

HCB
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March 21, 2005

VIA HAND-DELIVERY

Ms. Debbie Irvin
Clerk of the Board
State Water Resources Control Board
Cal/EPA Headquarters
1001 "I" Street
Sacramento, California 95814

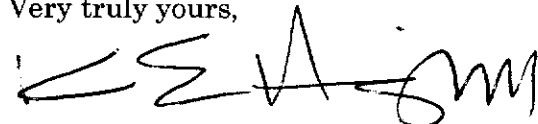
Re: Periodic Review of the 1995 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary

Dear Ms. Irvin:

Enclosed please find original and 16 copies of comments regarding Issue #8: River flows: San Joaquin River at Airport Way Bridge, Vernalis: February – April 14 and May 16 – June submitted on behalf of Stockton East Water District.

We appreciate the opportunity to comment on this issue.

Very truly yours,



KARNA E. HARRIGFELD
Attorney-at-Law

KEH:rl

cc: Mr. Kevin Kauffman, Stockton East Water District

**PERIODIC REVIEW OF THE 1995 WATER QUALITY CONTROL PLAN
FOR THE SAN FRANCISCO BAY/SACRAMENTO-SAN JOAQUIN
DELTA ESTUARY**

WRITTEN COMMENTS OF STOCKTON EAST WATER DISTRICT

**Issue # 8: River flows: San Joaquin River at Airport Way Bridge,
Vernalis: February - April 14 and May 16 - June**

The State Water Resources Control Board has requested information on whether the flow objective for the San Joaquin River at Airport Way Bridge, Vernalis, for February through April 14 and May 16 through June (collectively referred to as "San Joaquin River Flow Objective") in the Water Quality Objectives for Fish and Wildlife Beneficial Uses (Table 3 of the 1995 Plan) should be modified, and if so, what are the scientific and legal arguments in support of and against modifications. The State Board has also asked whether the current methodology for determining the San Joaquin River flow objectives by reference to the required Delta Outflow objectives should be changed, and if so, what are the scientific and legal arguments in support of and against modification.

Stockton East Water District supports modification of the San Joaquin River Flow Objective because it is not supported by any scientific or biological basis.

The San Joaquin River Flow Objective should be eliminated because there is no scientific or biological basis for the established objectives. The existing objective is a negotiated political solution via the Principles for Agreement. Conspicuously absent from these negotiations were ALL of the interests on the San Joaquin River tributaries. Despite the absence of all interests, the negotiated solution included requirements for San Joaquin River flows. In developing the San Joaquin River Flow Objective, which is the San Joaquin River contribution to the Delta Outflow, the parties arbitrarily set the San Joaquin Flow Objective at either 10%, 20% or 30% of the surrogate X2 Delta Outflow at either Collinsville or Chipps Island. No biological assessment or other scientific justification supported these figures; the parties simply picked a percentage. This startling fact has been confirmed by United States Bureau of Reclamation (one of the parties to the negotiations) in its

“Summary of 1997 Analysis of PROSIM and SANJASM Results Demonstrating Instances of Failure to Meet Vernalis Base Flows Required for X2 Compliance, attached as Exhibit “A.”

The 1995 Plan states the purpose of the San Joaquin River Flow Objectives as providing attraction and transport flows and suitable habitat for various life stages of aquatic organisms, including Delta smelt and Chinook salmon. [1995 Plan, pg. 15] The 1995 Plan notes that the USBR intends to meet San Joaquin River flow requirements, in accordance with the March 6, 1995 U.S. Fish and Wildlife Service biological opinion for the threatened Delta smelt, which are consistent with the San Joaquin River flow objectives in this plan. [1995 Plan, pg. 28] This logic is circular, however, because both the 1995 Plan and the 1995 Biological Opinion were derived from the negotiated solution contained in the Principles for Agreement.

The environmental impact report prepared for the 1995 Plan acknowledged that there was not a direct relationship between Delta outflows and Delta smelt protection. Specifically, the 1995 Plan EIR at page V-65 states: “[t]he relationship between Delta outflows and smelt abundance is not a simple one (Moyle et al. 1992). In fact, high outflows, such as those that occurred in February 1986, may have flushed Delta smelt out of the Estuary (SFEP 1992a). Unlike striped bass, longfin smelt, and other species with planktonic larvae, the Delta smelt does not show a strong correlation in abundance with outflows (DWR 1992a, NHI 1992, SFEQ 1992a). The substantial annual variation in abundance of smelt probably masks any long-term trends linked to outflows (NHI 1992a). It is believed that February-June Delta outflows are needed to transport larval and juvenile Delta smelt away from the influence of the export pumps and into low salinity productive rearing habitat in Suisun Bay and Suisun Marsh (USFWS 1994).”

We have obtained significant information since adoption of the 1995 Plan, all of which supports elimination of the San Joaquin River Flow Objective for the following reasons:

- The required San Joaquin River flows contribute little to Delta outflow. (Kimmerer 2004) The majority of San Joaquin River flow is exported by the SWP and CVP at the pumps with 0.1% of San Joaquin River flow making up Delta Outflow at Martinez. (San Joaquin River Group, Flow Science Inc. Presentation)
- Tidal flows overwhelm net flows in the Delta and more strongly affect Delta smelt movements and distribution, so only very high Vernalis flows are likely to affect Delta smelt transit times significantly (Kimmerer 2004). Thereby significantly reducing the value of making San Joaquin River flows for the protection of Delta smelt.
- Recent evidence suggests that intermediate to high late winter and spring flows in the San Joaquin River attract spawning adult Delta smelt into the South Delta, potentially leading to increased entrainment. (Nobriga, M., Z. Hymanson, K. Fleming and C. Ruhl. 2001. Spring 2000 delta smelt salvage and Delta hydrodynamics and an introduction to the Delta Smelt Working Group's decision tree. *IEP Newsletter* 14(2): 42-46; Nobriga, M., Z. Hymanson R. Oltmann. 2000. Environmental factors influencing the distribution and salvage of young delta smelt: a comparison of factors occurring in 1996 and 1999. *IEP Newsletter* 13(2): 55-65)

Modification of the objective is not a new idea. Recognizing the uncertainty surrounding both the Principles for Agreement and the 1995 Plan required prompt re-evaluation of the San Joaquin River Flow Objective. The 1995 Plan states that **[t]hese flows are interim flows and will be reevaluated as to timing and magnitude, up or down, within the next three years.** [1995 Plan, pg. 28] While the flows should have been evaluated over eight years ago, they have not been.

While the Bureau of Reclamation voluntarily agreed to meet the objectives, it has not been able to meet them with any consistency. This is particularly true because the Bureau has relied only on New Melones Reservoir to provide these flows. Though the Bureau has other means to meet the San Joaquin River flow objective other than New Melones Reservoir, and frankly has been directed by this Board to

use other sources, the Bureau has refused to do so. Over the past five years, the Bureau has repeatedly either asked for relief from the State Board or not met the objective. The reasoning that the Bureau has used to justify relief from the objective is the need to preserve storage in the New Melones Reservoir AND the lack of any impact on fisheries if the objective is not met, in specific, no impact on Delta Smelt. We have attached the Bureau's October 28, 2002 and November 18, 2004 letters dealing with relief from the objectives as Exhibit "B" and "C."

The State Board has variously responded by allowing relaxation, requiring additional export reductions and/or requiring the Bureau to make an equivalent amount of water available elsewhere in the system for fishery protection later in the summer. We have attached the State Board response to the Bureau's 2002 request as Exhibit "D."

However, the State Board has noted on several occasions that " changes to the Water Quality Control Plan will not affect Endangered Species Act requirement to meet the current objectives." [See State Board letter dated December 16, 2004, attached as Exhibit "E"] It is important to note, however, that over the past five years when the Bureau has failed to meet the San Joaquin River Flow Objective, the fishery agencies have been supportive of relief from the objective. [See Management Agencies letter dated February 27, 2004, attached as Exhibit "F.]

The fishery agencies' support is sound and can be traced to the original Biological Opinion for Delta Smelt. Since 1993, there have been a number of Biological Opinions issued by the U.S. Fish and Wildlife Services for Delta smelt. The Biological Opinions issued for Delta smelt since 1997 have assumed that operations of the East Side Division of the CVP (New Melones Reservoir) would be done in accordance with the Interim Plan of Operation (IPO) because that operation was proposed by the Bureau of Reclamation.

