

**I. INTRODUCTION**

The Central Valley Project Improvement Act (CVPIA) amended the authorities of the Central Valley Project (CVP) to make fish and wildlife mitigation, protection, and restoration purposes coequal to use of water for irrigation and domestic purposes of the CVP. To assist in meeting these goals, the Secretary is authorized and directed to modify CVP operations to provide flows "from the quantity of water dedicated to fish and wildlife and habitat restoration purposes" under section 3406(b)(2), from acquired water supplies and from "other sources which do not conflict with fulfillment of the Secretary's remaining contractual obligations to provide CVP water for other authorized purposes."

Section 3406(b)(2) of the CVPIA directs the Secretary to "dedicate and manage annually eight hundred thousand acre-feet of Central Valley Project yield [hereinafter "(b)(2) water"] for the primary purpose of implementing the fish, wildlife, and habitat restoration purposes and measures authorized by this title; to assist the State of California in its efforts to protect the waters of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary; and to help to meet such obligations as may be legally imposed upon the CVP under State or Federal law following the date of enactment of this title, including but not limited to additional obligations under the Federal Endangered Species Act." Subsection (B) of section 3406(b)(2) further provides that the (b)(2) water "be managed pursuant to conditions specified by the United States Fish and Wildlife Service after consultation with the Bureau of Reclamation and the California Department of Water Resources and in cooperation with the California Department of Fish and Game."

There has been considerable debate over the interpretation of this language, primarily regarding the issues of how the 800,000 acre-feet may be used and how it should be accounted. This paper presents Interior's proposal for dedicating and managing each year the water dedicated pursuant to 3406(b)(2).

**II. DEVELOPMENT OF THE (B)(2) GUIDELINES AND DRAFT CVPIA  
ADMINISTRATIVE PROPOSAL**

In December 1994, the Department of the Interior (Interior), acting through the Fish and Wildlife Service (Service) and the Bureau of Reclamation (Reclamation), issued draft guidelines ("(b)(2) guidelines") on the management of the (b)(2) water (also known as the "white paper"). Comments were received from many sources, including environmental, urban, and agricultural stakeholders. Several meetings were held with stakeholders to discuss the concept of the paper. The draft (b)(2) guidelines were revised and reissued as a draft on September 12, 1995, and were transmitted as a final recommendation from the authors to the Regional Directors of Reclamation and the Service in May 1996. A copy of that recommendation was included with the first public draft of the CVPIA Administrative Proposal on Management of Section 3406(b)(2) Water (800,000 Acre-Feet) on July 1, 1996 (Draft Administrative Proposal).

Further discussions of the issues involving the (b)(2) water began in late 1995 when a large stakeholder workteam began meeting. These stakeholders identified a lengthy list of issues surrounding the management of the (b)(2) water. A summary of the stakeholder discussions and Interior's initial proposals for addressing the issues were included in the Draft Administrative Proposal. A copy of that draft is available from Reclamation or may be accessed at the Bureau's home page on the Internet.

As noted in the Draft Administrative Proposal, two additional issues raised in the 800,000 acre-foot workteam -- the operation of New Melones Dam and area of origin priorities -- have been reviewed in other forums in the CVPIA Forum process, and the results of those reviews are included in the final CVPIA Stanislaus Administrative Proposal, dated June 23, 1997, and a draft paper titled, "Applicability of Area of Origin Statutes Federal Central Valley Project," dated March 13, 1996. That draft was released for comment and will be released to the public when finalized.

### III. PUBLIC COMMENT ON DRAFT ADMINISTRATIVE PROPOSAL

Interior received 17 formal comment letters on the Draft Administrative Proposal. Interior has considered those comments and is issuing this Administrative Proposal again in draft because of the issues raised by those comments. Interior plans to respond to those comment letters, as well as any submitted in response to this draft, when it finalizes the Administrative Proposal. In large part, these comment letters raised the same set of issues that had been raised in the stakeholder workteam in 1995, and restated the positions that had been articulated by the respective stakeholders during that process. These issues included: (i) whether Interior should continue crediting the CVP's contributions towards meeting the standards in the Bay Delta Accord against the (b)(2) water; (ii) whether it is appropriate to use (b)(2) water in the Delta in excess of the standards included in the Accord; (iii) whether and under what conditions Interior would invoke the shortage provision for (b)(2) water. The stakeholder comment letters also raised a number of primary issues involving the accounting for (b)(2) water. These issues are discussed below.

