



1331 Concord Avenue
P.O. Box H20
Concord, CA 94524
(925) 688-8000 FAX (925) 688-8122

Directors

Joseph L. Campbell
President

Elizabeth R. Anello
Vice President

Bette Boatman
John A. Burgh
Karl L. Wandry

Walter J. Bishop
General Manager

February 14, 2005

Ms. Debbie Irvin, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812

RE: Issue 4b: Rock Slough Compliance Location

Dear Ms. Irvin:

The 150 mg/L and 250 mg/L municipal and industrial (M&I) chloride objectives in the 1995 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (1995 Plan) and State Water Resources Control Board (Water Board) Water Rights Decision 1641 provide some protection against the intrusion of ocean-derived salts, including bromide, for the source water quality that Contra Costa Water District (CCWD) relies on to provide water to its customers for municipal and industrial uses.

CCWD comments regarding Issue 4b of the SWRCB's Periodic Review of the 1995 Plan are summarized below:

1. The Pumping Plant #1 compliance location (C-5) must remain unchanged at the Contra Costa Canal Pumping Plant #1 to ensure water diverted by CCWD from Rock Slough is at or better than the 150 mg/L and 250 mg/L M&I chloride objectives. These objectives provide protection against salinity intrusion to all M&I diversion points in the southern and central Delta, and are necessary to ensure water quality protection at those Delta M&I diversion points, including CCWD's Old River intake.
2. During periods of low diversions at Pumping Plant #1, local seepage and drainage into Rock Slough and the Contra Costa Canal intake channel can sometimes degrade water quality between Old River and CCWD Pumping Plant #1. Under such conditions, the ability of the State Water Project (SWP) and Central Valley Project (CVP) to fully control water quality at Pumping Plant #1 is limited. When exceedances of the M&I objective at this location have occurred in the past, CCWD, California Department of Water Resources (DWR) and the U.S. Bureau of Reclamation (Reclamation) have each reported to the Water Board that exceedances of the 250 mg/L M&I objective are not attributable to the actions of the SWP and CVP because water quality in Old

River was otherwise sufficient to meet the objective. Without exception, the Water Board has concurred, and has not levied fines or other enforcement actions in response to the M&I exceedances linked to low diversions at Pumping Plant #1. Examples of this correspondence are included as Attachment B.

3. CCWD and CALFED have embarked on major remediation projects to address the sources of drainage and seepage into Rock Slough and the Contra Costa Canal. The discharge point of agricultural drainage from Veale Tract is being relocated into Indian Slough. This project is expected to be completed in the summer of 2005, and will eliminate the effect of the Veale Tract discharge on Pumping Plant #1 water quality without redirecting impacts to others. The portion of the Contra Costa Canal most subject to seepage impacts (the unlined portion in the vicinity of Pumping Plant #1) may be lined as early as 2007, depending upon the availability of funding. CCWD appreciates the statements of Board members expressing their desire to make sure that these and similar projects are not delayed.
4. When these two remediation projects are completed, they will virtually eliminate the predominant sources of water quality degradation between Holland Tract and CCWD Pumping Plant #1. Of course, as CCWD demands increase, the likelihood of extended periods of low diversions at Pumping Plant #1 will be reduced for the simple reason that CCWD will need more of the Rock Slough capacity to meet its increased service area demands.
5. To address the near-term problem of water quality degradation in Rock Slough, CCWD recommends that a formal method be established for determining whether compliance with the M&I chloride objective at Pumping Plant #1 is within the control of the SWP and CVP under certain conditions, as outlined below and in Attachment A. CCWD's proposed language is included below.

There is conceptual agreement between CCWD, DWR and Reclamation that until the two remediation projects described above are completed, the SWP and CVP should not be considered fully responsible for exceedances of the M&I chloride objectives if, during times of low diversions from Pumping Plant #1, the electrical conductivity (EC) at Holland Tract is at or better than specific EC targets that are consistent with the M&I chloride objectives. CCWD, DWR and Reclamation have not reached agreement on the specific value of these equivalent EC targets.

CCWD proposes that, if the M&I chloride objective is exceeded at a time when CCWD was pumping below 30 cfs at Pumping Plant #1, the Water Board use Holland Tract EC data to determine whether the exceedance was fully within the control of DWR and Reclamation. CCWD recommends that the Holland Tract EC criteria be:

- 0.94 EC at Holland Tract for 250 mg/L chlorides at Pumping Plant #1
- 0.56 EC at Holland Tract for 150 mg/L chlorides at Pumping Plant #1

Ms. Debbie Irvin, Clerk to the Board
Issue 4b: Rock Slough Compliance Location
February 14, 2005
Page 3

This mechanism could be accomplished either as an implementation matter under Issue 11 or through addition of a footnote to the existing M&I chloride objective language (Table 1 of the May 1995 Plan). Such a footnote could read:

An exceedance of the 250 mg/L chloride objective will be considered not fully within the control of DWR and Reclamation if the 3-day running average diversion rate at CCWD Pumping Plant #1 is less than 30 cfs, and the daily EC at Holland Tract, measured three days previously, was 0.94 mS/cm or less. An exceedance of the 150 mg/l chloride objective will be considered to be not fully within the control of DWR and Reclamation if the 3-day running average diversion rate at Pumping Plant #1 is less than 30 cfs, and the daily EC at Holland Tract, measured three days previously, was 0.56 mS/cm or less.

CCWD would prefer that this mechanism be accomplished as an implementation matter rather than by an amendment to the Water Quality Control Plan because of the uncertainty of the necessary funding to complete the necessary projects discussed above. However, CCWD believes that this proposed footnote fairly acknowledges the difficulty the SWP and CVP have in meeting the M&I chloride objectives when Pumping Plant #1 diversions are low, while ensuring that the water quality provided by the M&I objectives for CCWD and other Delta water users is not degraded. It is expected, of course, that the water quality remediation projects will, upon completion, reduce the problem these criteria address.

If you or your staff have any questions regarding these comments, please contact me at (925) 688-8187.

Sincerely,



Richard Denton
Water Resources Manager

RAD/MM

Attachments

- A: Technical Basis for Proposed Modification
- B: Previous correspondence regarding exceedances to M&I chloride objectives

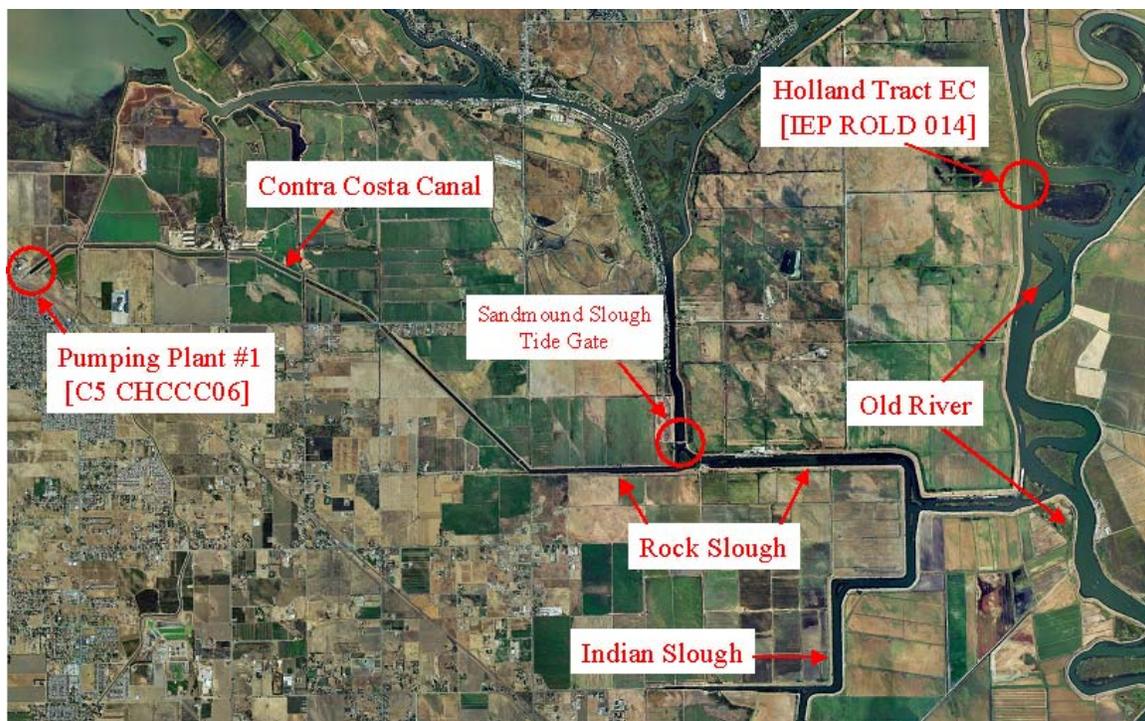
cc: Chester V. Bowling (USBR)
Alf Brandt (DOI)
Cathy Crothers (DWR)
Ken Landau (CVRWQCB)
Carl Nelson (BPMNJ)

Technical Basis for Proposed Modification

This attachment provides the technical basis for the proposed modification to the M&I chloride objective. Background information on CCWD operations is also presented here to aid the consideration of this proposal.

CCWD delivers water that is the primary source of drinking water for 500,000 people in central and eastern Contra Costa County. CCWD depends on water diverted from Rock Slough at the intake to the Contra Costa Canal for a major portion of its water supply. Figure 1 shows a map of Rock Slough and the Contra Costa Canal. Pumping Plant #1, the first location where water is lifted out of the Delta, is located at the end of the 4.2 mile unlined Contra Costa Canal.

Figure 1: Map of Rock Slough, Contra Costa Canal and Pumping Plant #1



The EC monitoring station on Old River at Holland Tract¹ is also shown in Figure 1. EC measurements have been collected daily at this station since 1964, developing a solid historical record of water quality which can then be correlated with chloride measurements taken at CCWD Pumping Plant #1 under a wide range of conditions. Also shown in Figure 1 is the

¹ Holland Tract is station HLL on DWR's California Data Exchange Center database. Real-time EC data is reported from this station every hour.

Sandmound Tide Gate, owned by Reclamation, which allows one-way tidal flow up to approximately 30 cfs from south to north out of Rock Slough into Sandmound Slough. This provides net circulation throughout eastern Rock Slough from Old River, and helps maintain water quality in the absence of CCWD pumping. CCWD currently maintains the self-operating Sandmound Slough Tide Gate under contract with Reclamation.

