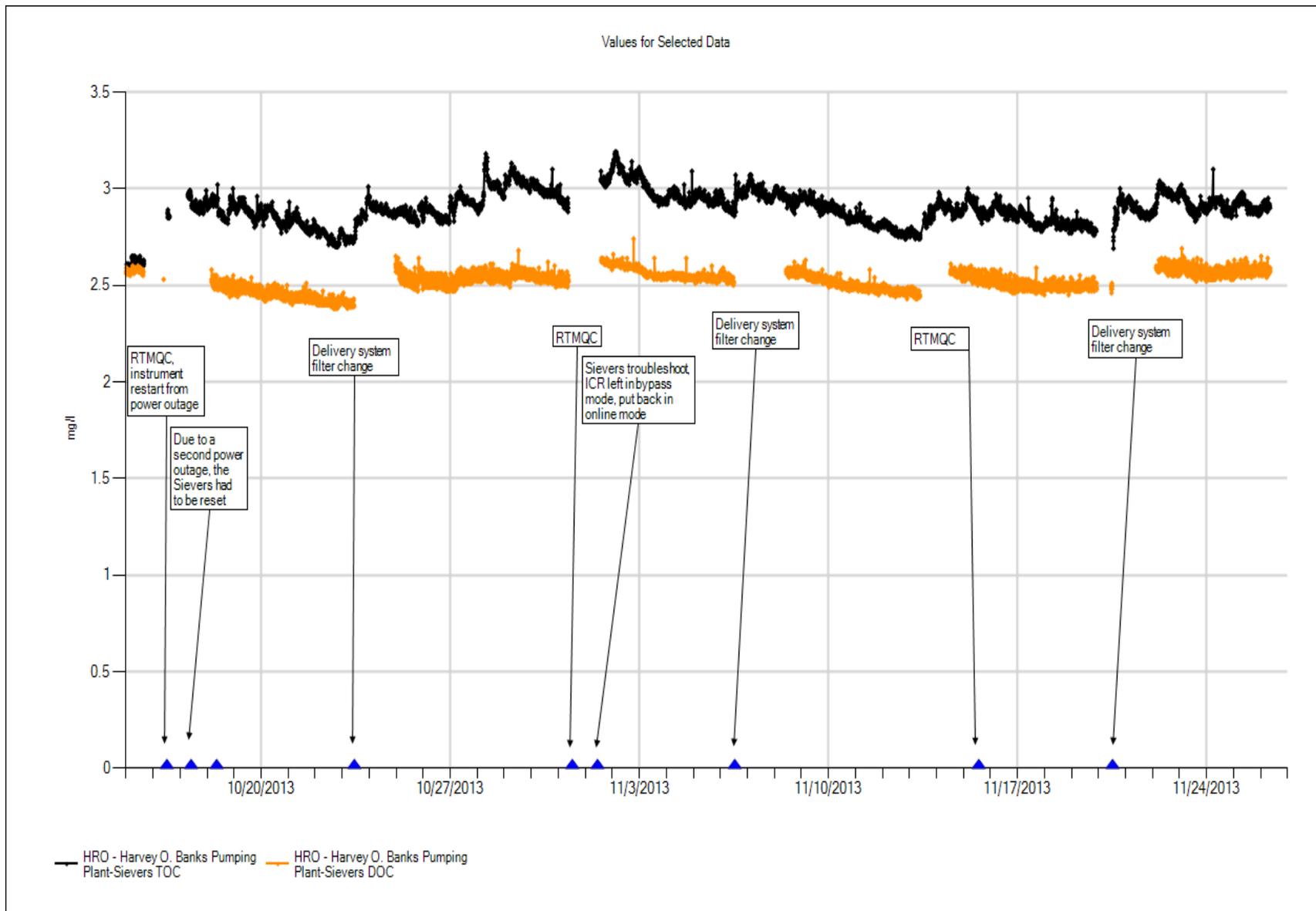
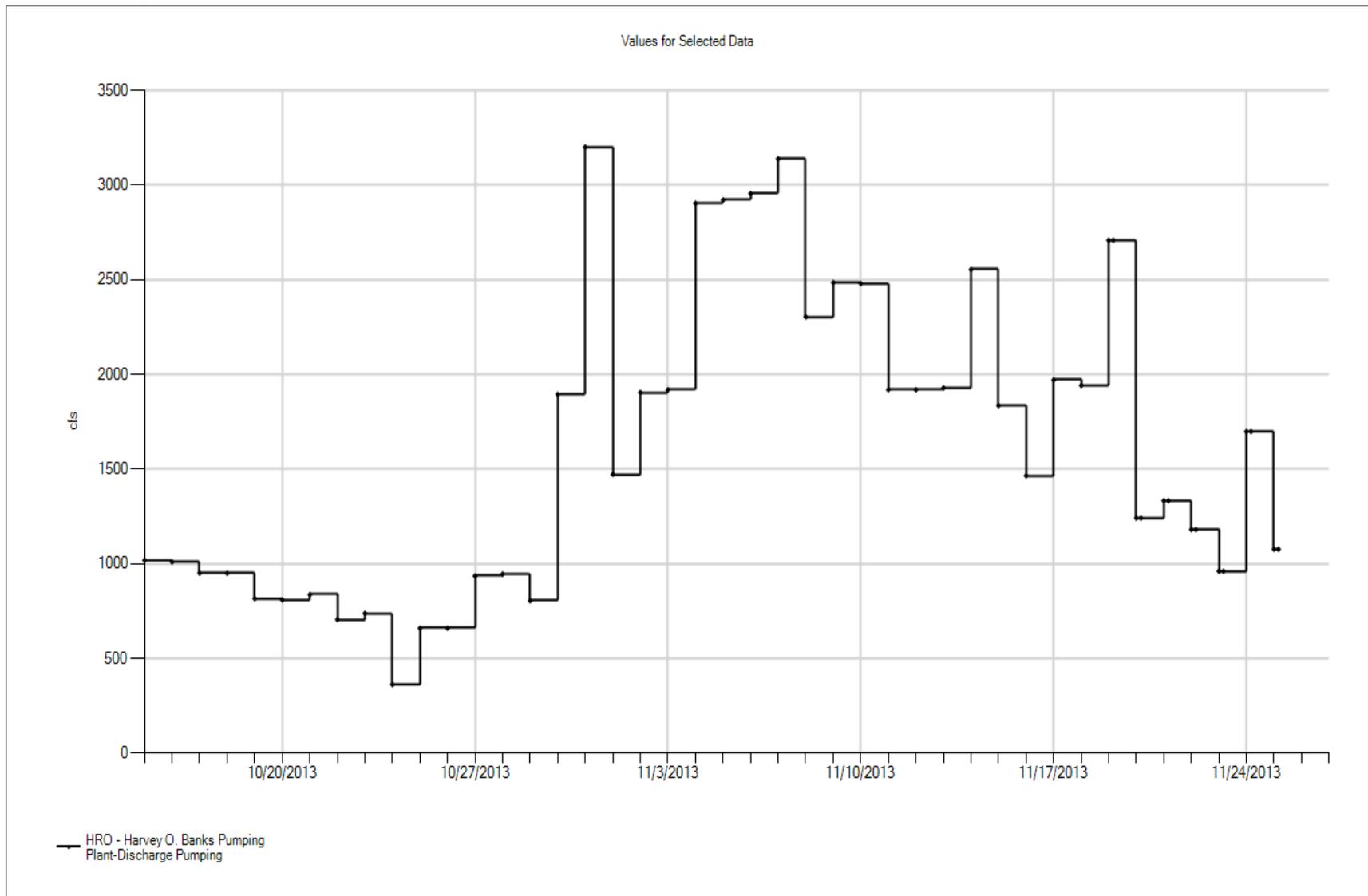


