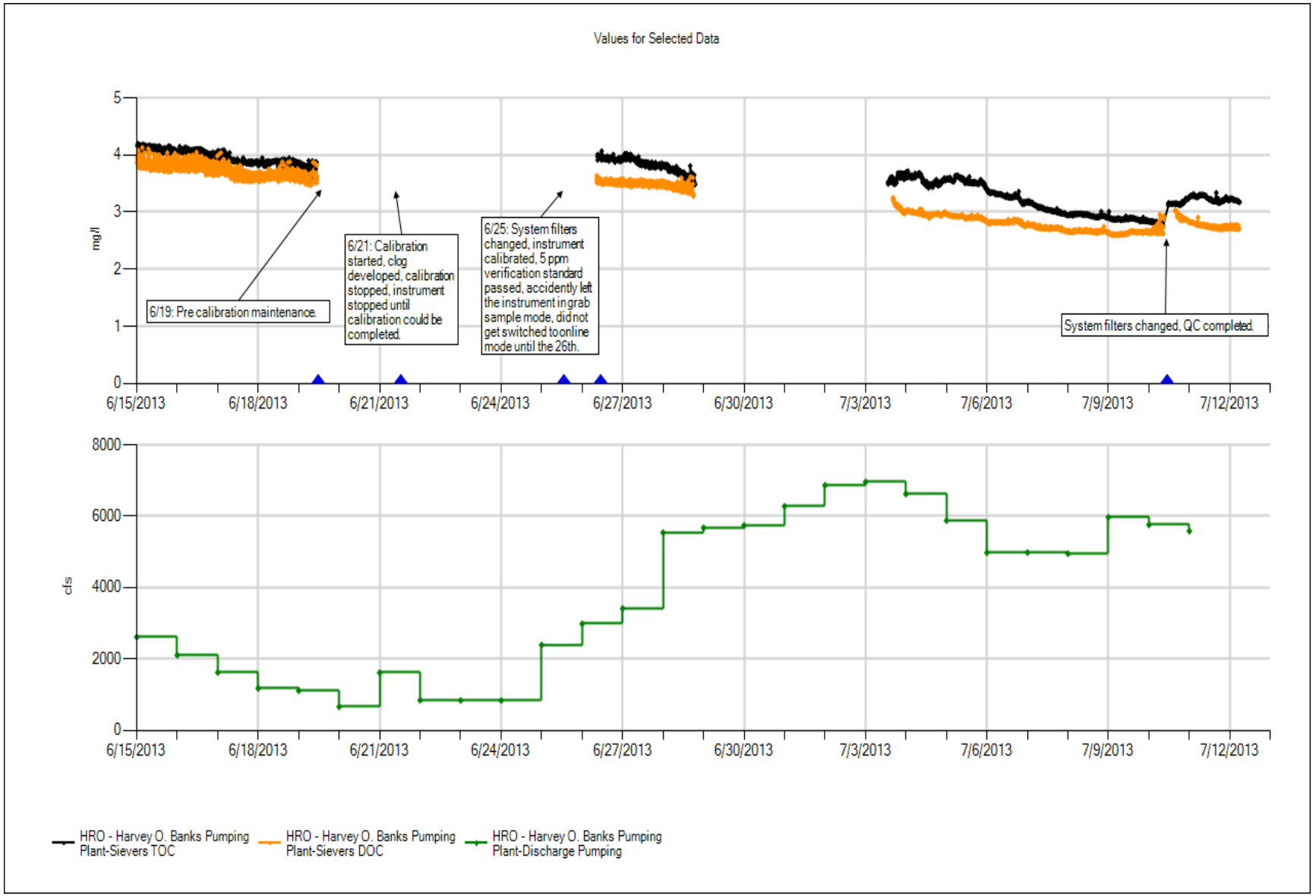
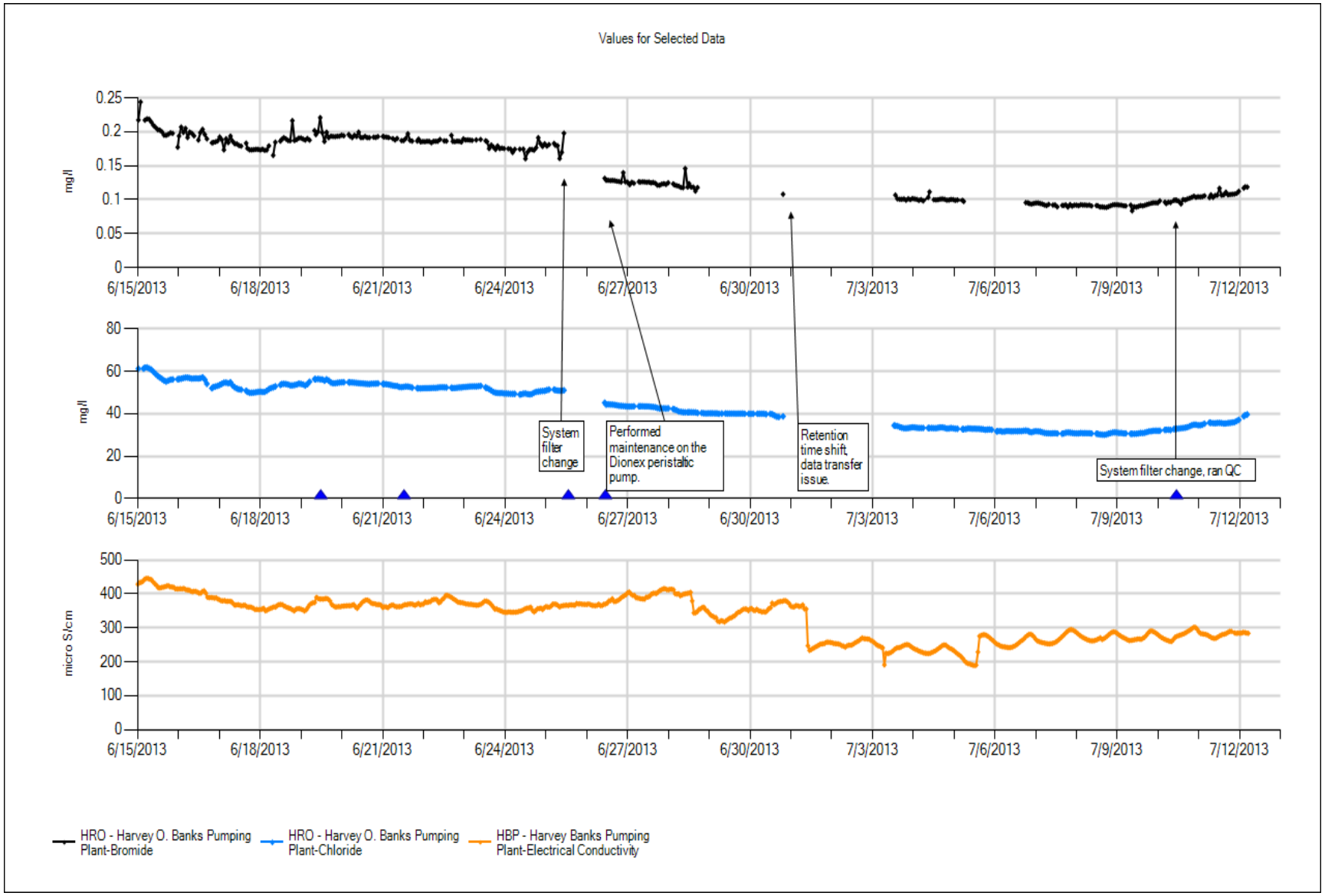
