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Self-regulating gate to limit flow to Drakes Island marsh

By JEN FISH, Portland Press Herald Writer

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The state's first self-regulating tide gate will be installed in Wells as part of a project to improve and restore more than 70 acres of the Drakes Island salt marsh.

The project, which is funded through a \$96,948 grant from the National Oceanic and Atmospheric Administration, will replace an aged culvert under Drakes Island Road to regulate tidal water coming into the marsh.

"A very common problem with coastal marshes is that when roads have been built . . . they installed culverts under the roads that were sufficient to keep the roads from washing over, but were not adequate for the health of the marsh," said Erno Bonebakker, the project coordinator from the Wells Estuarine Research Reserve.

"Marshes need the tides to rise and fall," he said. "What happens when there's not enough tidal flow is, the vegetation is pushed back by invasive upland plants."

For many years, the Drakes Island Marsh - on the north side of Drakes Island Road - was a freshwater marsh, thanks to dikes and the existing culvert that kept out salt water. In the late 1980s, that culvert broke, and salt water once again flowed into the marsh.

But the pipe bringing the water into the culvert is not big enough, causing water backups on the other side.

The self-regulating gate will be set on floats, so it will stay open and allow flooding up to a designated level. When it reaches that level, it will close on its own.

Other communities in Maine have used tidal gates, but those need to be physically manned by a person. The self-regulated gate, Bonebakker said, is a first for the state but has been used in other states, including Connecticut.

Jef Bucknam, a resident of Drakes Island, said some residents have had problems with basements flooding. Others who have land next to the marsh, she said, have seen that land become wetter as the amount of water has crept upward through the years.

"This will hopefully alleviate that," Bucknam said, referring to the new tidal gate. "Really, the concern of residents that live near the marsh is the amount of water."

The limited amount of salt water that does get in, Bonebakker said, is not enough to stave off invading plants such as cattails and reeds.

Reeds are a hazard because they not only crowd out other plants, but grow tall and thick, which can be a fire hazard.

Bonebakker said the project is unique because it balances both the needs of residents and the environment.

"It's been an exciting exercise in community partnerships to achieve things that are good for the environment and the community, to resolve flooding issues as well as enhancing the health of the marsh," he said.

A meeting for residents to discuss the project will be held at 6 p.m. on Sept. 9 at the Drakes Island Community Center.

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