GK

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February 27, 2006

Tam M. Doduc, Board Chair
State Water Resources Control Board
1001 I Street
Sacramento, CA 95812

Re: Periodic Review Related Proceedings Since June 2005.

Dear Ms. Doduc:

The State Water Resources Control Board ("SWRCB") closed the workshops for the Periodic Review of the 1995 San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan ("1995 WQCP") on June 3, 2005.[1] Since then, the San Joaquin River Group Authority ("SJRGA") has participated in administrative processes for Basin Plan amendments for dissolved oxygen ("DO") impairment in the Stockton Deep Water Ship Channel ("DWSC") and discharges of salt and boron into the Lower San Joaquin River ("LSJR"), the Cease and Desist Order ("CDO") proceeding against the United State Bureau of Reclamation ("USBR") and the California Department of Water Resources ("DWR"), and the 2006 update to the California Clean Water Act §303(d) List.

These processes must be considered in the Periodic Review of the 1995 WQCP. As discussed in a letter from Board Executive Director Member Celesté Cantú to the SJRGA dated October 7, 2005, "additional comments pertaining to issues under consideration in the Periodic Review and submitted to the SWRCB may be considered after the June 3, 2005 date since the State Water Board's review of the 1995 Plan is a quasi-legislative proceeding and, as such, is not subject to the same rules of accepting evidence as adjudicative proceedings." Therefore, the documents discussed in this correspondence must be considered by the SWRCB in its review and development of potential amendments to the 1995 WQCP and accepted into the record.

The documents submitted in the course of the following related proceedings are discussed below.

[1] A later workshop was noticed and held on August 31, 2005, solely for Issue Five, the Delta Outflow Objective, to address the issue of increased flexibility in meeting the outflow objective in order to void adverse upstream impacts.

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1. CALSIM II Peer Review.

The peer review of the latest version of CALSIM II ("CALSIM II-Revised"), the official planning model for the CVP and SWP, is complete. (See Review Panel Report: San Joaquin Valley CALSIM II Model Review (January 12, 2006).) Prior versions of CALSIM II have been used extensively by the SWRCB and others to support a variety of studies of alternative policies and scenarios that vary infrastructure, operational rules, regulations, water demands, and/or climate. A general external review of the methodology, software, and applications of CALSIM II was conducted in 2003.

CALSIM II-Revised replaces uncertain empirical formulations in the old representation with more accurate analytical estimates. It provides many functional and developmental improvements and enhances the flexibility of the CALSIM II model to address a variety of water management problems, particularly those regarding southern Delta electrical conductivity ("EC") and February through June flows. Simulations conducted with CALSIM II-Revised demonstrate that the salt problem is less severe than previously believed and that the EC objectives at Vernalis can be met in all years. The new representation of mainstem SJR salinity is a substantial advance over the older "Kratzer equation" representation. Under most circumstances, the newer model will be more accurate, although it underestimates salinity in low-flow years due to limited recent data on low-flow conditions.

CALSIM II-Revised modeling simulations were critical in developing the SJRGA's recommendations for Issue Eight, the February through June flow objectives, and Issue Ten, Southern Delta EC. CALSIM II-Revised has also been used to analyze recommendations made by other parties, particularly those made by the Bay Institute for the February through June flow objectives. CALSIM II-Revised will be an integral component and central issue in the Periodic Review of the 1995 WQCP, because many recommendations, and the analysis of those recommendations, will be premised on CALSIM II-Revised simulations. In order to properly evaluate each recommendation and analysis using CALSIM II-Revised, the SWRCB must understand the new modeling, where it improves on prior modeling, and where limits may remain.

2. 2006 Revisions of the California Clean Water Act §303(d) List.

The SJRGA submitted comments recommending removal of the segment of the Lower San Joaquin River from Mendota Pool to Vernalis from the California Clean Water Act §303(d) list of water quality limited segments for impairment by electrical conductivity ("EC") and boron. The revision of the §303(d) List bears on Issue Ten, Southern Delta EC.

No analysis or any evidence was used to list the Lower San Joaquin River in 1996 and no new analysis has ever been conducted. (See "Comments and Recommendations Regarding California's 2006 Clean Water Act § 303(d) List of Water Quality Limited Segments" submitted by the SJRGA, p24-34.) Based on the Policy for Developing California's Clean Water Act §303(d) List, adopted by SWRCB Resolution No. 2004-

0063, water bodies originally listed without analysis must be removed from the §303(d) List.

The Listing Policy also requires that data used to support any listing must temporally represent the water body. (Listing Policy, §6.) If data used to support a listing no longer represents the water body, the analysis used to support the listing becomes "faulty" and removal from the §303(d) List is required. Operational changes and new programs implemented since 1996 have changed conditions in the LSJR Basin so significantly that any data used to support the original listing, had any data been used, would no longer represent the current LSJR Basin. Consequently, the §303(d) listing of the LSJR for salt and boron in based on unrepresentative data and removal from the §303(d) List is required.

The EC objectives at Vernalis have been met without fail for ten years, as confirmed by CALSIM II Revised, and will always be met in the future. There is no evidence in the record that agricultural beneficial uses in the LSJR Basin are impaired by salt or boron. (See "Comments and Recommendations Regarding California's 2006 Clean Water Act § 303(d) List of Water Quality Limited Segments" submitted by the SJRGA, p70-80.) Pursuant to the Policy for Developing the California Clean Water Act §303(d) List of Water Quality Limited Segments, the Lower San Joaquin River must be removed from the §303(d) List for impairment by electrical conductivity and boron.

Water bodies must also be removed from the §303(d) List if applicable water quality objectives are revised and the water body would have complied with the revised objective in the past or will comply in the future. Currently, the SWRCB is re-evaluating the EC objective at Vernalis and proposals have been made to change the objective from the current Vernalis EC objectives of 0.7 dS/m from April 1 through August 31 and 1.0 dS/m the rest of the year, to a year-round 1.0 dS/m EC objective. (See "Comments and Recommendations Regarding Southern Delta EC Objectives (Issue Ten) of the State Water Resources Control Board Water Quality Control Plan For The San Francisco Bay/Sacramento-San Joaquin Delta Estuary", submitted by the SJRGA; see also DWR-22, "Establishing Water Quality Standards that are Protective for Agricultural Crop Production", by Dr. John Letey.) The United State Bureau of Reclamation ("USBR") can meet the current Vernalis EC Objective at all times. (See Periodic Review-EXH-07.) However, if the Vernalis EC Objectives are revised to 1.0 dS/m year-round, the USBR will be able to meet the objective more easily, making additional water available for other beneficial uses.

3. Cease and Desist Order Proceeding determining whether to adopt Cease and Desist Order No. 262.31 against the United State Bureau of Reclamation and Cease and Desist Order No. 262.31-17 against the California Department of Water Resources.

The DWR submitted several important documents in the course of the CDO Proceeding that bear on the issue of whether a year-round EC objective would fully protect South Delta agriculture, the factors affecting water quality in the South Delta, and

the types of crops grown in the South Delta. The documents submitted by the DWR bear on Issue Ten, South Delta EC.

DWR-20, "Investigation of Factors Affecting Water Quality", concluded that EC degrades by approximately 8% from Vernalis to Brandt Bridge. It also determines that the Brandt Bridge objective is irrelevant, because the Central Delta uses Sacramento River water.