### IV. DISCUSSION OF THE MAJOR ISSUES

This revised Administrative Proposal will discuss eight major issues: (A) Managing the (b)(2) water; (B) dedicating and accounting for (b)(2) water; (C) defining the (b)(2) baseline; (D) crediting (b)(2) water towards the Water Quality Control Plan (WQCP); (E) using (b)(2) in the Delta; (F) reoperation/reuse of (b)(2) water; (G) shortage provisions for (b)(2) water; and (H) prioritizing use for (b)(2) water.

As noted above, the "(b)(2) Guidelines" paper was sent as a final recommendation from its authors to the Regional Directors of Reclamation and the Service in May 1996. As Interior's evaluation of these issues has become more focused, it has become apparent that some of the

recommendations in the (b)(2) Guidelines will need modification. Therefore, Interior plans to revise the (b)(2) Guidelines to reflect the changes set out in this Administrative Proposal.

**(A) Managing the (b)(2) water**

The CVPIA represented a significant change in the way water resources are used and managed in the CVP. For the first time, the "mitigation, protection, and restoration of fish and wildlife" has been placed on an equal footing with other major CVP purposes. In addition, the CVPIA, in the (b)(2) water provisions, placed affirmative obligations on the Service to specify conditions for the management of the CVP water for restoration purposes. The CVPIA also requires the Service to consult with Reclamation and others in determining those conditions.

When combined with the directives on water management included in CVPIA Section 3406(b)(1)(B) (generally referred to as "(b)(1)" or "reoperation" of the project) and Section 3406(b)(3) (water acquisition from willing sellers), the (b)(2) water provision requires a modified approach to the management of CVP water. Reclamation has had to refine, and will continue to refine, its decisionmaking process to account for the multiple and frequently competing objectives for the project as now defined in the CVPIA. At the same time, the Service must develop a better understanding of Reclamation's decisionmaking process, so that it can be more effective in designing conditions for the use of (b)(2) water.

Interior's water management process under the CVP will focus on using the many tools in the CVPIA (including (b)(2) water, reoperation possibilities, acquired water, and others) in a coordinated and flexible manner. Recent cooperative efforts in California, such as the Bay Delta Accord and the CalFed Operations Group, have shown the advantages of flexible, real-time water management for both environmental and water supply goals. Interior intends to apply this same flexible approach to the management of CVP water.

Interior is developing a water management plan which will permit flexibility in meeting the goals of the CVPIA in two distinct ways. First, although the goal of the water management plan will be to attain some level of certainty for planning project operations, Interior believes that the development of pre-determined responses to real-time hydrological conditions should be a major component of the water management plan.<sup>1</sup> Second, Interior believes that while the water management plan will provide certainty to the project stakeholders, a "water reserve account," established for use of water dedicated to environmental purposes under section 3406(b)(2), will be an important tool in providing the flexibility needed to meet such real-time hydrological conditions. The water management plan will be periodically (3- to 5-year interval) updated in

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<sup>1</sup> There are several recent examples of "triggers" in Bay-Delta water management. The Bay-Delta Accord included water quality standards that included triggers correlating the "x2" salinity requirements with natural hydrology. Similarly, the delta smelt biological condition included a triggered process generally referred to as "yellow lights" and "red lights", which conditioned management responses on real time monitoring data.

response to changes brought about through implementation of CVPIA and other programs such as the CALFED Bay-Delta Program.

**(B) Dedication and Accounting for (b)(2) Water**

Section 3406(b)(2) provides the mandate that the Secretary "shall dedicate and manage annually 800,000 acre-feet of CVP yield" for the primary purpose of implementing the CVPIA's fish and wildlife habitat restoration purposes. The statute then further defines the CVP yield as "the delivery capability of the CVP during the 1928-1934 drought period" after factoring in the conditions of the applicable permits, licenses, and agreements in place at the time the CVPIA was enacted.

