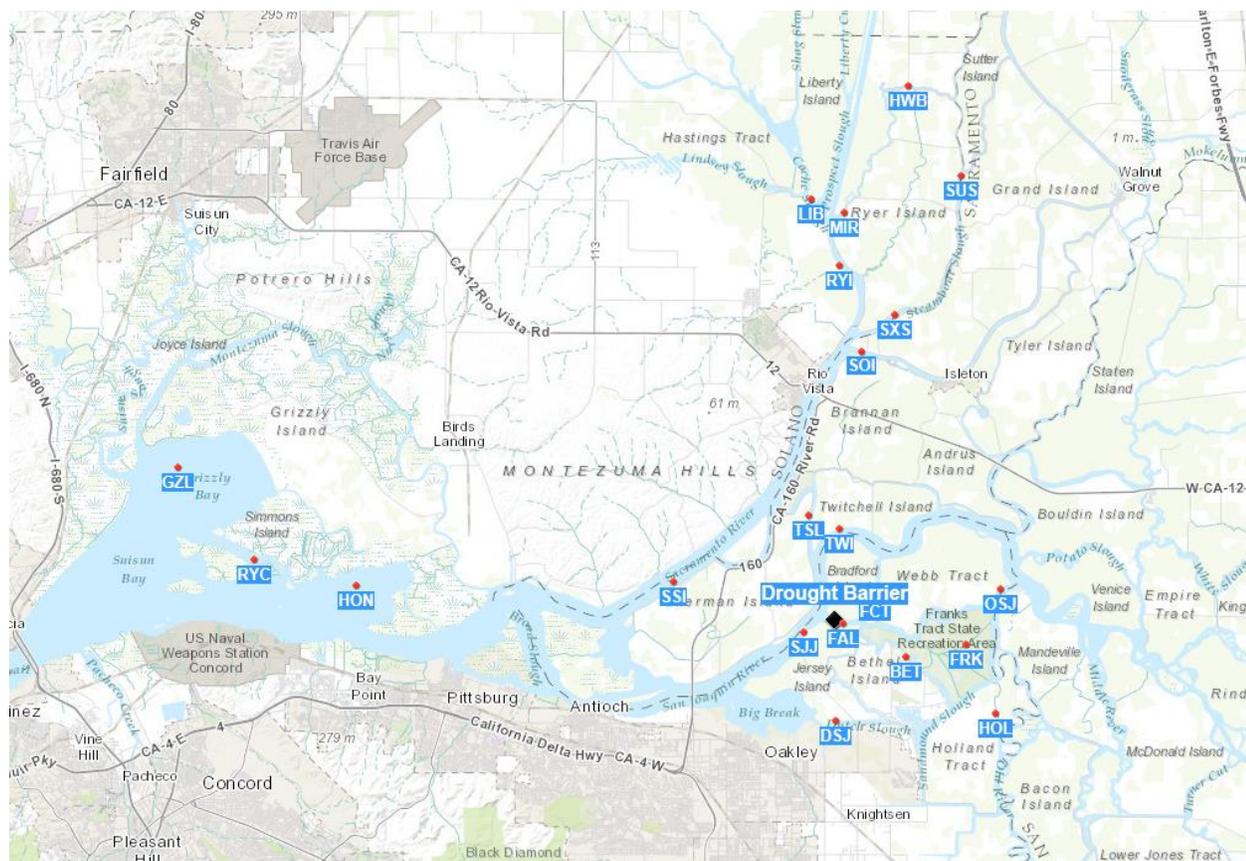


Emergency Drought Barrier Water Quality Monitoring Summary ¹

Weekly Update for September 14 through September 20, 2015

Below is a summary of water quality, flow, and velocity data since the hydraulic closure of the Emergency Drought Barrier (EDB) at West False River on May 28, 2015, with emphasis on trends observed during the past week. The EDB rock placement was completed on June 12, 2015. For additional water quality monitoring data, access the network of CDEC stations at the following link:

<http://dwr.maps.arcgis.com/apps/Viewer/index.html?appid=3be5e0bbe0994b76883b0567f4f6b9e3>