DWR-21, "South Delta Ag Testimony Final", discusses agriculture in the South Delta Water Agency ("SDWA") and the significant increase in SDWA bean cultivation since 1978.[2] Today, beans are predominantly grown in an area bounded by the San Joaquin River on the east and Old River to the north that consists of relatively well-drained mineral soils where groundwater tables can easily be maintained below the crop root zone and where leaching and salt management are easier and conditions are generally favorable for growing salt sensitive crops such as beans. At the time the 1978 Bay/Delta Plan was developed, the acreage planted to beans had diminished to approximately 2,400 acres in the SDWA, generally in the area receiving Delta-Mendota water[3], but since the Vernalis EC Objectives were adopted in 1978, the acreage planted to beans in the SDWA has increased by more than 2,400 acres over then next 18 years.[4]

The SJRGA presented a similar analysis during the workshops for the Periodic Review of the 1995 WQCP on Issue Ten, South Delta EC. (See SJRG-Exh-34.) Across San Joaquin County, the number of acres planted to beans plummeted from 29,200 acres in 1978 to a mere 9.400 acres in 2003. (Id., Appendix B.) A third of these beans, approximately 3,000 acres, were grown in the "South Delta", and nearly a quarter, approximately 2,301 acres, was grown in the Banta Carbona Irrigation District. (Id., p34-35.)

The diminished acreage planted to beans in San Joaquin County compared to the small increase in acreage of beans in the SDWA area, illustrates one of the critical conclusions in the SJRGA's analysis, that the area protected by the Vernalis EC Objectives is extremely limited due to the Head of Old River Barrier and SJR hydrology. (Id., p30-34.) The combination of the Head of Old River Barrier and export pumping prevent almost all SJR water from entering Old River, effectively eliminating any hydrologic relationship between Vernalis and the interior south Delta during the summer irrigation season, and thwarting any significant influence EC at Vernalis has on EC on Old River at Middle River, Old River at Tracy Road Bridge, or other locations in the

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[2] DWR-22 defined the "South Delta" as the boundaries of the South Delta Water Agency. In its analysis, the SJRGA defined the "South Delta" as the Union Island, Holt, Tracy, Vernalis, Lathrop, and Stockton West quadrangles and focused solely on lands irrigated with surface water from the San Joaquin River. (Id., Appendix A.)

[3] Delta-Mendota water is delivered to Plainview Irrigation District and Banta Carbona Irrigation District along a narrow strip adjacent to the southwest boundary of SDWA.

[4] The net cropped acreage for beans grown in SDWA mapped in the 1982, 1988, and 1996, DWR land use surveys, were approximately 11,800, 7,600, and 8,700 acres, respectively. These acreages did not include acreage planted in beans for any land within the southern Delta outside SDWA, including the lands receiving Delta-Mendota water.

interior South Delta. (SJRG-Exh-05, p4-6.) Once the SJR reaches the Stockton Deep Water Ship Channel ("DWSC"), water from San Joaquin River joins the Sacramento River. (Environmental Impact Report ("EIR") for the 1995 WQCP, pIII-104, III-106; SJRG-Exh-05, p5-6.) Very little of the water in Turner Cut, Paine Slough, the Grant Line Canal, and other areas in the interior South Delta comes from the SJR. (Id.) Instead, most water comes from the Sacramento River. (Id.) As a result, the interior South Delta is irrigated primarily with Sacramento River water and the only lands protected by the Vernalis EC Objectives are those bounded by the SJR on the east and Old River to the north. (Id., DWR-21.) Due to the limited reach of SJR water, limited protection provided by the Vernalis EC Objectives, and relatively small number of salt sensitive crops that actually benefit from the current Vernalis EC Objectives, large dilution flows are an unreasonable use of water in violation of Article 10, §2 of the California Constitution.

DWR-22, "Establishing Water Quality Standards that are Protective for Agricultural Crop Production", by Dr. John Letey, discussed general plant-salt interactions, the Ayers and Westcot steady-state analysis, and deficiencies in the Ayers and Westcot steady-state analysis. Dr. Letey explained that experimental results conducted in the laboratory and in the field all supported the same conclusion--that irrigation water with an EC of 1.0 dS/m or slightly higher would sufficiently protect for the most salt-sensitive crops. Further, rain can partially mitigate the effects of salinity in irrigation water by recharging the soil profile and leaching salts and thereby provide additional protection. Dr. Letey's conclusions are consistent with real farming operations in salt sensitive regions such as the Coachella and Imperial Valleys of California, where crops are successfully irrigated with Colorado River water, where EC is 1.25 dS/m and precipitation contributes almost nothing to the crop water demand.

Mr. Terry Prichard provided written testimony on behalf of the South Delta Water Agency and noted that no significant new research had been done since the Vernalis EC objectives were adopted almost thirty years ago. He did not explain why he considered any of the recent research and field work discussed by Dr. Letey in DWR-21 was insignificant.

On direct examination, Mr. Prichard disagreed with Dr. Letey's analysis and concluded that an EC objective of 0.7 dS/m was necessary for maximum crop production. (See Hearing Transcript, p2-7 (11-21-05).) First, Mr. Prichard asserted that Dr. Letey's analysis was based on a limited range of soil types and instead should have focused on the low permeable soils prevalent in the South Delta. (Id., p4.) However, most of the soils in the SDWA are defined by the United States Department of Agriculture/National Resource Conservation Service as "moderately well drained" and some are even defined as "well drained." (DWR-21, p7.) Only those areas nearest the SJR, where the soils are less suitable for beans and corn and where those crops are not generally grown, are the soils defined as "somewhat poorly drained" or "poorly drained." (Id.) A review of the land use surveys further show that beans, the most salt-sensitive crops grown in the South Delta, are grown on relatively well-drained mineral soils with no relatively shallow groundwater tables. (See DWR-21.) Therefore, the conditions described by Mr. Prichard

do not apply to beans or other salt sensitive crops grown in the SDWA, because salt sensitive crops are not grown on poorly-drained soils.

Mr. Prichard also disputed Dr. Letey's method of determining average root zone salinity by weighting by weighting it by crop water use. (Id.) However, Mr. Prichard's criticism was premised on the Ayers and Westcot approach, whereas Dr. Letey's analysis specifically addressed limits in the Ayers and Westcot approach and it was precisely because of those limits that his methodology differed. Ayers and Westcot performed their work more than 30 years ago, and as Dr. Letey explained, the state of the art has advanced.

Finally, Mr. Prichard disputed whether off-season rainfall could improve soil salinity, because the extent to which leaching may occur, if at all, is very condition-specific. (Id., p5.) Mr. Prichard did not discuss how much precipitation would be effective in the South Delta, but Dr. Letey's analysis used a very conservative assumption of 25%. Mr. Prichard also disputed whether off-season rainfall could improve soil salinity because water tables in the winter are too high. (Id., p9.) However, maps submitted by the DWR showed that the water table, especially where beans are actually grown, is well below the crop root zone.[5] (Id.) Mr. Prichard also suggested that transpiration of weeds in the off-season could also limit the ability of rainfall to improve soil salinity. (Id., p6.) However, the SJRGA photographed four bean fields in the South Delta region, particularly in the Banta Carbona Irrigation District service area, in October and again in February. (See South Delta Bean Field Photos; see also VernalisQuad (Photographed bean fields) and TracyQuad (Photographed bean fields).) In October, beans were growing in the fields. In February, grasses had recently sprouted, most likely due to unusually warm weather that occurred the week before. Large amounts of weeds were not covering the fields. Therefore, contrary to Mr. Prichard's suggestion, transpiration of weeds in the off-season would not limit the ability of rainfall to improve soil salinity.

4. SWRCB adoption of Resolution No. 2005-0086, Approving An Amendment To The Water Quality Control Plan For The Sacramento River And San Joaquin River Basins To Control Factors Contributing To Dissolved Oxygen Impairment In The Stockton Deep Water Ship Channel ("DO TMDL").

None of the issues in the Periodic Review of the 1995 WQCP specifically apply to the DO impairment in the DWSC. However, the DO TMDL recommends, among other actions, that the SWRCB use its water rights authority to impose permit terms and conditions that would increase flows in the DWSC. Consequently, effects on DO in the DWSC may be factors considered in contemplated flow regimes for Issue Eight, San Joaquin River Flows at Vernalis from February to May 14 and May 16 to June.

