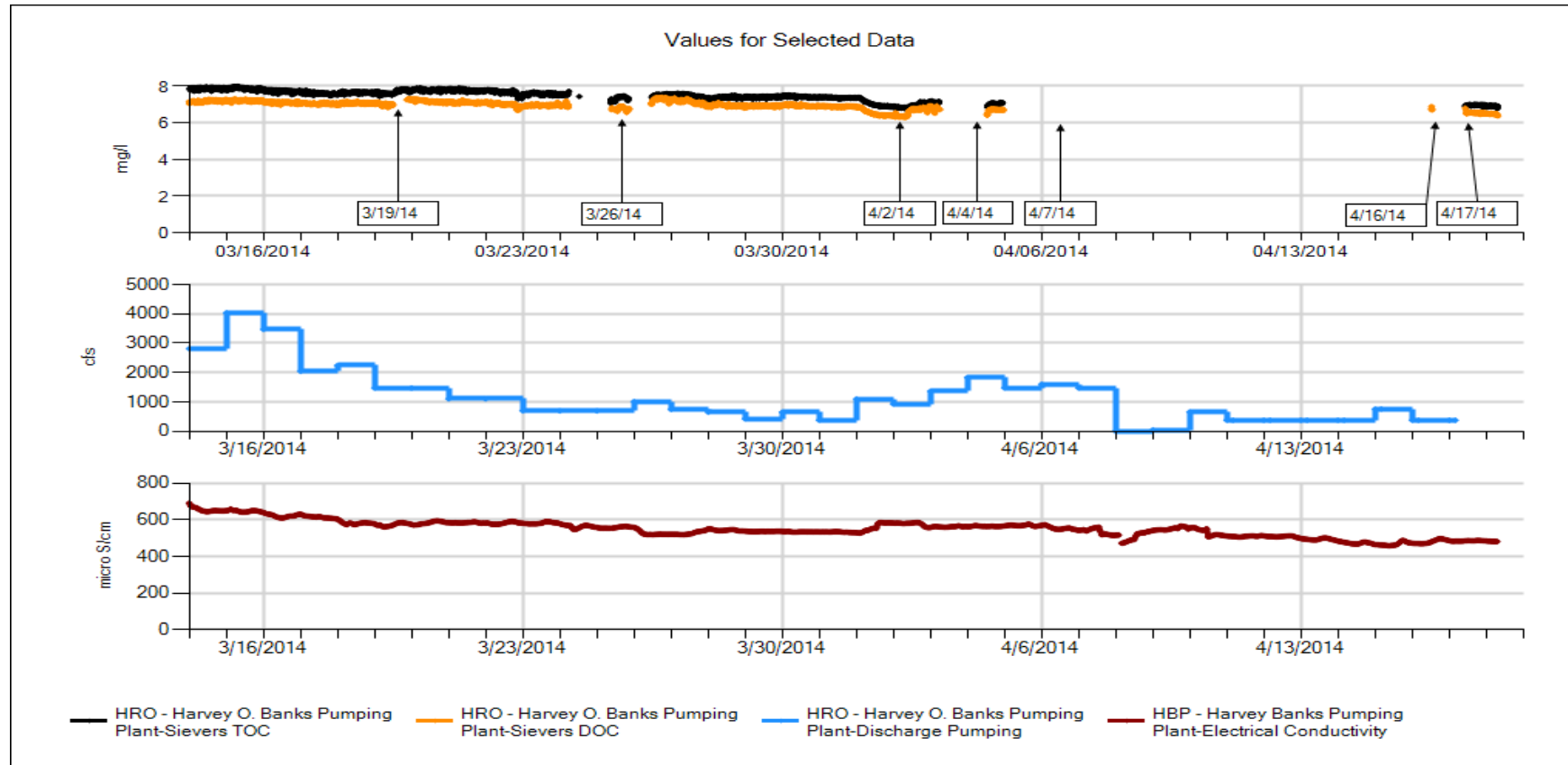


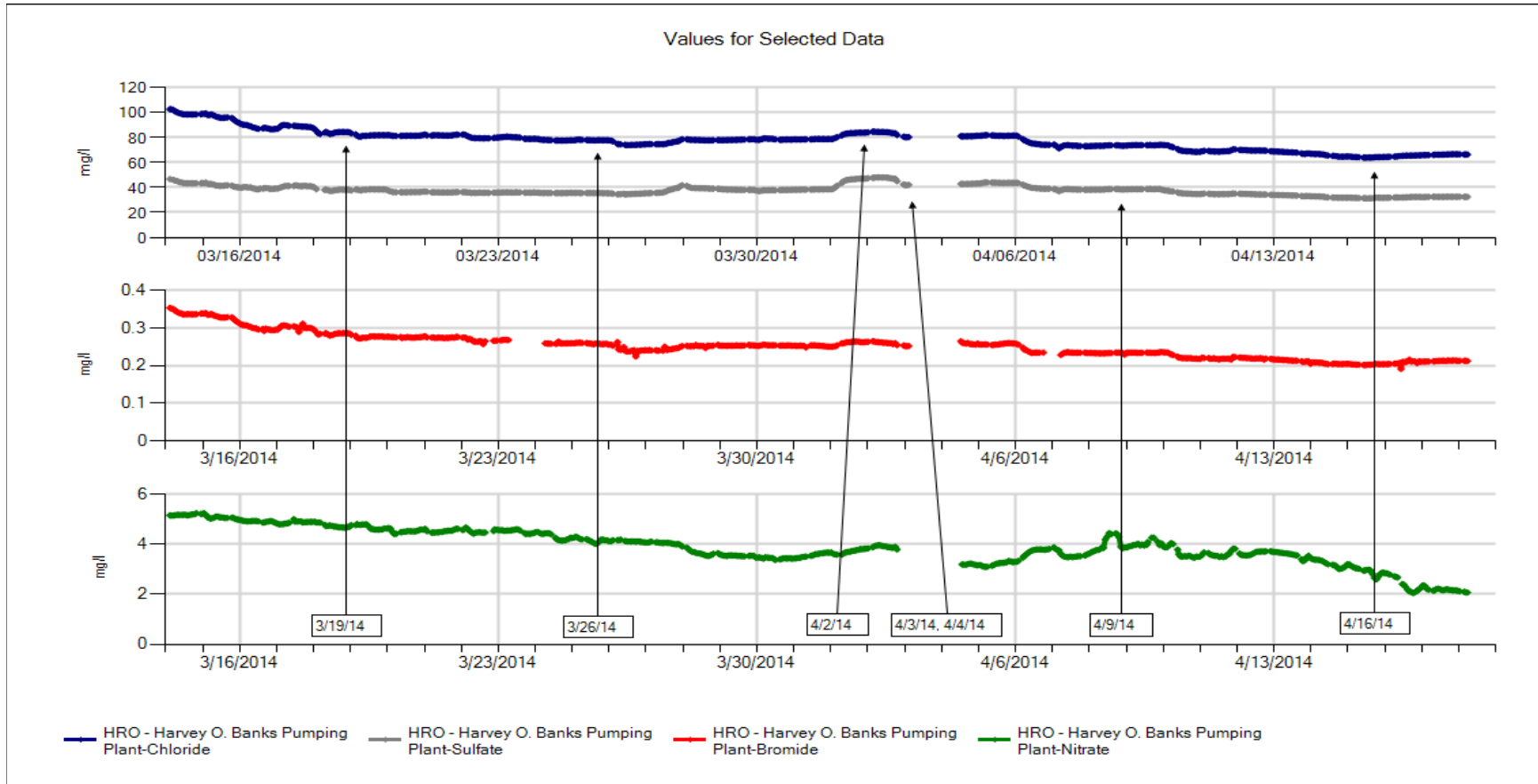
## Banks Pumping Plant – Organic Carbon, Pumping and EC