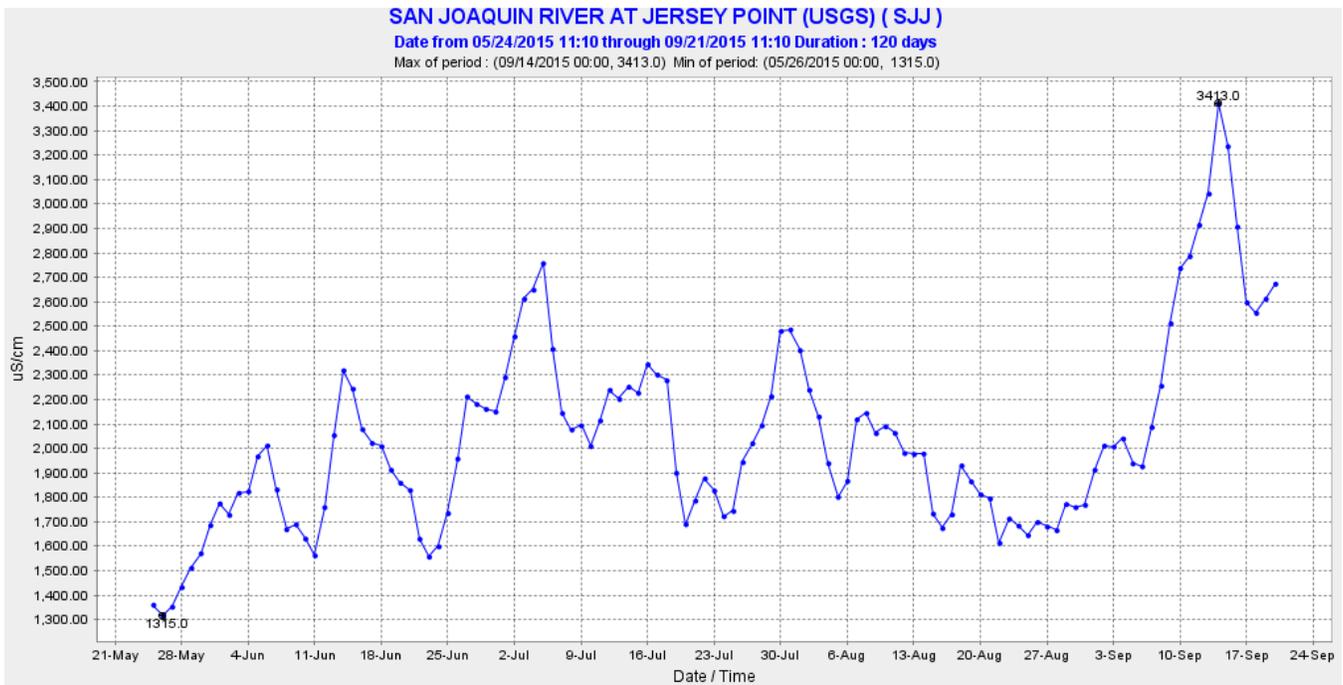
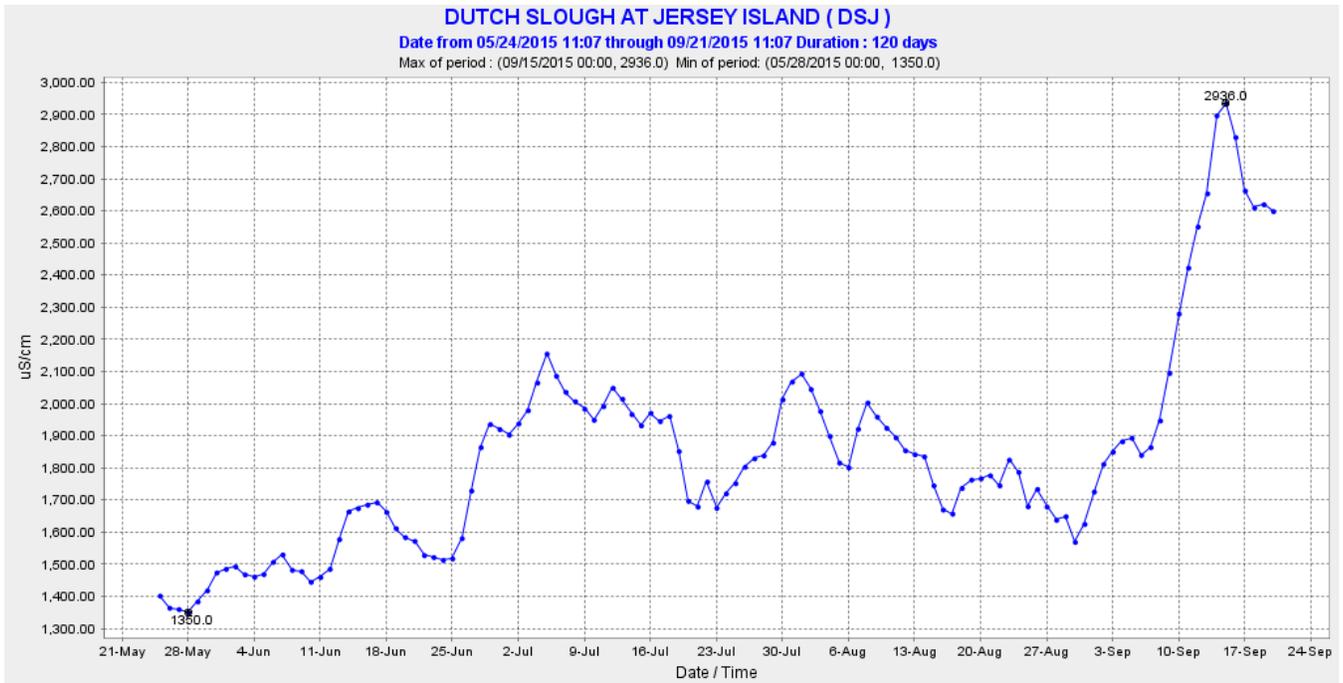


Specific Conductivity

After reaching high levels since the barrier was closed, average daily specific conductivity (EC) levels are decreasing again at San Joaquin River at Jersey Point (SJJ), Dutch Slough at Jersey Island (DSL), Fisherman's Cut (FCT), and False River (FAL). Peak levels were reached on September 14 or 15 before beginning to decrease. At Holland Cut (HOL) average daily EC reached a September peak of 759 $\mu\text{S}/\text{cm}$, but levels have decreased slightly since.

¹ All data in this report and subsequent weekly reports posted to California Data Exchange Network (CDEC) are preliminary and have not yet been validated.

