

**UNIT 3A****TSIU TO DUKTOTH  
COASTAL STRIP****Background**

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Unit 3A is defined by its importance as coastal habitat for wildlife and as an access area for commercial set net fishing and sport fishing.

**Physical features**

Unit 3A is a one-mile wide strip of sand dunes, grasslands, and lagoons backed in some places by strips of mature timber on uplifted beach terraces.

**Adjoining lands**

The Gulf of Alaska pounds the southern edge of the unit. The Yakataga State Game Refuge forms the northern and western boundary. The proposed addition to the refuge and a 1,490-acre tract of university land abut the northeast and east edge of Unit 3A.

**Land Status**

There are three Native allotments near the Kaliakh River mouth and two near Tsiu River. All other lands are state-owned.

**Access**

During the commercial fishing season at the Tsiu and Kaliakh rivers, fishermen travel the tidelands on all-terrain vehicles (ATVs) between scattered fish camps and aircraft landing areas. Fish buyers land DC-3 and C-46 aircraft on the flat areas of beach near the river mouth to transport salmon to processing plants in Yakutat and Cordova. Fish buyers need to locate their operations near the airstrip for efficiency.

Access across Unit 3A from the beach to the refuge is important for hunting, sport fishing, and wildlife viewing. This access is particularly important along the four major rivers.

**Resources and uses**

Important habitat in Unit 3A includes harbor seal haulout concentrations in the Tsiu, Tsiwat, Kaliakh and Duktoth River mouths, eagle roosting and nesting concentrations, and trumpeter swan nesting concentrations. The Chiuki River is reported to be the most productive nesting and brood-rearing area to trumpeter swans in the state, and the Kaliakh's concentration of eagles is also high, even by Alaska standards. Mature timber stands along these river mouths provide important moose winter habitat and provide cover for bears converging on the coast and rivers to feed. Unit 3A is a vital ecosystem component of the adjoining Yakataga State Game Refuge.

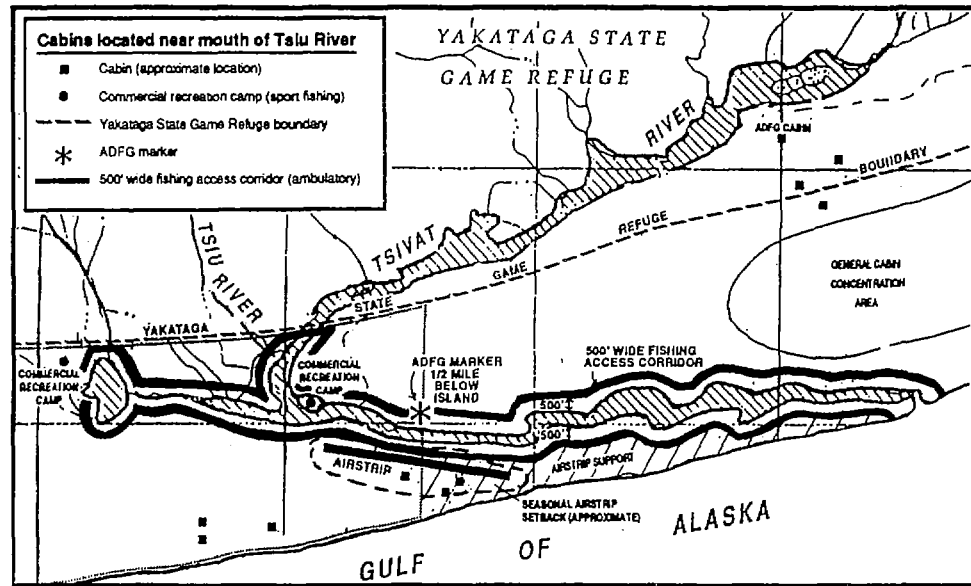
The Tsiu River mouth is the focal point for coho salmon fishing in the western planning area. There is a smaller fishery at Kaliakh River. The set net season runs from late August until October.