The Long Term Central Valley Project and State Water Project Operations Criteria and Plan Biological Opinion (Long Term OCAP BO), issued July 30, 2004 for coordinated operations of the CVP and SWP through 2020 operations, also assumes

the East Side Division (New Melones) will be operated in accordance with the IPO. With respect to the San Joaquin River Flow Objectives, the Long Term OCAP BO recognizes that the Bureau committed to provide these flows during the interim period of the Bay-Delta Accord. However, since D-1641 has been in place, the Bureau of Reclamation has released more water from New Melones than is provided in the IPO. This is despite the fact that the Biological Opinion expressly recognizes that “[t]he IPO describes the commitment Reclamation made regarding the operation of New Melones Reservoir.” [Long Term OCAP BO, pg. 54] That the Bureau’s commitment to meet the San Joaquin River flow component is limited, is clearly depicted by the IPO allocation chart, where the amounts dedicated to San Joaquin River Flow Objectives is limited to those depicted in the “Bay-Delta” column:

Interim Plan of Operation Requirements
(1,000 acre-feet measured at Goodwin)

| New Melones Storage + Inflow | | Fishery | | Vernalis Water Quality | | Bay-Delta | | CVP Contractors | |
|------------------------------|-------|---------|-----|------------------------|-----|-----------|----|-----------------|----|
| From | To | From | To | From | To | From | To | From | To |
| 1,400 | 2,000 | 98 | 125 | 70 | 80 | 0 | 0 | 0 | 0 |
| 2,000 | 2,500 | 125 | 345 | 80 | 175 | 0 | 0 | 0 | 59 |
| 2,500 | 3,000 | 345 | 467 | 175 | 250 | 75 | 75 | 90 | 90 |
| 3,000 | 6,000 | 467 | 467 | 250 | 250 | 75 | 75 | 90 | 90 |

The Long Term OCAP BO further provides that “[f]rom inspection of the above IPO allocation structure, two key New Melones-Stanislaus River water policies are inferred...The IPO only supports meeting the D-1641 Vernalis Base flow standards from the Stanislaus River water resources when the water supply conditions are determined to be in the “High” or “Medium-High” IPO designation, and then are limited to 75,000 af of reservoir releases.” [Id., pg. 56]

The modeling done for the Long Term OCAP BO confirmed that in at least one month in the February-March (pre-VAMP) period, the San Joaquin River Flow Objectives were not met in 13 out of 71 years. In June, San Joaquin River Flow Objectives were not met in 16 out of 71 years. [Exhibit “B,” pg. 3] Nonetheless, the BO finds “no jeopardy” if operations continue in accordance with the IPO. In fact, IPO operations must continue, with the San Joaquin River Flow Objective not being

met, in order for the CVP operations to be consistent with the Long Term OCAP BO. When it issued the Long-Term OCAP BO, US Fish and Wildlife concurred that a San Joaquin River Flow Component above and beyond that modeled is not justified or they would have ordered the Bureau to find additional measures to meet the objective.

The State Board should not tie the San Joaquin Flow Objective to Delta Outflow Objectives

The San Joaquin River Flow Objectives during February through April 14 and May 16 through June are improperly tied to hydrologic conditions in the Sacramento River basin. While, Table 3 – Footnote 13 states that the water year classification for the San Joaquin River flow objectives are established based on San Joaquin Valley Water Year Hydrologic Classification at the 75% exceedence level, a higher level of flow is triggered if X2 is at or west of Chipps Island. Location of X2 is highly dependent on Sacramento River flow conditions.

The past two years (2003 and 2004) illustrate why a change is needed. In both years, the higher flow value was triggered because of Sacramento River flow moving X2 west of Chipps Island, while conditions in the San Joaquin River Basin have been dry.

There is no scientific or biological justification for the flow objectives on the San Joaquin River, let alone the higher flows triggered by the placement of X2. Moreover, there is insufficient justification for the higher flow objectives on the San Joaquin River and tying it to Sacramento River hydrology. If the State Board intends to continue with a San Joaquin River Flow Objective, we advocate for the lower flow value currently contained in the 1995 Plan as the controlling flow objective during the February through June period and the reference to X2 in Footnote 13 deleted. Any additional flow necessary to meet the existing X2 objective should be borne by the Sacramento River Basin.

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These lower flows closely parallel the original flow objective proposed by US Fish and Wildlife Service in the 1994 Biological Opinion for Delta Smelt as follows:

The minimum average San Joaquin River flow (calculated at Vernalis) component of these flows is:

| Outflow/ Water-Year Type | Wet | Above Normal | Below Normal | Dry | Critical Dry |
|-----------------------------------|----------|-----------------|-----------------|----------|-----------------|
| San Joaquin River Component | 2000 cfs | 2000 cfs | 1500 cfs | 1200 cfs | 800 cfs |

USFWS 1994 BO for Delta smelt issued February 4, 1994.

This flow schedule represents the closest thing we have to a non-political scientific determination. It was imposed before the Principles for Agreement selected its random flows, and before the Bureau imposed the IPO on the Stanislaus River operations. Thus, if the State Board is going to continue with the San Joaquin River Flow Objective we would recommend either the San Joaquin River Flows contained in 1994 BO for Delta Smelt or Table 3 should be modified as follows:

Table 3 Water Quality for Fish and Wildlife Beneficial Uses

San Joaquin River flow at Airport Way Bridge, Vernalis:

| Outflow/ Water-Year Type | Wet | Above Normal | Below Normal | Dry | Critical Dry |
|---|----------|-----------------|-----------------|----------|-----------------|
| San Joaquin River at Airport Way Bridge, Vernalis | 2130 cfs | 2130 cfs | 1420 cfs | 1420 cfs | 710 cfs |

We appreciate the opportunity to provide written comments on Issue #8 of the Periodic Review of the 1995 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.

EXHIBIT “A”

Summary of 1997 Analysis of PROSIM and SANJASM Results Demonstrating Instances of Failure to Meet Vernalis Base Flow Required for X2 Compliance

In 1997, Reclamation staff performed an analysis based on PROSIM and SANJASM results that were being used at the time for analyzing San Joaquin- Bay Delta alternatives. The purpose of the analysis, among other things, was to look at how the San Joaquin River Agreement (SJRA) and Vernalis Adaptive Management Program (VAMP) would affect Reclamation's ability to meet other San Joaquin River flow requirements at Vernalis, and then also to look at to what degree SJRA affected the Central Valley Project (CVP) and State Water Project (SWP) Delta operations.

This analysis produced data regarding how often Reclamation failed to meet Vernalis Base flow requirements (i.e. February-June minimum flows required as a component of X2 compliance). The results of the analysis are interesting. First of all, VAMP caused the frequency of not meeting the Vernalis Base flows to increase, but only slightly. Secondly, the failures to meet the Vernalis flow seem to break into two categories: 1) pre-VAMP (February-April) and 2) post-VAMP (June). VAMP was assumed to occur in May in these studies, so Vernalis base flows were not an issue in May.

In the February-April (pre-VAMP) period, Vernalis Base flow was not met in at least one month in 13 of 71 study years (1922-1992). The typical situation was a "Dry" year category (60/20/20 Index) wherein the flow requirement was based on X2 being downstream of Chipps Island. In such cases, the Vernalis flow must be 2,280 cfs, and in a "Dry" year in those months, neither the hydrology nor the New Melones Interim Operations Plan (NMIOP) provide that much flow very often.

In June (post-VAMP), the Vernalis flows were not met in 12 out of 71 years. But the characteristic year for failure was quite different than for the Pre-VAMP period. The typical situation was "Above Normal" year category (60/20/20 Index) in which flows up to 3,420 cfs can be required depending on X2 requirements. Again, neither the hydrology nor the NMIOP seems to provide that much flow under those conditions.

The genesis of the Vernalis base flow requirements, as we understand, was the CVP-OCAP endangered species consultation with United States Fish and Wildlife Service (FWS) in 1994. The San Joaquin River component of X2, which is the required Vernalis base flow from February-June, was set at either 10% (Critical 60/20/20), 20% (Dry and BN), or 30% (AN and Wet), of the surrogate X2 Delta outflow at either Collinsville (7,100 cfs), or Chipps Island (11,400 cfs). Although the importance of San Joaquin flows is cited in the FWS March 6, 1995 Biological Opinion, we were not aware of any assessment relating these arbitrary flow thresholds to any specific biological habitat needs. In the December 15, 1994 Principles for Agreement, Reclamation took responsibility on an interim basis for meeting Vernalis flows. The assumption was that the flows would be re-evaluated as to timing and magnitude, and that SWRCB would assign responsibility. As has been demonstrated, providing the Vernalis flows long-term is beyond the capabilities of Reclamation through its operation of New Melones.

