

**DEPARTMENT OF WATER RESOURCES**

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

**MAR 25 2005**

Mr. Arthur Baggett, Jr., Chair  
State Water Resources Control Board  
Post Office Box 2000  
Sacramento, California 95812-2000

Petition for Reconsideration of Water Right Order 2005-0009

Dear Mr. Baggett:

The Department of Water Resources (DWR) and Bureau of Reclamation have reviewed recent data of current salinity in the Southern Delta and observe water quality is below 0.7 Electrical Conductivity (EC). Because of recent rains and wet conditions on the San Joaquin River, we have decided to not petition the State Water Resources Control Board (Board) to reconsider its Water Right Order 2005-0009. Instead, we will continue to follow water quality conditions in the Southern Delta and if salinity increases to levels approaching 0.7 EC, we will submit a new petition for temporary urgency change for the reasons discussed below.

DWR and Reclamation water right permits are conditioned on implementing water quality objectives in the Southern Delta to protect agricultural beneficial uses. Under water right Decision 1641, DWR and Reclamation are responsible for maintaining year-round water quality of 1.0 mmhos/cm (or Electrical Conductivity (EC)), on a 30-day running average, at three Southern Delta compliance stations: San Joaquin River at Brandt Bridge, Old River near Middle River, and Old River at Tracy Road Bridge. On April 1, 2005, the agencies will be responsible for a water quality objective of 0.7 EC during April through August, unless permanent operable barriers (POB) are constructed, or equivalent measures are implemented, in the Southern Delta, and an operations plan that reasonably protects Southern Delta agriculture is prepared. (*Id.*)

The Board recognized in the development of D-1641 that the measures available to attempt to meet the 0.7 EC objective in the absence of the POB could result in unreasonable use of water and a significant reduction in water supplies south and west of the Delta. On February 18, 2005 DWR and Reclamation submitted a temporary urgency change petition to the Board requesting delay of the effective date of the 0.7 EC objective. The Board denied the request finding that the agencies failed to show adequate cause for the urgent need to change the requirement.

Recently at the March 14<sup>th</sup> and 15<sup>th</sup>, 2005 Board workshop on revising the 1995 Bay-Delta Water Quality Control Plan, the Board members, staff and workshop attendees heard the latest information regarding efforts to improve water quality conditions in the Southern Delta, such as programs to reduce agricultural drainage into the San Joaquin River. In addition, DWR presented graphs showing results of water quality monitoring data in the Southern Delta at the three D-1641 compliance stations. These graphs and others that DWR has prepared for this letter, attached as Exhibit A1 through A6, show that water quality in the Southern Delta varies depending on water year type. Water quality often exceeds 0.7 EC in July and August in average to dry years. While in most wet years, the values may be much less than 0.7, graphs of hydrologic conditions in

some wet year types show that water quality in the Southern Delta may be slightly higher than 0.7 EC. In addition, prior water year-type may affect the following salinity conditions, as can be seen in water year 1997, which followed a dry year, compared to water year 1998 following a wet year. Both 1997 and 1998 are classified as wet years, but salinity in the Southern Delta exceeded the 0.7 EC objective in 1997.

Current hydrologic conditions suggest that the San Joaquin River basin will likely fall into the wet classification this year. Monitoring data for March taken at Vernalis indicates water quality is measuring well below 0.7 EC. Although this suggests that water quality objectives at the three Southern Delta stations may be met during the next few months, historical monitoring data from 1997 with similar hydrology as that forecasted for the San Joaquin Basin this year suggests that the salinity will increase in July and August and may exceed the required 0.7 EC objective.

As presented by DWR during the March 14 workshop, the temporary barriers provide benefits to Southern Delta agricultural water users by raising channel water levels to maintain levels for diversion facilities. The temporary barriers, however, cannot provide adequate water circulation benefits for water quality protection to achieve 0.7 EC under certain conditions. In fact, at times, implementation of the temporary barrier program to address water levels inhibits water circulation patterns conducive to managing water quality in the interior channels. For example, salinity may increase in Old River near Tracy Road Bridge despite lower salinity at Vernalis on the San Joaquin River. This is caused by local agricultural drainage and low or absent circulation (null zones). Increasing flow from the San Joaquin River does not improve the circulation in these interior channels. The proposed POB program, because of the ability to open and close the barriers, will improve circulation in the interior Southern Delta channels and prevent this problem. At this time, the proposed POB appears to be the only feasible water management tool available that will affect the interior channel water quality to achieve the Southern Delta objectives.