Approximately 30 cabins have been built without authorization near the mouth of the Tsiu, and two near the mouth of the Kaliakh.<sup>1</sup> Most of the Tsiu cabins are used by commercial fishers, their crews, or fish buyers. Several are reportedly used by sport guides or for personal or recreational use. Trespass will be enforced under existing authorities. Existing fish camps may be authorized under current

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<sup>1</sup> Owners of unauthorized cabins do not have preference rights.

**Map 3.5**  
Tsiu River mouth



lease and permit programs. DNR will implement standard stipulations for fish camps in the Yakataga area after completion of this area plan. Map 3-5, above, shows facilities at the Tsiu River mouth.

Two sport fish camps, with DNR permits, have operated on the west shore of the Tsiu for several years. DNR issued several additional sport camp permits in 1994. DFG maintains a cabin inside the boundary of the refuge to manage the Tsiu fishery.

### **Management considerations**

DNR has received reports of incipient or potential conflict between sport and commercial fish camps. Sport fish camp operators prefer a separation distance to buffer their sites from noise and lights and round-the-clock activity at commercial camps, which may diminish aesthetic and economic values for sport clientele. DNR management concerns at fish camps include: abandoned structures, vehicles, and refuse; potential disturbance of dune vegetation; and improper waste management leading to the killing of bears in defense of life and property.

The shifting dunes, rapidly shifting river channels, and occasional flooding of low areas make it difficult to identify appropriate areas for permanent structures. Land in unstable areas may be lost to erosion or other natural events. The land manager will need to confirm the current location of the Tsiu, Kaliakh, and Duktoth rivers when considering applications for lands near these rivers.

The Yakataga area is seismically very active. Historic seismicity suggests a 67 percent probability of a great earthquake (exceeding 8.2 on the Richter scale) before 2000. Man-made structures on or near active surface faults may be subject to extreme ground accelerations, catastrophic ground failure, or direct displacement. Tsunami hazards are also high.

DNR will not make state timber available for sale or harvest within this management unit until at least December 2014, except for harvest incidental to development of a cabin and trail system.<sup>2</sup> In addition, before future state timber offerings, DNR must revise the Yakataga Area Plan, including re-examination of land classifications and land use designations. The annual allowable cut for state land must also be recalculated after the area plan is revised.

<sup>2</sup> See Appendix C for the history and terms of the December 1994 settlement agreement.

## Unit 3A - Tsiu to Duktoth resource allocation summary

### Forestry

Under the settlement agreement regarding the university timber litigation, there will be no state timber sales or harvests, except incidental to a cabin and trail system, until at least December 2014.

The area plan allows timber harvest in Subunit 3a-2 (Chiuki and Kaliakh River mouths) if consistent with wildlife habitat and recreation. Approximately 100 acres of commercial timber elsewhere in the unit are not designated for Forestry.

### Fish and wildlife harvest

**Fish camps.** The area plan designates the Tsiu River mouth and the adjoining coast and tidelands for fish and wildlife harvest to support the intensive commercial set net and sport fisheries. The Division of Land is actively seeking to bring trespass camps into compliance.

**Access.** The area plan establishes a 500-foot-wide public use corridor along both banks of the Tsiu and Tsiyat Rivers, and an access corridor between the Tsiu and Kaliakh Rivers. The plan also has a guideline for setbacks from the airstrip to deter dune encroachment.

**Abundance.** An increase in the number of fishermen and guides may create competition and reduce individuals' harvest volumes. Area plans have no authority over allocation of fish and game stocks.

**Character.** At the time of this plan, fishermen did not support separation of sport and commercial fish camps, or other guidelines that would restrict the location of camps. Camp operators desire flexibility to respond to the dynamic physical and hydrological changes of the coastal plain.

**Retention in public ownership.** DNR will retain Unit 3A in state ownership to ensure public access for harvest and to allow camps to relocate in response to physical conditions.