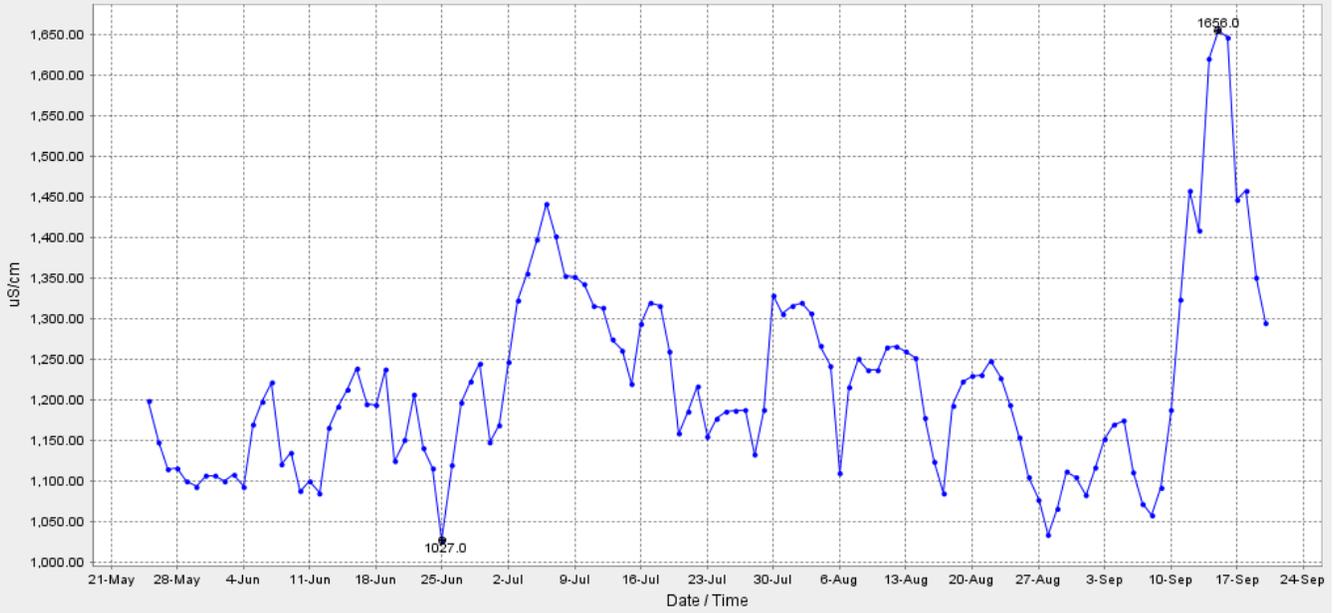
Daily average EC values for five stations in the vicinity of the EDB:



FALSE RIVER (FAL)

Date from 05/24/2015 11:19 through 09/21/2015 11:19 Duration : 120 days

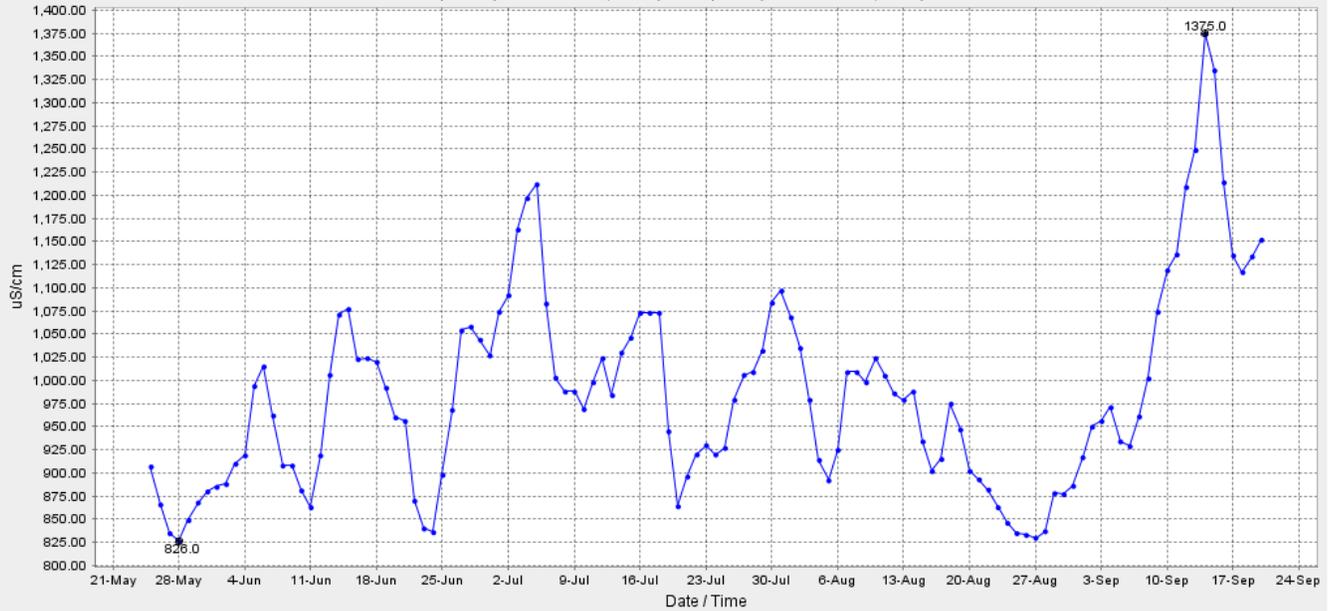
Max of period : (09/15/2015 00:00, 1656.0) Min of period : (06/25/2015 00:00, 1027.0)

