# Chapter 2
# Areawide Land Management Policies

# Chapter 2
# Areawide Land Management Policies

## Introduction

This chapter presents land management policies that apply to all state-owned, state-selected, and ANILCA top-filed lands for each of the major resources affected by the plan. The resources identified in this chapter are cultural features; fish and wildlife habitat; forestry; materials sites; public access; recreation, tourism, and scenery; settlement; shorelands and stream corridors; subsistence and harvest; subsurface mineral resources; transportation and infrastructure; and water. These policies apply to state land throughout the planning area regardless of the land use designation. Unit-specific management intent is provided in Chapter 3.

This chapter consists of goals, objectives, and management guidelines that apply to all state-owned and state-selected lands within the Plan boundary unless the Plan explicitly exempts some parcels or designations from a guideline, or the resource or use for which a guideline is intended does not exist in the parcel in question. There are few such exemptions. Goals are the general condition the Department is trying to achieve; objectives and guidelines are specific directives that will be applied to land and water management decisions as resource use and development occurs. Management goals, objectives, guidelines, and intent are focused on maintaining and enhancing opportunities for public and commercial use of the state lands and waters while considering emerging issues related to climate change and conserving the natural resources and habitats necessary to sustain fish and wildlife populations.

### Definitions

For definitions of terms commonly used in this chapter, see Appendix A, Glossary.

### Plan Goals

The following goals are for state lands in the planning area. The goals are listed alphabetically, and no single goal has priority over the others. Goals are general conditions that DNR attempts to achieve through management actions. These goals will lay the foundation for maintaining these important uses, resources, or activities, and guide use and development interests.

**Cultural Resources.** Preserve, document, and interpret Alaska's cultural resources and heritage on all lands within the State.

**Economic Development.** Provide opportunities for jobs and income by managing state land and resources to support a vital, self-sustaining, diverse local economy.

**Environment and Habitat.** Where possible, avoid or minimize the impact of uses, activities, and development on wildlife and the natural environment.

**Fiscal Costs.** Minimize the need for, and the fiscal cost of, providing government services such as schools or road maintenance activities when considering making lands available for private use (residential, commercial, or industrial).

**Pollution Remediation.** Discharges, spills, or other releases of pollutants will be reported immediately upon discovery and remediated in a timely fashion by the responsible parties, as required by state and federal agencies.

**Public Access.** Provide access to public and private lands and resources to ensure adequate opportunities for the use of public resources.

**Public Health and Safety.** Maintain or enhance public health and safety for users of state land and resources.

**Public Use.** Provide, plan, enhance, and manage diverse opportunities for public use of state lands, including uses such as hunting, fishing, boating and other types of recreation.

**Quality of Life.** Maintain or enhance the quality of the natural environment including land, water, fish and wildlife habitat, and harvest opportunities; provide opportunities to view wildlife and the natural environment; and protect heritage resources.

**Recreation.** Encourage outdoor recreation on public lands and provide for a range of recreational experiences on state land managed for multiple uses while protecting natural resources and public access.

**Settlement.** Provide opportunities for private ownership and leasing of land currently owned by the state.

**Subsistence Harvest Areas.** Retain lands and waters where subsistence harvest occurs in state ownership to support traditional uses.

**Sustained Yield.** Manage renewable resources to maintain the long-term productivity and quality of renewable resources including fish and wildlife habitat.

**Water Quality.** Provide adequate water quantity and quality to support subsistence and recreational uses; domestic, commercial and industrial uses; and fish and wildlife production.

## Plan Objectives

Objectives provided here are general and apply to all state lands and all authorized uses and activities in the planning area. The NEAAP provides for multiple uses of public land, as required by statute, and the objectives provide statements of what the state will do with a resource, use, or activity based on identified goals. In the long-term, the land within the Plan boundary will be used for as many uses as possible, without eliminating or unreasonably limiting other resources. DNR will use these objectives when considering issuing authorizations and conveyances or making management decisions on state lands.

## Plan Guidelines

Management guidelines identified are intended to provide specific standards, management direction or procedures to be followed by the Department in the issuance of permits, leases, or other authorizations for the use of state land or resources within the planning area. Guidelines range in their level of specificity, from giving general guidance for decision-making to identifying specific factors that need to be considered when making on-the-ground decisions. In most cases, these guidelines can be implemented through the authorization of applications for proposed uses or through agency actions. In other cases, DNR may promulgate regulations to ensure that these guidelines can be implemented and are enforceable.

A. All authorizations for use of state land within the planning area will be consistent with the principles of multiple use and sustained yield and with the management intent in this plan.

B. In considering authorizations for use of state land, DNR will adjudicate applications to:

    1. avoid or minimize damage to streambeds, fish and wildlife habitat, vegetation, trails, and other resources;

    2. minimize conflicts between resources and uses; and

    3. enhance public safety and protect the long-term value of resources and the environment.

C. If authorizations from other agencies are required, DNR will consider issuing a permit or lease contingent upon issuance of these other authorizations.

## Management Intent for the Plan

The following statements provide management intent for all state land in this plan with further unit-specific intent provided in Chapter 3. These statements define DNR's near and long-term management policies and are based on resource and use inventories, the review of

existing and potential economic trends, state authorizations, existing plans and similar resource management documents, agency review and comment, and public participation.

A. All general domain state land within the planning area will be managed to allow for multiple use and provide for the balanced use, development, and conservation of the resources.

B. Lands retained in state ownership will be managed to continue to provide habitats that support: maintaining fish and wildlife populations; hunting, fishing, and harvest opportunities; a diversity of recreation opportunities; and development of the State's mineral and hydrocarbon resources, among other beneficial uses.

C. State land will remain open to mineral entry unless specifically closed or affected by a Leasehold Location Order. Consequently, most lands remain open to mineral entry.

D. The designation applied to a unit identifies the recommended use for the unit. In some cases, a unit may have co-designated uses. Up to three designations may be assigned for one unit. Consistent with the multiple use mandate, other uses may also be allowed if they do not preclude the uses designated for a management unit. This plan emphasizes minimizing land use conflicts through guidelines and intent rather than through prohibitions. However, if DNR determines that a use conflict exists and that a proposed use is incompatible with the primary use(s), the proposed use should not be authorized, or the use should be modified so that the incompatibility no longer exists (11 AAC 55.040(c)). Except in areas closed to mineral entry, subsurface uses are considered an allowable use but must take into consideration the effects upon surface uses.

E. This plan designates state lands in categories that are generally consistent with current use patterns and reflect the significant resources in the planning area.

# Coordination and Public Notice

Consistent with the Alaska Constitution and Alaska statutes, certain actions taken by the Department such as leases, easements, and other disposals require public notice. Other actions, such as classifying and making lands available for private use, specifically require the involvement of municipalities and local residents. Where required by statutes and regulations, the Department provides notice of actions proposed on state lands and engages with local municipal and tribal entities and community members.

## Goals

**Coordination with Non-state Landowners.** Coordinate with municipal, Alaska Native Corporation, private, and other landowners in fulfillment of the Department's mission to, "*Responsibly develop Alaska's resources by making them available for maximum use and benefit consistent with the public interest.*"

**Public Participation.** Provide local governments, state and federal agencies, adjacent landowners, and the general public with meaningful opportunities to participate in the process of making significant land use decisions.

## Objectives and Management Guidelines

**Objective A.** DNR will provide notice as required by statutes and regulations and Department staff will provide public notice.

- **Guideline A-1.** *Notice for Decisions Requiring Public Notice (Under AS 38.05.945).* As required by statute, public notice will be given for decisions involving the sale, lease, or disposal of (or interests in) land, property, or resources. Notice will be given to parties known or likely to be affected by an action proposed by the state or an applicant to the state.
- **Guideline A-2.** *Avoiding Conflicts with Adjacent Upland Owners.* Before issuing a land use authorization on shorelands, DNR should encourage applicants to use areas that will reduce the likelihood of possible land use disagreements with upland owners. DNR will consider comments from private landowners and others before making a decision and will retain the right to issue a land use authorization over the objection of adjacent landowners.
- **Guideline A-3.** *Authority of State Plans.* This plan only applies to patented and tentatively approved state lands and lands that have been selected or top-filed for conveyance to fulfill the State's land entitlement under the Alaska Statehood Act. It

does not affect Borough lands, state lands not managed under Title 38 of the Alaska Statutes, other federal lands, or private lands.

**Objective B.** *Other Guidelines Affecting Coordination or Public Notice.* Several other guidelines may affect coordination or public notice. See other sections of this chapter.

# Cultural Resources

Northeast Alaska contains a long and rich history of human habitation. Numerous sites across the area contain cabins, graves, caribou fences, caves, commercial buildings, mining debris, military infrastructure, hunting and fishing camps, bones, and relics that attest to the long history of Alaska Native and Euroamerican presence within the planning boundary. Cultural resources are generally considered “historical” in age around the 50-year mark and therefore require further consideration under historic preservation law.

The earliest recognized cultural tradition in the area, the Beringian tradition, was followed by the American Paleoarctic tradition. Over time, the American Paloearctic tradition changed into the Northern Archaic tradition, which in turn gave way the Athabaskan tradition of the past 2,000 years. The earliest archeological evidence of human occupation of Interior Alaska dates to at least 14,000 years ago. This period was characterized by use of the atlatl to hunt steppe bison, horse, canids, and waterfowl, and frequent movement to follow the seasonal availability of resources. In the northern part of the planning area, the Mesa Complex of the Brooks Range is represented by the Hilltop site, which dates to around 12,200 years ago. As glaciers retreated, the Beringian tradition of the Interior and Mesa Complex of the north gave way to the American Paleoarctic Tradition. The tool base and animal resources were largely the same, except with a heavier focus on caribou and bison hunting. The American Paleoarctic tradition gave way to the Northern Archaic tradition during a period of climate stability around 8,000 years ago. As forests expanded, bison declined, and new tool technology developed, people of the Northern Archaic tradition relied more heavily on caribou. Around 2,000 years ago the Athabaskan tradition emerged during a period of glacial expansion. This period was marked by drastic technological change including the adoption of the bow and arrow. Dene (Athabaskan) lifestyles involved seasonal movement following fish in the summer and game in the winter. Social units were defined by regional and local band ties. Gatherings between bands would occur in mid-winter, where trade relationships or marriages might be arranged. Many traditional uses of the land continue today in the Dene communities and surrounding areas. These traditions, cultural practices, and subsistence lifestyle are passed down to the younger generations.