The Rock Slough compliance location must remain at Pumping Plant #1

The best way to ensure that water diverted by CCWD at the Contra Costa Canal at Pumping Plant #1 is of a quality equal to or better than the 1995 Plan M&I chloride objectives is to retain compliance with the objectives at Pumping Plant #1. Indeed, federal law² mandates that the compliance location be at Pumping Plant #1. P.L. 99-546 explicitly directs the Interior Secretary to operate the Central Valley Project, in conjunction with the State Water Project, to meet the water quality standards contained in Water Rights Decision D-1485. CCWD requests that the compliance location not be changed from Pumping Plant #1. However, the proposal contained in this letter is a recognition that, while the SWP and CVP must operate the Delta in a way that meets the objective, under conditions of low diversions from Pumping Plant #1, there are currently other factors beyond the control of the SWP and CVP that also affect water quality at Pumping Plant #1, which could reasonably be taken into account in the implementation of the objectives.

Continuous enforcement of the 150 mg/L and 250 mg/L chloride objectives at Pumping Plant #1, and requiring the SWP and CVP operate the Delta consistent with those chloride objectives, will also provide some protection against seawater intrusion for CCWD at its Old River intake, and for the other 23 million people who drink water diverted in the Delta, and at other primarily agricultural intakes in the south Delta. CCWD constructed the Los Vaqueros Reservoir, the Old River intake, and associated conveyance facilities to take advantage of the typically better water quality at Old River near Highway 4 that the objective in question helps protect.

² Public Law 99-546, enacted October 27, 1986, 100 Stat. 3050. This Federal legislation approved the Coordinated Operations Agreement between the Bureau of Reclamation and the Department of Water Resources.

Figure 2: Old River water quality is strongly correlated with, and better than, Rock Slough water quality. Maintaining good water quality at Rock Slough also maintains good water quality at CCWD's Old River intake and elsewhere in the south and central Delta

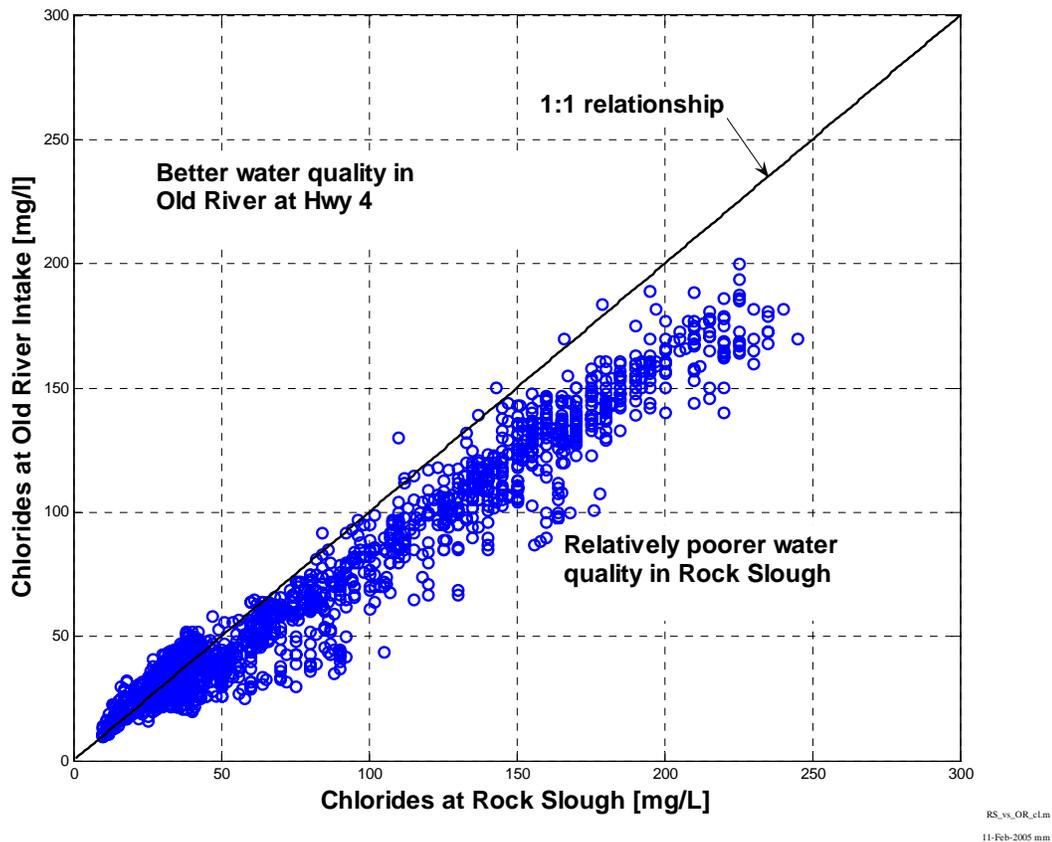


Figure 2 presents water quality measurements collected concurrently in Rock Slough and at the Old River intake. Above approximately 50 mg/L chloride, water quality is clearly and consistently better at the Old River intake than it is in Rock Slough. This was a primary motivation for the development of CCWD's Old River intake. A similar relationship may be demonstrated for water quality at Clifton Court or other south Delta diversion points relative to Rock Slough.

Certain conditions lead to water quality degradation beyond the control of SWP and CVP

Some natural variation (due to tides, winds, flow variations, upstream discharges, changes in Delta outflow, etc.) in water quality occurs between the Old River at Holland Tract monitoring station and CCWD Pumping Plant #1, which makes water quality at Pumping Plant #1 hard to accurately predict based on water quality at Holland Tract. To ensure conformance with the M&I objectives, an allowance for natural variation as the water moves from Holland Tract to

Pumping Plant #1 is required. To truly ensure equivalence with the M&I objective at Pumping Plant #1, a water quality benchmark at Holland Tract must include room for the normal random variation of the background conditions.

However, at times some measurable and consistent water quality degradation occurs between Old River at Holland Tract and Pumping Plant #1. As stated by Dr. David Briggs in the periodic review workshop on January 10, 2005, CCWD has investigated these local water quality impacts in detail through a project funded by CALFED and DWR. DWR has also carried out its own independent investigation. Two primary sources of degradation have been identified: local agricultural discharge into Rock Slough from the north side of Veale Tract, and seepage into the unlined portion of the Contra Costa Canal just upstream of Pumping Plant #1. The effect of these impacts is most apparent when CCWD reduces diversions from Pumping Plant #1 because the degradation continues with little or no dilution flow within the Canal or from Old River. In such circumstances, the poor quality water simply accumulates in the Canal. Under these conditions, it is difficult for SWP and CVP operations to fully control water quality at Pumping Plant #1 through reservoir releases or export reductions. Provided the SWP and CVP are meeting suitably conservative EC criterion at the Holland Tract monitoring station, a portion of the responsibility for implementation of the Pumping Plant #1 M&I objective – and any exceedances thereof – would need to be assigned to the parties causing the local degradation and addressed through waste discharge requirements and cease and desist orders.

The low diversion conditions described above occurred in December 1999, October 2001 and October 2002. In each case, SWRCB agreed with all parties that the exceedances were not within the control of DWR or Reclamation. Correspondence describing each of these events is attached to this letter (Attachment B).

CALFED has a project nearing completion that will eliminate the effects of the existing Veale Tract agricultural discharge

The agricultural discharge from Veale Tract affected water quality in Rock Slough prior to construction of the State Water Project, and even prior to completion of the Central Valley Project export facilities. Through funding from the CALFED Bay-Delta Program, CCWD has completed a detailed study of this issue and has recently completed design and permitting of a project to eliminate the water quality impacts of Veale Tract discharge in the Contra Costa Canal. The project, currently under construction, will relocate the discharge to the southeast of Veale Tract into Indian Slough where it can be properly diluted, will not accumulate, and will not affect other beneficial uses. The project is expected to be completed and operating by summer 2005.

CCWD has a project under way to eliminate seepage into Contra Costa Canal near Ironhouse Sanitary District

Seepage into the unlined portion of the Contra Costa Canal near land irrigated with treated wastewater by the Ironhouse Sanitary District was first noticed in 1997, when the Los Vaqueros

Project came on line and CCWD was able to temporarily stop Rock Slough diversions to carry out much needed maintenance of the Contra Costa Canal facilities, which had been operating continuously for almost 60 years. This was possible because CCWD's Old River intake was newly available to meet District demands. Now that the Los Vaqueros Reservoir Project is on line, with current demands CCWD can now rely on water diverted from the Old River intake or releases from Los Vaqueros Reservoir during periods of required maintenance as well to blend with generally poorer water quality in Rock Slough.

During times of little or no Canal pumping, seepage into the Canal can cause localized increases of salinity in the Canal near Pumping Plant #1. So long as Pumping Plant #1 is operating at about 20-30 cubic feet per second (cfs) or greater, the seepage is diluted by the flow passing along the Canal.

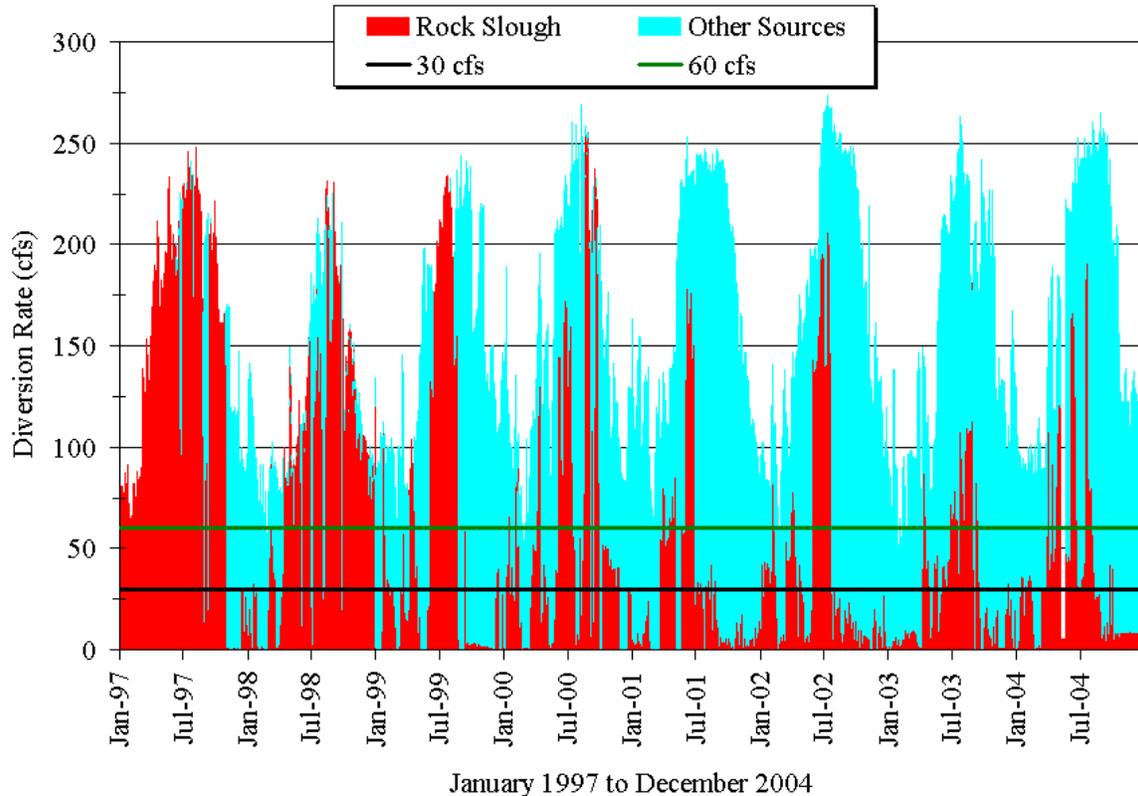
CCWD is working with the Central Valley Regional Water Quality Control Board to address this problem, which appears to be in large part directly related to land application of wastewater with some lesser contribution from local groundwater. CCWD has begun a project to encase this unlined portion of the Contra Costa Canal to eliminate the effects of this seepage, with funding contributed by CALFED, USBR, and local developers. If the current level of funding remains available, the first phase of this project, which will eliminate the major sources of seepage into the Canal, is expected to be completed by Summer 2007.

