

MONROE COUNTY SOLID WASTE MANAGEMENT DISTRICT

Monroe County Landfill

Bloomington, Indiana

Self-maintaining and self-regulating system treats wastewater and meets Indiana water quality standards in the process.



Originally opened in 1971, the Monroe County Landfill consists of a 50-acre municipal solid waste landfill (MSW) and a seven acre construction and demolition debris (C/D) landfill. The facility is permitted by the Indiana Department of Environmental Management. The original MSW landfill footprint of approximately 37 acres operated under permit number SW-46, and was closed in 1998.

Biohabitats was charged with designing a system capable of treating leachate (water that has filtered through a solid and acquired some waste as a result) from the facility for fifty years, while meeting Indiana water quality standards for Bichemical Oxygen Demand (BOD), Total Suspended Solids (TSS), nitrogen, and heavy metals. Treated effluent could

no longer be discharged into surface waters.

To meet the design objectives, Biohabitats proposed a system that included reed beds designed for the removal of leachate solids and in-situ treatment. Benefits of the proposed design included extremely low operation and maintenance costs, a self-maintaining and self-regulating system (with the exception of recycling pumps), an expansion capacity, low capital cost, the ability to handle variations in design flows and loading rates, and the ability to remove metals from leachate, and biologically degrade priority pollutants. The design flow was 5,000 gpd. Temperatures range from an average 1°C in January to 23°C in July. The average annual precipitation is 35 inches.

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