

The Sea Grant Files

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### How NOAA and the EPA Benefit You and Lake Superior

Hi, this is John Downing. I'm taking time-off today as Director of Minnesota Sea Grant to guest host this episode of The Sea Grant Files. I wanted to talk to you about a few of the ways the National Oceanic and Atmospheric Administration serves us all.

By now you might have heard that the National Oceanic and Atmospheric Administration ... or NOAA for short ... may be slated for a dramatic reduction in funding under the President's budget proposal leaked by some newspapers. It seems this version of the budget would eliminate Sea Grant, the Coastal Zone Management Program, the National Estuarine Research Reserve System and other valuable programs that are important to the Minnesota economy, jobs, security and environments that Minnesotans care about. The cuts could be most severe in weather forecasting, climate research, and research partnerships with universities.

NOAA is the nation's lead agency for forecasting weather, managing fisheries, assessing ocean conditions and monitoring climate. Indeed, most commercial weather outlets use NOAA data for their profits. Dr. Marshall Shepherd, Director of the University of Georgia's Atmospheric Sciences Program and host of *Weather Geeks*, said this about the proposed budget cut to NOAA: "If you rely on weather forecasts, use a weather app, eat fish, enjoy boating or claim your status as an Earthling, these cuts potentially have implications for you."<sup>1</sup>

In a similar vein, Dr. Chris McEntee, president of the American Geophysical Union, the nation's largest scientific organization, commented, "It's not just one agency, ... cutting one piece ... has an impact on the whole enterprise ... an enterprise <that enables> us to have the kinds of tools and information we need to protect infrastructure, to protect lives, to protect public safety, and to give us knowledge and information to make a more effective economy and country."<sup>2</sup>

NOAA, which is part of the U.S. Department of Commerce, **and you** have opportunities to respond to the budget before a final spending plan is written. In our nation, the president proposes a budget but our members of Congress actually decide on a budget. Right now, for example, our senators and members of the house can be encouraged to make "programmatic requests" for things that people and businesses want.

In Minnesota, the economic benefit generated by Sea Grant tallies to about 10 million dollars a year. Without the research, education and outreach capacity of Sea Grant, it would be vastly more difficult for communities to address coastal challenges .... like legacy pollutants, sea lamprey and 500-year floods. It would also be more difficult to generate economic opportunities ... like those Minnesota Sea Grant has encouraged by working with Lake Superior's commercial fisheries and Minnesota's baitfish industry.

As a system-wide program of the University of Minnesota, Minnesota Sea Grant has been contributing to Minnesota jobs, the state's economy, community security and the quality of Minnesota's waters for over 40 years. In fact, a former dean at the University of Minnesota, Dr. Athelstan Spilhaus, initiated the Sea Grant concept in 1963.

This might be the moment to introduce you to a word Dr. Spilhaus coined... ECOLIBRIUM. To him, the father of Sea Grant, ECOLIBRIUM meant balancing economic gains with environmental stability. From its Greek origin, ECO means "house, household affairs ... HOME." "HOME" is the root of both ECO-nomy and ECO-logy. "ECONomy" comes from *oikonomia*, meaning "stewardship of a household". "Ecology" means "study of the house". It is an early recognition that sound economies thrive in healthy environments.

Minnesota Sea Grant has embraced the Spilhausian concept of ECOLIBRIUM since the program's inception. We leverage our federal investment 10-fold and our work has proven valuable to industries, lake associations, and Minnesota's coastal communities. Over the years we've helped Sterns perfect their life jackets by helping them learn about hypothermia. Genetic studies we initially funded have become a promising weapon in the battle to cure cancer. We've helped solve the unusual harbor corrosion mystery and advanced ballast water management technologies to keep invasive species from spreading in the Great Lakes region. We help to keep people safe on beaches. Right now our work on wild rice is helping the state develop new sulfate standards and is being used by tribes. Next month we will be working with Minnesota businesses and government to explore avenues for creating environment-friendly, food-fish aquaculture. The U.S. imports about 90 percent of its seafood by value. I love Canada but wouldn't it be great to order "Minnesota Walleye" in your local restaurant?

The 33 Sea Grant programs in NOAA's network are tasked with delivering science-based solutions to people, businesses, policy makers and communities. The program's federal and state funding unites universities with industry and with government. From a national perspective, only a tiny bit of the federal funding is spent in Washington and virtually all comes back to the states. In 2015 Sea Grant created at least \$575 million in economic activity, supported 2900 businesses and 21,000 jobs, and helped well over 500 communities.

The president's budget may also propose to drastically cut the Environmental Protection Agency and the Great Lakes Restoration Initiative funding it administers. In addition to its role in protection of people and environments – sometimes called "regulation", EPA also works to undo the damage caused by pollution. Locally, this proposed cut would likely impact work toward undoing pollution in the St. Louis River Area of Concern. Successfully cleaning-up the St. Louis River estuary and its corridor will increase tourism opportunities and improve property values. Tourism and recreation already generate nearly \$13,000 per acre per year in the St. Louis River watershed so this work will bring back substantial economic benefit to our region.

Minnesota is known for water and innovation (it's the birthplace of the Sea Grant, water skis, and deep sea submarines). It is the first ... and only state so far ... to have a Water Sustainability Framework that guides state spending on water quality. Compared to other states, Minnesota

has done an outstanding job minimizing the spread of aquatic invasive species. We're currently in the heart of Governor Dayton's Year of Water Action. What a great time and particularly great place to recognize that Sea Grant and NOAA are engines of economic benefit to all Minnesotans concerned with the future of water resources and community security.

Much of what we know about Earth's atmosphere and oceans is the result of decades of sustained government-funded science that gives us hope for a secure future. NOAA employees ... public servants like me ... are helping the U.S. become a weather-ready nation and manage its water resources. We are serving you now ... and expect to be solving water resources issues with you for another 50 years.

Fresh water is the most important strategic natural resource now and over the next century. Water is a vital part of Minnesota's economy, history and environment ... and it is an essential part of the state's future.

I urge you to work with your government, communities and families ... and with Sea Grant ... to achieve ECOLIBRIUM now and on behalf of the future you would like to see.

This episode of the Sea Grant Files was produced by Sharon Moen, Mariah Schumacher, Maija Jenson, KUMD, and me, John Downing. To listen to more episodes of The Sea Grant Files and to subscribe to our podcast, visit the Minnesota Sea Grant website at [www-dot-seagrant-dot-umn-dot-edu](http://www-dot-seagrant-dot-umn-dot-edu). You can also follow Minnesota Sea Grant on Facebook, Twitter and Instagram. Thanks for listening.

## References

<sup>1</sup>Shepherd, Marshall, 2017, Four Ways NOAA Benefits Your Life Today, *Forbes*.  
[www.forbes.com/sites/marshallshepherd/2017/03/04/four-ways-noaa-benefits-your-life-today/#609dc8e0cab2](http://www.forbes.com/sites/marshallshepherd/2017/03/04/four-ways-noaa-benefits-your-life-today/#609dc8e0cab2)

<sup>2</sup>Waldman, Scott, 2017, Trump Administration Seeks Big Budget Cuts for Climate Research, *Scientific American*.  
[www.scientificamerican.com/article/trump-administration-seeks-big-budget-cuts-for-climate-research/](http://www.scientificamerican.com/article/trump-administration-seeks-big-budget-cuts-for-climate-research/)