### Significant events – 3/14/20 14 to 4/18/2014

- 3/19/2014 – Delivery system filter change
- 3/26/2014 – Delivery system filter change, acid cartridge replacement and QC sample analysis
- 4/2/2014 – Delivery system filter change, sample line pressure up to 15 psi
- 4/3 - 4/4/2014 – Sample intake line from the aqueduct was clogged, pulled intake and made necessary repairs
- 4/7/2014 – Carbon analyzer sample pump died
- 4/16/2014 – Carbon analyzer sample pump replaced, delivery system filters changed, cleaned sample lines between filters, QC sample analysis
- 4/17/2014 – Sample inlet line on carbon analyzer clogged, cleaned line

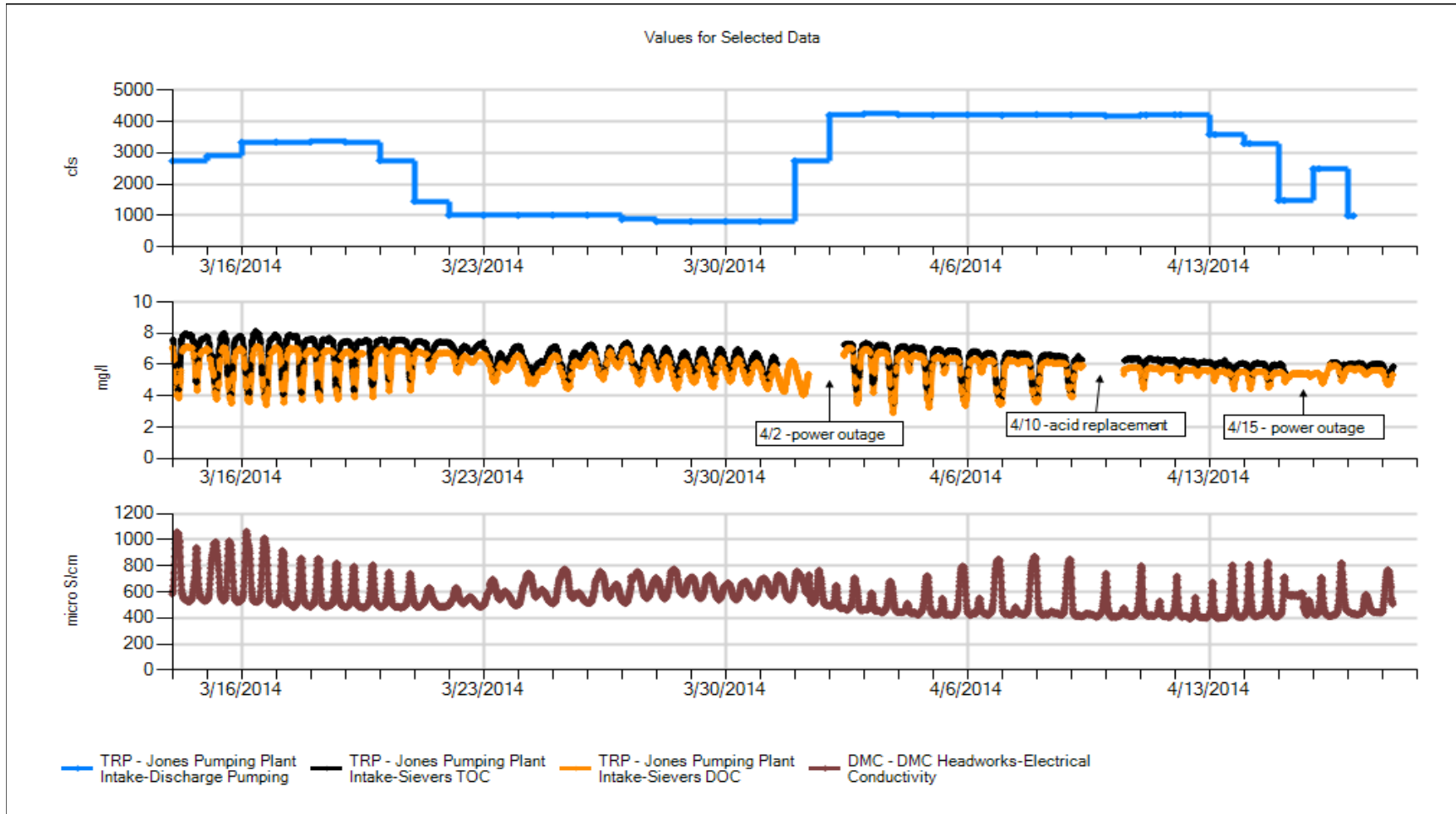
## Banks Pumping Plant – Chloride, Sulfate, Bromide and Nitrate



