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Everglades Foundation launches \$10 million prize to clean up toxic algae blooms

Goal is a cheaper and more effective way to remove phosphorus from polluted waters

21 JUL 2016 • BY DIANNE LUGO



This Landsat 8 image captures the extensive algal bloom in Florida's Lake Okeechobee. NASA EARTH OBSERVATORY

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Removing the phosphorus that causes toxic algal blooms in bodies of water around the world is a huge challenge for conservationists. The Everglades Foundation hopes that a \$10 million prize will spur the development of cost-effective technology that can lick the problem.

Today, the Palmetto Bay, Florida-based foundation officially launched the George Barley Water Prize, with the goal of removing phosphorus from the water at a cost that doesn't exceed \$120 a kilogram. "It's going to be hard to get there, but we trust that someone somewhere has the capabilities," says Melodie Naja, chief scientist at the foundation.



The need is pressing. In May, [Lake Okeechobee—the largest freshwater lake in the state of Florida—was hit with an algae bloom that extended across 33 miles.](#) Unusually heavy rains forced water districts to drain other lakes and rivers earlier than usual to avoid flooding. That action funneled warm, nitrogen-rich water through the St. Lucie Canal into Lake Okeechobee.

Algae blooms are typically caused by agricultural runoff or sewage that dumps large amounts of nitrogen and phosphorus into the water. The removal of phosphorus and algae is a long and expensive process. The Barley prize, named after the co-founder of the foundation, aims to find a better and cheaper way.

The competition officially opens today, and in 6 months the foundation plans to award a total of \$35,000 to a handful of teams with good ideas. The remaining competitors will then be asked to demonstrate how their technology performs under specific conditions. The foundation will choose one team to scale up the technology and receive the grand prize.

"These type of initiatives are really important," says Tim Davis, an ecologist at the National Oceanic and Atmospheric Administration Great Lakes Environmental Research Laboratory in Ann Arbor, Michigan. "And being able to have funding to help implement strategies and innovations that will reduce [phosphorous] is a key component to reducing harmful algal blooms and bringing lakes back to a healthy state."

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Nitrogen is another culprit in toxic algal blooms, Davis says, "but we don't have the same amount of data and models for nitrogen." He calls reducing phosphorous "a great first step" toward finding a comprehensive solution to this serious problem.

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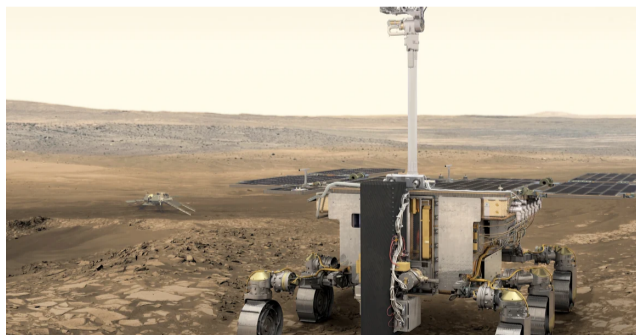
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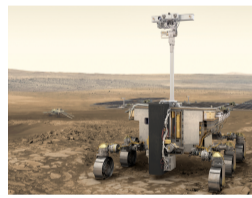
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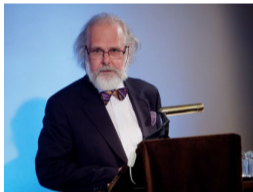
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