

## **Water Quality Monitoring of the Indiana Dunes National Lakeshore Great Marsh Complex**

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The Great Marsh complex of the Indiana Dunes National Lakeshore was drained extensively by humans, beginning in the late 1800s to provide land for farming and residences. Since 1998, 500 acres of the Great Marsh complex have been undergoing restoration in an attempt to return them to their pre-developed conditions. To assess the success of the ongoing restoration on water quality, 15 different parameters used to assess water quality are being measured. Data collected from June 2007 through July 2011 indicates that the water quality is typical of that for a wetlands in this region, and that the Great Marsh complex is functioning properly as a wetlands. For example, total phosphorous analyses indicate that the Great Marsh complex is consuming substantial amounts of phosphorus present in water entering the wetland, that the average conductivity in the Great Marsh complex is  $\approx 270 \mu\text{S/cm}$ , and that the amount of nitrogen in the water generally decreases as the water passes through the marsh. The restored Great Marsh complex also experiences seasonal changes that are characteristic of a wetlands. This includes fluctuating water temperatures, water levels, pH levels, and dissolved oxygen levels.

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