoir, a south of Delta offstream storage reservoir with a capacity of up to 1 MAF, would be located in Stanislaus County, about 2 miles west of the California Aqueduct and 32 miles south of the Banks Pumping Plant. The estimated cost Ingram Canyon Reservoir is high, at about $1,700 for a 820 TAF reservoir. This project would function similarly to the existing San Luis Reservoir, adding flexibility for Delta export operations when optimal biological and water quality conditions occur. About 3,500 acres of grassland, oak savanna, oak woodland, and chaparral habitat, as well as 5 miles of intermittent streambed, would be inundated. San Joaquin kit fox could be affected.
Recommendation: Complete the DWR reconnaissance study to improve estimates of costs, benefits and impacts. Determine interest among water users in pursuing the project.

Groundwater Conjunctive Use

Description: CALFED has completed a set of guiding principles for implementation of conjunctive use programs. These principles emphasize local control and voluntary implementation of conjunctive use programs and adequate protection for third parties. CALFED has identified a target of 500 thousand acre-feet of new groundwater storage south of the Delta to be implemented during Stage 1. CALFED is currently conducting a broad evaluation of potential conjunctive use and groundwater banking projects in all major groundwater basins within the CALFED solution area. Conjunctive use offers the benefits of improved dry period water supply reliability for local water users and reduced groundwater overdraft, intrusion of poor quality water ,and land subsidence. Improperly managed projects can result in unacceptable changes of groundwater levels and intrusion of poor quality water.
Recommendation: Continue local agency outreach for basins with good conjunctive use potential. Improve CALFED agency coordination in this effort. Secure long-term financial resources to negotiate, formulate, and implement locally supported, long-term conjunctive use projects. Needs for access to groundwater storage for near-term implementation of the EWA must be balanced against potential negative local reaction if projects move too quickly. Some well-developed projects, such as the Semitropic/Vidler groundwater banking project in Kern County, could likely be implemented quickly.

STORAGE PROPOSALS ISSUE SUMMARY

Issue papers for six Central Valley surface storage proposals and a description of CALFED's approach to groundwater conjunctive use are attached. The six surface storage proposals are among the twelve projects selected by CALFED for further consideration through an initial screening process.

CALFED's level of knowledge on the benefits, environmental impacts, and cost effectiveness varies significantly between the potential facilities. Some are ready for detailed advanced planning and feasibility studies which would lead directly to a decision whether or not to built a given facility. These include Groundwater Conjunctive Use, In-Delta Storage, Shasta Lake Enlargement, and Los Vaqueros Reservoir Enlargement. A feasibility study has already begun for Sites Reservoir, but due to the size and complexity of the project will require additional time for evaluation before a decision can be made on implementation. Millerton Lake Enlargement or Equivalent and Ingram Canyon Reservoir may require even additional time to improve estimates of costs, benefits and impacts and determine the interest in pursuing the projects further. The issue papers are summarizied below:

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Shasta Lake Enlargement

Description: Shasta Lake could be enlarged by 290 TAF by raising Shasta Dam 6 to 8 feet at an estimated cost of $150 million. Benefits would include increased cold water reserves for downstream fishery benefits, enhanced flexibility to maintain instream flows and meander belt, and water quality, and improved water supply reliability.

Recommendation: USBR conduct evaluations/designs necessary to lead to an operable project within the next 5-7 years. USBR will cooperate with DWR on technical and economic studies. Secure federal authorization for advanced planning (including NEPA/CEQA compliance) and engineering design authority. Congressional write-in for authorization will be required to maintain schedule. Resolve potential conflicts with California law regarding state/CALFED participation.

Sites Reservoir

Description: Sites Reservoir, with a storage capacity of 1.8 MAF, would serve as an offstream storage reservoir filled primarily through pumped diversions from the Sacramento River and its tributaries. Costs are estimated at $870 to $1,400 million. This new storage could provide improved water supply reliability, enhanced operational flexibility for managing fisheries and water quality, and improved Sacramento River diversion management.

Recommendation: Develop partnership agreements with GCID and other local entities to develop the project. Continue funding to complete the feasibility study and a joint DWR/USBR NEPA/CEQA review.