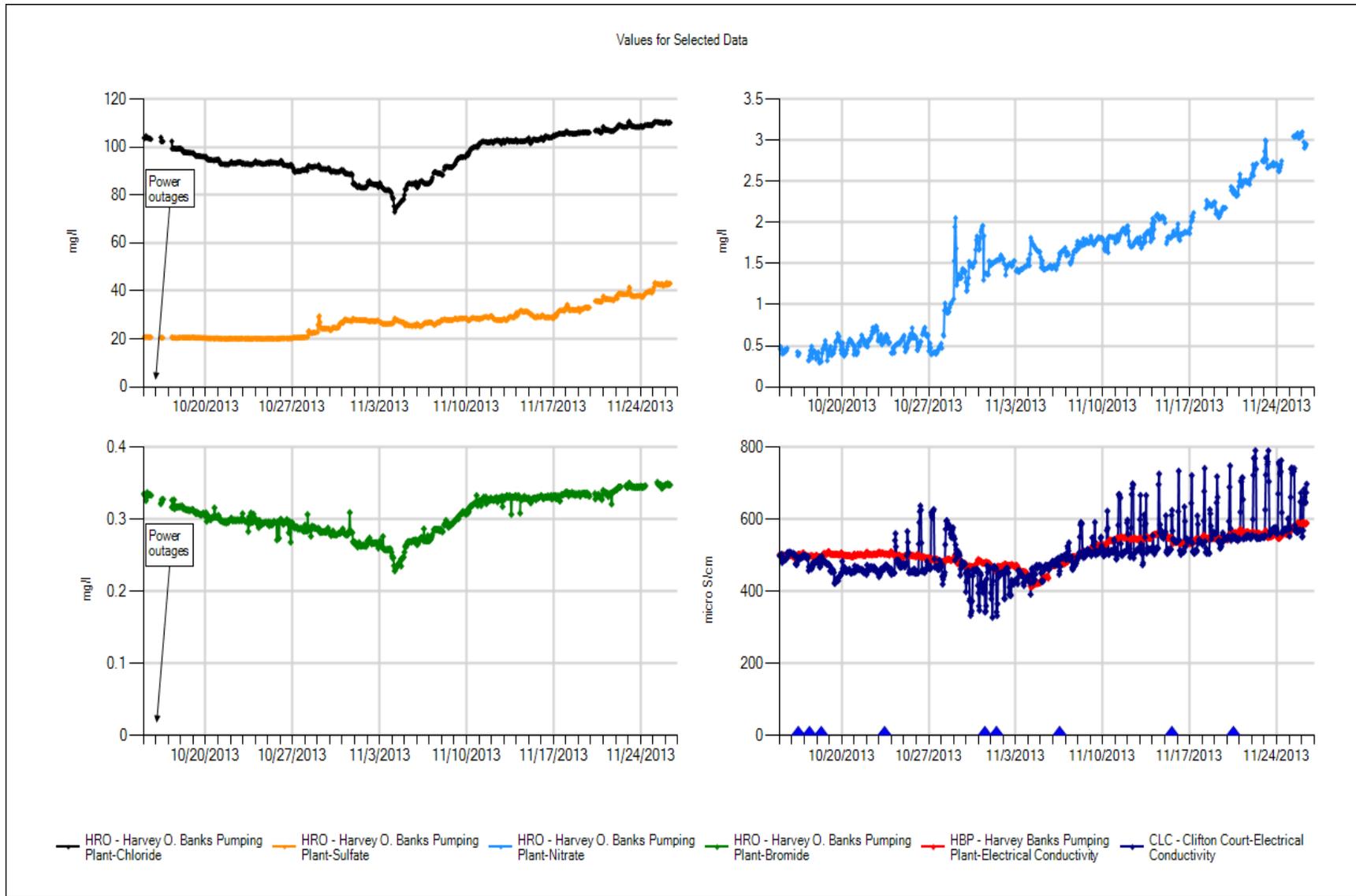
# Banks Organic Carbon



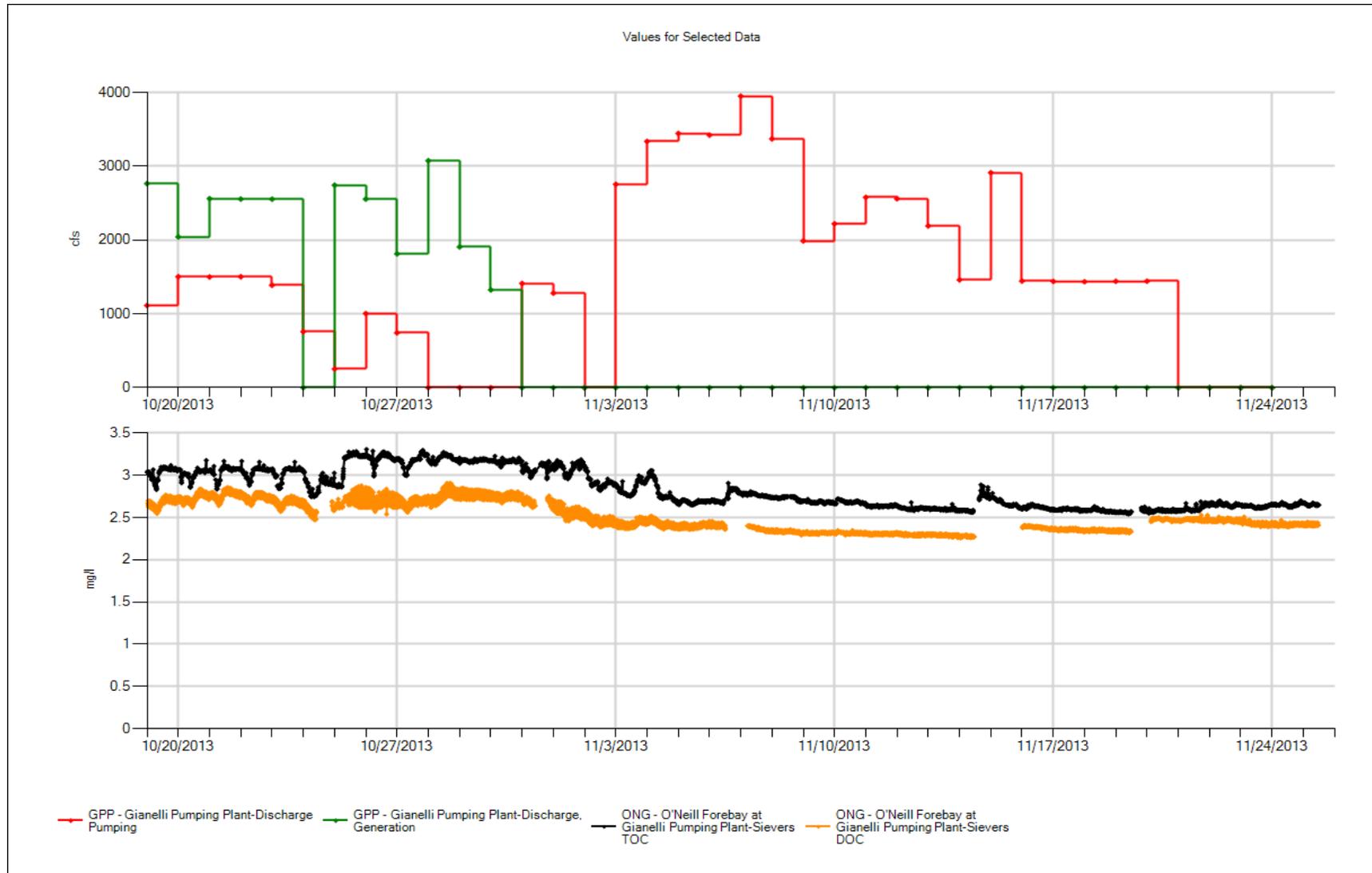
# Banks Pumping



# Banks Anions and EC



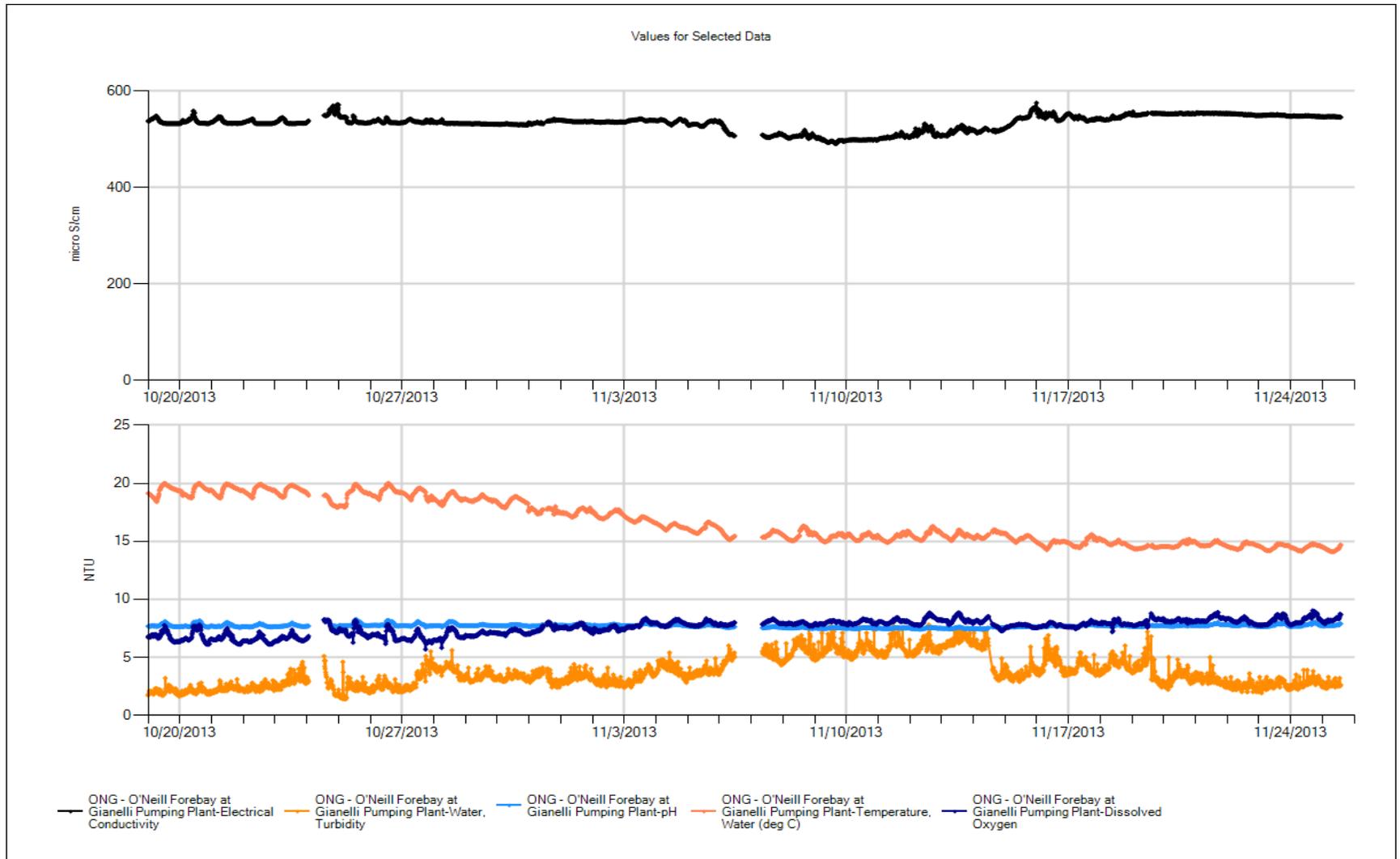
### Gianelli Organic Carbon and Pumping/Generating:



### Gianelli Significant Sievers Events: Oct 19, 2013 – Nov 25, 2013

- Cleaned the ICS degasser on 11/6 which helped clear up some of the variability in prior samples.