Euroamerican settlers arrived in Upper Yukon portion of Interior Alaska around the 1850s. They brought new diseases, technology, foods, and lifestyles. Many settlers came to this region in search of furs and mineral wealth, while others came on military or missionary business. The first major settlement in the region was at Fort Yukon, where the Hudson Bay Company set up an outpost. The Alaska Commercial Company, run by Americans, would take over the post and build many more along the Yukon after Alaska’s purchase. Interior Athabaskans sold 75,000 pelts to the traders in 1880 and would also be hired to help boats navigate the Yukon. Mining, furs, and later the oil and gas industries remained important to Native and settler histories through the 1980s in this region.

Some of the lands used by Alaska Native people have been conveyed to individuals as Native Allotments. Within the planning boundary there are currently 527 allotments totaling about

58,000 acres. The number and acreage will change as more allotments are conveyed under existing federal laws. Lands with heritage and cultural significance will be managed according to the following goals, objectives, and management guidelines.

## Goal

**Cultural Resources.** The Alaska Historic Preservation Act establishes the State's basic goal: to preserve, protect, and interpret the historic, prehistoric, and archaeological resources of Alaska so that the scientific, historic, and cultural heritage values embodied in these resources may pass undiminished to future generations.

## Objectives and Management Guidelines

**Objective A.** Preserve, protect, and interpret the historic, prehistoric, and archaeological resources within the planning area.

- **Guideline A-1.** Identify and determine the significance of cultural resources on state land through the following actions:
    1. Cultural resource surveys conducted by qualified personnel;
    2. Research about cultural resources on state land by qualified individuals and organizations; and,
    3. Cooperative efforts for planned surveys and inventories between state, federal, and local or Alaska Native groups.
- **Guideline A-2.** Protect significant cultural resources through the following actions:
    1. The Office of History and Archeology (OHA) within the Division of Parks and Outdoor Recreation (DPOR) reviews authorizations, construction projects, and land uses for potential conflict with cultural resources. The office determines if there may be an adverse effect on heritage resources and makes recommendations to mitigate these effects.
    2. Cooperating with concerned government agencies, Alaska Native corporations, statewide or local groups, and individuals to develop guidelines and recommendations on how to avoid or mitigate identified or potential conflict.
    3. Require the establishment of buffers a minimum of 50' or greater around significant cultural resources as part of the overall protection process when subdividing or otherwise using state lands.
- **Guideline A-3.** If determined by OHA during an agency review of a proposed disposal that a cultural survey may be required, further coordination between OHA and DMLW prior to the land disposal is warranted. A Cultural Resources Investigation Permit is required for cultural resource contractors surveying on State land. This permit authorization is managed by the State Archaeologist within OHA.

Cultural surveys shall be considered where OHA reported sites exist or where there is a high potential for such sites to exist. The extent and type of cultural survey within the area of the proposed land disposal shall be determined by OHA in consultation with DMLW.

- **Guideline A-4.** Recreation facilities that might subject cultural sites to vandalism because of the increased public use should not be placed adjacent to the cultural sites.
- **Guideline A-5.** The Alaska Heritage Resources Survey (AHRS) is an inventory of all reported historic and prehistoric sites within the State of Alaska and is maintained by the OHA. The AHRS is used to identify known cultural resource sites and ensure they are addressed during a project should one be proposed where a cultural resource exists. By knowing of possible cultural remains prior to construction, efforts can be made to avoid project delays and prevent the destruction of cultural sites. While over 45,000 sites have been reported within Alaska, this is estimated to be only about 1% of the sites which may exist but are yet unreported. The AHRS is not complete or static, so heritage sites, when found, should be reported to the OHA.

**Objective B.** *Other Guidelines affecting Heritage and Cultural Resources.* Many of the resource guidelines found within Chapter 2 either directly or indirectly affect heritage and cultural resources in the planning area. Other guidelines will affect cultural resources. See other applicable sections of this chapter.

# Fish and Wildlife Habitat

Fish and wildlife habitats across the planning area vary by region and season, spanning a range of terrestrial and freshwater environments. Habitats are undergoing significant changes due to a changing climate. Wildfires are becoming more frequent, wetlands are drying; boreal forests are transitioning to grasslands; Interior river basins are warming; permafrost is thawing; and water availability is declining. These shifts in habitats are expected to continue to affect fish and wildlife populations and distributions over the course of the life of this plan making it important to evaluate how activities will affect species in the context of on-going climate change. Therefore, adjudicators should consult with the appropriate state or federal agency to determine the most current information on fish and wildlife resources within the planning area.

Mammals inhabiting the area include moose, caribou, black and brown bears, Dall sheep and a variety of furbearers. Moose are prevalent, with known calving, rutting, and winter habitats throughout the planning area. Caribou are an important part of the biological landscape in the northern and southern parts of the planning area, with the most prominent use occurring from three different herds, the Central Arctic Herd (CAH), the Porcupine Caribou Herd (PCH), and the Fortymile Herd. Brown bears are known to seasonally congregate in the Brooks Range and along fish-bearing streams and berry patches. Dall sheep inhabit the higher terrain sweeping along the northern portion of the planning area through the Brooks Range, with a few smaller areas in the White Mountains. Furbearers and other small mammals such as foxes, beavers, woodchucks, muskrats, lynx, American mink, American martens, marmots, wolverines, wolves, snowshoe hares, squirrels, shrews, pikas, mice, weasels, river otters, porcupines, coyotes, ermines, lemmings, and voles occupy suitable habitats across the planning area. These species are important for subsistence use and trapping by local communities, and their populations and habitats should be managed to support continued traditional and sustainable harvests.

Wood bison habitat potential in the Yukon Flats was studied in 1992 and 1994. The habitat was found to be suitable for wood bison restoration. The Alaska Wood Bison Environmental Assessment of 2013 evaluated Yukon Flats as a place for restoration. ADF&G may restore wood bison in the Yukon Flats in the future.

The planning area provides seasonally important habitat for millions of birds, including waterfowl, shorebirds, songbirds, and raptors. Most of these species migrate to the region every spring and fall to breed, nest, raise young, and acquire energy stores prior to southward migration in the fall. However, a few–such as ptarmigan, certain boreal songbirds, some raptors, and resident species like owls and corvids–remain in the region year-round. These birds have adapted strategies to survive cold temperatures and limited food availability. Productivity of the landscape acts as a nursery for numerous bird species that migrate elsewhere and consequently impact populations globally. Suitable habitat, which varies by species, is widely dispersed and includes wetlands, boreal forests, riverine areas, and mountain cliffs. The highest concentrations of migratory birds in the planning area are

associated with the abundant wetlands and rivers. Landbird species including raptors, songbirds, and ptarmigan are seasonally concentrated along river corridors.

Resident and anadromous fish species are found in the waters of the planning area, including salmon, burbot, Dolly Varden, whitefish, northern pike, Arctic grayling, Arctic lamprey, slimy sculpin, sheefish, and longnose sucker. A brief summary of the major rivers, streams, and lakes as well as species that have been recorded in them are given in Table 2-1 and Table 2-2 as part of the Anadromous and High Value Fish Habitat information at the end of this section. Due to the lack of liquid water in winter, fish that overwinter in freshwaters have strict requirements for flow, oxygen, etc. Often these areas are small, particularly in rivers and streams, with large concentrations of fishes overwintering together in a small area. Each species has requirements for feeding areas and suitable spawning area with particular substrate types. Subsistence use of many of these fish and wildlife resources occurs throughout the planning area. See the Subsistence and Harvest section in Chapter 2 for more detail.

Within the planning area, nearly all land and water contribute to wildlife habitat resources, and the most important areas are identified through this plan and supported through the following goals. These goals, objectives, and guidelines lay the foundation for maintaining the integrity of these habitat areas, and guide use and development interests. This section will consider the habitat and needs of fish and wildlife species within the planning area.

## Goals

**Minimize Habitat Loss.** When resource development projects occur, avoid or minimize reduction in the quality and quantity of fish and wildlife habitat, particularly in anadromous waterbodies. Compliance with AS 16.05.871 is required.

**Manage Lands to Maintain the Natural Environment.** Maintain the natural environment in areas known to be important as habitat for fish and wildlife.

**Maintain and Protect Publicly Owned Habitat Base.** Maintain in public ownership and protect habitat for fish and wildlife resources sufficient to conserve a diversity of species to support commercial, recreational, or traditional uses on a sustained yield basis; or protect a unique or rare assemblage of a single or multiple species of regional, state, or national significance.

**Contribute to Economic Diversity.** Protect fish and wildlife resources which contribute directly or indirectly to local, regional, and state economies through commercial, subsistence, personal use, sport, and non-consumptive uses.

**Manage for Sustained Yield.** DNR management of state land and resources is to be consistent with the requirements of sustained yield, as expressed in the State Constitution under Article VIII (Natural Resources).

**Ensure Access to Public Lands and Waters.** Ensure access to state lands and waters and promote or enhance the responsible public use and enjoyment of fish and wildlife resources.

**Avoid the Introduction of and Reduce the Spread of Invasive Plants, Exotic Animals and Diseases.** State uplands and aquatic environments are to be managed to avoid the introduction, and reduce the spread, of non-native invasive animals and plants as well as exotic diseases that can be detrimental to wildlife populations. This management shall be consistent with the applicable requirements of 11 AAC 34.

## Objectives and Management Guidelines

**Objective A.** Minimize impacts to fish and wildlife habitat areas, whether or not it is classified as Wildlife Habitat Land, to maintain fish and wildlife populations, production, and related public uses.

- **Guideline A-1.** Waterbodies that contain anadromous fish shall be designated as Habitat (Ha). See the Navigable Waterbodies section of Chapter 3.
- **Guideline A-2.** Impacts to fish and wildlife habitat areas should be minimized when authorizing development and infrastructure projects.

**Objective B.** Protection of fish and wildlife habitat and riverine areas, particularly the areas described in guideline B-3, shall be considered in all authorizations by the Department.

- **Guideline B-1.** *Habitat Manipulation: General Requirements.*
    1. Fish and wildlife restoration, enhancement, or manipulation activities on state lands, whether by ADF&G or other parties, may be used to improve habitat for certain fish and wildlife species where ADF&G determines that it is beneficial to the species or habitat and DNR determines that it is compatible with the management intent for those lands. Habitat manipulation through controlled burning, mechanical treatment, water control, dredging practices, removal of pollution and pollution sources, or other measures may be allowed with the intent to enhance or restore wildlife.
    2. Enhancement activities likely to attract significant public use, will be designed and located to minimize the impact of additional public use on the existing recreation resources, moorage, campsites, and other resource values.
    3. The state shall manage its lands and waters to avoid the introduction, and reduce the spread, of invasive non-native plants and animals, consistent with the requirements of 11 AAC 34. Although the *Strategic Plan for Noxious and Invasive Plants Management in Alaska* recognizes this as a statewide issue, in most instances this problem is best handled at the local level.
- **Guideline B-2.** *Alteration of the Riverine Hydrological System.* To the extent feasible, channelization, diversion, or damming that will alter the natural hydrological conditions and have a significant adverse impact on important riverine habitat will be

avoided. If projects like this are proposed they will require a review and permit from the ADF&G Habitat Section and other agencies.