### Significant events – 3/14/2014 to 4/18/2014

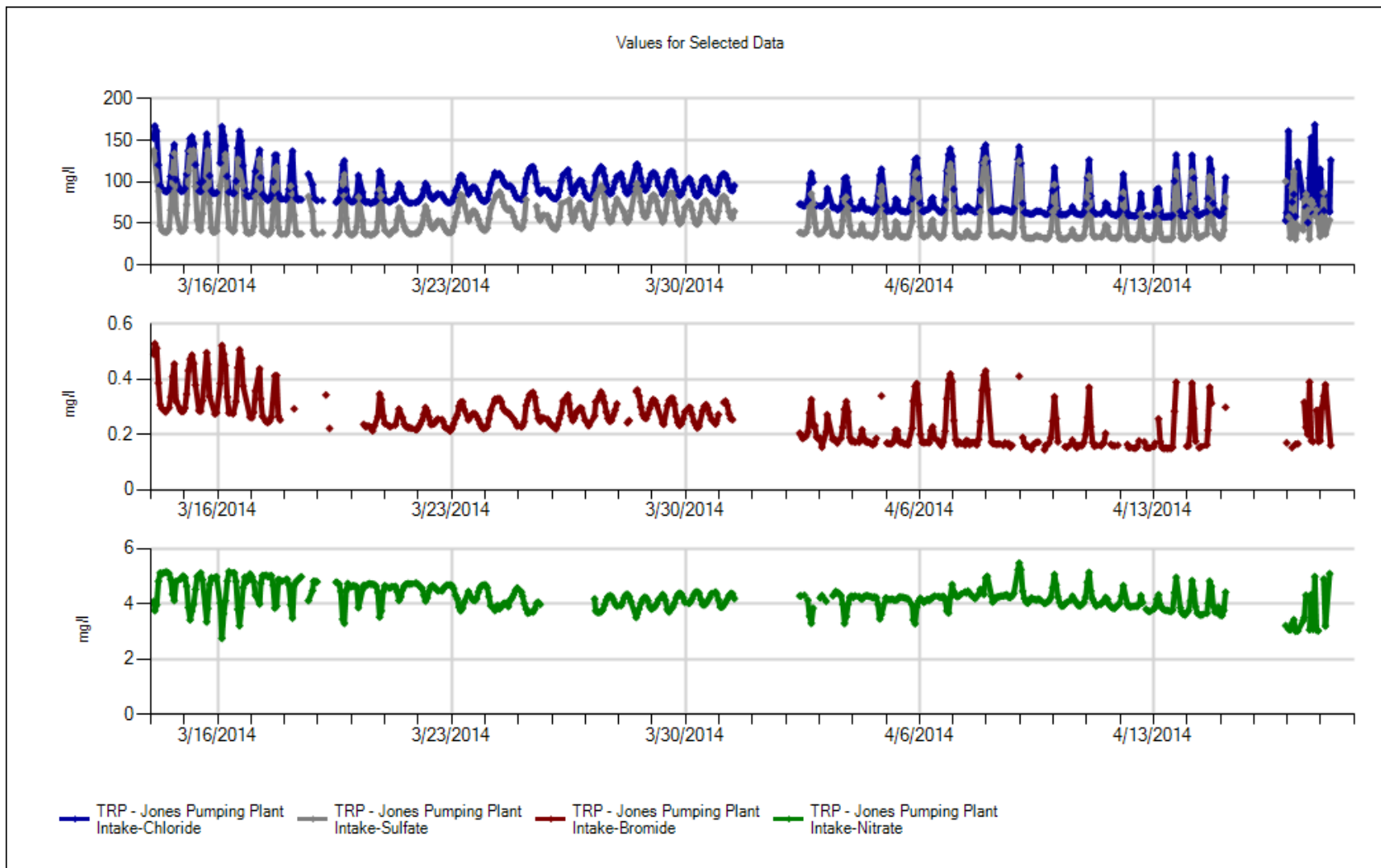
- 3/19/2014 – Delivery system filter change
- 3/26/2014 – Delivery system filter change
- 4/2/2014 – Delivery system filter change, sample line pressure up to 15 psi
- 4/3 - 4/4/2014 – Sample intake line from the aqueduct was clogged, pulled intake and made necessary repairs
- 4/9/2014 – Delivery system filter change
- 4/16/2014 - Delivery system filters changed, cleaned sample lines between filters, QC sample analysis

## Jones PP – Pumping, Organic Carbon, EC



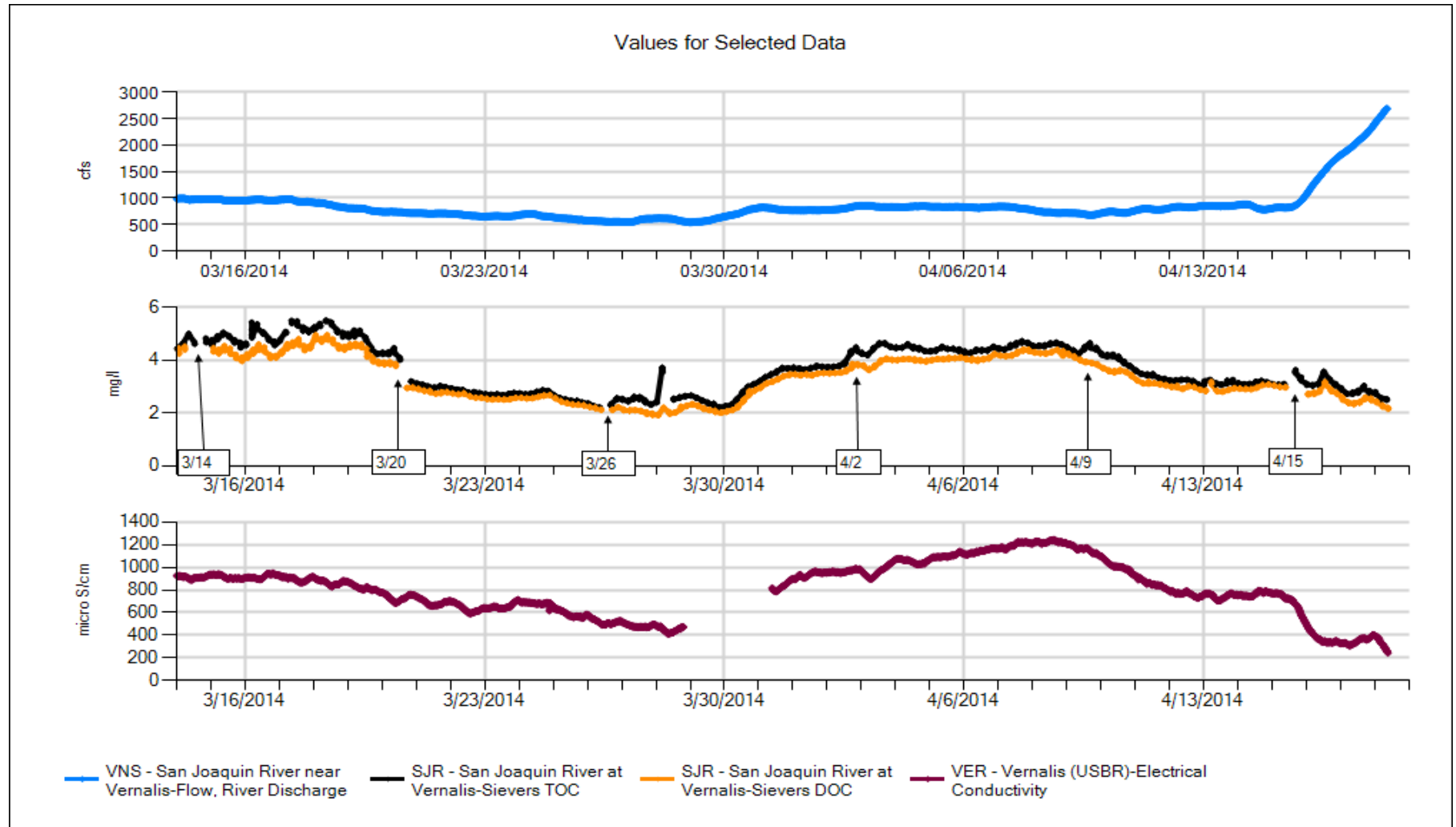
**3/19** – filter change **3/26** – filter change **4/2** – filter change. There was a short power outage 3/31 which caused only DOC to run. Then there was an extended power outage which caused the instrument to completely shut down until 4/2. **4/9** – filter change. Organic carbon reporting was turned off due to a depleted acid cartridge. No replacement cartridge was available for install until the following day. **4/10** – acid cartridge installed. Acid syringe was flushed three times after install. **4/15** –Short power outage caused only DOC to run. **4/16** – filter change and routine maintenance. The Streamwalker was reset after power outage.

