



Nearshore and Non-Point Source Pollution

funded by the Great Lakes Restoration Initiative

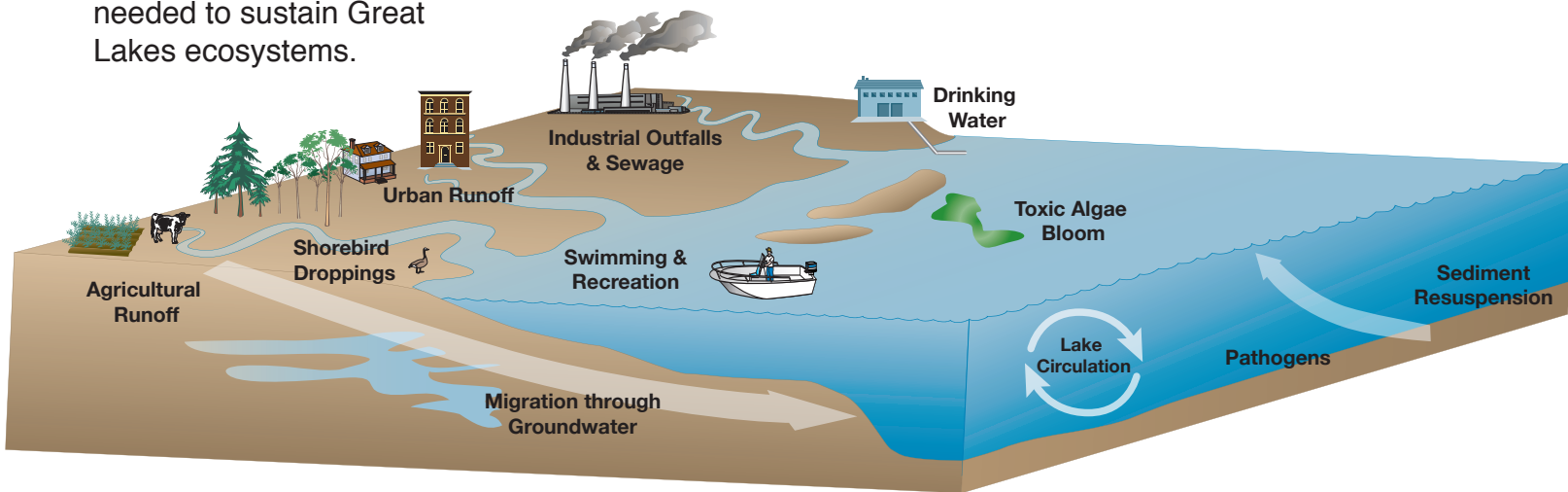
To address President Obama's call to action to restore the Great Lakes, NOAA has funded projects within the Nearshore Health and Nonpoint Source Pollution priority area of the Great Lakes Restoration Initiative (GLRI). The GLRI Action Plan calls for action to identify sources and reduce loadings of nutrients and soil erosion as well as improve public health protection at beaches. NOAA's projects listed below support efforts to improve nearshore areas and reduce nonpoint source pollution in the waters of the Great Lakes.

Identifying Land Use Indicators and Tipping Points

Communities need to know at what point the ecosystem will take a turn for the worse. A group of collaborative researchers and planners are working to find this "tipping point" and inform communities of what they can do to stay below it. This will be accomplished through the development of a statistical model based on land-use data to identify land-use change impacts on aquatic natural resources. Scientists will compare models to find the linkages between land use at township/county levels and impacts on the Great Lakes. This project is identifying land-use indicators and tipping points in Great Lakes nearshore areas that can be used to develop policies, ordinances, and land protection programs, and identify restoration priorities needed to sustain Great Lakes ecosystems.

Improving Coastal and Human Health and Beach Forecasting

Current water quality monitoring involves a lag time between sample collection and water quality reporting. This may permit swimming at coastal beaches when bacterial levels could pose health threats or unregulated toxic algal blooms could occur. The purpose of this work is to develop and implement techniques for predicting water quality at beaches up to 2 days in advance and for forecasting the movement and fate of harmful algal blooms in the Great Lakes. Predictive models enable environmental and public health officials to notify the public of expected water quality 1-2 days in advance, thereby preventing beach closures when conditions are safe and avoiding negative local economic impacts.



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