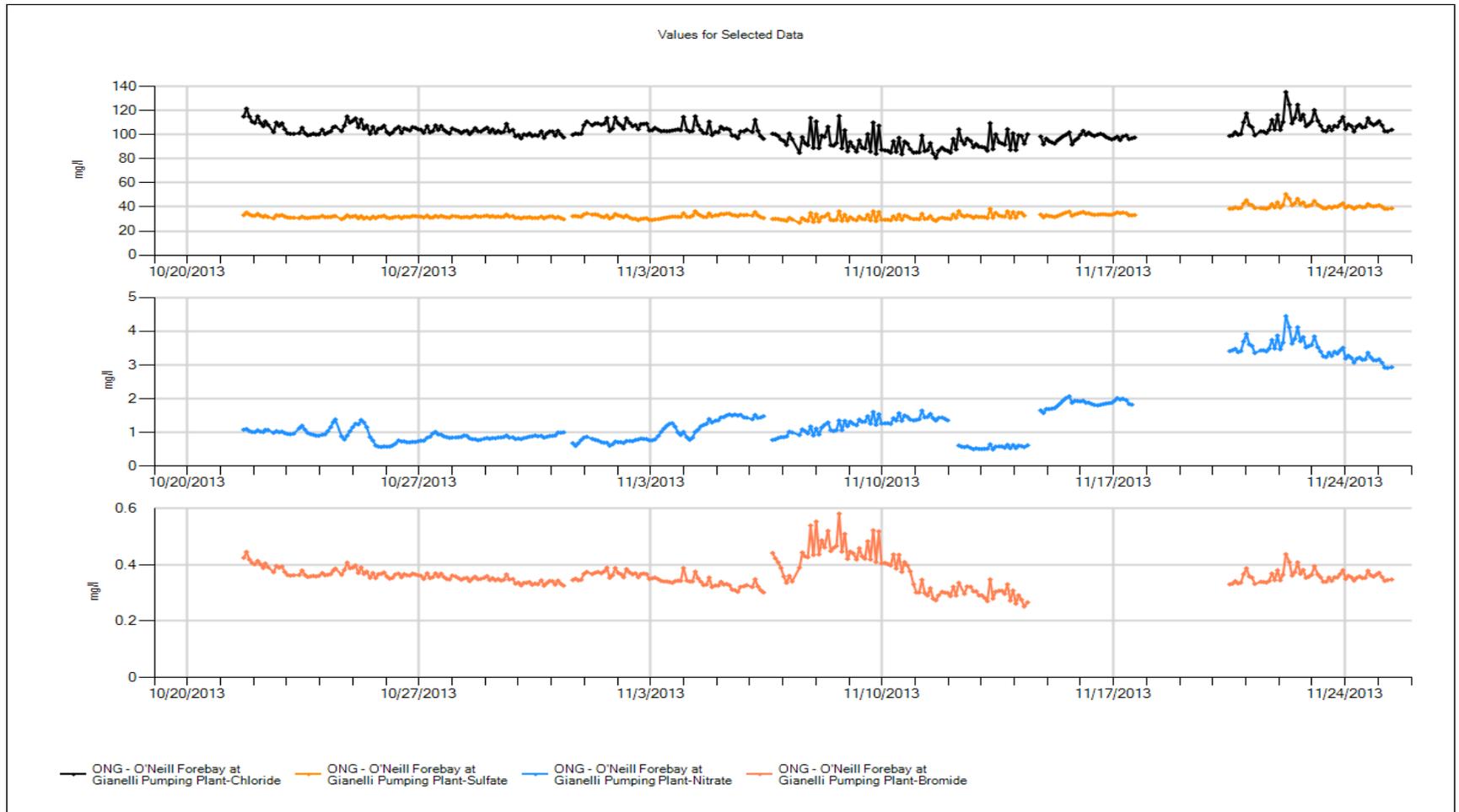
Gianelli Sonde (EC, DO, Temp, Turbidity, pH):