### Jones PP – Chloride, Sulfate, Nitrate



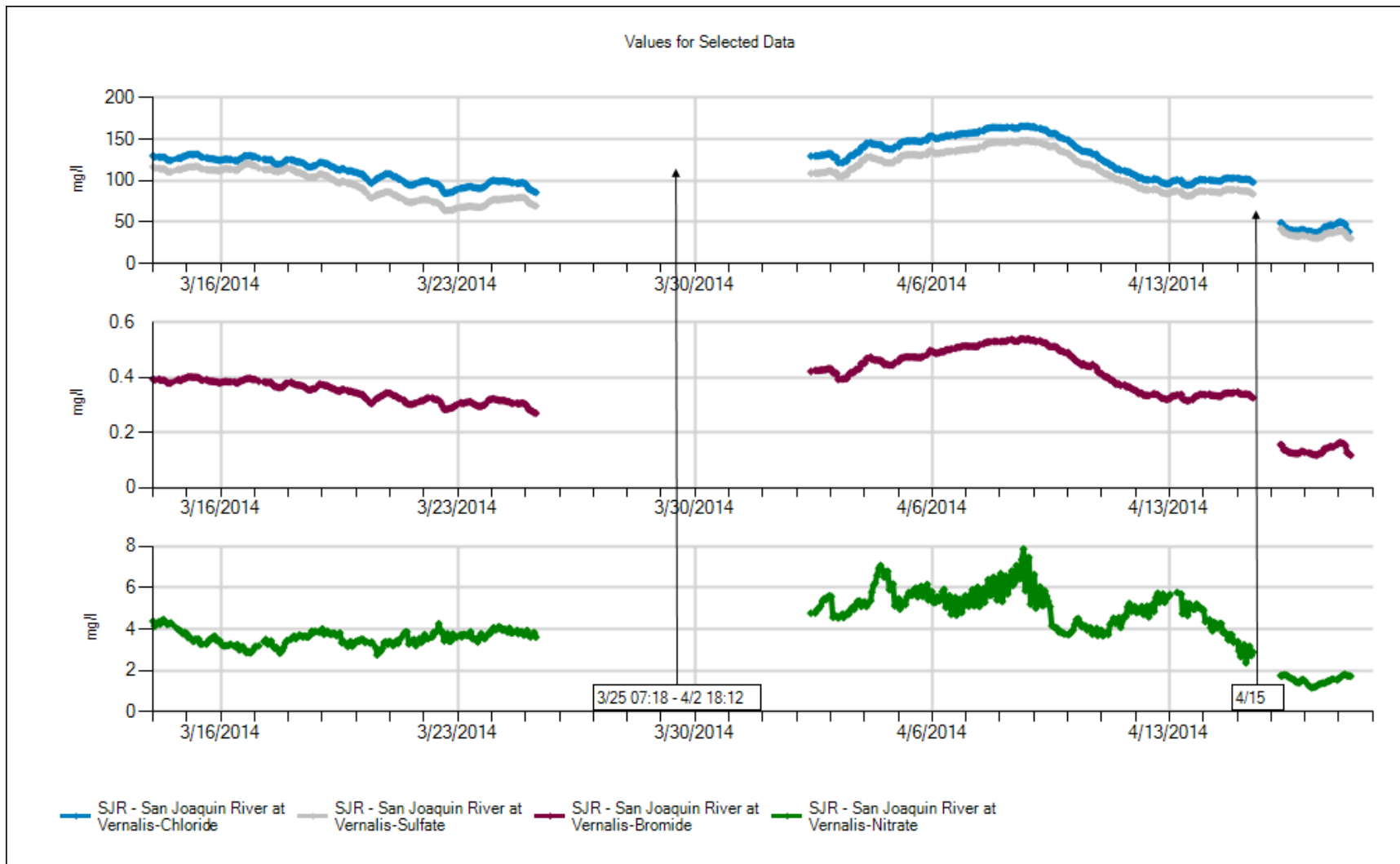
**4/2** – power outage. **4/16** – Not set to report because of replacement columns need to be installed. **4/17** – recalibrated but calibration seemed questionable. New part needed for Dionex and will install when the part is received.