- **Guideline B-3.** *Protection of Riverine Areas.* Riverine areas perform a variety of important functions related to recreation, habitat protection, and water quality/quantity maintenance, and the protection of these areas is important. Authorizations are to ensure the natural conditions of these areas are protected by avoiding, minimizing, or mitigating the impacts in any authorization that may be issued.
- **Guideline B-4.** *Allowing Uses in Fish and Wildlife Habitats (Ha).* These habitats are defined as areas that serve as concentrated use areas for a single or multiple fish and wildlife species during a sensitive life history stage where alteration of the habitat and/or human disturbance could result in permanent loss of a population or sustained yield of the species, or these habitats are highly important to the maintenance or management of a single or multiple fish and wildlife species.
    1. In the granting of authorizations within areas classified Wildlife Habitat Land, DNR adjudicators shall acquire more detailed recent information pertaining to habitat resources and values if there is some question as to the appropriateness of the use that is under consideration for authorization.
    2. There is a distinct seasonality associated with the critical life periods of certain species; seasonality, and any associated off-season carry-over effects, shall be taken into consideration during project review and approval. Seasonality and critical life cycle stages are identified by various agency sources. Thus, it may be possible, through consultation with ADF&G and other agencies, that uses and facilities may be found appropriate within areas classified Wildlife Habitat Land if the seasonality criteria are satisfied by including mitigating measures in project design.
    3. Uses that are likely to produce levels of acoustical or visual disturbance sufficient to disturb sensitive life stages may be authorized with spatial or temporal restrictions that eliminate or minimize the disturbance during the sensitive life stage period.
    4. Uses not consistent with a plan designation and classification, or not authorized in a management intent statement, and that, if permitted, would result in the degradation of the resource(s) within areas designated “Ha”, are to be considered incompatible and are not to be authorized unless determined to be necessary and in the best interest of the state. Degradation of the resource might result from actions involving one or more of the following factors: dredging, filling, significant compaction of vegetation and sediment, alteration of flow patterns, discharge of toxic substances, or disturbance during sensitive periods.
    5. If there is a question as to whether a use would be appropriate or whether it would degrade a listed resource, DNR shall consult with ADF&G in making the determination of initial incompatibility.

6. Non-designated uses that cause significant adverse impacts to the resources identified within a given "Ha" parcel may be allowed if:
    a) DNR, in consultation with ADF&G, determines that the management unit in question does not possess those attributes characteristic of a Habitat designation as defined in the plan; or
    b) If DNR, in consultation with ADF&G, determines that the non-designated use can be made compatible and significant adverse impacts to the "Ha" area avoided with appropriate design, siting, and operating stipulations; or
    c) If after consideration of the above statements, the project is then found to be in the best interest of the state under AS 38.05.035(e) or similar Department authorizations, and significant adverse impacts are mitigated under Management Guideline C-4.
7. For more information about the fish and wildlife categories used to identify Habitat (Ha) classifications and species-specific guidelines for allowing uses in Fish and Wildlife Habitats, see the *Species Specific Management Guidelines* and the *Anadromous and High Value Fish Habitat* discussion at the end of this resource section.

- **Guideline B-5.** *Allowing Uses Outside of Fish and Wildlife Habitat Areas.*

  If important fish and wildlife habitat or harvest areas exist in non-Habitat (Ha) designated units, DNR adjudicators shall consult with ADF&G and the appropriate federal management agency to acquire more detailed and recent information pertaining to fish and wildlife habitat and harvest values. See *Subsistence and Harvest* resource section for more detail.

- **Guideline B-6.** *Threatened and Endangered Species.*

  1. All land use activities will be conducted consistent with state and federal Endangered Species Acts to avoid jeopardizing the continued existence of threatened or endangered species of animals or plants, to provide for their continued use of an area, and to avoid modification or destruction of their habitat.
  2. Specific mitigation recommendations should be identified through consultation with ADF&G's statewide Threatened, Endangered, and Diversity Program for any land use activity that potentially affects threatened and endangered species.
  3. The U.S. Fish and Wildlife Service (USFWS), Division of Ecological Services should be consulted on questions that involve endangered or threatened species of federal interest. The ADF&G Threatened, Endangered, and Diversity Program should be consulted on questions that involve endangered or threatened species of state interest.

**Objective C.** When resource development projects occur, adequate measures shall be taken to avoid or minimize impacts that may result in changes in the quality and quantity of fish and wildlife habitat.

- **Guideline C-1.** *Balancing Impacts with Potential Development*.
    1. To the extent practicable, linear infrastructure shall be co-located to reduce the surface area of impacted lands except in situations where separation distances are required to reduce adverse impacts to wildlife movements.
    2. DNR, in its consideration of resources and in the management of state land, shall consider the immediate and long-term impacts of such use upon fish and wildlife populations and human uses of those populations, habitat and soil degradation, and upon other forms of use that may occupy the area that is under consideration in an authorization. Uses that are not compatible with these uses and resources are to be made compatible through the use of stipulations when possible.
    3. It is recognized that the use and development of resources will create some level and area of impact. Nonetheless, the state may determine through its authorization processes that the development of specific surface or subsurface resources is appropriate, even with some level of impact, and may approve such developments, with appropriate stipulations. It is also recognized that the development of specific subsurface resources may take precedence over surface uses.
- **Guideline C-2.** *Water Intake Structures.*
    1. When issuing water rights for waters providing fish habitat, DNR will require that practical water intake structures be installed that do not result in entrainment, entrapment, or impingement of fish and will maintain instream flows needed to sustain existing fish populations. The simplest and most cost-effective technology may be used to implement this guideline when consistent with all applicable permits.
    2. Water intake structures should be screened, and intake velocities shall be limited to prevent entrapment, entrainment, or injury to fish. The structures supporting intakes should be designed and maintained to prevent fish from being led into the intake. Other effective techniques may also be used to achieve the intent of this guideline.
    3. The DMLW (Water Section) and ADF&G (Habitat Section) should be consulted to determine screen size, water velocity, and intake design if the intake structure is in fish-bearing waters. ADF&G will continue to determine and permit the appropriate intake structures for specific locations and projects.
- **Guideline C-3.** *Transportation Routes and Facilities.* Location of routes and timing of construction should be determined in consultation with ADF&G. Transportation corridors that intersect or cross fish or wildlife movement areas shall be equipped with appropriate crossing devices or structures to allow the free and efficient bidirectional passage of species using the corridor.
- **Guideline C-4.** *Mitigation.*
    1. When issuing permits and leases or otherwise authorizing the use or development of state lands, DNR will recognize the requirements of the activity or

development and the effects to habitat when determining stipulations or measures needed to protect fish, wildlife, or their habitats. The costs of mitigation relative to the benefits to be gained will be considered in the implementation of the authorization.

2. DNR will consult with federal agencies to develop mitigation measures to avoid and minimize impacts to resources within the plan boundary, when appropriate.
3. All land use activities will be conducted in accordance with requirements from DNR and other pertinent agencies to avoid or minimize adverse effects on fish, wildlife, or their habitats, and on public access to those resources.
4. DNR, DEC, and ADF&G may require the mitigation of any significant damage to fish, wildlife, or their habitats that may occur as a result of a project or proposal. DNR, DEC, and ADF&G will enforce permit stipulations and measures consistent with their authorities and enforcement capabilities.
5. Mitigation will be required for any significant damage to fish, wildlife, or their habitats that may occur as a direct result of the party's failure to comply with applicable law, regulations, or the conditions of the permit or lease.
6. When determining appropriate stipulations and measures, the Department will apply, in order of priority, the following steps. Mitigation requirements listed in other guidelines in this plan will also follow these steps:
    a) Avoid anticipated, significant adverse effects on fish, wildlife, or their habitats through siting, timing, or other management options.
    b) When significant adverse effects cannot be avoided by design, siting, timing, or other management options, the magnitude of the adverse effect(s) of the use or development will be minimized.
    c) If significant loss of fish or wildlife habitat occurs, the loss will be rectified by repairing, rehabilitating, or restoring the affected area to a useful state once the authorized use ceases and the Department has determined the appropriate DR&R and potential site remediation action (if any) needed for the degraded lands or waters.
    d) DNR shall consider replacement or enhancement of fish and wildlife habitat when steps a through c cannot avoid substantial and irreversible loss of habitat. The ADF&G will identify the species affected, the need for replacement or enhancement, and the suggested method for addressing the impact. In those instances when replacement or enhancement is not feasible, DNR will consider the provision of substitute resources or environments. DNR will consider only those replacement and enhancement techniques that are either scientifically supported or are likely to be effective and that will result in a benefit to the species impacted by the development. Replacement or enhancement will be required by DNR if it is determined to be in the best interest of the state either through the AS 38.05.035(e) or other authorization processes.

- **Guideline C-5.** *Avoidance of Conflicts with Traditional Uses of Fish and Game.* Surface activities authorized under permit or lease that have the potential to impact local harvest activities are to avoid significant conflicts with local subsistence harvests and other traditional uses of fish and wildlife resources. The impact of surface activities upon local harvest is to be evaluated in DNR authorizations. These evaluations are to determine the degree of impact and, where significant impact is likely to occur, either deny the activity or impose seasonal/temporal restrictions. Prior to issuing an authorization that may have a significant effect upon habitat or local harvests, DNR is to consult with ADF&G and local communities to ascertain their interests and concerns. See *Subsistence and Harvest* section for more information.

**Objective D.** *Other Guidelines affecting Fish and Wildlife Habitat.* Nearly all of the resource guidelines found within Chapter 2 either directly or indirectly affect fish and wildlife habitat in the planning area. The most commonly affected resource sections include Public Access, Transportation and Infrastructure, Water Resources, Subsistence and Harvest, Subsurface Resources, and Recreation and Tourism; however other resources addressed in this chapter's sections should also be considered.

