

ALASKA DISTRICT TRIP REPORT

Project: Denali Commission Mooring Points Phase 4

Description: Pilot Point Trip Report

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Dates: 4 - 5 August 2011

George Kalli and Nathan Epps traveled to the coastal community of Pilot Point, Alaska via commercial air. They conducted a site visit and scoping meeting related to potential installation of barge mooring points in the community. Upon arrival, the team was met by the city manager, Malcolm Brown, and given a tour of the existing fuel and freight transfer sites. Two barge landing sites were investigated during the site visit: the fuel transfer site on Ugashik Bay and a freight transfer bulkhead on the south bank of Dago Creek (Figure 1). An overview of the community and barge landing sites is included as Figure 1.

A public meeting was scheduled at 1800 hours on 4 August; however, the city manager was the only member of the community to attend. Prior to the public meeting, the city manager arranged a meeting with the former mayor of Pilot Point, Sonny Greichen, to discuss the history of existing infrastructure in the community. Following is a summary of the information learned during the meeting and site visit.

GENERAL

Pilot Point is located on the northern coast of the Alaska Peninsula, on the east shore of Ugashik Bay. The community is 84 air miles south of King Salmon and 368 air miles southwest of Anchorage. The community has a population of 68 according to the 2010 U.S. Census. Fuel deliveries come to Pilot Point by barge to Ugashik Bay.

FUEL TRANSFER SITE

Fuel is delivered to the community tank farm by barge on the beach of Ugashik Bay. This summer Crowley Marine made two fuel deliveries to the community. Delta Western has also delivered fuel to the community.

The beach at Ugashik bay is very shallow and is composed of fine sand and clay. The upper portions of the beach are predominantly sandy with more clay present in deeper water (Figure 3).

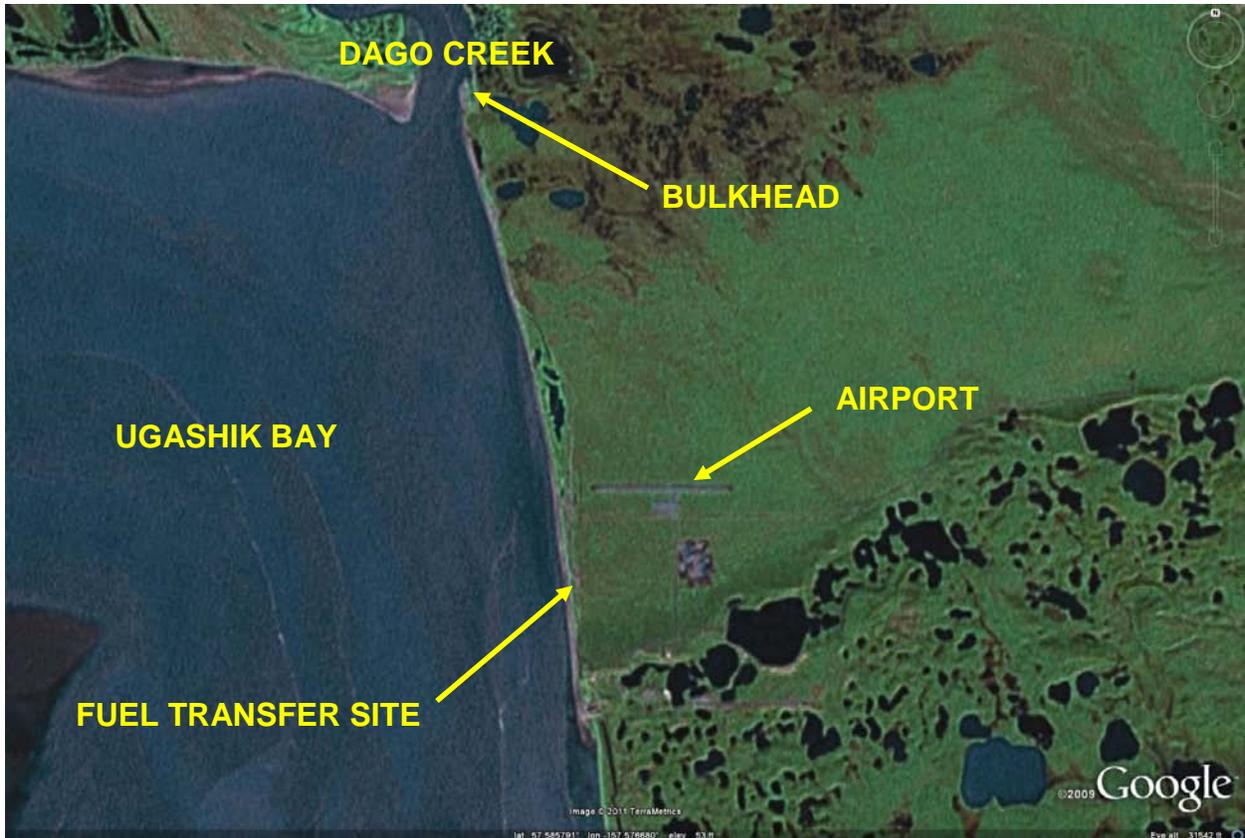


Figure 1: Pilot Point barge landing locations

The community's fuel dispenser facility (**Figure 4**) is about halfway between the community and the airport. Fuel is transferred between the tank farm and dispenser tanks via the truck shown in Figure 4. The fuel dispenser facility was constructed in 2009 with funding from the Denali Commission.

