



# Adverse Impacts of Delta Cross Channel Closures on Delta Water Quality

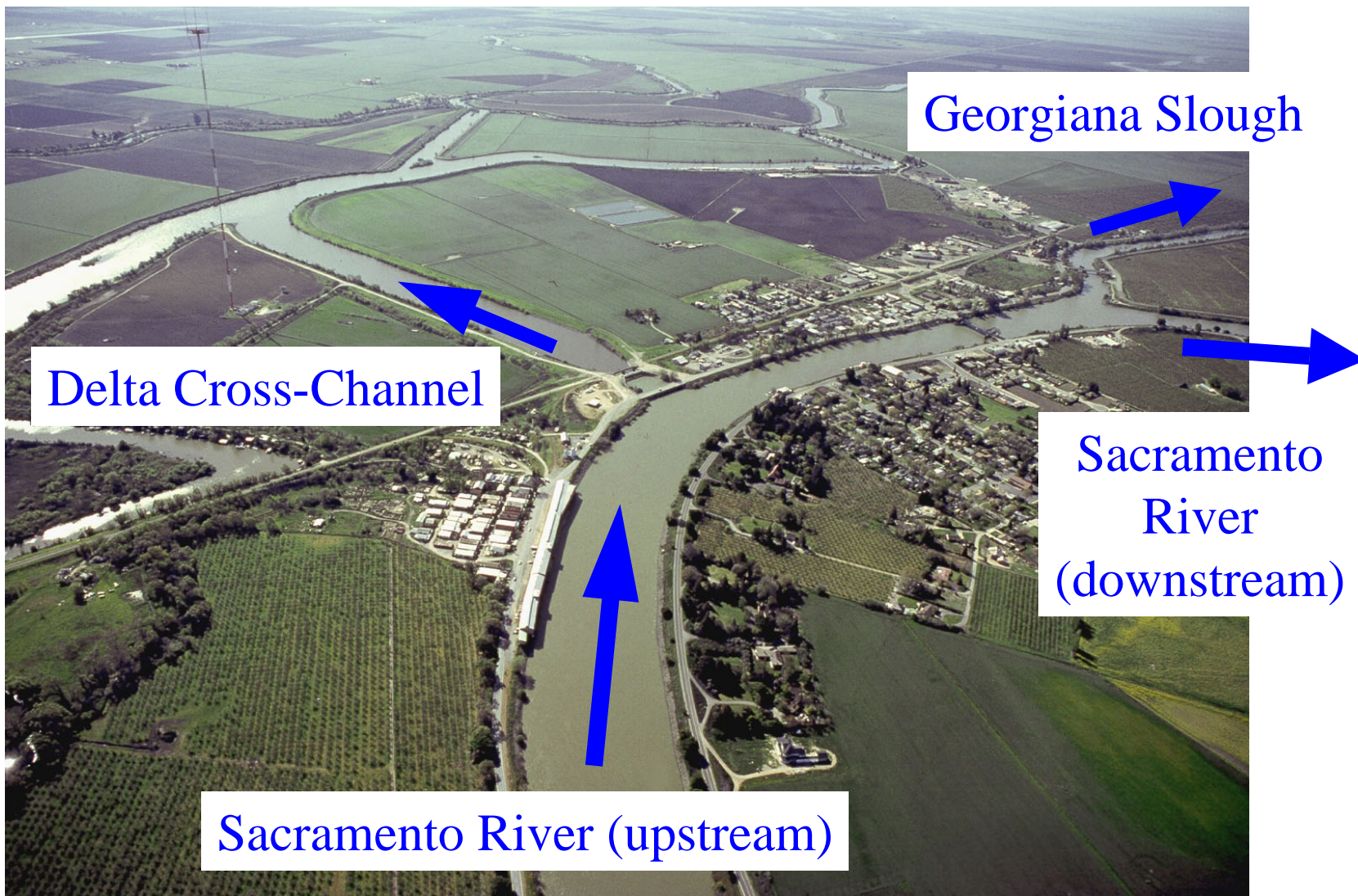
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**Contra Costa Water District**