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[5] Dr. Letey testified on cross-examination that a high water table is really a drainage problem that must be remedied by improving drainage. This is supported by Ayers and Westcot acknowledged that "Effective salinity control, therefore, must include adequate drainage to control and stabilize the water table and leaching as needed to reduced the accumulated salts." (Ayers and Westcot, "Water Quality for Agriculture", FAO Irrigation and Drainage Paper, 29 Rev. 1, §2.4.1.)

The SJRGA explained in a Workshop on October 6, 2005, that the proposed DO TMDL fails as a TMDL since no loading capacity is ever determined and no loads are allocated. (DO TMDL Presentation.) The DO TMDL recommended that the SWRCB use its water rights authority to amend the terms and conditions of water rights permits to increase flow in the DWSC. In the months when DO is low, particularly in Below Normal, Dry, and Critical years from July through October, current flows are higher than flows that would have occurred under "natural conditions", i.e., flows that would have occurred without any diversion, storage, or water transfers upstream of Vernalis. Consequently, the number of months with DO exceedances would have been substantially the same, and diversions, rather than flow, may be the source of the problem.

In comments submitted to the SWRCB on October 28, 2005, the SJRGA explained that the DO TMDL is incompatible with SWRCB Resolution No. 2005-0087, Approving An Amendment To The Water Quality Control Plan For The Central Valley Region To Incorporate A Total Maximum Daily Load (TMDL) For The Control Of Salt And Boron Discharges Into The Lower San Joaquin River ("Salt & Boron TMDL"). (Comments on DO in SDWSC 10.28.05.) CEQA requires a "cumulative impacts analysis" that includes a consideration of other projects, but the DO TMDL does not consider the impact of the Salt & Boron TMDL. The DO TMDL recommends increased flows in the SDWSC, but the Salt & Boron TMDL would require dischargers to hold their drain water, 50 TAF at a minimum, during low flow periods when DO is worst. (Salt & Boron TMDL, p76.) Consequently, implementing the two TMDLs could prove counterproductive and impose conflicting legal obligations.

5. SWRCB adoption of Resolution No. 2005-0087, Approving An Amendment To The Water Quality Control Plan For The Central Valley Region To Incorporate A Total Maximum Daily Load (TMDL) For The Control Of Salt And Boron Discharges Into The Lower San Joaquin River.

In the workshops leading up to adoption of the Salt & Boron TMDL, the SJRGA explained that based on the Policy for Developing the California Clean Water Act §303(d) List, the Lower San Joaquin River is not, by definition, a water quality segment in need of a TMDL. (Tim O'Laughlin Salt & Boron TMDL PowerPoint (11-16-05).) Even the "no project" alternative analyzed by the Central Valley Regional water Quality Control Board ("CVRWQCB") showed that the Lower San Joaquin River is not, by definition, a water quality limited segment in need of a TMDL. In D-1641 and the 1991 Water Quality Control Plan for Salinity, which was adopted pursuant to SWRCB Resolution 91-34, the SWRCB recommended that the CVRWQCB adopt and implement regulatory controls over discharges of salt into the LSJR. However, if the Listing Policy and CVRWQCB analysis show that a TMDL is neither required nor necessary, then the SWRCB should not recommend adoption of a TMDL for the control of discharges of salt into the LSJR.

6. Flow Recommendations from Department of Fish & Game.

During the workshops on Issue Nine, the 31-day, April 15 to May 15 pulse flow objective San Joaquin River at Airport Way Bridge, Vernalis, the DFG refrained from making any specific recommendations, because it lacked an analytical planning tool to evaluate various Vernalis instream flow levels and in terms of magnitude, frequency, and duration. (DFG-Exh-10.) After the workshops ended, the DFG submitted their "preliminary" flow recommendations based on a new model that predicted salmon abundance based on flow at Vernalis. DFG indicated that a review of the "robust" model developed by the DFG will be forthcoming under separate cover.

Flows also impact water temperatures. Elevated water temperatures can negatively affect Chinook salmon and other fish during. Temperature objectives specific to the Delta are contained in the 1991 WQCP.[6] The 1991 WQCP recommended temperatures no greater than 68°F at Vernalis from April through June. (1991 WQCP, p1-13.) However, the SWRCB recommended implementing temperature regulation using "controllable measures" such as waste discharge controls and riparian canopy restoration. (Id.) Reservoir releases, due to the distance of the Delta downstream from reservoirs, and uncontrollable factors such as ambient air temperature, reservoir releases for temperature control purposes were deemed an unreasonable use of water. (Id.) Consequently, the SWRCB refused to consider the use of reservoir releases for temperature control.

The SWRCB's 1991 determination that use of flow would be an unreasonable use of water is supported by data obtained from the Vernalis Adaptive Management Plan ("VAMP"). 2005 was a very high flow year when Vernalis flows exceeded 10,000 cfs, but even then, maintaining a temperature of 68°F throughout June was not possible. On May 19, 2005, the flow at Vernalis was approximately 10,000 cfs and the temperature was 16°C (60.8°F). By June 1, 2005, the flow at Vernalis was approximately 16,000 cfs, but the temperature had already climbed to 20°C (68°F). Although the flow was substantially higher than in prior years, temperature did not significantly improve. Temperature trends observed in 2005 were consistent with those observed in prior VAMP years.[7] (See Table 1 and Figure 1 through Figure 16, *infra.*) Temperatures increased at a slower rate in 2005, but still exceeded 68°F before all salmon had migrated. The solution therefore, may be moving fish earlier when temperatures are lower and conditions more favorable or increasing the 1991 WQCP recommended temperature based on more recent salmon temperature information.

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[6] Despite concerns regarding temperature, SWRCB Resolution 2003-0009, which approved the 2002 California Clean Water Act §303(d) List, neither the LSJR nor any of its tributaries were listed as water quality limited segments due to temperature.

[7] VAMP reports are available at which are available at http://www.sjrg.org/technicalreport/default.htm.

Table 1: Measured temperatures and flows at Vernalis, 2000-2001 from April 1 to June 1.

Year	Year Type	Flow (cfs) 1995 WQCP[8]	April	May	June	Average Temperature, April 16-May16 (°F) Durham Ferry	Jersey Point
2004	D	4,020 or 4,880	2,759	2,683	1,466	66	65
2003	BN	4,620 or 5,480	2,656	2,691	2,230	62	Logger lost
2002	D	4,020 or 4,880	2,599	2,794	1,424	62	62
2001	D	4,020 or 4,880	3,004	3,642	3,642	65	65
2000	AN	5,730 or 7,020	5,013	4,813	2,772	61	Logger dewatered

2005's significantly higher flows, but insignificant temperature improvement demonstrates that even DFG's recommended flows will be insufficient to maintain favorable temperatures. Flows sufficient to maintain a temperature of 68°F may require enormous amounts of water in excess of 2.25 MAF, or, as acknowledged in the Anadromous Fish Restoration Program Working Paper, may be altogether impossible. Furthermore, the SWRCB already determined in the 1991 WQCP for Salinity that use of flow for temperature regulation would constitute an unreasonable use of water that would violate Article 10, §2 of the California Constitution.

[8] 1995 WQCP minimum average monthly flow objective at Vernalis for April 15-May 15. (See 1995 WQCP, p19.) The higher flow objective applies when the 2 ppt isohaline measured as 2.64 mmhos/cm surface salinity) is required to be at or west of Chipps Island. (1995 WQCP, p19.)

Figure 1: VAMP Report 2005.