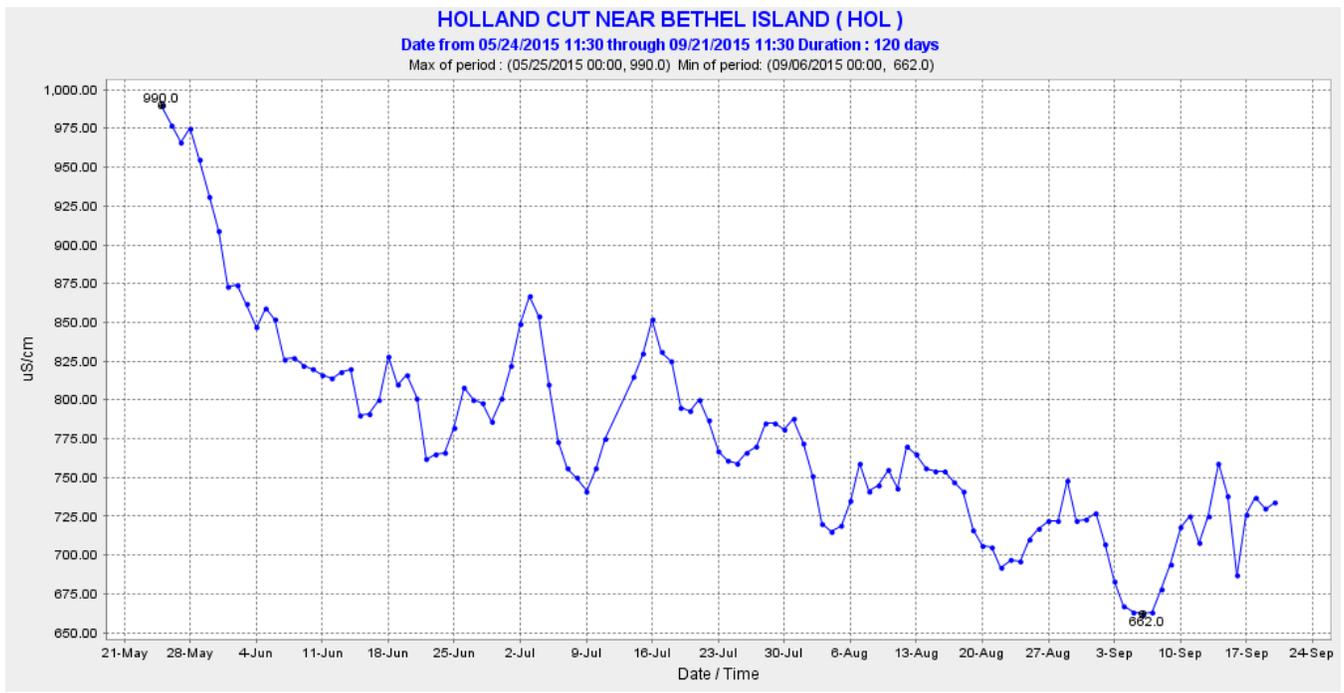


FISHERMANS CUT (FCT)

Date from 05/24/2015 11:28 through 09/21/2015 11:28 Duration : 120 days

Max of period : (09/14/2015 00:00, 1375.0) Min of period : (05/28/2015 00:00, 826.0)

