ALTERNATIVE C - DUAL DELTA 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 pumping from the South Delta is substantially curtailed, and a moderate level of habitat improvement is included.**

  - habitat and land use/flood protection - **high, moderate levels of vulnerability reduction and habitat restoration are combined with reduced export diversion effects.**

  - water supply availability and beneficial uses - **high/medium, water supply availability is improved for both water users and environmental uses by new storage upstream and downstream of the Delta. Isolated conveyance improves water supply availability. Provides flexibility to pump in shorter windows.**

  - water quality and land use - **medium, improved export water quality associated with the new diversion location, but this alternative is discounted because of possible adverse effects on South and Central Delta water users.**

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). - **High/Medium, all areas are substantially benefitted. Water quality in south Delta has moderate improvement.**

- 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, discounted because of level of land retirement and possible adverse impacts on South and Central Delta water users.**

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/High, the substantial capital cost of this alternative is largely offset by avoided treatment costs, and the improved conveyance increases the cost effectiveness of the new costly upstream and downstream storage components.**

- 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/HIGH

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/High, this alternative relies on different remedial theories, e.g, export diversion relocation, continued through-Delta conveyance, and habitat restoration. The new storage provides flexibility through potential reoperation. This alternative is discounted slightly because of the limited capacity of the isolated facility, limiting its ability to be adapted to changed conditions.**

- 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 variety of remedial theories as discussed above. This alternative is discounted somewhat because it does not include substantial improvements on the rivers and tributaries.**

- 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 storage and isolated conveyance improve durability in this sense, but continued export diversions from the South Delta are a negative. The continued South Delta export diversions remain suspect to interruption due to higher sea levels (increased flood risk) and additional species listings.**

- 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 variety of approaches included in this alternative offer the ability to adapt as more is known, providing some assurance of success. This alternative is discounted due to the perceived difficulty of crafting adequate assurances regarding the appropriate operation of the isolated facility. Need institutional guarantees for south Delta water quality.**

- 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/Medium, because water diverted to the new storage is readily quantifiable and accountable. Long-term contracts for water supply can be developed based on deliveries from storage and use of storage and the isolated facility. Benefits are easy to define.**

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 storage and habitat restoration projects is reasonably straightforward, requiring Section 404, NEPA, and CEQA compliance. The recent practical precedents for new storage and an isolated facility may substantually delay implementation.**

- 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 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 storage. The implementation of an isolated facility with consideration of Delta standards may require legal changes.**

- have broad acceptance across the various geographic areas and interest groups as well as the state as a whole - **Medium, due to opposition to structural solutions by some groups related to assurance of appropriate operations.**

MEDIUM

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, relatively small amounts of land-use change compared to other alternatives. Third party impacts on landuse change, for retirement, for facilities.**

- compensate for or mitigate unavoidable negative impacts to the greatest extent

practicable - Medium, relatively small amounts of land-use change compared to other alternatives, construction impacts are likely mitigable. Some redirected impacts.

MEDIUM

POTENTIAL REVISIONS

Revision	Principle Improved	Rationale	Potential Adverse Affects
Rehabilitate fish facilities at export pumping plants	Reduce Conflicts	Reduces entrainment effects	Cost
Serve eastside tributary areas from isolated facility	Reduce Conflicts, Equitable, Durable,Implementable, NSRDI	Transfer with eastside San Joaquin water users in exchange for stored water down San Joaquin tributaries. Improves flow and water quality in San Joaquin.	May not be enough water if isolated facility is to small.
Serve south Delta Agriculture from isolated facility	Reduce Conflicts, Equitable, Durable,Implementable, NSRDI	Directly serve Ag land in south delta that has high salinity problems or circulation problems.	May not be enough water if isolated facility is to small.
Increase range of isolated facility to 2K to 15K cfs	Reduce Conflicts, Equitable, Durable, NSRDI	Would increase flexibility to manage Delta for ecosystem. supply, and water quality.	Need institutional guarrentees

Add in-Delta storage connected to Clifton Court(100K to 200K AF)	Reduce Conflicts, Equitable, Durable, NSRDI	Filling this storage from the Delta or from the isolated facility. No significant environmental impacts. Improve water quality and fisheries Jul-Aug-Sep	Water Quality in the resevoir and TOC
Reduce Ag retirement to 150K to 200K Acres	Reduce Conflicts, Affordable, Equitable, Durable,Implementable, NSRDI	Decrease impacts on land use, decreases cost, doesn't harden demand as much. more acceptable to certain stakeholders, reduces third-party impacts	Reduced environmental water supply for the Bay
Add upper Sacramanto meander belts below Chico Landing	Reduce Conflicts, Durable	With upstream meanders increases river aquatic and terrestrial habitat. Need to boost habitat to make water supply guarrentees	Cost Looks like add-on Re-directed impacts to land owners.
Add subsidence control program	Reduce Conflicts, Durable,Implementable, NSRDI	Long term subsidence program that can co-exist with Ag and ecosystem quality. Long term conversion.	Cost, Re-directed impacts on long term change in landuse. Perception that the program is eliminating Ag in Delta.

Increase emergency response	Reduce Conflicts, Equitable, Durable, Implementable, NSRDI	Reduce land use conflicts, increases protection of water supply quality, improves breath of support	Cost

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