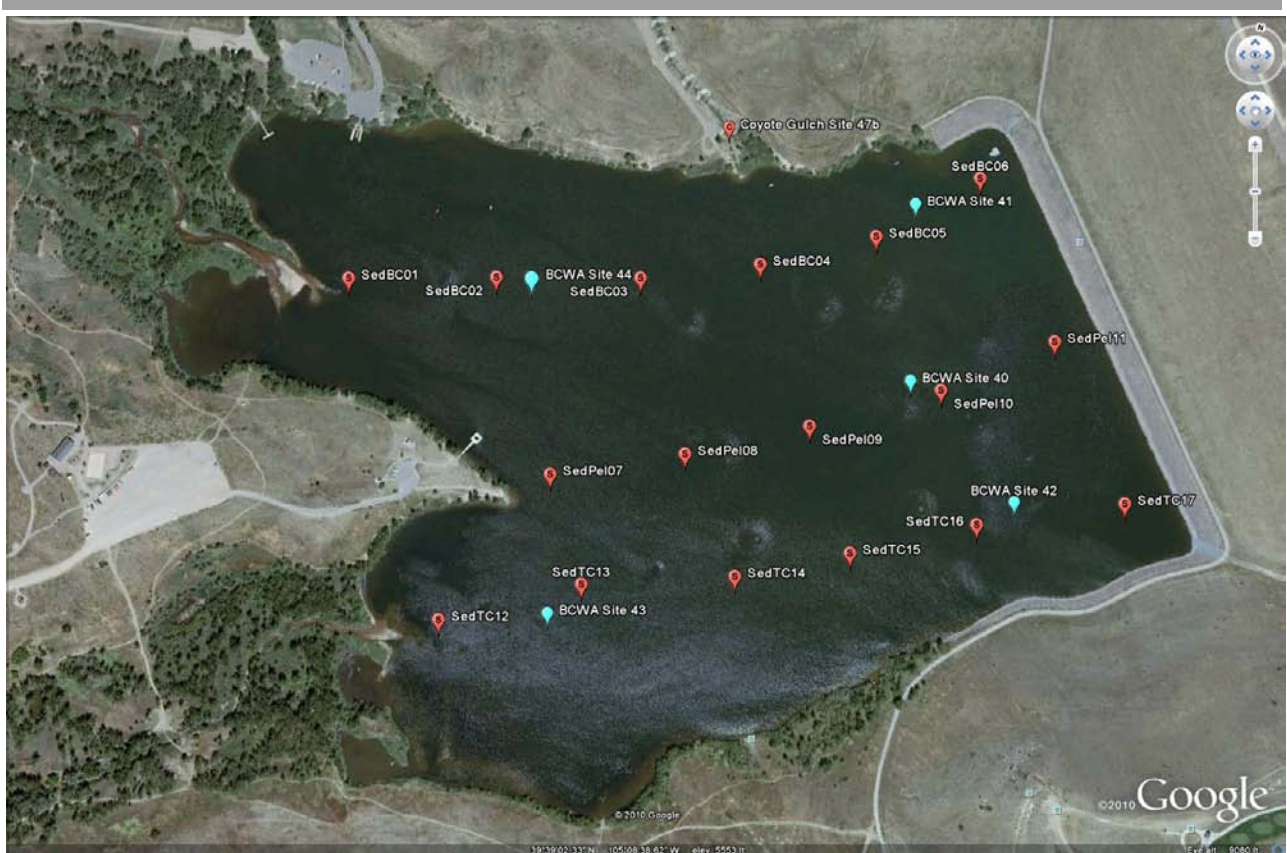


MEMORANDUM

Date: August 27, 2010
To: Bear Creek Watershed Association
From: Watershed Manager, Russell Clayshulte
Re: Sediment Methods and Results



Field Sampling

Field sampled on August 26, 2010. Bottom samples obtained with a petite Ponar sampler. Two dredge drops were made at each site resulting in 1.5 to 3 liters of bottom mud. GPS coordinates were taken at each site. The locations in above figure are estimates. Two samples were bagged from the composite mud sample at the site

One bag of sample was used for analyses and the second sample retained for future reference. The contents of the sample were placed in a pie tin. Samples were dried at 105 degrees C in an oven for 24 to 48 hours.