## Species Specific Management Guidelines

**Caribou.** Caribou are plentiful in the Interior Highlands, Dalton Corridor, and Arctic Regions, and they are generally absent from the Yukon Flats Region. The Arctic Region of the planning area functions as important winter range and general distribution area for caribou. The Central Arctic Herd (CAH), the Teshekpuk Caribou Herd (TCH), the Fortymile Herd, Hodzana Hills Herd, White Mountains Herd, and the Porcupine Caribou Herd (PCH) are present within the planning area. The CAH, PCH, and Fortymile Herd are the most prominent in the planning area, with the CAH centralized in the eastern Brooks Range, the PCH in eastern portions of the Arctic Slope, the Brooks Range, and the northeastern Interior Alaska, and the Fortymile Herd in the Interior Highlands Region. The Teshekpuk Herd periodically overlaps with the planning area during spring, fall, and winter. The Fortymile Herd is probably the least predictable of Alaska's herds, changing calving and wintering areas frequently. The Fortymile Herd uses remote calving and summer ranges primarily on federally protected lands. The White Mountains Herd has largely merged with the Fortymile Herd, with former calving areas primarily on federal lands. The smaller Hodzana Hills Herd resides and calves mainly in upland hill regions along the western edge of the planning area.

The most significant habitats include calving grounds and winter range. Where these areas exist, they are identified within specific management units in the Resource Allocation Tables (RAT) of Chapter 3. The RAT and the applicable goals, objectives, and guidelines found in this Chapter are to be consulted to determine the full management intent. The temporal sensitivity of herds within each unit should also be considered. If it is likely that a caribou concentration exists within the area affected by a potential project, adjudicators shall consult with ADF&G to identify important areas in addition to those identified in the management units in the Plan and to determine appropriate mitigation or avoidance measures. Other

management requirements pertain to the 'Subsurface Resources' component of Chapter 2 and should be consulted prior to authorizing locatable, leasing, or licensing activities.

**Moose.** Moose play a key ecological and cultural role on the landscape. They are widely distributed across the planning area, with various habitats being important for calving, rutting, and overwintering. Willow stands associated with riparian areas are important winter habitat. South-facing slopes and wetlands may also be important for wintering, offering thermal cover and easier movement. Moose rutting occurs throughout the area, particularly in riparian zones. During the calving and insect season (summertime), riparian zones and tundra are important habitats. Calving typically occurs from May through June, while rutting occurs from late September to October. In the Interior Highlands Region, during the summer, moose are commonly seen in subalpine habitats and in stream-margin shrublands. Severe winter conditions may force them into higher elevations along the Yukon and its major tributaries where temperatures are more moderate. DNR authorizations should include seasonal restrictions on activities that would produce significant acoustic or visual disturbance during wintering, calving (including post-calving), or rutting periods.

Moose calving and rutting areas may change over time. Adjudicators shall consult with ADF&G to identify important areas in addition to those identified in the management units in the Plan and to determine appropriate mitigation or avoidance measures, if applicable.

**Dall Sheep.** Dall sheep are present throughout the mountainous terrain and open alpine ridges from 3,000 to 6,000 feet including steep, rugged terrain suitable for predator escape; alpine tundra providing summer forage; and wind-scoured ridges or south-facing slopes with minimal snow in winter within the Brooks Range and the White Mountains. Within these areas, sheep are widely distributed. Spring lambing typically occurs between late May and early June. Ewes and lambs are especially vulnerable and sensitive to disturbances (e.g., low elevation air traffic) and other environmental factors at this time. Additionally, disease transmission from domestic livestock may pose a significant threat to Dall sheep and proactive prevention efforts should be considered. Fall rutting occurs from November to December. Rutting and wintering areas can be found throughout mountainous terrain of the planning area. There are mineral licks in the Dalton Corridor and Arctic Regions. The licks play an important role in the life history of the animals. The area around the licks should be protected for their wildlife value. Stipulations should be developed on a case-by-case basis, in consultation with ADF&G for authorizations. Adjudicators should implement stipulations that address:

1. How impacts on the mineral licks, the animal tracks leading to them, and other areas of concentrated animal use that are associated with the mineral lick will be avoided;
2. Consult with ADF&G for the method and routing of mining-related access to these areas. Adjudicators shall consult ADF&G to identify important areas in addition to those identified in the management units in the Plan and to determine appropriate mitigation or avoidance measures.

**Black and Grizzly Bears.** Grizzly Bears are seasonally concentrated along the fish-bearing streams, areas of mammalian food sources, and berry patches of the planning area. Densities are generally highest in the foothills and mountains of the Brooks Range (below 4,000 feet) and lowest in the Yukon Flats. Bears could be denning across nearly every portion of the planning area, particularly in regions where densities are highest. Adjudicators shall consult ADF&G to identify important areas in addition to those identified in the management units in the Plan and to determine appropriate mitigation or avoidance measures. All permanent and long-term seasonal facilities shall prepare a bear interaction plan to reduce conflicts with black and brown bears.

**Migratory Birds.** The planning area contains a variety of habitats that are integral to the breeding, nesting, and foraging of numerous migratory bird species. Alaska's wetland habitats are heavily used as summer staging and breeding grounds for migratory birds that use all four North American flyways to reach their wintering grounds. There are 41 migratory bird Species of Greatest Conservation Need that occur within the planning area, as identified in the 2015 Alaska Wildlife Action Plan. For many species, the planning area includes core breeding and staging areas important to population maintenance. Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (Eagle Act). Current recommendations are that disturbance of nesting habitat should be avoided between May 1 to July 15 for most birds, and between March 1 to August 31 for eagles. Adjudicators shall consult ADF&G and may contact USFWS to identify important areas in addition to those identified in the management units in the Plan and to determine appropriate mitigation or avoidance measures.

Abundant field data reveals climate-related stressors that result in both breeding and carry-over effects for migratory species. Given the list below, it is imperative to account for both the current context of climate change, as well as any additional habitat disturbance, which can result in cumulative impacts.

Some scientifically documented existing climate-related stressors for birds are:

1. Many low-lying areas are changing and drying, reducing habitat suitability.
2. Asynchrony of migratory and reproductive events with the phenology of physical and biological events, reducing survival.
3. Greater variability of seasonal weather and dates of snowmelt can dramatically reduce breeding success.

**Waterfowl and other waterbirds.** The extensive lakes, ponds, and sloughs of the Yukon Flats are one of the most productive waterfowl breeding areas in North America. These habitats support important breeding concentrations for numerous species, including trumpeter swan, sandhill crane, Arctic tern, Canada and white-fronted geese, and yellow-billed loons (a former Endangered Species Act (ESA) candidate). Interior boreal forests support a diverse range of waterfowl, offering both breeding and foraging opportunities. Wetlands within these forests are crucial for duck species such as scaup, northern pintail, and American wigeon. Streams with dense vegetation and crevices provide important breeding habitat. Birds will

feed on larvae of aquatic insects and fish eggs in the streams. Adjudicators shall consult ADF&G and may contact USFWS to identify important areas in addition to those identified in the management units in the Plan and to determine appropriate mitigation or avoidance measures.

**Shorebirds.** The planning area contains several areas important to about a dozen shorebird species during breeding and post-breeding staging, with at least five shorebirds of Greatest Conservation Need or Birds of Conservation Concern, and at least seven priority shorebird species according to the Alaska Shorebird Group in 2019. In important waterfowl and waterbird habitat, activities requiring a lease, permit, or development plan, and producing habitat disturbance or high levels of acoustical or visual disturbance from sources such as boat traffic, vegetation clearing, construction, blasting, dredging, and seismic operations, should be avoided during sensitive periods such as nesting, staging, or brood-rearing periods. Adjudicators shall consult ADF&G and may contact USFWS to identify important areas in addition to those identified in the management units in the Plan and to determine appropriate mitigation or avoidance measures.

**Landbirds.** Landbirds include songbirds, upland gamebirds, and raptors. The planning area supports a significant portion of the continental populations of several species. The Alaska Landbird Plan 2021 highlights multiple species, including the short-eared owl and the olive-sided flycatcher, which is on their watchlist. Other songbirds of conservation concern include gray-headed chickadees, American kestrel, gray-cheeked thrush, varied thrush, fox sparrow, and American tree sparrow. Songbirds breed within a variety of habitats, including boreal forests and wetlands. The gray-headed chickadee is of special concern due to its limited range and small population size. Recent surveys across its range in Alaska suggest a significant population decline and range contraction.

Five resident upland game bird species occur. Willow and rock ptarmigan nest in the tundra areas and willow stands within river valleys of the planning area and are the most common. Much of the Yukon-Tanana Uplands is an important breeding area for rock and willow ptarmigan and remains an important wintering area for males of both species. Spruce grouse are abundant in forests. Ruffed grouse and sharp-tailed grouse are also present in the area.

**Raptors and Eagles.** Golden and bald eagles, federally protected under the Bald and Golden Eagle Protection Act, use habitats throughout the planning area and appear to be important for continental populations. Bald and golden eagles are known to nest along or near the Yukon River. Golden eagles also nest on ledges in the tundra uplands. The best-available tracking data can be provided by the FWS Western Golden Eagle Team. The additional federal protections under the Eagle Protection Act prohibit molesting, agitating, disturbing or taking these species, their parts, nests, or eggs without a federal permit. Disturbance includes decreasing productivity by substantially interfering with breeding, feeding, sheltering behavior, or causing nest abandonment in the current or subsequent year.

Alaska also supports 100% of the U.S. breeding population of gyrfalcon, rough-legged hawk, and snowy owl, as well as large proportions of other raptor subspecies. Given the endemic

nature of breeding populations, recent declines, and presence of their habitat in the planning area, these species are worthy of consideration. Rough-legged hawks may nest in upland areas. America's largest falcon, the gyrfalcon, nests in the highlands of the Charley River. Common raptors within the planning area include peregrine falcons, gyrfalcons, rough-legged hawks, goshawks, golden eagles, red-tailed hawks, osprey, kestrels, northern harriers, and owls including boreal, great gray, great horned, short-eared, and northern hawk. Generally, raptor nesting sites are associated with bluffs and cliffs along riverine areas, particularly the Yukon, Koyukuk, and Porcupine river areas, which have some of the highest concentrations. Short-eared owls are likely widely distributed in the planning area and their habitats include grasslands, wetlands, tundra, and low shrubs; short-eared owls have been in decline and their habitat should be protected. Adjudicators shall consult with ADF&G and may contact USFWS to identify important areas in addition to those identified in the management units in the Plan and to determine appropriate mitigation or avoidance measures.