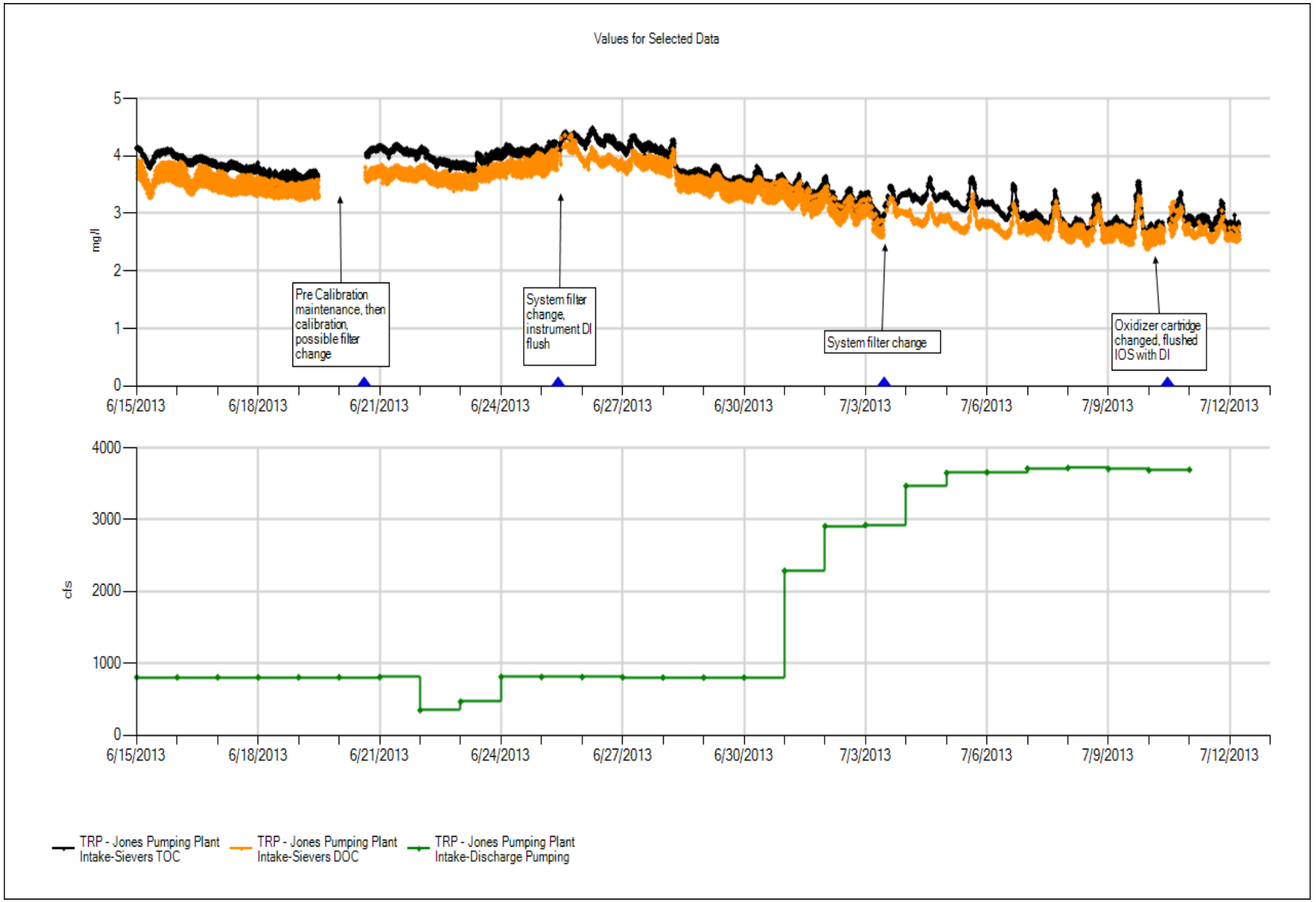
Banks PP Organic Carbon and Pumping