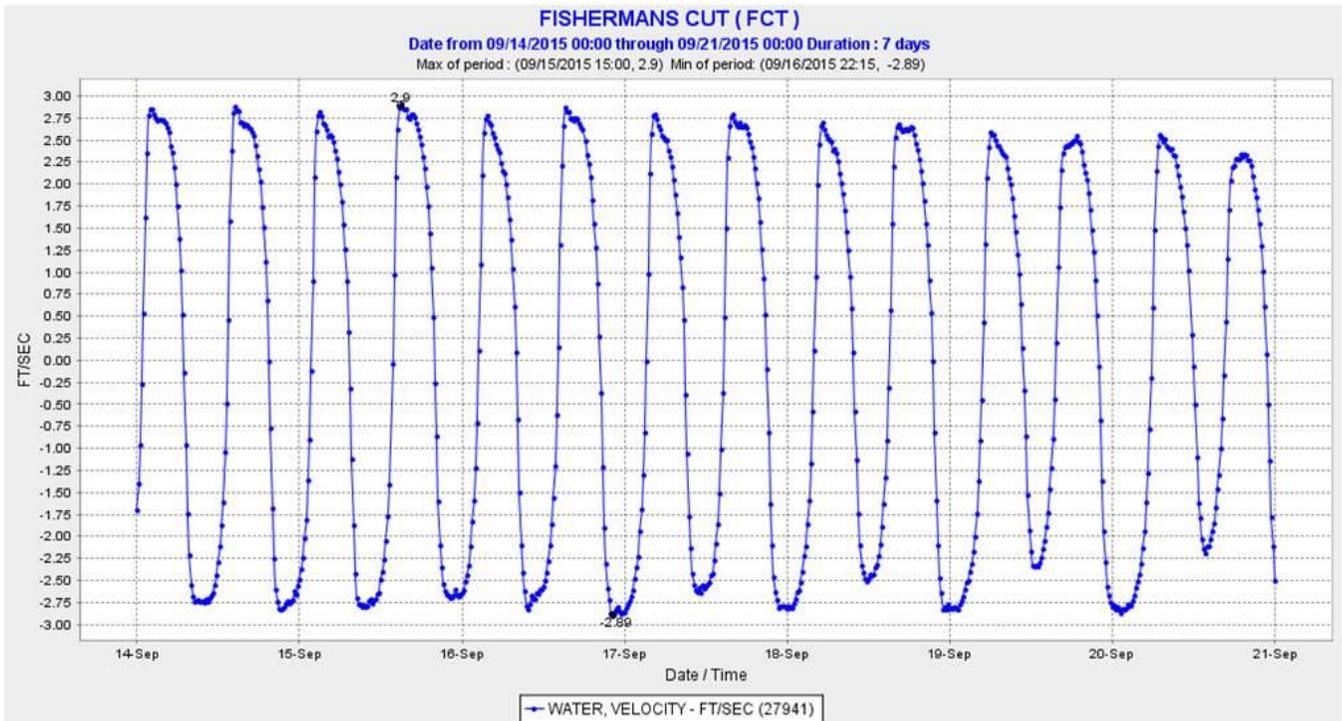




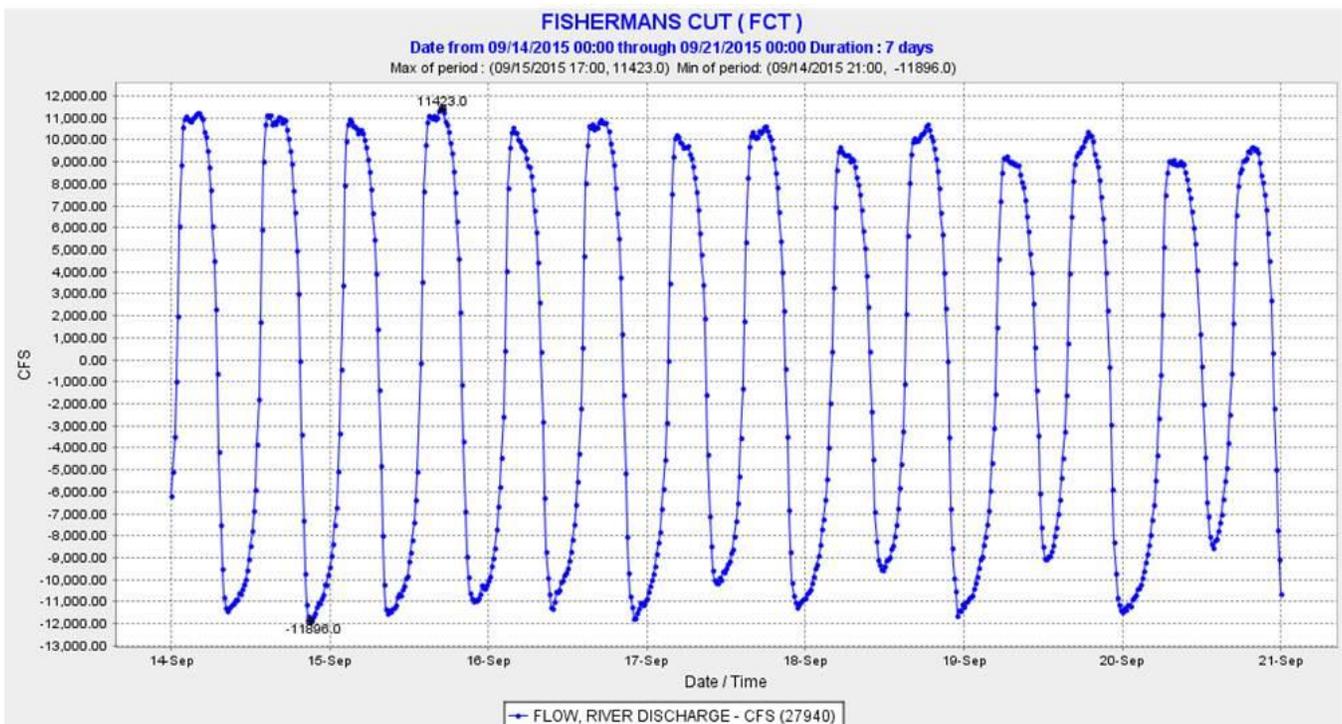
Flow and Velocity

Peak water velocities at the FCT flow station varied between +2.90 ft/s (9/15/15 at 15:00) and – 2.89 ft/s (9/16/15 at 22:15). While the barrier is in place, positive water velocities measured at this station refer to water flowing into Fisherman’s Cut southward from the San Joaquin River. Thus, last week’s peak water velocity of +2.90 ft/s occurred during a flood tide. Flows varied