# **Creating impacts** in coastal communities





11,000 **PEOPLE** 

Each year, over 11,000 people participate in Illinois-Indiana Sea Grant (IISG) extension activities and use the information they gain to make better decisions as consumers and Great Lakes citizens.

### **HOW DOES SEA GRANT IMPACT ILLINOIS & INDIANA?**



#### We fund and engage in research to help inform decisions on managing Lake Michigan and Great Lakes ecosystems

- IISG-funded research revealed that microfibers (likely from clothing) are the most prevalent microplastic in southern Lake Michigan waters.
- A three-year Lake Erie study found that dead zones can spring up and disappear quickly—this new information has led to changes in annual fish surveys.
- In light of changes due to invasive species, IISG, along with Wisconsin Sea Grant, funded a series of projects to define the nearshore food web in Lake Michigan.



#### We provide marketing training and support to fish farmers to help them increase efficiency and compete with lower-cost imports

- With 11 facilities around the state, Indiana has become a leader in inland shrimp farming.
- Indiana produces 1.5 million pounds of fish per year from about 40 farmers at an estimated value of \$15 million, a five-fold increase between 2005 and 2015.
- Every year, 30 aquaculture producers and commercial fishers in Illinois and Indiana use IISG resources to make their businesses more economically and environmentally sustainable.



#### We deploy and manage two buoys off the coasts of Indiana and Illinois to provide real-time data about the waters of southern Lake Michigan

- The National Weather Service uses our buoy data to forecast wave and weather conditions, observe current conditions and inform changes in forecasts during irregular conditions.
- Boaters, anglers, paddlers and surfers use the data to assess water conditions and make decisions about personal safety. Our website (iiseagrant.org) buoy pages garnered over 143,000 visits in 2017.



IISG helped inform the Illinois Department of Natural Resources on water management, which led to amended Lake Michigan allocation rules and a reduction of 300 million gallons of domestic water use per day in the Chicago area.

We work with partners to develop and update policies to protect water resources

With Illinois being a key contributor to the Gulf of Mexico dead zone, IISG led the effort to develop and implement a strategy to reduce nutrient pollution from point and non-point sources in priority watersheds. This strategy has led to an increase in the adoption of best management practices.

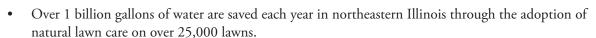




## We develop products, tools and strategies to provide access to Great Lakes and other water quality research findings

- A new online tool, Great Lakes Monitoring, brings to light decades of agency and university water quality monitoring data—what used to take months to retrieve, now takes minutes.
- New methods provide quick understanding of terabytes of water monitoring data sets and more consistent and accurate sampling.
- Communities have access to water quality data that helps them understand the health of their resources and inform their land-use planning decisions.





- With Sea Grant support for community collection programs over the last 10 years, 210,000 pounds of medicine did not end up in our waterways and were disposed of properly.
- Natural lawn care adoption has reduced the amount of pesticides used in Indiana and Illinois by 24,900 pounds per year.
- Sea Grant works with an average of 20 communities per year to help plan for optimal growth—balancing economic, societal, and environmental needs.
- Seven Chicago-area communities have adopted ordinances and have taken steps to protect community water supplies.



- IISG helped support the development of risk assessment tools to predict which species may be invasive and help target efforts to prevent introductions.
- Through IISG-led meetings with stakeholders and researchers, both Indiana and Illinois have banned 28 invasive plants, which will slow the spread of these species in the Great Lakes and local waterways.
- Sea Grant specialists help protect 11,000 acres of water and shoreline from the economic and societal impacts of invasive species.

# We improve Great Lakes literacy, encourage stewardship and train tomorrow's workforce

- Every year, more than 300 educators learn Great Lakes science through IISG workshops and conferences, and they, in turn, introduce this knowledge to 38,650 students.
- Working with these educators, students are inspired to engage in 6-8 stewardship projects each year as a result of becoming more knowledgeable about Great Lakes and other water issues.
- In 2016, Sea Grant helped 56 college students pursue water-related careers by providing internships and fellowships and supporting their research.

## We work closely with communities in EPA Areas of Concern as their waterways are cleaned up through the Great Lakes Legacy Act

• In northwest Indiana along the Grand Calumet River, 2 million cubic yards of sediment have been removed. IISG's efforts to educate stakeholders about the improving health of the river have led to \$600,000 of the larger economic improvement.



210,000



11,000 ACRES



**STUDENTS** 



