

OPERATIONS SCENARIO

MONITORING-BASED, FLEXIBLE OPERATIONS EMPHASIS

Assumptions

1. The significance (biological importance) of "take" at the CVP/SWP facilities can only be evaluated if the overall population/distribution of key (target) species is known or can be estimated with reasonable accuracy contemporaneously with the "take". Changes in facility operations will be made by comparing adult equivalent "take" at the facilities to contemporaneous population estimates (not "indices") based on a systematic sampling of the target species populations throughout their range and across all potential habitats within that range.
2. The VAMP experiment will be conducted, within its original scope (31 days with flexible timing).
3. The Accord will remain in place for seven more years.
4. The VAMP experiment shall not be considered for use as a regulatory tool until the experiment has been completed.
5. E/I ratios will be phased out within the remaining life of the Accord, with emphasis on early phase-out.
6. The X2 standard will be phased out with the Accord and possibly within the life of the Accord as factors for which X2 is an intended surrogate are identified through an aggressive program and expeditiously factored into system management.

Elements

1. Flexible operations to reduce aquatic resource entrainment mortality and identifiable indirect mortality associated with the projects, including:
 - Salvage will be monitored on a real-time basis, as one operations trigger.
 - Aggressive cross-habitat, community-based, near-real-time biological monitoring (see below) will be conducted for "early warning" and a second operations trigger.
 - Percent-of-population adult equivalence (all target species) will be used for "take" and for "in harm's way" estimates as feedback to operations.
 - Joint Point of Diversion (plus intertie) will be used as part of flexible operations.

- Flexible operations will be integrated with Head of Old River Barrier operations (normally closed) and Cross-Channel Gate operations (opened only when necessary for water quality) using the aggressive monitoring tool.
 - During the remaining life of the Accord (or until earlier abandonment), the X2 standard will be relaxed whenever warranted by both biological monitoring and water supply needs in order to take advantage of delta channel storage and to avoid adverse impacts on reservoir storage and carryover. Greater relaxation will be phased in as factors for which X2 is an intended surrogate are identified and factored into system management.
 - Until abandonment within the remaining life of the Accord, E/I constraints will be relaxed whenever warranted by both biological monitoring and water supply needs.
2. A "no degradation" policy shall be implemented for CCWD, including chloride standards at Los Vaceros, Rock Slough and Antioch with the following elements as operational guidelines:
- 250 ppm chloride year-round at Rock Slough, with 155 - 240 days per year at 150 ppm chloride at either Rock Slough or Antioch, depending on the water year type.
 - 50 ppm chloride at Los Vaceros for sufficient time to fill the reservoir.
 - Alternatively, if water costs are significant, alternative "plumbing" (*e.g.* into the SWP) will be investigated to protect water quality for CCWD.
3. An extensive across-habitat, community-based biological monitoring and research program (incorporated into CMARP) will be implemented.
- Purposes:
 1. Near-real-time data will be used as feedback to Flexible Operations.
 2. Organism/habitat and community/habitat relationships and interactions will be determined, along with population distributions and seasonal changes.
 3. The influences of toxics and exotics on biological communities and distribution and abundance of native species will be determined.
 4. Responses of organisms, populations and communities to real-tide hydrodynamics and interactions with physical habitat characteristics will be determined, along with changes in these relationships.

5. This monitoring program will replace existing monitoring programs with focused, rigorously designed investigations specifically designed to determine actual population levels, distributions and ecological relationships of target organisms.
 6. Reliance on average-condition surrogates such as X2, E/I, Q-West, Delta outflow, etc. as regulatory standards will be expeditiously phased out. Factors for which X2 is an intended surrogate will be identified through this aggressive, focused program and expeditiously factored into system management as appropriate.
- Characteristics:
- Sampling and data analysis methods will be "best available" and be designed to specifically address parameters/species/processes under investigation.
 - Experimental design will call for cross-habitat and community based sampling and data analysis protocols.
 - All feasible steps will be taken to calibrate or "index" new sampling and data analysis protocols to historical databases in order to address the issue of database continuity.
 - There will be full stakeholder participation in design and execution
4. Enthusiastic agency and environmental group support for water transfers, storage and water banking (tied to the "Environmental Water Account") will be an important element in this scenario.

Additional elements

The following elements are not strictly "operations" elements, but are included to balance the package:

1. Implement increased conveyance channel capacity in the South Delta (Old River, etc.) in order to facilitate operations flexibility.
2. Establish "interceptor" habitat along major conveyance channels (gradual build-out).
3. Unless specifically contra-indicated on a local basis by peer-reviewed studies, implement aggressive, focused predator removal (transfer) programs at the following target locations:
 - Within CCFB until screened, then in front of CCFB

- In front of Tracy
 - Below Woodbridge Dam
 - Seek out and include other areas of extraordinary predator concentrations, especially along migration routes.
4. The habitat program defined so far is only the beginning; additional elements should have the following results:
- Significant increase in water residence time within the delta
 - Additional large areas of gently sloping, vegetated intertidal habitats with distributary channels
 - Significant increases in "edge" habitat (increased edge/area ratio)
 - Other major elements which become identified during Phase I

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