If DWR and Reclamation cannot meet the conditions under D-1641, they will not be authorized to use their facilities for water transfers or joint point operations based on requirements in their Water Quality Response Plan for joint point operations. (See D1641 at 156, section 2.a.(4) requiring that all permit conditions be met before joint point operations are undertaken.) The inability to make transfers would prevent wheeling of water for the Environmental Water Account Program (EWA) and for wildlife refuges south of the Delta during August, the month when the majority of this water is transferred. Relief from the requirement of the 0.7 EC objective in August would be critical to prevent interference with these transfers at the SWP Delta pumping facility.

DWR and Reclamation will submit a petition for a temporary urgency change for this limited period if conditions in June suggest that salinity in the Southern Delta may be approaching the 0.7 EC values. We believe such temporary relief will not harm other water users. During the March 14<sup>th</sup> and 15<sup>th</sup> Board workshop on the Southern Delta salinity objectives, various parties submitted analyses and information to the Board that support the finding that continuation of existing water quality conditions this year will not

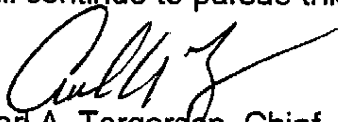
Mr. Baggett

MAR 25 2005  
Page 3

harm agricultural water users in the Southern Delta. Experts representing the San Joaquin River Group Authority (SJRGGA) presented their analysis of information showing that irrigation water of salinity of 1.0 EC is adequate for obtaining maximum crop yields in the Southern Delta. James Brownell reviewed studies on irrigation salinities for crops and the irrigation practices of an irrigation district in the Southern Delta and concluded that Delta water salinity of 1.0 EC would not be expected to impact crop yield (Presentation of James R. Brownell, PhD, consultant to SJRGGA for 2005 Workshop, p. 7-8). William Johnston reviewed past studies and testimony prepared for the Board in prior hearings and reported that analyses in these studies emphasize that agricultural practices and specific soil and climatic conditions are more important in maintaining favorable crop production than irrigation water. (Presentation of William R. Johnston, "Concerning Southern Delta Electrical Conductivity," SWRCB March 2005, p. 4 and 6.) Johnston also reviewed recent studies on irrigation water salinity and crop yields and found that these studies support finding that 1.1 EC would provide adequate water quality in the Southern Delta. (Id. at 7.) Consistent with the presentations of the SJRGGA experts, the South Delta Water Agency presented a 1981 study that recommended more extensive field study of leaching fractions in the South Delta in order to better determine an adequate water quality standard for the South Delta. (Hoffman, Prichard, and Meyer, "Water Quality Considerations for the South Delta Water Agency," 1981, p. 10.) For example, this study suggests that if a farmer achieved a 23 percent leaching fraction, beans could be irrigated with about 1.0 EC and achieve 100% yield. (Id. at Table 5.)

The information from the Board workshop supports finding that water quality of about 1.0 EC is not expected to negatively impact crop production in the Southern Delta. Furthermore, based on this year's hydrology compared with that of past years with similar hydrology, water quality conditions in the Southern Delta is not expected to exceed 1.0 EC and may likely be close to 0.7 EC. Therefore, in the event that DWR and Reclamation may submit an temporary urgency change petition for relief from implementing the 0.7 EC objective, such relief would likely be in the public interest as no harm would occur to other water users and it would assure DWR and Reclamation that they could carry out their other obligations regarding water transfers this season.

DWR and Reclamation have submitted to the Board a petition for long-term change of their water rights to address the delay in implementation of the POB and a need to consider changing the effective date of the 0.7 EC objective in the Southern Delta. We will continue to pursue this petition with the Board.

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

Attachments

cc: (See attached list.)

