

Clark Canyon Reservoir sampling project - 2016

Objective	Medium	Parameter/Study	Waterbody				Sampling Frequency	Sampling Notes
			Clark Canyon Reservoir	Red Rock River	Horse Prairie Creek	Beaverhead River		
Causes of Beaverhead R. Turbidity	Water Chem	Nutrients (SAP Table 3.1, Table 4.1)	X	X	X	X	Monthly, synoptic (May through Sept), plus clarity change-triggered events	Depth of 1 m and 1m from lake bed of reservoir
	Water Chem	Common Ions (SAP Table 3.1, Table 4.1)	X	X	X	X	Monthly, synoptic (May through Sept), plus clarity change-triggered events	Depth of 1 m and 1m from lake bed of reservoir
	Water Chem	TSS, TDS, VSS (SAP Table 3.1, Table 4.1)	X	X	X	X	Monthly, synoptic (May through Sept), plus clarity change-triggered events	Depth of 1 m and 1m from lake bed of reservoir
	Water Column	Phytoplankton Chl-a, AFDW (SAP Table 3.1, Table 4.1)	X	X	X	X	Monthly, synoptic (May through Sept), plus clarity change-triggered events	Depth of 1 m and 1m from lake bed of reservoir. All water column Chl-a sampling will include replicates samples.
	Water Column	Phytoplankton Phaeophyton (SAP Table 3.1, Table 4.1)	X	X	X	X	Monthly, synoptic (May through Sept), plus clarity change-triggered events	Depth of 1 m and 1m from lake bed of reservoir. All water column Chl-a sampling will include replicates samples.
	Water Column	Phytoplankton Taxonomy (SAP Table 3.1, Table 4.1)	X					One site (CC1) on Clark Canyon reservoir; sampled in July, August, Sept
	Water Column	X-ray size fractionation of material suspended in water. (need field method, sample handling, storage, holding time, and lab method/description)	X			X	Monthly,at site CC1 at the depth of turbidity, and in the Beaverhead River tailrace (May through Sept), plus clarity change-triggered events	sampling conducted only if there is turbidity evident
	Sediment Chem-Cores	Full geochemistry of sediments and water at the bottom of the reservoir (need parameter/analyte list)	X				Monthly, synoptic (May through Sept), plus clarity change-triggered events	
	Reservoir bed elevation, water turbidity	Sontek Doppler-Acoustic mapping of reservoir sediment elevations at established transects near the Clark Canyon Dam, including turbidity in the water column (need method and info for SAP)	X				Once	
	Reservoir Sediment and Water	Sontek Doppler-Reservoir Sediment and Water Movement (need method and info for SAP)	X				Once	Doppler monitoring to be conducted if turbidity increases in July or August; looking for water motion and turbidity near the reservoir bed
	Water-streams	Stream Discharge		X	X	X	Each sampling event	Beaverhead River gage data may be used when the river is not wadeable
	Reservoir-water	Dam discharge	X				continuous	BOR dam operation discharge data or gage data for the Beaverhead River at Barretts
	Water-Momentary In-Situ	Hand held YSI EXO meter: DO, pH, SC, water temperature, turbidity (NTU), chl-a, ORP, water depth . From 1 meter depth to 1 meter from lake bed, at 1 meter increments in the reservoir; and in the 3 streams	X	X	X	X	Monthly, synoptic (May through Sept), plus clarity change-triggered events	
	Water-Continuous (1/2-hour) In-Situ	YSI 6600: DO, pH, SC, water temperature, turbidity (NTU), chl-a .		X	X	X	continuous, <i>in situ</i>	
	Water Column	Secchi Depth- water clarity	X	X	X	X	Monthly, synoptic (May through Sept), plus clarity change-triggered events	Secchi disk to be used in the reservoir, Secchi tube to be used in the streams
	Substrate crust	Substrate crust composition: calcium carbonate(CaCO3) , calcium sulfate (CaSO4)"/"gypsum"?				X	Once in August or September	Check for composition of crusts
	Climate data	Weather Station: Wind speed, wind direction, temperature					continuous, July through September	Deploy weather station on the island

Selenium/Metals Investigation	Water Chem	Metals, Hardness- Total Recoverable, Total Dissolved (SAP Table 3.1, Table 4.1)	X	X	X	X	First round of sampling : May	All sites
	Sediment	Sediment Metals (SAP Table 3.1, Table 4.1)	X	X	X	X	Single sampling, soon after runoff (July)	All sites
	Field Photos	Field Photos	X	X	X	X	Each sampling event	All sites
	Water-streams	Stream Discharge		X	X	X	Each sampling event	Beaverhead River gage data may be used when the river is not wadeable
	Red Rocks Watershed and TMDL project	Sediment, Habitat, Nutrients, Temperature, eColi, Metals		X	X		Project will run from last year to ~2019 with monitoring ramping up from year to year until TMDL writing begins.	
	Beaverhead TMDLs phase II	Nutrients, Metals, Temperature(blacktail deer)				X	no more sampling	Beaverhead River will be listed for nutrients.