Summary of 1997 Analysis of PROSIM and SANJASM Results

Instances of Failure to meet Vernalis Base Flow Requirement for Model Years 1922-1992

February

| Year | WY Class (S/J/V) | Modeled | | WQCP | |
|------|------------------|-----------------|----------|-----------|-------|
| | | VNS Flow w/VAMP | VNS Flow | Req. Flow | VNS |
| 1948 | BN | 1,387 | 1,535 | 2,280 | 2,280 |
| 1964 | D | 1,692 | 1,749 | 2,280 | 2,280 |
| 1955 | D | 1,909 | 1,900 | 2,280 | 2,280 |
| 1935 | AN | 3,230 | 3,118 | 3,420 | 3,420 |
| 1963 | AN | 3,231 | 2,086 | 2,280 | 2,280 |

March

| Year | WY Class (S/J/V) | Modeled | | WQCP | |
|------|------------------|-----------------|----------|-----------|-------|
| | | VNS Flow w/VAMP | VNS Flow | Req. Flow | VNS |
| 1972 | D | 1,535 | 1,535 | 2,280 | 2,280 |
| 1926 | D | 1,749 | 1,749 | 2,280 | 2,280 |
| 1947 | D | 1,900 | 1,900 | 2,280 | 2,280 |
| 1963 | AN | 3,118 | 3,118 | 3,420 | 3,420 |
| 1968 | D | 2,086 | 2,086 | 2,280 | 2,280 |
| 1959 | D | 2,160 | 2,160 | 2,280 | 2,280 |
| 1964 | D | 1,713 | 1,713 | 1,774 | 1,774 |
| 1985 | D | 2,169 | 2,169 | 2,185 | 2,185 |

Feb: 5/71 years

Mar: 8/71 years

April

| Year | WY Class (S/J/V) | Modeled | | WQCP | |
|------|------------------|-----------------|----------|-----------|-------|
| | | VNS Flow w/VAMP | VNS Flow | Req. Flow | VNS |
| 1972 | D | 1,728 | 1,728 | 2,280 | 2,280 |
| 1933 | D | 1,625 | 1,625 | 2,068 | 2,068 |
| 1947 | D | 1,933 | 1,933 | 2,251 | 2,251 |
| 1966 | BN | 2,122 | 2,122 | 2,251 | 2,251 |
| 1968 | D | 2,209 | 2,209 | 2,251 | 2,251 |

Apr: 5/71 years

June

| Year | WY Class (S/J/V) | Modeled | | WQCP | |
|------|------------------|-----------------|----------|-----------|-------|
| | | VNS Flow w/VAMP | VNS Flow | Req. Flow | VNS |
| 1932 | AN | 1,869 | 1,869 | 3,177 | 3,177 |
| 1979 | AN | 2,197 | 2,197 | 3,288 | 3,288 |
| 1973 | AN | 2,280 | 2,280 | 3,334 | 3,334 |
| 1927 | AN | 2,205 | 2,205 | 3,210 | 3,210 |
| 1936 | AN | 2,222 | 2,222 | 2,872 | 2,872 |
| 1935 | AN | 2,810 | 2,810 | 3,334 | 3,334 |
| 1963 | AN | 2,861 | 2,861 | 3,374 | 3,374 |
| 1945 | AN | 2,648 | 2,648 | 2,956 | 2,956 |
| 1923 | AN | 2,554 | 2,554 | 2,816 | 2,816 |
| 1950 | BN | 1,830 | 1,830 | 1,933 | 1,933 |
| 1948 | BN | 2,121 | 2,121 | 2,192 | 2,192 |
| 1933 | D | 1,391 | 1,391 | 1,431 | 1,431 |

Jun: 12/71 years

Overall, Feb-Apr (i.e. before VAMP): 13/71 individual model years have deficient Vernalis base flow

- Notes:
1. WQCP Required Flows Calculated based on Previous month 8 River Index and WQCP tables for determining number of days X2 downstream of Chipps Island.
 2. Modeled Flows assume VAMP implemented during May, so Vernalis base flows are only required Feb-Apr and Jun.

EXHIBIT “B”



United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:

CVO-400
WTR-1.10

OCT 28 2002

Mr. Arthur Baggett
Chairman, State Water Resources Control Board
P.O. Box 100
Sacramento, California 95812

Subject: Compliance with the Vernalis Flow Objective in February and March 2002

Dear Mr. Baggett:

We are responding to Ms. Celeste Cantú's letter dated May 1, 2002, subject as above. We are concerned that information previously presented to the State Water Resources Control Board (Board) was not fully considered when Ms. Cantú's letter was prepared. Addressing compliance with the Vernalis water quality objectives will require consideration of much broader issues, particularly how compliance affects Stanislaus River resources.

During the last decade, the Bureau of Reclamation has repeatedly asserted that its Central Valley Project (CVP) water resources in New Melones Reservoir cannot satisfy all the permit requirements under all circumstances. The 1987-1994 droughts showed that New Melones Reservoir could not support all demands in certain dry conditions. In statements and testimony in workshops, meetings, and hearings leading to the Board's Decision 1641 (D-1641), Reclamation witnesses have stated that competing Stanislaus River needs and permit conditions make it impossible to provide sufficient water for all beneficial uses in the Stanislaus River, San Joaquin River, and Delta (for an example, see enclosed statements by Roger Patterson and Lowell Ploss). These statements and testimony were based on studies leading to the 1994 Bay-Delta Accord, 1995 Delta Water Quality Control Plan, and 1997 New Melones Interim Operations Plan (NMIOP). The NMIOP and associated studies are in the hearing record for D-1641, and a summary of those studies is also enclosed.

The Reclamation modeling studies of New Melones Reservoir have found that the Vernalis flow objectives at issue here cannot be satisfied in all dry years. After complying with New Melones permit conditions, New Melones cannot provide sufficient base flow at Vernalis in the February through mid-April period in at least 1 month in 13 of 71 study years (1922-1992). It is noteworthy that for those 13 study years for which the Vernalis flow objective was not met, the predominant hydrologic classification was

Subject: Compliance with the Vernalis Flow Objective in February and March 2002 2

"dry" – the same classification and flow requirements that prevailed in 2002. Consistent with those studies, the Vernalis flow objectives could not be achieved earlier this year without substantial risk to continued compliance with other permit conditions.

In working with Stanislaus River stakeholders on developing the NMIOP, Reclamation sought a reasonable balance between the many competing demands for water on the Stanislaus River system. The NMIOP was implemented in 1997 as a result of several years of cooperative work between the Department of the Interior agencies (Reclamation and the U.S. Fish and Wildlife Service) and stakeholders on the Stanislaus River including the South Delta Water Agency, Stockton East Water District, Central San Joaquin Water Conservation District, Oakdale Irrigation District, South San Joaquin Irrigation District, and other interested parties.

The studies supporting the NMIOP showed that yield from New Melones Reservoir alone is not capable of fully meeting the San Joaquin River requirements at Vernalis under certain conditions, even if the entire yield is dedicated to that one purpose. We would also note that the Vernalis flow, Vernalis electrical conductivity, and Ripon dissolved oxygen standards can, in effect, be in competition with each other, and meeting one standard early in the year can lead to problems with meeting another standard later in the year. The NMIOP, therefore, sought to maximize compliance with all requirements, recognizing that some or all of the requirements might not be achieved in a particular dry year like this one.

In 2002, Reclamation operated New Melones in accordance with the NMIOP, which resulted in an allocation for San Joaquin River requirements that was insufficient to meet those requirements. At that time, Reclamation looked into both the potential for acquiring water from other sources, and the possibility of making releases of CVP water from San Luis Reservoir to meet the standards. Neither alternative was deemed to be feasible at that time. Reclamation consulted with the Service in order to address the biological situation associated with the flow requirements and this year's hydrologic/fishery conditions. The Service reported that the Delta smelt were not occupying the Southern Delta at that time. In their letter to you dated April 18, 2002, the Service states "Sampling data for February and March showed that Delta smelt were exhibiting the "usual" dry-year distribution with the majority of the population in the Montezuma Slough area, with lesser numbers occupying the fringes of the Delta, including the south-Delta region." Reclamation determined that there was enough flexibility under the NMIOP to provide water from New Melones that would bring Vernalis flow average up to 80 percent of the flow target. Although the Service subsequently suggested that additional water be made available at a later time for fishery needs, achieving 80 percent of the flow target was reasonable and prudent in order to reserve water for complying with subsequent permit condition requirements.

In order to address the continuing Stanislaus and San Joaquin River issues, the Department agencies are committed to reviewing the NMIOP and considering different

operational criteria for New Melones. The original NMIOP was intended to be in place for only 2 years, but it has continued for more than 5 years. Other programs that incorporate the NMIOP, such as the Vernalis Adaptive Management Program, depend upon a clear interpretation of operational criteria. Over the past 5 years of implementation, the agencies and stakeholders have identified criteria that need clarification. During the course of the review, the Department will also review water allocations to fishery purposes and permit requirements. We anticipate that any revised plan would still be unable to comply with all existing permit obligations.

