

Water Quality of Restored Wetlands: A Study of the Great Marsh Complex in the Indiana Dunes National Lakeshore

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Historic wetlands are increasingly being restored for multiple purposes, including improving water quality (WQ). The Great Marsh of the Indiana Dunes National Lakeshore (IDNL) serves as an excellent example of a restored wetland that affects WQ. Fifteen different WQ parameters have been monitored at sites throughout the Great Marsh to assess how the restored wetland is functioning. Data collected thus far indicate WQ in the restored Great Marsh is typical of a northwest Indiana wetland and that the Great Marsh is functioning like a typical wetland in this region. For example, total phosphorus analyses indicate substantial phosphorus uptake by the wetland, E. coli levels generally decrease as water passes through the marsh, and the average conductivity in the wetland is 270 $\mu\text{S}/\text{cm}$. The restored Great Marsh also experiences seasonal changes typical of a wetland, such as fluctuating water temperatures, water levels, and dissolved oxygen levels.

Information about the Authors:

Wendy Marth is a senior chemistry major at Valparaiso University and has worked with Dr. Jonathan Schoer since 2009. She has a passion for nature and the outdoors and plans on attending graduate school to earn her Ph.D. in environmental science and engineering. Diandra Obermeyer is a freshman chemistry major at Valparaiso University. She hopes to pursue a career in research in a chemistry-related field that is yet to be determined. Kandice Spera is a junior environmental science major at Valparaiso University and plans to continue environmental work in the future. Pitchaya Patana-Anake worked as a volunteer for the National Park Service during the summer of 2010 collecting WQ data and samples in the Great Marsh. Adam Conner is a 2010 VU chemistry alumnus who worked with Dr. Jonathan Schoer on environmental water quality research before his graduation.

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