

Reflections – Twin Lakes, Colorado – the “Lake Mendota of the Rockies”
By: Sharon Campbell, October 2007



I came to Colorado in June, 1978 with a relatively new degree in Biology from the University of Puget Sound in Tacoma, WA. I had been hired as a Biological Technician by the Bureau of Reclamation in the Environmental Sciences Section for the Mt. Elbert Pumped-Storage Powerplant studies of the effects of powerplant operation on the ecology of Twin Lakes, Colorado. I worked with several other scientists collecting limnological data at Twin Lakes for over 8 years. Data collection was supposed to consist of 1 - 2 years of pre-operational, and 1- 2 years of post-operational efforts to determine how the ecology of the lake responded to powerplant operation. We ended up with 14 years of pre-operations data and just 2 years of post-operational data collections because construction and equipment installation was delayed.

In retrospect, the data collection and sample processing for the studies at Twin Lakes were the ultimate limnology training course for the group of scientists who participated in the process. In September, we had a small reunion to honor Jim Sartoris, who retired to Hawaii 2 years ago. Jim LaBounty, Jim Sartoris and I spent part of the evening remembering Twin Lakes and all of us agree that it was the best time of our professional careers. We all shared a common body of work that was interesting, challenging, and rewarding. We were all stimulated creatively by the depth of

understanding we gained about lake ecology and Twin Lakes response to hydrology, meteorology, and perturbation, once the powerplant began to operate.



Photo taken July 9, 1993 at the Twin Lakes Monograph party, with principals from the Twin Lakes Study celebrating the completion of the Engineering Monograph titled “Aquatic Ecology Studies of Twin Lakes, Colorado 1971-86: Effects of a Pumped-Storage Hydroelectric Project on a Pair of Montane Lakes.” From left to right are: Steve Hiebert, Eric Bergersen, Wes Nelson, Jim Yahnke, Sharon Campbell, Lloyd Timblin, Jim Sartoris, Dale Hoffman, Rick Roline, Gene Otto, Rich Walters, Tom Bartley, and Jim LaBounty. Not shown are Davine Lieberman, John Boehmke, Melo Maiolie, Tom Nestler and a variety of summer temporary employees and students who assisted in the studies at various times.

We were also challenged by working at high altitude, doing year-round surveys using boats during the ice-free seasons and snowmobiles, dragging sleds or on snowshoes during the winter. Before the powerplant began operation, we actually drove a big suburban out on the ice and drilled through up to 3 feet of ice to lower our equipment and sampling gear. On many occasions in winter, the handlines froze solid as we pulled them out of the hole in the ice and made a free-form ice sculpture behind us! We have tales of frostbite, breaking through the ice and having to be winched out, wind and thunderstorms in both summer and winter that caused us to run for cover. During one memorable winter survey, there was so much static electricity in the atmosphere that the spud bar we used to break ice with, was actually vibrating and humming as it stood upright in the ice. My acrylic knit hat had an aura of fuzz sticking straight out in all directions and every time my colleague, Steve Hiebert, bent down and straightened up, he got a shock from his metal framed eyeglasses. We could hear thunder rolling across the lake and the snow was falling around us like giant feathers sifting down from a featherbed that had somehow split in the clouds above us. We should have run for cover that time as well, but were too ignorant to realize the danger that the ionic charge represented. Fortunately, we completed the survey without harm to either us or any of the equipment.

Twin Lakes was the place where I actually experienced “lake turnover”, as the lakes developed a thermocline each summer in the ice-free season. I learned to recognize diatoms, desmids, chrysophytes, copepods, rotifers, and cladocerans in the plankton samples I processed. I learned to conduct radioisotope uptake tests and process samples. I learned to collect and process chlorophyll biomass samples and did the same for benthic invertebrate samples. I learned to measure physical-chemical parameters and collect samples for water quality constituents. I learned to work and share information with a group of colleagues who shared the same interests and were always willing to discuss, inform and teach each other about lakes, lake functioning and ecology. And at the end, I also learned how to enter the data to both mainframe and desktop computers and utilize the information to analyze and interpret the results to help us all understand how the ecology of Twin Lakes responded to perturbation from pumped-storage powerplant operation. I will be forever grateful for being able to participate in the Twin Lakes studies and be a graduate of the LaBounty school of limnology at the “Lake Mendota of the Rockies”.