Reclamation recognizes that the NMIOP offers only one part of a potential solution to meeting the Vernalis flow standards. Reclamation has considered water acquisitions and drawing on other water resources. Additional water acquisitions are not feasible at this time due to funding limitations and departmental priorities for acquiring Level 4 refuge water supplies. Once Level 4 refuge requirements have been met, any remaining water acquisition funds may be available to acquire water for Vernalis flows. Recirculation of water from San Luis Reservoir to meet the Vernalis flow standards is not feasible at this time. As you know, D-1641 requires Reclamation to study the feasibility of recirculation of Delta waters to meet the flow standards. Although this study has begun, implementing recirculation before the study is completed may generate risks to Delta water quality.

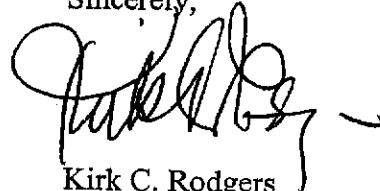
The Board appeared to recognize in D-1641 that Reclamation may not be able to comply with all New Melones and Vernalis objectives when it committed to considering further action if the Vernalis salinity objectives could not be achieved consistently in the first 5 years. D-1641 also requires Reclamation to report non-compliance with those salinity objectives, as well as by December 2004 report on "all actions it has taken in attempting to meet the (Vernalis salinity) objectives." We were surprised when the Board responded to our report of the 2002 situation by imposing what could be considered a penalty, as reflected in Ms. Cantú's letter. While Reclamation may be able to comply with this direction, such compliance must be considered in the broader, long-term context of complying with all New Melones permit conditions.

We propose that the Board hold a workshop on New Melones operating conditions and compliance with all Vernalis and New Melones objectives. This workshop would allow the many and diverse stakeholders on the Stanislaus River and lower San Joaquin River to offer additional information and perspectives for the Board to consider as it responds to Reclamation's report of the 2002 situation. It would be helpful for the Board and its staff to develop a procedure for addressing similar situations in the future. We all share a common goal of achieving compliance with the Delta water quality objectives as much as reasonably possible. When hydrologic conditions do not allow such compliance, we need to address the issues that arise as soon as possible.

Subject: Compliance with the Vernalis Flow Objective in February and March 2002 4

Thank you for your attention to this matter. Should you have any related questions, please contact Chet Bowling at 916-979-2199. We would be pleased to meet with you and/or your staff to discuss this further.

Sincerely,



Kirk C. Rodgers
Regional Director

Enclosures - 3

cc: Ms. Celeste Cantú
Executive Director
State Water Resources Control Board
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Sacramento, CA 95812

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Summary of 1997 Analysis of PROSIM and SANJASM Results Demonstrating Instances of Failure to Meet Vernalis Base Flow Required for X2 Compliance

In 1997, Reclamation staff performed an analysis based on PROSIM and SANJASM results that were being used at the time for analyzing San Joaquin- Bay Delta alternatives. The purpose of the analysis, among other things, was to look at how the San Joaquin River Agreement (SJRA) and Vernalis Adaptive Management Program (VAMP) would affect Reclamation's ability to meet other San Joaquin River flow requirements at Vernalis, and then also to look at to what degree SJRA affected the Central Valley Project (CVP) and State Water Project (SWP) Delta operations.

This analysis produced data regarding how often Reclamation failed to meet Vernalis Base flow requirements (i.e. February-June minimum flows required as a component of X2 compliance). The results of the analysis are interesting. First of all, VAMP caused the frequency of not meeting the Vernalis Base flows to increase, but only slightly. Secondly, the failures to meet the Vernalis flow seem to break into two categories: 1) pre-VAMP (February-April) and 2) post-VAMP (June). VAMP was assumed to occur in May in these studies, so Vernalis base flows were not an issue in May.

In the February-April (pre-VAMP) period, Vernalis Base flow was not met in at least one month in 13 of 71 study years (1922-1992). The typical situation was a "Dry" year category (60/20/20 Index) wherein the flow requirement was based on X2 being downstream of Chipps Island. In such cases, the Vernalis flow must be 2,280 cfs, and in a "Dry" year in those months, neither the hydrology nor the New Melones Interim Operations Plan (NMIOP) provide that much flow very often.

In June (post-VAMP), the Vernalis flows were not met in 12 out of 71 years. But the characteristic year for failure was quite different than for the Pre-VAMP period. The typical situation was "Above Normal" year category (60/20/20 Index) in which flows up to 3,420 cfs can be required depending on X2 requirements. Again, neither the hydrology nor the NMIOP seems to provide that much flow under those conditions.

The genesis of the Vernalis base flow requirements, as we understand, was the CVP-OCAP endangered species consultation with United States Fish and Wildlife Service (FWS) in 1994. The San Joaquin River component of X2, which is the required Vernalis base flow from February-June, was set at either 10% (Critical 60/20/20), 20% (Dry and BN), or 30% (AN and Wet), of the surrogate X2 Delta outflow at either Collinsville (7,100 cfs), or Chipps Island (11,400 cfs). Although the importance of San Joaquin flows is cited in the FWS March 6, 1995 Biological Opinion, we were not aware of any assessment relating these arbitrary flow thresholds to any specific biological habitat needs. In the December 15, 1994 Principles for Agreement, Reclamation took responsibility on an interim basis for meeting Vernalis flows. The assumption was that the flows would be re-evaluated as to timing and magnitude, and that SWRCB would assign responsibility. As has been demonstrated, providing the Vernalis flows long-term is beyond the capabilities of Reclamation through its operation of New Melones.

Summary of 1997 Analysis of PROSIM and SANJASM Results

Instances of Failure to meet Vernalis Base Flow Requirement for Model Years 1922-1992

February

| Year | WY Class (S/JVI) | Modeled VNS Flow w/VAMP | WQCP Req. Flow VNS |
|------|------------------|-------------------------|--------------------|
| 1948 | BN | 1,387 | 2,280 |
| 1964 | D | 1,692 | 2,280 |
| 1955 | D | 1,909 | 2,280 |
| 1935 | AN | 3,230 | 3,420 |
| 1963 | AN | 3,231 | 3,420 |

March

| Year | WY Class (S/JVI) | Modeled VNS Flow w/VAMP | WQCP Req. Flow VNS |
|------|------------------|-------------------------|--------------------|
| 1972 | D | 1,535 | 2,280 |
| 1926 | D | 1,749 | 2,280 |
| 1947 | D | 1,900 | 2,280 |
| 1963 | AN | 3,118 | 3,420 |
| 1968 | D | 2,086 | 2,280 |
| 1959 | D | 2,160 | 2,280 |
| 1964 | D | 1,713 | 1,774 |
| 1985 | D | 2,169 | 2,185 |

April

| Year | WY Class (S/JVI) | Modeled VNS Flow w/VAMP | WQCP Req. Flow VNS |
|------|------------------|-------------------------|--------------------|
| 1972 | D | 1,728 | 2,280 |
| 1933 | D | 1,625 | 2,068 |
| 1947 | D | 1,933 | 2,251 |
| 1966 | BN | 2,122 | 2,251 |
| 1968 | D | 2,209 | 2,251 |

June

| Year | WY Class (S/JVI) | Modeled VNS Flow w/VAMP | WQCP Req. Flow VNS |
|------|------------------|-------------------------|--------------------|
| 1932 | AN | 1,869 | 3,177 |
| 1979 | AN | 2,197 | 3,288 |
| 1973 | AN | 2,280 | 3,334 |
| 1927 | AN | 2,205 | 3,210 |
| 1936 | AN | 2,222 | 2,872 |
| 1935 | AN | 2,810 | 3,334 |
| 1963 | AN | 2,861 | 3,374 |
| 1945 | AN | 2,648 | 2,956 |
| 1923 | AN | 2,554 | 2,816 |
| 1950 | BN | 1,830 | 1,983 |
| 1948 | BN | 2,121 | 2,192 |
| 1933 | D | 1,391 | 1,431 |

Feb: 5/71 years

Mar: 8/71 years

Apr: 5/71 years

Jun: 12/71 years

Overall, Feb-Apr (i.e. before VAMP): 13/71 individual model years have deficient Vernalis base flow

- Notes:
1. WQCP Required Flows Calculated based on Previous month 8 River Index and WQCP tables for determining number of days X2 downstream of Chippis Island.
 2. Modeled Flows assume VAMP implemented during May, so Vernalis base flows are only required Feb-Apr and Jun.

