SOP for Reservoir Continuum Sampling  
Written by W. Woelmer  
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* Within-reservoir sites should be sampled as you move upstream (i.e., Site 50 -> Site 45 -> Site 30 -> Site 20)
* Stream sites should also be sampled in a downstream -> upstream manner (where applicable).
* All sites should be sampled following the procedure below:
  1. Collect **EEMs sample**
     1. Use an acid-washed syringe to suck up a small amount of sample water and filter (but do not collect!) through the filter and filter cartridge. This serves as a sample rinse for both the syringe and the filter/filter cartridge
     2. Use syringe to suck up ~ 20 mL of sample water, then filter sample water into previously combusted glass vial. ONLY fill the vial ¾ full (in order to prevent cracking when freezing; especially important for freshwaters)
     3. Store in the dark, preferably in a cooler with ice, and transport back to the lab
     4. Repeat steps 1a-1d for Rep. 2
  2. Using the same syringe and filter cartridge (and changing to an un-ashed GF/F filter if necessary), collect **soluble nutrient samples** at the surface
     1. Syringe should already be rinsed from EEMs sample collection
     2. Rinse soluble bottle with filtered water 1X
     3. Fill bottle ~3/4 full with filtered sample water
     4. Store in a cooler and transport back to the lab
     5. Repeat 2a-2d for Rep. 2
  3. Collect **total nutrient sample** at the surface
     1. Rinse bottle with sample water 3x
     2. Fill bottle ~3/4 full with sample water
     3. Store in a cooler and transport back to the lab
     4. Repeat 3a-3c for Rep 2
  4. Collect **chlorophyll-a sample**
     1. Fill 2L amber bottle with surface water
     2. Store in a cooler (if possible) and transport back to the lab
  5. Collect **BDOC sample** (at select sites and dates)
     1. Collect BDOC only at the following sites: B100, B20, B01, & B50 and F50, F30, F200, F99, F102
     2. Rinse bottle with sample water 3x
     3. Fill bottle with sample water
     4. Store in a cooler and transport back to the lab
  6. **Measure physical conditions** (water temperature, dissolved oxygen, and conductivity) at the surface
     1. **DO and YSI sensors should be calibrated before use**
     2. Make sure to record the sensor ID on the field datasheet
  7. \*\*\*At stream sites, **measure discharge**
     1. **Flowmeter method**
        1. At 0.1m intervals along the width of the stream, measure depth (cm) using a meter stick and velocity using a flow meter (ft/s or m/s—be sure to record the units\*\*)
        2. Velocity should be recorded at 1/3 of the total depth above the stream bed at a given width interval.
        3. Make sure to record the flow meter ID on the field datasheet.
     2. **Salt slug method**
        1. Pick a slug addition site approximately 50m above the stream continuum monitoring site.
        2. At the monitoring site, collect several baseline specific conductance (SC) measurements before adding the salt slug upstream.
        3. At the slug addition site, dissolve the pre-weighed salt (~125g/1m stream width) in a bucket with stream water.
        4. Pour the bucket into the stream all in one slug at the slug addition site. Record the time or start a stopwatch. Immediately begin recording time and SC at the monitoring site. Record as frequently as needed. If SC is not changing or only changing slowly, record only every minute or less, but once SC begins to change rapidly, it may be necessary to record every 10 - 15 seconds.
        5. Continue recording until SC returns to background (or nearly back).
  8. **NOTE**: Please collect the EEMs sample before the soluble nutrient sample, making sure to use both an acid-washed syringe and a combusted GF/F filter for the EEMs sample. Besides the EEMs and soluble samples, the order of sample collection/measurements does not matter.

**Post-field processing**

* EEMs should be stored frozen in the divided, cardboard boxes they originally came in
* Total and soluble nutrients should be stored frozen
* Chlorophyll-a samples should be filtered as soon as possible upon returning to the lab. If this is not able to happen on the day of field sampling, the samples should be chilled in a refrigerator until they can be filtered. Refer to Chlorophyll-a SOP for filtering procedure.
* BDOC samples should be filtered within 48 hours. Refer to BDOC SOP for filtering procedure.
* Physical measurements, including discharge should be digitized at the earliest convenience.