

Eyak River Boating Site Environmental Assessment



Lead Agency

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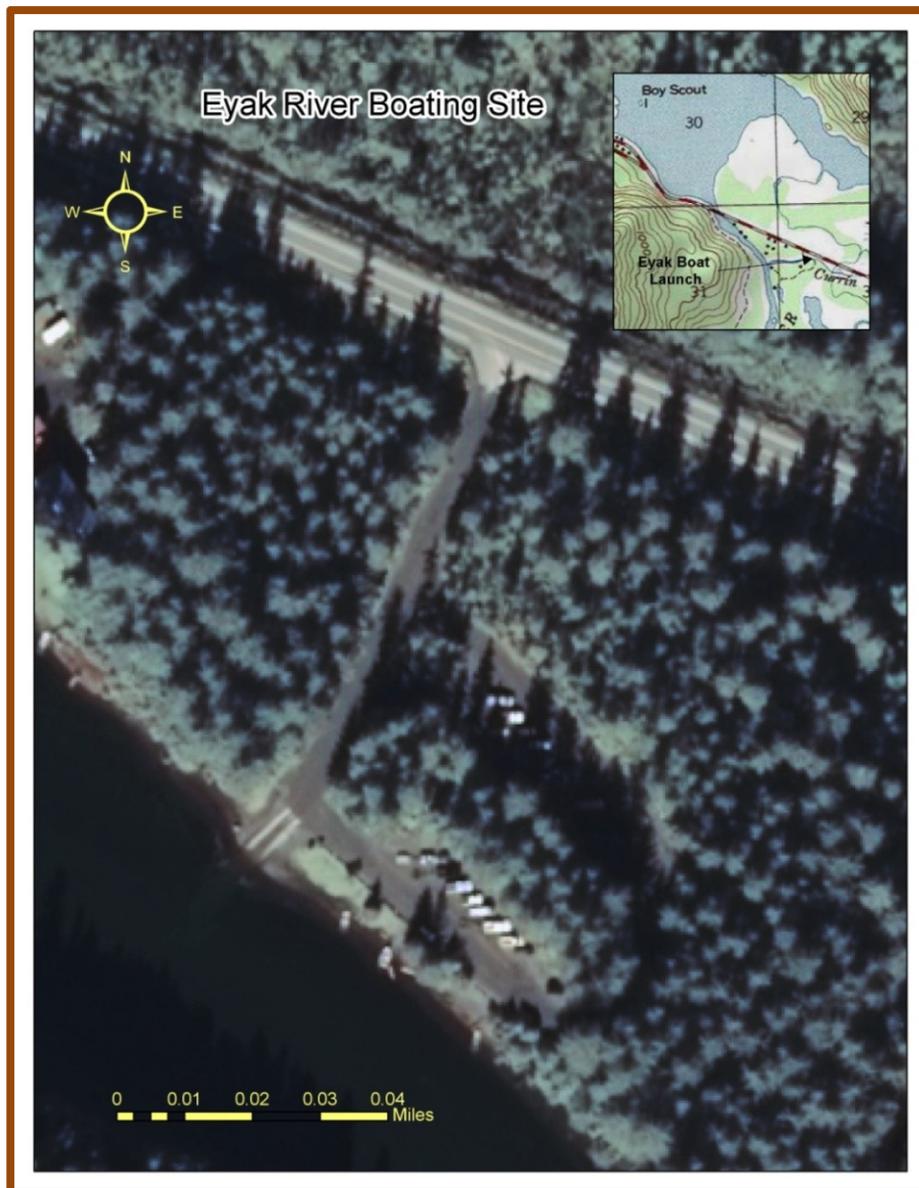
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Introduction

This environmental assessments (EA) is being prepared in accordance with the National Environmental Policy Act (NEPA). This EA discloses the environmental consequences of the proposed action and alternatives and provides evidence and analysis for determining whether to prepare an environmental impact statement (EIS) or a finding of no significant impact (FONSI).

Background and Location

The Eyak River Boating Site is located along the Copper River Highway at approximately milepost 6 and along the east bank of the Eyak River approximately 800 meters downstream of the Eyak River Bridge. The Eyak River Boat Launch Site is a Forest Service Recreation Site and is actively managed as a boat launch. The site is located within Cordova quadrangle C-5, Section 31 Township 15S Range 2W, Copper River Meridian. The Eyak River Boating Site provides a boat ramp and parking for access onto Eyak River. The Eyak River and the boat ramp are used for fishing, hunting, recreation, and special use permit cabin access. The Eyak River Boating Site is primarily used during the summer and is particularly busy during the coho salmon fishing season (August through September). This is the only public boat launching access to Eyak River.



Purpose and Need

The purpose of the Eyak River Boating Site Project is to: (1) create a more user friendly recreation site at the Eyak River Boat Launch and (2) improve fish habitat along an unstable portion of the streambank. Specifically, the following concerns have been identified with the recreation site:

Parking

Parking at the Eyak River Boating Site is not adequate to meet user demand; especially during the Coho salmon fishing season. In addition, there is no marked parking arrangement for vehicles with trailers. As a result, the parking of vehicles with trailers at the northeast end of the facility can be disorderly and reduce available space.

Traffic Flow

At present, the Eyak River Boating Site does not provide for orderly traffic flow for vehicles with trailers. Vehicles entering the parking area drive directly toward the boat ramp, where they must then turn around in close quarters in order to back boat trailers down the boat ramp.

Restroom

The restroom, a vault outhouse, is at low elevation relative to the Eyak River. At present, the restroom can be flooded during periods of high water, and the contents of the vault can mix with the floodwater with potential negative effects on water quality.

Boat Ramp Capacity

The existing boat ramp is 16 feet wide, which only allows for one boat to be launched or loaded at a time. During periods of high use, the boat ramp is congested because users must wait to either launch their boats or wait until a boat is loaded onto the trailer in order to use the boat ramp. In addition, the existing boat ramp is too narrow for some users.

Access Road

A portion of the access road on the south-east side is encroaching on private property.

