

# **Kivalina Coastal Erosion**



Condition of Improvements  
31 December 2017  
**Kivalina Coastal Erosion, Alaska**  
(CWIS No. 081818)

**Authorization** Construction in 2009 and 2009 was under Section 117 of Division C, Public Law 108-447 which states, “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.” Section 117 of Public Law 111-8 repealed this authority, but construction was underway and allowed to be completed.

**Table 1**

| <b>Existing Project</b> | <b>Length ft.</b> |
|-------------------------|-------------------|
| Coastal beach revetment | 1,200             |
| Coastal beach revetment | 400               |

**Progress of Work**

|      |  |
|------|--|
| 2009 | 1200 feet of rock revetment was constructed under the Section 117 authority.   |
| 2010 | 400 feet of rock revetment was constructed under the Section 117 authority.  |
| 2011 | Inspection activities find project to be in good condition. Steepening of the revetment at the Singuak Inlet from STA 35+75 to STA 37+25 and damage to the north end of the project from STA 17+50 to STA 18+00 due to ice impact was noted. |
| 2014 | Inspection in August finds project to be in good condition. Accretion of sand was noted along the revetment from STA 24+00 to STA 27+00.   |
| 2015 | Inspection in August finds project to be in good condition. Additional accretion of sand from STA 27+00 to STA 30+00   |
| 2016 | Inspection in August finds project to be in good condition. No significant changes from previous inspections.  |
| 2017 | Inspection in August finds project to be in good condition. No significant changes from previous inspections.  |

**Table 2 Cost to Date**

| <b>Project</b> | <b>Description</b> | <b>Cost \$</b> |
|----------------|--------------------|----------------|
| 081818         | CG Costs           | 13,428,774     |

*\* Unofficial cost. This project is part of the Alaska Coastal Erosion funding account currently being refined to segregate costs to individual projects.*

**Table 3 Range of Tides in feet**

| <b>Tide Station</b>  | <b>Mean Range</b> | <b>Diurnal Range</b> | <b>Extreme Range</b> |
|----------------------|-------------------|----------------------|----------------------|
| 949 1253 Kivalina AK | 0.67              | 0.9                  | 5.45                 |

# Kivalina Coastal Erosion, Kivalina, Alaska



Oblique of Kivalina, June 2010



Oblique of the riprap revetment, July 2011

# Kivalina Coastal Erosion, Kivalina, Alaska



Riprap revetment, July 2011



Typical Riprap revetment , August 2017