**Gianelli Significant Sonde Events: Oct 19, 2013 – Nov 25, 2013**

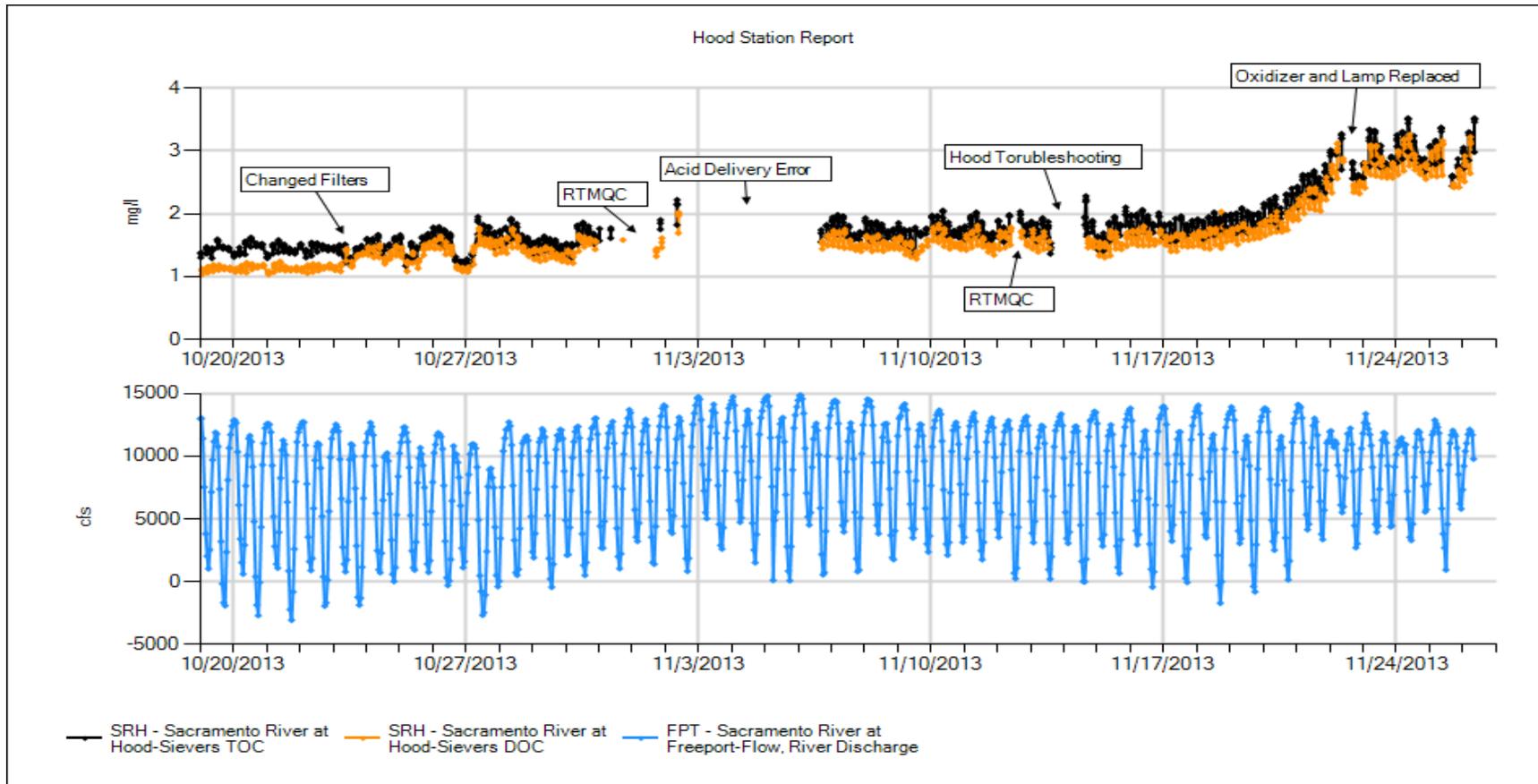
- Calibrated on 10/24.

## Gianelli Anions (Chloride, Sulfate, Nitrate, & Bromide):



### ***Gianelli Significant Metrohm Events: Oct 19, 2013 – Nov 25, 2013***

- Installed a new guard and analytical columns and calibrated on **11/6**.
- The nitrate peak was being misread from **11/12 – 11/14** and the bromide peak was getting misread from **11/14 – 11/17**. Both are signs of bad columns.
- The system ran out of eluent on **11/17**, which shut off the analysis until **11/19** when both the eluent and guard column were replaced.

