

Trip Report

Nondalton Dock and Boat Launch

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Participants

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Summary

This trip report documents the site visit to Nondalton, Alaska to investigate dock and launch facility improvements as part of the AKV291 (326047) Nondalton Dock and Launch Ramp Denali Commission\ project.

Photos taken during the site visit are located at O:_Projects by Location\Nondalton\AKV291 (326047) Nondalton Dock and Launch Ramp Denali Commission\06 Photos-Maps-Drawings

Trip Report

The team travelled to Nondalton via regularly scheduled service with Iliamna Air Taxi. Upon arrival the team was met by Jack Hobson, Nondalton Tribal Council Chairman who acted as our guide for the visit.

City Concerns and Ideas

The community has expressed a desire for a better boat landing for the launching and retrieval of the community's boats. Boats are currently launched and retrieved by dragging the boat up upon the cobble shoreline leading to accelerate wear and tear upon the boats hull. A paved launching ramp would allow for vessel launch and haul via trailer instead of by hand. These boats, about fifty in the community, are typically under 20 foot powered skiffs, are of vital importance to the community for transportation to neighboring communities and to assist the community residents with access the fish and game resource. The desired boat launch is a paved 24 foot wide ramp.

The community also is expressing a need for a vessel dock. A dock would prevent the need for temporary ground of vessels which is now the normal practice. The desired

dock is 150 foot in length with a 100 foot tee at the end. The dock would have lighting, power, and water.

Corps Inspection

Engineering Observations

Nearly all cargo, including fuel, is shipped to the community via aircraft. Barges are basically associated with construction contract work. The proposed project site is also the preferred barge landing site. Barges typically have a ramp or drop front and are nosed into the gravel beach for offloading.

Waves at the project site were reported to be moderate with extreme height in the 3' range. The typical local boat is an 18 to 20' open skiff with propeller driven outboard motor. Some flat bottom, jet driven river boats are also present. Locals often use their boats on Lake Clark, which is a much larger lake with much larger waves. Mr. Hobson made the comparison that the waves at the project site and on Six Mile like in general are much smaller than the waves on Lake Clark.

The water level in the lake varies considerably depending on the season. June, July and August tend to be high water months with the water essentially at the vegetation line at the site. During our site visit the apparent high water line was about 3' higher than the observed water level. Comparing Google Earth imagery from May 23, 2006 and July 7, 2005 the shoreline changes by about 65' horizontally (lower in May). Using an estimated bottom slope of 12% this yields a water level change of about 8'.

Overhead electric power lines were observed adjacent to the site. Mr. Hobson stated that a city water line was also present and pointed out that the city sewage lagoons are on the opposite side of Hill Street from the project.

There are no deep draft vessels in service in the area. Barges are shallow draft to navigate the Newhalen River. Maximum draft to plan for is expected to be in the 4' range.



Figure 1 - Shoreline at Project Site Looking Towards Community

There is no known geotechnical information for the project site, however pile driving for the new Community Center (250' from and about 100' above the shoreline & 4000' from the project site) reportedly went easily driving 8" pipe piles to 30' depth with a vibratory hammer. No known permafrost exists in the area.

The city owns the following equipment: Caterpillar 312C-L Track Hoe; Caterpillar 950G Loader; Volvo L70C Forklift (loader type); and about an 8 cubic yard dump truck (Ford). All equipment was observed, photographed and appears to be in excellent condition.



Figure 2 - Caterpillar 950G Loader

After visiting the project site the team went to the city owned borrow pit adjacent to the landfill to the southwest of the community. The pit appears to be almost entirely gravel on the order of 3” minus with a some 6 to 8” stones. A few large granite boulders, on the order of 3’ diameter, were also observed indicating that some larger rocks are also present. The borrow pit appeared well developed and is on the order of 4 acres based on Google Earth imagery from May 4, 2006.



Figure 3 - Community Gravel Pit

The team then proceeded to the new Community Center to see the steel pipe piles that were driven there. Mr. Hobson indicated that the building was placed on piles because the city engineer believes the entire hillside is moving towards the lake. The 30' pile embedment was designed to thwart this tendency.

Environmental Observations

The proposed project site was a gravelly area on the shore of Six Mile Lake currently used to launch boats. The beach was very shallow and graded smoothly into the lake bed, which was also composed of rounded gravel. No aquatic vegetation was noted in the lake at the project site. Numerous carcasses of sockeye salmon lay on the beach, and there were bear tracks visible in the gravel just south of the boat launch site. The vegetation around the site was mostly scrubby willow and birch, bordered by typical grasses and herbaceous plants.