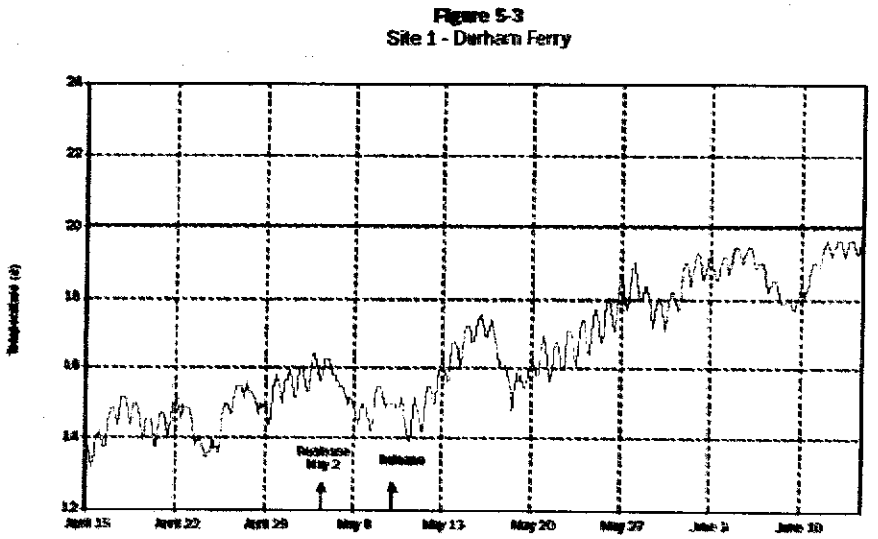


Figure 2: VAMP Report 2005.

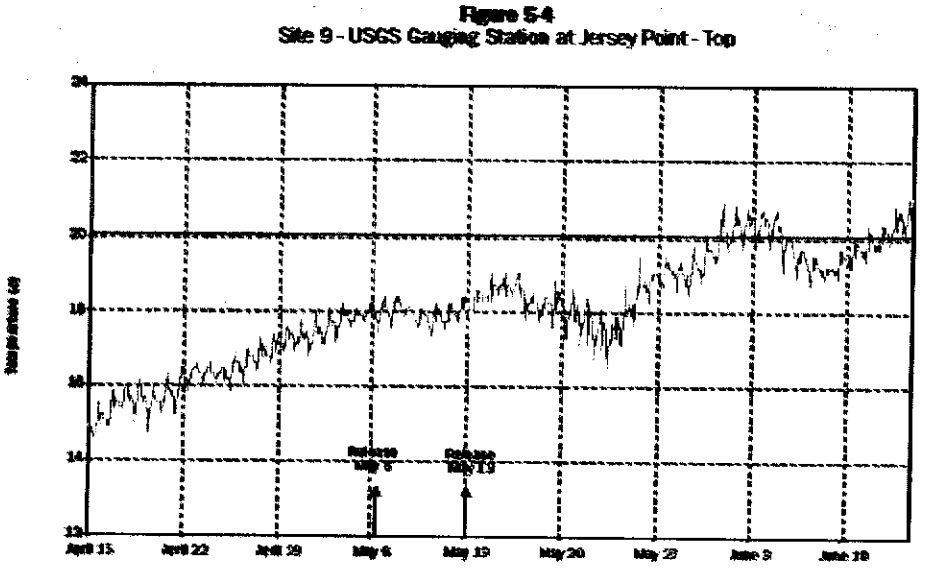


Figure 3: VAMP Report 2005.

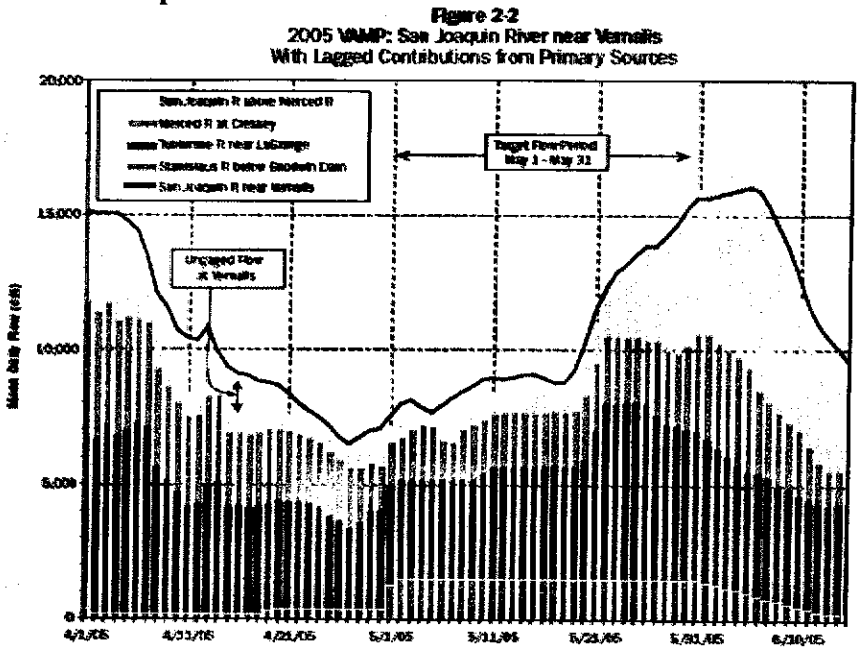


Figure 4: VAMP Report 200 4.

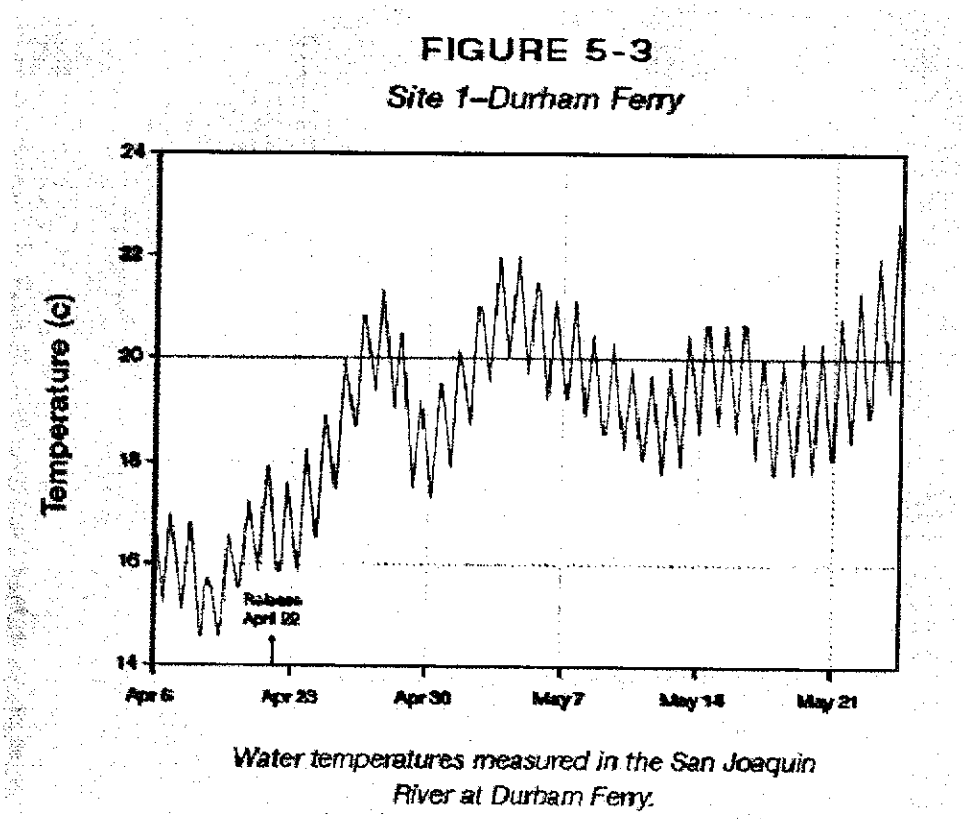


Figure 5: VAMP Report 200 4.