## Vernalis Flow, Organic Carbon, and Electrical Conductivity Data



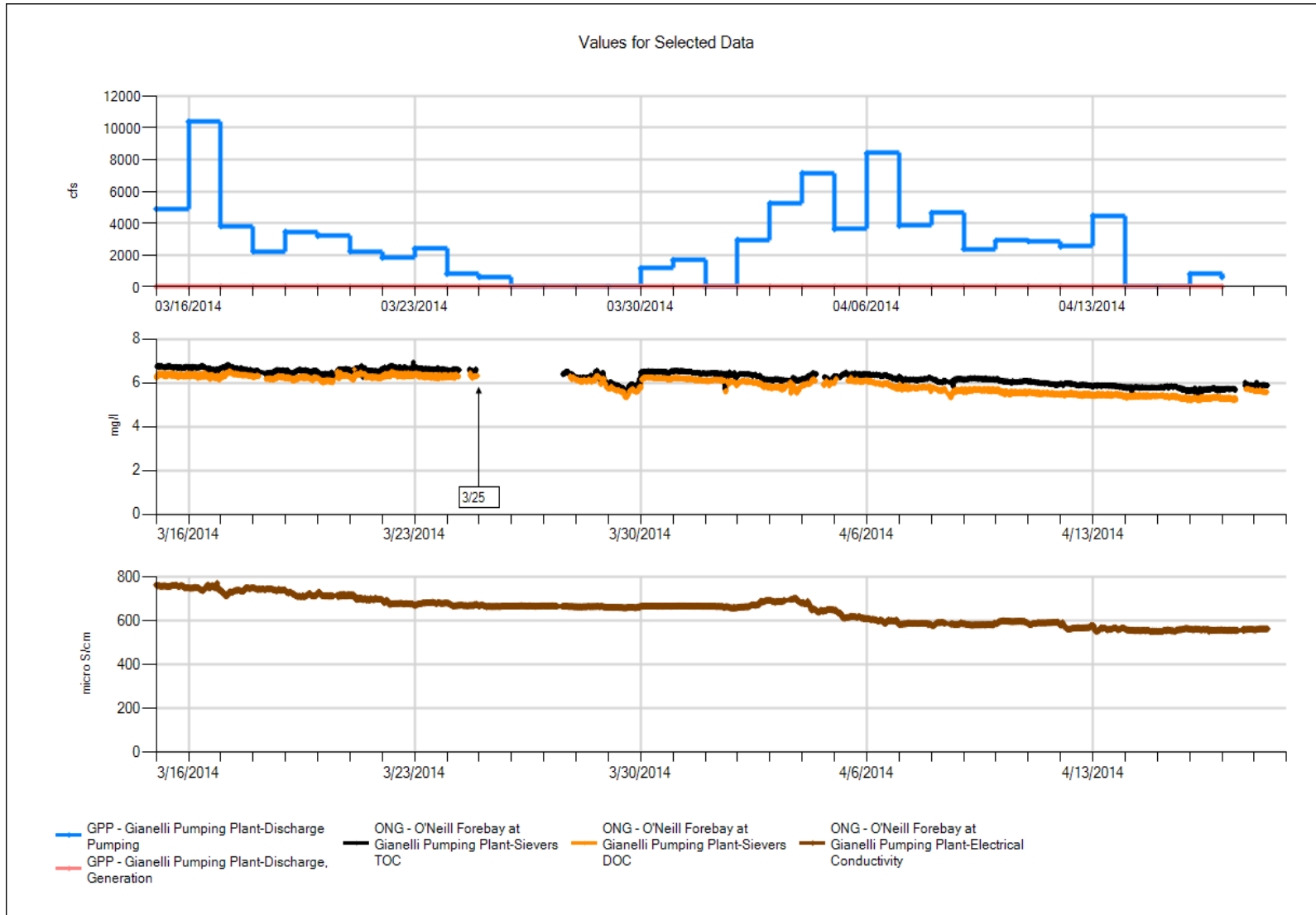
**Filter changes: 3/11 all filters, 3/26 all filters, 4/2 prefilters only, 4/9 prefilters only, 4/15 all filters. Events: 3/11:** Rebuilt pump, check standards high, flow rate check, call in to Sievers tech support. **3/14:** Ran two vials of hydrogen peroxide to clean out biological growth; not much effect. May need new lines. **3/20:** Installed new DI loops and restrictor lines; data greatly improved. Shut off bypass. **3/26:** Rebuilt pump. **4/2:** Changed prefilters. **4/9:** Changed prefilters and shut off bypass. **4/15:** Rebuilt pump.