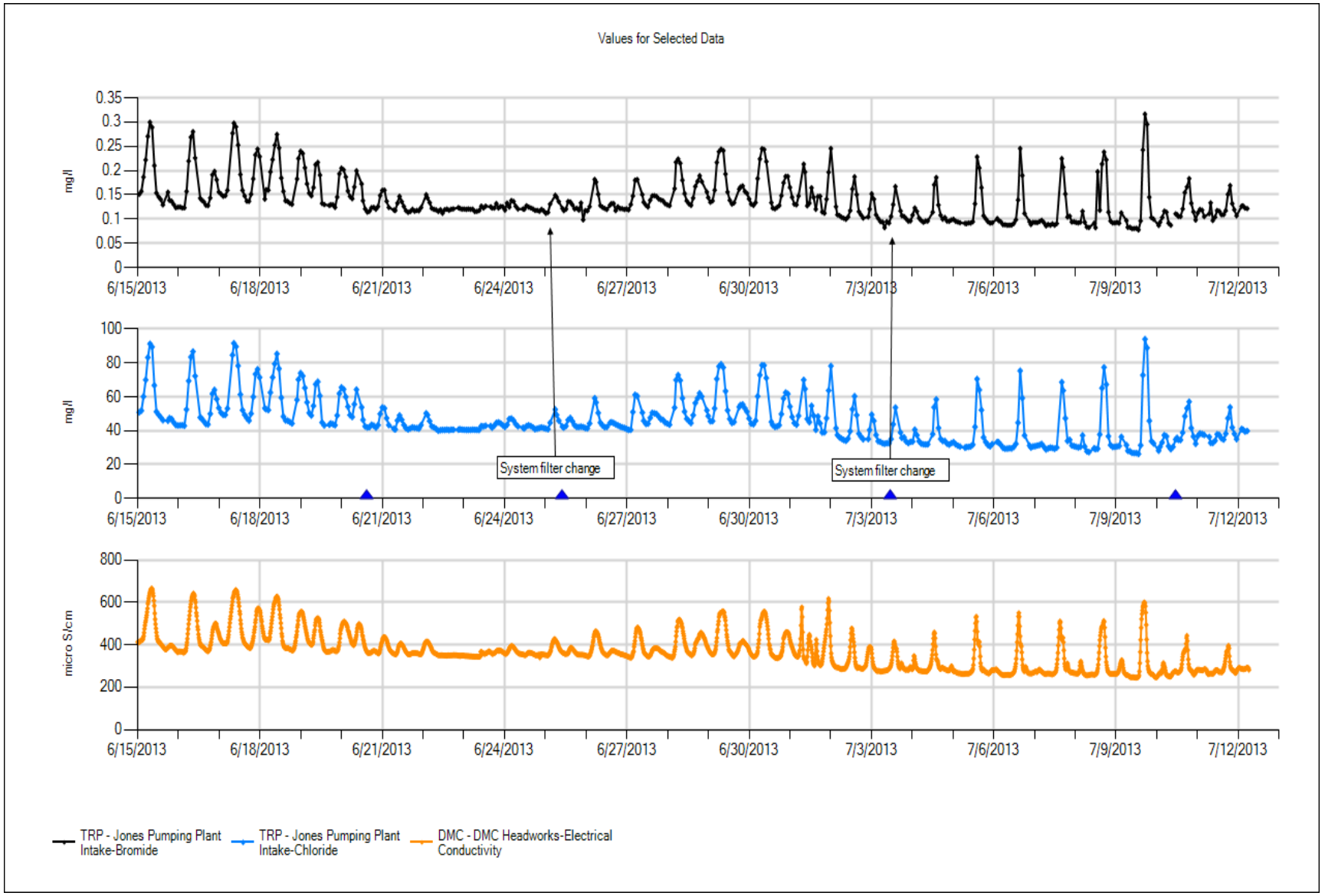
Banks Bromide, Chloride and EC



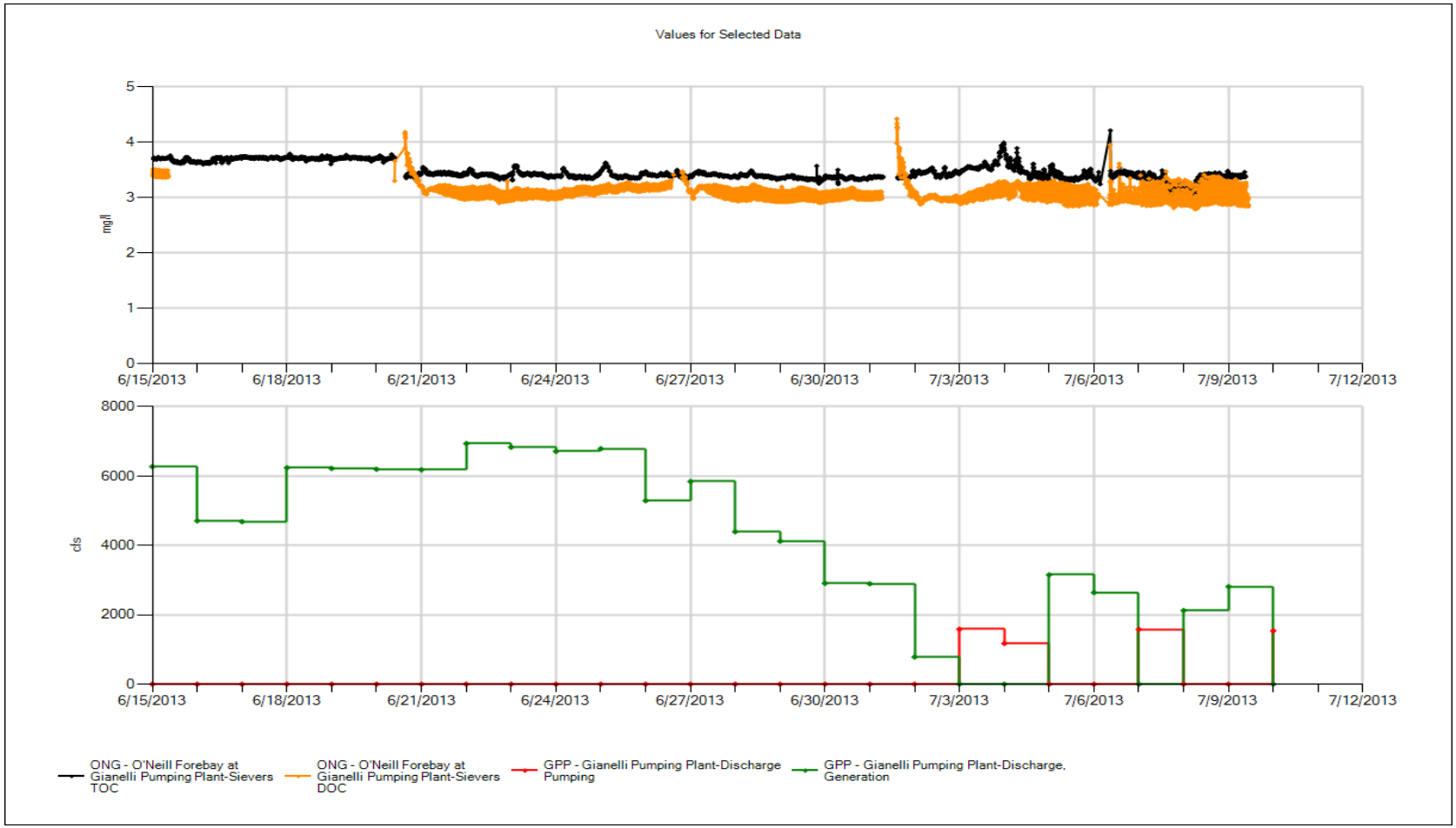
Jones PP, Organic Carbon and Pumping



Jones PP Bromide, Chloride and EC



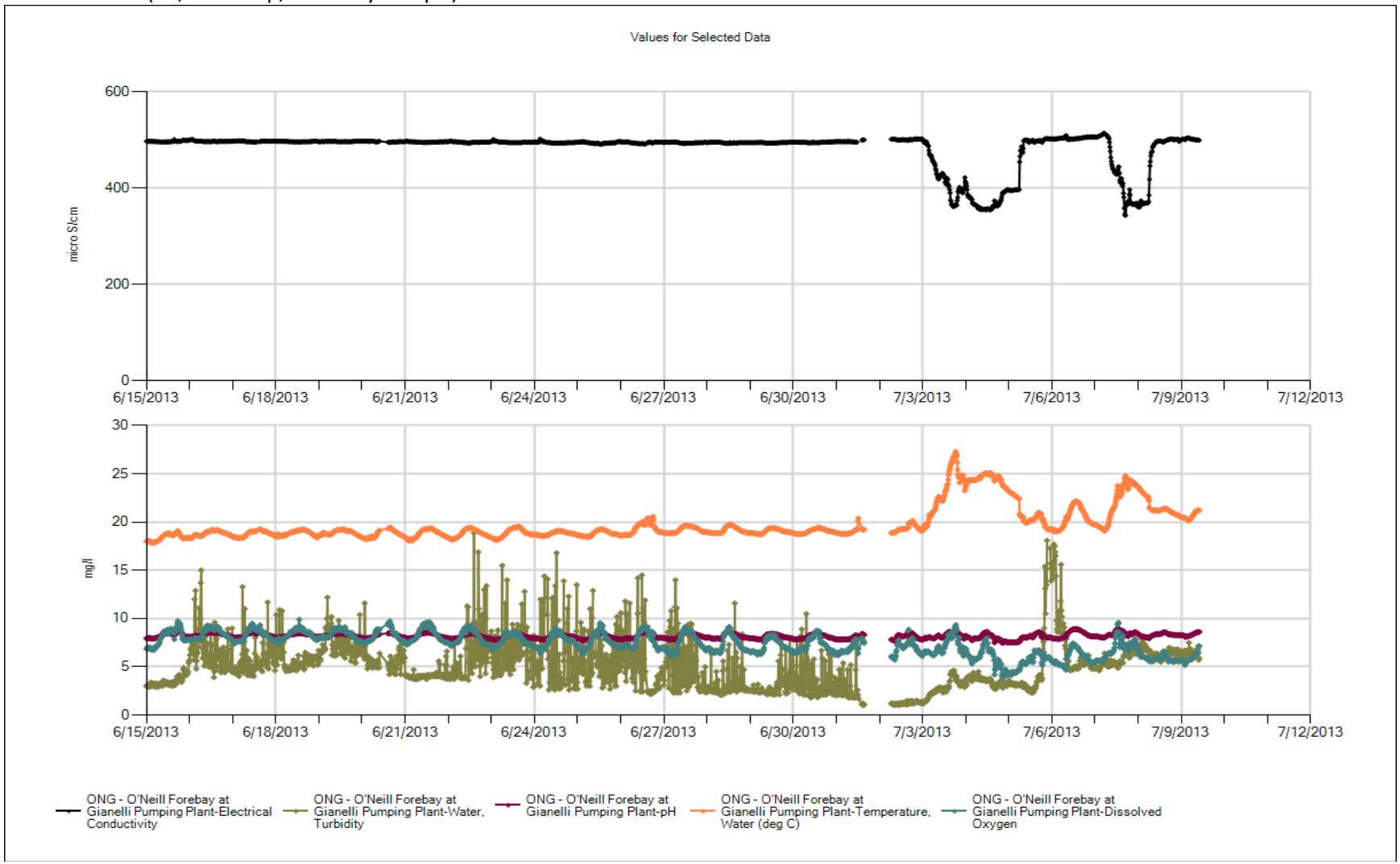
Gianelli Organic Carbon and Pumping/Generating



Gianelli Significant Sievers Events: June 15, 2013 – July 12, 2013