## Anadromous and High Value Fish Habitat

The Yukon River provides high value fish habitat for anadromous species, including salmon. Anadromous whitefish such as sheefish, broad whitefish, and Bering cisco are also present in the NEAAP. Sheefish that overwinter in the Yukon River Delta are often found at the mouths of tributary streams early in the season as they migrate upstream during spring and summer to their known spawning locations in the Yukon River drainage where they spawn in the fall. Bering cisco are widely distributed in coastal habitats of western Alaska but only spawn in the Yukon, Kuskokwim, and Susitna Rivers. In the Yukon River, Bering cisco spawn in a single reach between Fort Yukon and Circle during the second and third weeks of October. Some Arctic lamprey populations may also be anadromous.

Arctic grayling are ubiquitous throughout the Yukon River drainage, especially during the open water season. Northern pike are found in the lower reaches of most tributary streams and in backwater sloughs of the Yukon. Burbot are also found throughout the Yukon River; they spawn throughout the mainstem during late January to early February. Dolly Varden have been noted in northern rivers – most within the Yukon River drainage are believed not to be migratory. Longnose suckers and slimy sculpin are also ubiquitous throughout the Yukon River drainage. Adjudicators should consult ADF&G and the Alaska Fish Resource Monitor, and may consult USFWS to identify important areas in addition to those identified in the management units in the Plan and to determine appropriate mitigation or avoidance measures.

**Salmon.** Chinook, chum, and coho salmon are present in the planning area. Timing of spawning runs is different for each species of salmon. Of these, Chinook salmon are typically the first to enter the Yukon River in early June, arriving at middle to upper Yukon River spawning streams from late June through late August. Yukon River chum salmon consist of genetically distinct summer and fall runs. Summer chum, approximately two-thirds of all Yukon chum salmon, enter the river primarily before July 16. Summer chum salmon spawn

from July through September. Fall chum salmon begin entering the Yukon River in mid-July. Spawning for fall chum occurs mainly in September and October, with key spawning areas including the Teedriinjik (Chandalar) and Sheenjek Rivers. Adult coho salmon primarily enter the Yukon River between August and September. In November, they migrate up the Porcupine River and can be found in Old Crow, Yukon Territory. Adult and juvenile coho salmon also occur in the Draanjik (Black) River. After spawning, salmon eggs remain in the gravel until hatching in late April to early May, when juveniles begin migrating downriver during spring runoff. Protecting the diversity and interconnectedness of riverine habitats is key to sustaining these populations.

Salmon are highly valuable to subsistence fishers along the Yukon River. Chinook salmon stocks have experienced over a decade of low productivity with subsequent restrictions to subsistence fishing opportunities. For more information, see the Subsistence and Harvest section of Chapter 2. Adjudicators should consult ADF&G and may contact USFWS to identify important areas in addition to those identified in the management units in the Plan to determine appropriate mitigation or avoidance measures.

Timing data for all Yukon River monitoring projects are available through the ADF&G link: https://www.adfg.alaska.gov/yukonfishcounts. Aerial survey data can also be accessed at the ADF&G AKY Database Management System (https://www.adfg.alaska.gov/CF_R3/external/sites/aykdbms_website/) under “Data Type” > “Survey Counts Data.”

**Table 2-1: Fish Species in NEAAP Major Rivers and Streams**

Fish species presence in the state and state-selected lands of major rivers and streams in the NEAAP as recorded by the Alaska Freshwater Fish Inventory. Data was collected at stream locations at points in time, so the lack of species data does not mean that the species are not present, just that they were not captured and recorded.

| **Rivers and Streams** | | Fish Species | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Crosses Highway | Chinook Salmon | Chum Salmon | Coho Salmon | Arctic Grayling | Northern Pike | Slimy Sculpin | Burbot | Whitefish | Dolly Varden | Longnose Sucker | Sheefish | Arctic Lamprey |
| Dietrich River | Dalton Highway | | | | X | | X | | | X | | | |
| Bettles River | Dalton Highway | | X | | X | | X | | | X | | | |
| North Fork Chandalar River | Dalton Highway | X | X | | X | X | X | X | X | | | | |
| Middle Fork Koyukuk River | Dalton Highway | X | X | | X | | X | | X | | | X | |
| South Fork Koyukuk River | Dalton Highway | X | X | X | X | | | | X | | X | | |
| Hammond River | Dalton Highway | X | X | | | | X | | | | X | | |
| Minnie Creek | Dalton Highway | X | | | X | | X | | X | X | | | |
| Marion Creek | Dalton Highway | X | X | | | | X | | | | | | |
| Slate Creek | Dalton Highway | X | X | | X | | | | | X | | | |
| Ray River | Dalton Highway | X | X | | X | | X | | | | | | |
| Kandik River | No | X | X | | X | | X | | X | | X | | |
| Draanjik River | No | X | X | X | X | X | X | | X | | X | | X |
| Grayling Fork Black River | No | X | X | X | X | X | X | X | X | | X | | X |
| Ikheenjik River (Birch Creek) | Steese Highway | X | X | X | X | | X | X | X | | X | X | |

**Table 2-2: Fish Species in NEAAP Major Lakes**

Fish species presence in the state and state-selected lands of the NEAAP as recorded in the Alaska Lake Database. Lack of species data does not mean that the species were not present, just that they had not been captured and recorded.

| Lakes | | Fish Species | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Nearby Villages / Towns | Chinook Salmon | Arctic Grayling | Northern Pike | Slimy Sculpin | Burbot | Whitefish | Lake Trout |
| Medicine Lake | Circle | | | X | | | X | |
| Ackerman Lake | Chandalar | | | | | X | X | X |
| Vunittsieh Lakes | Chandalar | | | X | | | | |
| Chandalar Lake | Chandalar | X | X | X | X | X | X | X |
| Boulder Lake | Chandalar | | X | X | X | | X | X |
| Bob Johnson Lake | Chandalar | | X | X | X | X | X | X |

## Threatened and Endangered Species

All land use activities will be consistent with state and federal Endangered Species Acts to avoid jeopardizing the continued existence of threatened or endangered species, to provide for their continued use of an area, and to avoid modification or destruction of their habitat. Specific mitigation recommendations should be identified through interagency consultation for any land use activity that potentially affects threatened or endangered species. At the time of adoption, there are no determined threatened or endangered species under AS 16.20.190 within the planning boundary. The U.S. Fish and Wildlife Service, Division of Ecological Services should be consulted for questions involving federally designated threatened or endangered species in the planning area.

# Forestry

The forest resources of the NEAAP planning area are a mixture of white spruce, black spruce, quaking aspen, and paper birch in the upland areas. Balsam poplar is commonly found in riparian areas. Black spruce is the dominant species in the boreal forest. White spruce has commercial value for sawlogs, biomass, fiber, and wood chips. The commercial value of the paper birch is for biomass, fiber, and wood chips; birch with little or no defects has some sawlog value. Spruce and birch support a significant personal use firewood harvest by residents of the area.

The recommendations that follow implement constitutional and statutory policies to develop the state's renewable resources, making them available for maximum use, consistent with the principle of sustained yield, and with the overall public interest. The primary purpose of the timber management program is to provide for the production, utilization, and replenishment of timber resources while allowing other beneficial uses of public lands and resources. Forestry designated lands are to be managed by DNR as a 'working forest' consistent with the constitutional mandate to encourage the use and development of state resources, including renewable resources. A 'working forest' refers to actively managed forest lands that provide wood for personal and commercial use, while protecting fish and wildlife habitat, providing the public with recreation and other multiple use of state land, and maintaining public benefits such as clean air, land, and water.

## Goals

**Personal Use Timber.** Provide timber to meet the needs of Alaskans. This program will be provided on a demand basis when the operational costs of administering this program are satisfactory.

**Economic Opportunities.** Provide for economic opportunities and stability in the forest products industry by allowing the use of state uplands in areas designated Forestry. Also, to benefit the state's economy by providing royalties to the state from stumpage receipts, and adding to the state's economy through wages, purchases, jobs, and business.

**Support Timber Industry.** For adherence to the Alaska Forest Resources and Practices Act, continue to perform reviews of private timber harvests. Provide the timber industry with information, technical expertise, and management guidance for utilizing forest resources.

**Wildland Fire Suppression.** DOF shall continue to provide wildland fire suppression within the planning area consistent with the requirements of the Alaska Interagency Fire Management Plan.

**Forest Health.** To improve forest health and vigor by harvesting and replacing mature birch stands with healthy new stands of regrowth, while protecting and maintaining other resource values.

**Wildlife Habitat Management.** DNR will seek to create, enhance, and maintain wildlife habitat consistent with forest management objectives by providing a mosaic of forest stand areas, reflecting the natural range of species and habitat diversity, for the variety of wildlife species that live in the planning area.

**Provision of Biomass for Public Purposes.** DNR shall support actions to develop sustainable sources of energy for meeting community needs from renewable woody biomass obtained from state forests or other state lands that are suitable for this purpose and consistent with state and federal permitting standards. Wherever feasible and practical, the by-products of forest management practices involving harvest or land clearing are to be utilized for biomass.

**Carbon.** In 2023, legislation was enacted allowing the State to use its lands and natural resources for carbon management projects, including through the Carbon Offset Program authorized under AS 38.95.400 – AS 38.95.499. The Carbon Offset Program enables the State to implement carbon offset projects on State land.

## Objectives and Management Guidelines

A systematic program of scheduled timber harvests is appropriate within those areas of the plan designated Forestry. Timber management activities are subject to the following management guidelines. Another important component of the state forestry program within the planning area is fire management. A management guideline is included that describes the broad aspects of this program. The implementation of the state fire management program is identified and controlled in detail by the Alaska Interagency Fire Management Plan.

**Objective A.** Timber harvest activities must be compatible with unit-specific management intent and conducted in accordance with pertinent state guidelines and laws.

- **Guideline A-1.** *Timber Harvest: General Requirements.*
    1. Systematic timber harvest programs are to be conducted in areas designated Forestry.
    2. Forest harvest operations can precede actual construction conducted on a parcel of state land intended for subdivision development or agriculture by DNR. These operations must be consistent with the subdivision plan or Farm Conservation Plan for the parcel; consultation with DMLW is required before commencing operations.
    3. Timber harvest operations will be conducted in accordance with the stipulations in the Forest Land Use Plan, the Five Year Schedule of Timber Sales, the Alaska

Forest Resources and Practices Act (AS 41.17 & 11 AAC 95), the Alaska Land Act (AS 38.05 & 11 AAC 71), and other pertinent state guidelines and laws.