### Vernalis Chloride, Sulfate, Bromide, and Nitrate Data



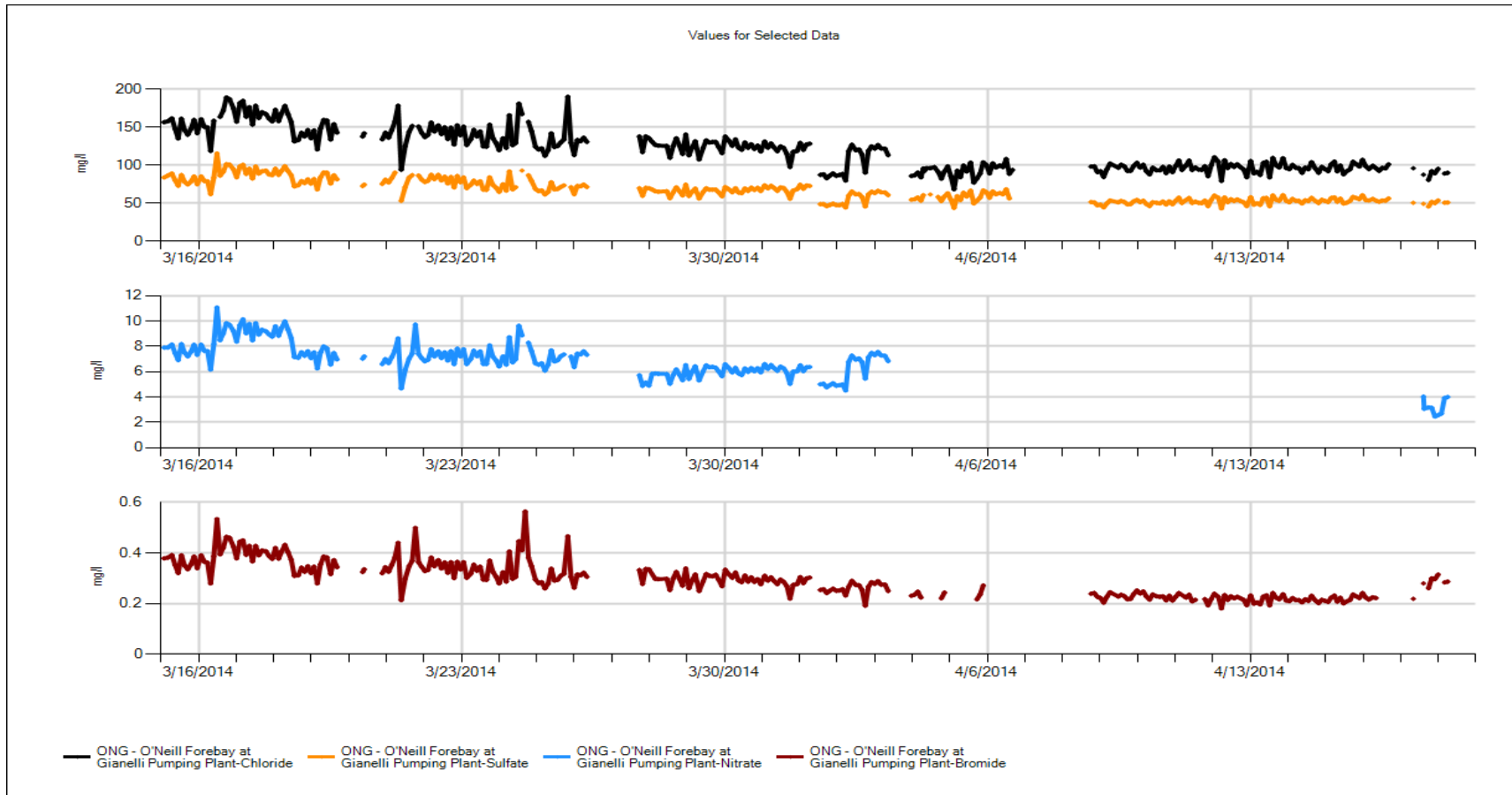
**Events:** **3/25 – 4/2:** Data has been resent, but did not update at the time of this report. **3/26:** Changed stock and check standards, recalibrated, and rebuilt the pump. **4/15:** Changed out guard and analytical columns, recalibrated, replaced delivery lines, injected hydrogen peroxide through the sample valve, and rebuilt the pump.

Gianelli – Pumping, Organic Carbon, EC



3/25 to 3/27 – Low flows stopped the Sievers' analysis.

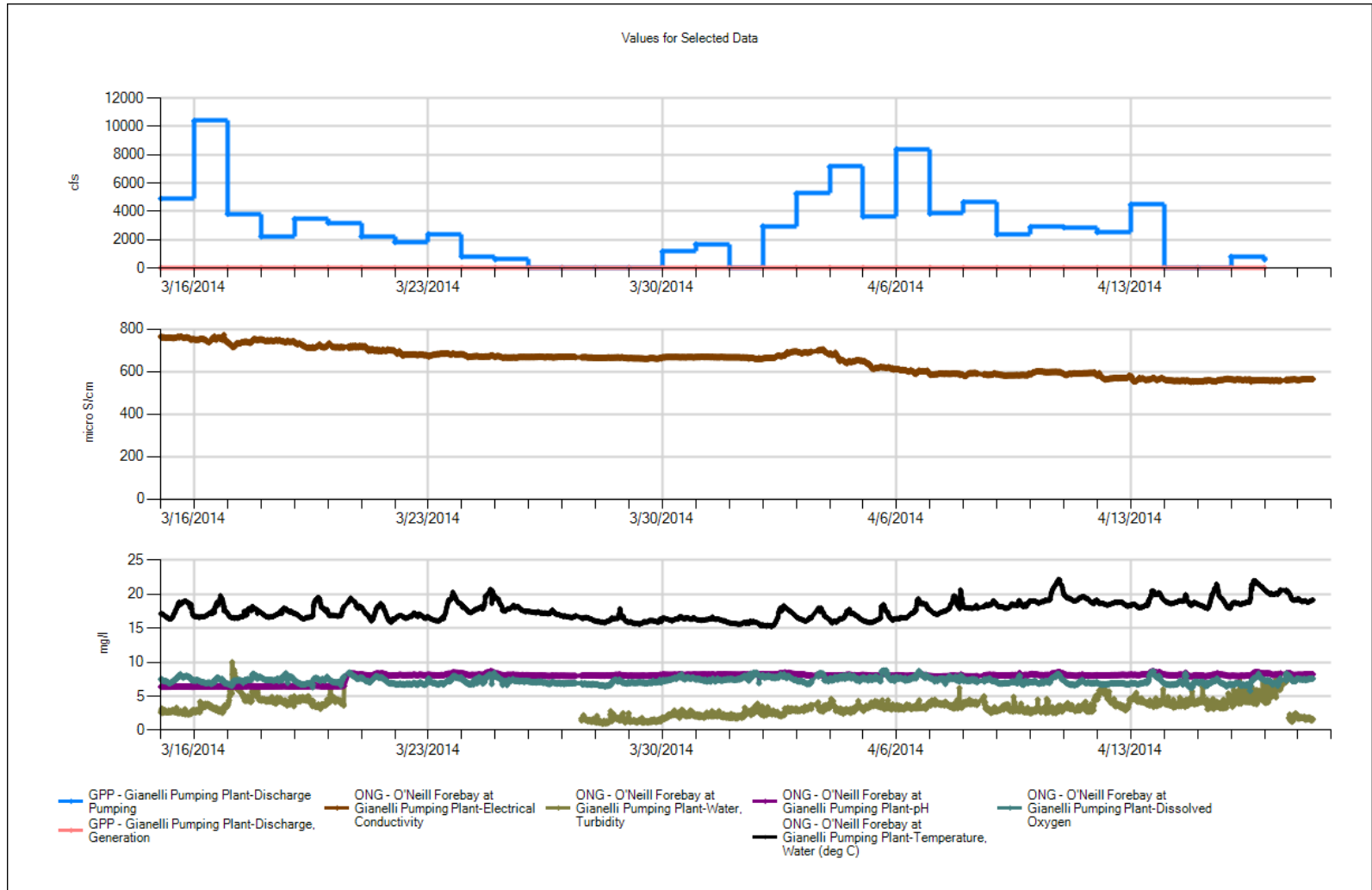
## Gianelli – Chloride, Sulfate, Bromide, Nitrate