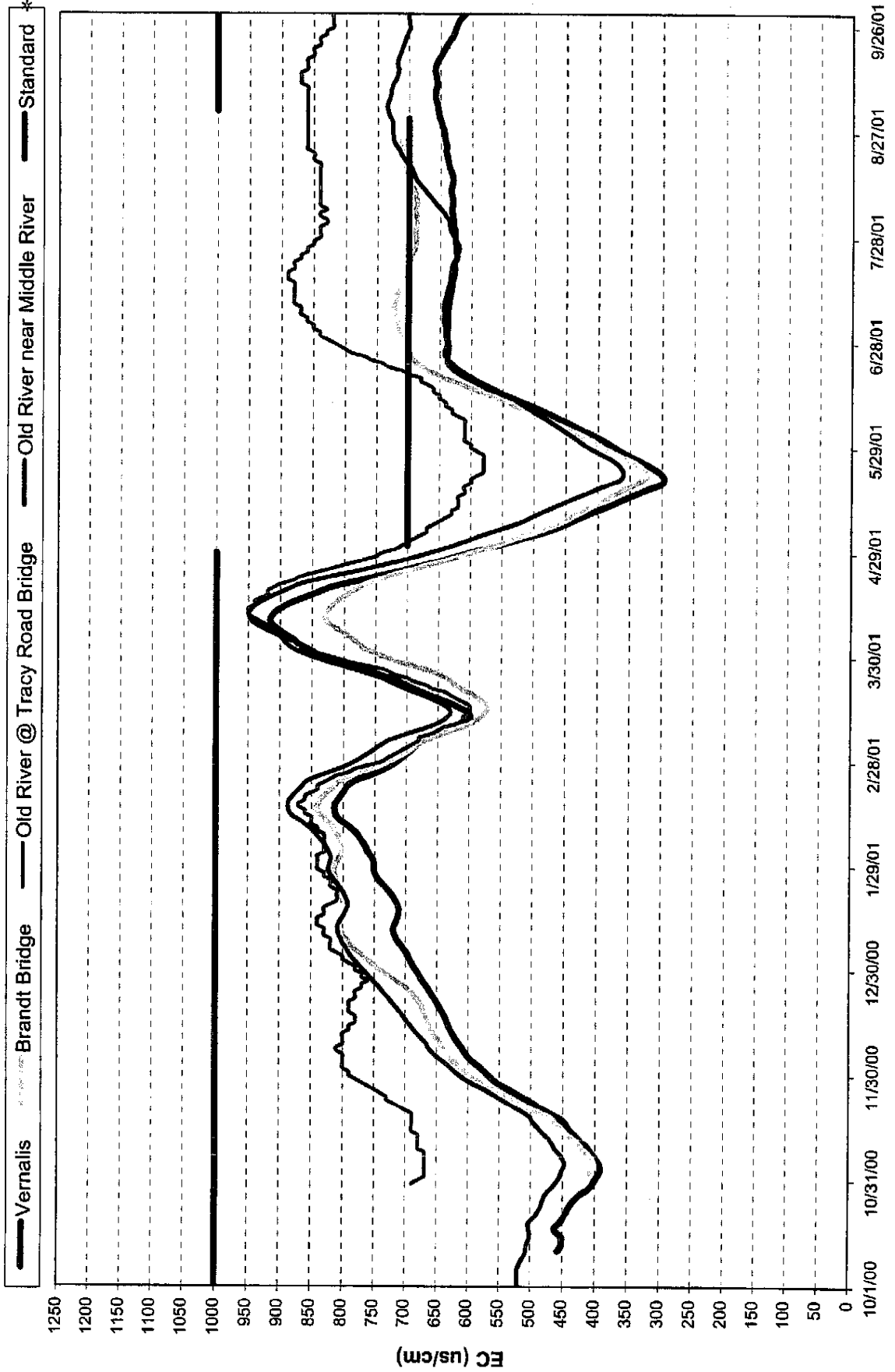
Exhibit A1

WY 2004: Sacramento Index - Below Normal ; San Joaquin - Dry



\* The 700 uS/cm standard applies beginning April 30, per footnote 2 on page 182 of the Revised D-1641 . Applies in 2005 to Brandt Bridge and Old River stations.

### WY 2001: Sacramento Index - Dry ; San Joaquin Index - Dry



\* The 700  $\mu\text{S/cm}$  standard applies beginning April 30, per footnote 2 on page 182 of the Revised D-1641 & Applies in 2005 at Brndt Bridge and Old River stations.

