



# DETAILED ACTION PLAN

## ALAKANUK OLD BIA SCHOOL

### WASTE EROSION ASSESSMENT & REVIEW (WEAR)

MAY 2015

The **Alakanuk Old Bureau of Indian Affairs (BIA) School** is a site located at latitude 62.688290 and longitude -164.634385 upstream and across the river from the village. It is located on the north shore of the Alakanuk Pass, which is a tributary of the Yukon River, and was inspected for the Waste Erosion Assessment and Review (WEAR) project on July 10, 2012.

The Alakanuk Old BIA School consists of three old school buildings owned by the BIA. The school has been abandoned since the 1980s. It was reported that the old school had a fuel tank, but it has been removed and no evidence was seen of an old tank or contaminated soil during the 2012 WEAR inspection.



Imagery Dated 2006, WEAR Map at <http://dec.alaska.gov/eh/sw/wear.html>

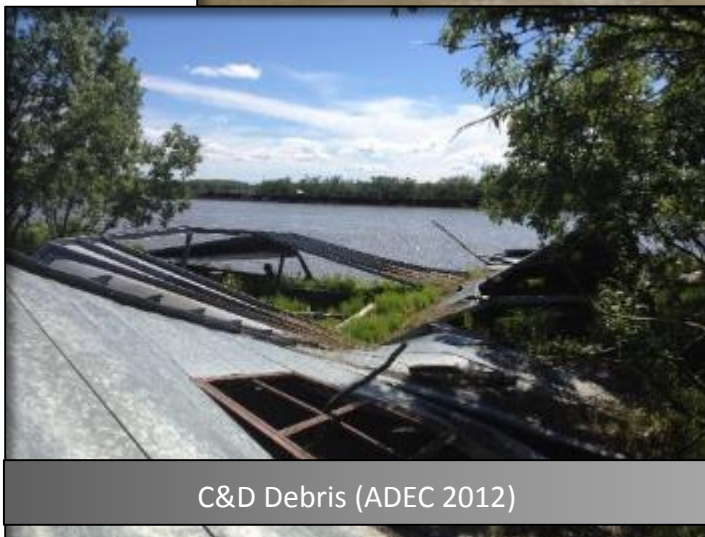
**Community\* – ALAKANUK** – is located on Alakanuk Pass, the major southern channel of the Yukon River, 15 miles from the Bering Sea. It is part of the Yukon Delta National Wildlife Refuge. Heavy winds are frequent during the fall and winter.



## CONTAMINANT RISK

The Alakanuk Old BIA School was in operation from the 1940s to 1974. It is located approximately 3,000 feet east of the community on the north side of Alakanuk Pass. It is considered a small site measuring 0.4 acres. The site is located 680 feet from the nearest residences. The Alakanuk Old BIA School is within the drinking water protection zone for the Alakanuk Water System, which is a surface water supply whose summer intake is downstream of the site.

This site contains construction and demolition (C&D) debris that is a concern due to the possible presence of asbestos-containing materials. Asbestos was widely used in construction materials prior to the 1980s and remains in many rural communities in their older structures. Asbestos is known to cause lung cancer, but does not pose a health risk if it remains contained and is not released to the environment. Asbestos released to water due to erosion is less of a health concern; however, asbestos fibers released to the air pose a more significant risk to human health and the environment. Once asbestos fibers are released they are difficult to clean up, which can result in both short term and long term impacts.





## EROSION RISK

The US Army Corps of Engineers 2009 study, *Alaska Baseline Erosion Assessment (BEA)*, lists an estimated erosion rate of 2 feet per year for Alakanuk. According to the BEA, erosion occurs two times during the year: spring break-up and the fall storm season. During breakup, the Yukon River experiences high flows due to thawing snow and ice as well as surges caused by the failure of ice jams upriver. The soil at this site is silt and sand, which is more easily eroded than other soil types.

During the 2012 WEAR site inspection, the school was actively eroding into the river and it was reported by local residents that ice was the main contributor to erosion.



## MITIGATION

There were no erosion mitigation efforts for this site as of the 2012 WEAR inspection.

### Mitigation Options

- A. **No Action** – If no action is taken to control erosion or remove the structures, the river will continue to erode more of the old BIA school. The buildings will eventually end up in the river, releasing debris into the Alakanuk Pass that could cause navigation hazards. The possible release of asbestos into the environment could harm both human health and the environment.
- B. **Remove Site** – Removing the old BIA school will eliminate the chance of navigation hazards as well as possible contaminant risk from asbestos. This will involve removing all of the debris at the site and moving it to a permitted landfill. This action would likely require planning and a significant amount of money. Some of the steps involved would be: determine the location of all the debris, complete an asbestos survey, obtain community and landowner buy-in, find funding and equipment to remove the buildings and debris.
- C. **Erosion Mitigation** – Ice, spring breakup, and storm surges are the primary causes of erosion on this riverbank. The Department of Commerce, Community, and Economic Development’s Division of Community and Regional Affairs handbook, *Understanding and Evaluating Erosion Problems*, suggests the best methods for protecting against erosion from these causes are beach fill or relocation. The full list of suggested methods is provided in Table 2 of the document, which is available at <http://commerce.state.ak.us/dnn/dcra/PlanningLandManagement.aspx>. However, since the site is actively eroding and the old BIA school has been abandoned, there may be little benefit to erosion mitigation at this site. The community should carefully weigh the benefits of mitigation against the associated costs.

## SUMMARY

The Alakanuk Old BIA School site poses a contaminant risk due to the presence of construction and demolition debris, which possibly contains asbestos, and due to its location in close proximity to residences and location within the drinking water protection zone for the community water system. It poses an erosion risk, as the site currently eroding, with an estimated erosion rate of 2 feet per year and no current mitigation efforts occurring as of 2012.

## RECOMMENDATIONS

Immediate action is recommended for this site as it is actively eroding into the river. Erosion mitigation is not recommended for this site as the rest of the community is on the south shore of the Alakanuk Pass, and mitigation would not protect any active or in-use structures.

It is recommended to complete an asbestos survey for the site, then to remove the buildings and dispose of them in an ADEC permitted landfill. As the site is already falling into the river, it is necessary to begin planning and seeking funds to remove and cleanup this site before erosion can further deteriorate the Old BIA School.



Imagery Dated 2006, WEAR Map at <http://dec.alaska.gov/eh/sw/wear.html>

\*Community Database Online, Division of Community and Regional Affairs, Department of Commerce, Community and Economic Development

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