Chemical Characterization of Clark Canyon Reservoir, Montana [MAS]

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A preliminary study of the water chemistry of Clark Canyon Reservoir, Montana, was begun. Clark Canyon is located 20 miles south of Dillon, and is filled by Red Rock River and Horse Prairie Creek, and is the source of the Beaverhead River. Clark

Canyon is a rich and popular fishery. Samples were taken at the deepest part of the lake (near the dam) depths of: surface, 5 m, 10 m, 15 m, 20 m, and bottom (approx. 25 m). During the winter, holes were drilled in the ice and a water sampler used. Temperature, pH, dissolved oxygen were measured on site, and the samples were immediately transported back to the lab for analysis. All analyses were done within 48 hours of sampling. Analysis was done with a HACH DR/2000 Spectrophotometer following EPA protocols. Results obtained for several analyses are reported here. The concentrations reported are ranges and averages of samples taken on four different dates. Calibration standards were run to check for accuracy, and all reported results have errors of less than 10%. Sampling dates: 1/5/97, 1/31/97, 2/23/97, 4/17/97. All concentrations are in mg/L except pH and where otherwise noted. Temperature: range 1-6°C, average 4°C. Dissolved oxygen: range 4.7-4.8, average 9.3. Nitrate: range 0.44-1.63, average 0.77. Nitrite: range 0.013-0.030, average 0.020. Sulfate: range 66-88, average 76. Phosphate: range 0.33-2.86, average 0.89. Iron: range 0-0.71, average 0.14. Fluoride: range 0.10-0.69, average 0.40. Chloride: range 6.6-16.5, average 9.8. Ammonia: range O.12-0.37, average O.22. Calcium hardness: range 112-185, average 151. pH: range 7.56-8.64, average 8.10.