COMMENTS
OF THE
FEDERAL ECOSYSTEM DIRECTORATE
ON
DRAFT WATER QUALITY CONTROL PLAN
OF THE
STATE WATER RESOURCES CONTROL BOARD

FEBRUARY 23, 1995

I. Opening Statement

Good Morning, I am Roger Patterson, and I will be presenting the comments of the Federal Ecosystem Directorate, otherwise referred to as Club FED, on the draft Water Quality Control Plan. Club FED is made up of the Bureau of Reclamation (Reclamation), the Fish and Wildlife Service, the Environmental Protection Agency, and the National Marine Fisheries Service. It was established for coordinating the Federal effort for resolving the environmental problems associated with the Bay-Delta Estuary and the river systems of the Central Valley, and for providing a reliable water supply to users of water from the Delta.

On December 15, the Federal departments and agencies which constitute Club FED were signatories, along with agencies of the State of California, water users, and representatives of environmental organizations of the "Principles for Agreement on Bay-Delta Standards Between the State of California and the Federal Government (Principles)." The draft Water Quality Control Plan (draft Plan) the State Water Resources Control Board (State Board) has prepared is a reflection of the standards contained in those Principles.

The Bureau and the Department of Water Resources have agreed to operate the Central Valley Project and the State Water Project in conformance with the Principles for the next three years. This is the period in which the State Board will be developing an implementation program for the Water Quality Control Plan. It is expected that this program will address all water right holders in the Central Valley and determine their responsibility to meet the Plan. The Bureau would like to make it clear that it may not be possible or prudent to meet all the standards under all conditions, but we will make our best effort to do so.

The Fish and Wildlife Service and the National Marine Fisheries Service who have responsibility under the Federal Endangered Species Act have or will be modifying the Biological Opinions for winter-run chinook salmon and delta smelt to reflect that the projects will be operating to these standards.

II. Technical Comments

The Club FED agencies have been working with State Board staff and other interested parties to reach agreement upon interpretations of the standards in the draft Plan and the Principles. A number of meetings have been held

regarding errata in the draft Plan. This has resulted in an errata sheet that State Board staff has prepared.

There are however several differences between the Principles and the draft Plan. These include:

1. Striped bass water quality standard.
2. Forecast for San Joaquin flows.
3. X2 starting gate.
4. Export limits during San Joaquin River pulse flows.
5. Suisun Marsh standards.

We have been working with the various agencies and interested parties to reach agreement on these particular issues. We believe the following agreements have been reached:

1. The striped bass water quality standard shall be 0.44 EC from Prisoners Point to Jersey Point in wet, above normal, below normal and dry years and no standard shall apply in critically dry years.
2. Project operations shall use the 90 percentile forecast to determine required San Joaquin River flows. This will be included in the Biological Opinions.
3. The starting gate criterion shall be addressed by the CALFED Operations Group in any year when there may be associated water costs. Therefore in addition to the exception in cases where the Eight River Index is less than 650 KAF, the criterion should state:

"At the discretion of the CALFED Ops Group, the starting gate requirement may also be met by a minimum three-day average outflow of 7100 cfs, if the January Eight River Index is between 650 and 1000 KAF."

4. Export limits during the San Joaquin pulse flows will be 1500 cfs or the flow of the San Joaquin River at Vernalis, whichever is greater. Any flows acquired to provide Delta outflow from the San Joaquin side of the Delta will not be exported.
5. Standards for the Suisun Marsh (without going into detail) shall be the following:

Eastern Marsh - D-1485 standards

Western Marsh - Suisun Marsh Preservation Agreement standards

Regarding other general elements of the draft Plan, the Club FED agencies will be participating in the State Board's process to develop an implementation plan for the draft Plan.

The Club FED agencies believe that the recommended actions in the draft Plan have a great deal of merit and should be pursued. To the extent that the authorities under which our agencies operate and our funding allow us to do so, we will undertake such programs.

The Club FED agencies will be working closely with the State agencies and others to develop a monitoring program to address the needs and requirements of the new standards. We believe the Interagency Ecological Program (IEP) is the appropriate vehicle to develop such a monitoring program and that integrated monitoring should be the goal; one that will meet not only the

needs of the new standards, but also aid the efforts involved with Central Valley Project Improvement Act implementation and the joint long-term State and Federal Delta planning process.

III. Actions Underway

In order to conform our operations to the new standards, the Bureau and the Department of Water Resources will be submitting shortly to the State Board a petition to modify conditions in Central Valley Project and State Water Project water rights that are inconsistent with conditions imposed by D-1485. We will also be petitioning to have interchangeable use of the projects' points of diversion in the Delta. This will allow the projects to optimally utilize Delta diversion facilities to provide environmental benefits and water supply reliability.

IV. Conclusion

In conclusion, the Club FED agencies are firmly committed to the Principles that we signed on December 15. We stand ready to assist the State Board in any way you desire. We will be happy to answer questions.

STATE WATER RESOURCES CONTROL BOARD

PUBLIC WORKSHOP

APRIL 21 - 22, 1998, WORKSHOP ON
THE HEARING PROCEDURES AND PROPOSED
SETTLEMENT AGREEMENTS FOR THE BAY-DELTA
WATER RIGHTS HEARING

---oOo---

RESOURCES BUILDING - FIRST-FLOOR AUDITORIUM
SACRAMENTO, CALIFORNIA
TUESDAY, APRIL 21ST, 1998
9:00 A.M.

Reported by:

MARY GALLAGHER, CSR #10749

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MR. HOWARD: One question I don't think it's so much
16 structured at Mr. Gallery but of the Bureau, perhaps,
17 relating to the interim New Melones operations plan issue
18 raised by Mr. Gallery. And I'm not sure who's the right
19 person, it might even be someone from the San Joaquin River
20 Group. Let me ask the question and see if someone can
21 answer.

22 HEARING OFFICER CAFFREY: Please.

23 MR. HOWARD: We've heard the San Joaquin River Group
24 say that the interim New Melones operations plan is a
25 pillar, I believe, was the term of the agreement. We heard

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1 Alex Hildebrand say the New Melones plan will result in
2 lack of compliance with the salinity standards 40 percent
3 of the year. And we've now heard Mr. Gallery say it will
4 cause water rights problem with Tuolumne Utilities
5 District.

6 The question I have is: How is the interim New
7 Melones operation plan developed? And can someone tell us
8 about the logic that's embedded in it?

9 MR. NOMELELLINI: Can I cross-examine?

10 MR. PLOSS: I was trying to avoid this.

11 THE COURT REPORTER: Your name, please?

12 MR. PLOSS: Lowell Ploss with the Bureau of
13 Reclamation.

14 HEARING OFFICER CAFFREY: Mr. Ploss, welcome, sir.

15 MR. PLOSS: The interim operations plan for the New

16 Melones that has been referred to I believe is a
17 three-year-old planning model that the Bureau ran in trying
18 to develop what would be the best operation for New Melones
19 in meeting all the competition for the resources. We did
20 try in that model to meet the '95 Water Quality Control
21 Plan, to meet flows on the Stanislaus River under CVPIA, to
22 meet water quality and to meet the needs of our CVP
23 contractors.

24 We varied the amounts for each of those demands
25 based on a -- the water supply that was available in New

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1 Melones and what the projected water supply would be for
2 the balance of each year. In doing that model study, what
3 we did is we tried to protect the reservoir storage in New
4 Melones in an effort to have adequate water to carry us
5 through a prolonged drought like we experienced a few years
6 ago, a seven-year drought period.

7 ~~And in doing so, as you heard earlier, there was~~
8 ~~about 40 percent of time that we could not comply with~~
9 water quality requirements. Not surprisingly New Melones
10 alone cannot meet the '95 Water Quality Control Plan, nor
11 could we meet all of our fish flow -- in-stream fish flow
12 requirements, nor could we meet all of the contractor
13 needs. So, everybody took shortages when we're trying to
14 protect the reservoir for a prolonged drought.

15 With that information in hand, we entered into

16 discussions with New Melones -- with the Stanislaus
17 Stakeholder River Group, about 50 individuals representing
18 different interests on the Stanislaus River and outside the
19 Stanislaus River. For about two years we've been in
20 monthly discussions. No one can yet agree on the operation
21 of the New Melones Reservoir. For the past two years we
22 did acquire water from Oakdale Irrigation District. That
23 allowed us to meet some of our fish flows, while at the
24 same time making a commitment to the contractors, the CVP
25 contractors out at New Melones and meet our water quality

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1 standards.

2 That interim operations plan is referred to in the
3 San Joaquin River Agreement. The San Joaquin River
4 Agreement also specifies that if that interim operations
5 plan for New Melones is modified that the parties to the
6 San Joaquin River Agreement would then evaluate the
7 commitments, the operations under that and determine if
8 there needs to be any adjustments made thereto. So while
9 it is an interim operations plan it is flexible over the
10 next 12 years. And we're continuing to work with the
11 parties on the San Joaquin River to try to improve on that
12 interim operations plan.