### Fish and wildlife habitat

Most of the coastal strip is designated for habitat.

**Riparian habitat.** The Tsiu River mouth is not designated habitat because of the intensive commercial and recreational use. However, the plan enables DNR to consider additional habitat protection of the Tsiu because the plan retains the land in state ownership and establishes a 500-foot-wide public access zone bordering the river. To protect the natural hydrologic regime of the river, the plan prohibits erosion control measures.

**Coastal habitat.** The two areawide guidelines for a 500-foot-wide buffer at the coastal edge of timber are the main provisions for coastal habitat.

**Tidelands and submerged lands.** Tidelands and submerged lands near the Tsiu and Kikluh river mouths are designated H1 HV1 for protection of anadromous fisheries, and species that congregate because of the fishery. Other tidelands and submerged lands within the three-mile limit are designated H2 HV2.

## Unit 3A Tsiu to Duktoth resource allocation summary, continued

### Minerals development

DNR has adopted a mineral leasehold location order that applies to the state-owned shorelands and tidelands (lagoons) of the Duktoth, Tsiu, and Kaliakh rivers, which flow through this unit. If DFG initiates a mineral closure on the Tsiu and Tsvat rivers, DNR has agreed to support the closure.

### Recreation and tourism

Dispersed recreation is a designated use of all uplands in this unit. Commercial recreation leases and permits are preferable to land sales so that the state can protect the high habitat values along the coast and can meet the ever-changing requirements for public access as the river mouths, shoreline, dunes and floodplains change. The area plan's guidelines protect the natural setting of the coastal edge of timber by limiting logging and new surface uses.

### Settlement

The area plan did not designate settlement lands in this area. There is a public interest in retaining these lands in state ownership as directed by AS 38.04.015, based on their habitat and recreation values, as well as their remoteness from essential services. Retention also avoids the potential liability to the state of selling land in unstable or hazardous areas.

### Transportation

The plan has a guideline for setbacks from the airstrip to deter dune encroachment. The plan also directs DNR to designate a public access corridor between the Tsiu and Kaliakh Rivers.

### Waterfront development

There is no likely waterfront development site along this exposed outer coast. The primary value of the waterfront to Unit 3A is fish and wildlife habitat and harvests.

### Other resources

**Ecosystem management.** By emphasizing fish and wildlife habitat and harvest in Unit 3A this plan is compatible with the adjoining Yakataga State Game Refuge. Unit 3A is a vital component of the refuge ecosystem.

## **Subunit 3a-1 - Tsiu and Tsivat River mouth**

### ■ Designation

Harvest and public use site recreation (HV1, RP1)

### ■ Management intent

Protect or enhance conditions for fish and wildlife harvest, particularly for the set net and sport fisheries at the mouth of Tsiu River, and access for moose and bear hunting and wildlife viewing in the state game refuge. Protect or enhance access and facilities for recreation, particularly for fishing, boating, camping, and access to the game refuge. All activities will, to the extent feasible and prudent, avoid significant adverse impacts to the harvest activities and recreation uses listed above.

This subunit will also be managed for public access for fishermen and recreation users along the shore of the river and immediately adjacent uplands.

Retain lands in this subunit in state ownership to protect the high habitat values and the need for access to the river and the refuge. DNR will not sell or convey land in this subunit for several reasons: 1) the coastal uplands have high value for public use and access, 2) access needs and constraints will shift with the dynamic natural changes in the land, and 3) natural forces pose unpredictable hazards to long-term development. Land sold in unstable areas may be lost to erosion or other natural events.

If a borough is formed that includes the Tsiu subunit, DNR will consider a Memorandum of Understanding for borough management of the subunit in accordance with this plan. Borough management may enable more monitoring and enforcement than the state can currently provide.

DNR supports a proposed initiative by DFG to seek legislative approval to close to new mineral entry the state-owned shorelands and tidelands of Tsiu River, as mapped in Appendix B, in order to protect anadromous fish habitat. If the legislature approves these closures, DNR will amend the Yakataga Area Plan to reflect the closures.