CCWD has reduced its diversions from Rock Slough but will continue to rely on the Rock Slough intake to meet demand when filling Los Vaqueros Reservoir, to meet peak summer demand, and future demand

When CCWD's Old River intake (with its capacity of 250 cfs) became operational in 1997, CCWD had the ability to temporarily reduce or cease its diversions from Rock Slough, both to perform maintenance and to divert better quality water from the Old River intake. Figure 2 shows the Pumping Plant #1 diversions from Rock Slough from January 1997 through December 2004. The other sources referred to in the figure are diversions from the Old River intake and releases from Los Vaqueros Reservoir. The data show periods when diversions from CCWD Pumping Plant #1 were minimal or close to zero. The data also show periods after 1997 when CCWD relied almost fully on Rock Slough to meet its customers' demands.

Currently, during periods when CCWD is filling Los Vaqueros Reservoir from the Old River intake, very little pumping capacity remains at the Old River intake to meet service area demands, so the remaining demand must be met from Rock Slough at Pumping Plant #1. In the next 30 to 50 years, CCWD's peak summer demands are forecast to increase to approximately twice the capacity of the Old River intake. CCWD will need to use diversions from Pumping Plant #1 to meet a significant part of that demand. The increasing demand within the CCWD service area will reduce the current cyclical nature of diversions at Pumping Plant #1.

Figure 3: CCWD diversions from Rock Slough at Pumping Plant #1 have reduced significantly since 1997, but CCWD still relies on this intake during periods of service area high demand and outages at the Old River intake, and will rely on it to meet increased future demands



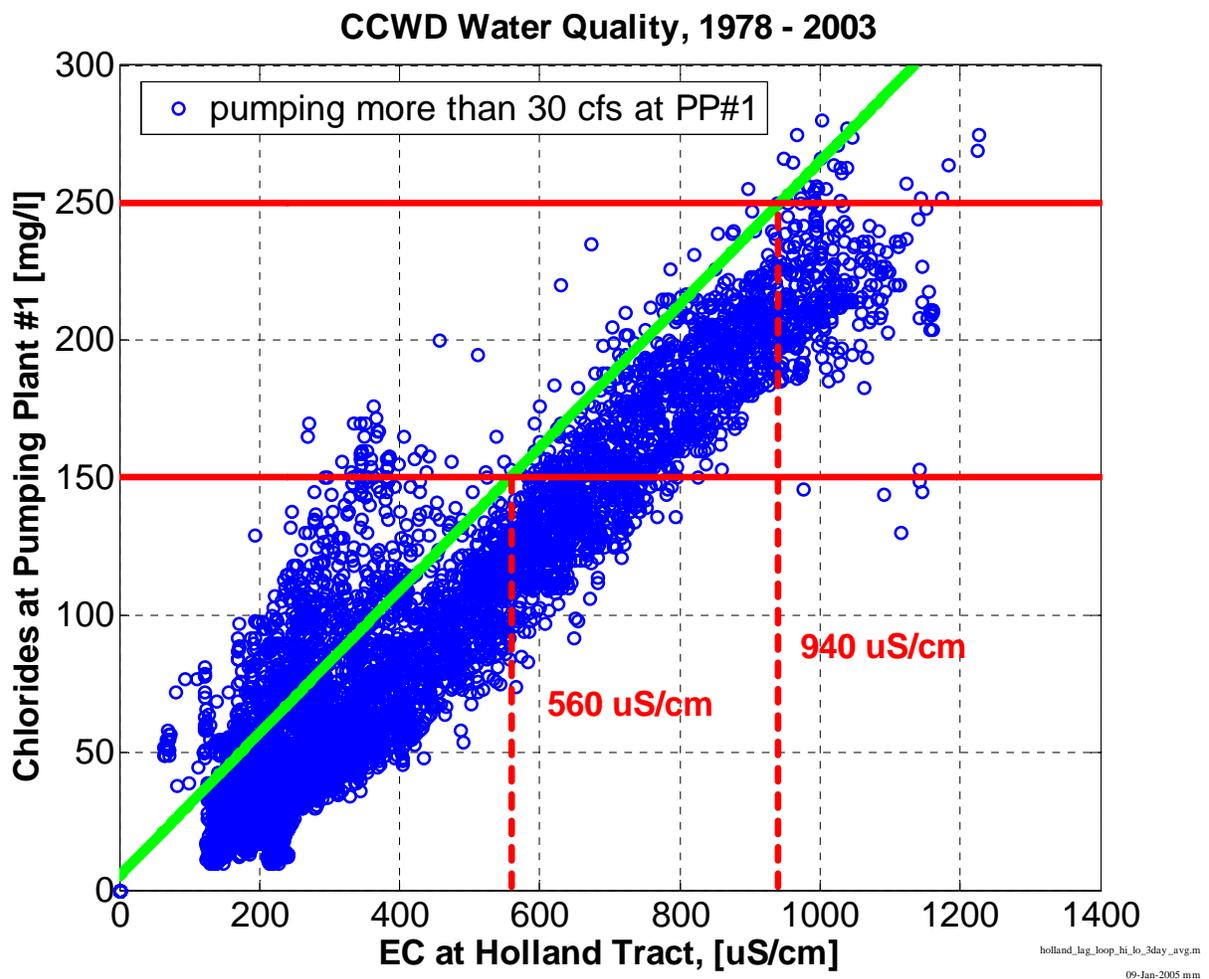
It is worth noting again that the M&I objectives at Pumping Plant #1 also provide important protection against seawater intrusion and water quality impacts at the Old River intake and at the State Water Project's Banks Pumping Plant and the Central Valley Project's Tracy Pumping Plant.

Source water protection efforts in Veale Tract and the Contra Costa Canal immediately east of Pumping Plant #1, in concert with increased usage of the Rock Slough intake to meet future CCWD demands, will likely reduce or eliminate the occurrence of conditions in which water quality at Pumping Plant #1 is not directly reflective of water quality in Old River. Nonetheless, until these changes have occurred, CCWD believes it is necessary to define conditions under which DWR and Reclamation can be considered unable to control water quality at Pumping Plant #1 through their Delta operations.

Adding an additional method of assessing compliance appropriately addresses the difficulty in controlling water quality at Pumping Plant #1 during low pumping conditions

CCWD, DWR and Reclamation have developed an additional compliance method based primarily upon the relationship between Holland Tract EC and the corresponding chloride data measured at Pumping Plant #1. Figure 3 compares the historical measurements of daily Holland Tract EC and Pumping Plant #1 chlorides since the M&I chloride objectives were first established in 1978.

Figure 4: The relationship between Pumping Plant #1 chlorides and water quality in Old River at Holland Tract



A lag of 3.5 days has been applied to the data presented in Figure 3 to account for typical travel time between Holland Tract and Pumping Plant #1. As may be seen in Figure 3, water quality at Holland Tract and Pumping Plant #1 have been closely linked historically, but there is some

natural variability in the data. The solid diagonal (green) line shown on Figure 3 represents the typical upper range expected chloride concentrations at Pumping Plant #1 for a given Holland Tract EC value. CCWD recommends that the intersections of the diagonal line with the 150 mg/L and 250 mg/L chloride values represent the most appropriate Holland Tract EC criteria for ensuring that the SWP and CVP have properly exercised their operational control to ensure compliance at Pumping Plant #1, given the natural variability in the data.

These criteria, however, should only be used to assess the SWP and CVP's responsibility for meeting the M&I objectives at Pumping Plant # 1 when CCWD is diverting less than 30 cfs at Pumping Plant #1. When CCWD is pumping more than 30 cfs, the seepage into the Canal near Pumping Plant #1 is diluted by the larger flow toward the pumping plant and not detectable within the range of measurement error. When CCWD is diverting more than 30 cfs, the SWP and CVP can control water quality at Pumping Plant #1 through their Delta operations.

Ms. Debbie Irvin, Clerk to the Board
Issue 4b: Rock Slough Compliance Location
February 14, 2005
Page B-1

**Attachment B: Previous correspondence regarding
exceedances to M&I chloride objectives**

Memorandum

Date : DEC 27 1999

To : Mr. Walter Pettit
Executive Director
State Water Resources Control Board
Post Office Box 100
Sacramento, California 95812

From : Department of Water Resources

Subject: Municipal and Industrial Water Quality Objective Under D-1485
For Contra Costa Canal Pumping Plant No. 1

This is to confirm our previous communications with your staff that the D-1485 water quality standard at Contra Costa Canal Pumping Plant No. 1 of 250 mg/l was exceeded on December 20, 1999 with an average daily chloride value for that day of 258 mg/l.

The salinity in the interior and southern Delta gradually increased following closure of the Delta Cross Channel gates on November 26, 1999. The gates were closed to provide protection for outmigrating spring-run chinook salmon during the first spring tidal cycle of November. The increase in salinity continued during the following neap tidal cycle despite substantial reductions in export operations and Sacramento River flows at Freeport in excess of 14,000 cfs. The Delta Cross Channel gates were fully opened on December 15, 1999 and salinity conditions in the interior and south Delta are beginning to improve. However, the current conditions in the vicinity of Old River and Rock Slough may result in additional exceedences in the near future. We are continually monitoring water quality conditions and working with the other CALFED agencies to prevent a recurrence of the events leading to the poor water quality conditions in the Delta.