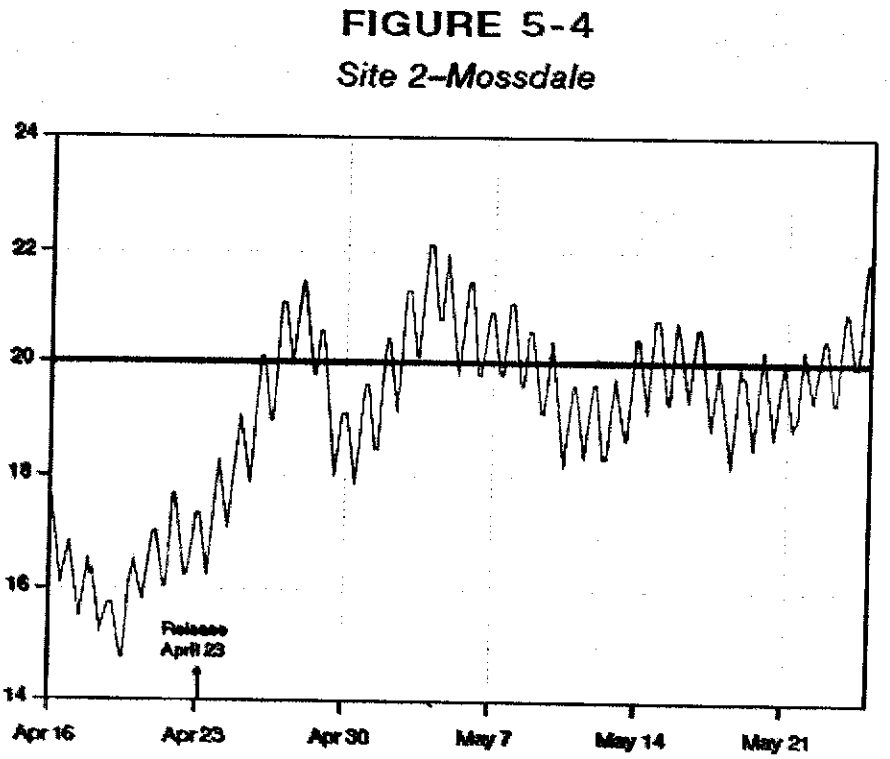


Figure 6: VAMP Report 200 4.

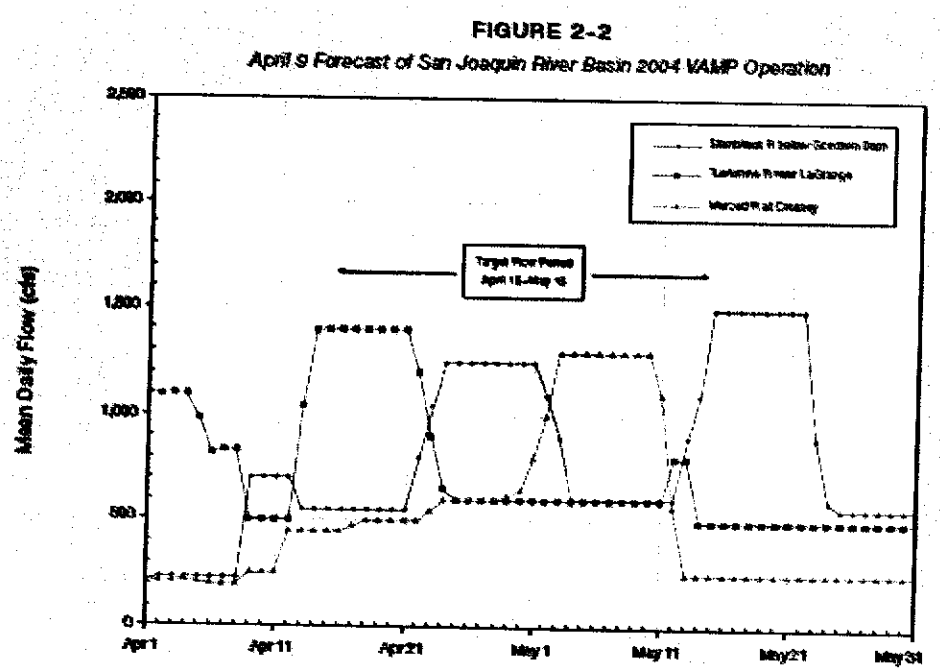


Figure 7: VAMP Report 2003.

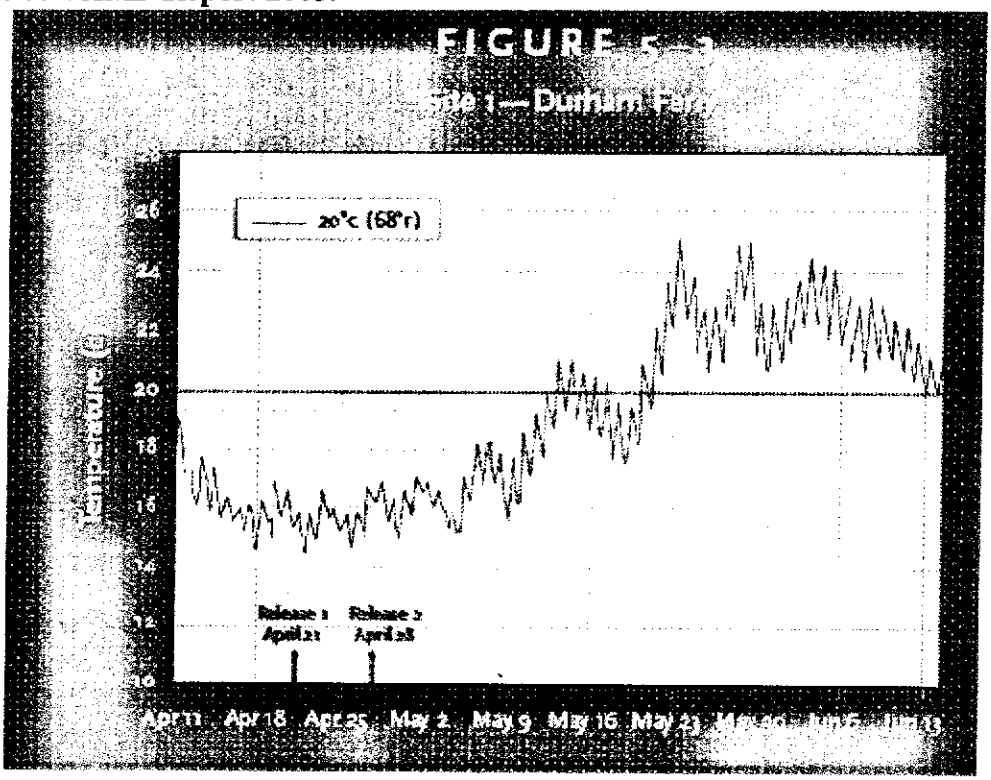


Figure 8: VAMP Report 2003.

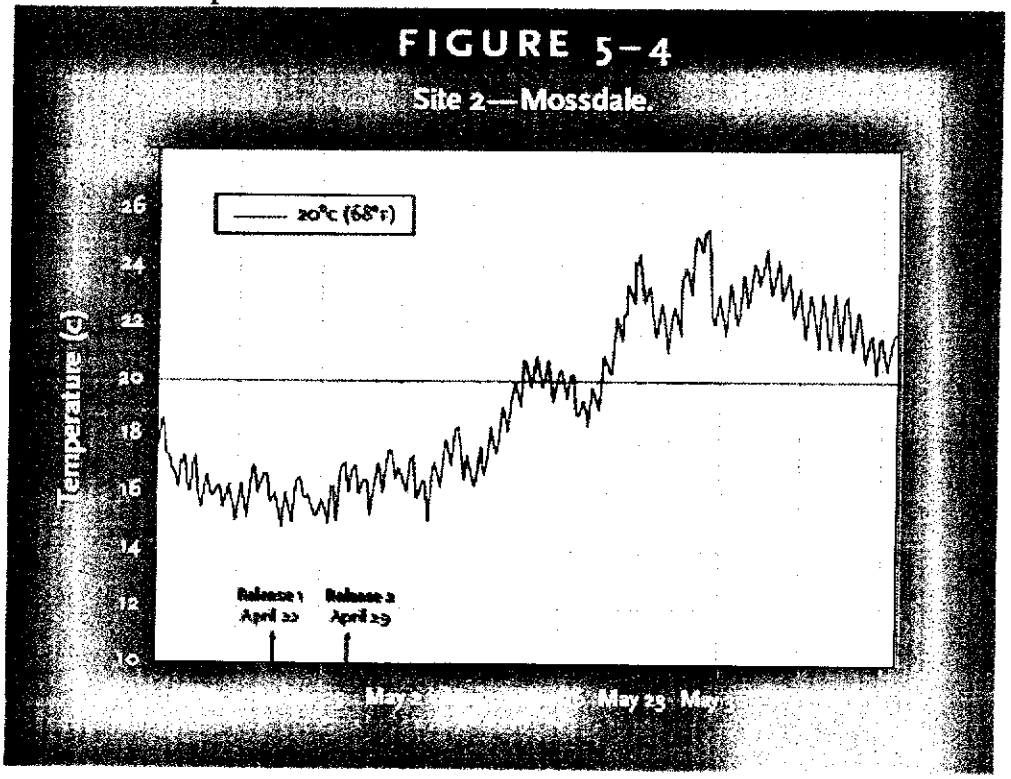


Figure 9: VAMP Report 2003.