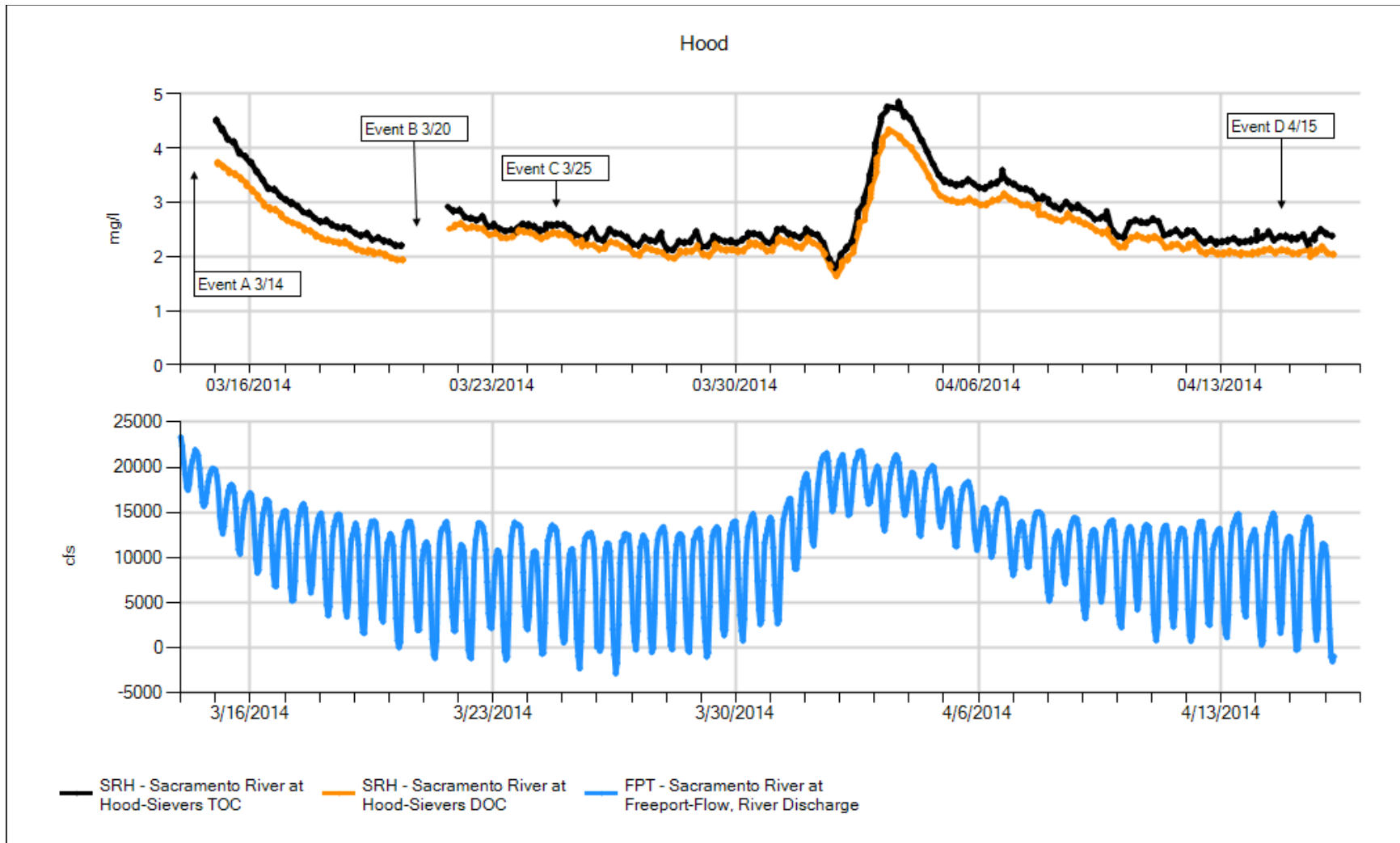
- 3/19 – The ongoing instrument communication error caused it to shut down. I restarted it the morning of the 20<sup>th</sup> and it ran two samples before I started working on it that day.
- 3/26 – Low flow caused errors in the analysis.
- 4/3 – Nitrate values increased after service visit. I later determined it was due to a plug of algae in the water supply line. Large nitrate peaks intermittently overlapped with bromide causing errors in bromide readings until 4/8.
- 4/17 – Second Metrohm service visit cleared up some issues, however several tasks still need to be completed.



## Gianelli – EC, Temperature, pH, DO & Turbidity



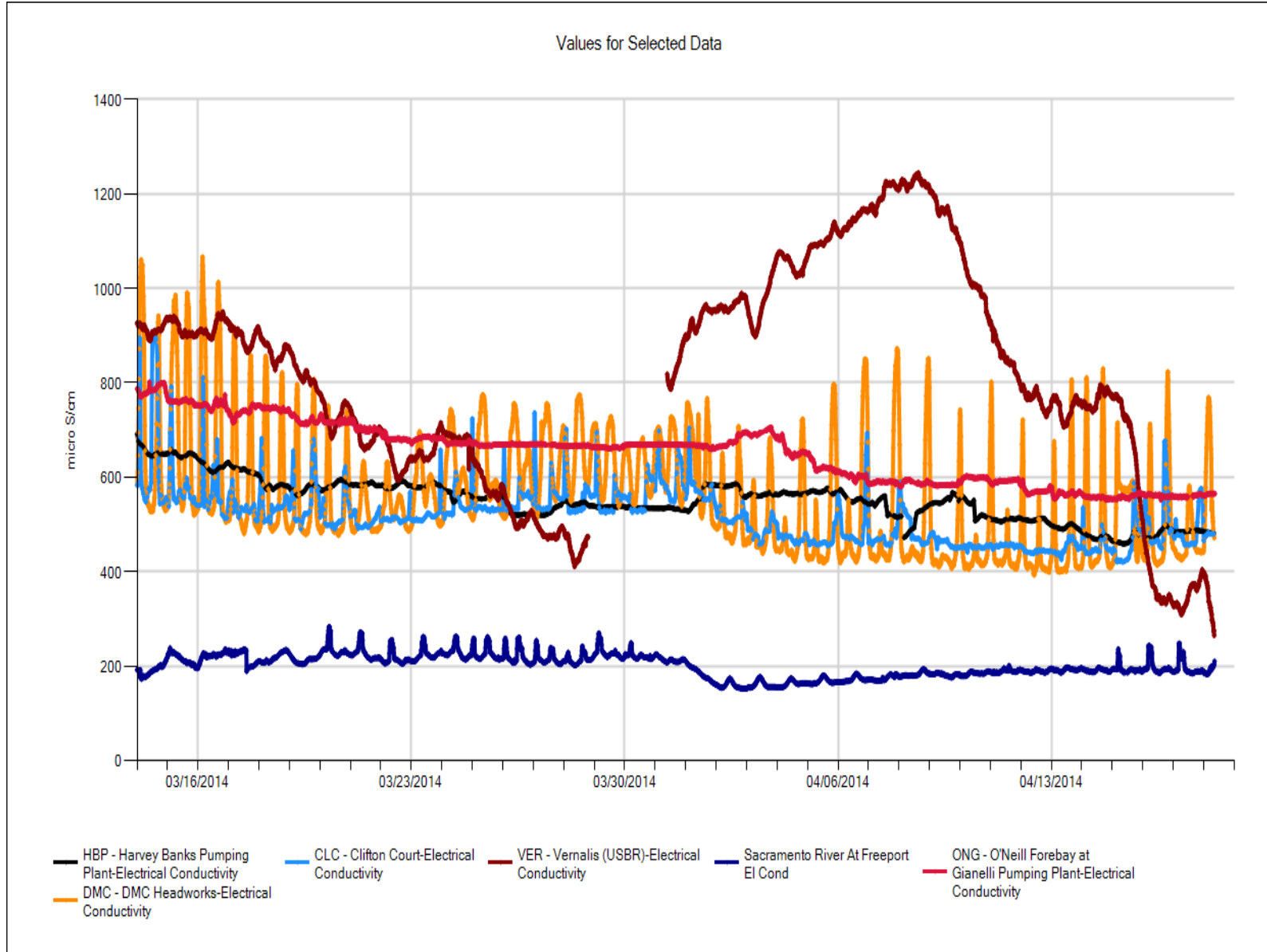
- 3/20 – Recalibrated. After recalibration, both the DO and turbidity probes malfunctioned. We had a spare DO probe, which I replace, but we had to wait for a new turbidity probe to arrive.
- 4/17 – Cleaned a large amount of sediment and muck out of housing and off of the probes.