In its Draft Administrative Proposal, Interior proposed measuring (b)(2) water by modeling up to 800,000 acre feet of impacts to contractor deliveries each year. Measuring the 800,000 acre feet in any "real world" sense is difficult, if not impossible. Unlike agricultural or municipal contractors, the environmental restoration water is generally not delivered to a set point with a gauge that can accurately measure the quantity of water delivered. Instead, in the CVPIA, Congress has established a unique system for the use of project water for fish and wildlife mitigation and restoration. Such "use" of the water manifests itself through the accomplishment of certain conditions -- for example, certain instream flows, water temperature, or salinity levels. Therefore, rather than specifying a physical means of measurement, or even a "measurement location" for the Secretary to use in identifying the environmental restoration water, Congress established a mechanism whereby the (b)(2) water is to be managed pursuant to conditions specified by the Fish and Wildlife Service.

After review of the stakeholder comments and reconsideration of this issue, Interior believes that a significant part of the disagreement over the (b)(2) provision is caused by separating the (b)(2) "measurement" issue (an aspect of dedication) from the (b)(2) "actions" issue (how the water is managed). Interior believes that (b)(2) water measurement definitions cannot take place in a vacuum isolated from the process of defining the actual environmental restoration actions that will be accomplished through the use of (b)(2) water.

Interior also believes that much of the controversy over the (b)(2) water arises from concern over the potential impact of any given "accounting" system. Stakeholders have expressed a desire for certainty, and a desire to clearly understand how the water will be used and what the impact of that use will be to them.

Therefore, in recognition of the interrelationship between the accounting and the management of the water, and in an attempt to provide certainty to the broad range of stakeholders, Interior is proposing the following resolution of the (b)(2) issues:

~ First, Interior has developed a set of environmental measures that it will commit to implement during the next 3 to 5 years.<sup>2</sup> These measures will be accomplished through a combination of project reoperation ((b)(1)) and dedication of (b)(2) water. Interior believes that, within the reasonable range of uncertainty inherent in managing water for environmental purposes, implementation of these measures will comply with the Act's mandate to dedicate a quantity of water under section 3406(b)(2). Further, by coordinating actions under (b)(2) with the operational flexibility authorized under section 3406(b)(1), the expected benefit to the environment should exceed the benefit solely attributable to 3406(b)(2). Also, where appropriate, additional capabilities and benefits may be obtained, under certain circumstances, through the acquisition of water from willing sellers, using the authority provided in section 3406(b)(3). A matrix summarizing the environmental measures is attached to this administrative proposal as Appendix A. Note that most of these measures vary in some way according to hydrological and operational conditions.

~ Second, Interior is modeling the expected effects of implementing these environmental measures on CVP water supplies. In doing so, it is modeling its best approximation of these measures over the 72-year hydrological record and quantifying the impacts to CVP water supply during the modeled period. While impacts to water supplies is neither the goal nor the measure of the 800,000 acre feet of (b)(2) water, the model results will provide the best data available on the effect that use of the 800,000 acre feet of water will have on existing contractors. In addition to showing overall averages, this summary will provide modeled maximum, minimum, and average CVP water supply impacts for each of the modeled standard water year type categories (wet, above normal, etc.). This modeling process and presentation is similar to the modeling effort carried out in developing the Bay-Delta Accord.

The information provided in Appendix A reflects a number of important conclusions, including the following:

~ The environmental measures included in Appendix A are consistent with the proposals for upstream and in-Delta measures included in the Revised Draft Anadromous Fish Restoration Plan, although the Appendix A matrix is more detailed in many instances.

~ One measure included in Appendix A -- the water reserve account -- reflects a different approach to managing (b)(2) water. Under this approach, (b)(2) water will be dedicated to the water reserve account each year with the amount "scaled" according to hydrologic conditions. That reserve account could then be flexibly used by Interior to respond to new information or opportunities during the course of the year. In this way, Interior can actively "manage" its (b)(2) water so as to maximize its effectiveness.

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<sup>2</sup> During that time, Interior expects to acquire additional data, through monitoring and through the information developed in CALFED, that will inform its selection of future measures.