13 With regard to Tuolumne Utilities District, I
14 believe we did advise them at an earlier time about the
15 problems with New Melones Reservoir. Because of the
16 prolonged drought we've experienced up there, it's

17 interesting that the hydrology that was used to authorize
18 the project, the Federal Government looked at a drought
19 period different than what we've experienced recently.

20 Since New Melones Reservoir, construction was
21 completed, we've got both the wettest year of record in
22 Stanislaus and driest drought record, neither one
23 contemplated in the original planning. Looking at the new
24 drought scenario for New Melones and Stanislaus River, one
25 could say there is no new project yield on the New Melones

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1 Reservoir. This is what prompted us to move in to a
2 process with all the interests in that basin to try to come
3 up with a way to balance the resource for everyone, not
4 unlike what you're trying to do. Good luck, if we've had
5 two years' experience with what we're doing.

6 So we are still open. We did advise Tuolumne that
7 based on the yield conditions there may be a difficulty for
8 them to get any kind of a firm yield out of the reservoir
9 during a critical period. The analysis we did do does
10 include deliveries to CVP contractors, it does not specify
11 which contractors. Right now the two contractors we have
12 there are -- Stockton East Water District and Central San
13 Joaquin Water District are the two contractors that we
14 currently have there.

15 ~~MR. HOWARD~~: Just sort of a follow-up question. I
16 have a copy of the New Melones interim operations plan, it

17 was incorporated for the modeling that we did for the VAMP
18 alternative, which is presently posted on the Internet by
19 the way in case anyone wants to see the recent studies that
20 were done by the Department for the State Water Board.

21 And in it I had a question regarding the fish
22 releases, annual release for fish for the watershed. In
23 all of our previous modeling we had used fish releases of
24 98,000 acre feet to I think it was to 302,000 acre feet.
25 98,000 was from D-1422 and the 302,000 acre feet was from a

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1 1987 Fish and Game Agreement as I understand it.

2 MR. PLOSS: Correct.

3 MR. HOWARD: However, for this study the Department
4 for its interim operations plan had established annual fish
5 releases for the Stanislaus River ranging from 98 to
6 467,000 acre feet, which is larger than we've seen in any
7 of our other model studies, 165,000 acre feet at better
8 conditions for the fish. My question is: Where did the
9 higher fish flow requirement come from?

10 MR. PLOSS: Those are the flows -- the higher level
11 of flows came from the CVPIA work that was undertaken. So
12 it's the anadromous fish -- from the draft Anadromous Fish
13 Restoration Plan.

14 MR. HOWARD: The last question I had had to do with
15 the agreement. In the agreement on page 12 and Section
16 10.1.1 it said, "In order to achieve the purpose of this
17 agreement, the Bureau shall assume responsibility for the

18 term of this agreement for the San Joaquin River portion of
19 the 1995 Water Quality Control Plan objectives that can
20 reasonable be met through flow measures."

21 Is it the Department's -- is the Bureau's position
22 that the interim operations plan is the level that can
23 reasonably be met? Is that what -- what this term means?

24 ~~MR. FLOSS:~~ Yes, it is. What can reasonably be met
25 with our operation at New Melones.

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1 MR. HOWARD: Okay. Thank you.

EXHIBIT “C”



United States Department of the Interior

BUREAU OF RECLAMATION
Central Valley Operations Office
3310 El Camino Avenue, Suite 300
Sacramento, California 95821

IN REPLY
REFER TO:
CVO-400
PRJ.13.10

Nov 18, 2004

Ms. Celeste Cantú
Executive Officer
State Water Resources Control Board
P.O. Box 2000
Sacramento, CA 95812-2000

Subject: Plan for Meeting Fish and Wildlife Flow Requirements at Vernalis for Water Year 2005, (Your Letter Dated April 28, 2004)

Dear Ms. Cantú,

Pursuant to your letter of April 28, 2004, in regard to comments received on the Temporary Urgency Change in permit term for New Melones Dam and Reservoir (applications 14858A, 14858B and 19304), the Bureau of Reclamation (Reclamation) hereby submits the following plan explaining how Reclamation intends to meet the Water Quality Control Plan fish and wildlife flow objectives at Vernalis during Water Year 2005.

Reclamation has been unable to comply with the Fish and Wildlife objective for the last 3 years due to dry hydrologic conditions in the San Joaquin River Basin and low reservoir storage. Reclamation believes that compliance with this requirement will be problematic under these conditions in the future. The potential for another dry year is fairly high and it is likely that New Melones Reservoir storage will be even lower than in the winter of 2004. The Department of Water Resources' (DWR) November 1, 2004 Water Supply Forecast is that the year type will be dry (San Joaquin River Index at the 75 % exceedance level of 2.3 million acre-feet (MAF)). Also, the 2 part per thousand isohaline (X2) requirement will most likely be required to be at or west of Chipps Island in February and March except under the driest conditions. This would trigger the higher flow requirement at Vernalis (2,280 cubic feet per second (cfs) in below normal and dry years).

Recent conditions and operating experience have confirmed Reclamation's prior modeling suggesting that, over the long-term, the Stanislaus River basin does not produce sufficient inflow to New Melones Reservoir to support all the requirements and demands placed on the New Melones system. In anticipation of continued dry conditions, Reclamation has identified five possible options for addressing the fish and wildlife flow objectives at Vernalis, in 2005 - in addition to using releases from New Melones Reservoir. These options are identified herein with comments on follow-up actions necessary for implementation. Depending on actual hydrology, Reclamation will implement some combination of these options in order to ensure compliance with the fish and wildlife flow objectives. Reclamation nevertheless encourages the Board to address continued reliance on New Melones for compliance with water quality objectives at Vernalis.

Purchase Additional Water

Reclamation could purchase water from willing sources in the San Joaquin Basin. To have water provided in an amount and at a flow necessary to be effective, water purchased would probably have to come from a storage reservoir on one of the San Joaquin River tributaries.

Reclamation's Water Acquisition Branch is presently making inquiries as to the availability of water for purchase on the tributaries of the San Joaquin. Preliminary inquiries indicate that it would be very unlikely to be able to obtain any water for February and March but water may be possible for June. Availability of funding for purchases is also uncertain at this date; however, Reclamation will continue to assess availability and priorities of funding for this use. The recently signed Calif Bay Delta Authorization Act provided authorization for Reclamation to acquire water to assist in meeting the Vernalis flow objective, but no appropriations have been made for this purpose.

Recirculation

Water to meet the flow objectives could be pumped at Tracy or Banks Pumping Plant and released from the Delta Mendota Canal (DMC) into the San Joaquin River through the Newman Wasteway. A pilot study in August 2004 provided information regarding the use of recirculation to help meet flow and water quality requirements in the San Joaquin River. A final report on this study is expected in December 2004. The pilot study, however, did not analyze the potential impacts on fisheries of changes in water composition in the San Joaquin River and the effects of increased pumping in the Delta. It also did not assess any impacts on water deliveries to Central Valley Project (CVP) and State Water Project (SWP) contractors.

Although more detailed studies are needed to perform recirculation on a long-term basis, Reclamation is exploring the possibility of doing another pilot study in 2005 to assess the effects of recirculation on fish and has initiated discussions with the fishery agencies. Reclamation plans on meeting with the Regional Water Quality Control Board to see if concerns with turbidity in the 2004 study can be resolved should another pilot study take place next year.

South of Delta Storage Release

Water could be released from San Luis Reservoir through the DMC and then into the Newman Wasteway or from Friant Reservoir directly into the San Joaquin River. Reclamation, however, believes it would be an unreasonable use of water from Friant Reservoir to meet the Vernalis flow requirements and Reclamation may be prohibited by Federal law from releasing water for downstream purposes until certain studies are completed. The reach of river between Gravelly Ford and Mendota Pool is usually dry, and this section would have to be "watered up" before any flow would reach the lower San Joaquin River. The magnitude of losses has been estimated at 25 to 75 percent and could be more depending on the amount of flow, length of time required, and the hydrological conditions. Releases from San Luis Reservoir to the San Joaquin River would also have to use the Newman Wasteway and we would have concerns similar to the Recirculation Option regarding water quality and fishery impacts. Moreover, neither Friant Reservoir nor San Luis Reservoir was authorized with the intent of releasing water to meet Bay Delta water quality standards and Reclamation does not believe that this is an appropriate use of the water.

Relief from Flow Objective

Reclamation could request a temporary urgency change in the February through June (with the exception of the April/May pulse flow period) fish and wildlife flow objective at Vernalis. Reclamation would operate New Melones Reservoir to meet minimum fishery flows in the Stanislaus River, water right

agreements and the Vernalis salinity objectives and would meet modified minimum flows at Vernalis as determined by coordination with the fishery agencies. This option is most likely to be pursued if the hydrology and water supplies in the San Joaquin Basin are significantly drier than in the Sacramento Basin as was the case in Water Year 2004. Reclamation will continue to monitor conditions, prepare forecasts of operations, and consult with the State Water Resources Control Board (SWRCB) staff in the CALFED Operations Group.

