

SHELL KNOB SENIOR CORPORATION

# Ozark Villas Natural Wastewater Treatment System

Shell Knob, Missouri



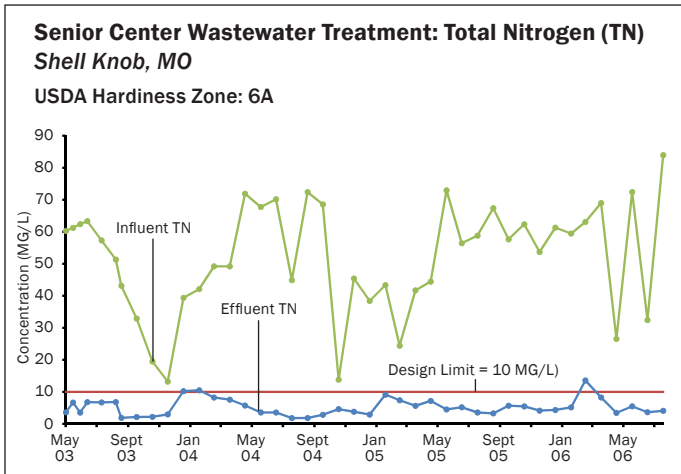
*This innovative, decentralized treatment facility manages phosphorus and other pollutants to serve an affordable, multi-family, senior housing community.*

The Ozark Villas at the Shell Knob Senior Center and residential housing complex is a collection of 32 duplex units and 32 single-family homes. The wastewater treatment system, which holds 12,000 gallons per day, is discharged to the environmentally sensitive Table Rock Lake. Because of very real concerns with phosphorus, the Missouri Department of Natural Resources required a phosphorus limit of 0.5 mg/liter. Reaching these low levels had never before been achieved in Missouri through the use of a small wastewater treatment system.

Biohabitats was asked to design a demonstration facility that would be inexpensive to build and operate. Treatment elements consisted of interceptor tanks with effluent filtering for every two units, a small diameter collection system (two inch sewer lines, no manholes), constructed wetlands with a gravel trickling filter (recycle mound), a recirculating sand filter, and an alum polymer for the phosphorus.

#### SERVICES

Green Infrastructure  
Design  
Construction Management



from top: Constructed wetlands; Comparison of influent nitrogen levels to effluent nitrogen levels.

conservation planning  
ecological restoration  
regenerative design



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