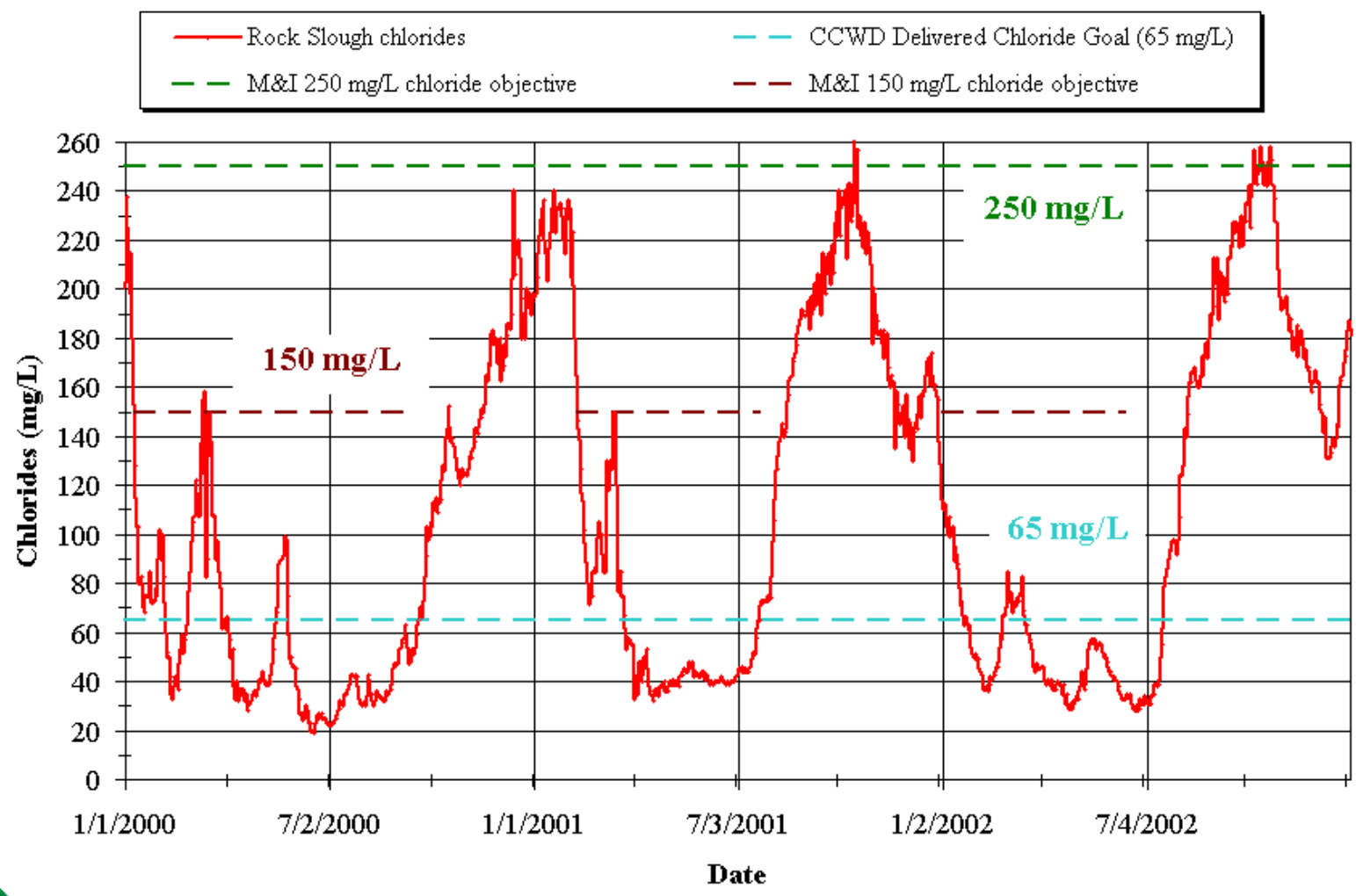


# DCC and Georgiana Slough Flow Split



# Typical Variation in Delta Water Quality

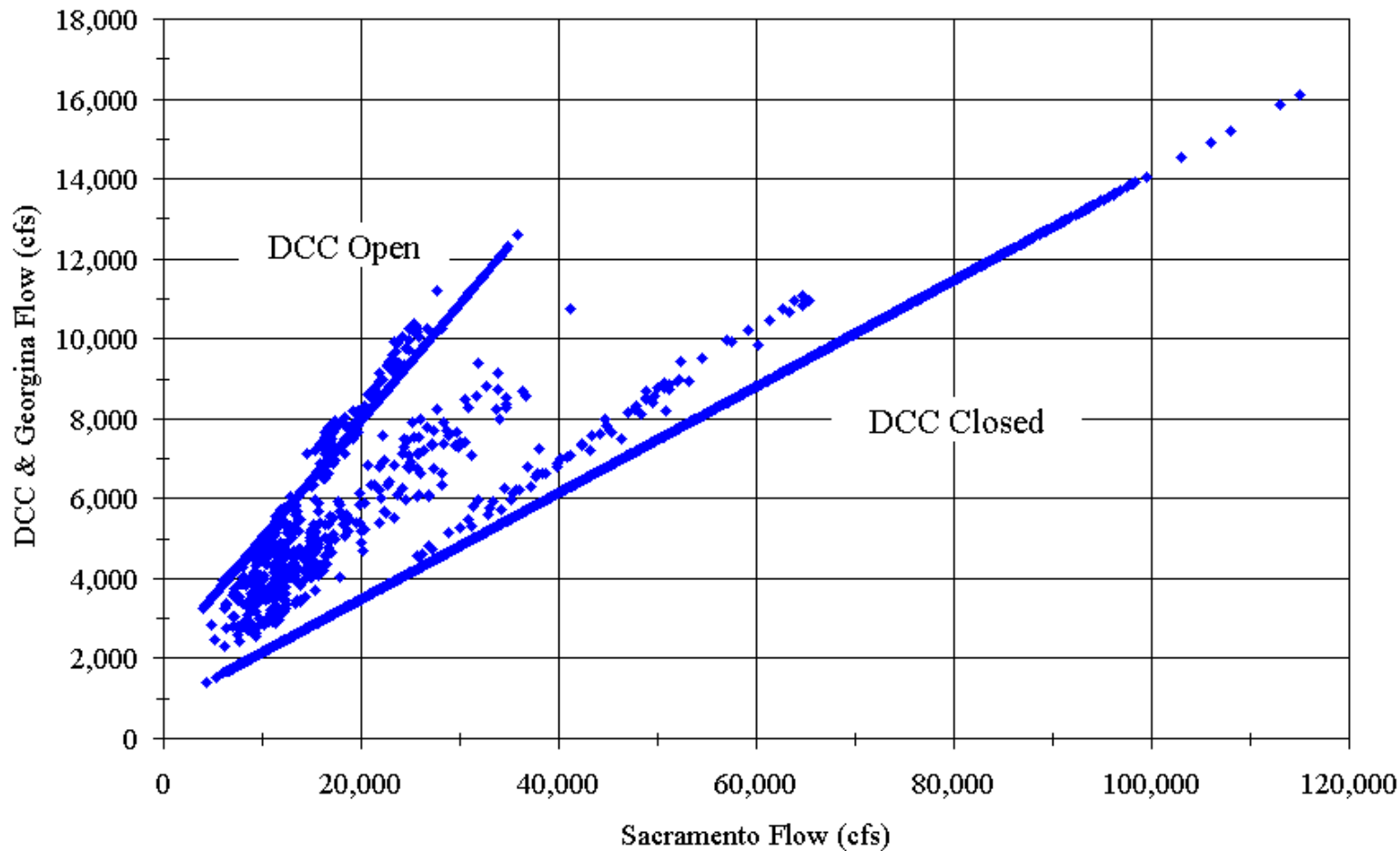
Figure 1: CCWD Rock Slough Intake Chlorides





# DAYFLOW Data – DCC & Georgiana

DAYFLOW Combined DCC and Georgiana Flow  
(1970-2003)





