



MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) SEA GRANT



February 2018

MIT Sea Grant is one of 33 Sea Grant college programs and is based at the Massachusetts Institute of Technology.



MIT Sea Grant is developing an autonomous surface vehicle that can be used to systematically collect data in areas that are difficult to access at a lower cost. Credit: MIT Sea Grant

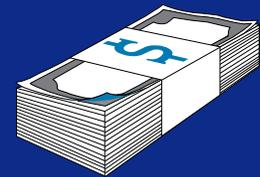
Understanding coastal ocean acidification in Buzzards Bay

MIT Sea Grant-funded researcher Scott Doney and colleagues are tackling the challenging and complex issue of coastal acidification in Buzzards Bay, MA by studying the effects of wastewater discharge on local ocean acidification. Researchers have improved a coastal ocean model enabling them to target data collection from three wastewater treatment facilities outflow plumes. These improvements to modeling and data collection will allow researchers to directly quantify the localized impact of wastewater effluent on coastal acidification and will inform managers of coastal water quality and allow them to develop informed mitigation strategies.

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\$75.4 M

Economic benefit



44,000

Attendees at public and professional presentations

110

Undergraduate and graduate students supported



Metrics reported to National Sea Grant Office in June 2017 for work completed February 2016 to January 2017



RESEARCH

EXTENSION

EDUCATION

Revitalizing New Bedford's Fishing Heritage



Ronnie Enoksen, Vice President of Eastern Fisheries, talks with Something Fishy campers about the scallop industry.
Credit: New Bedford Fishing Heritage Center

MIT Sea Grant was instrumental in the creation of the New Bedford Fishing Heritage Center and development of their first exhibit on fishing heritage. The center connects the local community in New Bedford with their thriving commercial fishing port. The informal education setting is rich in details that help the public see both the history and reality of what it takes to bring sustainable seafood to their plate. Both the public and school children will continue to benefit from educational outreach and curricula are being developed to address STEM and the state educational standards.

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“MIT Sea Grant’s Autonomous Underwater Vehicle (AUV) Lab creates significant innovation in unmanned maritime vehicles ... MIT Sea Grant continues to have a profound positive impact on the global ocean science and technology community.”

- Justin Manley, Founder of Just Innovation and Senior Member at the Institute of Electrical and Electronics Engineers

Charting Safe Waters for Boaters



MIT Sea Grant partnered with the Charles River Alliance of Boaters to chart the Lower Charles River, enabling safer transit of boaters in the river and providing decision makers with a complete tool that informs future river management decisions. Charts included geospatial data, such as landmarks, elevated structures, and detailed shorelines.

Examining the Social Impacts of Fishing Regulations



In 2016, MIT Sea Grant developed a systematic approach to analyzing public comments on fishing regulations that helped fisheries managers understand the social impacts of their decisions. MIT Sea Grant used social science software to identify themes in public comments and quantify their apparent importance among stakeholders, which were then considered by council members.

Improving Emergency Shelter Vulnerability



MIT Sea Grant coordinated “Hurriplan Workshops” with the Massachusetts Emergency Management Authority and Woods Hole Sea Grant to train engineering and architecture professionals in planning and building design strategies to increase community resilience to severe storm events. In 2016, workshop participants designed an emergency shelter for the City of Gloucester, MA.