

CHRONOLOGICAL ACCOUNT AND DECISION-MAKING PROVISIONS

The DCC gates were closed on November 26, 1999 at the beginning of a minor spring tidal cycle to protect emigrating spring-run chinook salmon. This action was taken to be consistent with the CALFED Ops Group Spring-run Protection Plan and in consultation with the National Marine Fisheries Service and the Department of Fish and Game on protection of spring-run yearlings. The action is also consistent with the SWRCB water right order 98-9 that provides for closing of the DCC gates from November – January, as needed, for fishery protection.

Over the next three weeks, exports remained at capacity while water quality gradually deteriorated in the Delta. When the gates were closed on November 26, the CVP and SWP were pumping at 6,672 and 4,048 respectively. Because of continued concern on the part of the fishery agencies about protection for emigrating salmon, the DCC gates were not opened to improve water quality. In an effort to improve water quality conditions, upstream releases from Lake Oroville were increased beginning on December 8 and water exports at both the State and federal facilities were curtailed on beginning on December 10. The export curtailment (at the federal Tracy Pumping Plant) was coordinated with implementation of the Department of Interior's b(2) Implementation Plan. When water quality conditions did not improve and monitoring of chinook yearling activity in the lower Sacramento River and Delta indicated a significant decline in emigration, the DCC gates were opened for a few hours on December 14, then re-closed. They were re-opened the morning of December 15, and have remained open since, when it was realized that SWRCB Decision 1485 water quality standards would likely to exceeded.

During the week of 12/20, the DCC gates remained open and pumping at Tracy Pumping Plant and inflow to Clifton Court Forebay were gradually increased to a total of 8,000 cfs on December 27. DWR planned to continue ramping up SWP exports to about 7,000 cfs utilizing the flexibility under the U.S. Army Corps of Engineers Public Notice 5820A to capture up to one-third of Vernalis flow when it is greater than or equal to 1,000 cfs. However, tide conditions limited Clifton Court Forebay inflow to a maximum of about 6,800 cfs.

The following is a detailed daily accounting of activities and decisions.

- **November 24 (Wednesday)** – Data Assessment Team Conference Call – It is reported that although yearling spring-run salmon had been observed leaving Mill and Deer creeks in mid- to late- October, to date no indicators under the Spring-run Protection Plan that would necessitate closing the DCC gates have been triggered. It is also noted that no triggers have been pulled to begin the planned DOI b(2) export reduction (see DAT notes for November 24, 1999). However, later that afternoon, the CVP

and SWP Operations' staffs receive a call from the Department of Fish and Game's DAT representative requesting USBR to close the DCC gates based on the two-day catch of 44 spring-run sized salmon at Tisdale and three spring-run and one winter-run size salmon at Knights Landing, just reported by field crews. During the morning DAT conference call DWR and USBR operators expressed concern with potential water quality problems that may result from a spring tide predicted over the Thanksgiving weekend (November 25-28), however, there was no decision that water quality considerations should preclude closing the gates if salmon appeared and, as the DAT notes indicate, USBR was prepared for a possible gate closure over the holiday weekend

- Recommendation to close the DCC gates – DAT.
- Basis for Recommendation – Spring-run Protection Plan, ESA consultation with NMFS and DFG, and WR 98-9.

- **November 26 (Friday)** – The DCC gates are closed to protect out-migrating spring-run salmon, per the Spring-run Protection Plan and ESA consultation with NMFS and DFG. The basis for closure is detection of salmon at Tisdale and Knights Landing. At the time of the closure, Delta water quality conditions are not a concern because (1) forecasted changes in weather patterns are likely to produce storms during the first week of December; and (2) likely curtailment of export pumping consistent with the b(2) Implementation Plan.

- Decision to close the DCC gates – USBR.
- Basis for Decision – Compliance with Spring-run Protection Plan, ongoing ESA consultation with NMFS and DFG, and WR 98-9.
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- **November 29 (Monday)** – Electrical Conductivity¹ has increased as expected, but still is not a major concern since (1) EC values are still below the threshold levels established under the Spring-run Protection Plan that indicate deteriorating conditions in the interior/southern Delta and concerns for maintaining SWRCB water quality requirements; (2) the DAT will discuss the need to open the gates during the next call scheduled for Wednesday, December 1; and (3) and export reductions pursuant to b(2) Implementation Plan are anticipated to be implemented within the next couple of weeks.

