



**Downeast Institute's Testimony  
in Support of  
LD 416: An Act to Authorize a General Fund Bond Issue for Research and  
Development and Commercialization**

Located on the shores of  
Black Duck Cove on  
Great Wass Island

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Good morning Senator Rotundo, Representative Sachs, and Members of the Joint Standing Committee on Appropriations and Financial Affairs.

My name is Sara Randall, and I am the Associate Director of the Downeast Institute (DEI) located in the Washington County town of Beals. DEI improves the lives of coastal and downeast Maine people through marine research, marine science education and innovations in wild and cultured shellfish. Part of my work involves conducting field research across the coast of Maine to find ways to enhance and sustain one of Maine's most valuable fisheries- the soft-shell clam.

Downeast Institute is an excellent example of the good that results from Maine Technology Institute (MTI) investments. Since 2000, DEI has received almost four million dollars in investments from MTI. During this time frame we have grown from 5 to seventeen employees, and our annual budget has grown from half a million to about \$1,500,000.

The most significant investments include a \$1 million grant from MTI's Maine Technology Asset Fund (MTAF) that helped construct our marine education center/classroom in 2008. We also received two million dollars from the 2016 Marine Economy Bond, administered by MTI, which, along with investments from private foundations, allowed us to construct a full service marine research laboratory and dorm and become the easternmost marine field station in the U.S.

Examples of the hands-on Research & Development (R & D) work DEI has done to sustain and grow Maine's marine economy and support our coastal communities include:

- Production of millions of commercially important shellfish species a year (e.g. soft-shell clams, quahogs, Atlantic surfclams, blue mussels, Razor clams, American oysters) to enhance wild stocks and also for aquaculture.

*The mission of the Downeast Institute is to improve the quality of life for the people of downeast and coastal Maine through marine research, marine science education, and innovations in wild and cultured fisheries.*

- Eliminated a barrier to increased farmed mussel production in the northeast by developing a consistent and affordable method to grow Blue mussels to supplement natural seed settlement.
- Developed a visually distinct (gold) hatchery grown mussel to help Maine farmers differentiate their product and command a higher market price.
- Discovered, through extensive independent field research, how climate change is impacting the valuable clam fishery through increased predation by the invasive green crab.
- Monitoring mudflat temperature, clam recruitment, recruit growth and recruit survival at 24 locations across the Maine coast.
- Undertaking a comprehensive study to determine how many eggs clams of different sizes produce to provide shellfish managers with information necessary to sustain harvests in a warming ocean.
- Developing ways to produce Sea scallops in the hatchery to increase sustainability by reducing reliance on capturing wild seed and ensuring continued supply.
- Creating new cultured fisheries opportunities such as Arctic surf clam and Sea scallops.
- Conduct research to sustain shellfish in our state-of-the-art ocean acidification laboratory.
- Engaging over 500 pre-K to 12<sup>th</sup> grade students a year in hands-on marine science and applied math education.

We hope these are clear examples of the benefit of Maine's continued investment in R & D. Frequent and robust state investment in the Maine Technology Asset Fund (MTAF) will encourage innovation and new ventures, support existing research and development activities, and above all, will help grow Maine's economy.