Streambank

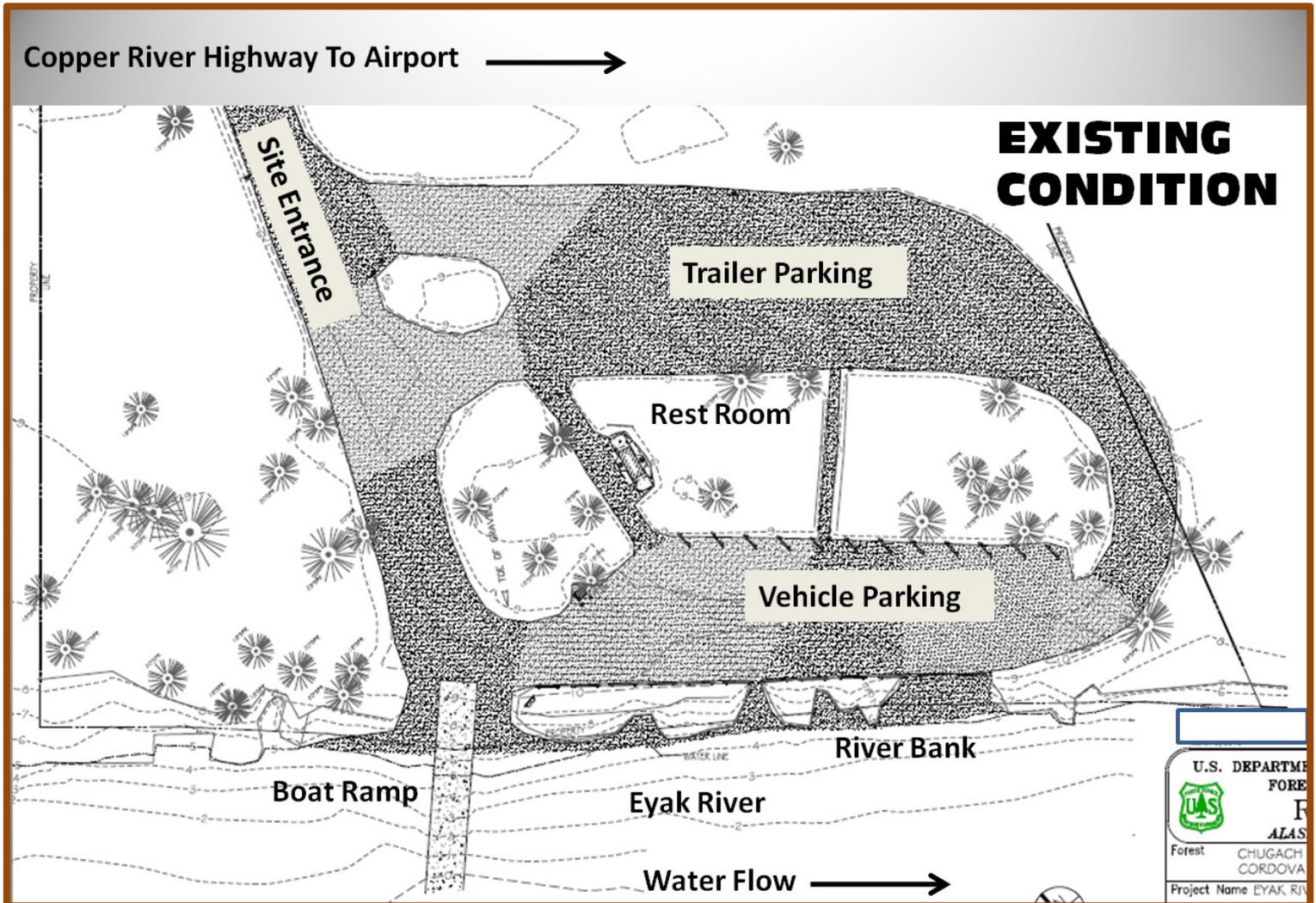
The streambank near the boat ramp is used to tie off boats and for foot access to the Eyak River. As a result, the streambank on this portion of the river is unstable and is eroding into the Eyak River. The stream bank has become unsightly and serves as poor fish habitat.

Proposed Action and Alternatives

This EA discusses the environmental impacts of three alternatives; two action alternatives and a no action alternative. Tables 1 and 2 provide a brief comparison of the alternatives. The following section describes these alternatives in detail:

Alternative 1-No Action

Alternative 1 would not result in any reconstruction of the Eyak River Boating Site. The access road would remain in the same location and would continue to encroach on private property. Vehicle parking would not change. The existing boat ramp and restroom would remain the same, and stream bank restoration would not be performed.