Attached are graphs of salinity conditions along Old River, Delta inflow, and Delta outflow. A detailed report of the increasing salinity and actions taken to improve water quality conditions will be provided as soon as the Department of Water Resources and the U.S. Bureau of Reclamation are confident the SWRCB water quality standard for Contra Costa Pumping Plant No. 1 will not be exceeded again. We will continue to keep you and your staff informed on conditions as they improve.

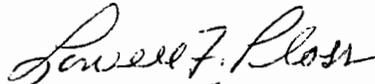
Mr. Walter Pettit

DEC 27 1999
Page 2

If you have any questions concerning this matter, please call Victor Pacheco, DWR's Chief of Delta Environmental Compliance at (916) 574-2662, or Paul Fujitani, Hydraulic Engineer for the USBR's Central Valley Operations Office at (916) 979-2197.



Larry K. Gage, Chief
Operations Control Office
Division of Operations and Maintenance
Department of Water Resources



Lowell F. Floss
Operations Manager
Central Valley Project Operations
Bureau of Reclamation
U.S. Department of Interior

Attachments

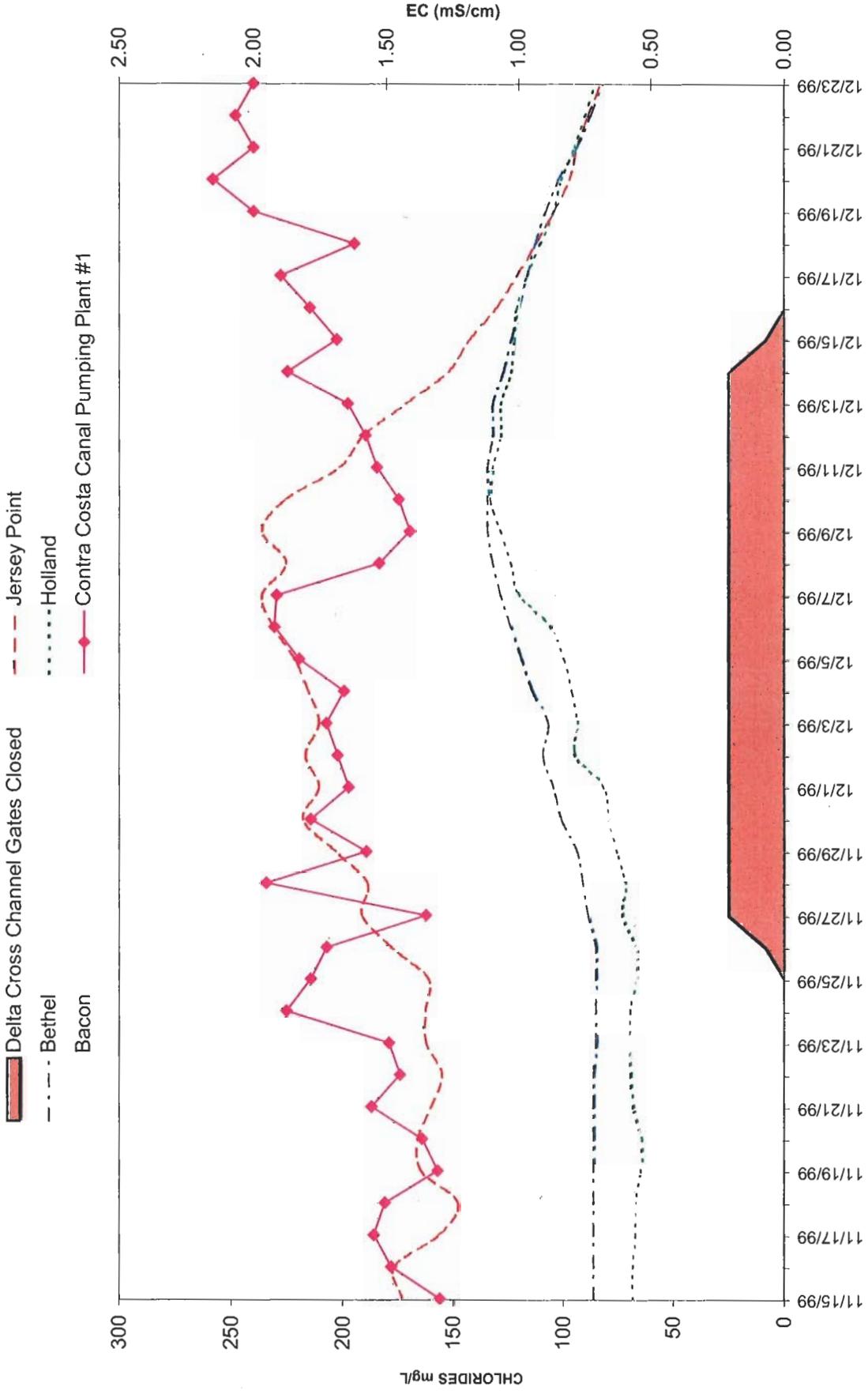
cc: Mr. Thomas Hannigan, Director
Department of Water Resources
1416 Ninth Street, Room 1115-2
Sacramento, California 95814

Steve Macaulay, Chief Deputy Director
Department of Water Resources
1416 Ninth Street, Room 1115-2
Sacramento, California 95814

Mr. Lester Snow, Regional Director
U.S. Bureau of Reclamation
Department of the Interior
2800 Cottage Way, Room W1105
Sacramento, California 95825-1898

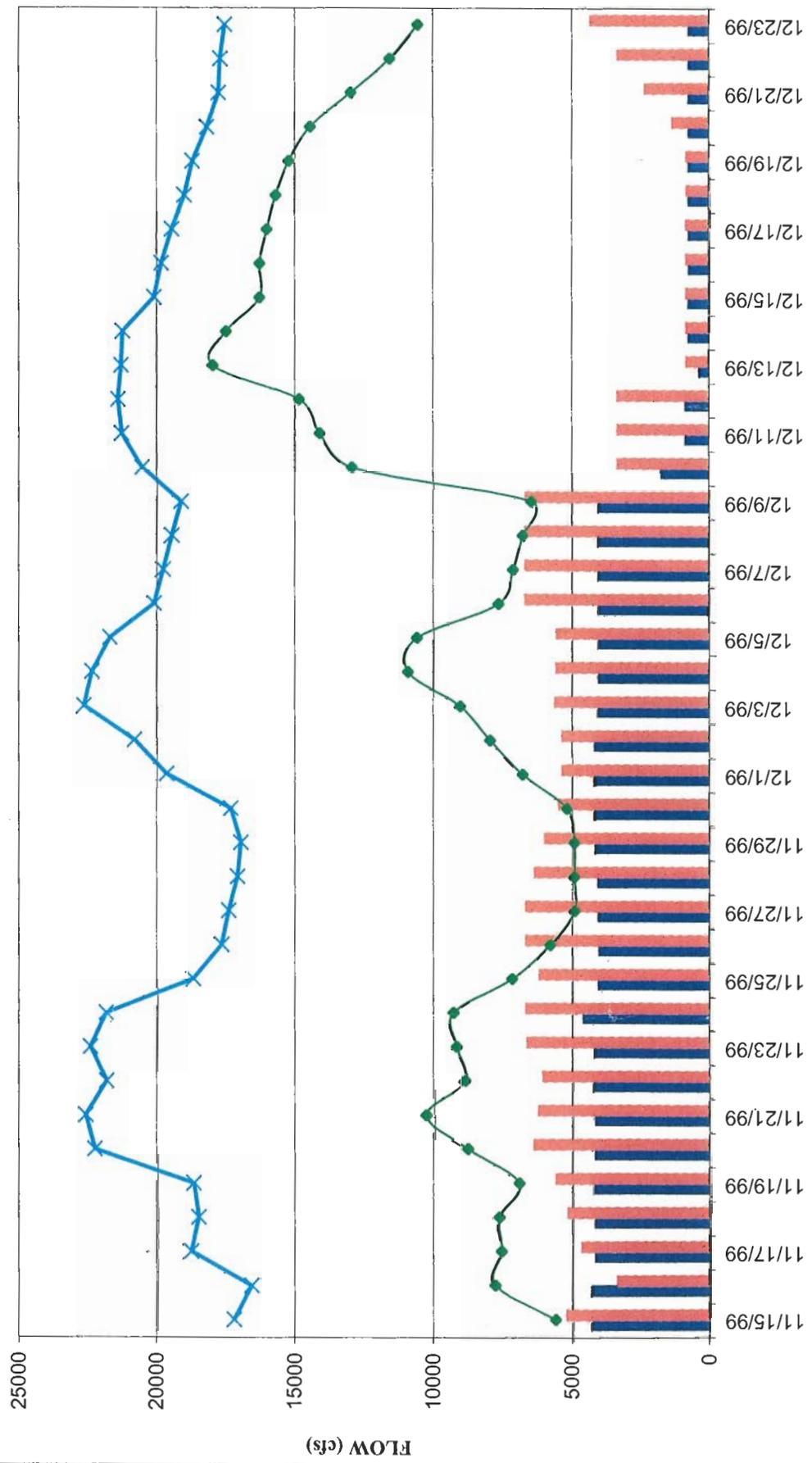
Mr. Greg Gartrell
Contra Costa Water District
1331 Concord Avenue
Concord, California 94524

SALINITY CONDITIONS



DELTA INFLOW / OUTFLOW

- Tracy Pumping Plant
- Clifton Court Forebay
- Net Delta Outflow Index
- Delta Inflow



DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



November 1, 2001

Ms. Celeste Cantu
Executive Officer
State Water Resources Control Board
Post Office Box 200
Sacramento, California 95812-2000

Water Quality Standard at Contra Costa Canal Pumping Plant #1

Dear Ms. Cantu:

This letter is to inform you that the maximum daily chlorides standard of 250 mg/l at the Contra Costa Canal Pumping Plant No. 1 was exceeded on October 14, 16 and 17, 2001. SWRCB Water Right Decision 1641 imposes the 250 mg/l chloride standard as a condition to the water right permits of the State Water Project and Central Valley Project. On October 14, 16, and 17 the daily chloride values were 263, 257, and 257 mg/l respectively despite the continued efforts of the SWP and CVP to maintain compliance.