- **November 30 (Tuesday)** – USBR reports closing of the DCC gates to the CVP Water Association Operations committee and indicates the potential for export curtailments consistent with the b(2) Implementation Plan, based on similar biological triggers.

¹ Electrical Conductivity is an indirect measurement of mineral concentration. The higher the concentration of minerals in the water, the greater the electrical conductivity.

- **December 1 (Wednesday)** – DAT Conference Call. DWR notifies the DAT that Delta EC values will soon approach the salinity profile outlined in the Spring-run Protection Plan. This profile serves as an indicator of seawater intrusion that would likely lead to difficulty in managing salinity conditions in the south Delta and possible exceedences of SWRCB water quality standards. The biological indicator for beginning the b(2) export reduction occurred over the Thanksgiving weekend. However, DAT recommends delaying the b(2) export reduction until more spring-run are observed in the Sacramento area. Although no recommendations are made to open the DCC gates due to anticipated b(2) actions (export reductions), DWR staff indicates some action is needed to control salinity. Review of historical operations by DWR staff indicates a significant reduction of exports may mitigate closure of the DCC gates. DAT recommends monitoring water quality and fish movement over the next few days and convening another DAT call prior to the weekend.
 - Recommendation to keep DCC gates closed – DAT.
 - Decision to keep gates closed – USBR.
 - Basis for Recommendation and Decision – Compliance with Spring-run Protection Plan and ESA consultation with NMFS and DFG.

- **December 3 (Friday)** – DWR sends out the first in a series of water quality updates to the DAT. At this point, two stations (Jersey and Bacon) have exceeded the salinity profile and Holland is at its trigger level. However, the CVP and SWP operators make no recommendation to open the gates. The first yearling is observed near Sacramento and the DAT recommended the b(2) export reduction start as soon as possible, Tuesday, December 7. DAT recommends the DCC gates remain closed over the weekend. DAT also recommends the b(2)- related export reduction be implemented and believes this reduction will begin soon. DOI schedules 3,500 cfs export reduction for December 7.
 - Recommendation to keep gates closed – DAT.
 - Decision to keep gates closed – USBR.
 - Basis for Recommendation and Decision – Compliance with Spring-run Protection Plan and ESA consultation with NMFS and DFG.

Water users meet with the State Administration to discuss concern of implementing export curtailments. DOI, postpones the decision to curtail export pumping pursuant to b(2) Implementation Plan after consulting with State officials.

- **December 6 (Monday)** – All salinity profile indicators specified in the Spring-run Protection Plan have been reached or exceeded. The DAT is notified of the conditions and of the need to open the DCC gates. Concern

for opening the DCC gates is more acute when it becomes apparent that CVP b(2) export reductions will not occur as planned due to concerns raised by the State Administration. The DAT is informed that DWR will recommend opening the DCC gates during the December 8 DAT conference call if no export reductions are made by then.

- **December 7 (Tuesday)** – Due to concerns raised by the State Administration, DOI defers its b(2) export reduction, pending resolution of water impact-related issues. A final decision is expected later in the week. DWR and Reclamation raised concern about potential water quality impacts resulting from continued DCC gate closures at the same time that pumping levels remained high.
- **December 8 (Wednesday)** – DAT Conference Call (a.m.) – No agreement is reached on a recommendation for operation of the DCC gates. The DAT develops three options to be considered by the CALFED Ops Group: (1) leave the gates closed and begin the b(2) export reduction; (2) open the gates halfway for a short period (assumed to be until Monday, December 13) to benefit from freshwater entering the DCC into the central and south Delta, then close the DCC gates in combination with a reduction in exports; or (3) open the DCC gates as necessary, and then close as water quality improves to an acceptable level. These options are presented to the CALFED Ops Group for resolution.

CALFED Ops Group meeting (p.m.) – The Ops Group discusses the options developed by the DAT, but does not decide on which option should be implemented. Instead, the options will be forwarded to the CALFED Water Operations Management Team for a decision. The Water Ops Management Team will meet the next day. DWR schedules a 200 cfs increase in releases at Oroville as an initial step in anticipation of larger increases in the future as a measure to address water quality conditions and balance release contributions in response to USBR cuts at Keswick (releases are decreased because of low inflow to Lake Shasta and decreasing Shasta storage that approaches the maximum flood vacancy).