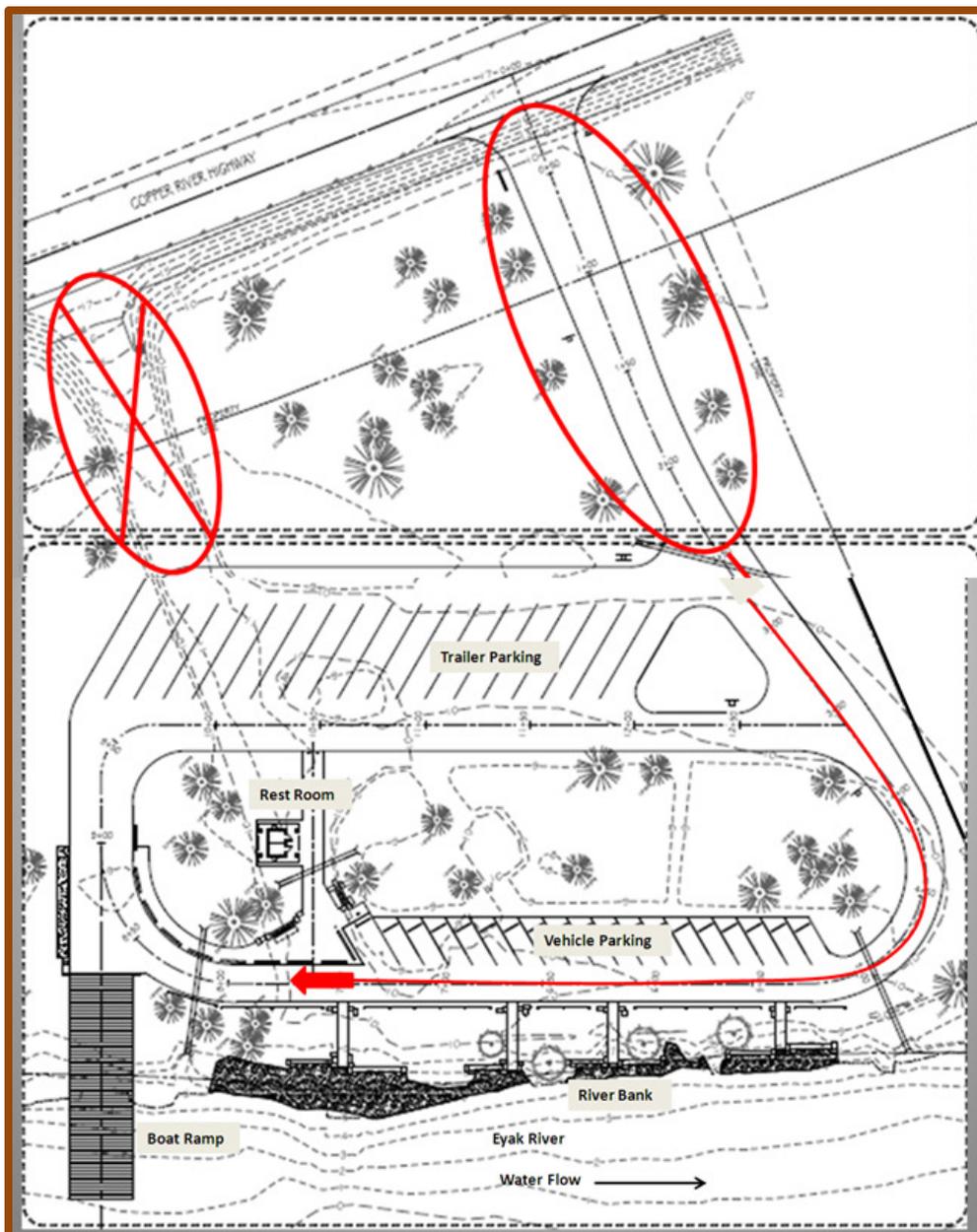


Alternative 2

- (1) Alternative 2 proposes to reconstruct the Eyak River Boating Site. Specific construction activities would include: Removal and rehabilitation of the existing access road into the Eyak River Boating Site and constructing a new two lane access road into the site to address and correct traffic flow issues, and to address the private property encroachment issue.
- (2) Removal of the existing restroom facility and construction of a new restroom facility above the 100 year flood event elevation.
- (3) Construction of 19 parking spaces for vehicles and 15 parking spaces for vehicles with trailers on the north end of Eyak Boat Site.

- (4) Stabilization of the stream bank by placing 18-inch diameter logs parallel to the stream bank to reduce erosion from boat wakes and enable revegetation of areas currently eroded.
- (5) Removal of the existing boat ramp and installing a new 30 foot wide accessible boat ramp that can accommodate two trailers. The new boat ramp will be approximately 70 feet upstream from the existing ramp and 90 feet from adjacent residential property.
- (6) Construction of several hardened walkways from the parking area to the river bank to facilitate public access to where boats are beached, and also to mitigate erosion effects from foot traffic.
- (7) Placement of small cobble or gravel on the beach area to reduce erosion and turbidity caused by foot traffic in the river.

Proposed Condition



Alternative 3

Alternative 3 was developed in response to public comments expressing concern that the proposed location of the boat launch at 30 feet from the private property boundary could affect the private property owners due to the noise and visual impacts generated from boat launching activities. Under Alternative 3 the new boat ramp would be 70 feet upstream from the existing ramp and 90 feet from adjacent private property. Alternative 3 is similar to Alternative 2, except that there would be 15 parking spaces available for vehicles with trailers instead of 18 under Alternative 2. Also, under Alternative 3 a larger green strip buffer would remain next to the adjacent private property to provide additional visual and sound buffer for users of the boating site and the private property owners.

Mitigation Measures Common to Alternatives 2 and 3

The following mitigation measures are incorporated into Alternatives 2 and 3. These measures were developed in order to reduce or minimize potential environmental impacts.

1. All construction equipment must be cleaned (visibly free from soils, plant material, and other debris) before being transported to the project area, in order to reduce the potential spread of non-native plant species.
2. Vegetation clearing will occur outside the nesting/breeding season for migratory birds. The nesting/breeding season occurs from May 1 through July 1.
3. Instream construction windows for boat ramp and streambank stabilization work will be followed in order to reduce potential disturbance to salmon. These construction windows will generally occur in the spring prior to salmon migration when water levels are the lowest or fall after salmon migration has occurred. This window will occur between October 1 and May 30 for Eyak River. Alaska Department Fish and Game Habitat Division have been consulted.
4. The access road and parking area will slope toward vegetated areas in order to reduce runoff and sedimentation into Eyak River.
5. Disturbed areas and decommissioned infrastructure (the old ramp, restroom, and road) will be revegetated and restored to a natural state. Materials from decommissioned infrastructure will be disposed of through existing guidelines.
6. The boat launch entrance onto the Copper River Highway will be moved approximately 200 feet east to reverse traffic flow pattern within the boat launch site, thereby improving public safety. The road will also be moved west ten feet to eliminate current encroachment onto private property.
7. The existing restroom facility will be removed. A new restroom facility will be constructed above the 100 year flood event elevation to minimize the potential for septic system flooding into the Eyak River.
8. A Forest Service archeologist will monitor the ground disturbing activities that are determined necessary to have an archaeologist present. A comprehensive monitoring plan will be followed

throughout the duration of the project. If potentially significant cultural material is discovered, construction will be suspended and the Alaska State Historical Preservation Officer office will be consulted.

