

Hanson Lakes Wastewater Treatment System

Bellevue, Nebraska



from top: Constructed wetland; Aerial view of the Hanson Lakes community

A natural wastewater treatment system filters the wastewater for a 350-home community near Bellevue, Nebraska, improving the water quality for surrounding lakes.

The 350-home community of Hanson Lakes was built around a series of small lakes near the Platte River. Over the years, the homes changed from summer to year-round residences.

The existing water infrastructure was not designed for year-round use, and pollution from existing leach fields began to infiltrate the water table. As water quality in the lakes deteriorated and well water began to show signs of pollution, the Health Department encouraged the community to sewer each of the lots. An investigation revealed that the option of transferring waste to the City of Bellevue would be both expensive and without a long-term guarantee of service. The community voted to create a Sewer Improvement

District and invest in the necessary infrastructure.

Biohabitats partnered with Omaha-based Olmsted and Perry Consulting Engineers, Inc. who designed a small diameter collection system. Biohabitats designed a wastewater treatment system to complement the small diameter sewer system. The new wastewater treatment system now consists of flow splitters, pretreatment tanks, filter tanks, subsurface constructed wetlands, dosing tank, pumps, piping, flow meters, UV disinfection system, control building, and related appurtenances.

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