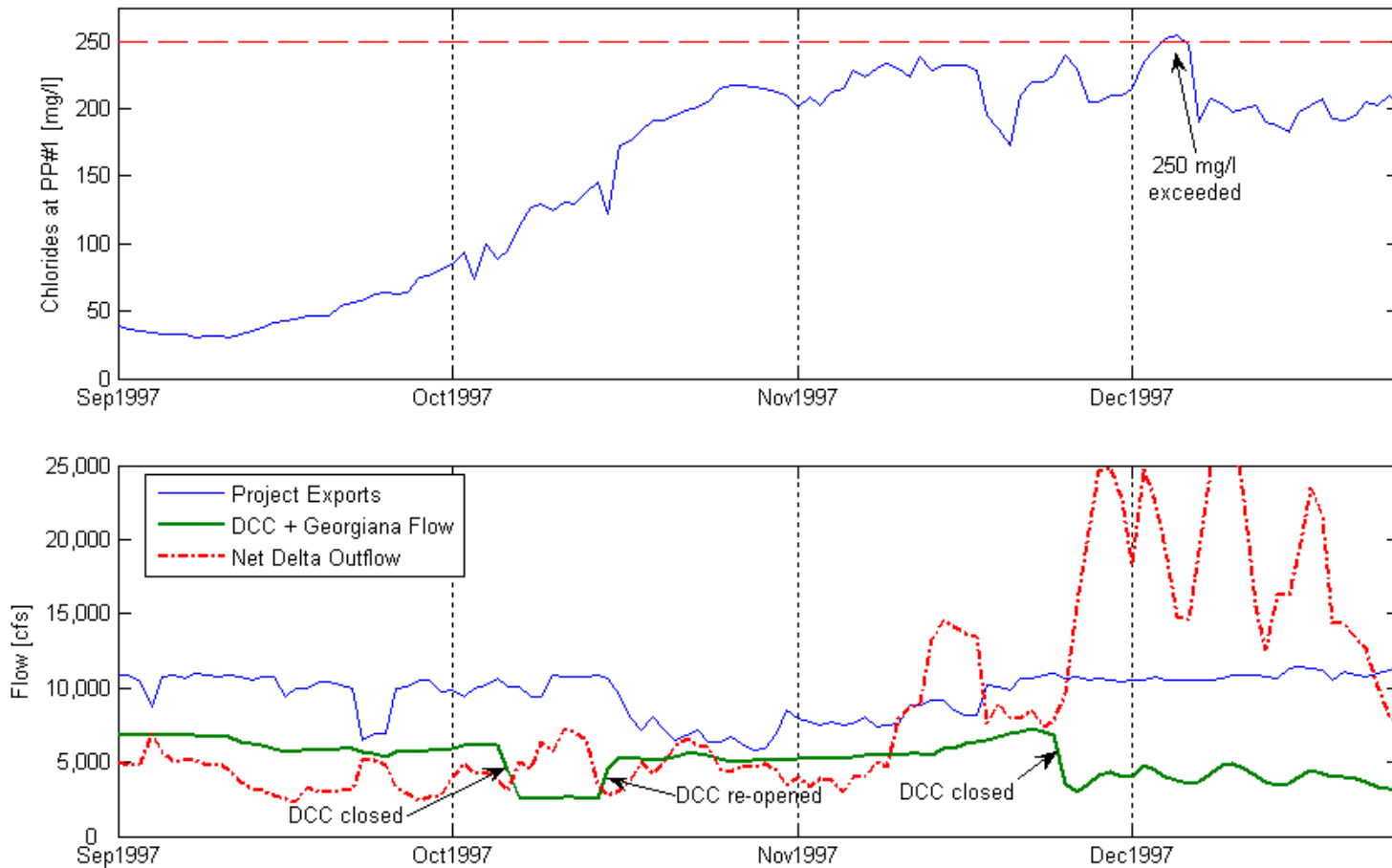
## Examples of Effects of Fall DCC Closures

- Closing the DCC under low Delta outflow and high export conditions degrades interior Delta water quality
- Three examples are:
  - ❖ October & December 1997
  - ❖ November 1999 and
  - ❖ December 2000
- In each case, water quality was an issue and operational adjustments had to be made:
  - ❖ Significant cut back in exports
  - ❖ Increasing Delta outflow
  - ❖ Reopening the DCC



