

WATER QUALITY

Water Quality Sampling

Grant Ranch Master Homeowners Association - Bowles Reservoir



Bowles Reservoir is located in Littleton, Colorado. A subdivision known as Grant Ranch entered into a recreational water lease agreement with J.W. Bowles Reservoir Company to use Bowles Reservoir for recreational purposes. As part of the recreational lease agreement, Grant Ranch Master Homeowners Association was required to conduct long-term water quality monitoring to ensure that construction activities and then the subdivision recreational water use did not negatively impact the water quality in the reservoir.

Martin and Wood, working for Grant Ranch Master Homeowners Association, collected water samples at six different locations within the reservoir five to seven times a year. Martin and Wood personnel used an inflatable raft to collect the samples in bottles to be analyzed by a water quality lab. Martin and Wood personnel then received the results from the water quality lab and analyzed them to determine whether each water quality parameter analyzed fell within appropriate standards for the reservoir. The water quality parameters typically tested included nitrite, nitrate, orthophosphate, oil and grease, total copper, dissolved copper,

total cadmium, total lead, and total zinc. Martin and Wood prepared an analysis of the water quality results and submitted it to the Homeowners Association after each sampling event.

Martin and Wood personnel also created a spreadsheet of water quality data that was updated after each sampling. The data were then displayed in graphical format so long-term water quality trends could be easily observed.

Eldorado Artesian Springs, Inc. - South Boulder Creek Water Quality Sampling

The homes in the community of Eldorado Springs “Eldorado” are currently on private septic systems. For many years, the community has been planning and discussing options for a municipal wastewater treatment system to serve all members of the community, trying to find the most affordable system for the community.

Members of the community hired Martin and Wood to conduct multiple tests of South Boulder Creek at different times of the day and week for a period of one month. Samples were taken upstream, adjacent to, and downstream of Eldorado Springs. In addition to normal water quality testing to meet standard preliminary effluent limits, the samples were analyzed

for household chemicals, pharmaceuticals, and other consumables as well as biogenic hormones, which are released directly to the environment after passing through individual septic wastewater treatment processes. A broad-spectrum drug screen was conducted including caffeine, acetaminophen, and other prescription and non-prescription drugs. Although these drugs were found to be good indicators of waste contamination in the USGS testing of other streams in the United States, none of these drugs was detected in the South Boulder Creek samples.

The results of this study indicated that there were no immediate impacts from the septic system on the nearby creek.

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