Exhibit A3

WY 2000: Sacramento Index - Above Normal ; San Joaquin Index - Above Normal



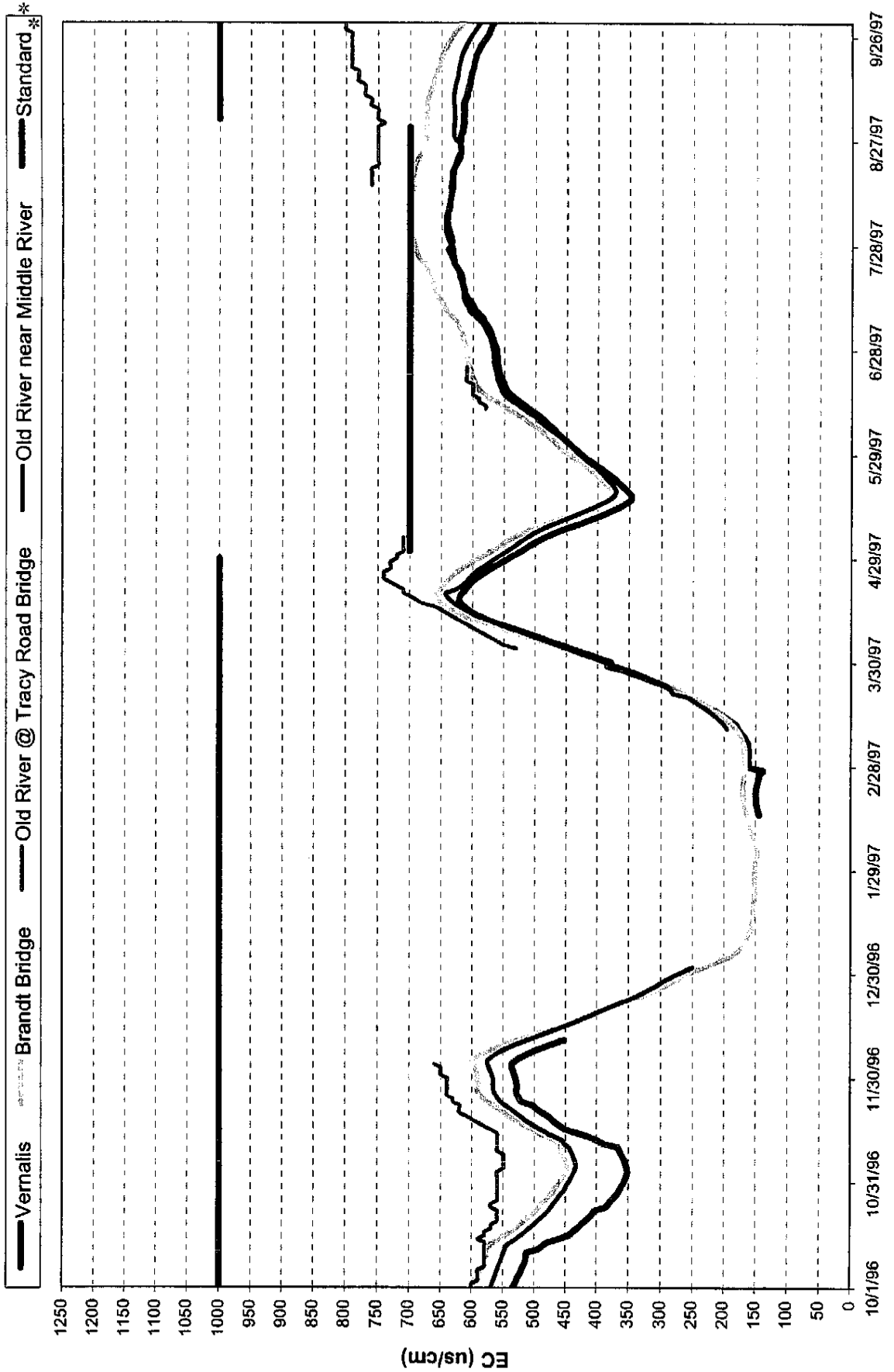
\* The 700 uS/cm standard applies beginning April 30, per footnote 2 on page 182 of the Revised D-1641 & applies at Brandt Bridge and Old River stations in 2005.

WY 1998: Sacramento Index - Wet ; San Joaquin Index - Wet



\* The 700 uS/cm standard applies beginning April 30, per footnote 2 on page 182 of the Revised D-1641 & applies at Brandt Bridge and Old River stations in 2005.