# October & December 1997 Closures

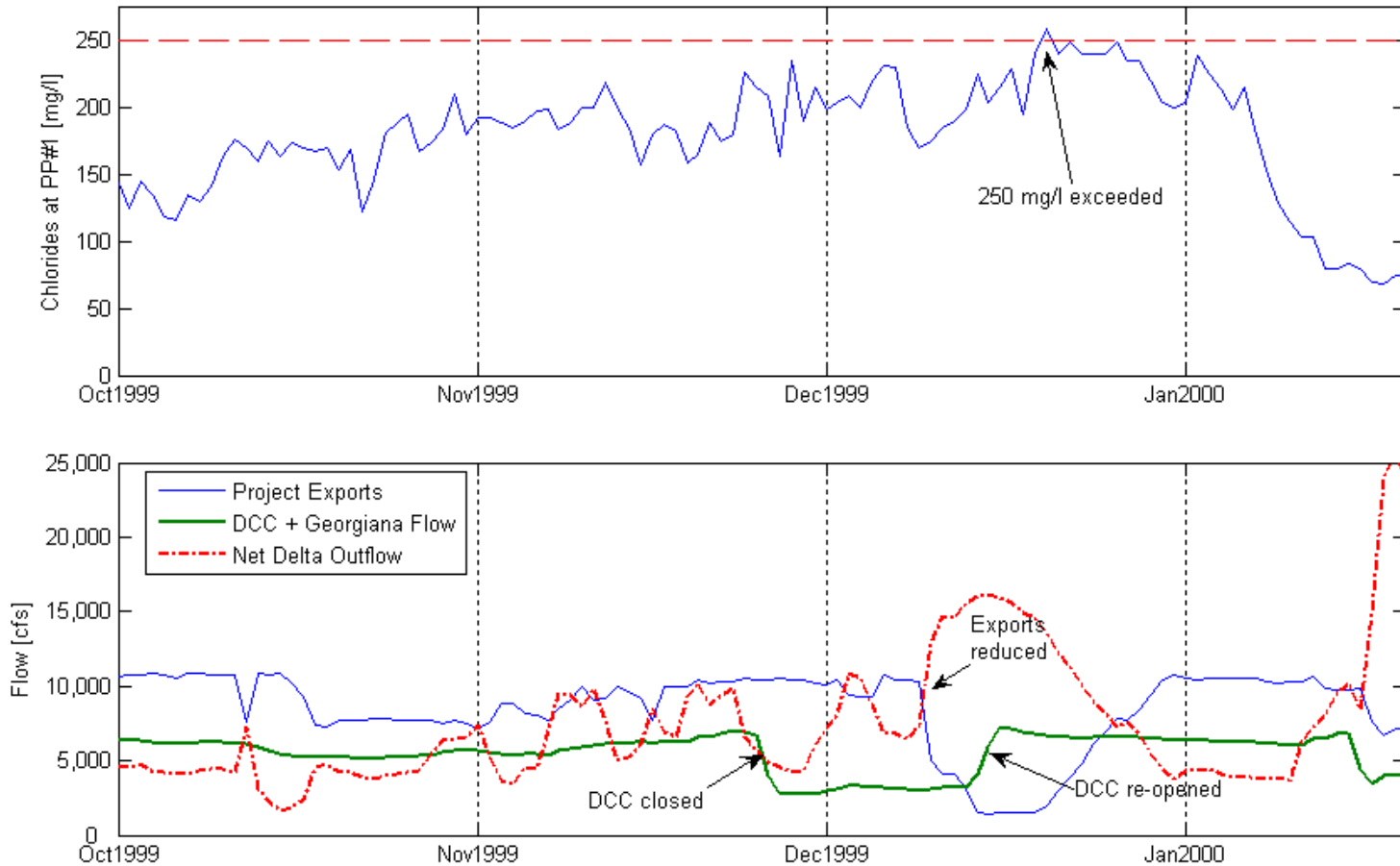
Figure 2: October and December 1997 DCC Closures