~ By agreeing on a set of measures that will be implemented over the course of a set period of time, Interior is providing better certainty for project operators and water users. Once set, these measures will be incorporated into the annual operations of the CVP unless and until Interior goes through a process of revising those measures. Stated differently, "real time" flexibility to change environmental measures in the system will come primarily through project reoperation, through management of the water reserve account, or through water purchases.

~ As noted above, Interior believes that "accounting" for (b)(2) water is intrinsically connected with the definition of the environmental measures. How Interior "accounts" for (b)(2) water in meeting these measures may vary depending on the measure. For example, water used to enhance Delta outflows might best be measured using the modeling process described above. On the other hand, water dedicated to the water reserve account could be more directly measured and counted.

~ Interior believes that the Act provides for the use of up to 800,000 acre feet of (b)(2) water every year. At the same time, it is reasonable to expect that the entire 800,000 acre feet may not be necessary in the wettest hydrologies. The Draft Administrative Proposal noted that CVPIA Section 3406(b)(2)(D) provides a relief provision from the mandate to dedicate (b)(2) water.

If the quantity of water dedicated under [(b)(2)] or any portion thereof, is not needed for the purposes of this section, based on a finding by the Secretary, the Secretary is authorized to make such water available for other project purposes.

~ Inherent in the selection of the matrix of measures in Appendix A is the Secretary's finding that the full portion of (b)(2) water will not be needed under certain hydrologic and operational conditions during the 3- to 5-year period covered by the matrix. Instead, especially in the wettest hydrologies, the fish and wildlife restoration measures should be able to be met primarily through reoperation. That finding and the selection of appropriate measures will be reevaluated when the water management plan is updated.

### **(C) Defining the (b)(2) Baseline**

Another issue involving the (b)(2) water dedication is the question of what is the proper "baseline" against which the dedication should be measured. As explained in the Draft Administrative Proposal, some stakeholders believe that the proper baseline conditions should include only those requirements that were formally in place at the time of the CVPIA's passage (October 1992), including the D-1485 Bay/Delta standards along with the 1992 Biological Opinion's winter-run salmon temperature requirements. The fundamental issue is whether any of the 1993 winter-run Biological Opinion's requirements are appropriate for inclusion in the baseline.

Interior continues to believe that the proper baseline includes not only the literal language of the 1992 Biological Opinion, but also those requirements from the 1993 Biological Opinion that were inherently part of the 1992 Biological Opinion. The 1992 Biological Opinion was a 1-year opinion only and did not have to consider issues such as long-term temperature objectives. The 1993 Biological Opinion is intended to be a long-term, multi-year opinion. As such, it was necessary in the 1993 Opinion to explicitly articulate the related conditions that would lead to compliance with the 1992 Biological Opinion temperature requirements over a broader range of hydrological conditions.

Interior believes that including the Shasta Reservoir storage requirements from the 1993 Biological Opinion is the best way to reflect how the temperature requirements of the 1992 Biological Opinion would affect CVP operations into the future. Accordingly, Interior is including those requirements in its baseline for purposes of dedicating and measuring the (b)(2) water. Similarly, Interior is using this same baseline in its analysis of the CVPIA in the Programmatic Environmental Impact Statement.

Interior notes that other measures included in the 1993 Biological Opinion, such as the "Q-West" requirements, are not being included in the baseline. This is because, consistent with the reasoning above, these requirements were additional to, rather than explanatory of, the measures in the 1992 Biological Opinion.

#### **(D) Crediting of Bay/Delta Requirements Towards the WQCP**

The December 15, 1994, Principles for Agreement on Bay-Delta Standards between the State of California and the Federal Government ("Accord") provide that, for the term of the Accord, "All CVP water provided pursuant to these principles shall be credited toward the CVP obligation under Section 3406(b)(2) of the CVPIA to provide 800,000 acre feet of project yield for specified purposes." Stakeholders appear to agree that this crediting arrangement should remain in place for the life of the Accord. There is not consensus, however, as to whether the credit should be extended beyond the 3-year life of the Accord. CVP contractors support extending the credit, but environmentalists are opposed to an extension.