between +11,423 cfs (9/15/15 at 17:00) and –11,896 cfs (9/14/15 at 21:00) indicating a higher peak flow during an ebb tide. All data will be validated and reported to the Water Data Library. Below are the velocity and flow plots for the last week of data.

15-Minute velocities for FCT in the vicinity of the emergency drought barrier:



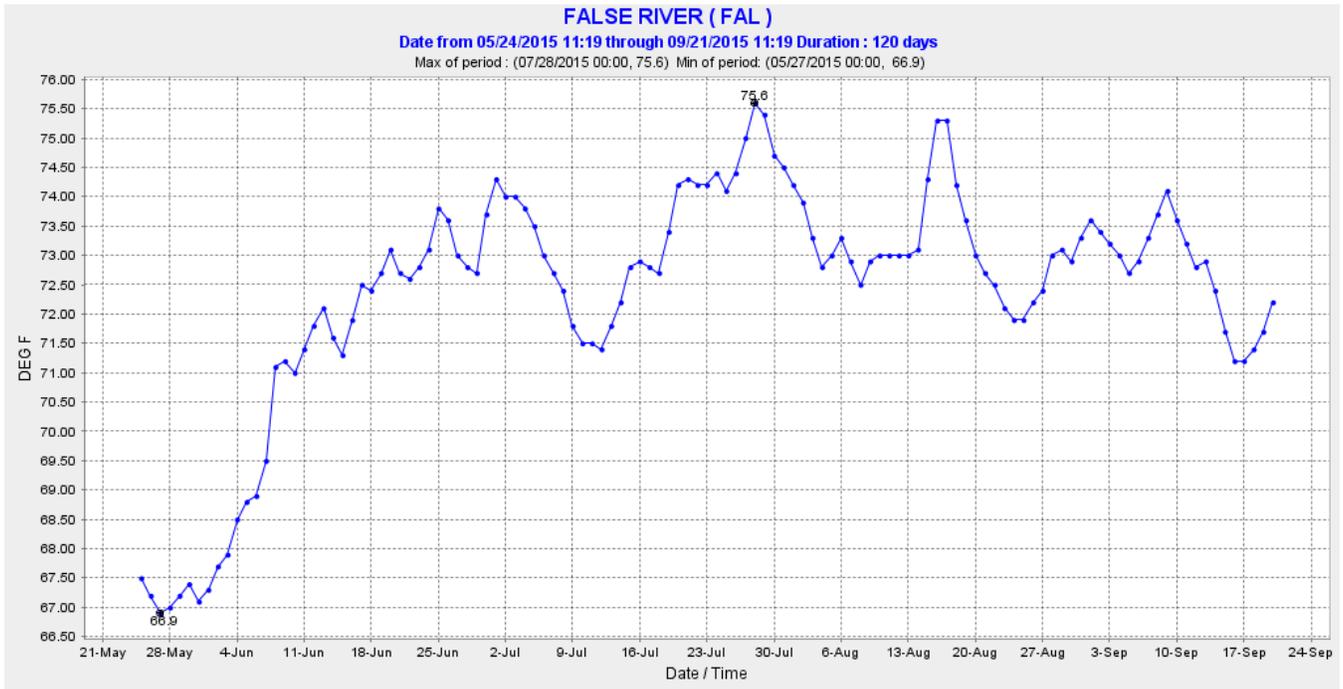
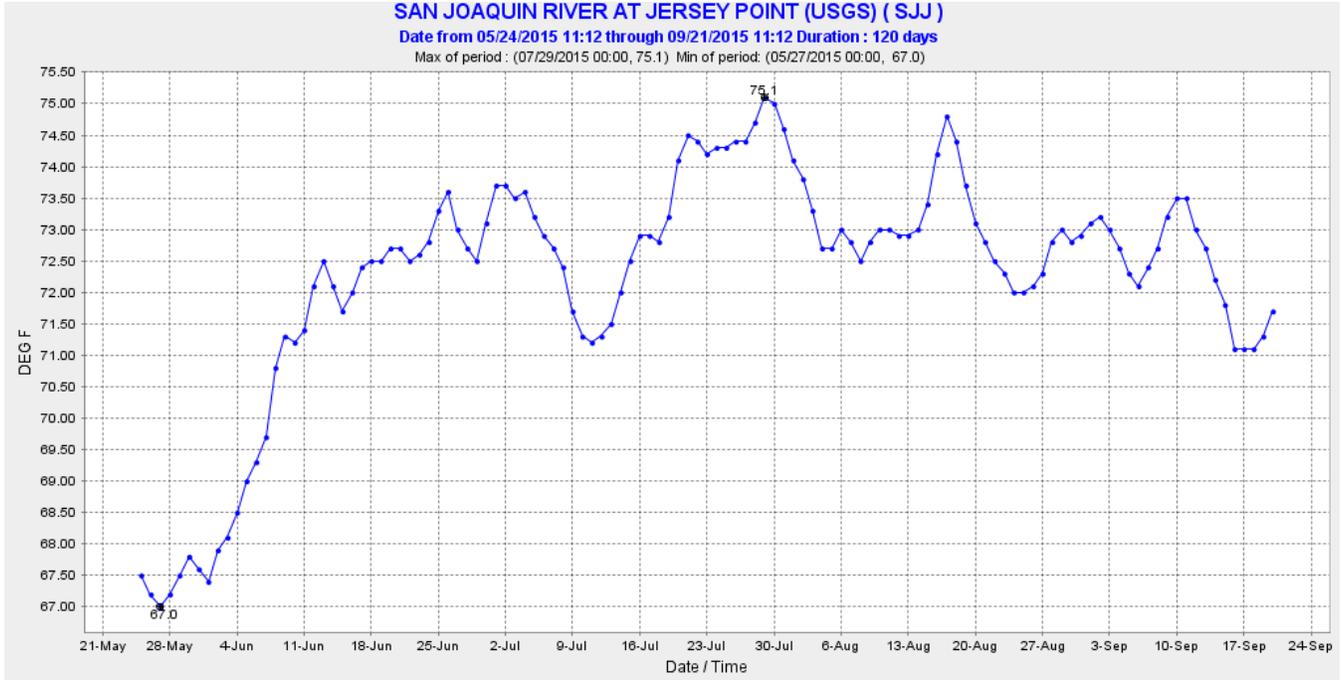
15-Minute flows for FCT in the vicinity of the emergency drought barrier:



Water Temperatures

During the past 7 days, average daily water temperature at SJJ decreased about 1°F while weekly beginning and ending temperature remained similar at FAL.

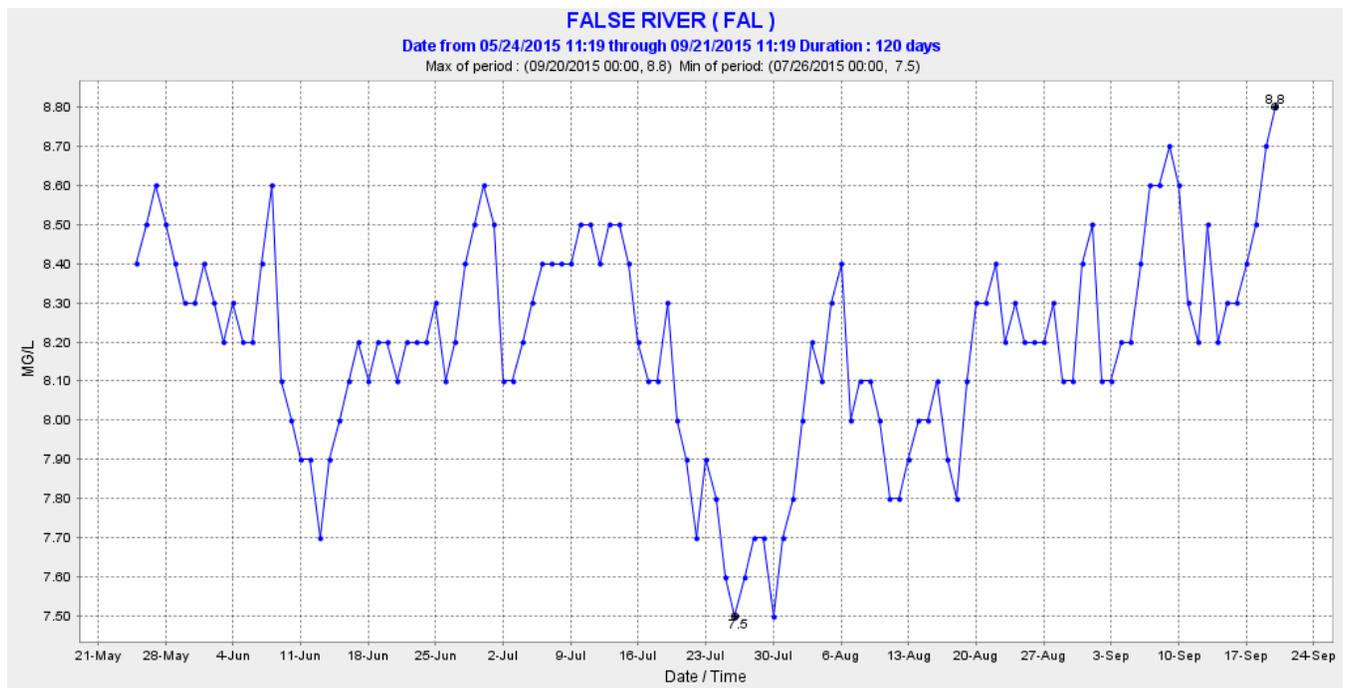
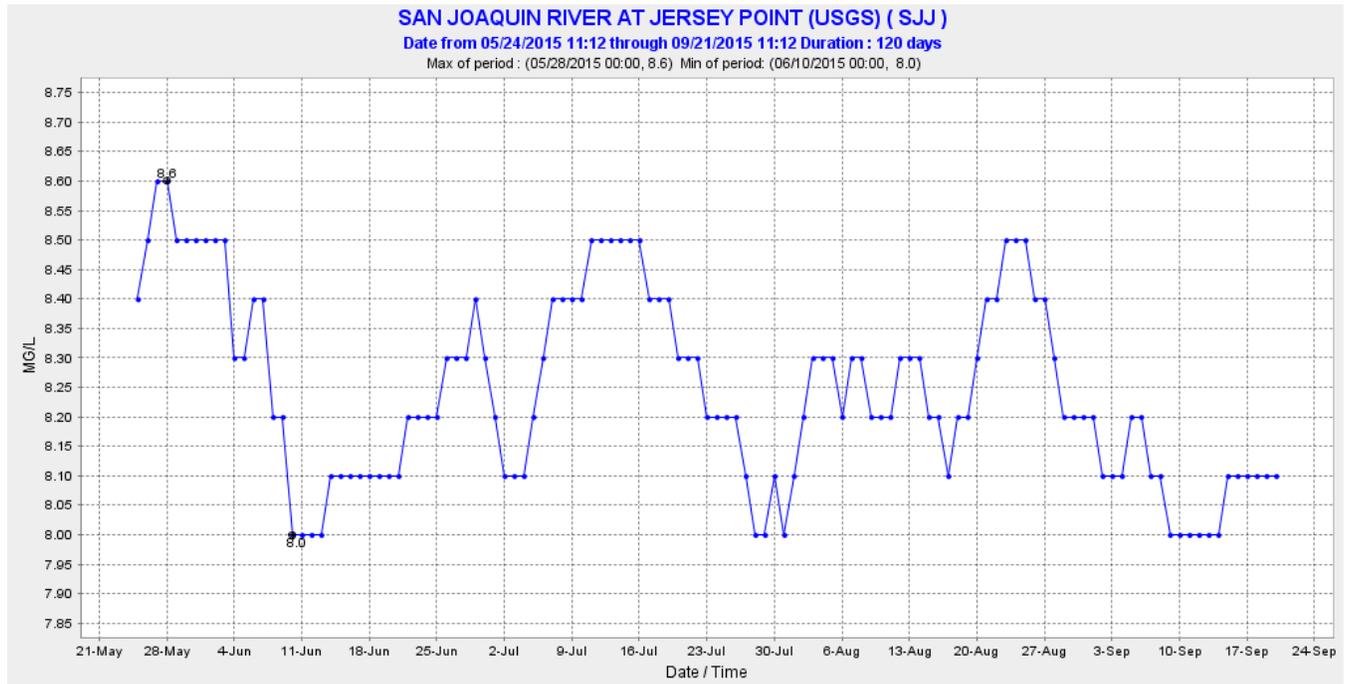
Daily average temperature for stations immediately upstream and downstream of the EDB:



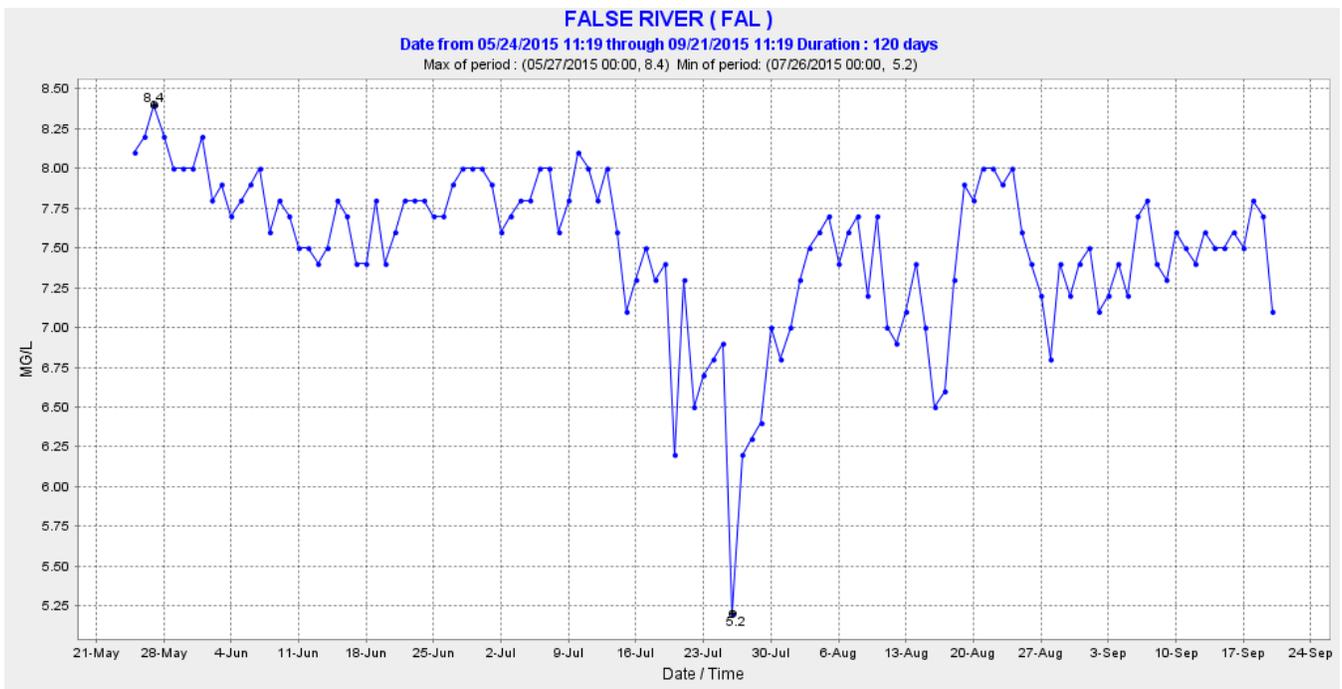
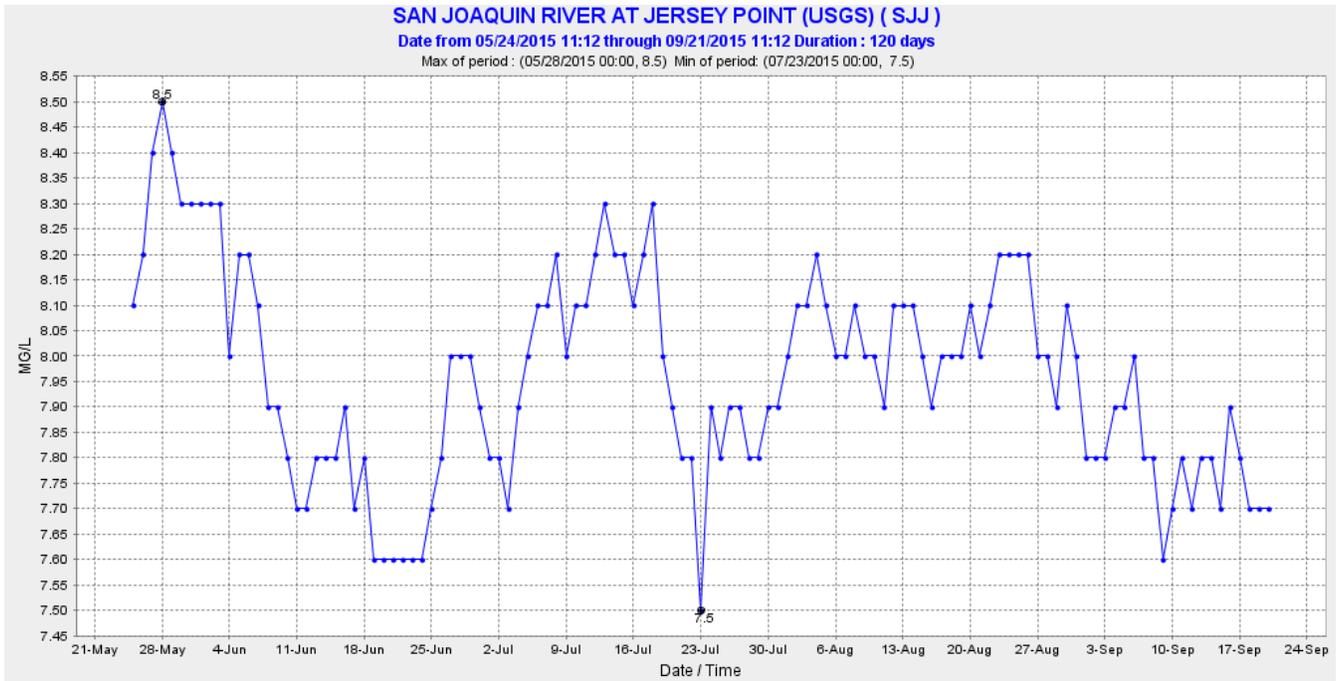
Dissolved Oxygen

During the past 6 days, average daily dissolved oxygen (DO) increased slightly at SJJ, while increasing at FAL 0.3 mg/L to a high of 8.8 mg/l since barrier closure. Average daily DO remains at or above 8.0 mg/L for both stations. Minimum DO levels remained relatively stable at both stations. At both stations DO remained well above the 5.0 mg/l water quality criterion for aquatic life, as it has since the barrier was installed.

Daily average DO for stations immediately upstream and downstream of the EDB:



Daily minimum DO for stations immediately upstream and downstream of the EDB:



Summary of EC data ($\mu\text{S}/\text{cm}$) by station for the period September 14 through September 20, 2015. **Note: Not all data has transmitted through CDEC for this period. Data from RYC was transmitted to CDEC beginning at 1030 on September 18.**

Station	Mean	Median	Minimum	Maximum	Area
Suisun Bay - Cutoff near Ryer (RYC)	21043	21195	17391	24993	Grizzly Bay to Lower Sac River
Grizzly Bay (GZL)	22979	22755	20720	25398	
Sacramento River near Sherman Island (SSI)	6491	6159	2098	11841	Dutch Slough
Dutch Slough @ Jersey Island (DSJ)	2732	2680	2040	3510	
San Joaquin River @ Jersey Point (SJJ)	2841	2695	1380	5130	Vicinity of EDB
Three Mile Slough at San Joaquin River (TSL)	2601	2385	1290	5170	
San Joaquin River @ Twitchell Island (TWI)	1824	1755	800	3363	
Fisherman's Cut (FCT)	1210	1103	723	2168	
False River (FAL)	1496	1450	1250	2100	
Bethel Island near Piper Slough (BET)	963	962	903	1056	Frank's Tract
Franks Tract Mid (FRK)	884	884	848	918	
Old River near Frank's Tract near Terminous (OSJ)	659	646.5	471	901	
Holland Cut near Bethel Island (HOL)	733	720	646	916	
Sacramento River downstream of Isleton (SOI)	365	323	171	1130	North Delta/Cache Slough
Steamboat Slough near Sacramento River (SXS)	230	199	174	436	
Cache Slough @ Ryer Island (RYI)	258	255	224	348	
Liberty Island @ Approx Cntr S End (LIB)	256	256	223	301	
Miner Slough (MIR)	206	189	168	283	
Steamboat Slough downstream of Sutter Slough (SUS)	175	175	166	185	
Miner Slough @ HWY 84 Bridge (HWB)	174	174	164	185	

Mean specific conductance ($\mu\text{S}/\text{cm}$) for the period of September 14 through September 20, 2015. Means from RYC and GZL are much greater and thus are not shown due to scaling issues.