- Power outage on **6/15** caused the StreamWalker to only process TOC samples.
- System calibration on **6/20** and standard QC on **7/1**.
- Wide ranging DOC readings after **7/3** most likely caused by plug of algae.
- Data after 7/9 was not reported due to modem problems. The data exists and will be backfilled as soon as possible.

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



Gianelli Significant Sonde Events: June 15, 2013 – July 12, 2013

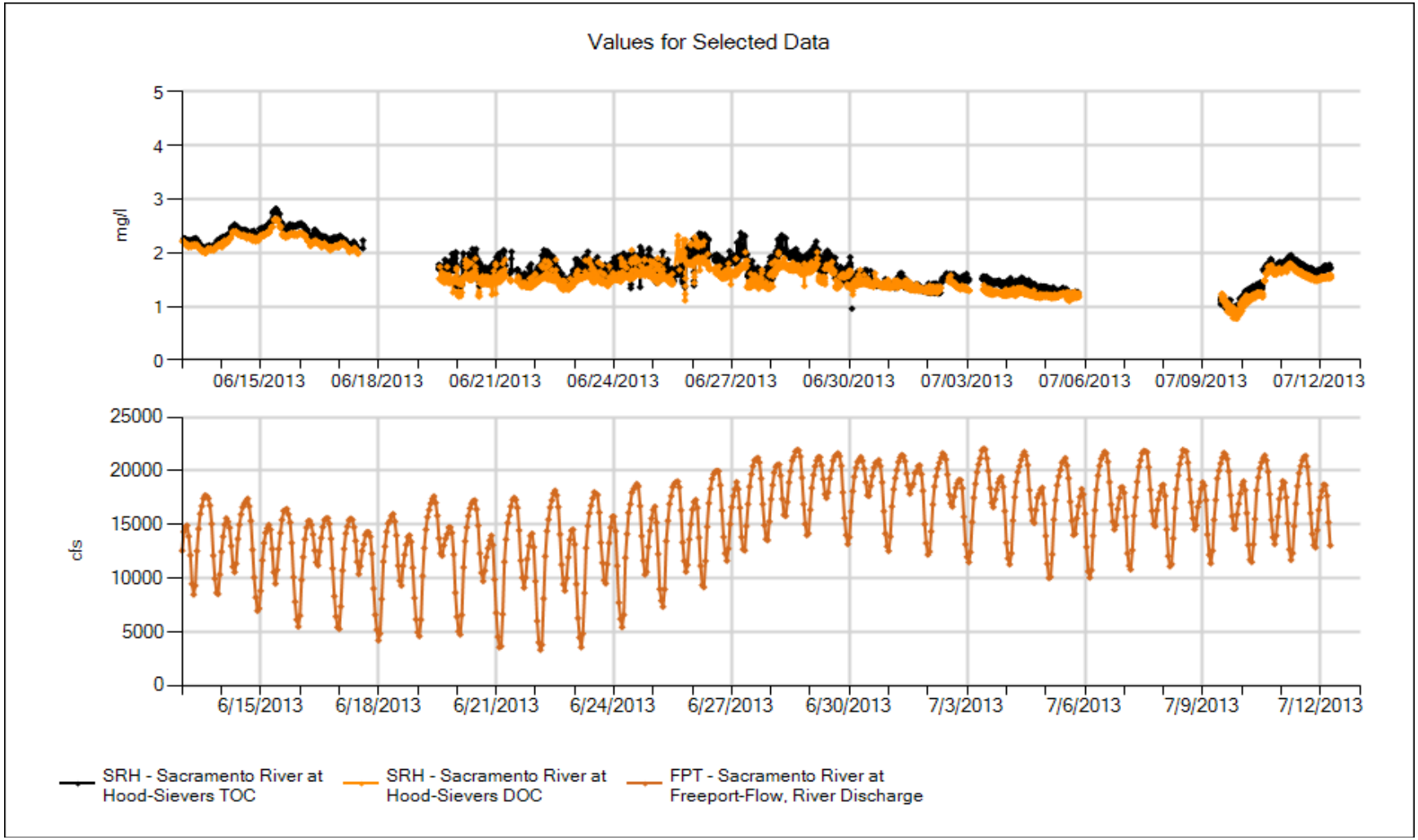
- Erratic turbidity spikes due to build up in the sonde housing.
- Sonde data reporting wasn't turned back on after station visit. Data will be backfilled once it has been downloaded.

