

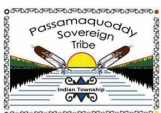
Preserving History: Engineering With Nature® and the National Park Service



The History

In June 1604, French Explorers Pierre Dugua, Sieur de Mons, Samuel Champlain and 77 men, sailed up the Saint Croix River, the present day border of Canada and the United States, in search of a safe haven for the winter. Saint Croix Island, in Passamaquoddy Nation ancestral territory, with its high cliffs and abundance of trees, appeared to be 'easily defensible' and optimal for building a settlement.

Tragically, the French were mistaken. By the following spring half of the settlers would be dead and buried. However, the surviving inhabitants eventually settled in Port Royal, Nova Scotia ultimately founding New Canada. The 6.5-acre, uninhabited island is the first known European settlement outside of Florida and is managed by the National Park Service (NPS) as an International Historic Site under a formal agreement with Parks Canada and in consultation with the Passamaquoddy Tribe.



The Problem

Over the centuries, erosion and sea level rise - made worse by climate change - have taken their toll on the island, threatening the ancient cemetery, that is the final resting place of 35 French settlers. Situated in a challenging region known as a 'cold region', the Island experiences swift tidal currents, a 20+ foot tidal range, and winter storms and ice. Given the archaeological and historic significance of the site NPS wants to understand what natural approaches would work to stabilize and mitigate ongoing erosion.



The Initial Approach

EWN assembled a multi-disciplinary, international coalition of partners, including local stakeholders and representatives of the Passamaquoddy Nation, to conduct research that informs potential options for use of natural and nature-based features to stabilize the Island. This collaborative research effort will be transferable to other projects in cold regions to advance the use and acceptance of natural approaches in these challenging environments.