9. A representative of the Native Village of Eyak and Eyak Corporation will be invited to be present during ground disturbing activities that are determined necessary to have an archaeologist present. These representatives will be consulted though out the implementation of the project.
10. During the “pulling back” of the existing roadbed currently encroaching on Eyak Corporation lands, an Archaeologist will need to be present. Only “fill” material will be removed with no additional disturbance to below road grade subsurface layers. If fill material is left in place it will be replanted and reclaimed with native plant species.
11. Applicable Best Management Practices (BMPs) will be followed during the activities, as stated in the Region 10 Soil and Water Conservation Handbook (USDA Forest Service, Alaska Region, 2006) in order to ensure that water resources are protected within and downstream of the project area. Specific BMPs that may apply to this project include the following:
 - a. 12.4: Floodplain Identification, Evaluation, and Protection
 - b. 12.5: Wetland Identification, Evaluation, and Protection
 - c. 12.6: Riparian Area Designation and Protection
 - d. 14.5: Road and Trail Erosion Control Plan
 - e. 14.6: Timing Restrictions for Construction Activities
 - f. 14.9: Drainage Control to Minimize Erosion and Sedimentation
 - g. 14.24: Road Obliteration
 - h. 16.1: Recreation Facilities Planning and Location

Comparison Of Alternatives

Table 1

Alternative	Access Road	Restroom	Trailer Parking	Vehicle Parking	Boat Ramp	Streambank Stabilization
Alt 1-No Action	West side	Current location and elevation	Approximately 12	12	16 feet wide single boat ramp	None
Alt 2-Proposed Action	East side	Restroom elevated 5 feet	18	19 in total (18 plus 1 accessible)	30 feet dual boat ramp	Yes
Alt 3-Modified Proposed Action	East side	Restroom elevated 5 feet	15	19 in total (18 plus 1 accessible)	30 feet dual boat ramp	Yes

Table 2

Alternative	Accessibility	Distance from Private Property	Walkways to Riverbank	Vegetation to be removed
Alt 1-No Action	No accessible ramp to boat launch	160 feet	None	None
Alt 2-Proposed Action	Accessible ramp to boat launch	30 feet	Hardened walkways from the parking area to river	0.5 acre
Alt 3-Modified Proposed Action	Accessible ramp to boat launch	90 feet	Hardened walkways from the parking area to river	0.3 acre

Environmental Impacts of the Proposed Action and Alternatives

(Biological evaluations and other specialist reports were written in response to the proposed action and alternatives. The following section summarizes these reports.)

Sensitive and Non-native Plants

The project area includes coniferous forest, riparian areas, streambanks, and areas of human disturbance (primarily the existing Eyak Boat Site). The project area was surveyed on August 26th 2009 for sensitive plants. No sensitive plants were discovered during the survey. Although no sensitive plant species were discovered during the survey, the project area does contain potential habitat for Calder’s loveage (*Ligusticum caldera*) and the Unalaska mist-maid (*Romanzoffia unalaschcensis*). The Calder’s loveage is suspected to occur and the Unalaska mist-maid is known to occur on the Cordova Ranger District. The survey also identified one non-native plant species within the project area; the Creeping Buttercup (*Ranunculus repens*).

Environmental Consequences for Sensitive and Non-native Plants

None of the alternatives will have any impacts to sensitive plants because they do not exist within the project area. All alternatives have the potential to spread non-native plants into the project area because public use of the site will occur regardless of reconstruction. Alternatives 2 and 3 have slightly more potential to result in the spread of non-native plants in the project area because construction will occur and 0.5 acres will be disturbed. However, there is a low likelihood that non-native plants will spread into the area from these alternatives because equipment must be cleaned (visibly free from soils, plant material, and other debris) before being transported to the project area.

Wildlife

The project area does not contain any habitat or critical habitat for threatened or endangered wildlife species and no threatened or endangered wildlife species have been observed. The project area does

contain habitat for Alaska Region sensitive species such as migratory songbirds; however, no sensitive species have been observed in the project area. The project area also contains habitat for bald eagles; however, no active nests have been observed in the project area.

Environmental Consequences for Wildlife

None of the alternatives will have any impacts to threatened or endangered wildlife species or their habitat because this habitat does not exist in the project area. A wildlife Biological Evaluation was prepared and concluded that there would be no adverse effects under all 3 alternatives.

Alternative 1 represents taking no action at the Eyak River Boating Site. All parking, roads, boat ramp and restroom remain in their current location. Under alternative 1, no vegetation is affected and the Eyak Boating Site remains approximately 160 feet from adjacent private property.

Alternative 2 represents one of two action alternatives. This alternative will remove and revegetate the access road from the west side of the Eyak River Boating Site. A 200 foot new road will be constructed on the east side of the Eyak Boating Site. This alternative will remove approximately 0.5 acres of vegetation including a large 40" diameter mature Spruce tree that is potential habitat for sensitive species; however, no sensitive species have been observed in the project area and the project area is not believed to be critically important to any sensitive species. The parking areas, boat ramp and restroom would be moved or reconstructed. Under this alternative the site will be 30 feet from the adjacent private property.

Alternative 3 was developed in response to public comments expressing concern regarding noise and visual effects on adjacent private property. It is similar to alternative 2 except for the amount of vegetation to be removed and the distance from the Eyak Boating Site will be from the adjacent private property. Under alternative 3 approximately 0.3 acres of vegetation would be removed, the large 40" diameter Spruce tree would remain and the site will be 90 feet from the adjacent private property.

Alternatives 2 and 3 are not expected to have any noticeable impact on sensitive species. Alternatives 2 and 3 will remove vegetation that serves as habitat for migratory birds; however, the likelihood that vegetation removal will impact migratory birds is low because as a mitigation measure vegetation removal will occur outside the breeding/nesting season. In addition, it is not likely that the project will impact any bald eagle nests because no eagle nests have been observed in the project area.

Fisheries Resources

At the Eyak River Boating Site, the river substrate consists of fine gravel, sand, and silt. Thus, there is no salmonid spawning habitat in this area. Much of the shoreline is not vegetated due to foot traffic from boaters, but where there is overhanging vegetation or undercut banks, there can be habitat for juvenile coho salmon.

The Eyak River serves as a migratory corridor for adult salmon moving upstream to spawn and juvenile salmon heading to the ocean or to downstream rearing areas. In early to mid-May until mid July, sockeye salmon adults move past the boat ramp area to upstream spawning areas. Small numbers of pink salmon migrate from mid-June to August. Coho salmon move past the area from August until November. Juvenile salmon migrate downstream from late April until early July.

