ALTERNATIVE A - EXTENSIVE DEMAND MANAGEMENT

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 -**medium, potential reductions in export pumping for normal years 1-2 MAF with some savings in critically dry years. Export pumping from the South Delta continues and only a modest level of habitat restoration is included. Benefits to fisheries may be reduced in dry years when they may be most needed. Would need institutional guarantees to keep export reductions down during increase in demand and to ensure no redirected impacts. Initially reduced entrainment.**

  - habitat and land use/flood protection - **low/medium, moderate levels of levee improvement. Modest levels of vulnerability reduction and habitat restoration are included.**

  - water supply availability and beneficial uses - **low/medium, limited water supply benefits, and substantial reductions in agricultural uses. Reducing demands should increase supply and have some benefit on water quality from retirement of poor drainage lands.**

  - water quality and land use - **low, limited improvement in export water quality since export pumping from South Delta continues, only modest pollutant source controls included.**

LOW/MEDIUM

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, some uncertainty that fish populations will improve, therefore water supply improvements are somewhat uncertain and unreliable. However, all areas are equally (modestly) benefitted. Institutional guarantees need to insure shared benefits of saved water**

- 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, if costs are largely allocated to water users, this alternative would rank very low.**

- result in net benefits and burdens balanced across stakeholder groups - **Low, burden on San Joaquin Valley communities and uncertainty that fish will respond.**

LOW/MEDIUM

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. Financing for the large land retirement component is potentially complex, and could lead to a low rating for this alternative.**

- be among the least expensive solutions, for a given level of implementation, which achieve the Program objectives - **Low/medium due to the perceived limited cost-effectiveness of this solution; the large wastewater reclamation component is**

relatively expensive, and the large land retirement component is likely to have high secondary costs (e.g. in-lieu county property tax payments, etc.) Capital costs are low but annual costs are high. Being implementable early is a positive.

- 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.**

LOW/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 - **Low/Medium, demand is "hardened" by the aggressive demand management, land fallowing, and land retirement components. A substantial change in state demographics could reduce or eliminate the alternative's accomplishments.**

- provide ecosystem improvement using a variety of mechanisms to better face biological uncertainty rather than relying on any single theory of ecosystem improvement - **Low, this alternative relies on a combination of modest habitat improvement and reoperation due to demand reduction. May not be enough benefits derived from demand reduction. Narrow focus on one solution, not enough flexibility.**

- 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) - **Low, continued South Delta export diversions are subject to interruption due to higher sea levels (increased flood risk) and additional species listings. Lacks protection from drought sequences**

- have adequate legal, operational, or physical provisions to ensure that objectives continue to be met in an equitable way for the long term - **High, because the basic conveyance configuration of the Delta is unchanged, existing hydraulic constraints on export diversions remain. Focused on senior water rights holders.**

- 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 supplies developed by wastewater reclamation are readily quantifiable and accountable. Land retirement is inherently flexible and can be phased in over time and expanded or contracted if necessary.**

MEDIUM

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 - **High, relative to the other alternatives, development of habitat restoration projects is reasonably straightforward, requiring Section 404, NEPA, and CEQA compliance.**

- have institutional feasibility - **High, this alternative could be implemented by and within existing institutional authorities.**

- 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. May need some legislation, because districts control water. Senior water rights obstacles may cause lack of institutional will.**

- have broad acceptance across the various geographic areas and interest groups as well as the state as a whole - **Low, discounted because this alternative includes a substantial land retirement component which is not broadly accepted through the state.**

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 - **Low, relatively large amounts of land retirement and resultant third-party impacts compared to**

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other alternatives.

- compensate for or mitigate unavoidable negative impacts to the greatest extent practicable - **Low, relatively large amounts of land retirement and resultant third-party impacts compared to other alternatives.**

LOW

POTENTIAL REVISIONS

Revision	Principle Improved	Rationale	Potential Adverse Affects
Rehabilitate fish facilities at export pumping plants	Reduce Conflicts	Reduces entrainment effects	Cost
Add south of Delta storage and increase permitted pumping capacity	Reduce Conflicts, Durable, Implementable	Produces water supply benefits, and more flexibility to meet pumping windows	Increase levee maintenance and emergency response
Reduce land retirement, Specify water savings expected and let users manage to produce savings	Reduce Conflicts, Affordable, 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	Improve in Delta conveyance in specific areas.
Add the habitat part of alternative "F"	Reduce Conflicts, Durable	Produces more critical habitat and possibly water supply reliability	Cost, uncertainty of results
Increase pollutant source control	Reduces Conflicts	Improves Water quality for drinking water and south Delta	Uncertainty of results in south Delta

Increase levee maintenance and emergency response	Reduces Conflicts, Durable	Alternative relies heavily on the Delta as it is. Vulnerability protection should be higher for such a single focus.	Cost
Improve in Delta conveyance in specific areas.	Reduces Conflicts, Durable	Improve conveyance ,along with habitat improvements, to increase flexibility to pump at full permitted capacity during environmental windows of opportunity.	Increase levee maintenance and emergency response