Total Organic Matter

An about 5 gram sample of the dried sediment was weighed, ashed in a muffle furnace at 550 degrees C for 1 hour and reweighed. The total organic matter (TOC) is volatilized and the percent difference is calculated to determine the estimated percentage of TOC .

Grain Size Distribution

A mechanical sieve “sandshaker” was used to determine the percentage distribution of selected grain sizes in the dried bottom sediments. The dried sediment was re-loosened into a sandy silt material. All bottom sediment material was less than U.S. Standard sieve 10 (0.08 inches) in diameter. As such all reservoir sediment ranges from coarse sand to clay size. The Sieve distribution used is shown in the following Table.

Grain-Size Term	ASTM No.	Mesh Opening (in)	Sieve Designation
Very Coarse and Coarse Sand	25	0.026	26 OPN
Medium Sand	60	0.009	9 OPN
Fine Sand	120	0.0046	46 OPN
Very Fine Sand	200	0.0029	29 OPN
Silt and Clay	<200		

Total Phosphorus

Extraction Procedure - Distilled Water

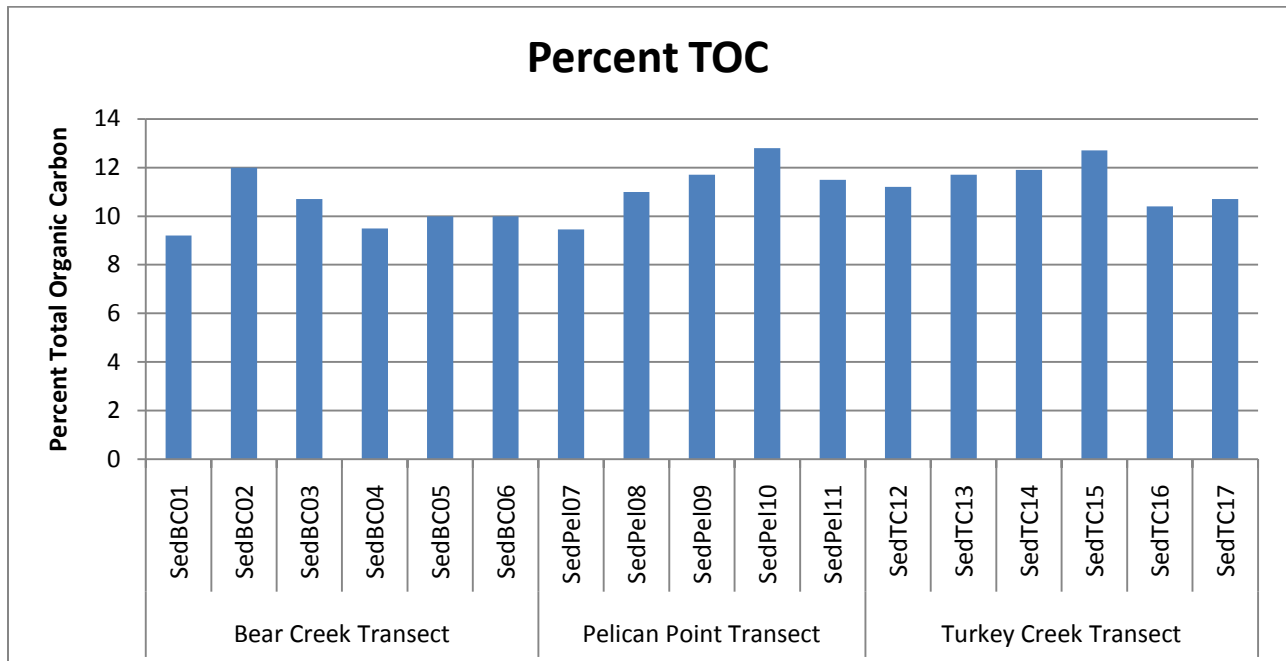
1. Weigh 4 g of wet mud into 125 ml bottle with lid.
2. Add 20 mL of distilled water and shake manually over a one hour period.
3. Centrifuge at 3,500 rpm for 15 minutes.
4. Filter the solution through a 0.7 µm membrane filter.
5. Use 5 ml for analysis; retain remainder for dilution, if appropriate.

