RREV School Snapshot – Belfast Area High School

Background

In June 2020, the Maine Department of Education (MDOE) was awarded a \$16.9 million grant from the U.S. Department of Education's Rethink K–12 Education Models program to implement the Rethinking Responsive Education Ventures (RREV) program. The overarching purpose of RREV is to support Maine educators to create, implement, and disseminate responsive and innovative educational models that help all students learn and thrive.

Pilot Description

In March 2022, Belfast Area High School received an award from RREV to implement its pilot *Marine Institute and Internship Program*. This pilot is in the Extended Learning Opportunities (ELO) category.

The goals of this pilot are to:

- Provide opportunities for students to gain career and job skills in the community during the school day through the creation of a school-wide internship program.
- Establish the Marine Institute, a program which pairs the core academic curriculum with handson project-based field research in the Penobscot Bay and community-based internships in marine and maritime studies. Some students will enroll in the Marine Institute as their main program of study while others might opt to participate in some Marine Institute offerings for their electives; for example, a student could enroll in the scuba certification pathway as an elective.

Key activities of this pilot include:

- Designing and implementing the Marine Institute, which requires students to complete a
 combination of core academic credits, internship hours, community service, and a capstone
 project. The program includes a marine studies course block meeting every other day and
 various electives that enable students to receive credentials and certifications for marine-based
 activities.
- Developing and implementing the internship program through partnerships with local businesses and organizations, with the day-to-day responsibilities handled by the ELO Coordinator.
- Making facilities improvements, such as the establishment of a wet lab to house the Marine Institute science labs and gear and equipment purchases to support hands-on learning.
- Inviting teachers to join the Marine Institute team and adapt their curriculum to meet the criteria for the integrated learning model with a marine focus. Examples include a social studies class focused on New England maritime history and an English class based in science fiction that explores fish and wildlife issues.

Category	Year 1	Year 2	Total
Personal Services – Salaries and Stipends	\$5,250.00	\$5,250.00	\$10,500.00
Employee Benefits	\$1,226.40	\$1,226.40	\$2,452.80
Purchased Professional and Technical Services	\$135,000.00	\$35,000.00	\$170,000.00

Exhibit: RREV Award Summary

General Supplies	\$30,017.20	\$26,250.00	\$56,267.20
Technology-related Software (supply asset)	\$3,500.00	\$3,500.00	\$7,000.00
Instructional Field Trip Transportation	\$1,890.00	\$1,890.00	\$3,780.00
Total	\$ 176,883.60	\$ 73,116.40	\$ 250,000.00

- 32 students directly enrolled in Marine Institute during 2022-2023, but all 500 students have option to participate through electives
- Grades 9-12 served
- Four teachers participate in the Marine Institute as part of their overall courseload (science, English, marine studies and history, and art), plus the technology integrator, Belfast Community Outreach Program coordinator, and two administrators at Belfast Area High School

Responsiveness of the pilot

Belfast Area High School's pilot is responsive to local needs and/or assets because:

- The new wet lab facility reflects the first upgrade in science labs at the high school since 1959. Growing kelp in classrooms has required the use of very loud aquariums, which have drowned out teachers' voices and relied on inefficiency energy use. The new customized wet lab provided by OpBox will house the Marine Institute science labs and function as a modern selfcontained classroom.
- Students will gain access to many local opportunities related to Penobscot Bay. An administrator observed "how crazy it is that so many kids have never accessed the water and don't know about local opportunities that have to do with the ocean." The Marine Institute and the internships will rely on community connections to help develop ocean literacy, build familiarity with local industries, and introduce marine safety.
- Given the diverse socio-economic community, a flexible program is needed to span the range of student needs and career aspirations. The Marine Institute can support combined programs such as marine biology research and marine diesel technology exploration in the same classroom. Immersive field experiences and community-based internships will allow all students to focus on their specific interests.

Innovativeness of the pilot

The pilot at Belfast Area High School is innovative because:

- Students have more hands-on opportunities to develop practical job and life skills. For example, the Marine Institute has just received Limited Purpose Aquaculture (LPA) licenses for four kelp lines in Penobscot Bay and is putting out seed this fall. Also, an instructor from the Maine Maritime Academy will be conducting a Coastguard training course in the BAHS pool to certify students in saltwater safety.
- Students engage directly in program design and implementation. Interviews with students informed the program structure, and student interest has been reinforced through activities such a Marine Institute logo contest for students held last spring and an elective fair held before registration this fall. One student who had previously performed poorly in a marine science

course is now enrolled again as a senior. This time the student is completing an internship serving in a leadership role, helping to design the wet lab and kelp farm. Program leaders have already observed improved student motivation and expect greater student involvement to reduce drop-out rates.

• The curriculum can reach all students, regardless of their areas of interest, to build ocean literacy. The program is not limited to science-focused, higher achieving students. Instead, marine themes are embedded through an interdisciplinary approach, with teachers in English and art serving on the pilot team. The increased emphasis on flexibility and student choice means that students can selectively participate in field trips and electives without committing to the full Marine Institute experience if they prefer.

Sustainability of the pilot [to update in the spring]

The strategy for sustainability of the *Marine Institute and Internship Program* includes investing the RREV award largely in one-time costs that will not be recurring, relying on existing staffing, and tapping into complementary funding sources to support ongoing supply needs. The RREV award was not used to fund any positions. One major cost was the wet lab which is expected to last for 50 years. Growing community connections fostered through parents and school alumni are perceived as a win-win engagement, where students are gaining real-world experiences and local industries are gaining needed human resources. Early efforts to ensure sustainability include exploring the complementarity of other BAHS funding and partners, such as through a Career and Technical Education (CTE) satellite aquaculture program and a partnership with the Maine Center for Research in STEM Education (RiSE) funded by the National Science Foundation.