# November 1999 Closure

Figure 3: November 1999 DCC Closure

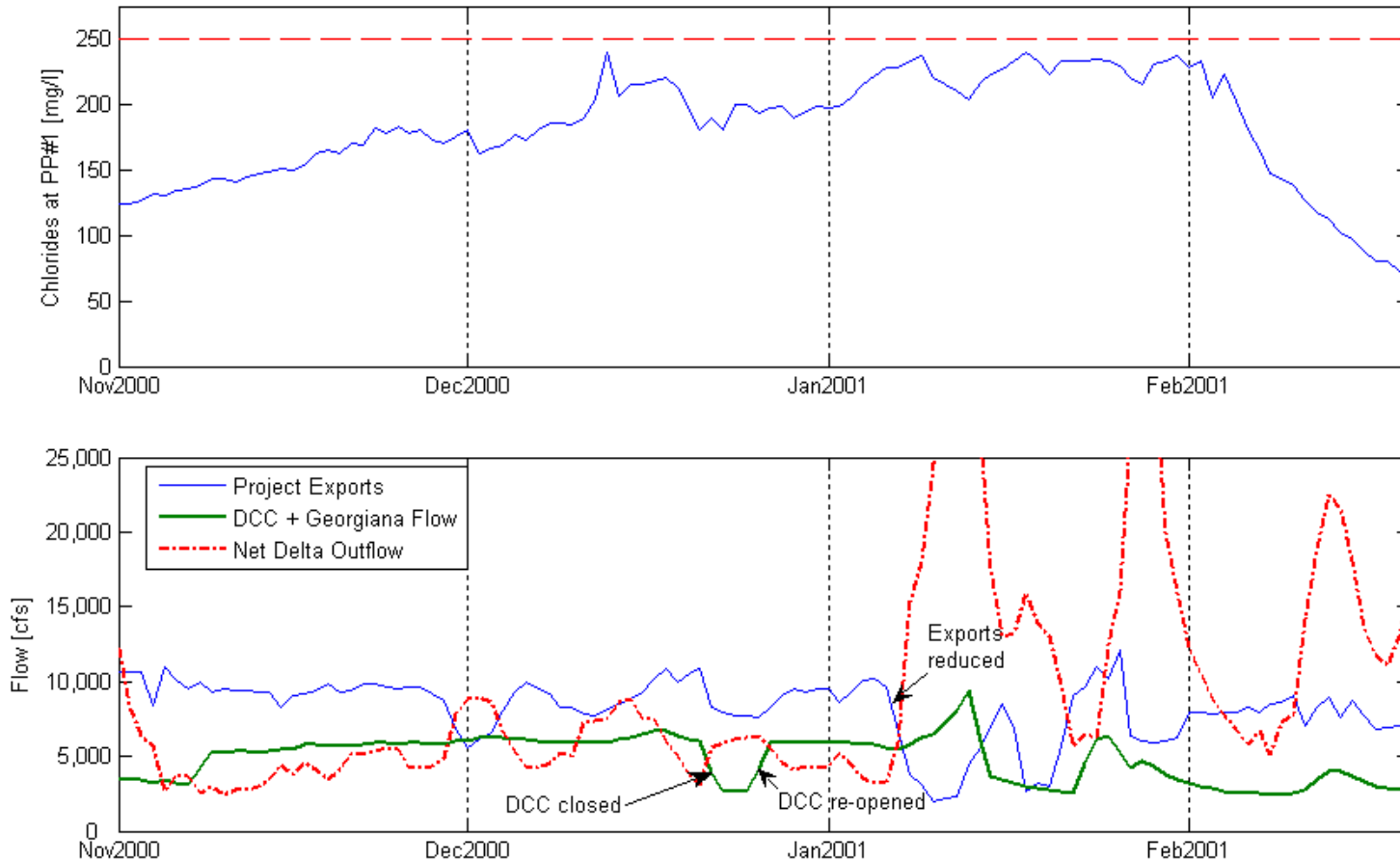






# December 2000 Closure

Figure 4: December 2000 DCC Closure



dcc\_closure\_2.m  
12-Nov-2004 m.m.







## November – January DCC Closures

- Closing the DCC in the fall degrades interior Delta water quality and makes it harder for the SWP and CVP to meet M&I chloride objectives
- Intent of November-January DCC requirement (1994 Bay-Delta Accord) was to keep DCC open at least 50% of time to protect water quality
- DCC should only be closed for fish (up to a maximum of 45 days) if there is clear evidence that fish are present



# Suggested Edits to Nov-Jan Requirement

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Suggested edits to 1995 Plan (Footnote 26, page 22):

[26] For the November-January period, close Delta Cross Channel gates for ~~up to~~ a total of up to 45 days, as needed for the protection of fish and for flood control. During this period, closures beyond 45 days will be allowed solely for flood control purposes and to prevent scour while the flows in the Sacramento River flows are in excess of 20,000 cfs. ~~The timing of the gate closure will be determined by the operations group established under the Framework Agreement.~~ The USBR will determine the timing and duration of the gate closure after consultation with the USFWS, the NMFS and the DFG. Consultation with the CALFED Operations Group will satisfy this requirement.