Sections 3406(b)(1)(C) and (b)(2) state that one purpose of the (b)(2) water is to assist the State of California in its efforts to protect the waters of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. We note that many of the anadromous fish habitat restoration measures and subsequent management of the (b)(2) water will have conjunctive benefits to other aquatic resources in the CVP streams and Delta ecosystem. Interior, therefore, believes that there is both legal and policy rationale supporting the use and extension of the credit, and intend to continue crediting water provided for meeting the CVP's share of the State's water quality standards towards the dedication of (b)(2) water.

Interior's conclusion on this issue is based in part on the assumed equal sharing of the burden of the Bay-Delta Accord between the State and Federal water projects. Interior notes that two

projects are moving towards a review and revision of the sharing formula in the Coordinated Operations Agreement (COA) governing joint operations of the projects. If the current formula for sharing the burdens of meeting current endangered species act and Delta water quality requirements changes substantially, Interior will reevaluate this policy of crediting the Accord towards the (b)(2) water.

**(E) Appropriateness of Delta Uses for (b)(2) Water**

During the Spring 1996 water allocation process, a dispute arose about the appropriateness of using (b)(2) water to supplement the water dedicated under the Bay-Delta Accord for Delta outflow. The resolution of this controversy for the 1996 water year is summarized in the Draft Administrative Proposal.

Interior continues to believe that the use of (b)(2) water for additional Delta fishery benefits above the standards required in the Accord is appropriate and that such use is consistent with both the CVPIA and the Accord. Interior recognizes the particular importance of the issues surrounding Delta uses of (b)(2) water, not only because of the Accord, but because of the longer term need to balance potential impacts to water supplies and the need to address environmental issues in the Delta. Interior is committed to working with stakeholders and other federal and State agencies (including the CALFED Bay-Delta Program process) to evaluate water-efficient approaches to protecting Delta environmental resources, including an analysis of the measures set out in Appendix A.

**(F) Reoperation/Reuse of (b)(2) Water**

The stakeholder comment letters indicated a fundamental disagreement over whether water released as (b)(2) water could be recaptured and reused for other project purposes. Many commenters found the discussion of this issue in the Draft somewhat confusing.

Interior believes that the issues related to recapture and reuse are largely resolved in the process of "accounting" for a particular measure. For example, certain of the environmental measures set out in Appendix A can be easily "accounted for" through hydrological modeling. In modeling the effects of those measures, Interior has assumed that water released for a fish and wildlife objective upstream can be picked up in the Delta for consumptive purposes unless there is an explicit additional fish and wildlife requirement for that water (e.g., it is needed to meet a Delta outflow requirement). At the same time, however, the models consider this water to be "reoperation" or (b)(1) water, rather than (b)(2) water. For other environmental measures, however, such as the water reserve account, that are not easily "accounted for" through hydrological modeling, a different resolution of the recapture issue may be appropriate.

Many commenters were also concerned about so-called "make-up pumping," which refers to the use of water for environmental purposes during one part of the year, and a subsequent effort to pump additional water later in the year to "make it up." The concern expressed (primarily by

environmental interests) is that "make up pumping" unnecessarily shifts environmental risks from one part of the year to another. This is viewed as especially troublesome if there was an opportunity to attain the initial environmental goals with the dedication of (b)(2) water.

While Interior believes that it is appropriate to make use of the flexibility in the system to achieve environmental results without impacts to deliveries, it also acknowledges that "make up pumping" has the potential to shift environmental risks from one time period to another, from one stream segment to another, and/or from one species to another. Therefore, Interior does not generally intend to rely on make-up pumping. Interior will not rely on make-up pumping to accomplish the measures set out in Appendix A unless make-up pumping is clearly shown to be part of the measure or unless an emergency arises. In addition, Interior will not engage in make up pumping activities unless those activities are in compliance with water quality standards, State Board Order 95-6, the biological opinions applicable to the Bay-Delta, and the provisions of the Bay-Delta Accord.