We believe this exceedence was the result of high salinity seepage from surrounding lands coupled with the low pumping rate at Contra Costa Canal Pumping Plant No. 1. Over the two weeks leading up to the exceedences, Contra Costa Water District pumping from Rock Slough averaged less than 17 acre-feet per day. Current maintenance activities at the pumping plant have precluded drawing fresher water into the canal to mix with the poor quality water. In addition, we believe the water quality is impacted in part by Ironhouse Sanitation District spreading its treated discharge of wastewater on lands adjacent to the canal. This is supported by data collected at CCWD stations as well as at our stations located in the central and western part of the Delta. Although high electrical conductivity values at nearby interior Delta stations were indicative of poor water quality into Rock Slough in mid-September, EC values at Jersey Point, Bethel Island, and Holland Tract did not reach levels usually associated with values over 250 mg/l chlorides at Rock Slough in the weeks proceeding the exceedences. Chloride readings at CCWD's Old River intake were in the range of 140 to 160 mg/L over the same period.

These exceedences occurred at relatively low combined project export levels and adequate Vernalis flows. Combined exports were about 4,400 cfs, 300 cfs at Clifton Court and about 4,100 cfs at Tracy Pumping Plant. The CVP has since dropped one unit and is targeting pumping at about 3,350 cfs or lower for the rest of October.

Ms. Celeste Cantu
November 1, 2001
Page Two

Vernalis flows were about 1,500 cfs, which is higher than we had expected in a dry year. Recently Vernalis flows have risen as part of the October pulse flow. We believe that under the circumstances we are taking all reasonable actions to comply with the chloride standard.

We have expressed our concerns in the past about the inability of the CVP and SWP to meet the Rock Slough Standard under certain conditions. Contra Costa Water District and others echoed this concern in petitions before the Board regarding the Ironhouse Sanitary District discharge onto lands adjacent to the Contra Costa Canal. If you wish to discuss this matter further or have any questions please contact Curtis Creel, DWR at (916) 574-2722 or Paul Fujitani, USBR at (916) 979-2707.

Sincerely,



for

Carl A. Torgersen, Chief
SWP Operations Control Office
Division of Operations and Maintenance

Date 11/2/01

cc: Mr. Richard Denton
Contra Costa Water District
Post Office Box H²O
Concord, California 94524



for Chester Bowling, Operations Manager
Central Valley Operations
Bureau of Reclamation

Date 11/2/01



**CONTRA COSTA
WATER DISTRICT**

1331 Concord Avenue
P.O. Box H20
Concord, CA 94524
(925) 688-8000 FAX (925) 688-8122

November 26, 2001

Directors

James Pretti
President

Noble O. Elcenko, D.C.
Vice President

Elizabeth R. Anello
Bette Boatman
Joseph L. Campbell

Walter J. Bishop
General Manager

Ms. Celeste Cantú
Executive Director
State Water Resources Control Board
P.O. Box 200
Sacramento, CA 95812-2000

Subject: Water quality standard exceedances at Contra Costa Canal Pumping Plant #1

Dear Ms. Cantú:

The District is in receipt of the November 1, 2001 letter from the Department of Water Resources (DWR) regarding the exceedances of the 250 mg/L chloride standard at Contra Costa Canal Pumping Plant #1 in SWRCB Water Right Decision 1641. Mean daily chloride concentrations were 263, 257 and 257 mg/L on October 14, 16, and 17, respectively.¹

The District agrees with DWR that the exceedances were due in part to sources of water quality degradation along the Contra Costa Canal, and in particular to seepage of high salinity groundwater along the Ironhouse Sanitation District (ISD) project area. The District has raised this issue with ISD and the Central Valley Regional Water Quality Control Board and requested actions to eliminate this contamination of CCWD's drinking water supply as part of the renewal of ISD's Waste Discharge Requirements (WDR) for land discharge of high salinity treated wastewater. The District, DWR and the State Water Contractors recently petitioned the SWRCB to review the ISD WDR adopted by the Regional Board because the WDR fail to address this drinking water and water supply impact.

The District will continue to work with DWR and other agencies to address local sources of water quality degradation in Rock Slough and the Contra Costa Canal. Because the exceedances on October 14, 16 and 17 were not caused by Central Valley Project or State Water Project operations, the District recommends that no action be taken regarding these three exceedances.

¹ Note. The mean daily electrical conductivity (EC) data on these three days were actually lower than those on the days before. The chloride and EC readings were measured at the same time and location. The reason for the higher chloride to EC ratio on the three days is uncertain.

Ms. Celeste Cantú

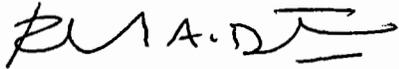
Water quality standard exceedances at Contra Costa Canal Pumping Plant #1

November 26, 2001

Page 2

If you have any questions regarding this issue, please contact me at (925) 688-8187.

Sincerely,

A handwritten signature in black ink, appearing to read "R.A. Denton". The signature is stylized with a large initial "R" and a horizontal line at the end.

Richard A. Denton

Acting Director of Planning

cc: Carl A. Torgersen, Chief, SWP Operations Control Office, DWR
Chester Bowling, Operations Manager, Central Valley Operations, USBR

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



October 16, 2002

Ms. Celeste Cantú
Executive Director
State Water Resources Control Board
Post Office Box 200
Sacramento, California 95812-2000

Water Quality Standard at Contra Costa Canal Pumping Plant #1.

Dear Ms. Cantú:

This letter is to inform you that the maximum daily chlorides objective of 250 mg/l at the Contra Costa Canal Pumping Plant No. 1 per State Water Resources Control Board Decision 1641 was exceeded on October 7, 12, 13, and 14, 2002. Chloride values were 257 mg/l on October 7; 252 mg/l on October 12; 258 mg/l on October 13; and 252 mg/l on October 14. The exceedences occurred despite actions taken by the Department of Water Resources and Bureau of Reclamation to arrest salinity intrusion into the central Delta.

The Department and Reclamation have been coordinating State Water Project and Central Valley Project operations to reduce combined exports and subsequently increase Delta outflow beginning the first week of September. Additional export reductions began September 21; electrical conductivity levels peaked at Holland Tract on September 19 at 0.95 mS/cm. Since September 19 combined daily exports averaged 6,719 cfs and the daily Net Delta Outflow Index averaged 4,884 cfs. As of October 15, 2002 EC at Holland Tract was 0.68 mS/cm. Although a concern, water quality conditions never exceeded levels historically associated with chlorides greater than 250 mg/l at Pumping Plant No. 1.

We can only speculate as to why the water quality at Pumping Plant No. 1 continued to degrade despite improving water quality conditions in Old River for the proceeding eighteen days. EC at the mouth of Rock Slough peaked on September 19 at 0.95 mS/cm and has since improved reaching 0.76 mS/cm on October 7; these EC values correlate to chlorides of 231 mg/l on September 19, and 175 mg/l on the October 7. EC at Old River at Bacon Island also peaked on September 19 at 0.92 mS/cm and has since improved reaching 0.74 mS/cm on October 7; these EC values correlate to chlorides of 218 mg/l on September 19 and 165 on the October 7. Nevertheless conditions in Rock Slough continued to degrade; EC in Rock Slough near Sand Mound Slough was 0.94 on September 19, peaking at 0.98 on October 3, then dropping to 0.94 by the October 7. EC at Pumping Plant No. 1 was 0.88 mS/cm on September 19 and seems to have

Ms. Celeste Cantú
October 16, 2002
Page 2

peaked at 1.07 mS/cm on October 8. We are not sure what effect local drainage or seepage may have had on water quality in Rock Slough and Contra Costa Canal. Pumping rates at Pumping Plant No. 1 averaged 14 cfs September 19 through October 7.

We have expressed our concerns in the past about the inability of the CVP and SWP to meet the Rock Slough Standard, especially during times of low diversions at Pumping Plant No. 1. There appears to be a significantly different water quality relationship between Old River and Rock Slough since the inception of the Los Vaqueros project than occurred historically when Pumping Plant No. 1 was Contra Costa Water District's main diversion location. Nevertheless the Department and Reclamation will continue to adjust SWP and CVP operations as needed to assure adequate water quality exists in Old River to meet the 250 mg/l chloride standard at Pumping Plant No. 1.



Dr
Carl Torgersen
Chief
SWP Operations Control Office
Department of Water Resources

10/16/02  *10/16/02*
Date Chester Bowling Date

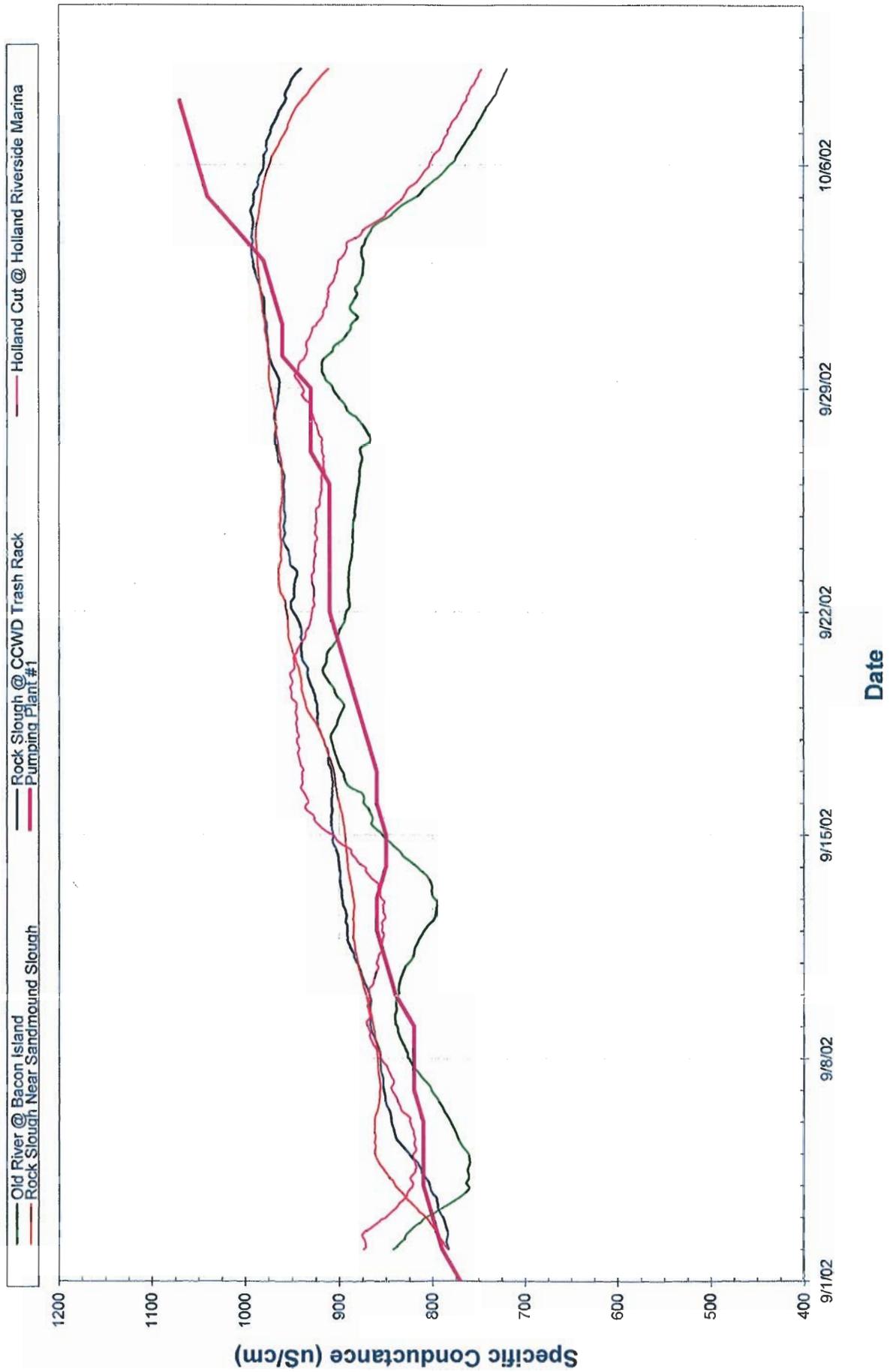
Operations Manger
Central Valley Operations Office
Bureau of Reclamation