4. The Forest Practices Act provides statewide policy and regulatory authority for managing forestry related activities. The specific layout and other site-specific requirements of a timber sale is addressed through a Forest Land Use Plan (FLUPs), which is prepared prior to any commercial timber harvest or sale (AS 38.05.112).
5. FLUPs developed for timber sale or harvests in the planning area are to be consistent with the Forestry Management Guidelines of this Chapter and the Management Guidelines specified for particular parcels in Chapter 3. FLUPs shall consider, in their preparation, the sensitive resources and wildlife, or any other significant factors identified in the Management Guidelines for a parcel.

- **Guideline A-2.** *Sustained Yield of Forest Resources.*

1. Forestland will be managed to guarantee perpetual supplies of renewable resources to serve the needs of all Alaskans for the many products, benefits, and services obtained from them.
2. The annual allowable harvest will be calculated using the area control method and the units designated Forestry or co-designated Forestry are to be used for the basis of this calculation.

- **Guideline A-3.** *Timber Harvest in Areas Designated Settlement, Materials, or Minerals.*

1. Timber harvests are considered appropriate in areas designated Settlement if intended to support the costs of subdivision development, provide access to the subdivision, or provide ancillary facilities subject to the other requirements of the Forestry standards in this Chapter. The elective harvesting of timber before subdivision development is considered appropriate, after consultation with the Land Conveyance Section and if authorized by the Regional Manager, NRO.
2. Timber harvests may be appropriate in areas designated Minerals or Materials if the use is consistent with the submitted plan of operations or as may be authorized by the Chief, Mining Section, DMLW, and after consultation with the Regional Manager, NRO.

**Objective B.** Wherever feasible and practical, the by-products of forest management practices involving harvest or land clearing are to be utilized.

- **Guideline B-1.** *Timber Salvage from Rights-of-Way.* Timber with commercial or personal use value should be salvaged from lands that are to be cleared for other uses such as roads, transmission lines, material sites, mining, and habitat enhancement projects (AS 41.17.083). The DMLW Regional Manager shall determine the amount and kind of material that is to be salvaged and shall coordinate with DOF on timber salvage operations having commercial value.

- **Guidelines B-2.** *Salvage of Damaged Trees.* Trees damaged due to fire, windthrow, insects, disease, or other causes may be salvaged on all land use designations. A Forest Land Use Plan, if required, will provide the rationale for conducting the salvage harvest and describe how the action will not conflict with the management intent for each management unit.

**Objective C.** Provide personal use timber to meet the needs of Alaskans when the operational costs of administering this program are satisfactory.

- **Guideline C-1.** *Personal Use Wood Harvest.*
  1. When forested lands are available near communities and where personal use harvest is consistent with other purposes for which the land is being managed, DOF may provide wood products for personal use.
  2. This program will only be undertaken if it can be effectively and efficiently administered by DOF.
  3. In areas designated for settlement, personal use forestry permits may be issued by DOF after consultation with DMLW's Land Conveyance Section to assure compatibility with future land sales.

**Objective D.** The Division of Forestry shall provide wildland fire management within the planning area consistent with the requirements of the Alaska Interagency Fire Management Plan.

- **Guideline D-1.** *Fire Management.* The intent of fire management is to identify where wildland fire can be allowed or managed fires can be used to reduce costs of fire suppression, reduce the risk of damaging fires, and maintain the natural diversity and productivity of forest stands.
- **Guideline D-2.** *Fire Suppression and the Alaska Interagency Fire Management Plan.*
  1. Residential areas or other forms of active land use, high value recreation use areas, and areas with infrastructure development will be the priority for fire suppression.
  2. Consistent with AS 41.15.010 and AS 41.15.020, DOF will protect forest resources from destructive agents commensurate with the values at risk identified in the Alaska Interagency Fire Management Plan.
  3. The Fire Management Plan indicates where suppression operations are likely to occur; generally, such operations are to be limited to decreasing the long-term risk of damaging fires and maintaining the natural diversity of forest stands, stand ages, and habitat types. Specific fire suppression levels are identified in the Alaska Interagency Fire Management Plan.

**Objective E.** DNR will seek to create, enhance, and maintain wildlife habitat consistent with forest management and to improve forest health and vigor.

- **Guideline E-1.** *Enhance and Maintain Wildlife Habitat.*
    1. DOF will consult with ADF&G during the planning stage of timber harvest layout and in the preparation of the Forest Land Use Plan in order to receive guidance on wildlife habitat enhancement opportunities.
    2. Trees and vegetation may be manipulated by cutting, crushing, harvesting, or burning to provide or improve wildlife habitat.
    3. Where soil erosion is not a concern subsequent to wildland fire, habitat enhancement techniques may be appropriate.
- **Guideline E-2.** *Improve Forest Health and Vigor.* Harvesting and replacing mature birch stands with healthy new stands of regrowth, while protecting and maintaining other resource values may be appropriate. Scarification to expose mineral soil, a substrate essential to the natural regeneration of early successional browse species, may be appropriate for use after wildland fire.

**Objective F.** *Other Guidelines Affecting Forestry***.** Other guidelines will affect management practices for timber development support facilities and forestry. See other sections of this chapter.

# Material Sites

Material sites are areas where common variety materials such as sand, gravel, rock, crushed rock, and rip-rap are extracted and processed. Material resources are required for the construction, maintenance, and expansion of infrastructure including roads, pipelines, airports, businesses, residences, utilities, and communication facilities among other types of projects. Some material sites or material sources exist that may have been previously developed and are not currently active or are newly identified sources. Ideally, source areas are located close to a project area or other area of use to reduce transportation costs; however, appropriate material sources are not located uniformly in many landscapes, so transportation distances can vary. Transportation costs increase with distance from the material source area which quickly makes their use cost prohibitive; therefore, a lack of materials sites within a reasonable distance from projects increases transportation costs and may effectively prevent some maintenance and development activities that are necessary or desirable.

Within the planning area, material source sites are more readily identified in lands adjacent to the Dalton Highway, Steese Highway, and Yukon River, where sand and gravel are common and exist in a natural thawed state. Current trends and outlooks for the planning period indicate that demand for materials is high and will continue to grow as mineral exploration is conducted and projects are authorized by local, state, and federal agencies. Material resources for this plan have been assessed with the perspective of managing a relatively scarce resource while also prioritizing sites near project areas.

## Goals

**Retain Land for State-Owned Material Sites.** Maintain in state ownership and make available to public and private users sufficient, suitably located material sites to meet long-term economic and infrastructure needs of the area.

**Minimize Material Site Impact.** Sites will be consolidated to minimize impact to other resources, to the extent economical or practicable.

## Objectives and Management Guidelines

**Objective A.** The State will designate material sites necessary for development and maintenance of infrastructure during the planning period.

- **Guideline A-1.** All state-owned material sites designated under AS 38.05.550 will be retained in state ownership unless determined by the Commissioner to be in the state's best interest to dispose of the land.

- **Guideline A-2**. Lands with potential for production of materials necessary for maintenance of existing infrastructure, or development of new infrastructure, are identified as such and shall be retained in state ownership unless a land disposal is determined by the Commissioner to be in the State's best interest.
- **Guideline A-3.** When designating material sites, the state may include appropriate stipulations. The designation of material sites may take precedence over other surface uses.
- **Guideline A-4.** When responding to a request for a new material site designation, the highest priority should be given to using or expanding existing designated material sites when the quality, quantity, and cost of the resource is acceptable.
- **Guideline A-5.** Consideration should be given to designating material sites near present or planned infrastructure projects.
- **Guideline A-6.** Construction material resources are required for the development, maintenance, and expansion of critical infrastructure including roads, pipelines, airports, utilities, communication facilities, and similar types of projects. Because of the importance of material resources, it may be appropriate to locate material sites within areas not already identified in this plan. Unless specifically stated in the management intent, material sites should be considered appropriate in any classification.
- **Guideline A-7.** As a general policy, material sites will not be designated in known fish spawning areas or within 100 feet of known spawning areas.
- **Guideline A-8.** Material Site Designation decisions will go through the AS 38.05.945 public notice process which includes alerting the appropriate borough, municipality, village, and Native corporation entities. When authorizing a material site, coordinate with the Alaska Department of Transportation & Public Facilities (DOT/PF) and ADF&G for site-specific information.

**Objective B.** Designated material sites required for exploration and development activities will be limited to the minimum necessary and will include stipulations to minimize the environmental impact.

- **Guideline B-1.** *Protect Area Adjacent to Anadromous or High Value Resident Fish Waterbodies.* A buffer shall be provided adjacent to anadromous waterbodies. The adjudicator shall consult with ADF&G on the width of the protection area prior to designating a material site. See also ADF&G Pit Performance Guidelines.

**Objective C.** Development of upland sources should be prioritized over streambed or riverine sources to minimize impact to river systems, to the extent that it is practicable.

**Objective D.** When siting, operating, or closing material sites, maintaining other uses and resources is to be considered to the maximum extent practicable.

- **Guideline D-1.** Prior to material extraction, the adjudicator will ensure that the requirements of the permit or lease adequately protect other important resources and uses.
- **Guideline D-2.** The disposal of materials should be consistent with the applicable management intent statement and management guidelines of the plan.
- **Guideline D-3.** In some instances, areas occupied by a material site may be appropriate for reuse for settlement or another form of development. These instances are noted in the 'management intent' of the affected unit when reuse of the parcel for the intended use is appropriate. If this occurs, the reclamation plan shall take this into consideration and account for the possible reuse.
- **Guideline D-4.** *Land Sales in Areas of High Material Potential.* Generally, if a settlement area contains sand and gravel deposits, rock sources or other similar, high value material resources, a material site should be identified during subdivision design and retained in state ownership for future use.
- **Guideline D-5.** Where topography and vegetation allow, material sites should be screened from roads, residential areas, recreational areas, and other areas of significant human use. Sufficient land should be allocated to the material site to allow for such screening. Rehabilitation of the site shall follow the requirements of AS 27.19.020 and 11 AAC 97.250.
- **Guideline D-6.** *Access Roads.* Roads for access to material sites should be dedicated to their respective site and maintained for materials extraction operations.

**Objective E.** *Other Guidelines affecting Material Resources.* Nearly all of the resource guidelines found within Chapter 2 either directly or indirectly affect material resources in the planning area. Other resources addressed in this chapter should also be considered.

# Public Access

Public access is sparse due to the limited number of roads throughout the planning area, therefore most areas are primarily accessed by air. The Steese Highway and Dalton Highway are the two main ground access routes. Off-road vehicles are prohibited on land within five miles of the Dalton Highway right-of-way, with a few exceptions. See AS 19.40.210 for more information.