### ■ Guidelines

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| <b>Access corridor between Tsiu &amp; Kaliakh rivers</b> | Land use authorizations should not block public trail access between the Tsiu and Kaliakh rivers. DNR should consider designating a public access corridor before issuing authorizations. The corridor should be routed to avoid the 500-foot-wide coastal fringe of timber.   |
| <b>Public access corridor along the river</b>            | Land within 500 feet of the Tsiu River's ordinary high water mark will be retained in state ownership and managed to allow public access. Within this zone, permits, leases, or other authorizations must not interfere with access to and along the river for all users. This public access zone will be ambulatory to reflect the changing shoreline.  |
| <b>Commercial recreation leasing under 38.05.073</b>     | DNR may consider commercial recreation leasing by competitive bid under AS 38.05.073.  |
| <b>Hydrologic regime</b>                                 | To protect the natural hydrologic regime of the river, persons are prohibited from controlling erosion through structures or actions. This prohibition includes actions to protect facilities under state lease or permit: there is no right attached to a state authorization that allows interference with the hydrologic regime of the river. The intent is to avoid unnatural realignment of the river that may interfere with natural habitat evolution, or damage other authorized facilities. |

- Airstrip setback zone** Each fall, leaseholders, permit holders, and other users will move away from the airstrip any structures and equipment that may form dunes over the winter and obstruct the airstrip. DNR will determine the distance of the seasonal setbacks from the airstrip case-by-case at the end of each fall fishing season.
- Mineral leasehold location** In the beds of the lower Tsiuat and Tsiu rivers that support anadromous fish, new mineral entry will be allowed only under leasehold in order to protect high quality anadromous fish habitat and to avoid impacts to water quality that is essential for sustaining the productivity of the Yakataga area's community, sport, and commercial harvest fisheries. See Appendix B for a map of the leasehold location area.

■ **General information**

The commercial set net fishery for cohos at Tsiu River runs from late August through September or October with an average of 34 permit holders participating. The set net harvest has an average annual value of \$296,000 (based on 1981-1991 data). In the 1992 season, the ex-vessel value of the set net harvest at the Tsiu River was approximately \$1 million. The sport fishery averaged 473 angler days. In the peak year for sport fishing on the Tsiu, 685 anglers came from Anchorage alone. The average annual value of the sport fishery is \$300,000 to \$500,000. The sport fishing guides in the area between Icy Cape and Cape Suckling employed approximately 34 employees in the early 1990s.

Unstable dunes and the frequent shifting of the river channels create hazards for settlement. The airstrip used by commercial fish buyers was moved from the east side of the Tsiu River to the west side in 1991 because of flooding. Local users report that sites for airstrips are limited by soft sands, dune incursion, and changing hydrology. Fish buyers need to locate their facilities near the airstrip for efficient shipment.

Gales frequently wrack this area during the fall. Abandoned or improperly anchored structures and materials are likely to be strewn about or partly buried by sand.

The river is relatively shallow. DFG is in the process of identifying fording sites that avoid or minimize damage to fish habitat, and will issue a general Title 16 permit to authorize the necessary crossings. DFG is also identifying trail routes and airboat use areas within the refuge. Fishermen have previously crossed the river with ATVs and trailers without the permission required under AS 16. Many fishermen operate without skiffs, picking their exposed nets at low tide.

Most of the 30 unauthorized set net cabins are located on east side of the Tsiu River. In 1991 and 1992, several cabins were built on the west side to avoid flooding and to be close to the new airstrip. Two sport camps are authorized on the west side near the refuge boundary.

**Subunit 3a-2 - Chiuki and Kaliakh River mouths**

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■ **Designation**

Habitat and dispersed recreation (H1, RD1)

■ **Management intent**

Protect or enhance fish and wildlife habitat, particularly for moose, trumpeter swans, eagles and seals. Protect or enhance conditions for dispersed recreation, particularly for camping, boating, and access to the game refuge. All activities will, to the extent feasible and prudent, avoid significant adverse impacts to the habitat and recreation uses and resources listed above.