The streambank at the site has eroded and receded where foot traffic has killed the vegetation. In areas where there are prickly spruce saplings, there is less foot traffic and the banks remain fairly intact. Boat wakes exacerbate the erosion where there is no vegetation and stir up the silty bottom.

Environmental Consequences for Fisheries Resources

Under Alternative 1 there will be no reconstruction of the Eyak River Boating Site or any rehabilitation of the streambank. In general, it is expected that streambank will continue to erode and foot traffic will continue to remove stream bank vegetation. In this condition, the streambank will continue to serve as poor habitat for juvenile coho salmon and could become more degraded in the future. The Biological Evaluation concluded there would be no adverse effects to fish or fish habitat from this project. There may be temporary disturbances, but the action alternatives include stream bank restoration work that will improve fish habitat in the long run.

Under Alternatives 2 and 3, construction of the boat ramp will require digging into the river substrate to place the concrete blocks that will form the ramp. This will disturb the fine sediments on the bottom, and the water will be cloudy during the time of construction. Although suspended silt can irritate the gills of young fish or adversely affected spawning habitat, no substantial effects are anticipated for a number of reasons:

- The turbidity will only last for the few days required for construction.
- The construction will not muddy the entire river, and fish can move to the other side of the river to clearer water if necessary.
- Fish can tolerate certain levels of silt as occurs naturally after rain storms or when the upstream glaciers melt and introduce sediment into the river.
- By working in April to early May or after the beginning of October, few salmon are expected to be in the area.
- Because there are no downstream spawning areas, the disturbed sediments will not smother salmon eggs buried in the gravel.
- The placement of logs along the stream bank will reduce erosion from boat wakes and will reduce turbidity in the future. This will mitigate the temporary effects during construction.
- The proposed placement of cobble along the muddy shoreline where people get in and out of boats will reduce disturbance of the mud and erosion. This will reduce turbidity over the long term and will help to mitigate the effects of the substrate disturbance during the construction period.

For these reasons, any turbidity resulting from the replacement of the boat ramps in Alternatives 2 and 3 are not expected to have any impacts on salmon or salmon habitat.

The construction of the boat ramp will cause the loss of about 30 linear feet of streambank vegetation (the width of the ramp and the fill on the sides). The vegetation hanging over the stream provides cover for juvenile salmon along the shore and provides a source of food for juvenile salmon as invertebrates on the vegetation (spiders, aphids, caterpillars) fall into the water. The shoreline vegetation also traps sediment, oil, and other contaminants that might wash off of the parking area during heavy rains.

Although there will be some loss of vegetation, the area covered by the existing ramp will be revegetated as well as other areas that have lost vegetation due to heavy foot traffic. Overall there should be a net gain

in shoreline vegetation. The site plan drawings also show that a 10- to 15-foot vegetated buffer will be in place that will be sufficient to trap sediment and contaminants that might wash off the parking area.

Given the proposed revegetation of the currently barren areas and the maintenance of a vegetated buffer along the river, there will be no effect to salmon or salmon habitat from the removal of vegetation for the boat ramp. In addition, concentrating foot traffic to the walkway will help maintain or re-grow streamside vegetation that will be otherwise trampled. Increasing streamside vegetation and preventing further erosion will benefit juvenile coho, sockeye and pink salmon that use overhanging vegetation or undercut banks for habitat.

Clearing and leveling land for the construction of a new road and parking areas has the potential to introduce sediment and other contaminants into the river if the runoff of rainwater is not controlled. A site drainage plan needs to be developed so that runoff during construction and in the future is directed to vegetated areas or sediment traps where sediment or contaminants can be filtered and trapped. The site plan calls for vegetated “islands” between the parking areas, and wooded areas are present around the edges of the site. If the road and parking areas are sloped so that they drain toward vegetated areas and a vegetated buffer is maintained along the bank of the river, there will be no substantial introduction of sediment or contaminants into the water, and there will be no effect to salmon or salmon habitat.

Hydrology, Floodplains, and Wetlands

Watersheds

The proposed project lies within the Scott River-Frontal Gulf of Alaska 5th-level watershed (HUC 1902010416) and the Eyak Lake 6th-level watershed (HUC 190201041604). This watershed received a Class I (functioning properly) rating under the 2010 Watershed Condition Framework.

Climate

The climate in this area reflects a maritime climate with cool summer temperatures, mild winters, and heavy precipitation year-round. Storms generally circulate counter-clockwise in the Gulf of Alaska, and weather and winds come from the east. Average annual precipitation in Cordova is approximately 163 inches (Western Regional Climate Center, 2011). Snowfall occurs between mid-October and mid-May, and rain can occur at any time of the year. Large, high intensity rainstorms are common in September and October. Peak snowpack in Cordova averages about 13 inches (Western Regional Climate Center, 2011).

Geomorphology

Eyak Lake is a shallow natural lake formed by the damming effect of glacial outwash deposition from the Scott River on the Copper River Delta. Eyak River flows south approximately 6 miles across glacial outwash from the outlet of Eyak Lake at 20 feet elevation to its mouth at the Gulf of Alaska. A weir was constructed at the mouth of Eyak Lake to maintain a higher lake level after the 1964 earthquake. At the proposed project site, the Eyak River drains approximately 26,000 acres (41 square miles), including Power Creek and numerous small tributaries to Eyak Lake.

Streams

The proposed project is along a 300-foot long portion of the Eyak River about 1500 feet downstream of the highway bridge at the Eyak Lake outlet. The entire length of the Eyak River is classified as a large meandering glacial outwash channel (GO2), based on the Tongass National Forest stream classification system (USDA Forest Service, Alaska Region, 1992). The Eyak River adjacent to the proposed project area has a very low gradient with low velocities and a sand/gravel substrate. The stream channel is approximately 230 feet wide. The river at this location is relatively stable, with low sediment transport rates because of the low gradient and the presence of Eyak Lake just upstream. Localized bank erosion occurs as a result of human trampling, but these impacts are limited to the boat launch area. Bank erosion from natural sources is minimal. While most of the length of the bank along the day use area is developed, with vegetation partially or fully cleared from the bank, healthy riparian vegetation exists on the banks upstream and downstream of the boat launch area. The presence of the riparian vegetation and woody debris in the channel in this area causes increased deposition of fine sediment.