Figure 4 - Typical Shoreline at Project Site

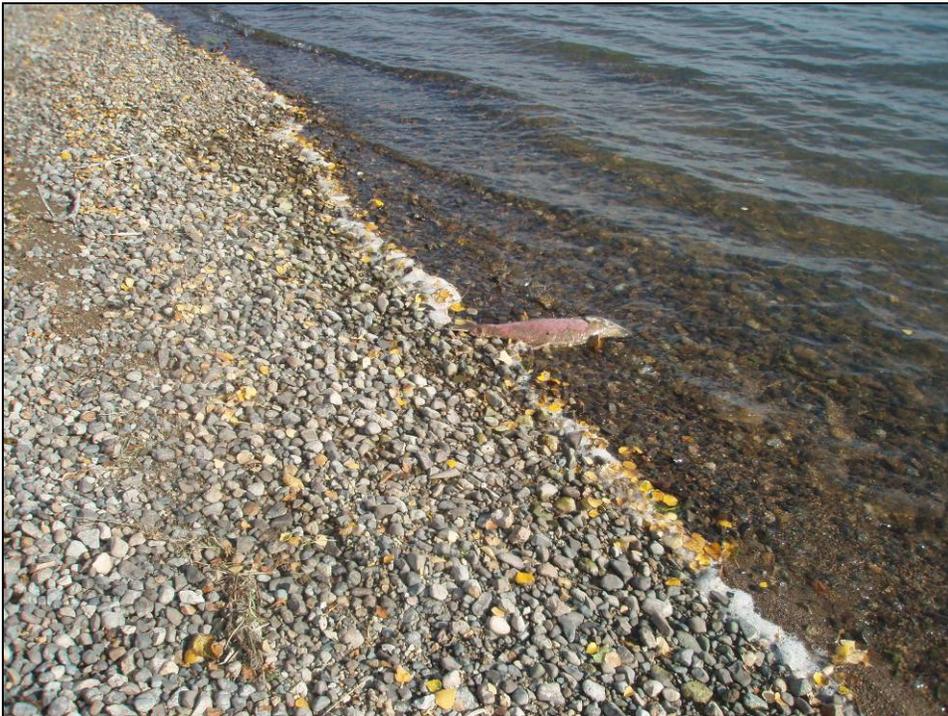


Figure 5 - Salmon Carcass On Shore

Village chairman Jack Hobson stated few people fish in the lake immediately offshore of the proposed project site, but that an active fish camp exists at the head of the Newhalen River about one mile south of the project site. In addition to salmon, the lake contains rainbow trout, Dolly varden, grayling, pike, and burbot. He said that hunting and berry-picking mostly takes place in the hills west of Nondalton, and that there was little or no subsistence use of the land immediately around the boat launch area.

Six Mile Lake is catalogued as an anadromous “stream” by the Alaska Department of Fish and Game. The ADFG lists sockeye salmon and arctic char as “present” in Six Mile Lake. Salmon are not thought to spawn within Six Mile Lake, but migrate through the lake on their way to spawning streams. Several sockeye salmon spawning streams enter or drain Six Mile Lake within a few miles of the proposed project site, including the Newhalen River, the Tazimina River, and an unnamed stream that drains to the eastern shore of Six Mile Lake from the Pickerel Lakes.

The boundary of Lake Clark National Park and Preserve lies along the opposite shore of Six Mile Lake, roughly a half mile from the proposed project site.

Figure 6 was excerpted from a City of Nondalton area use map, and shows some features near the proposed project site. The map indicates an “old grave site” immediately southwest of the proposed project area.

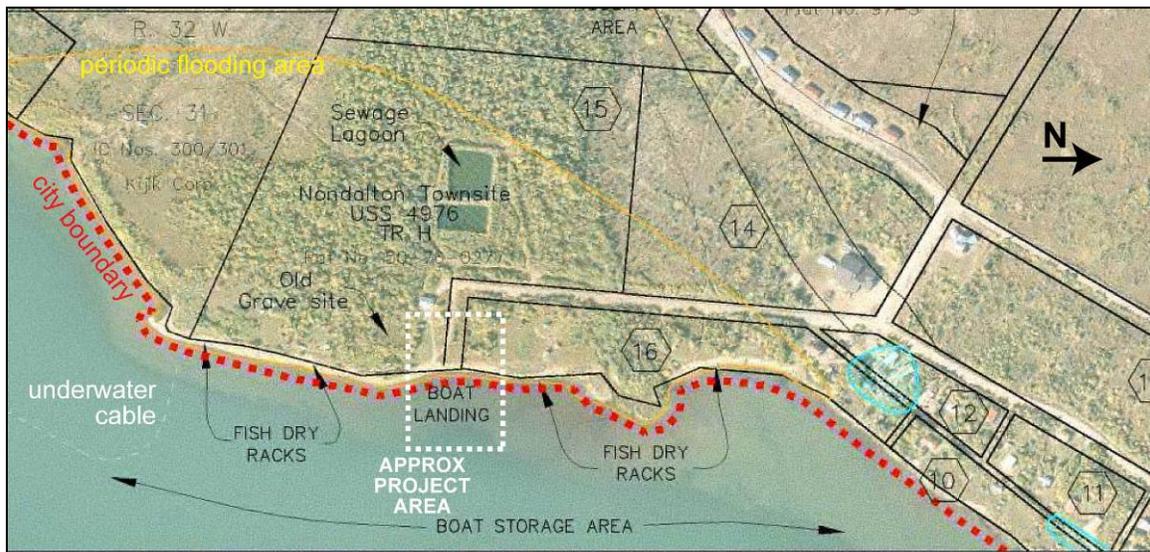


Figure 6 - Annotated excerpt from 2003 Nondalton Area Use Map (<http://dcra.commerce.alaska.gov>)

Initial Assessment of Proposed Project

The community of Nondalton would benefit by the installation of an improved boat ramp and boat dock. Providing this subsistence community with easier access to the lake and a more viable location to launch and retrieve vessels will decrease time needed to prepare for subsistence activities and would decrease wear and tear on their boats.

The design and construction of the proposed project appear to be routine. The facilities would need to be able to exist in the wave climate of the lake and would either need to be removable for the winter or strong enough to withstand ice loading from a freezing lake. Apart from the design, work should also include wave analysis, survey, bathymetry, and geotechnical. A needs assessment would also be useful to determine the optimal size of the project.