**Water Quality Sampling**

Outline

* Measurements of dissolved oxygen (mg/L), temperature (C), and transparency (cm) will be obtained at Bluff Lake during any periods of natural or artificial water level changes.
* Dissolved oxygen and temperature will be measured using a YSI 85 multimeter (YSI, Inc., Yellow Springs, Ohio).
* Water transparency will be indexed using a secchi disk.

Sampling Points

* The main pool of Bluff Lake will be allocated a grid of twenty nonaligned random points.
* At each point, dissolved oxygen and temperature will be measured at a 60 cm depth.
* On each sampling day, a random subset of five points will also be measured in a 20 cm spaced vertical profile, culminating within 20 cm of the reservoir bottom.

Protocol

* The boat will drive to the sampling area
  + the final approach should be at slow speeds in order to reduce the affects on DO and turbidity
* the depth at the point should be recorded
* A DO probe will be used to measure both DO and temperature at 60 cm from the surface, or in a 20 cm spaced vertical profile starting at the surface.
  + Allow the measurements to stabilize for at least 1 min
* Slowly lower the Secchi disk into the water on the shady side of the boat until it is no longer visible. Record this depth.
  + Slowly raise the disk until it just becomes visible once again. Record this depth.
  + Average the depths from steps 1 and 2 to get the Secchi depth.
* Percent vegetation in a 1m2 area surrounding the point will also be recorded