

ALTERNATIVE H - CHAIN OF LAKES CONVEYANCE

Reduce Conflicts in the System

A solution will reduce major conflicts among beneficial users of water. A solution should:

- significantly reduce each of the four major conflicts which have been identified for the Bay-Delta system. Most of the problems in the Bay-Delta are embodied in one or more of these conflicts. They are:
 - fisheries and diversions - high/medium - export diversion from the South Delta is eliminated.
 - habitat and land use/flood protection - medium/high, a moderate level of vulnerability reduction is included. The chain of lakes, in conjunction with moderate habitat improvements, produces a very high level of habitat restoration. The vulnerability of export supplies to catastrophic interruption is substantially reduced.
 - water supply availability and beneficial uses - high/medium, this alternative eliminates in-Delta conveyance constraints but is discounted due to possible adverse impacts on in-Delta water users.
 - water quality and land use - medium, substantial improvement in export water quality since most export diversion is moved from the South Delta. However, substantial amounts of Delta land are taken out of production. May be TOC and south Delta water quality problems.

MEDIUM/HIGH

Equitable

An equitable solution will focus on solving problems in all problem areas. Improvement for some problems will not be made without corresponding improvements for other problems. Equitable considerations include:

- satisfy some portion of each of the 4 primary and 14 secondary objectives which have been identified for the program - High, addresses some portion of all objectives.

- provide a reasonable balance of reliability weighted improvements for the four resource areas. Balance does not necessarily require an equal level of improvement for each resource areas (e.g. water exporters might be willing to accept less improvement in water supply reliability if water quality is improved). - **Medium/high, although all resource areas are substantially benefited there is little benefit to Delta tributaries and in-Delta water quality may be in question.**

- result in costs allocated to the economic users of water based on the benefits they receive from the solution. However, there is no obligation to provide benefits to those unwilling to contribute towards the solution - **Unable to consider this factor in the absence of a financing plan.**

- result in net benefits and burdens balanced across stakeholder groups - **Medium/high, service from the isolated facility to the central and south Delta water users and an 70 TAC of land retirement improve balance.**

MEDIUM/HIGH

Affordable

An affordable solution will be one that can be implemented and maintained within the foreseeable resources of the Program and stakeholders. An affordable solution should:

- have identifiable revenue and financing provisions which are adequate for implementation and continued maintenance of the solution - **Unable to consider this factor in the absence of a financing plan.**

- be among the least expensive solutions, for a given level of implementation, which achieve the Program objectives - **Medium, this is a relatively expensive alternative compared to other isolated facility options. Cost , hydraulic operation, and effects on urban water quality are uncertain.**

- minimize the negative effects on the credit rating of those funding the solution - **Unable to consider this factor in the absence of a financing plan.**

MEDIUM

Durable

A durable solution will have political and economic staying power and will sustain the resources it was designed to protect and enhance. A durable solution should:

- be adaptive, flexible to changing needs and potential future conditions, and able to address biological uncertainty to sustain the resources it was designed to protect and enhance - **Medium, multiple diversions and in-Delta storage provide flexibility to operate in the best interests of Delta health. The chain could be phased in over time, beginning with an enlarged Clifton Court Forebay, and moving northward island by island.**
- provide ecosystem improvement using a variety of mechanisms to better face biological uncertainty rather than relying on any single theory of ecosystem improvement - **Medium/High, this alternative relies on a combination of extensive habitat improvement and export diversion relocation and reoperation.**
- accommodate hydrological and other physical uncertainties (e.g. increased storage would hedge against the unknown, or consideration of impacts of potentially higher sea levels on the various alternatives could strengthen durability) - **Medium/High, new in-Delta storage provides durability in this sense, along with the multiple diversion locations and isolated conveyance.**
- have adequate legal, operational, or physical provisions to ensure that objectives continue to be met in an equitable way for the long term - **Medium, the conveyance capacity of the chain could be designed to limit total exports to a specified maximum capacity.**
- include a financial plan which has provisions to ensure that the solution will be implemented as intended, while providing flexibility to alter revenues to respond to changing needs - **High, because water diverted to the new conveyance and storage is readily quantifiable and accountable. Long-term contracts for water supply can be developed based on deliveries from storage and use of storage.**

MEDIUM/HIGH

Implementable

An implementable solution will have broad public acceptance, legal feasibility and will be timely and relatively simple to implement compared to other alternatives. An implementable solution should:

- have legal or practical precedents or have a clearly identified series of reasonable steps which could be taken to enable implementation - Medium/Low, relative to the other alternatives, development of new conveyance, storage and habitat restoration projects is reasonably straightforward, requiring Section 404, NEPA, and CEQA compliance. However, the practical precedents for a large isolated facility using flooded islands do not exist.

- have institutional feasibility - High, this alternative could be implemented by and within existing institutional authorities. Some contractual or joint powers authorities might be desirable to implement the new conveyance and storage.

- include as few major legal and institutional changes as necessary while meeting Program objectives - Medium, this alternative could be implemented by and within existing institutional authorities. Some contractual or joint powers authorities might be desirable to implement the new conveyance and storage. Possibility of misoperation would require operational guarantees.

- have broad acceptance across the various geographic areas and interest groups as well as the state as a whole - Low/Medium, discounted because of opposition of some groups to structural solutions, particularly one on this scale. Also, depending on the specific conveyance and reservoir locations, the new storage included in this alternative may face significant local or regional opposition. Central and South Delta water users may oppose an isolated facility.

MEDIUM/LOW

No Significant Redirected Impacts

A solution will not solve problems in the Bay-Delta system by redirecting significant negative impacts, when viewed in its entirety, in the Bay-Delta or other regions of California. A solution should:

- minimize negative long-term economic impacts at the regional level - Medium/High, relatively small amounts of land-use change compared to other alternatives.

- compensate for or mitigate unavoidable negative impacts to the greatest extent practicable - Medium/High, relatively small amounts of land-use change compared to other alternatives.

MEDIUM/HIGH

POTENTIAL REVISIONS

Revision	Principle Improved	Rationale	Potential Adverse Affects
Provide water service to Central and South Delta water users from the isolated facility	Reduce Conflicts, Implementable.	Provide benefits to in-Delta water users to improve water quality in south and central Delta	Cost
Add upstream storage	Reduces Conflicts, Equitable, Durable, Implementable	Provides increased water supply benefits and flexibility to manage river flows for ecosystem and improve screen efficiency.	Cost, redirected impacts of Reservoir
Add south of Delta storage	Reduce Conflicts, Equitable, Affordable, Implementable	Generates water supply benefits and flexibility to meet pumping windows	Cost, redirected impacts of Reservoir