Gianelli Anions (Chloride, Sulfate, Nitrate & Bromide)

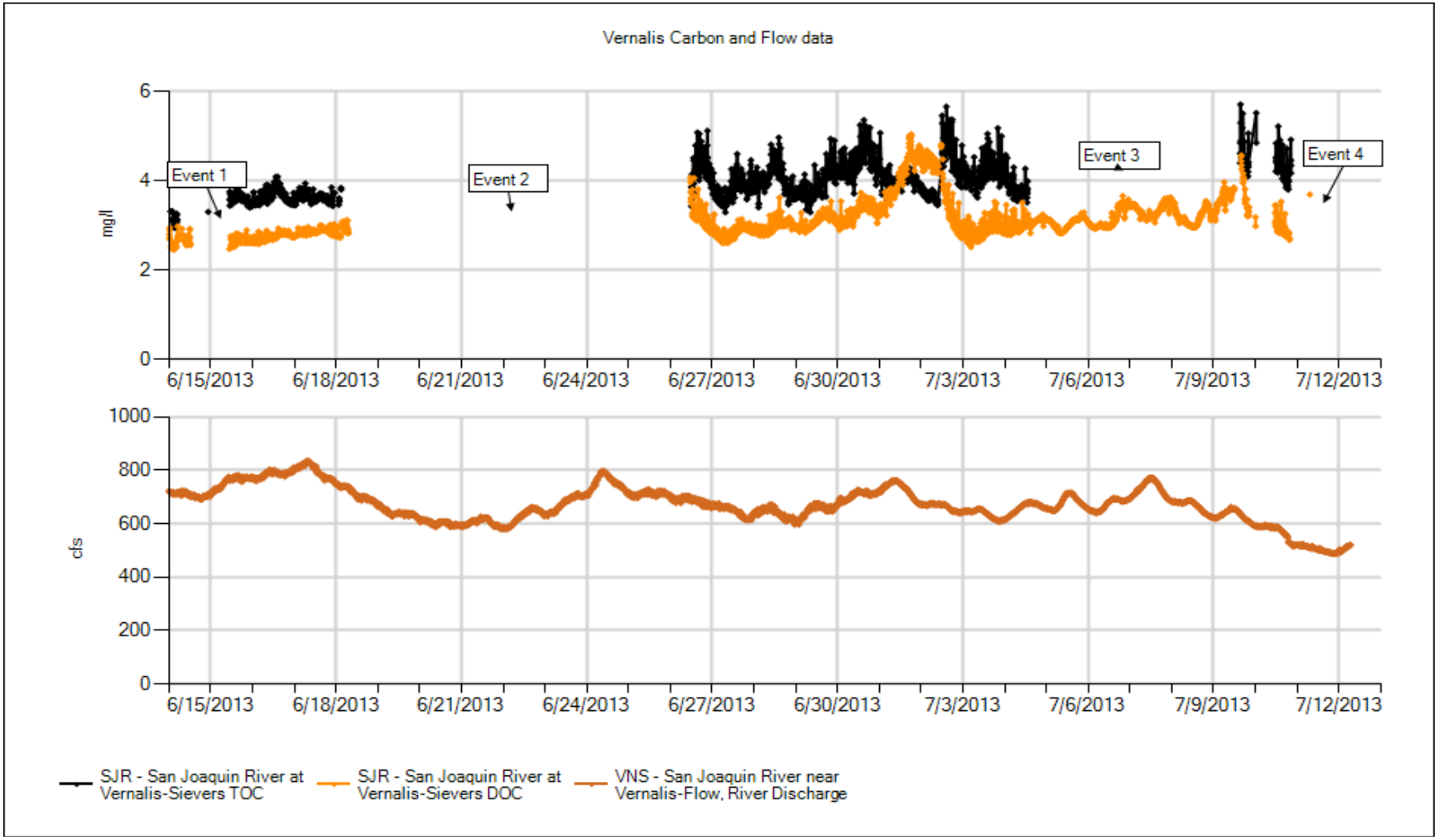
Gianelli Significant Metrohm Events: June 15, 2013 – July 12, 2013

- Power outage on **6/15** caused instrument to shut down.
- Instrument lost communication with a periphery device and shut down on **6/18, 6/20, and 6/22**.
- Obstruction in sample flow path caused erratically low readings from **7/5** to **7/9**.