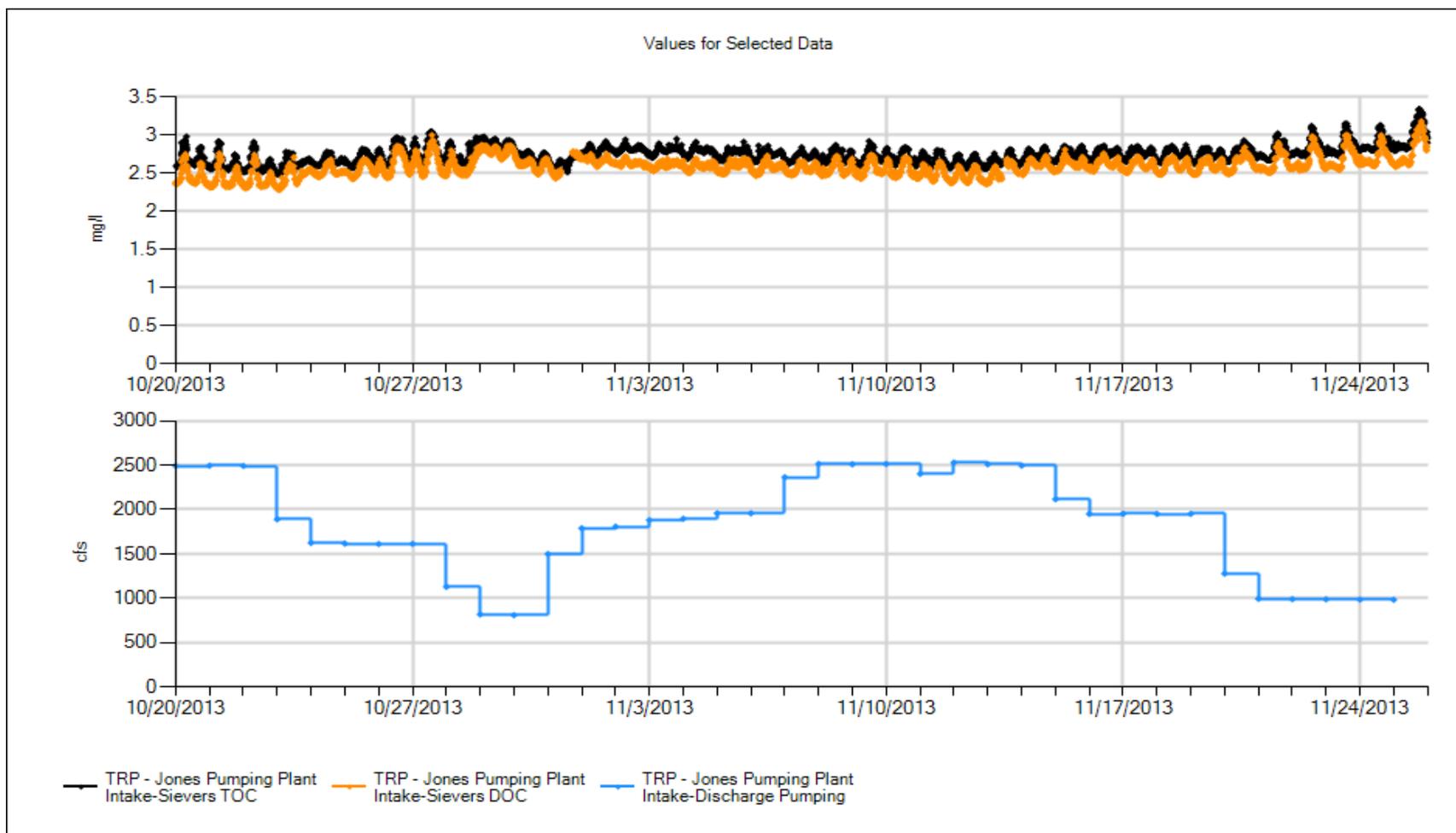


### Hood Notes

**Significant Events:** October 19 to November 26, 2013

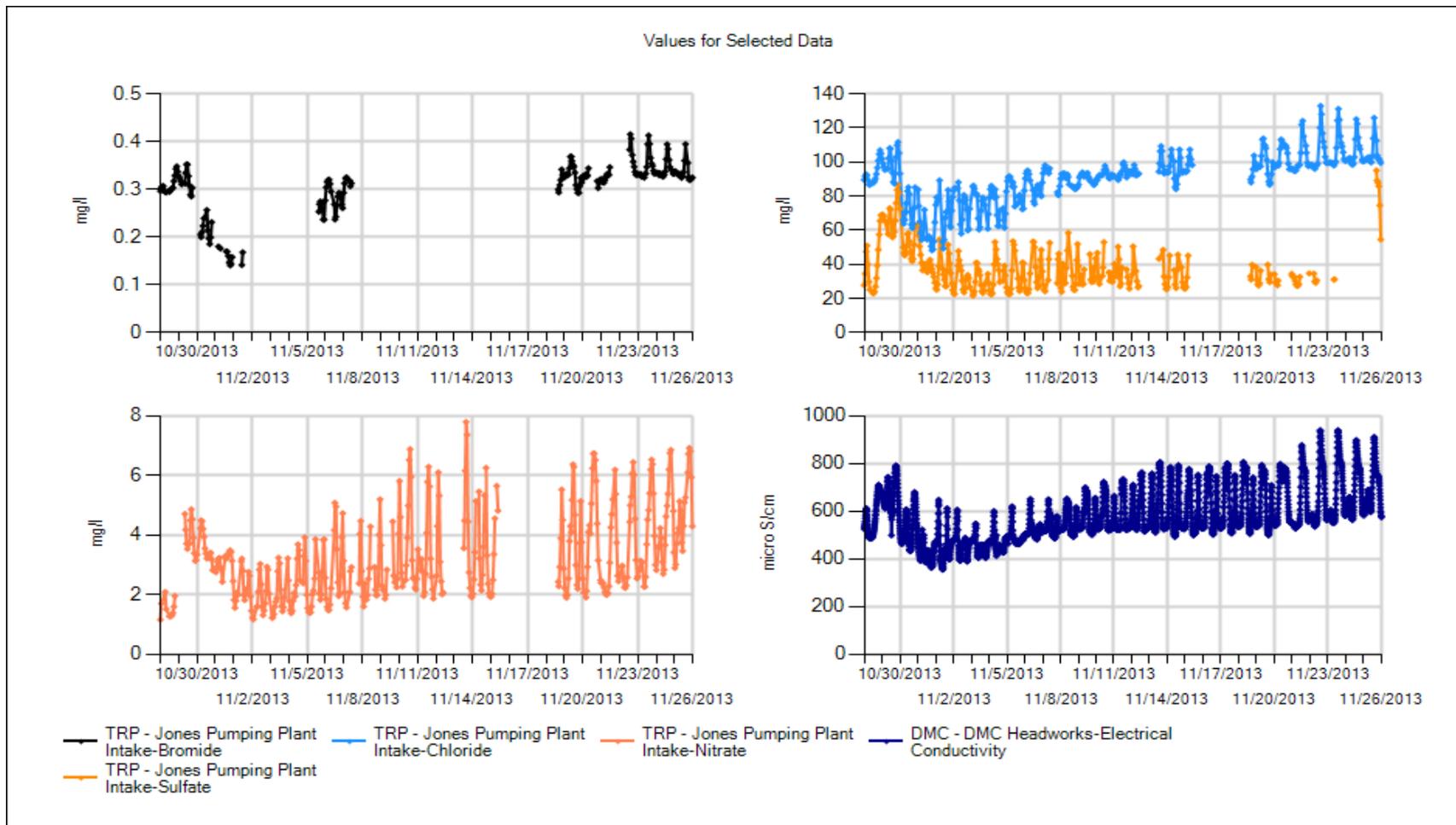
- **Changed Filters 10/23:** Replaced the .45 micron filter that had over a month of operation with a new flushed .45 filter.
- **RTMQC 11/1:** Changed all filters except the .45. I was getting grab samples with very high TOC and DOC values.
- **Acid Delivery Error 11/3:** The Acid cartridge was very low and the concentrations delivered were insufficient. Replaced the Acid Cartridge.
- **RTMQC 11/12:** changed filters and ran a couple of grab samples.
- **Hood Troubleshooting 11/14:** I tried to figure out why my DOC and TOC lines were overlapping. When I left the station I left the bypass switch on and my samples were getting funky readings.
- **Oxidizer and UV lamp Replaced 11/22:** Replaced the whole oxidizer syringe set (with motor). Also, replaced the Oxidizer cartridge and the UV lamp.

