

The Quoddy Tides, November 13, 2009



JARLATH MCENTEE, Ocean Renewable Power Company's vice president of technology and engineering, is shown with Peggy Davis' fourth and fifth grade students during his November 4 visit to the Eastport Elementary School. (Susy Kist photo)

Tidal Turbine engineer visits students By Lora Whelan

Eastport students in the fourth through eighth grades proved that they knew more than a little bit about the marine life and tidal currents of Passamaquoddy and Cobscook bays during a recent visit to the science lab by Jarlath McEntee, vice president of technology and engineering for Ocean Renewable Power Company (ORPC). While the actual language used to describe the physics behind the 2- foot tides of the area was not on the tip of most tongues, there was no hesitation when it came to students naming the marine life forms that inhabit the bay.

McEntee was at the Eastport Elementary School to tell the students about ORPC and the tidal energy project he has been working on. He combined subjects of geography, physics, marine biology and tools such as side-scan sonar and magnetometer equipment to explain his work. "I'm the guy who designed the turbine blades," he said to the seventh and eighth graders. Projected on to a screen in the classroom was an image of a turbine prototype. One student noted that he had just seen that very turbine at the Boat School.

Students were presented with a whirlwind of information about the different areas that an engineer needs to consider and understand when designing for a project. The fourth and fifth graders discussed the currents and the lack of sunlight as they watched a video of a diver walking on the bay's floor. McEntee pointed out the rope, weighed down by anchors, that the diver was following. An earlier slide had shown a colorful rendering of the bay showing where an old iron anchor had been identified by a magnetometer. Side-scan sonar created lushly colored pictures of the ocean floor. Hushing the class, McEntee asked if they could hear the diver breathing as he walked. The class was still and the sound of breathing filled the darkened classroom. The engineer broke the silence by pointing to the flecks of sand, seaweed and algae streaming past the walking diver. The diver was breathing hard, he explained, because the tide was fast, making it difficult work to move ahead.

That tidal movement is both a result of gravitational pull and the "bath-tub" like shape of the Bay of Fundy, McEntee told the seventh and eighth graders, a fairly unusual combination of forces that makes it one of a few sites with great potential for the type of tidal energy project he is working on. The strong connection to the ocean held by most students in the area kept their interest level relatively high for a darkened classroom towards the end of mid-afternoon.

With the sixth through eighth graders, McEntee discussed how the cycles of the sun, moon and the Earth are related to ocean tides and how energy can be generated from the tide cycles using ORPC's tidal energy technology. With the fourth and fifth graders, he shared video footage of recent surveys conducted for ORPC of the ocean floor and the organisms living in Western Passage and Cobscook Bay. He related this to students' recent studies of the Earth's layers.

ORPC is involving the fourth through eighth grade classes in an essay contest based on the engineer's recent class visits. Kist explains that their responses will be reviewed and two students – one from the fourth and fifth grade section and the other representing sixth through eighth grades – will be selected to help christen ORPC's new turbine generator unit, which is expected to be launched in early 2010.