#### **(G) Shortage Provisions for (b)(2) Water**

Under section 3406(b)(2)(C) of the CVPIA, the Secretary is given discretion to reduce the dedication of the (b)(2) water up to 25 percent "whenever reductions due to hydrologic circumstances are imposed upon agricultural deliveries of Central Valley Project water" with the condition that "such reductions shall not exceed in percentage terms the reductions imposed on agricultural service contractors."

Interior has concluded that in critically dry years, it will generally invoke the shortage provision of section 3406(b)(2)(C), so that (b)(2) water will be reduced to the greater of 600,000 acre feet or the percentage of deliveries to agricultural service contractors. The attached matrix of environmental measures reflects that assumption.

In making its evaluation of this shortage provision, Interior recognizes that the use of water year types can seriously misstate the actual hydrological conditions. The recent hydrology of 1997 is a good example: in this year, record floods in January were followed by record drought in the remainder of the spring period. Although the formal water year type was "wet" due to the early floods, both biological resources and water contractors faced a significantly more restricted water management problem. To account for the possible inaccuracy of water year types, Interior intends to develop a "trigger" that will rely on actual hydrological conditions during the critical spring run-off period. This trigger will be used to verify whether the "critically dry" shortage should be invoked in any particular year.

#### **(H) Priorities for Use of (b)(2) Water**

Establishing priorities for the use of the (b)(2) water has also generated some controversy. The debate tends to focus on whether the (b)(2) water should be dedicated to use in the Delta first, or to upstream measures and then to the Delta, or in some combination of those approaches.

The matrix attached as Appendix A sets out Interior's view of the proper priorities for the use of (b)(2) water during the next few years. Those priorities will also be reflected in the long-term water management plan now being developed.

# Appendix A

MATRIX OF AFRP FLOW-RELATED ACTIONS TO BE ACHIEVED THROUGH MANAGEMENT OF B2 WATER AND MODIFICATION OF CVP OPERATIONS 1/

	CD	D	BN	AN	W
DA #1 Provide Vernalis flow to exports ratio (4/15 - 5/15)		≥3:1 or 1500 cfs combined or SJAMP 2/		5:1 or 1500 cfs combined CVP and SWP exports or SJAMP 2/	
DA #2 Install and maintain head of Old River barrier for a minimum 30 Days (4/15 - 5/15)		4/15 - 5/15 or SJAMP 2/		(4/15 - 5/15) if Vernalis flow <7500 cfs or SJAMP 2/	
DA #3 Increase X2 Days at Chipps Island (May and June)	See specific number of X2 days required at Chipps Island in the May 30, 1997 Revised Draft Restoration Plan for the AFRP (Table Attached).				
DA #4 Provide minimum Sacramento River flows at I Street and at Knights Landing during May	The objective is to provide flows in May based on appropriate triggers, targeting 13,000 cfs at I Street and 9,000 cfs at Knights Landing				
DA #5 Ramp the Export to Inflow ratio (May 15 - June 1)	During the last half of May, ramp (linearly) the combined Export to Inflow ratio from what it is at end of 30 day, April and May pulse period to not more than 35% on June 1. Interior believes this action should be part of any approved SJAMP.				
DA #6 Additional Closure of DCC (Nov - Jan)	Close DCC up to an additional 45 days above that provided by the Bay-Delta Agreement based on triggers described in the May 30, 1997 Revised Draft Restoration Plan for the AFRP.				
DA #7 Limit CVP and SWP Exports to Inflow ratio to target ≤35% during July	The objective is to achieve ≤35% for all of July for Below Normal, Above Normal, and Wet years and ≤35% for at least July 1-15 in dry years.				
DA #8 Provide and evaluate Exports to Inflow ratio of 65% in Dec and 35% in Jan	E to I ratios will be as near to 65% and 35% as operationally feasible for at least 10 days in December and January, respectively.		E to I ratio will be as near to 65% in December for 10-14 days. ≤35% - January		
DA #9 Provide Exports to Inflow ratio to target ≤35% (Nov - Jan)	Future E to I ratios dependent upon results of Delta Action #8 adaptive management experiment.				
UA #1 Clear Creek flows	≥100 cfs (10/1 - 5/31)	≥150 cfs (10/1 - 5/31)		≥200 cfs (10/1 - 5/31)	
UA #2 Sacramento River flows	Flows 10/1 - 4/15 based on water year type (storage will be based on year type, flows based on storage). Flows 4/16 - 9/30 based on meeting temperature criteria for winter-run chinook salmon.				
UA #3 American River flows	Flows 10/1 - 12/31 based on water type (storage will be based on year type, flows based on storage). Flows 1/1 - 9/30 based on storage and inflow.				
UA #4 Stanislaus River flows	Flows for 1997 and 1998 will be based on storage plus inflow per the New Melones Interim Plan of Operation (May 1, 1997). Flows after 1998 will be developed as part of the New Melones Long-term Management Plan.				
Water Reserve Account	A portion of the (b)(2) water will be held in reserve to provide for fish-related contingencies, opportunities, carryover, etc., in most water years.				