In-Delta Storage

Description: One potential In-Delta storage project, Delta Wetlands,would convert two Delta islands (Webb Tract and Bacon Island) comprising 11,000 acres into surface storage facilities and two islands (Bouldin Island and Holland Tract) comprising 9,000 acres to habitat. Together, the two storage islands would provide 238 TAF of new storage capacity. Cost of the project is estimated at $650 million. Delta Wetlands would provide improved flexibility for managing Delta fisheries and water quality problems.

Recommendation: Conduct joint DWR/USBR/local partnership evaluations (appraisal, advanced planning & feasibility studies)/designs necessary to lead to an operable project within 3 to 5 years. Determine requirements for additional NEPA/CEQA review for implementation of Delta Wetlands. Allocate $12 million over next 3 years for advanced planning/feasibility studies,

CEQA/NEPA, permitting including resolution of levee seepage and potential TOC-related water quality concerns.

Los Vaqueros Reservoir Enlargement

Description: The existing Los Vaqueros Reservoir (100 TAF) is an offstream storage facility located near the Delta in Contra Costa County that could be enlarged up to 1,065 TAF. Cost for an enlargement to 400 TAF is estimated at about $700 million. An expanded Los Vaqueros might be interconnected with the Mokelumne, Hetch Hetchy, and/or South Bay Aqueducts to store and distribute high quality water from a variety of sources throughout the Bay Area.
Recommendation: Conduct joint DWR/USBR/local partnership evaluations to lead to a decision on implementation of new near Delta storage, with primary focus on Los Vaqueros Reservoir Enlargement, to find a solution to Bay Area blending for water quality and water supply reliability. Immediately initiate joint DWR/USBR/local partnership reconnaissance study as a component of a Bay Area regional blending study.

Millerton Lake Enlargement

Description: Millerton Lake is located on the San Joaquin River near Fresno. Friant Dam could be raised to enlarge Millerton lake to a capacity of up to 1,240 TAF. The estimated cost of the project is high, at about $1,100 million. This project could provide improved water supply reliability, enhanced flexibility to maintain instream flows and water quality in the San Joaquin River, improved ability to manage San Joaquin Valley conjunctive use operations and/or regional water transfers, and flood control benefits.
Recommendation: Initiate joint USBR/DWR/local partnership appraisal study to improve cost estimates, clarify implementation issues, and explore alternative means to achieve project benefits. This project should be considered in the context of broader San Joaquin River water management (flow and habitat restoration, flood management, conjunctive use, reservoir reoperation and water transfers. Secure federal authorization for a joint USBR/DWR/local partnership feasibility study and NEPA/CEQA review in FY 2002, contingent on appraisal study findings.

Ingram Canyon Reservoir

Description: Ingram Canyon Reservoir, a south of Delta offstream storage reservoir with a capacity of up to 1 MAF, would be located in Stanislaus County, about 2 miles west of the California Aqueduct. The estimated cost of Ingram Canyon Reservoir is high, at about $1,700 million for a 820 TAF reservoir. This project would function similarly to the existing San Luis Reservoir, adding flexibility for Delta export operations when optimal biological and water quality conditions occur.
Recommendation: Complete DWR estimates of costs, benefits and impacts through the ISI.

Groundwater Conjunctive Use

Description: CALFED guiding principles for implementation of conjunctive use programs emphasize local control and voluntary implementation of conjunctive use programs and adequate protection for third parties. CALFED has identified a target of 500,000 acre-feet of new groundwater storage south of the Delta to be implemented during Stage 1. Conjunctive use offers the benefits of improved dry period water supply reliability for local water users and reduced groundwater overdraft, intrusion of poor quality water ,and land subsidence
Recommendation: Continue local agency outreach for basins with good conjunctive use potential. Allocate long-term financial resources to negotiate, plan, formulate, and implement locally supported, long-term conjunctive use projects. Some well-developed projects, such as the Semitropic/Vidler groundwater banking project in Kern County, could likely be implemented quickly and should be pursued. Use Proposition 13 funds to assist local entities to implement conjunctive use and groundwater banking projects.