Functional Equivalent

Reclamation could meet a functional equivalent of the required flow at Vernalis as in Water Year 2004. This option could be implemented in conjunction with a temporary urgency change for relief from the flow objective. Releases from Goodwin Reservoir and reductions in Tracy Pumping Plant exports would be coordinated to achieve the functional equivalent of the required flow at Vernalis (2,280 cfs for a "below normal" or "dry" year designation). This would result in conserved water in New Melones and a deficit of water in the federal share of San Luis Reservoir. Reclamation would consult with the fishery agencies as to the biological effects of such operations.

As you know, Reclamation uses the 1997 New Melones Interim Plan of Operations (NMIPO) in planning operations and making allocations. Although intended as a short-term plan, the NMIPO continues to provide substantial operational guidance until a new operations plan is developed. The NMIPO only supports meeting the Vernalis flow standards from Stanislaus River water resources when the water supply conditions are determined to be in the "high" or "medium-high" NMIPO designation and then the amount allocated is limited to a maximum yearly release of 75,000 ac-ft.

Data from modeling performed using CALSIM II for the recently completed (June 2004) Long-Term Central Valley Project and State Water Project Operations Criteria and Plan Biological Assessment indicate that in at least one month in the February-March (pre-Vamp) period, Vernalis flow requirements were not met in 13 out of 71 years. The typical situation is a "Dry" year category when the flow requirement is based on the position of X2 being at or west of Chipps Island (X2 represents the geographical position of the 2-parts-per-thousand (PPT) isohale). In June, Vernalis flows were not met in 16 out of 71 years, however, the typical situation in June is an "Above Normal" year category in which flows of up to 3,420 cfs can be required depending on the position of X2. Neither the hydrology nor operations pursuant to the NMIPO provides that much flow under these conditions.

Since 1995, there have been four years in which compliance with the Vernalis flow objective has resulted in a conflict with the NMIPO: 1999 (June), 2002, 2003, and 2004. Each of these instances correspond with the circumstances that modeling predicted would be a problem. June of 1999 was a San Joaquin River Index "Above Normal" year and the February-March period in 2002, 2003, and 2004 were "Dry" and flows of 2,280 cfs were triggered based upon the X2 position being west of Chipps Island.

The following table summarizes the releases from New Melones to meet the flow standard since 1999:

Water Released from New Melones to Meet Flow Objective (in acre-feet)

| Year | February | March | April/May | June |
|------|----------|-------|-----------|--------|
| 1999 | | | | 15,300 |
| 2002 | 11,400 | 6,500 | 12,800 | |
| 2003 | | | 13,900 | 46,000 |
| 2004 | 27,900 | | | 15,300 |

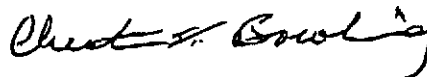
The intent of the Delta outflow standard is to improve habitat protection for fish in the Delta by providing adequate flows to move delta smelt away from the CVP/SWP pumps and into low-salinity rearing habitat in Suisan Bay and the lower Sacramento River. In February 2004, after the SWRCB approved Reclamation's Temporary Urgency Petition to relax the Vernalis objective from 2,280 cfs to 1,420 cfs, Reclamation increased Goodwin Reservoir releases to 500 cfs and reduced Tracy Pumping Plant exports to provide a "functional equivalent" Vernalis flow of approximately 2,500 cfs. This was coordinated with the fishery agencies and was deemed as providing adequate protection given the low delta smelt counts in the Delta at the time.

In June 2004, approximately 15,300 acre-feet of water was released from New Melones Reservoir to meet the June Vernalis flow objective of 1,420 cfs, although the delta smelt surveys indicated that the smelt were already well away from the pumps and there were few concerns with any other species. From June 15 through June 30, 2004, the Stanislaus River provided approximately 65% of the flow at Vernalis.

Should dry conditions in the San Joaquin River Basin persist in 2005, Reclamation will plan on pursuing a combination of options that would provide intended biological benefits to delta smelt and other species, considering the actual conditions. We will be extremely reluctant to release any water from New Melones storage for San Joaquin River flows unless we see a projected gain in storage. Therefore, we will work together with the fishery agencies to develop a suitable level of protection in the Delta and implement the options to achieve that protection.

Please contact Paul Fujitani at 916 979-2197 or Elizabeth Kiteck at 916 979-2684 if you have any questions.

Sincerely,



Chester V. Bowling
Operations Manager

cc: Mr. Wayne White
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EXHIBIT “D”



State Water Resources Control Board



Winston H. Hickox
Secretary for
Environmental
Protection

Executive Office

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FILE

1026-003

FEB 26 2003

Mr. Kirk C. Rodgers
Regional Director
Bureau of Reclamation
2800 Cottage Way
Sacramento, CA 95825-1898

Dear Mr. Rodgers:

COMPLIANCE WITH THE SAN JOAQUIN RIVER FLOW OBJECTIVES IN FEBRUARY AND MARCH 2002

This letter responds to your October 28, 2002 letter regarding compliance with the San Joaquin River flow objectives in February and March of 2002. Your letter responds to the May 1, 2002 letter from Celeste Cantú to Carl Torgersen and Chet Bowling on the same subject. In effect, the May 1 letter identified the Bureau of Reclamation's failure to meet the Vernalis flow objectives in February and March of 2002 as a violation of Reclamation's water right permits for the New Melones Reservoir. The May 1, 2002 letter advised Reclamation that the State Water Resources Control Board (SWRCB) would not take enforcement action if Reclamation pays back the water which is required in D-1641 for Delta smelt protection, by dedicating an equal amount of water to fishery resources at a time and place determined by consultation with the U.S. Fish and Wildlife Service.

Your response is that Reclamation told the SWRCB during the Bay-Delta Water Rights Hearing that Reclamation would make its best effort to meet the water quality objectives in the 1995 Bay-Delta Water Quality Control Plan, but that the SWRCB should have known that Reclamation could not guarantee that it could always meet the objectives.

As Ms. Cantú stated in her May 1, 2002 letter, the water right permit amendments adopted in SWRCB Decision 1641 require Reclamation to ensure that the water quality objectives for San Joaquin River flow at Vernalis are met (D-1641, condition 2(a), page 161). The permits do not, however, require Reclamation to use water diverted under the New Melones permits to meet the Vernalis flow objective if it uses other sources of water, or other means, to meet the conditions. In other words, the permits allow Reclamation to meet the Vernalis flows by purchasing water or by using other water appropriated under Reclamation's water rights. The permits impose a legal duty on Reclamation to meet the Vernalis flow objectives. If Reclamation does not comply with the conditions of its water right permits by meeting the objectives, the SWRCB will have to decide whether to take enforcement action.

FEB 26 2003

Mr. Kirk C. Rodgers

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The SWRCB understands the difficult situation that Reclamation faces in trying to meet all of the conflicting demands on the New Melones system. It appears that Reclamation may not have enough water to meet all of its New Melones project commitments using only the New Melones project. Hydrologic conditions this winter are very similar to those that gave rise to the problem last year, and Reclamation may once again have difficulty meeting the Vernalis flow objective.

As an interim solution, Reclamation can file a petition for temporary urgency change under Water Code section 1435, requesting a temporary change in the requirement to meet the Vernalis flow objectives. Before approving a petition under section 1435, the SWRCB must find that the proposed change would not result in harm to fish and wildlife or other legal users of water. The SWRCB can authorize a temporary urgency change to take effect almost immediately after submission of a petition. A change can be implemented, if appropriate, even before issuing notice of the petition.

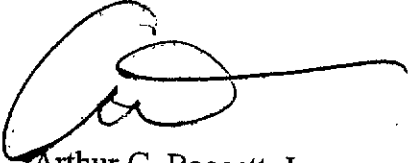
A temporary urgency change is, however, subject to California Environmental Quality Act (CEQA) compliance. In this case, an exemption from CEQA potentially may be available under California Code of Regulations, Title 14, section 15308 (Class 8). To approve an exemption under Class 8, the SWRCB would have to find that the purpose of the proposed change is to protect the environment, and that the proposed change includes procedures for protecting the environment. For example, it may be possible to make such a finding if water conserved by not meeting the flow objectives during February and March results in an equivalent amount of water being used for environmental purposes at some future time when the water will have an environmental benefit that is equal to or greater than the current use, and would not otherwise be available. Such a finding would require letters from the California Department of Fish and Game, the National Marine Fisheries Service and the U.S. Fish and Wildlife Service in support of the temporary change.

