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Restoring Our Great Lakes Without Excessive Nutrients

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Restoring Our Great Lakes Without Excessive Nutrients

My research studies a new technology to control phosphorus from different water sources in agricultural watersheds that produce high phosphorus input into surrounding water bodies. Phosphorus is one of the nutrients that impacts aquatic life directly. Some phosphorus is essential for plant growth. However, too much phosphorus causes excessive plant and algae growth, and decreases oxygen level and fish populations leading to a phenomenon called eutrophication. Without excessive nutrients load, eutrophication takes thousands of years. However, nutrients that were added to Lake Erie caused it to undergo the eutrophication process in only 25 years. My research focuses on removing phosphorus from agricultural pollutants and animal waste produced on the farm and field versus watersheds and lakes. Reducing phosphorus load is crucial for protecting aquatic ecosystems from serious problems. Findings from this research will assist agencies and decision-makers in developing and choosing the right strategies and tools for phosphorus removal.