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## REGION-WIDE ECONOMIC BENEFITS IN THE LAKE ERIE REGION EXPECTED IF PHOSPHORUS/HARMFUL ALGAE REDUCTIONS ARE ACHIEVED

Benefits to: beach-goers and recreational anglers, property owners, and water treatment plants

Where: University of Toledo Lake Erie Center 6200 Bayshore Rd. Oregon, Ohio 43616

When: August 14 at 11:30 am

Who: Key-Log Economics and representatives from Lucas County, City of Toledo, City of Oregon,

and Lake Erie Waterkeeper

TOLEDO, OHIO, AUGUST 14, 2019 –A presentation of the economic study funded by the City of Toledo, Lucas County and the City of Oregon, Lake Erie Ecosystem Services Assessment: Economic Benefits from Phosphorus Reductions, by Key Log Economics will be presented at the University of Toledo Lake Erie Center on Wednesday, August 14, 2019. The study sheds light on economic benefits (and avoided costs) associated with phosphorus/algae reductions. "Knowing economic costs of the harmful algal blooms will help government to understand the need to speed up management and policies to reduce the blooms" said Lucas County Commissioner Tina Wozniak Skeldon. The study uses the Great Lakes Water Quality Agreement (GLWQA) target 40% reduction and other levels of phosphorus reductions to assess potential economic benefits associated with reducing harmful algae. Specifically:

- Achieving the GLWQA 40% phosphorus reduction goal would result \$117.0 to \$436.9 million for Lake Erie's recreational anglers.
- A 20% reduction in spring soluble reactive phosphorus loads from the Maumee River would result in an annual benefit to Lake Erie's recreational anglers of \$44.4 to \$154.7 million.
- A 30% reduction in the number of water quality advisories and beach closure days for Lake Erie's beaches would result in benefits ranging from \$37.7 to \$42.5 million.
- A 20% reduction in the number of water quality advisories and beach closure days would result in benefits ranging from \$24.8 to \$27.7 million.
- Potential annual reductions in the incremental operating costs associated with the treatment and monitoring of algae of up to \$2.6 million a year for water treatment plants sourcing water from Lake Erie.
- Avoidance of property value losses ranging from \$685.9 million to \$1.1 billion for households next to and near the lake, respectively, if drinking water standards for microcystin are met.

The research also shows that the greater Lake Erie region provides natural benefits valued at \$443 billion. Of this sum, \$327 billion are water-related natural assets and \$102 billion are cropland-related.

Harmful algal blooms in Lake Erie impose significant burdens on those residing in and visiting the region. Blooms themselves are generally concentrated in the western basin but have negative impacts to Lake Erie's central basin when blooms create dead zones. Negative perceptions of blooms are far-reaching across the entire lake and can have profound impacts on those choosing to recreate and live along Lake Erie. The analysis presents economic benefits and costs avoided for ALL--Ontario and the U.S.-- of Lake Erie's recreational anglers, beach-goers, and next to & near-lake properties. Specifically, unique to the analysis is a survey and estimates of water treatment

costs associated with algal treatment and monitoring for water treatment plants sourcing water directly from Lake Erie.

The cities of Toledo and Oregon have first-hand experience with the costs and impacts of algal blooms and drinking water. "The harmful algal blooms have resulted in added cost to Toledo water users for monitoring and treatment," said Toledo Mayor Wade Kapszukiewicz. Additionally, the City of Oregon has a water intake near Toledo, that has similar consequences according to City Administrator Mike Beazley, "Oregon water users are paying for added treatment, capital costs and monitoring."

"The ongoing cost for failing to reduce harmful algae continues to impact beach goers, anglers, property owners, and other important industries and sectors" states Sandy Bihn of Lake Erie Waterkeeper. Unfortunately, the management actions and policy decisions on how phosphorus reductions will occur is still being debated. "What is not up for debate is the fact that the region will economically benefit from reductions in the severity and frequency of harmful algal blooms," lead author Sonia Wang said. The framework for the policy and management decisions is contained in the Great Lakes Water Quality Agreement, a bi-national commitment between the U.S. and Canada to restore and protect the waters of the Great Lakes. Annex Four has domestic action plans to address phosphorus loads contributing to harmful algal blooms in Lake Erie.

The full report, titled "Lake Erie Ecosystem Services Assessment: Economic Benefits from Phosphorous Reductions", will be available for download August 14th at the Lucas County, Toledo, Oregon and Lake Erie Waterkeeper websites and from <a href="https://www.keylogeconomics.com">www.keylogeconomics.com</a>