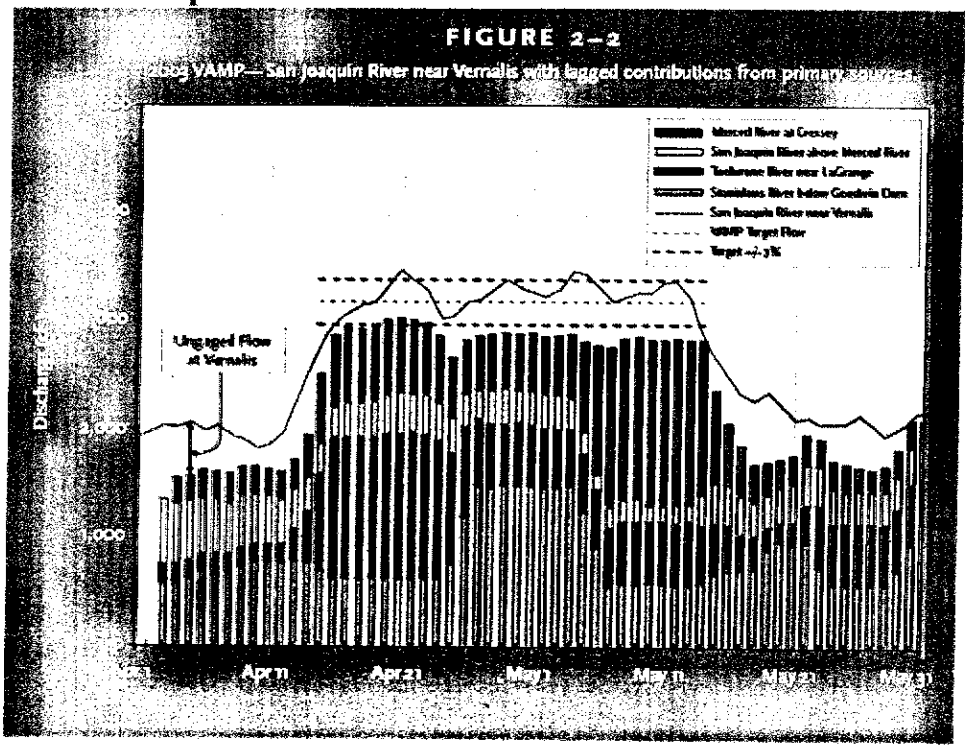


Figure 10: VAMP Report 2002.

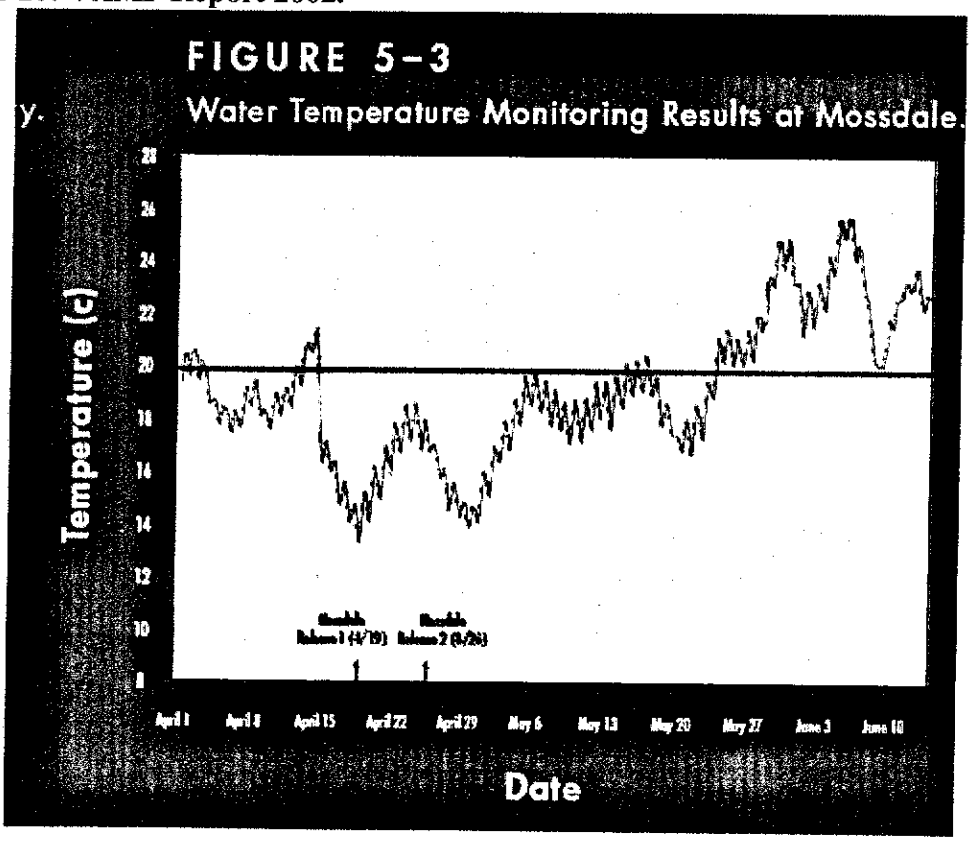


Figure 11: VAMP Report 2002.

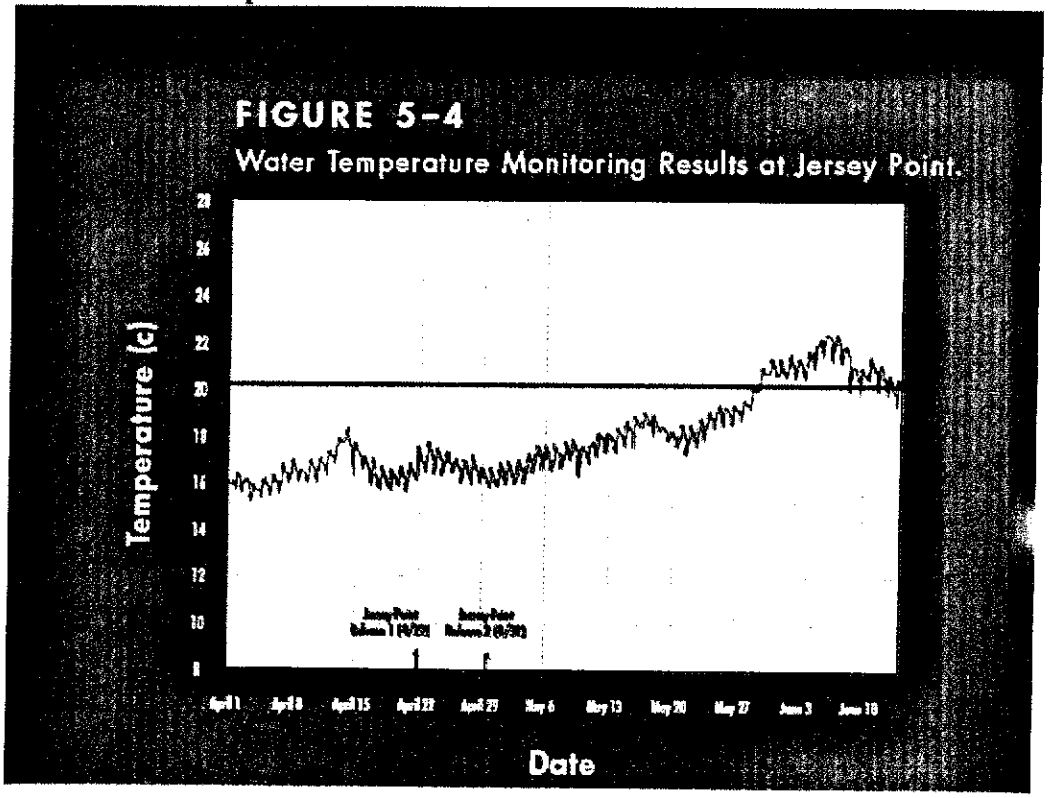


Figure 12: VAMP Report 2002.

