



Table Rock Lake Highway H Residence

Presented as part of an extensive study and works project undertaken from 2001 to 2005 by Table Rock Lake Water Quality

PROJECT OVERVIEW

Table Rock Lake is located in the Upper White River Basin watershed, in the heart of the Ozarks.

The second largest of five reservoirs in the Upper White River, covering over 43,000 acres, the reservoir's drainage basin covers over 5,000 square miles in both Missouri and Arkansas. The lake, which is widely considered to have the best water quality of any in Missouri, is quite clear and supports a variety of fish species including bass, crappie and sunfish.

Table Rock's excellent water quality has led to a booming recreation and tourism business, with many resorts catering to fishing, boating and swimming activities, principally during the summer months. The U.S. Army Corps of Engineers estimates that the recreational use at Table Rock Lake ranges between 30 and 40 million visitor hours annually. Along with the Branson tourism industry, Table Rock Lake and other reservoirs on the White River are responsible for the hundreds of millions of dollars annually pumped into the local economy. This growth has benefited the local economy, but has not come without costs. The large numbers of visitors, an increase in confined animal production in the basin, and population growth present the greatest challenges to the water quality in Table Rock Lake.

To learn more about the Table Rock Water Quality Onsite Wastewater Demonstration Project, please visit <http://www.trlwq.org/onsiteDemoproj.html>

ISSUES FACED

The Missouri Department of Natural Resources identified three probable sources of excessive nutrient loading in the lake: municipal sewage discharge from wastewater treatment plants, residential on-site wastewater treatment systems associated with increasing populations, and livestock and poultry wastes.

HIGHWAY H RESIDENCE STATS

LOCATION

Table Rock Lake, Upper White River Basin
Missouri

PROPERTY TYPE

Single family residence

SITE BACKGROUND

The Highway H location consists of a new single family residence with 3 bedrooms and expected average flow of less than 500 gallons per day.

A small yard was made by building a large retaining wall. This area houses the tank and most of the drip dispersal field. The drip field was covered with sod and the system provides water and nutrients for the lawn. The project was considered a showcase for overcoming very tough site conditions with advanced treatment and an irregular-shaped drip field.

SITE CONDITIONS

- Lake front property
- Steep slopes
- Solid rock with very little native soil. Irregular shaped lot
- Site was so challenging that even getting a system installed was a major accomplishment

TYPE OF TREATMENT SYSTEM

- BioMicrobics FAST system with Netafim Bioline in imported soil

DESIGN FLOW (GPD)

360



View of the retaining wall that was built to house the treatment system and much of the drip dispersal field.



Clean fill is added before dripperline is laid out.



Bioline dripperline is laid out. Note the proximity of the tubing to the home. Bioline's precise application allows it to be used where other products cannot perform, including close to hardscapes.



After laying the dripperline out in evenly-spaced rows, soil is laid over the tubing. **NOTE:** the operator is keeping the loader parallel to the tubing to minimize any shifting.



Once the tubing was laid down, soil cover was added and sod was installed. Using Bioline for dispersal is an excellent way to supplement an irrigation system. Ensuring that plants or turf are used for cover also helps draw nitrogen and phosphorus from the soil.



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