Enclosure

cc: Mr. Richard Denton
Contra Costa Water District
Post Office Box H20
Concord, California 94524

Specific Conductance Data ~ (9/1/02 - 10/8/02)

24hour running average (except PP#1)





**CONTRA COSTA
WATER DISTRICT**

1331 Concord Avenue
P.O. Box H20
Concord, CA 94524
(925) 688-8000 FAX (925) 688-8122

November 4, 2002

Directors
James Pretti
President

Noble O. Elcenko, D.C.
Vice President

Elizabeth R. Anello
Bette Boatman
Joseph L. Campbell

Walter J. Bishop
General Manager

Celeste Cantú
Executive Director
State Water Resources Control Board
P.O. Box 2000
Sacramento, California 95812-0100

**Subject: Exceedances of water quality standard at Contra Costa Canal
Pumping Plant #1 in October 2002**

Dear Ms. Cantú:

Contra Costa Water District (CCWD) has reviewed the California Department of Water Resources (DWR) and U.S. Bureau of Reclamation (Reclamation) letter to you dated October 16, 2002 (Carl Torgersen and Chester Bowling to Celeste Cantú) regarding water quality standard at the Contra Costa Canal Pumping Plant #1 (PP#1) and would like to provide CCWD's perspective and clarification on the reasons for the recent exceedances of the 250 mg/L chloride standard.

Note that the Projects' October 16 letter addresses exceedances that occurred on October 7, 12, 13, and 14. The PP#1 M&I standard was also exceeded on October 20, 21, and 22. A summary of the chloride concentration measurements at PP#1 (three per day and the daily average) and the single daily measurement at the Delta Road Bridge in Rock Slough east of the Sandmound Slough tide gate for October 1 through October 28 is given in the attached table.

There are three factors that may have contributed to the Rock Slough standard being exceeded on seven days between October 7 and October 22.

1. **Low Delta outflow** – The chloride concentrations in Rock Slough and Old River are largely determined by the cumulative effect of the previous Delta outflows; if outflow averaged over one or two months drops below about 3,700 cfs, the chloride concentrations in Rock Slough can be expected to rise to 250 mg/L. The effect is not immediate, however, and the Rock Slough salinity peak may not occur for about a month after the low outflows. Once the salinities become high in the western Delta, exceedance of the standard at Rock Slough becomes very likely and it is generally too late to prevent exceedance by increasing Delta inflow or reducing exports. The Delta outflow was low in late August and early September, with the 7-day average minimum outflow dropping to 2,650 cfs

on September 1. Tables of Delta outflow data for August-October, 2002, are also attached. The lowest daily outflows occurred at a time when the water levels in the Delta were increasing (based on the Antioch tide gage) which exacerbated intrusion of seawater into the Delta. If somewhat higher Delta outflows had been maintained during that period, the salinity intrusion could have been better controlled and would have been easier to arrest before the chlorides at the entrance to Rock Slough approached 250 mg/L.

2. **Low Pumping Plant #1 Diversion Rate** – Pumping Plant #1 draws water out of Rock Slough through the intake section of the Contra Costa Canal. On October 2, the PP#1 chlorides were 242 mg/L. Because of the poor water quality at PP#1, pumping at that location had to be reduced to protect the quality of water delivered to CCWD customers. PP#1 pumping averaging about 10 cfs from October 1 through October 22. The high salinity water that had previously entered the Contra Costa Canal therefore moved slowly through the Canal. At 10 cfs, it is estimated to take about 7 days for the water to move the length of the 4-mile intake section of the Canal.
3. **Local Drainage or Seepage** – As was explained with regard to the exceedances of the Contra Costa Canal standard that occurred in October 2001 (Richard A. Denton, CCWD, to Celeste Cantú, SWRCB, letter dated November 26, 2001), seepage of salty groundwater into the Canal in the vicinity of the Ironhouse Sanitary District can increase Canal chloride concentrations. This effect is most pronounced at low CCWD diversion rates. Your December 21, 2001 letter to the Projects acknowledged this issue and suggested that the petitions filed by DWR, the State Water Contractors and CCWD with the State Board appear to be the appropriate process for resolving this issue. Unfortunately, the State Board declined to hear these petitions leaving no mechanism to resolve this. The State Board Water Rights section referred it to the Water Quality section and the Water Quality section determined there were no policy issues and did not refer it to the Board. CCWD respectfully suggests that such a situation creates a significant policy issue.

An underlying concern is that the State Board and Central Valley Regional Board lack a clear policy on protection of the Delta as a drinking water supply. Given the importance of these issues, CCWD strongly urges the SWRCB to adopt a clear comprehensive drinking water policy that elevates the priority of drinking water protection and results in consistent regulatory actions that protect and improve the water quality of the Delta and the State's drinking water sources. The CALFED Record of Decision calls for the development of such a policy by 2004. There is currently an effort underway by CALFED to draft a workplan for the development of a policy. This effort would greatly benefit from SWRCB participation and leadership.

In summary, the recent exceedances of the 250 mg/l chlorides standard at PP1 were triggered by low Delta outflows in late August and early September which allowed the water quality in Old River near Rock Slough to degrade to close to 250 mg/L chlorides.¹ This water was drawn into

¹ In their October 16 letter, DWR and Reclamation reviewed specific conductance (EC) data from Holland Tract and the mouth of Rock Slough and found that both peaked on September 19 with a daily-

Celeste Cantú

Exceedances of water quality standard at CC Canal PP#1 in October 2002

November 4, 2002

Page 3

Rock Slough and into the Contra Costa Canal, where, it was likely exposed to additional contamination by local seepage. Once the standard was exceeded, the high chlorides persisted in the Canal because of the low rate of diversion, which was required to protect CCWD's customers from the poor water quality.

The Projects did take action to increase Delta outflows in the second half of September and CCWD's measurements at Delta Road Bridge² show that after reaching a maximum value of 245 mg/L on October 7, the Delta Road chlorides decreased significantly and on the day of the last exceedance (October 22), the Delta Road chloride reading was down to 195 mg/L.

CCWD acknowledges that one of the contributing factors, local drainage and seepage, is beyond the Projects' operational control, but is inherent throughout the Delta and was known when the standards were set. This should be taken into account as part of Project operations. The local drainage and seepage in Rock Slough and the intake section of the Contra Costa Canal is currently being studied by CCWD as a local project and as part of a broader CALFED Bay-Delta Program, described in the CALFED ROD, to eliminate local drainage.

The 250 mg/L M&I standard at PP#1 provides protection for beneficial uses of water throughout the central and south Delta, including CCWD's intake on Old River, the Tracy Pumping Plant and the Banks Pumping Plant, and not just M&I uses at CCWD's PP#1 intake. It should also be noted the M&I standard of 250 mg/L chlorides in the WQCP was promulgated on the basis on taste, and quite simply is set far too high to ensure protection of public health. In fact, the CALFED Record of Decision, on page 56 sets a Delta source water salinity target for drinking water of 50 µg/L bromides (or about 20 mg/L chlorides) to protect public health.

CCWD would like to work with DWR and Reclamation and other CALFED Operations Group stakeholders in reviewing the minimum Delta outflows needed to control seawater intrusion when the Rock Slough standard is likely to govern in the fall. Waiting too long to increase Delta outflow will result in "overshooting the target". It is also likely that maintaining slightly higher minimum outflows earlier to control the rate of increase in salinity requires less water than making larger outflow increases later as a corrective action.

averaged EC of 0.95 mS/cm or about 231 mg/L chlorides. The maximum hourly EC at Holland Tract from DWR's CDEC website was 1085 mS/cm on September 26 or more than 260 mg/L chlorides.

² The Delta Road Bridge measurement is taken at Lindquist Marina in Rock Slough to the east of the Sandmound Slough tide gate (and 1.5 miles east of the intake to the unlined Contra Costa Canal). This reading generally represents the quality of Old River water circulating through Rock Slough and seawards through the Sandmound Slough tide gate. The water quality at Delta Road Bridge is not affected by the local seepage into the unlined Canal. During wet periods, it can be impacted by agricultural discharges from Veale Tract but this was not a factor in October 2002.

Celeste Cantú

Exceedances of water quality standard at CC Canal PP#1 in October 2002

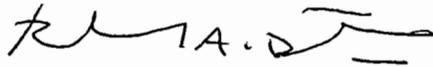
November 4, 2002

Page 4

When the water in the Delta degrades, CCWD cannot deliver it to its customers and CCWD forced to reduce its diversions from Rock Slough. However, CCWD will also work with DWR and Reclamation on how to best deal with the issues related to seepage and low pumping rates.

If you have any questions, please contact me at (925) 688-8187 or Samantha Salvia at (925) 688-8057.

Sincerely,

A handwritten signature in black ink, appearing to read "R.A. Denton". The signature is fluid and cursive, with a horizontal line at the end.