## Jones organic carbon and pumping

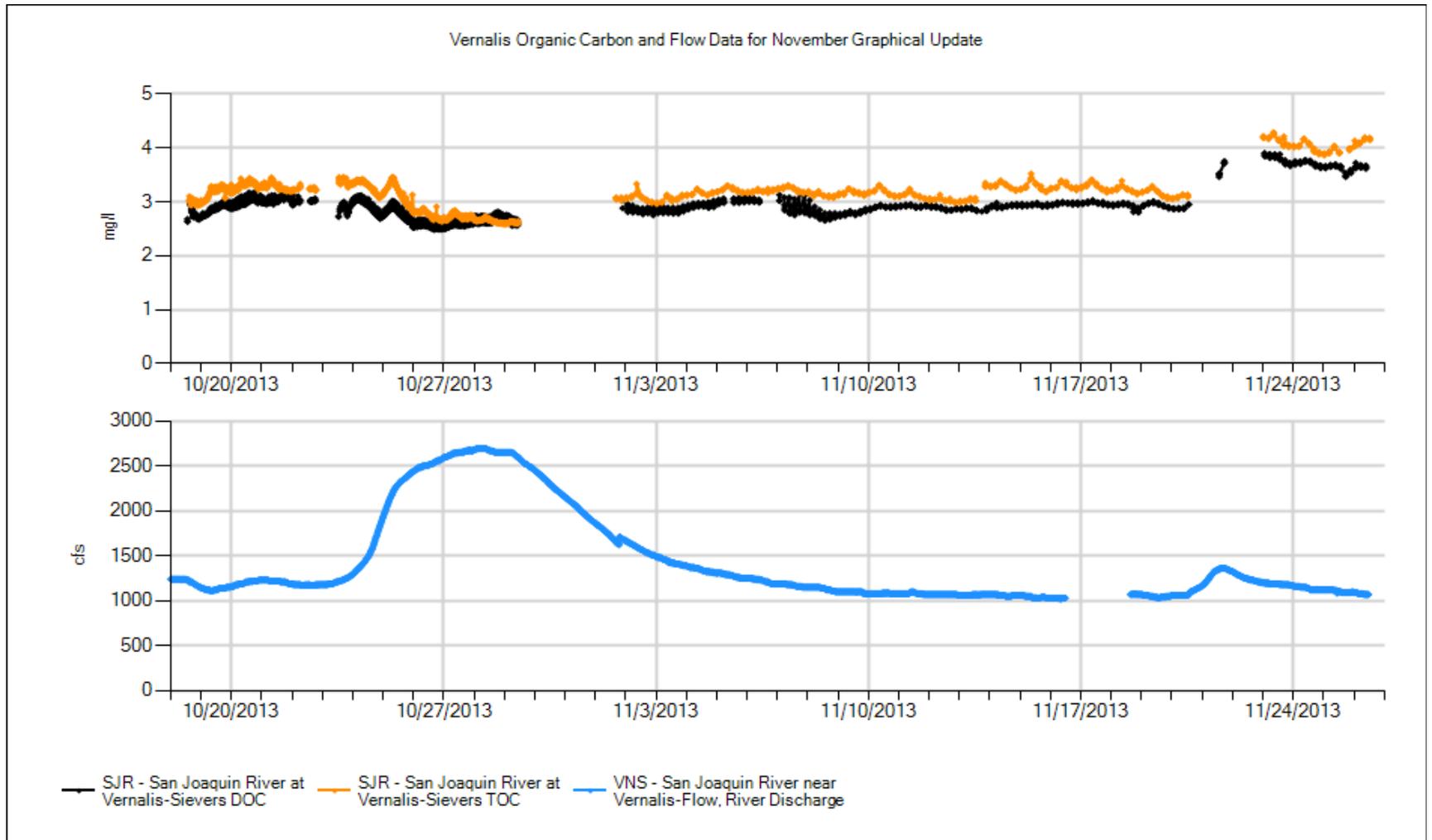


- 10/23 – filter change
- 10/31 – filter change. Cleaned IOS system because of increasing variability in TOC/DOC data.
- 11/13 - Filter change. Our 5KHP standard that we use for our QC checks came in very low, but I believe this is due to a bad batch and not with the instrument. Overall, the Sievers analyzer has been operating very well.

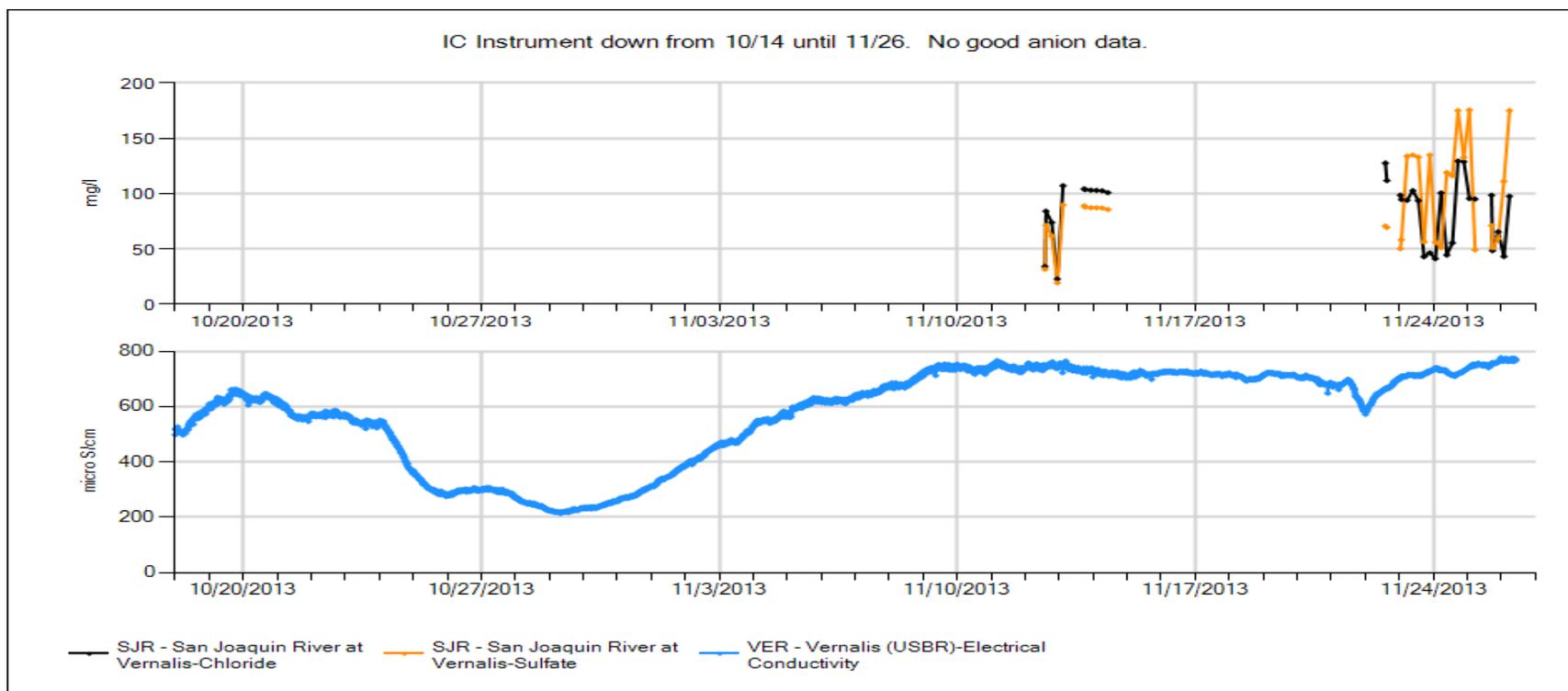
## Jones Anions and EC



- filter change dates are the same as on previous page
- 11/7 - Changed stock and check standard on Dionex. Ran a system calibration followed by “default” settings. Did not change filters.
- 11/5 – changed stock and check standard on Dionex. Previous batch of standards had inaccurate quantities of bromide, which explains the gap in data in bromide.
- 11/20 – Added double DI to the Dionex reservoir. Did not change filters in an attempt to let filters run for two weeks.