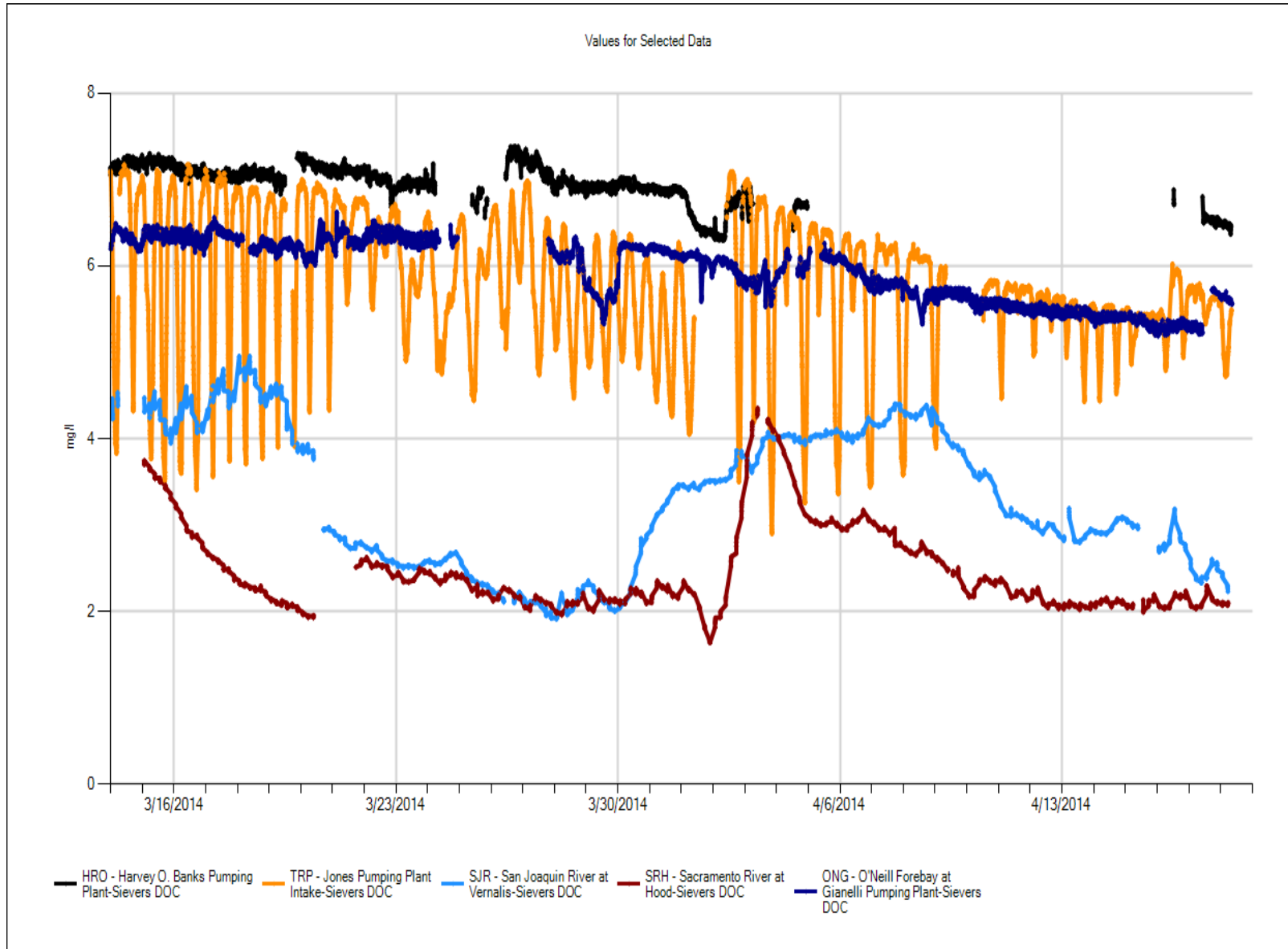
**Significant Events:** March 14<sup>th</sup>, 2014 to April 16th, 2014

- **Event A 3/14:** Firmware Update, Sievers was not reporting to indigo due to firmware issues.
- **Event B 3/20:** Sievers was calibrated with lab standard vials. OC was 20% off targeted reading, IC was only 3%.
- **Event C 3/25:** 75, 50, and .45micron filter change.
- **Event D 4/15:** 75 and 50micron filter change.

Station EC's plus Clifton Court



All stations DOC



All stations bromide