Streamflows and Water Quality

No stream gauge or historic streamflow data exist for the Eyak River, although 48 years of flow data exist for Power Creek, the largest tributary to Eyak Lake (US Geological Survey, 2011). Streamflows on the Eyak River are controlled by summer snowmelt runoff and runoff from large rain storms throughout the year. The largest floods are likely to occur as a result of rainfall runoff, with the largest events occurring in September and October. Winter baseflows remain low, but flows can increase rapidly as a result of winter rain events. Because of its low gradient and low capacity to convey flows across the flat delta, high flows can lead to large increases in the water surface elevation of Eyak Lake. Flooding along Eyak Lake and the Eyak River is relatively common.

Water quality in Eyak Lake is impacted by industrial and residential uses along the Lake. Eyak Lake was placed on the 2002/2003 303(d) list of impaired waters as a result of the release of petroleum products from above ground storage tanks (Alaska Department of Environmental Conservation, 2010). Although a sheen has not been observed since 2005, Eyak Lake remains on the list, and additional petroleum-related water quality concerns exist. Other water quality concerns that have been detected in the past include sewage contamination, low levels of dissolved oxygen, and heavy metals. Sediment entering the Eyak River is generally low because the lake acts as a settling basin. Water quality impacts resulting from the Eyak River boat launch include minor amounts of sedimentation from bank erosion, as well as potential fecal coliform pollution resulting from inundation of the existing restroom during floods.

Floodplains and Wetlands

The existing boat launch parking area is located on a high floodplain surface, about 5 feet above the normal water elevation of Eyak River. This portion of the Eyak River is slightly incised as a result of erosive down cutting through the glacial outwash sediment that creates the lake. Although this is not an active floodplain and this area does not experience regular floods, larger flood events do inundate this facility including most recently two events which occurred October 2007 and October 2009. Riparian vegetation in the floodplain along the Eyak River bank upstream and downstream of the boat launch area provides protection and structure to the bank, as well as instream habitat. The floodplain surface and riparian vegetation in the boat ramp area are highly impacted as a result of clearing, development, roads, and localized impacts to banks from human trampling.

As mapped by the US Fish and Wildlife Service National Wetland Inventory, the proposed project does not lie within mapped wetlands, with the exception of the instream portions of the project, which lie within ravine wetlands defined by the Eyak River channel.

Environmental Consequences for Hydrology, Floodplains, and Wetlands

Alternative 1 would result in no change from the existing condition. Bank erosion would continue to occur as a result of trampling in the boat launch area. Water quality could potentially be affected by sediment and pollutants associated with frequent inundation of the restroom. No additional effects would occur to floodplains and wetlands.

Alternatives 2 and 3 would have little or no direct or indirect effects on stream channel processes, streamflows, water quality, floodplains, or wetlands. The eroding stream banks would be hardened and stabilized using logs, preventing additional bank erosion and allowing for riparian vegetation to become reestablished. Hardened walkways would concentrate foot traffic and reduce trampling of vegetation. The boat ramp would be wider than the existing ramp, but the low profile along the channel surface would be similar to the existing ramp, causing no additional impacts to channel function. Relocating the restroom to higher ground would decrease the potential for water quality impacts. Clearing of an additional 0.5 acres would cause a small impact to the floodplain and riparian areas, but would not reduce the overall riparian function along this section of the Eyak River. The proposed streambank stabilization could also improve the condition of the riparian vegetation in existing impacted areas.

Scenic Resources

The project area is currently a developed site and human presence is obvious in the area with private residence to the north and south of the existing Eyak Boating Site near the highway. The existing river bank erosion, parking, and road encroachment continues to make the scenic quality less than optimum.

Environmental Consequences for Scenic Resources

Alternative 1, the no action alternative, will not have a significant scenic effect on the site. Although the site is considered a “developed” recreation site and provides public parking, boat launch and bathroom facilities it is also considered “scenic” due to the dense vegetation throughout the site, the adjacent river and Heney Mountain Range directly to the west. The Eyak River Boat Launch site is enclosed and surrounded by a thick canopy of overstory vegetation including Sitka spruce, hemlock, and cottonwood trees, and understory vegetation consisting of alder, salmon berry and many other species of woody and nonwoody plants and shrubs. Eyak River, which the boat launch site accesses, and the Heney Mountain Range immediately to the west provides a scenic backdrop to the heavily vegetated Eyak River Boat Launch recreation site. Currently, however, river bank erosion, and rather unorganized traffic congestion and parking patterns tend to make the scenic quality of this area less than optimum.

Alternative 2 will reduce erosion through bank stabilization and replanting vegetation. This alternative will also provide for more orderly traffic flow and trailer parking pattern. However, Alternative 2 will remove approximately 130 feet of Spruce forest buffer including some very large old growth spruce trees between the boating site and the private land owner to the north leaving only a 30 foot buffer. The removal of the large spruce trees and the location of the boating site will detract from the scenic quality of the area primarily because private residence will be more evident from the boating site, evidence of

human presence will be more noticeable, and the loss of scenic quality through the removal of the large spruce trees.

Alternative 3 provides for a 90 foot buffer between the private residence and the project area. The 90 foot buffer will preserve three or four very large spruce trees; including a very large 48” spruce that is remarkably larger than the other trees in the area. Retaining the large spruce trees and maintaining a 90 foot buffer between the project area and the private residence will improve scenic quality because the private residence will be more “screened” from the project area. Of the “action” alternatives Alternative 3 would be least visually impacting to the site from both the users’ perspective and from the perspective of the private residence to the north as a result of leaving a wider 90 foot vegetative buffer and visual screen instead of a 30 foot vegetative buffer and visual screen.

Soundscape

The Eyak Boating Site is a generally quiet area except during the peak sport fishing season of August through September. On August 25, 2011, the Forest Service measured the ambient noise level at the Eyak Boating Site at approximately 50 decibels.