You propose in your letter that the SWRCB hold a workshop so that a diverse group of stakeholders can offer additional information and perspectives on the Vernalis flow objective, including discussing the situation that developed during February and March of 2002. A workshop on this subject will not, however, resolve this issue. The SWRCB cannot change the conditions in Reclamation's water right permits based upon comments at a workshop, nor can the SWRCB change the underlying flow objective in the 1995 Bay-Delta Water Quality Control Plan based on such comments. The better approach is for the SWRCB to consider whether to revise the Vernalis flow objectives in the 1995 Bay-Delta Plan during a periodic review under Water Code section 13240 of the objectives in the 1995 Bay-Delta Plan. If the objectives were to be revised after a periodic review, the SWRCB could subsequently consider changing the conditions in the New Melones permits pursuant to a change petition filed by Reclamation under Water Code section 1702.

FEB 26 2003

If you have questions, please contact Victoria Whitney, Assistant Division Chief at (916) 341-5423, or Barbara Leidigh, Staff Counsel IV, at (916) 341-5190.

Sincerely,



Arthur G. Baggett, Jr.
Chair

cc: Mr. Wayne White
Field Supervisor
U.S. Fish and Wildlife Service
2800 Cottage Way, W-2605
Sacramento, CA 95825

Mr. Robert C. Hight, Director
California Department of Fish and Game
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Sacramento, CA 95814

Mr. Thomas P. Hannigan, Director
California Department of Water Resources
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Sacramento, CA 94236-0001

Ms. Jeanne Zolezzi
Herum Crabtree Brown
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Stockton, CA 95207

EXHIBIT “E”



State Water Resources Control Board



Terry Tamminen
*Secretary for
Environmental
Protection*

Division of Water Rights
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Arnold Schwarzenegger
Governor

DEC 16 2004

Chester V. Bowling
Operations Manager
U.S. Bureau of Reclamation
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Sacramento, CA 95821

PLAN FOR MEETING FISH AND WILDLIFE FLOW OBJECTIVES ON THE SAN JOAQUIN RIVER AT VERNALIS DURING 2005

This letter responds to your letter to Celeste Cantú dated November 18, 2004 regarding the U.S. Bureau of Reclamation's (USBR) plan for meeting the fish and wildlife flow objectives on the San Joaquin River during February through June of 2005 (excluding April 15 to May 15). Ms. Cantú asked that I respond to you regarding this matter. On February 25, 2004, by Order 2004-0005, I approved USBR's Temporary Urgency Change Petition to temporarily change its permit conditions adopted in Decision 1641 (D-1641) for the February through June San Joaquin River fish and wildlife flow objectives (with the exception of the April/May pulse flow period) during 2004. Following my approval, by letter dated April 28, 2004, I requested that you submit a plan by November 15, 2004, detailing how USBR intends to meet the fish and wildlife flow requirements during 2005.

In your letter, you state that compliance with the San Joaquin River flow objectives will likely be problematic in the future due to continuing dry conditions in the San Joaquin River watershed and resulting low carryover storage in New Melones Reservoir. You go on to state that recent conditions and operating experience have confirmed USBR's earlier modeling analyses indicating that over the long-term the Stanislaus River basin does not produce sufficient inflow to New Melones Reservoir to support all of the demands on it. In anticipation of continuing dry conditions, you state that USBR has developed five possible options for addressing the San Joaquin River fish and wildlife flow objectives in 2005. The five options are: (1) purchasing additional water from willing sellers in the San Joaquin Basin, (2) recirculating water through the Delta Mendota Canal and the Newman Wasteway, (3) releasing water from San Luis Reservoir or Friant Reservoir into the San Joaquin River, (4) relief from the flow objectives through filing a Temporary Urgency Change Petition with the State Water Resources Control Board (SWRCB), and (5) meeting functional equivalent flows on the San Joaquin River through filing a Temporary Urgency Change Petition, whereby USBR would reduce exports at the Tracy Pumping Plant and release water from New Melones Reservoir to achieve the functional equivalent of the required flows at Vernalis.

You state that depending on actual hydrology, USBR will implement some combination of these options to comply with the fish and wildlife flow objectives. However, you state that USBR encourages the SWRCB to address continued reliance on New Melones Reservoir to meet these objectives.

California Environmental Protection Agency

DEC 16 2004

cc: (Continuation page.)

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EXHIBIT “F”



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National Marine Fisheries Service
Protected Resources Division
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California Department of Fish and Game
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Sacramento, California 95814

FEB 27 2004

Ms. Victoria Whitney, Division Chief
Division of Water Rights
State Water Resources Control Board
P.O. Box 2000
Sacramento, California 95812-2000

Subject: Notice of Petition for Temporary Urgency Change in Permit Term for New Melones Dam and Reservoir (App. 14858A, 14858B and 19304)

Dear Ms. Whitney:

This letter responds to your February 10, 2004 Notice of Petition for Temporary Urgency Change for New Melones Dam and Reservoir. The Management Agencies (U.S. Fish and Wildlife Service, National Marine Fisheries Service and California Department of Fish and Game) have also reviewed the January 30 and February 9, 2004 letters on this subject from the U.S. Bureau of Reclamation (Reclamation) to the State Water Resources Control Board (Board) and your February 4, 2004 response.

As the Board's notice states, under dry year conditions, D-1641 requires Reclamation to maintain a minimum monthly average flow of 2,280 cfs at Vernalis from February through April 14 and May 16 through June whenever X2 is required to be at or west of Chipps Island. The U.S. Fish and Wildlife Service incorporated this flow requirement into its biological opinion for delta smelt (dated March 5, 1995), because it is important for the protection of delta smelt.

However, the Management Agencies also recognize that under hydrologic conditions, such as we experienced in early February, increasing releases on the Stanislaus River to the rate necessary to meet the Vernalis flow objective (approximately 1,000 cfs) likely would have an adverse impact on salmonid fry rearing in the Stanislaus River below Goodwin Dam and on New Melones Reservoir carryover storage. A managed short-term flow increase of lesser magnitude during a relatively dry period in late January 2003 resulted in Chinook fry moving downstream from the Stanislaus into the Delta where, with low inflows and high export pumping rate, they were soon observed at the CVP fish facilities. To avoid a recurrence of that type of event and because of a concern we share with Reclamation about further depleting the already low storage in New



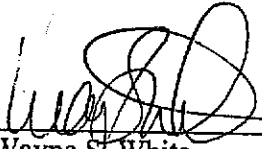
Melones Reservoir by relying on this source alone, we believe a better option in the future would be for Reclamation to acquire water on the Tuolumne and Merced rivers to spread out the flow contributions needed to comply with the Vernalis flow requirement among the three tributaries.

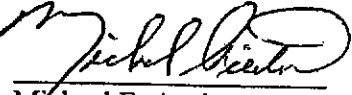
In the meantime, we are working with Reclamation and the Department of Water Resources in the Water Operations and Management Team (WOMT) weekly meetings to determine the most reasonable plan of operation and best use of available water from New Melones this year, as described in Reclamation's February 9 response to questions 3 and 5. It is important to note that one of WOMT's roles when managing the environmental water is to consider opportunities to: (1) relax standards when hydrologic and biological conditions permit; and (2) exceed protection levels provided by existing standards when hydrologic and biological conditions warrant. We will continue to work with the WOMT regarding the Vernalis flow objective on a monthly basis through June. Reclamation's monthly reports on the previous month's operation and the forecasted operation for the current month will keep the Board informed of progress and actions implemented by Reclamation pursuant to deliberations with the other WOMT agencies.

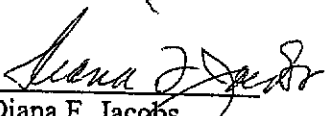
In closing, we appreciate the Board's attention to this matter. The Management Agencies will continue to work with Reclamation and do not consider it necessary for the Board to schedule a hearing regarding the petition for the temporary urgency change. We understand that the Board may address this as part of its periodic review of the 1995 Bay-Delta Water Quality Control Plan. At that time it will be important to examine the factors that make it difficult for Reclamation to meet this important flow objective at Vernalis solely with CVP water from New Melones Reservoir in some hydrologic conditions and determine options or opportunities that will assist in meeting the Vernalis flow objective more frequently.

Should you require additional information, please contact Mr. Roger Guinee (FWS) at (916) 414-6537, Mr. Jim White (CDFG) at (916) 653-3540, or Mr. Brian Kinnear (NMFS) at (916) 930-3609.

Sincerely,


Wayne S. White
Field Supervisor


Michael E. Aceituno
Supervisor, Sacramento Area Office


Diana F. Jacobs
Deputy Director

cc:

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Mr. Tom Glover, DWR, Sacramento, CA
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