Sacramento River: TOC, DOC and Flow rate

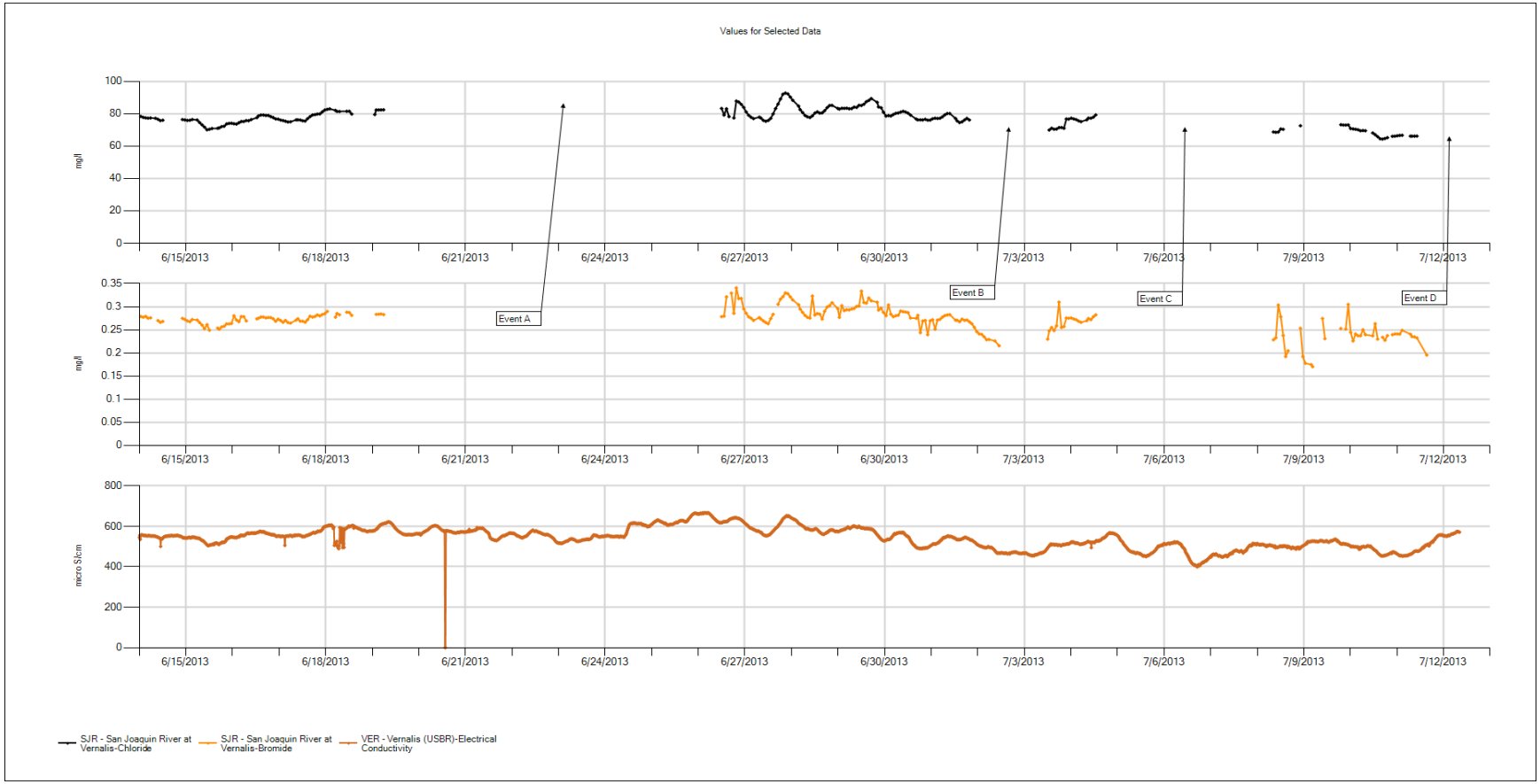


Significant events: 6/17 – Filters changed, oxidizer cartridge changed, pre-calibration procedures conducted. **6/18** – Calibration postponed due to resin bed flushing. **6/19** – Calibration passed. **6/21** – Acid cartridge was changed. For about two weeks the analyzer experienced erratic readings and software glitches. It was finally determined that the micro-tubing running from the DI reservoir to one of the solenoid valves was completely clogged. After the system was flushed and the micro-tubing cleaned, the analyzer began running smoothly. **6/28** – back-flushed membranes to remove any clogs. **7/2** – Filters changed. **7/10** – Cleaned and re-installed solenoid tubing.



