

# **Shishmaref Coastal Erosion**



Condition of Improvements  
31 December 2022  
**Shishmaref Coastal Erosion, Alaska**  
(CWIS No. 086131, 086259, 180892)

**Authorization** (a) Section 117 of Division C, Public Law 108-447 provides, “Notwithstanding any other provision of law, the Secretary of the Army is authorized to carry out, at full Federal expense, structural and non-structural projects for storm damage prevention and reduction, coastal erosion, and ice and glacial damage in Alaska, including relocation of affected communities and construction of replacement facilities.” (b) Section 117 of PL 111-8 repeals P.L. 108-447 in 2009. However, construction is allowed to continue until completion. In addition to the federal revetment, several sections were built by the City of Shishmaref and Kawerak Inc., as shown on the attached drawing.

**Table 1**

| <b>Existing Project</b>                   | <b>Length ft.</b> |
|---|-------------------|
| Section 14 (2005)                         | 230               |
| Section 117 Revetment Phase 1 (2007-2008) | 625               |
| Section 117 Revetment Phase 2 (2009)      | 700               |

**Progress of Work**

|         |   |
|---------|---|
| 2003    | Kawerak Inc. constructed 500 feet of rock revetment.  |
| 2005    | The Corps used the Section 14 authority to construct 230 feet of rock revetment and the City of Shishmaref constructed 350 feet of rock revetment   |
| 2007-08 | The Corps Section 117 authority was used to construct the Phase 1 rock revetment of 625 feet.   |
| 2009    | The Corps Section 117 authority was used to construct the Phase 2 rock revetment of 750 feet.   |
| 2011    | The inspection found the revetments to be in good condition and recommended annual monitoring. An inspection after the November storm found the Corps revetments in good condition. Repairs at the western end of the Kawerak revetment were recommended. |

## Progress of Work

|      |   |
|------|---|
| 2012 | The City of Shishmaref constructed 300 feet of rock revetment. An inspection found the revetments to be in good condition.  |
| 2013 | An inspection found the revetments to be in good condition with no significant changes from previous years.   |
| 2014 | An inspection found the revetments to be in good condition with no significant changes from previous years.   |
| 2015 | An inspection found the revetments to be in good condition and annual monitoring is recommended. The inspection report recommends damage to the City revetment sections be repaired.  |
| 2016 | An inspection found the revetments to be in good condition with no significant changes from previous years.   |
| 2017 | An inspection found the revetments to be in good condition with no significant changes from previous years.   |
| 2019 | An inspection found the revetments to be in good condition with no significant changes from previous years.   |
| 2021 | The toe of the revetment appears to be sound. Launching of core and B rock is visible throughout the length of the revetment, but this is to be expected. Toe was not visible in some locations due to the water level. Overall, the revetment is still in good condition.            |
| 2022 | USACE inspected the project on 26 September 2022 following Typhoon Merbok. The project was found to be in good condition. Beach elevations at the toe of the structure, notably on the east end show evidence of launching the underlayers of the revetment and need to be monitored. |

**Table 2 Cost to Date**

| Project | Description                   | Cost \$   |
|---------|-------------------------------|-----------|
| 086131  | CG Appropriations             | 5,000     |
|         | CG Costs                      | 5,000     |
| 086259  | CG Appropriations             | 7,500     |
|         | CG Costs                      | 7,500     |
| 180892  | CG Appropriations             | 1,000,000 |
|         | CG Costs                      | 1,000,000 |
|         | CG Contributed Appropriations | 744,151   |
|         | CG Contributed Costs          | 744,151   |

| <b>Tide Station</b>             | <b>Mean Range</b> | <b>Diurnal Range</b> | <b>Extreme Range</b> |
|---------------------------------|-------------------|----------------------|----------------------|
| 946 9854 Shishmaref Inlet 2, AK | 0.76              | 1.03                 | -                    |

*NOAA Publication Date: 05/28/2004*

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Rock revetment , July 2019



Rock revetment , July 2019