Retain lands in this subunit in state ownership to protect the high habitat values and the need for access to the river and refuge. DNR should retain the land in state ownership for several reasons: 1) the coastal uplands have high value for public use and access, 2) access needs and constraints will shift with the dynamic natural changes in the land, and 3) natural forces pose unpredictable hazards to long-term development.

#### ■ Guidelines

<b>Access corridor between Tsiu and Kaliakh rivers</b>	Land use authorizations should not block public trail access between the Tsiu and Kaliakh rivers. DNR should consider designating a public access corridor before issuing authorizations. The corridor should be routed to avoid the 500-foot coastal fringe of timber.
<b>Public access corridor along the river</b>	Land within 500 feet of the Kaliakh River's ordinary high water mark will be retained in state ownership and managed to allow public access. Within this public access zone, permits, leases, or other authorizations must not interfere with access to and along the river for all users. This public access zone will be ambulatory to reflect the changing shoreline.
<b>Commercial recreation leasing under 38.05.073</b>	DNR may consider commercial recreation leasing by competitive bid under AS 38.05.073.
<b>Commercial leases</b>	Commercial leases for fish and wildlife harvest and recreation are allowed in this subunit consistent with the management intent for habitat and recreation.
<b>Timber harvest</b>	Timber harvest may occur if consistent with management intent for habitat and recreation.
<b>Mineral leasehold location</b>	In the beds of the lower Kaliakh River and its tributaries that support anadromous fish, new mineral entry will be allowed only under leasehold location in order to protect high quality anadromous fish habitat and to avoid impacts to water quality that is essential for sustaining the productivity of the Yakataga area's commercial, sport, and community harvest fisheries. See Appendix B for a map of the leasehold location area.

#### ■ General information

Narrow stands of spruce ( $\frac{1}{4}$  to  $\frac{1}{2}$  mile wide) run parallel to the beach, flanked by low-lying willow stands, lagoons, and wetlands, and the river. This interface of forest, wetland, and coastal habitat supports high concentrations of swans and eagles, provides winter moose habitat, and provides shelter for recreational users.

The commercial set net fishery for cohos attracted an annual average of 20 permit holders from 1981-1991. Many of these set net fishermen are based at the Tsiu River. The average annual value of the set net harvest was \$95,000. The average sport fishing effort was 20 to 100 annual angler days.

The Kaliakh River mouth and channel are continually shifting. Set net sites shift accordingly.

## **Subunit 3a-3 - Duktoth River mouth**

### **■ Designation**

Habitat, harvest, and dispersed recreation (H1, HV1, RD2)

### **■ Management intent**

Protect or enhance fish and wildlife habitat, particularly for moose, bear, seals, and swans. Protect or enhance fish and wildlife harvest, particularly for guided and subsistence hunting of bear, moose, and waterfowl. All activities, to the extent feasible and prudent, will avoid significant adverse impacts to the habitat resources and harvest activities listed above.

Maintain conditions for dispersed recreation consistent with fish and wildlife habitat and harvest. All activities will minimize significant adverse impacts to recreation uses.

Retain lands in this subunit in state ownership to protect the high habitat values, and the need for access to the river and refuge. Reasons for retaining the land in state ownership include: 1) the coastal uplands have high value for public use and access, 2) access needs and constraints will shift with the dynamic natural changes in the land, and 3) natural forces pose unpredictable hazards to long-term development.