Environmental Consequences for Soundscape

On August 25, 2011, the Forest Service measured noise levels at the existing Eyak River Boating Site to determine the amount of noise that would be generated from use of the boat ramp. One of the purposes of the study was to determine the level of noise at the private residence from use of the boat ramp under the alternatives. The sound study was conducted at varying distances away from the Eyak River bank to simulate the distance that neighboring homes are from the water under the different alternatives. A jet boat was used that produces the highest noise output of most boats that would be expect to launch at this site. Recordings were taken under 4 different scenarios with the variable being the width of vegetation between the boat launch and the decibel meter. The first sample was taken at the existing ramp with no vegetation, 2nd sample was simulating a 30' wide vegetative buffer while the 3rd and 4th samples simulated a 90' and 160' vegetative buffers respectively. The 30' and 90' widths represent the two design alternatives while the 160' width is the sound level that is currently experienced at the property boundary. The ambient decibel reading at each width was taken as an extended reading while the boat idled near the ramp. The results of the study are summarized in Table 3:

Table 3

	No Buffer	Alternative 2	Alternative 3	Alternative 1
Buffer Width	0 feet - no buffer	30 feet buffer	90 feet buffer	160 feet buffer
Boat Idle	60 db	51 db	51 db	51 db
Boat ¾ Throttle	72 db, 78 db	72 db, 75 db	65 db, 67 db	66 db, 65 db

In general, the study indicates that there is approximately a 7-8 dB difference between the amount of noise heard from a boat leaving the boat launch under ¾ throttle between Alternatives 2 (30 foot vegetative buffer) and 3 (90 foot vegetative buffer). Based on this study, the sound of a boat throttling away from the boat ramp under Alternative 2 with a 30 foot vegetative buffer will be more noticeable from the private residence than under Alternative 3, with a 90 foot buffer, due to the increased vegetative screening . In addition, the noise from a boat throttling under Alternative 3 (90 foot vegetative buffer) is

similar to what is heard under Alternative 1(160 foot vegetative buffer) —65 dB, 67 dB measured at 90 feet and 66 dB, 65 dB measured at 160 feet. For this reason, in terms of noise heard at the private residence, Alternatives 1(160’ buffer) and 3 (90’ buffer) are similar. The difference between noise level using common examples are listed under Table 4:

Table 4

dB	Example
0	Healthy Hearing Threshold
10	A Pin Dropping
20	Rustling Leaves
30	Whisper
40	Babbling Brook
50	Light Traffic
60	Air Conditioner
70	Dishwasher
75	Vacuum Cleaner
80	Garbage Disposal

Most people perceive one sound to be twice as loud as another when an increase in 10 dB occurs. For instance, a 60-dB air conditioner will sound twice as loud as a 50-dB refrigerator. A 70-dB dishwasher will sound about four times as loud as the 50-dB refrigerator. This is displayed in Table 5:

Table 5

Decibel Level	Perceived loudness
50	1X
60	2X
70	4X
80	6X

Results of Sound Study

Based on this study, therefore, the perceived sound level difference between no action Alternative 1 (160 foot buffer) would be negligible as compared to Alternative 3 (90 foot buffer). The perceived sound level difference between action alternative 2 (30 foot buffer) and action alternative 3 (90 foot buffer) would be an increase in perceived sound level of 50-100% under alternative 3, where a 7-8 dB noise increase occurred, using the boat under ¾ throttle sample due to 60 feet less of vegetative buffer.

Recreation

The Eyak River Boating Site has been a popular location for a variety of recreation opportunities since its construction in 1981. The existing boat ramp and outhouse were reconstructed in 1991. The site is also the only public boat launch access to Eyak River. This site gives the public access to Eyak River, the Copper River Delta and the Gulf of Alaska for many activities including sport and subsistence fishing, hunting and access to private special use cabins.

Environmental Consequences for Recreation

Alternative 1 will result in no change from existing condition. This alternative is expected to cause continued dissatisfaction with recreation visitors. Parking will continue to be inadequate for user demands and possibly worsen with the anticipated increase in use during the coho salmon fishing season. Traffic flow will continue to be uncontrolled allowing vehicles with trailers to drive directly towards the boat ramp creating congestion and an environment for collisions with other vehicles and pedestrians. The boat ramp will continue to be undersized and difficult to use increasing congestion at the boat ramp where multiple users must wait to either launch or load their boats during silver salmon season. The stream bank where users tie off their boats will be expected to continue eroding from foot traffic creating sedimentation, unstable footing and undesirable scenic quality and a compromised streambank .

Alternative 2 will be a significant redesign of the entire site. Traffic flow into the site will be more fluid and controlled by moving the entrance to the northeast corner of the site encouraging one way traffic flow. Moving the roadway west ten feet will eliminate the encroachment onto private property. Enlarging the parking areas and delineating parking stalls is expected to ease congestion by creating more parking capacity and orderly parking of vehicle and vehicles with trailers. Widening the boat ramp from a single to a double wide boat launch facility (16 foot to 30 foot) is expected to ease congestion by allowing for easier unloading and loading of boats. Creating an accessible pedestrian ramp for boat boarding and off boarding will address the needs of a segment of recreation users not presently served through the existing site. Stabilizing and revegetating the river bank and providing pedestrian pathways to the boat tie off area will be expected to make user access much easier. It is expected that all of these design changes will decrease user frustration and increase user satisfaction. User safety will also be increased by avoiding potential collisions with other vehicles and pedestrians through minimizing congestion and much of the unpredictability of vehicle movements.

Alternative 3 and 2 are very similar with a couple of exceptions. Under Alternative 3, the edge of the site will be 90 feet from the adjacent private property up river instead of 30 feet and there will be a reduction of 3 parking spaces for vehicles with trailers. It is expected that this additional vegetative buffer, including several large mature spruce trees, will be advantageous to both boating site user and adjacent private land owner because a larger visual screen and natural vegetative sound barrier will create a desirable scenic and soundscape qualities between the two properties. Additionally approximately .2 tenths acre of existing vegetation would be retained on the site. In all other aspects Alternative 3 and Alternative 2 will be similar.

Heritage

The Eyak River boat ramp site was subject to a complete archaeological survey in accordance with Section 106 of the National Historic Preservation Act. Past surveys and monitoring activity has occurred within the project area since the original construction in 1981. Archival and background research into the project area was completed and followed up by multiple field visits. Prior to the field investigation, documents pertaining to the history of the area were examined in order to identify the historic use of the area and the nature of historic and prehistoric properties that may be encountered. Although the area has been previously documented through previous Section 106 surveys, it was necessary to review the project due to the nature of the undertaking and the level of ground disturbance involved with the re-design. Additionally, the tribal consultation resulted with concerns over the protection of the archaeological

resources that may be encountered during both the geo-technical testing and the placement of the new ramp and driveway.