## Goals

**Public Access.** Preserve, enhance, or provide adequate access to public lands for recreation, harvest, and resource development. Provide for future trail and access needs and protect or establish trail corridors to ensure continued public access consistent with responsible wildlife and fish habitat conservation. Ensure adequate opportunities for the public's use of public resources of local, regional, and statewide significance.

## Objectives and Management Guidelines

**Objective A.** To the maximum extent practicable, adequate opportunities for the use of public resources of local, regional, and statewide significance by the public will be ensured.

- **Guideline A-1.** *Preservation of Access Opportunities.* The Department shall preserve existing access routes, and may identify additional potential access to, through, and within the planning area. Unless there is an overriding state need, section-line easements are to be preserved. DOT/PF is to be consulted prior to any action involving requests for the vacation of section-line easements. Vacation requests should not be granted unless it clearly be shown that there will not be a need for the foreseeable future (25 years) or if an alternative route is available of equal or better access.
- **Guideline A-2.** *Access Across Land Use Designations.* Due to their linear alignment, it is recognized that roads and trails may traverse several different land use designations. A particular land use designation is not intended to affect or preclude access. Access may be developed on all land use designations, including Habitat, Public Recreation, and Water Resources, although stipulations may be required to mitigate adverse impacts to the resources associated with these designations.
- **Guideline A-3.** *Retain Access.* Improve or preserve public access to areas with significant public resource values by retaining access sites and corridors in public ownership; reserving rights of access when state land is sold or leased; or identifying, managing and legally validating RS 2477 (Revised Statute Section 2477) rights-of-way. RS 2477 rights-of-way within the planning area that are identified in

AS 19.30.400(d) or otherwise determined by DNR to qualify as RS 2477 trails are to be retained in state ownership or made a stipulation of approval ('subject to') in the transfer of state land.

- **Guideline A-4.** *Reservation of Public Use Easements.* Before selling, leasing, or otherwise disposing of the land estate, DNR will reserve public use easements pursuant to the requirements of 11 AAC 51.015. This section of administrative code establishes when public access easements are to be reserved and the widths of these easements. Specific standards for section-line easements are identified in 11 AAC 51.025 and for easements required under AS 38.05.127, to and along navigable and public waters, in 11 AAC 51.045. These sections of Administrative Code shall be used as the basis for the reservation of public access easements in authorizations granted by DNR.
- **Guideline A-5.** *Management of ANCSA 17(b) Easements.* The state will identify 17(b) easements as required and ensure that public access is maintained to state lands. These easements are intended to provide access through private Native lands to public lands and waters. They are reserved and managed by the federal government. Generally, DNR will not accept management of 17(b) easements unless the state already actively manages a portion of the trail or easement, or state management will best protect public access to state lands.
- **Guideline A-6.** *Access to Non-State Lands.* Reasonable access will be provided across state lands to other public and private lands. If a proposed access route is located in close proximity to a village or Alaska Native owned lands, DNR should coordinate with the appropriate regional or village corporation holding title to the surface estate. Existing legal access will not be precluded unless equivalent access is available.
- **Guideline A-7.** *Access for Exploration Activities.* Access for exploration should be temporary and constructed of ice or snow unless DNR approves an alternative. Access will be encouraged to occur during winter months and may be approved in areas where snow and soil temperatures are sufficient to protect the ground surface. Summer off-road travel may be authorized subject to time periods and vehicle types and configurations approved by DMLW. Exceptions may be granted by DMLW.
- **Guideline A-8.** *Access for Development.* Public access to mineralized land, oil, gas or geothermal areas, recreation, fish, wildlife, or other public resources should generally be retained when an access route is constructed for resource development over state land. If the new resource facility is likely to be of limited duration and provides superior access to the current means of access, the state should retain the new facility for public access. If the new route or facility will not or should not provide public access due to concerns for public safety or the long-term detrimental impact on natural resources, the current means of public access should be retained. Additional access routes in some areas may lead to negative impacts on valuable resources, particularly certain renewable resources. The development of new trails should not displace current methods of access without providing alternative routes.

- **Guideline A-9.** *Limiting Access.* Access to state lands may be curtailed at certain times or locations to protect public safety, provide for the remediation of public use areas, allow special uses, and prevent harm to the environment, fish and wildlife.
- **Guideline A-10.** *Joint Use and Consolidation of Surface Access.* Multiple use and consolidation of access routes and facilities should be encouraged whenever it is feasible and prudent to do so. Surface access should be sited and designed to accommodate future development and avoid unnecessary duplication.
- **Guideline A-11.** *Consultation between DMLW and DOG.* Proposed access routes to oil and gas resources shall be reviewed by DMLW and DOG prior to authorization. DMLW determines if the routes or trails are required, consistent with applicable sections of statute and administrative code.

**Objective B.** To the maximum extent practicable, adequate opportunities for access to and within developing areas will be provided.

- **Objective B-1.** DNR shall consider the need for public access before selling, leasing, or otherwise disposing of the land estate. If local access needs are identified through the adjudication and agency or public review process, access trails should be reserved. This will occur through the retention of state land in public ownership or through the creation of a public use easement. Under either approach, the public should have the right of access within the area of state land or the public use easement.
- **Objective B-2.** *Ownership.* The following factors shall be considered by DNR in making the decision to retain the access corridor under state ownership or to provide for public access through public easements.
    1. If the access (usually a trail within a developed or developing area) is used for subsistence purposes or is a trail route of regional significance, access should be retained in public ownership.
    2. If a route is used as access by residents, it should be dedicated to local government or established as an easement to an entity willing to accept maintenance and management responsibility. This would typically occur when the purpose is to establish access between communities or to traditional subsistence areas.
    3. If the access provides a connection to other areas and is considered of regional or statewide significance, it should be retained in public ownership.
- **Objective B-3.** *Width of Access Corridors.* The width of the access corridor shall be determined according to its function and location:
    1. Access corridors shall not be less than 25 feet in width for pedestrian movement and not less than 40 feet if motorized movement can be expected in addition to pedestrian travel. In areas where topographic conditions restrict development, widths less than 40 feet may be considered.

2. In all other areas, the width shall vary with terrain, function, and the need for separation from other uses, but shall not be less than 50 feet.
3. Trails or other access facilities of statewide or regional significance shall not be less than 100 feet in width.

- **Objective B-4.** *Trail Rerouting.* Standards for the vacation and modification of trails are identified in 11 AAC 51.065. Rerouting of trails may be permitted to minimize land use conflicts, reduce duplication in trail routings, or minimize habitat destruction. If trails are rerouted, provision should be made for construction of new trail segments if warranted by type and intensity of use. Rerouting trails shall be done in consultation with affected private users and public agencies. Rerouted trails should allow the same uses and activities as the original trail. Reroutes should not interrupt access, and reroutes should be established, open and useable for the intended uses before the original route is closed. Closed routes should be blocked off and restored. The development of new trails should not displace current methods of access without providing alternative routes.

**Objective C.** Whenever feasible, adequate public access opportunities should be preserved, enhanced, or provided without adversely impacting other resources, uses, or the natural environment.

- **Guideline C-1.** Existing roads should be used for access to material sites whenever feasible.
- **Guideline C-2.** *Siting and Constructing Permanent Roads, Bridges, and Causeways.* Permanent roads, bridges, and causeways will, to the extent feasible and prudent, be routed to avoid sensitive wetlands, avoid streams and minimize alteration of natural drainage patterns, and avoid long-term adverse effects on fish and wildlife, water quantity or water quality, and permafrost.
- **Guideline C-3.** Access across tundra, wetlands, and other environmentally sensitive areas will be managed in a manner that minimizes damage and must be consistent with the requirements of applicable administrative regulations, including 11 AAC 96.010 and 11 AAC 96.025.
- **Guideline C-4.** *Protection of the Environment.* In the siting of regional and industrial access facilities, consideration should be given to the effect of the proposed project or improvement on the natural environment, fish and wildlife species, and habitats that the plan identifies as significant. Precautions should be taken when developing new trails or access roads to avoid critical wildlife concentration areas. ADF&G shall be consulted prior to the issuance of an authorization or development of an access route if significant impacts to fish or wildlife resources or their associated habitats will occur.

**Objective D.** *Other Guidelines affecting Public Access or Trail Management.* Other guidelines may directly or indirectly affect access. See other sections of this chapter.

# Recreation, Tourism, and Scenery

Recreational use and commercial tourist destinations are present throughout the planning area. Most recreational use is along the Steese and Dalton Highway corridors, and in areas surrounding communities in the region. Most commercial recreation is guided hunting. Commercial guide hunting generally occurs in the Brooks Range with staging areas located near Coldfoot and the Dalton Highway. Hunting trips are for Grizzly bear, wolves, caribou, Dall sheep, and moose. One commercial guide reported 133 visitor days in 2023. Other commercial recreation includes staging areas for television programs, lodges on Chandalar Lake, guided canoeing and backpacking, and flightseeing tours. Floating trips occur on the Charley River, Ikheenjik River (Birch Creek), Beaver Creek, and Porcupine River.

The use of off-road vehicles, including all-terrain vehicles (ATVs) and snowmobiles, is prohibited within the Dalton Highway Corridor LDA, with some exceptions. Allowable means of access include boat, aircraft, foot, ski, or dog team. The frontcountry is accessible year-round via automobile on the Dalton Highway and Steese Highway; these areas are the most popular for recreation. The main source of backcountry access is during the summer months via flights, Off-Highway Vehicles (OHV), and river corridors, including the Yukon, Charley, Teedriinjik (Chandalar), Porcupine, and Ikheenjik River (Birch Creek). These waterways are accessed by highway or fly-in to drop-off boats. During the winter, snowmachines are the primary method of access.

Common recreation activities along the Dalton Highway include camping, hiking, boating, gold panning, hunting, and fishing. Hunting also occurs throughout the Dalton Highway Corridor Management Area and Steese National Conservation Area. Hunters traverse off the Dalton Highway to hunt beyond the LDA's 5-mile management boundary using firearms, or hunt within the corridor closer to the road with bow and arrow. The area around the Twelvemile wayside of the Steese is particularly popular for hunting and viewing caribou, as well as moose and upland bird hunting. Sport fishing occurs throughout the area. Trapping activities are dispersed and most trapping cabins located on state land are within the Interior Highlands Region. Additionally, the Steese area is well known for berry picking.

This section will consider the recreation and tourism resources within the planning boundary. The Goals, Objectives, and Management Guidelines that follow apply to areas classified Public Recreation throughout the planning area.