### **■ Guidelines**

<b>Public access corridor along the river</b>	Land within 500 feet of the Duktoth River's ordinary high water mark will be retained in state ownership and managed to allow public access. Within this public access zone, permits, leases, or other authorizations must not interfere with access to and along the river for all users. This public access zone will be ambulatory to reflect the changing shoreline.
<b>Commercial recreation leasing under 38.05.073</b>	DNR may consider commercial recreation leasing by competitive bid under AS 38.05.073.
<b>Mineral leasehold location</b>	In the beds of the lower Duktoth River that support anadromous fish, new mineral entry will be allowed only under leasehold location in order to protect high quality anadromous fish habitat and to avoid impacts to water quality that is essential for sustaining the productivity of the Yakataga area's commercial, sport, and community harvest fisheries. See Appendix B for a map showing the area of leasehold location.

### **■ General information**

A narrow stand of spruce (¼ mile wide) extends parallel to the coast, flanked by the river, dunes, and grasslands. This interface of forest, grassland, and coastal habitat supports concentrations of wildlife and provides shelter for recreational users.

The Duktoth River mouth is continually shifting.



### **Subunit 3a-4 - tidelands and submerged lands between Midtimber Lake and Duktoth River mouth - most areas**

#### ■ Designation

Habitat and harvest (H2, HV2)

#### ■ Management Intent

Maintain conditions for fish and wildlife habitat and harvest. All activities will minimize significant adverse impacts to fish and wildlife habitat and harvest.

■ **Guidelines:** None. There are no guidelines specific to this subunit.

#### ■ General Information

See the table at the end of this unit.

### **Subunit 3a-5 - tidelands and submerged lands at Tsiu and Tsivat rivers**

#### ■ Designation

Habitat and harvest (H1, HV1)

#### ■ Management Intent

Protect or enhance fish and wildlife habitat, particularly areas for eagle feeding concentrations, trumpeter swan nesting and brood rearing, and seals. Protect or enhance conditions for fish and wildlife harvest, particularly sport fishing, commercial set net salmon fishing, commercial crab harvest, and community harvest of fish and waterfowl. All activities will, to the extent feasible and prudent, avoid significant adverse impacts to the habitat resources and harvest uses listed above.

■ **Guidelines:** None. There are no guidelines specific to this subunit.

#### ■ General information

The Tsiu and Tsivat river channels frequently shift. Set net sites shift accordingly.

### **Subunit 3a-6 - tidelands and submerged lands at Kaliakh River**

#### ■ Designation

Habitat and harvest (H1, HV1)

#### ■ Management Intent

Protect or enhance fish and wildlife habitat and harvest, particularly commercial set net fishing, sport fishing, community harvest of waterfowl and fish; and commercial trolling offshore.

All activities will, to the extent feasible and prudent, avoid significant adverse impacts to the harvest activities listed above.

■ **Guidelines:** None. There are no guidelines specific to this subunit.

#### ■ General information

The Kaliakh River channel frequently shifts. Set net sites shift accordingly.