- **December 9 (Thursday)** – CALFED Water Operations Management Team Meeting – DWR and USBR announce at the meeting that they will reduce exports and increase upstream releases as a way of continuing to protect spring-run yearlings while attempting to improve water quality by increasing Delta outflow. The Water Ops Management Team discusses the magnitude of the reduction and DWR and USBR agree to a 4,000-5,000 cfs reduction in exports to begin Friday, December 10. Total exports are 10,700 cfs at the time the decision is made. Initially, combined exports of 6,000 cfs (2,700 cfs at Tracy and 3,300 cfs at Banks) are scheduled. Total release to the Feather River is increased to 3,000 cfs.

DOI informs the State agencies of its decision to implement export curtailments at Tracy consistent with implementation of the b(2) plan. Thus, Tracy pumping is reduced to about 750 cfs. After reviewing water quality conditions, DWR decides not to adjust its planned 3,300 cfs reduction in exports; the total planned export reduction is from 10,700 cfs to about 4,100 cfs.

- Decision to keep the DCC gates closed, reduce exports by 4,700 cfs and increase upstream releases – CALFED Water Operations Management Team.
 - Decision to reduce exports another 1,900 cfs – DWR.
 - Basis for Decision – Spring-run Protection Plan, ESA consultation with NMFS and DFG, b(2) Implementation Plan, and SWRCB water quality standards contained in Decision 1485.
- **December 10 (Friday)** – SWP and CVP combined exports are reduced to about 4,100 cfs. The SWP is at 3,300 and the CVP is at 800 cfs (one unit). A DAT conference call is scheduled for Monday, 12/13. Total release to the Feather River is increased to 3,500 cfs.
 - **December 13 (Monday)** – The DAT convenes a conference call to evaluate water quality conditions and spring-run yearling status to make a recommendation on operation of the DCC gates. Some DAT members recommend opening the DCC Gates. Others believe keeping the DCC gates closed is needed to protect emigrating salmon. All members agree gate closure will provide maximum protection for spring-run. A compromise DAT recommendation is made to open the DCC gates tidally during daylight hours for the next several days. It is hoped this compromise will result in an improvement in water quality and while providing some protection for spring-run yearlings. The DAT prepares a Memorandum to the CALFED Operations Group titled “Biological Justification for Keeping Cross Channel Gates Closed for Fisheries Protection.” (see attachment).

SWP and CVP operators recommend opening the DCC gates to provide an opportunity for improvement in water quality. Although Jersey Point is showing signs of declining salinity, the remaining stations continue to exceed the profile values and are likely to result in exceeding the water quality standards during the next spring tidal cycle. Without fully opening the DCC gates, SWP and CVP operators believe compliance with D-1485 water quality standards will be compromised. Thus, SWP exports are further reduced to 800 cfs. Combined exports are about 1,600 cfs.

- Decision to further reduce SWP export operations – DWR.

- Basis for Decision – Compliance with SWRCB D-1485, Spring-run Protection Plan and continued ESA consultation with NMFS and DFG.
- **December 14 (Tuesday)** – The DCC gates are opened from about 9 a.m. to 2 p.m. The intent is to operate the DCC gates during daylight hours and during a portion of the tidal cycle that pushes Sacramento River flow south through the cross-channel. Daylight hour operations are easier for the USBR to staff and considered safer. Keeping the DCC gates closed on the ebb tide in the Sacramento River may help minimize the numbers of fish that enter the DCC. SWP and CVP operators continue to recommend opening the DCC gates full time to provide an opportunity for improvement in water quality.
 - Decision to tidally operate the DCC gates; keep them open during daylight hours – USBR.
 - Basis for Decision – Compliance with SWRCB D-1485, Spring-run Protection Plan and continued ESA consultation with NMFS and DFG.
- **December 15 (Wednesday)** – The DCC gates are opened at 9 a.m. A DAT conference call is held in the morning and a No Name Group (NNG) conference call is held in the afternoon.

As of December 15, no SWRCB water quality standards are exceeded, however the next spring tide starts on the 16th. DWR operators expect the SWRCB water quality standard for Contra Costa Canal Pumping Plant Number 1 to be exceeded within the next 7 days, even if the gates remain open. Water Quality standards at Clifton Court and Tracy may also be exceeded.

