

## Diamond Lake Experiences Sanitary Sewer Overflows

Lake County Public Works Department retained RJN Group, Inc. to determine the cause of SSOs in Diamond Lake.

An SSES was completed by RJN and was subsequently followed by design work to prepare plans and specifications for improvements to the sanitary sewer system. The most feasible solution to the SSO problem was to remove the heavy buildup of mineral deposits and insert a cured-in-place liner.

A manhole in the vicinity of a drainage swale discharged to Diamond Lake overflowed, even during moderate storm events. This poor hydraulic configuration was worsened by a badly deteriorated 12-inch pipe downstream, which had lost about 50 percent of its capacity through a build up of mineral deposits. The 12-inch pipe was in a 24-inch casing under an IDOT highway.

Plans and specifications were completed and construction was completed in 2000.

RJN also addressed extensive hydrogen sulfide deterioration of the Acorn Lane Pump Station Wet Well. The deterioration jeopardized the structural integrity to the wet well. A calcium aluminate cementitious lining was specified, and, as an alternate bid, a fiberglass reinforced polyester wet well liner was specified.