## Unit 3A - Tsiu to Duktoth coastal strip

Area # & name	Designation	Resource or Use (See the resource reports and maps for more complete information)	Background
<b>3a-1 Tsiu &amp; Tsvat river mouth</b>	HV1 RP1	<ul style="list-style-type: none"> <li>■ anadromous fish habitat</li> <li>■ eagle feeding concentration area</li> <li>■ harbor seal haulout concentration area</li> <li>■ trumpeter swan nesting and brood rearing in northern and western subunit</li> <li>■ commercial set net fishery (approximately 30 cabins, currently unauthorized)</li> <li>■ flat sand terraces above the beach are used by cargo planes for fish hauling</li> <li>■ commercial sport fishing camps</li> <li>■ access to subsistence and commercial moose and bear hunting in the Yakataga State Game Refuge (YSGR), recreational boating, camping, ATV use</li> <li>■ sport fishing</li> <li>■ non-forested</li> </ul>	<ul style="list-style-type: none"> <li>■ Structures and activities that damage dune vegetation may destabilize dunes.</li> <li>■ The river channels may shift rapidly.</li> <li>■ Fall winds are often gale force.</li> <li>■ There are two Native allotments east of the Tsiu River mouth (10 and 40 acres).</li> <li>■ An airstrip for fish-buying operations was relocated from the east to the west side of the river in 1992. Locations suitable for cargo plane operations are limited by dunes, soft soils, and flooding.</li> <li>■ Yakataga State Game Refuge borders to the north, one mile inland from high water.</li> </ul>
<b>3a-2 Chiuki &amp; Kaliakh river mouths</b>	H1 RD1	<ul style="list-style-type: none"> <li>■ immature spruce and hemlock</li> <li>■ anadromous fish habitat</li> <li>■ moose winter habitat</li> <li>■ eagle roosting and nesting</li> <li>■ trumpeter swan nesting and rearing concentration area</li> <li>■ A lake on the Chiuki River is reported to be the largest producer of trumpeter swans in the state (USFWS, 1991).</li> <li>■ harbor seal haulout concentration area</li> <li>■ commercial set net fishery</li> <li>■ guided bear, moose &amp; waterfowl hunting</li> <li>■ community harvest: bear, moose, waterfowl, fish, trapping</li> <li>■ camping</li> <li>■ recreational and fishery-related ATV use</li> <li>■ recreational boating</li> <li>■ sport fishing</li> <li>■ access to Yakataga State Game Refuge</li> </ul>	<ul style="list-style-type: none"> <li>■ Structures and activities that damage dune vegetation may destabilize dunes.</li> <li>■ The river channels may shift rapidly.</li> <li>■ Yakataga State Game Refuge borders to the north, one mile inland from high water.</li> <li>■ There are three Native allotments near the mouth of the Kaliakh (adjoining parcels of 40, 40, and 80 acres)</li> </ul>

### Unit 3A - Tsiu to Duktoth coastal strip, continued

Area # & name	Designation	Resource or Use (See the resource reports and maps for more complete information)	Background
<b>3a-3 Duktoth River mouth</b>	H1 HV1 RD2	<ul style="list-style-type: none"> <li>■ anadromous fish habitat</li> <li>■ moose winter habitat</li> <li>■ bear summer concentration area</li> <li>■ harbor seal haulout concentration area in both rivers</li> <li>■ trumpeter swan nesting &amp; brood rearing</li> <li>■ guided bear, moose, and waterfowl harvest</li> <li>■ community harvest: bear, moose, waterfowl</li> <li>■ narrow strip of mature spruce and hemlock</li> <li>■ recreation: beach combing, hiking, wheel plane access</li> </ul>	<ul style="list-style-type: none"> <li>■ The proposed addition to the refuge borders to the north, one mile inland from high water.</li> </ul>
<b>3a-4 tidelands &amp; submerged lands between Midtimber Lake and Duktoth River mouth -most areas</b>	H2 HV2	<ul style="list-style-type: none"> <li>■ commercial salmon trolling harvest</li> <li>■ commercial tanner crab harvest</li> <li>■ community harvest: waterfowl</li> <li>■ bald eagle winter concentration area</li> </ul>	
<b>3a-5 tidelands &amp; submerged lands at Tsiu and Tsviat rivers</b>	H1 HV1	<ul style="list-style-type: none"> <li>■ commercial set net concentration area at mouth of Tsiu-Tsviat River system</li> <li>■ commercial trolling offshore</li> <li>■ commercial tanner crab harvest</li> <li>■ sport fishing: guided and unguided</li> <li>■ eagle feeding concentration area</li> <li>■ community harvest: fish and waterfowl</li> </ul>	
<b>3a-6 tidelands &amp; submerged lands at Kaliakh River</b>	H1 HV1	<ul style="list-style-type: none"> <li>■ harbor seal haulout concentration area</li> <li>■ commercial set net concentration at mouth of Kaliakh</li> <li>■ sport fishing</li> <li>■ community harvest: fish, waterfowl</li> <li>■ commercial trolling offshore</li> <li>■ commercial tanner crab harvest</li> </ul>	