Analysis

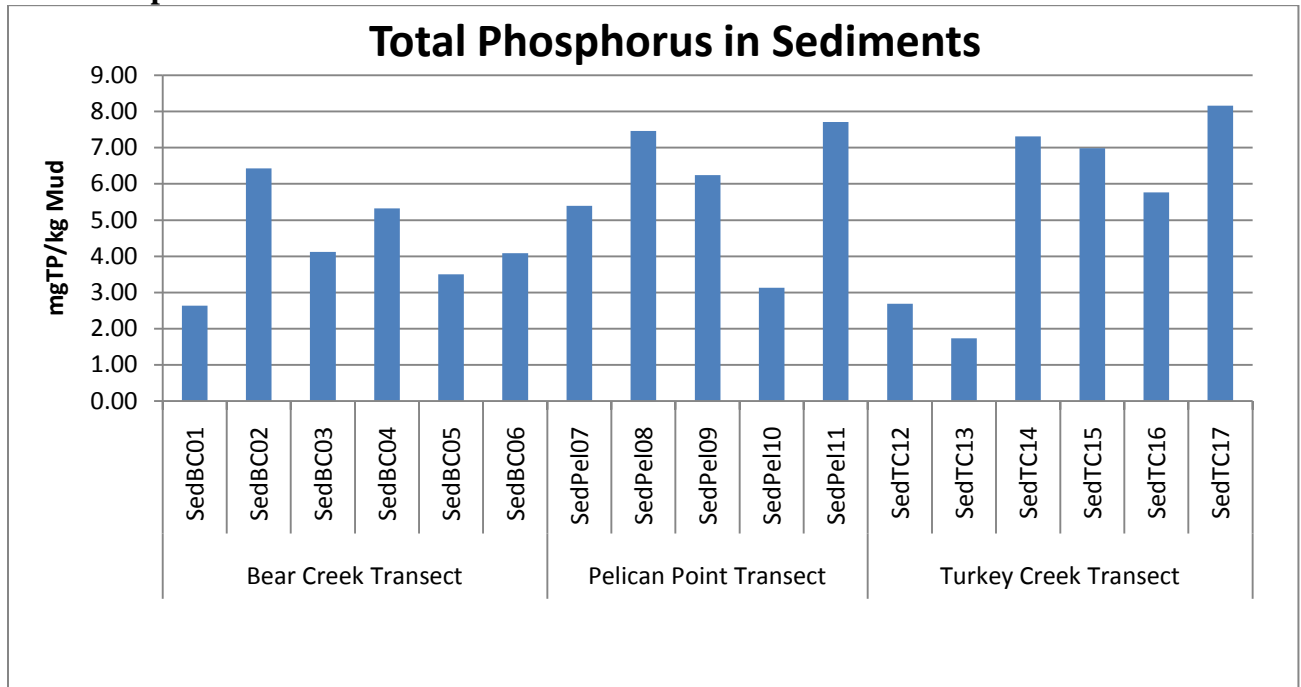
Determine total phosphorus as water extractable P in wet mud using HACH method 8190 PhosVer 3 with acid persulfate digestion Test “N Tube method measured with a Hach DR2010 spectrophotometer at 890 nm.

Results

TOC



Total Phosphorus



Grain Size Distribution

