# Erosion Control Project Protects Historic West Jonesport Cemetery

## Full Mitigation Best Practice Story

*Washington County, Maine*

**Jonesport, ME** – The town of Jonesport, Maine, overlooks Chandler Bay and the Atlantic Ocean. It offers a spectacular water view and maritime activities such as fishing and pleasure boating. The scene is picturesque on a clear summer day, but the shoreline is vulnerable to severe erosion during coastal storms. The West Jonesport Cemetery sits on Moosabec Reach overlooking the Bay. Waves generated during storms persistently wore away the embankment since a storm destroyed the tamarack-log rip-rap installed in 1976.

Over the past several years, a 350-foot section of shore frontage at the historic cemetery has been steadily eaten away. The erosion threatened the graves, some of which date back to the first half of the 19th century. In fact, one grave marker is dated 1837. The erosion also undermined the embankment along a public parking lot on West Main Street, which posed a threat to the safety of travelers, many of whom were tourists, along the scenic Route 187 loop.

West Jonesport Cemetery is one of four cemeteries maintained by the town. Many residents have relatives buried there.

David Garcelon, district conservationist with the Natural Resource Conservation Service, inspected the shoreline at the cemetery and declared the following: “Site inspection found critically eroding slope due to tidal and wave action at the base of the bank…slope is mostly bare soil at the 1:1 or steeper grade, 10 to 12 feet high, and extends approximately 250 to 300 feet along the cemetery and adjacent parking lot.”

The solution seemed relatively simple: stabilize the embankment and install rip-rap that would withstand the punishing wind and waves.

However, there were complicating factors, such as how to gain access to the hillside to install the rip-rap and restore the beach and, of course, how to pay for the work. The first problem was solved when the owner of the adjacent property to the west allowed workers to use his land, and even tore down a building to facilitate access to the cemetery site. The town agreed to stabilize the area used for equipment access.

The town had been concerned about the erosion of the West Jonesport Cemetery for a long time. Local officials began searching for funding in the early 1990s, and Selectwoman Gloria Feeney began contacting a series of funding sources in 1997. She communicated with at least 10 non-profit and government agencies, including the Maine Emergency Management Agency (MEMA). MEMA applied to the Federal Emergency Management Agency’s (FEMA) Hazard Mitigation Grant Program on behalf of the West Jonesport Cemetery, and was awarded funding for the erosion control project.

Construction began in July 2000 and was finished the following month. The rehabilitation included lining the bank with filter fabric, adding some 2,500 cubic yards of gravel, and installing 5,000 cubic yards of granite rip-rap to stop the erosion and protect the beach. Following a recommendation from the Washington County Soil and Water District, about 100 rugosa roses, about $800 worth, were planted in two parallel rows among the slabs of rip-rap. As they grow, the roses’ root systems will help to further stabilize the embankment. Rugosa roses were chosen because they tolerate the saline conditions of the shorefront location. FEMA contributed $39,203 to the project, which totaled $52,271. The town’s share was $13,067.

The town explored alternative mitigation approaches, one of which was to move the cemetery. That solution would have been more expensive and worsened the erosion problem.

According to Selectwoman Feeney, nature regularly tests the effectiveness of the erosion control project. “We get several storms each year, mainly in the winter, but the project has stood the test,” she said.

When asked if the erosion reached any of the graves, Ms. Feeney replied, “No, but it came close. Very close.”

## Activity/Project Location

| | |
|---|---|
| Geographical Area: | **Single County in a State** |
| FEMA Region: | **Region I** |
| State: | **Maine** |
| County: | **Washington County** |
| City/Community: | **Jonesport** |

## Key Activity/Project Information

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|---|---|
| Sector: | **Public** |
| Hazard Type: | **Coastal Storm** |
| Activity/Project Type: | **Vegetation Management** |
| Activity/Project Start Date: | **07/2000** |
| Activity/Project End Date: | **08/2000** |
| Funding Source: | **Hazard Mitigation Grant Program (HMGP); Local Sources** |
| Funding Recipient: | **Local Government** |
| Application/Project Number: | **9999** |

## Activity/Project Economic Analysis

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|---|---|
| Cost: | **$52,271.00 (Actual)** |

## Activity/Project Disaster Information

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|---|---|
| Mitigation Resulted From Federal Disaster? | **Yes** |
| Federal Disaster #: | **1198 , 01/13/1998** |
| Federal Disaster Year: | **1998** |
| Value Tested By Disaster? | **Yes** |
| Tested By Federal Disaster #: | **No Federal Disaster specified** |
| Year First Tested: | **2005** |
| Repetitive Loss Property? | **No** |

## Reference URLs

Reference URL 1: **http://www.fema.gov/government/grant/hmgp/index.shtm**

Reference URL 2: **http://www.maine.gov/local/washington/jonesport/**

## Main Points

- The coastal town of Jonesport, Maine, is picturesque on a clear summer day, but the shoreline is vulnerable to severe erosion during coastal storms.
- Over the past several years, waves have steadily eaten away a 350-foot section of the embankment at the historic West Jonesport Cemetery since a storm destroyed the tamarack-log rip-rap installed in 1976.
- The erosion threatened graves, some of which date back to the first half of the 19th century.
- FEMA's Hazard Mitigation Grant Program and the town funded an erosion control project in 2000 to stabilize the embankment by installing granite rip-rap, laying gravel and filter fabric, and planting wild roses.

View of Chandler Bay from West Jonesport Cemetery.

Project consultant and resident Marsha Ismail (l) and Selectwoman Gloria Feeney (r) stand near wild rose bushes and tombstones above Moosabec Beach.

A view of the historic West Jonesport Cemetery and its protective granite rip-rap from Moosabec Beach.