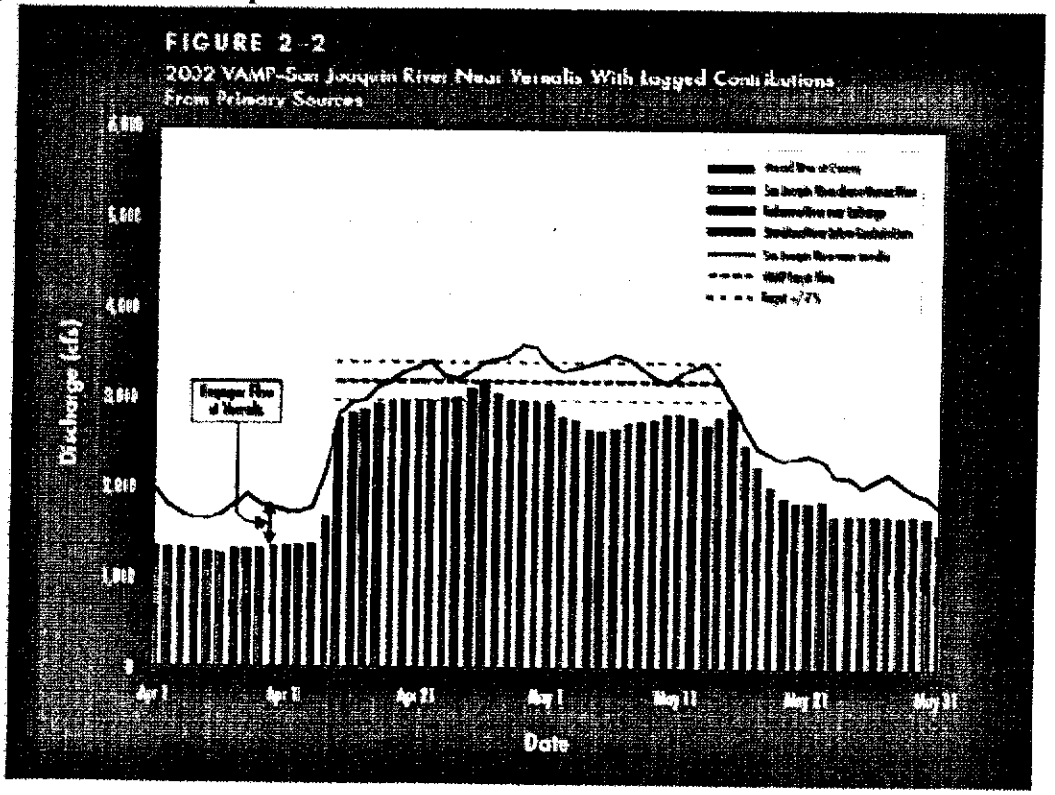


Figure 13: VAMP Report 2001.

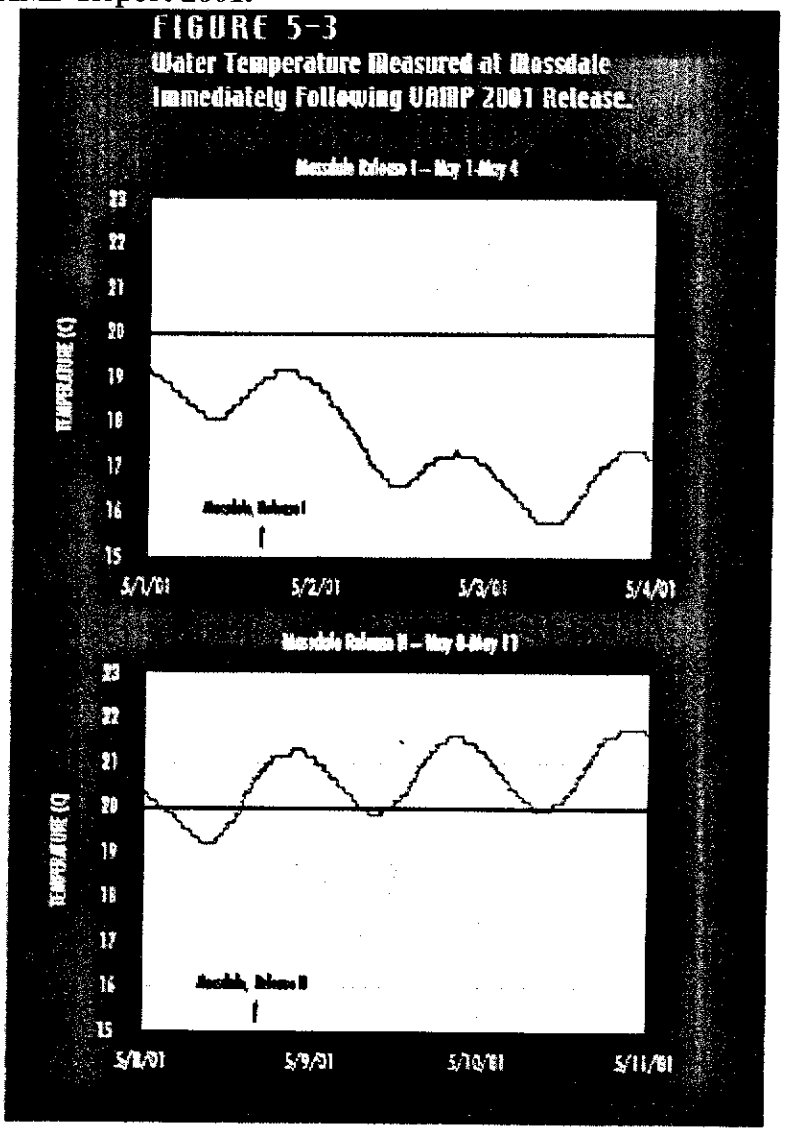


Figure 14: VAMP Report 2001.

FIGURE 5-4
Water Temperature Measured at Jersey Point
Immediately Following VAMP 2001 Releases.