During its conference call, the DAT concludes the DCC gates need to be open more than 6 hours a day for water quality control. The USBR and DWR operators propose opening the gates fully, waiting for water quality to improve then ramping up exports to circulate high quality water into the central and south Delta.

The fishery biologists request an export schedule to ensure pumping does not increase unchecked while the gates are open. A schedule for increasing exports and water quality criteria to define when the DCC gates could be closed are developed for the 2 p.m. NNG conference call.

The No Name Group recommends keeping the gates open and ramping up Banks exports at a rate of 500 cfs per day. The export increase is to begin when Jersey Point is at about 0.9 mS/cm. The ramping will stop when combined exports reach about 4,100 cfs on Wednesday (December 22).

- Decision to keep the gates open – USBR.
 - Decision to ramp Banks exports up – DWR.
 - Basis for Decision – Spring-run Protection Plan and continued ESA consultation, SWRCB D-1485, and DAT and NNG Recommendations.
- **December 17 (Friday)** – NNG Conference Call — DWR and USBR report they are holding exports at 800 cfs at Tracy and at 800 cfs at Banks. Salinity near the confluence and along the San Joaquin River is improving and conditions in the interior/southern Delta are holding steady.
 - **December 20 (Monday)** – The NNG holds a conference call to review recent operations and to develop recommendations for future operations. Salinity in the Delta has improved because of the gate opening and 16,000 cfs of Delta outflow since the previous Wednesday. However, the State Water Resources Control Board's maximum daily chloride standard of 250 mg/l is exceeded at the Contra Costa Canal Pumping Plant No. 1 with a reported average daily value of 258 mg/L.
 - **December 21 (Tuesday)** – DAT Conference call. During the discussion, the fishery biologists develop biological criteria and operational recommendations for closing the DCC gates for spring-run chinook salmon protection. The recommendations are intended to assist the operators and biologists work through the period from December 21 to January 3 when some agency staff will be on vacation. The recommendation is that when specified fish indicators are observed, the DCC gates be closed for 5 days to allow the fish to pass. If water quality does not allow for the DCC gates to be closed, then the recommendation is to reduce exports to 4,100 cfs.
 - **December 22 (Wednesday)** – NNG conference call. The NNG reviews the DAT plan and an operations plan to ramp up exports from 4,000 cfs to 8,000 cfs over four days, holding reservoir releases constant and keeping the DCC gates open unless fish observations triggered a request for closure by DAT. The recommendation is to these plans through December 27. The NNG and DAT schedule a conference call for Monday the 27th, to discuss operations and the latest water quality and fishery data.
 - **December 27 (Monday)** – Combined NNG and DAT conference call. Salinity levels in the Delta are generally good, with the exception of Rock Slough. Fish monitoring reveals no apparent significant salmon migration occurred over the holiday weekend. Contra Costa resumes pumping at Contra Costa Canal which is to be blended with lower salinity Los Vaqueros Reservoir water. USBR announces planned reductions in reservoir releases: Keswick releases will be reduced from 5,500 cfs to 5,000 over three days beginning December 28 and Nimbus from 2,350 to

2,000 cfs beginning December 28. Given the current salinity levels and the DCC gates remaining open, DWR and USBR will begin increasing exports on Tuesday, December 28. DWR will go to 5,000 cfs on December 28, then 6,680 cfs on December 29. USBR will adjust pumping from 4,000 cfs to about 4,200 cfs beginning December 28. DWR needs to finalize pumping schedules through the New Year's weekend, no later than by Wednesday. Another DAT/NNG conference is scheduled for Wednesday, December 29, to discuss weekend operations, monitoring plans, and contingencies for operation of the DCC. DWR will develop a description of currently relevant factors governing operation of the DCC, to assist with any upcoming decisions regarding closure or re-opening.

- **December 29 (Wednesday)** – NNG and DAT conference call. The fish monitoring continues to indicate no significant migration of spring-run yearlings through the Delta. The fish triggers developed for closure of the DCC gates have not been reached. Monitoring will continue over the weekend. A double trigger has been developed for closure of the DCC gates based both on fish monitoring and water quality. Additionally criteria have been developed to open the DCC gates if water quality becomes a concern. The next NNG calls will be on Friday, December 31 and Monday January 3.