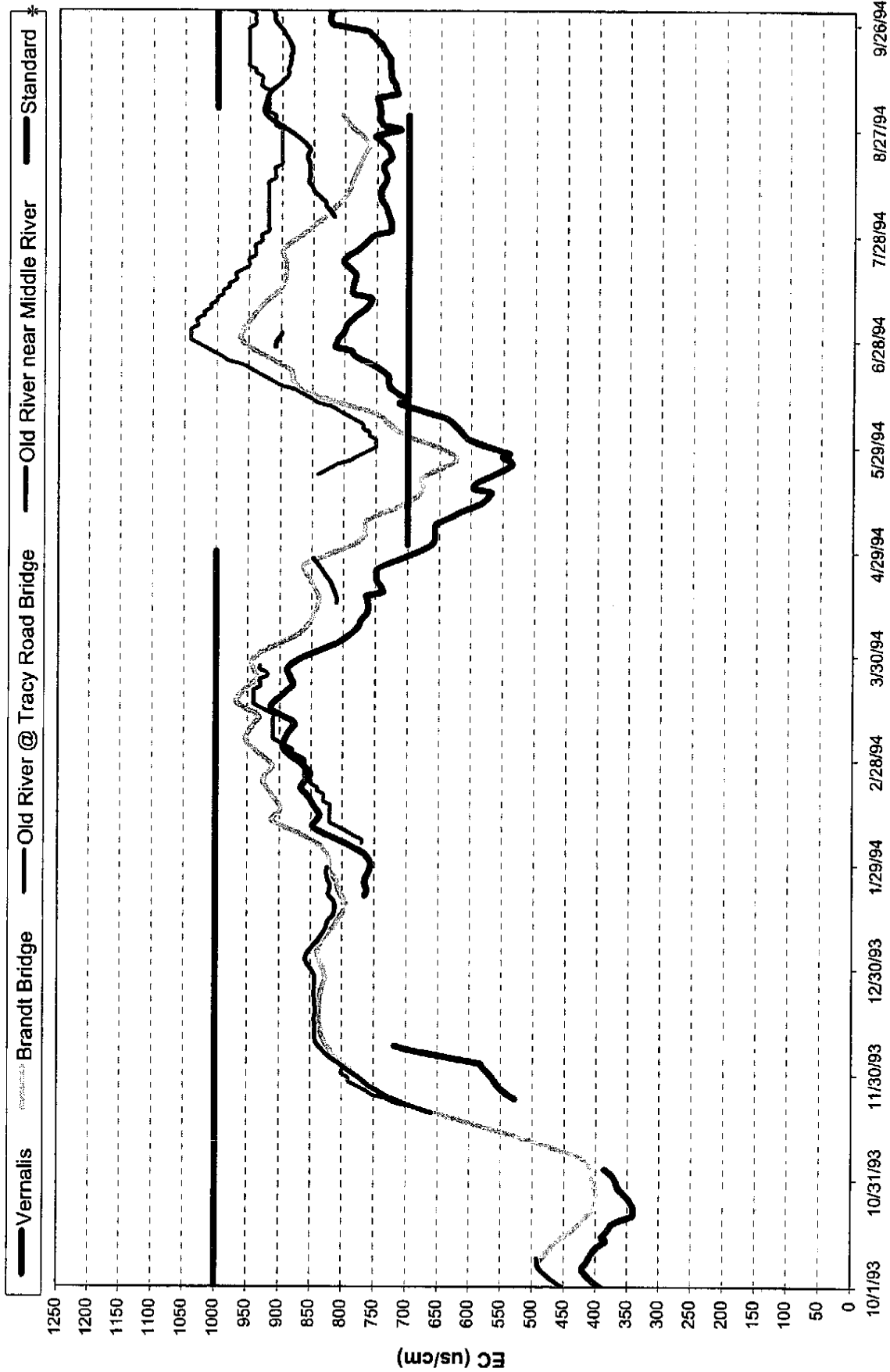
WY 1997: Sacramento Index - Wet ; San Joaquin - Wet



\* The 700 us/cm standard applies beginning April 30, per footnote 2 on page 182 of the Revised D-1641 & applies in 2005 at Brandt Bridge Old River stations.



WY 1994: Sacramento Index - Critically Dry ; San Joaquin Index - Critically Dry



\* The 700 uS/cm standard applies beginning April 30, per footnote 2 on page 182 of the Revised D-1641 & applies in 2005 at Brandt Bridge and Old River stations.