Richard A. Denton

Water Resources Manager

cc: Chester Bowling (USBR)
Carl Torgersen (DWR)
Nick Wilcox (SWRCB)

Attachment: October titrated chlorides and August-October Tides and Delta outflows

Celeste Cantú

Exceedances of water quality standard at CC Canal PP#1 in October 2002

November 4, 2002

Page A-1

CCWD Chloride Titration Data -- October 1-28, 2002

Day	Canal Pumping Plant One Chlorides (PP#1)				Delta Road Bridge	PP#1 Pumping acre-feet
	Midnight Cl	7:30 AM Cl	3:30 PM Cl	Daily Average Cl	8:30 AM Cl	
1	235	235	235	235	240	30.50
2	245	245	235	242	235	7.31
3	225	225	225	225	225	11.67
4	245	235	235	238	235	17.25
5	245	245	240	243	230	21.05
6	245	250	240	245	235	20.15
7	250	255	265	257	245	18.53
8	250	250	250	250	225	39.81
9	250	240	240	243	220	25.51
10	240	255	245	247	225	16.93
11	250	240	255	248	185	1.88
12	255	255	245	252	200	25.97
13	N/A	260	255	258	200	24.45
14	245	255	255	252	200	18.34
15	245	240	245	243	190	31.84
16	N/A	255	240	248	170	30.28
17	250	250	250	250	170	19.22
18	240	240	245	242	175	16.88
19	245	250	255	250	175	5.03
20	255	255	245	252	185	18.98
21	260	255	260	258	190	19.69
22	255	255	250	253	195	17.31
23	245	235	250	243	190	12.53
24	240	240	245	242	180	20.24
25	240	230	240	237	180	15.52
26	230	225	230	228	180	13.57
27	230	225	225	227	170	19.16
28	230	200	195	208	175	34.69

August Tides and Delta Outflow

Mth	Day	Year	Antioch Tides		Delta Outflow (cfs)	7-Day Delta Outflow (cfs)
			High (feet)	Half (feet)		
8	1	2002	2.97	1.19	4,899	6,034
8	2	2002	3.33	1.35	4,608	5,812
8	3	2002	3.57	1.67	4,078	5,530
8	4	2002	3.41	1.45	3,623	5,215
8	5	2002	3.41	1.38	4,551	5,041
8	6	2002	3.63	1.38	4,206	4,678
8	7	2002	3.62	1.27	4,700	4,381
8	8	2002	3.59	1.17	4,526	4,327
8	9	2002	3.48	1.13	4,121	4,258
8	10	2002	3.43	1.26	3,715	4,206
8	11	2002	3.26	1.34	3,462	4,183
8	12	2002	2.99	1.37	3,207	3,991
8	13	2002	3.02	1.36	3,548	3,897
8	14	2002	3.27	1.39	3,541	3,731
8	15	2002	3.47	1.43	2,999	3,513
8	16	2002	3.61	1.53	3,281	3,393
8	17	2002	3.67	1.68	3,241	3,326
8	18	2002	3.67	1.61	3,346	3,309
8	19	2002	3.73	1.64	3,424	3,340
8	20	2002	3.61	1.48	3,073	3,272
8	21	2002	3.39	1.28	4,049	3,345
8	22	2002	3.30	1.27	4,113	3,504
8	23	2002	3.12	1.12	3,841	3,584
8	24	2002	2.79	0.97	3,954	3,686
8	25	2002	2.52	0.83	3,088	3,649
8	26	2002	2.15	0.72	2,586	3,529
8	27	2002	2.34	0.78	2,590	3,460
8	28	2002	3.03	1.19	2,725	3,271
8	29	2002	2.96	1.46	2,718	3,072
8	30	2002	3.05	1.33	2,688	2,907
8	31	2002	3.03	1.33	2,604	2,714

September Tides and Delta Outflow

Mth	Day	Year	Antioch Tides		Delta Outflow (cfs)	7-Day Delta Outflow (cfs)
			High (feet)	Half (feet)		
9	1	2002	3.12	1.26	2,639	2,650
9	2	2002	3.35	1.32	2,642	2,658
9	3	2002	3.35	1.41	3,074	2,727
9	4	2002	3.49	1.36	3,098	2,780
9	5	2002	3.42	1.21	3,379	2,875
9	6	2002	3.36	1.20	3,901	3,048
9	7	2002	3.26	1.12	3,732	3,209
9	8	2002	2.90	0.95	3,898	3,389
9	9	2002	2.59	0.90	3,111	3,456
9	10	2002	2.90	0.95	3,558	3,525
9	11	2002	3.12	1.07	2,450	3,433
9	12	2002	3.27	1.31	2,509	3,308
9	13	2002	3.33	1.42	3,090	3,193
9	14	2002	3.24	1.43	3,609	3,175
9	15	2002	3.25	1.45	3,155	3,069
9	16	2002	3.05	1.25	3,388	3,108
9	17	2002	3.05	1.25	3,985	3,169
9	18	2002	3.11	1.19	3,690	3,347
9	19	2002	3.05	1.17	3,712	3,518
9	20	2002	3.05	1.27	4,585	3,732
9	21	2002	2.96	1.29	5,534	4,007
9	22	2002	2.80	1.24	5,315	4,316
9	23	2002	2.55	1.11	5,250	4,582
9	24	2002	2.76	1.16	5,206	4,756
9	25	2002	2.85	1.24	4,844	4,921
9	26	2002	3.21	1.52	4,929	5,095
9	27	2002	3.20	1.68	4,173	5,036
9	28	2002	3.14	1.52	4,752	4,924
9	29	2002	3.12	1.49	5,594	4,964
9	30	2002	3.06	1.42	4,641	4,877

October Tides and Delta Outflow

Mth	Day	Year	Antioch Tides		Delta Outflow (cfs)	7-Day Delta Outflow (cfs)
			High (feet)	Half (feet)		
10	1	2002	3.00	1.30	5,014	4,850
10	2	2002	2.79	0.95	4,670	4,825
10	3	2002	2.79	0.94	4,831	4,811
10	4	2002	2.87	0.95	4,485	4,855
10	5	2002	2.77	0.92	4,986	4,889
10	6	2002	2.52	0.82	4,760	4,770
10	7	2002	2.80	0.87	4,804	4,793
10	8	2002	3.06	1.00	4,417	4,708
10	9	2002	3.41	1.22	3,736	4,574
10	10	2002	3.46	1.44	3,576	4,395
10	11	2002	2.99	1.21	3,541	4,260
10	12	2002	2.75	1.05	4,452	4,184
10	13	2002	2.60	0.99	4,117	4,092
10	14	2002	2.60	1.01	3,975	3,973
10	15	2002	2.65	1.16	3,804	3,886
10	16	2002	2.65	N/A	3,747	3,887
10	17	2002	2.57	N/A	3,977	3,945
10	18	2002	2.43	0.91	3,806	3,983
10	19	2002	2.21	0.76	4,146	3,939
10	20	2002	2.46	0.85	4,256	3,959
10	21	2002	2.71	0.98	3,753	3,927
10	22	2002	3.00	1.25	3,604	3,898
10	23	2002	2.86	1.20	3,069	3,802
10	24	2002	2.94	1.15	3,962	3,799
10	25	2002	3.09	1.24	4,005	3,828
10	26	2002	3.28	1.44	3,930	3,797
10	27	2002	2.97	1.38	3,786	3,730
10	28	2002	2.77	1.26	3,530	3,698

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
 SACRAMENTO, CA 94236-0001
 (916) 653-5791

November 26, 2002



Ms. Celeste Cantú
 Executive Director
 State Water Resources Control Board
 Post Office Box 200
 Sacramento, California 95812-2000

Water Quality Standard at Contra Costa Canal Pumping Plant No. 1.

This letter is to inform you that the maximum daily chloride objective of 250 mg/l at the Contra Costa Canal Pumping Plant No. 1 per SWRCB Decision 1641 was exceeded on October 20, 21, and 22, 2002. These three days are in addition to the four earlier days of exceedences relayed to you by our letter of October 18. The subsequent exceedences occurred despite continuing improvements to Delta water quality in and around Rock Slough.

The exceedences of October 20, 21, and 22 were respectively at the values 252, 258, 253 mg/l. Water Quality at Pumping Plant No. 1 remained poor through most of October despite continually improving conditions in Rock Slough and more than adequate corresponding water quality in Old River. Correlated chlorides at the mouth of Contra Costa Canal averaged between 170 and 160 mg/l. Please see the enclosed graphs illustrating water quality data as electrical conductivity and correlated chlorides.

The movement of water from Old River into Rock Slough is dependent on tides, miscellaneous agricultural diversions in Rock Slough, and the pumping rate at Contra Costa Water District's Pumping Plant No. 1 at the end of Contra Costa Canal. The Department of Water Resources and Bureau of Reclamation can neither control the time needed for fresher water to displace saltier water nor the rate of degradation that seems prevalent in the immediate region. Therefore, we do not believe any action by the Board is necessary. The Department and Reclamation will continue to adjust State Water Project and Central Valley Project operations as needed to assure adequate water quality exists in Old River to meet the 250-mg/l chloride standard at Pumping Plant No. 1.


 Carl Torgersen
 Chief
 SWP Operations Control Office
 Department of Water Resources

12-2-02

Date


 Chester Bowling
 Operations Manger
 Central Valley Operations Office
 Bureau of Reclamation

12-2-02

Date

Enclosures

cc: (See attached list.)