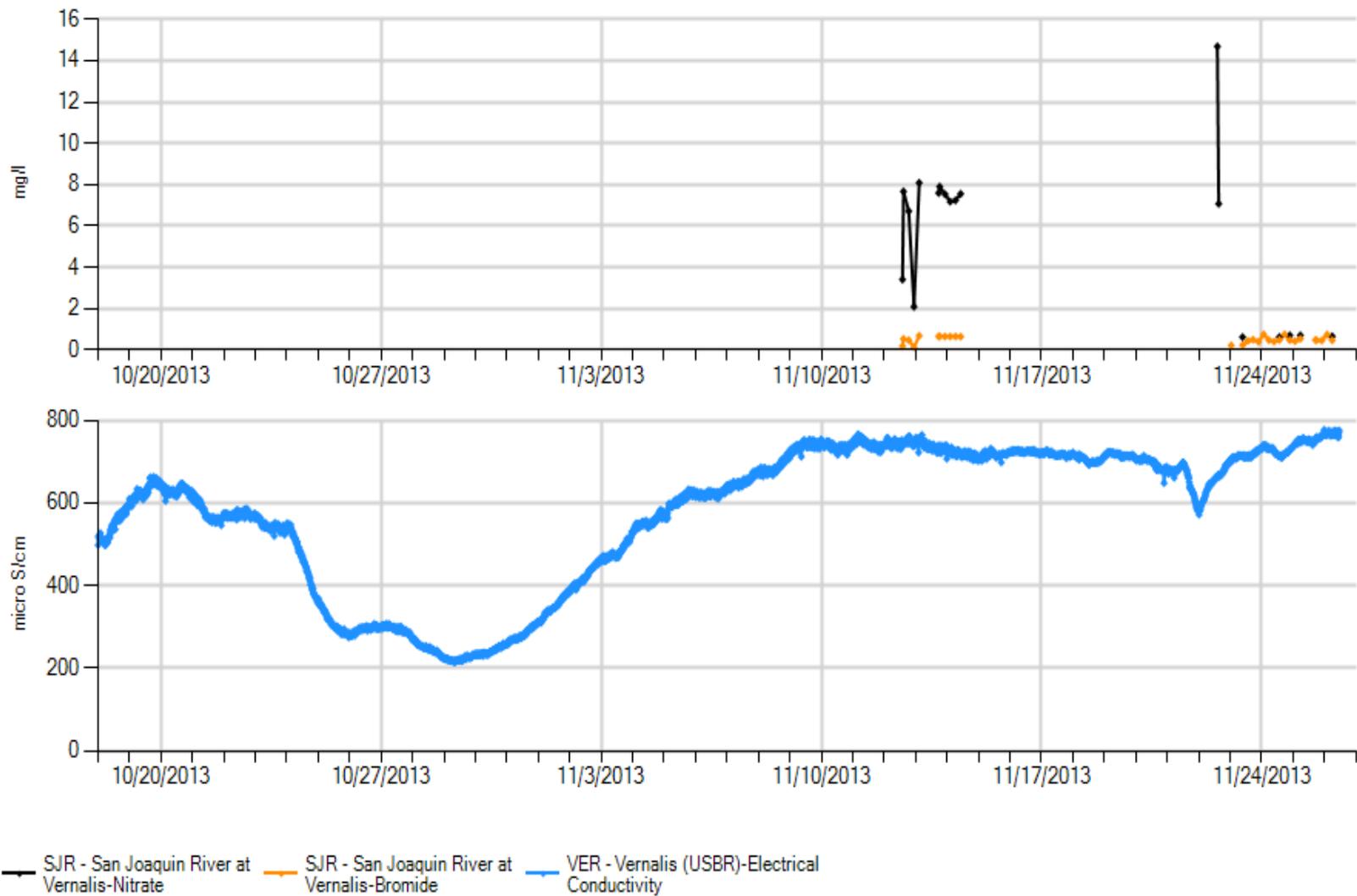


**Filter Changes:** 10/18 all filters, 10/23 prefilters only, 10/29 prefilters only, 11/6 all filters, 11/13 new 20" prefilters, and 10s", 11/20 prefilters only, 11/25 all filters. ("All filters" includes the 0.45 micron finishing filter, "prefilters only" means the 0.45 micron filter did not need to be changed.) **Significant events:** From 10/29 to 11/1 the "Stevens II" flow controller was installed, greatly increasing the filter life of the 0.45 micron cartridge. From 11/20 to 11/21 the Sievers was inadvertently left in the "IDLE" mode after station maintenance. Turned online 11/21.



The Dionex has been non-operational since mid-October, from a series of events. On 10/13, the analytical and guard columns were changed, but the instrument would not finish the necessary calibration sequence because of an error in the software. The Thermo-Fisher/Dionex tech made a site visit on 10/31 to diagnose the previously unseen issue, but did not make much progress by the end of the day. In the meantime, Mark was able to trace the error to a Windows 7 printer update/Chromeleon software interface issue, and fixed the problem by disabling certain features of the software. On 11/13, the calibration showed a problem with the bromide concentration of the stock standards made for the Dionex. The standards were made using an older formula that only contained half of the necessary bromide. On 11/18, the new standards were installed but there were problems with one of the peristaltic pumps not delivering enough standard to the dilution vessel for calibration. The peristaltic tubing was worn-out and a new length was procured and installed on 11/21. The analyzer calibrated on Friday 11/22 and ran over the weekend. After a QA/QC site visit on Monday 11/25, the anion data was set to report the morning of 11/26.

IC Instrument down from 10/14 until 11/26. No good anion data.



Grab Chloride, Bromide and Online EC