Fuel transfer also includes propane delivery. Propane tanks are hoisted from the barge to a loader on the beach which carries the tank up the beach to a storage area near the tank farm (Figure 5).

Ice prevents winter deliveries of fuel to this landing. The short length of the runway (3,200 feet) in Pilot Point hampers the delivery of fuel by air.

According to Malcolm Brown, storm waves are not a concern at this landing.

Typically, the fuel delivery barge will approach the beach at mid tide as the tide is going out and ground on the beach. The beach material is a mix of fine sand and clay that provides a soft surface for the hull to rest on. Fuel hoses are dragged up the beach and connected to fuel headers behind the first line of dunes at the top of the beach (Figure 2).

Barge operators from Crowley Marine specifically noted that mooring points would not be beneficial to their operations at this site due to their practice of grounding during tidal cycles. No mooring points are recommended at this landing.

Malcolm Brown noted that, generally, there were no needs for improvement at this site. The most difficult aspect of operations noted was transferring the propane tanks to the shore. At the top of the swash zone, the loader climbs a short steep slope through soft sand (**Figure 6**). His suggestion was to add some gravel to this area to provide a better driving surface. Gravel is available for purchase in Pilot Point from the Pilot Point Native Corporation.



Figure 2: Fuel headers



Figure 3: Beach landing site for fuel barges. The slope is very shallow and the lower portion of the beach appears to have more clay than the upper portion.



Figure 4: Fuel dispenser facility



Figure 5: Propane tanks stored near the tank farm



Figure 6: Access road to the beach at the fuel transfer site

DAGO CREEK BULKHEAD

A sheetpile bulkhead is located at the mouth of Dago Creek at the north end of Ugashik Bay, approximately 4 miles from the community. This bulkhead is used to transfer fish to the shore from the local fishing fleet and for delivering ice to the vessels. Freight for the community is also delivered here. Freight shipments often originate in Naknek or Homer. There had not been any freight shipments to the bulkhead yet this summer.

The bulkhead has a 100-foot-long steel sheet pile mooring face with six bollards welded onto the pile cap (Figure 7). The ends of the steel sheet pile wall are bent towards the shore about 20 feet. The bulkhead is protected from scour by timber retaining walls that extend back to shore. The timber retaining walls are tied back soldier pile walls with timber lagging. The tiebacks are steel cables that presumably tie into deadmen buried in the fill. The bulkhead was reportedly built by Knik Construction, but those we spoke to were uncertain when it was constructed.

The steel portions of the project appeared to be in fair condition and the wall was holding its shape. Corrosion was noted throughout the steel; however, the corrosion was not severe enough to compromise the structure.

The timber portions of the structure were failing. The upstream retaining wall was tilting severely outward and had lost a significant amount of fill (Figures 8 and 9). The downstream wall was in better condition, but loss of fill was observed (Figure 10). Several broken soldier piles were found, and large gaps in the lagging was found (Figure 11).

The former mayor of Pilot Point stated that the toe of the wall (Figure 11) is dry at low tide. This restricts use of the dock to a portion of the tide cycle. He noted that placing the wall 30 to 50 feet farther out into Dago Creek would provide full tide access to the bulkhead and assist in fishery operations.

Since mooring points (bollards) at this facility already exist, there is no need to install additional mooring points. The city manager concurred. Installation of mooring points is not recommended for this landing. There appears to be merit in further investigation of the bulkhead facility, though this is outside of the scope of the mooring points investigation.



Figure 7: Looking downstream along the face of the bulkhead at the mouth of Dago Creek. Note bollards along the top of the bulkhead.



Figure 8: Upstream tilting wall of the bulkhead



Figure 9: Loss of fill behind the upstream retaining wall. Note exposed tieback cables.



Figure 10: Downstream wall of the bulkhead



Figure 11: Toe of the timber retaining wall. Note splintered soldier piles and fill visible between gaps in the lagging.

RECOMMENDATIONS

Installation of mooring points is not warranted in Pilot Point.

There appears to be merit in further investigation of repairs for the bulkhead facility, though this is outside the scope of the mooring points investigation.