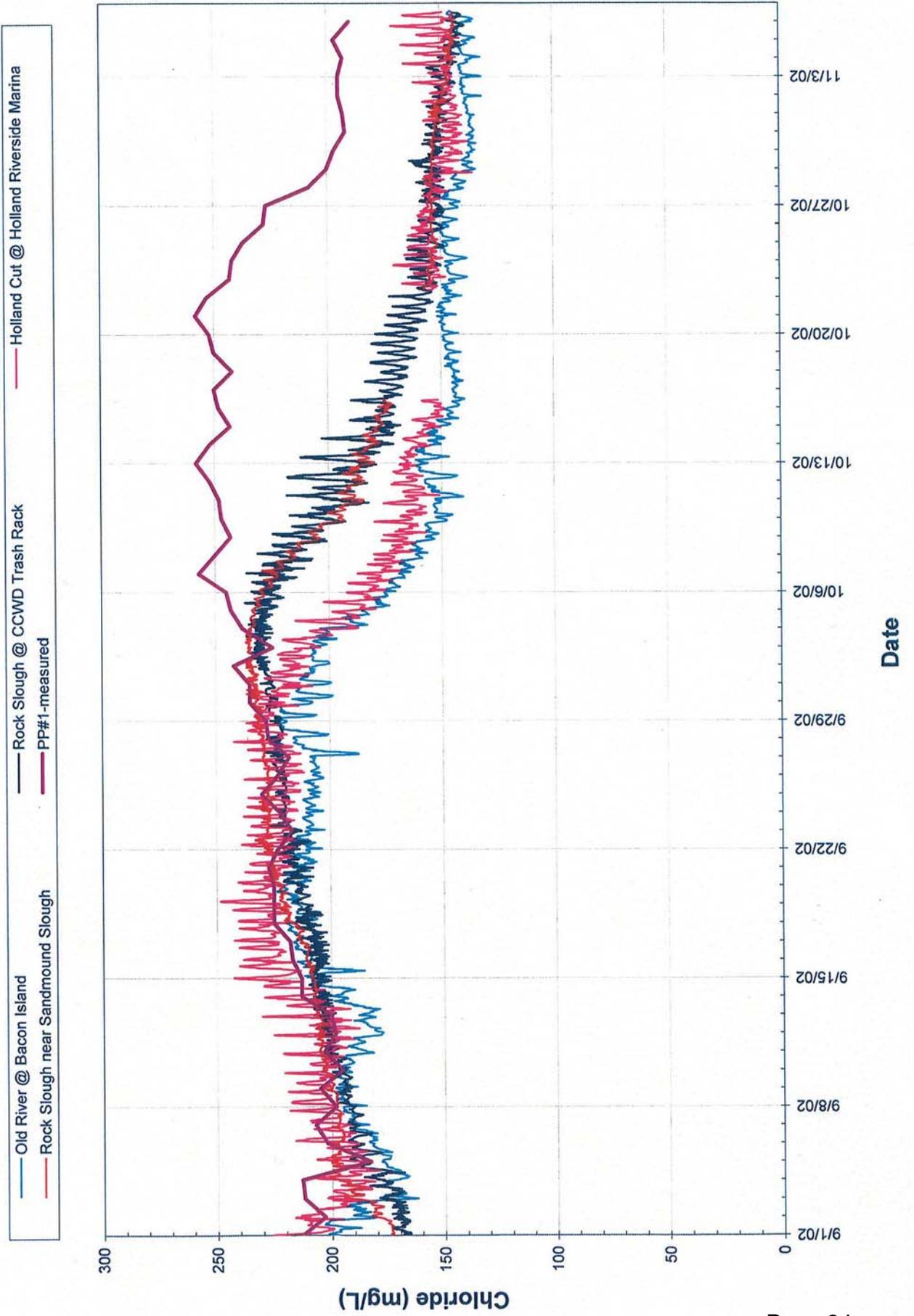
Mr. Richard Denton
Contra Costa Water District
Post Office Box H20
Concord, California 94524

Nick Wilcox
State Water Resources Control Board
Post Office Box 200
Sacramento, California 95812-2000

Specific Conductance Data ~ (9/1/02 - 10/9/02)



Chloride Data Correlated with Specific Conductance ~ (9/1/02 - 10/9/02)





State Water Resources Control Board



Winston H. Hickox
Secretary for
Environmental
Protection

Division of Water Rights
1001 I Street, 14th Floor • Sacramento, California 95814 • (916) 341-5300
Mailing Address: P.O. Box 2000 • Sacramento, California • 95812-2000
FAX (916) 341-5400 • Web Site Address: <http://www.waterrights.ca.gov>

Gray Davis
Governor

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at <http://www.swrcb.ca.gov>.

NOV 27 2002

Mr. Carl A. Torgersen, Chief
SWP Operations Control Office
Department of Water Resources
3310 El Camino Avenue, Suite 300
Sacramento, CA 95821

Mr. Chester V. Bowling, Operations Manager
Central Valley Operations
Bureau of Reclamation
3310 El Camino Avenue, Suite 300
Sacramento, CA 95821

Mr. Richard Denton
Contra Costa Water District
Concord, CA 94524
P.O. Box H20

Dear Messrs. Torgersen, Bowling and Denton:

EXCEEDANCES OF THE WATER QUALITY OBJECTIVE FOR CHLORIDE AT CONTRA COSTA PUMPING #1 IN OCTOBER 2002

This letter responds to the joint letter from the Department of Water Resources (DWR) and the Bureau of Reclamation (USBR) dated October 16, 2002, notifying Celeste Cantú, Executive Director of the State Water Resources Control Board (SWRCB) that the daily maximum chloride objective of 250 mg/l at the Contra Costa Pumping Plant #1 was exceeded on October 7, 12, 13 and 14, 2002. This letter also responds to the letter from the Contra Costa Water District (CCWD) dated November 4, 2002, regarding the exceedances of the chloride objective. CCWD also points out that the chloride objective was exceeded on October 20, 21 and 22, 2002.

The DWR and the USBR point out that they are now less able to comply with the chloride objective at Pumping Plant #1 than in the past. They attribute this to changes in operation by CCWD. CCWD currently diverts most of its water from Old River for the Los Vaqueros project, whereas in the past CCWD's main point of diversion was from Rock Slough at Pumping Plant #1 in the Contra Costa Canal.

CCWD acknowledges that low rates of diversion at Pumping Plant #1 exacerbate the problem. Local seepage of salty groundwater can cause elevated chloride concentrations, particularly when the Pumping Plant #1 diversion rate is low. When chloride-laden water stagnates in Rock Slough and in the Canal, it can take several days to pump out the water and replace it with fresher water from the Delta, thus increasing the number of days the objective is exceeded. CCWD also believes that the chloride exceedances in October may have been related to antecedent Delta outflow conditions.

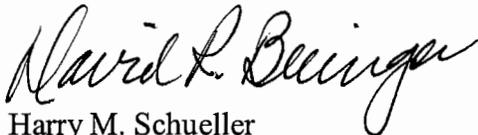
NOV 27 2002

The SWRCB appreciates your notification of the exceedances and understands that the exceedances are due to a combination of factors, only some of which are under the control of the DWR and the USBR. In the past there has been talk of moving the compliance point away from Pumping Plant #1. To consider moving the compliance point or implementing CCWD's recommendations to change the Delta outflow objective and to adjust downward the chloride objective to achieve a higher degree of protection for drinking water supplies, the SWRCB would have to conduct formal proceedings. Such proceedings would include reviewing the objectives in the 1995 Bay-Delta Water Quality Control Plan (1995 Plan) under Water Code section 13240, preparing draft revisions to the objectives, and conducting a hearing on the proposed revisions. To apply any revised objectives to the DWR and the USBR, the SWRCB then would have to amend the water right permits of the DWR and the USBR, which could require a water right hearing. Water Code section 13240 requires periodic reviews of water quality control plans, and accordingly, the SWRCB may soon commence a review of the 1995 Plan. If it does so, you will be notified and will have an opportunity to participate in the review.

With regard to the exceedances of the chloride objective in October of this year, it appears that CCWD is not requesting any specific action at this time. Accordingly, the SWRCB will take no further action.

If you have questions, please contact Nick Wilcox, Chief of the Bay-Delta Unit at (916) 341-5424, or Barbara Leidigh, Staff Counsel IV, at (916) 341-5190.

Sincerely,



for Harry M. Schueller
Chief Deputy Director

cc: Mr. Curtis Creel
SWP Operations Control Office
Department of Water Resources
3310 El Camino Avenue, Suite 300
Sacramento, CA 95821

Mr. Paul Fujitani
Central Valley Operations
Bureau of Reclamation
3310 El Camino Avenue, Suite 300
Sacramento, CA 95821



State Water Resources Control Board



Executive Office

Winston H. Hickox
Secretary for
Environmental
Protection

1001 I Street • Sacramento, California 95814 • (916) 341-5615
Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100
FAX (916) 341-5400 • Web Site Address: <http://www.waterrights.ca.gov>

Gray Davis
Governor

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.
For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at <http://www.swrcb.ca.gov>.*

JAN - 9 2003

In Reference Refer to: NW:
A005626, A005630

Mr. Carl A. Torgersen, Chief
SWP Operations Control Office
Department of Water Resources
3310 El Camino Avenue, Suite 300
Sacramento, CA 95821

Mr. Chester V. Bowling, Operations Manager
Central Valley Operations
Bureau of Reclamation
3310 El Camino Avenue, Suite 300
Sacramento, CA 95821

Dear Messrs. Torgersen and Bowling:

EXCEEDANCES OF THE WATER QUALITY OBJECTIVE AT CONTRA COSTA PUMPING #1 FOR OCTOBER 20 THROUGH OCTOBER 22, 2002.

This letter responds to the joint letter from the Department of Water Resources (DWR) and the Bureau of Reclamation (USBR) dated November 26, 2002, notifying me that the daily maximum chloride objective of 250 mg/l at the Contra Costa Pumping Plant #1 was exceeded on October 20, 21 and 22, 2002.

You point out that the DWR and the USBR can neither control the time needed for fresher water to displace saltier water in Rock Slough nor the rate of degradation that appears to be related to local seepage in the immediate region. You also point out that joint State Water Project and Central Valley Project operations are adjusted to assure that adequate water quality exists in Old River at the entrance to Rock Slough and that the State Water Resources Control Board (SWRCB) should take no specific action at this time regarding the exceedances.

The SWRCB reached a similar conclusion in our November 27, 2002 response to your notification regarding the chloride exceedances that occurred throughout the month of October. Relocation of the compliance point for the Contra Costa chloride objective away from Pumping Plant #1 is an issue appropriate for triennial review of the 1995 Bay-Delta Water Quality Control Plan. Water Code Section 13240 requires periodic reviews of water quality control plans and the SWRCB may soon commence such a review.

Mr. Carl A. Torgersen
Mr. Chester V. Bowling

2

JAN - 9 2003

If you have questions, please contact Nick Wilcox, Chief of the Bay-Delta Unit at (916) 341-5424, or Barbara Leidigh, Staff Counsel IV, at (916) 341-5190.

Sincerely,



Celeste Cantú
Executive Director

cc: Mr. Richard Denton
Contra Costa Water District
P.O. Box H20
Concord, CA 94524

Mr. Curtis Creel
SWP Operations Control Office
Department of Water Resources
3310 El Camino Avenue, Suite 300
Sacramento, CA 95821

Mr. Paul Fujitani
Central Valley Operations
Bureau of Reclamation
3310 El Camino Avenue, Suite 300
Sacramento, CA 95821