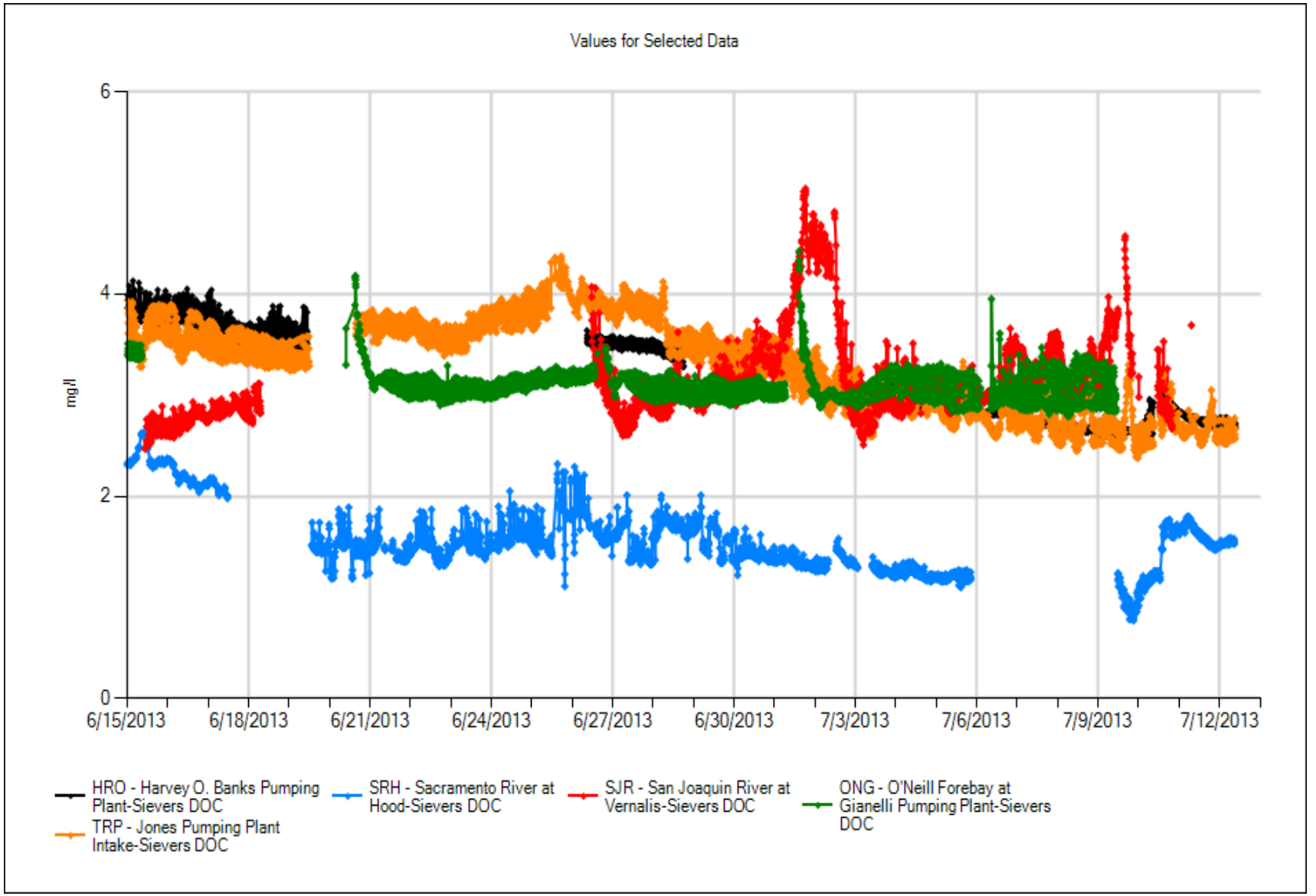
Event 1: Possibly low water left pump dry. **Event 2**: Low water caused pump to run dry. Pump was shut off and the standpipe and river substrate altered to allow the pump to sit deeper. The pump was already damaged and needed replacement. Purchasing restrictions (no Cal-Cards) made it difficult to procure a new pump/motor. New pump installed on 6/26. **Event 3**: Power outage caused the stream-splitter to run only one stream, DOC, until it could physically reset. **Event 4**: Low water and sediment loading around the pump will not allow the motor to dissipate heat, thereby tripping the thermo-protection switch and not providing water to the station. Should be fixed today, 7/12.

Vernalis Chloride, Bromide and EC



Event A: Low water caused pump to run dry. Pump was shut off and the standpipe and river substrate altered to allow the pump to sit deeper. The pump was already damaged and needed replacement. Purchasing restrictions (no Cal-Cards) made it difficult to procure a new pump/motor. New pump installed on 6/26. **Event B**: Clogged delivery/waste line on the Dionex. Also some difficulty with a dirty solenoid valve. **Event C:** Power outage during the holiday. Dionex was restarted on Friday, but did not report the good data. Could not reset the Dionex until Tuesday (new site recon on Monday), but did provide some data (albeit suspect) on Monday from a remote restart. **Event D:** Low water and sediment loading around the pump will not allow the motor to dissipate heat, thereby tripping the thermo-protection switch and not providing water to the station. Should be fixed today, 7/12.

DCO at all stations



Bromide and EC at Selected Stations