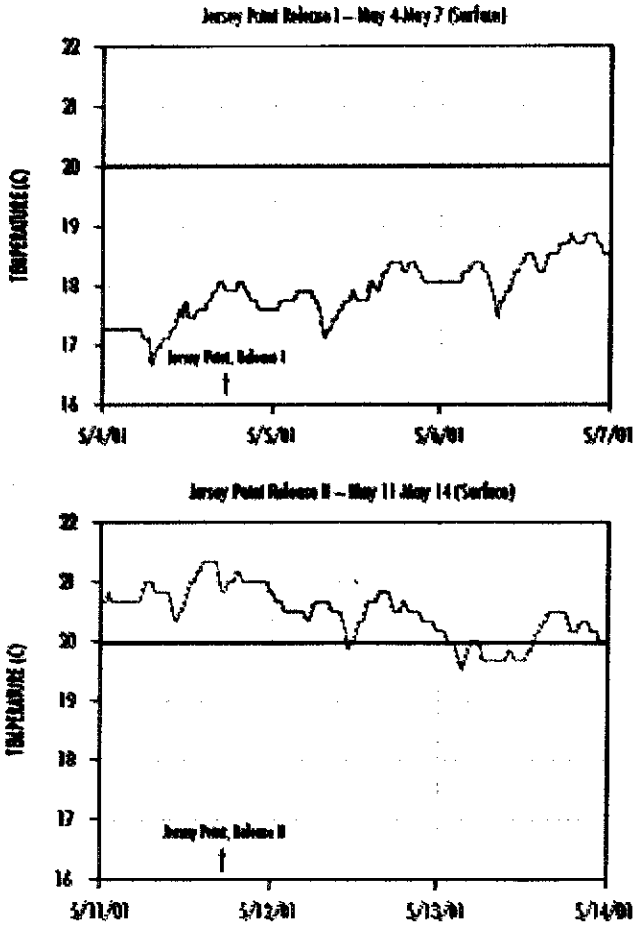


Figure 15: VAMP Report 2001.

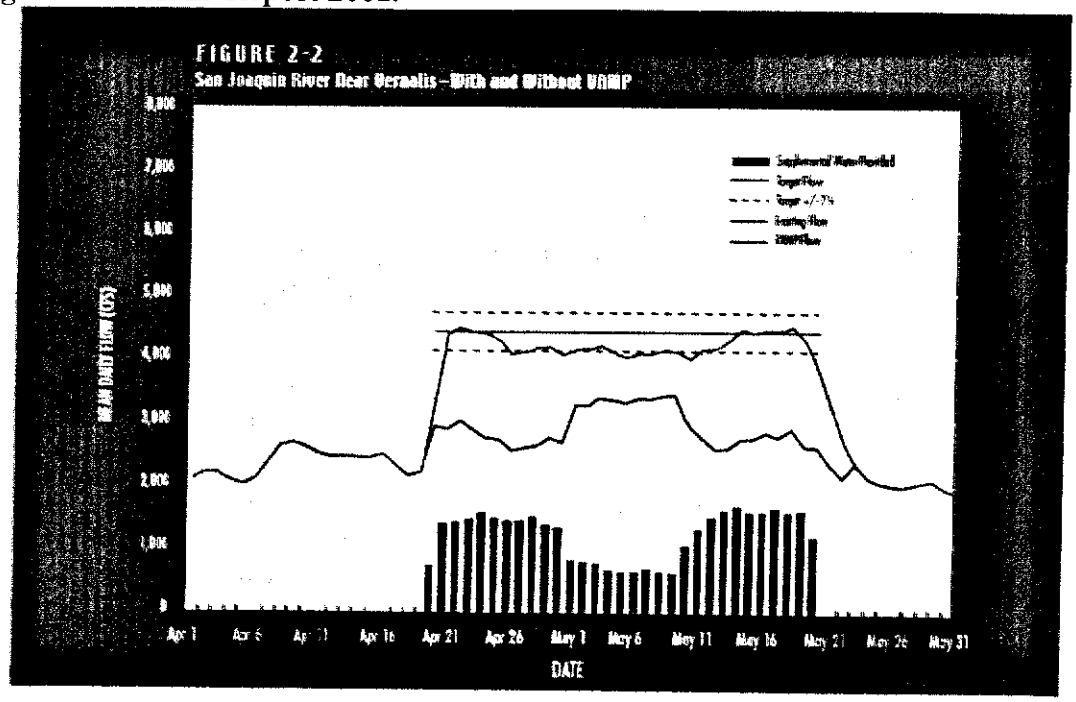
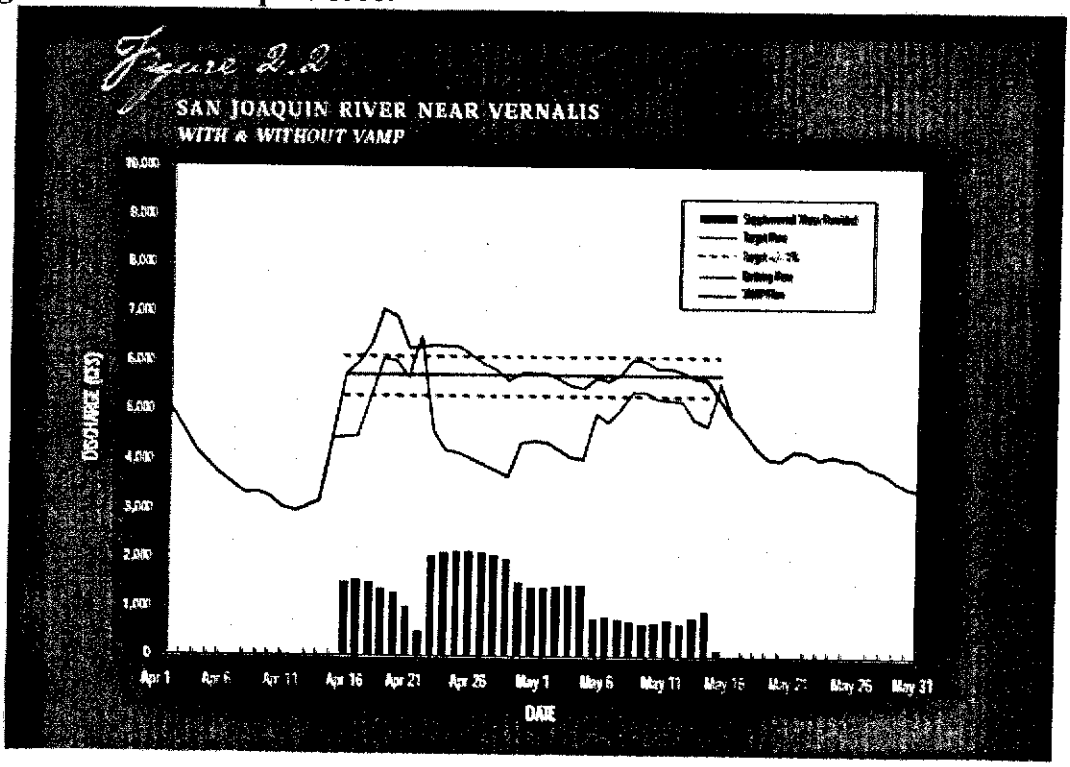


Figure 16: VAMP Report 2000.[9]



[9] Figure 5-3 and Figure 5-4 were not used in the 2000 VAMP Report.

7. CALFED Peer Review of Stanislaus River Temperature Modeling.

Peer review of the Stanislaus River Temperature Model (HEC-5Q) was completed on July 29, 2004. Temperature modeling for the Stanislaus bears on Issue Eight, the February through June flows. DFG has established temperature criteria wherein two temperatures define three criteria – lethal, sub-lethal, and optimum. (Stanislaus Temperature Model Peer Review, p9.) DFG has determined that 65°F is "lethal."[10] (Id., p10.) "Lethal" temperatures lead to increasingly stressful conditions that result in various impacts, but not necessarily death. (Id., p21.) However, long-term exposure to such conditions is assumed to limit survival, reproduction, and or long-term success of the particular life stage. (Id.) In the last five years, temperatures on the Stanislaus River have continually exceeded 65°F by the end of May. (See Figure 1 through Figure 16, *supra.*) If DFG is correct, then the LSJR should be full of dead fish by June 1 of each year, but this has not occurred. Reality therefore, does not support the DFG's recommendations or analysis. DFG is not correct and the SJRGA does not agree that DFG's temperature criteria for Stanislaus River temperature modeling purposes can be applied for regulatory purposes to the Tuolumne, Merced, and the LSJR below Friant.

Very truly yours,

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By: _____

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Attachments)

[10] The Anadromous Fish Restoration Program Working Paper recommends temperatures of 56°F from October 15 to February 15 and 65°F from April 1 to June 31 for the segment of the SJR from the Merced River to the Delta and implementation of flows sufficient to maintain them.