1/ Assumes Delta smelt and winter-run chinook biological opinions conditions are met as well as Bay/Delta Accord standards.

2/ SJAMP, when developed and approved is intended to incorporate this action. Should that effort fail, Interior will work with the fish technical team and the model team to further refine this action. (See attached footnotes for proposed AFRP flow related actions)

## Footnotes for Matrix of AFRP Flow-Related Actions

- DA#1 - We recognize that the San Joaquin Adaptive Management Plan (SJAMP) is being developed and, when approved, may replace Delta Action #1. The SJAMP will need to be implemented consistent with the delta smelt biological opinion for CVP and SWP operations.
- DA#2 - This action is also being developed as part of the SJAMP. As described in the Army Corps of Engineers' 5-year 404 permit and related Section 7 consultations (covering 1996-2000) for installation of the temporary rock barrier at the head of Old River, the barrier cannot be installed and maintained when Vernalis flows exceed 7500 cfs. Therefore, this action assumes no barrier when Vernalis inflow  $\geq$  7500 cfs. Potential use of culvert(s) in the barrier will be based on analysis and evaluation of 1997 data, and the results of reinitiation of Section 7 consultation for delta smelt. For 2001 and beyond, this action will be subject to future 404 permits and related Section 7 consultations.
- DA#4 - This action is still under development. Objective is to provide flows in May for striped bass protection in a timely fashion. Ability to do so will likely be based on April storage, projected inflow, and ability to develop appropriate triggers based on real time monitoring of striped bass presence. Needs to be consistent with meeting temperature requirements for winter-run chinook salmon. Will require combined efforts of the fish technical team and the modeling team to develop appropriate triggers.
- DA# 5 - This action will be coordinated with Delta Action #1 and Delta Action #2 for effective use of the water management tools, and to be consistent with the biological opinion for delta smelt. We recognize that the San Joaquin Adaptive Management Plan is being developed and may incorporate Delta Action #5. Interior believes this action should be part of any approved San Joaquin Adaptive Management Plan.
- DA#7 - The E to I ratios are important for fishery resources as well as for water supply. Defining this action will require combined efforts of the fish technical team and the modeling team to develop appropriate triggers.
- DA#9 - Implementation awaiting evaluation of Delta Action #8.
- UA #1 - Clear Creek summer flows (June 1 - September 30) will be developed consistent with the Revised Draft Restoration Plan for the Anadromous Fish Restoration Program (May, 1997).
- UA #2 - The end of September storage in Shasta Reservoir will be based, insofar as possible, on the water year type. However, the requirement for April 16 through September temperature control for winter-run chinook salmon will be overriding. The October - April 15 flows in the Sacramento River will be based on actual end of September storage.

UA #3 - The end of September storage in Folsom Reservoir will be based on the water year type. The flows in the American River from October 1 to December 31 will be based on the end of September storage and the flows from January 1 through September 30 will be based on the previous months storage and inflow.

UA #4 - The Stanislaus River flows after 1998 will be developed consistent with the New Melones Long-Term Management Plan.

Water Reserve Account - The concept is that, in some years when (b)(2) water is available, a portion will be reserved to provide for contingencies, serve as a guarantee to make up for the impacts of acquired water, or to implement additional or opportunistic measures or experiments in that water year; or to carry over if possible until the following year as a hedge against drought. The specifics of this concept are still to be developed.