Area of Potential Effect

The area of potential effect (APE) for the project area is defined as the entire project area and the National Forest system managed lands which encompasses 3.2 acres and is further defined as the area to the east of the parking lot where sensitive resources are located on Eyak Corporation Lands. There are known sites within the APE which are associated with the past human occupation of the area along the Eyak River by the Eyak. The area is attributed ethnographically to the Eyak. Consultation should continue to occur with the Native Village of Eyak to define the area of potential effect and to determine the effects on the cultural resources.

Archaeological Survey

Archaeological surveys were conducted for the project in 2009, 2010 and 2011 by the Heritage Program archaeologists. Surveys were conducted in areas identified for ground disturbing activities and were small-scale in nature. The survey strategy included a systematic pedestrian survey designed to ensure that all prehistoric and historic archaeological sites, objects, structures and features would be discovered within the APE. Transects were spaced at 20 meter intervals with individual modifications occurring in response to variations in vegetation. GPS points were taken at any cultural resources located during the course of the survey. Photo documentation was gathered as well as written observations. The surveys were undertaken as the project was being designed in response to the changes. Additional cultural features were identified during the course of the survey that were not identified in previous surveys. These cultural features are recommended for avoidance and a buffer has been defined. Prior to the geo-technical testing a Native American Graves Protection and Repatriation Act (NAGPRA) Plan of Action (POA) (Appendix A) was written to identify the necessary process in the event of an unanticipated discovery of human and or native cultural remains.

Environmental Consequences for Heritage

Alternative 1 represents the no action alternative at the Eyak Boat Ramp site. Under this alternative there will be a finding of No Historic Properties Affected reached by the Heritage Program for all sites.

For both action alternatives – alternative 2 and alternative 3 a determination of eligibility would need to be completed for the 3.2 acre site. The DOE would be completed during the winter and spring of 2013 with any additional ground testing occurring summer 2013. As was done during the Geotechnical testing of the site, representatives of the Native Village of Eyak would be invited to participate in any additional ground testing and would be consulted throughout the DOE process.

If the site through the DOE process is determined eligible the following mitigation would occur during the project implementation phase:

- Standard Archaeological Language would be included in the Contract Package for either alternative 2 or alternative 3.
- A Forest Service Archaeologist would be on site during ground disturbing activities that were determined necessary to have an archaeologist present.

- If any historic or prehistoric artifacts are found work will be halted and the Forest Service Archaeologist along with the Native Village of Eyak would be contacted.
- If human remains are found work will be halted and the Forest Service Archaeologist along with the Native Village of Eyak would be contacted.
- During the “pulling back” of the existing roadbed currently encroaching on Eyak Corporation lands, an Archaeologist will need to be present and only “fill” material removed with no additional disturbance to below road grade subsurface layers. If fill material is left in place it may be replanted and reclaimed with native plant species.
- A representative of the Native Village of Eyak would be invited to be present during ground disturbing activities that were determined necessary to have an archaeologist present and will be consulted throughout the implementation of the project.

If the site through the DOE process is not determined eligible, the above mitigation measures would still apply during project implementation and contract package preparation for alternatives 2 and 3.

Under Alternative 2 it is estimated that 0.5 acres of vegetative disturbance would occur and under Alternative 3 that 0.3 acres of vegetative disturbance would occur. Because alternative 3 removes approximately 0.2 acres less vegetation and results in less ground disturbance the likelihood of affecting a heritage resource would be minimized under alternative 3. For both action alternative 2 and alternative 3 the above mitigation measures would need to be implemented.

Public Involvement

This project was first listed in the Schedule of Proposed Actions for Environmental Analysis in the April 2011 quarterly report. The 30-day comment period started on May 2, 2011 with a legal notice published in the Cordova Times. A public meeting was held in Cordova on May 10, 2011 to present the proposed action and receive comments. The proposed action and associated analysis were posted May 2, 2011 on the Forest Service World Wide Web at www.fs.fed.us/da.gov/chugach under “Land & Resources Management”, “Projects”, “Eyak Boat Launch Reconstruction Project”. In May 2011, a scoping letter was sent to 35 individuals, organizations, businesses, agencies, Native groups, and others who have previously shown interest in Forest Service projects. Other agencies consulted include the ADF&G Habitat Division and the U.S. Army Corps of Engineers. U.S. Forest Service recreation, wildlife, botany, heritage resource, and fisheries specialists were consulted as well. Fifteen comments were received from the public through email, phone calls and at the public meeting. Issues and comments included the following:

- Concerns regarding noise and visual effects to the adjacent private property north of the boating site.
- Concern regarding the protection of any heritage resources that might be in or around the area of the boating site.
- Support for elevating the outhouse vault toilet to eliminate the potential for vault flooding.
- Support for improving the capacity of the boating site and improving traffic flow.
- Support for correcting the road encroachment onto adjacent private property.
- Support for revegetating the Eyak River streambank at the boating site.

- Support for reconstruction of the boat ramp to make it wider for ease of boat launching and retrieving.

How Issues Were Considered

- During the public comment process one major issue was identified: the noise and visual effects of a narrow vegetative buffer between the Eyak River Boating Site and the adjacent private property to the north. During the comment period, the adjacent land owner raised concerns that a 30 foot vegetative buffer was too narrow and would allow noise generated by the public using the site to affect him on his property. He also raised concerns that a 30 foot vegetative buffer would be too narrow a visual screen.
- The proposed action will have no significant adverse effect on districts, sites, highways, structures or objects listed in or eligible for listing in the National Register of Historic Places.

Agencies and Persons Consulted

The Forest Service consulted an interdisciplinary team of resource specialists in the development of this environmental analysis. The Forest Service also contacted and consulted the following agencies and persons in the preparation of this environmental assessment:

- Native Village of Eyak
- Eyak Corporation
- Alaska Department of Fish and Game, Habitat Division