## Goals

**Maintain Multiple Use.** Maintain recreation opportunities on state land and water that serve multiple purposes such as hunting, tourism, and backcountry wilderness activities.

**Contribute to Economic Diversity.** Encourage commercial development of recreational facilities and services through concession contracts, land sales, leases, and permits where public recreation needs can most effectively be provided by private enterprise, while minimizing environmental impacts and conflicts with the existing users of the area.

**Protect Recreational Resources.** Protect resources including public access, visual and aesthetic resources, as well as the isolation and unique wilderness characteristics of the planning area.

**Minimize Use Impacts.** Maintain protection of ecosystems and habitat to prevent damage caused by inappropriate recreation use.

## Objectives and Management Guidelines

**Objective A.** Manage state land within the planning area for multiple uses without eliminating or unreasonably limiting recreation, tourism, or scenic resources.

- **Guideline A-1.** *Management of Recreation Uses on State Lands.* To the extent provided by law, DNR will manage recreation use and activities to enable a variety of uses and vehicle types:
    1. while ensuring that adverse impacts to fish and wildlife species and habitats are avoided or minimized, and
    2. while avoiding the creation of user conflicts and minimizing the impact of any existing conflicts.
- **Guideline A-2.** *Roles of Different Public Landowners in Providing Public Recreational Opportunities.* Generally, the State's role is to retain and manage land supporting recreational opportunities of regional or statewide significance. The state and federal governments are most capable of providing recreational opportunities that require large land areas, while local government is generally best suited for providing and managing community recreation opportunities. To recognize local government's role in providing community recreation needs, the state may transfer state land designated Public Recreation-Dispersed (Rd) or state recreation sites within or near existing communities, if this action is in the overall best interest of the state (AS 38.05.810). The selection of these sites shall be agreed to by local government and the state and shall be contingent on the local government's commitment to develop and maintain the recreation uses, facilities, and values of these areas.
- **Guideline A-3.** *Coordination with Other Landowners and Users.* Recreation management, including the location and management of recreation facilities, will consider the current and projected future uses of lands owned by local governments and private landowners, and should strive for compatibility with adjacent current and anticipated uses.

- **Guideline A-4.** *Public Use Sites*. Uses that adversely impact public use sites or areas should not be authorized. Uses that are made available to the public, such as an airstrip development or a dock, may be authorized if consistent with the management intent for the public use site or area, and if there is a demonstrated public need.
- **Guideline A-5.** *Scenic Areas of Exceptional Value.*
    1. To the extent feasible and prudent, areas of exceptional scenic value are to be retained by the state and protected with easements, setbacks, or other management techniques.
    2. Authorizations issued by DNR shall consider the area's scenic values during the process of adjudication, and if found to be in the state's best interest, should retain or protect these areas through appropriate stipulations or management requirements.
- **Guideline A-6.** Consult with ADF&G in the siting of recreational facilities where fish and wildlife species or important habitats are present.

**Objective B.** Consider the needs of recreational use to minimize user conflict, provide for a quality experience for a range of user groups, and protect the natural values and attributes of the planning area.

- **Guideline B-1.** *Private Commercial Recreation Facilities and Operations on State Land.*
    1. Lodges or other private commercial facilities and operations designed to be run as or to support private commercial recreation facilities may be authorized if:
        a) the facility or operation fulfills the conditions outlined in this guideline; or
        b) conforms to the requirements of AS 38.05.070 and AS 38.05.850, AS 38.07.075, or AS 38.05.073.
    2. If authorized, the facility or operation should be sited, constructed, and operated in a manner that creates the least conflict with natural values and existing uses of the area.
    3. The commercial facility and its generated use should avoid significant adverse impacts on fish and wildlife habitat and existing uses of an area.
    4. For facilities supporting recreational fish and wildlife harvest, ADF&G should be consulted on the possible effects of increased harvest on fish and wildlife resources, and on established commercial, recreation, and subsistence users.
- **Guideline B-2.** *Commercial Recreation Leasing Processes.*
    1. There are several processes for leasing state land for commercial recreational facilities under the following Alaska Statutes: AS 38.05.070, 38.05.073, 38.05.075, and 38.05.810. The first three are used for commercial recreation facilities and the last is used for not-for-profit entities that provide some type of recreational use or service.

2. In particular, AS 38.05.073 is designed for creating recreational facility leaseholds. This statute requires that the regional land use plan identify areas suitable for recreational facility leasing. Given the broad scope of this plan, the determination of specific sites is impractical, although such uses are generally appropriate within most classified lands.
3. Authorizations under AS 38.05.073 must evaluate the adequacy of the proposed recreation facility, and a final site determination and best interest finding must support this determination. Any amendments to this plan to accommodate such a commercial lease shall be reviewed by the Director of DMLW prior to or concurrent with the adjudication process.

- **Guideline B-3.** *Permits, Easements, and Leases Adjacent to Recreation Facilities.* Permits, easements, and leases may be issued adjacent to recreation facilities if the land manager determines that the two uses can be made compatible by design, siting, or operating guidelines; or if the land manager determines there is no feasible and prudent alternative for the activity. This guideline also applies to sites reserved for future recreation facilities. The land manager's determination will be made after consultation with the facility manager.
- **Guideline B-4.** Consult with ADF&G in the siting of recreational facilities where fish and wildlife species or important habitats are present.

**Objective C.** *Other Guidelines affecting Recreation, Tourism, and Scenery.* Many of the resource guidelines found within Chapter 2 either directly or indirectly affect recreation and tourism in the planning area. Other resources addressed in this chapter's sections should also be considered.

# Settlement

The general pattern of settlement along the highways within the planning area is catalyzed by mining activities, and is therefore commercial in nature, especially in the Wiseman/Coldfoot and Central areas. Other settlement areas include the villages throughout the area. Commercial and industrial use of the Settlement designation is used in this plan. It is unlikely, given the relative isolation of this area, that extensive residential growth can be expected for the planning period. Review of available settlement locations throughout the planning area indicates there may be areas suitable for potential remote settlement. Any proposed land conveyance would require a subsequent public process through the DMLW Land Conveyance Section.

DNR will attempt to satisfy three settlement categories within the planning area:

**Industrial or commercial development.** DNR will sell, lease, or protect for future use suitable land for private commercial and industrial uses. If DNR sells the land, the timing of this disposal will depend upon market demand and adequate funding.

**Seasonal remote recreation opportunities.** DNR may offer land suitable for seasonal recreation use. This land will be provided as demand warrants, subject to the availability of funding. This category of land disposal is intended to provide land, often in remote locations, for recreational needs. No public facilities and services are intended to be provided.

**Year-round residences for community expansion**. DNR will offer accessible land suitable to meet the needs of existing communities. This category serves people whose principal place of residence and work is, or will be, in the area of the disposal. This land will be provided as demand warrants, subject to the availability of funding.

## Goals

**Provide Private Land Ownership Opportunities.** Provide suitable public land for transfer to private ownership for settlement purposes.

**Balance Fiscal Impacts.** Land disposals (not including remote settlements) should be sited and planned to minimize the costs of infrastructure and other services resulting from settlement.

## Objectives and Management Guidelines

**Objective A.** Plan and coordinate the transfer of state land to private ownership with other landowners to ensure the optimal use, development, and protection of area resources.

- **Guideline A-1.** It may be appropriate to provide land for private use, but such an action must be in the overall best interest of the state.
- **Guideline A-2.** *Competition.* To ensure the availability of lands suitable for transfer to private ownership for settlement purposes within the Plan boundary, the state may compete with the private sector or local governments if necessary to satisfy demand, provide market choice, or moderate unreasonably high prices.
- **Guideline A-3.** *Pacing.* Settlement offerings may be phased over 20 years – the length of the planning period. The timing and extent of disposals will depend upon anticipated demand, availability of funding, the rate of community expansion, the availability of or costs to provide necessary infrastructure, and the particular land requirements of such expansion. Another factor may be whether the disposal will generate a demand for services that cannot be reasonably expected to be met by local government or community organizations.
- **Guideline A-4.** *Ensure Access to Remote Settlements*. Because remote settlement areas are almost always distant from infrastructure, it is generally not practicable to identify and develop access corridors to such areas, whether or not they are adjoined by state land or land under other ownership. However, in those limited instances where access corridors can be identified and economically developed, access should be provided. In this circumstance, it is intended that this access be accommodated even if plan designation(s) differ from that of Settlement. As part of the development of remote settlement areas, DNR should consider the provision of staging areas, parking areas, and/or trailheads in order to accommodate landowners parking vehicles and other equipment while accessing their remote parcels. ADF&G should be consulted to ensure there will be no habitat associated impacts from parking areas or trailheads.

**Objective B.** To the maximum extent practicable, DNR will sell, lease, or protect suitable land for private, commercial, and industrial uses or for seasonal residences used for recreation.

- **Guideline B-1.** *Types of Settlement Land and Land Offerings*. The nature of state land available for private ownership is influenced by both the characteristics of land designated for settlement, and the type of land sales program that makes it available. The NEAAP designates certain lands for settlement and provides guidelines for land sales.
- **Guideline B-2.** *Industrial or Commercial Development.* DNR will sell, lease, or protect for future use suitable land for private, commercial, and industrial uses. If

DNR sells the land, the timing of this disposal will depend upon market demand and adequate funding.

- **Guideline B-3.** *Seasonal Residences for Recreation.* DNR may offer land suitable for seasonal recreation use. This land will be provided as demand warrants, subject to the availability of funding. This category of land disposal is intended to provide land, often in remote locations, for recreational needs. No public facilities and services are intended to be provided.
- **Guideline B-4.** *Areas Designated Resource Management and Minerals.* The large areas of state land that are designated Resource Management are generally not suitable for development during the planning period. Most Resource Management areas are remote and generally unsuitable for residential development because of the presence of adverse topography, poor drainage, or extensive areas of wetlands that adjoin these areas. This makes the lands within the Resource Management areas difficult to develop because of the costs and difficulty of road construction in the adjacent wetlands. For these reasons, residential development during the planning period in areas designated Resource Management is considered generally inappropriate except in those areas that adjoin parcels designated Settlement, where road access has been provided to adjoining properties, or for remote land disposals that are not dependent upon access. Similar considerations exist for areas designated Minerals (or Minerals/Habitat) except that settlement/residential development to support mining exploration and/or development may be appropriate. In instances where settlement has been determined by DNR to be appropriate within areas that are so designated, a plan amendment (to Settlement) and reclassification (to Settlement Land) will be required.
- **Guideline B-5.** *Recommended Land Disposal Program*. Units designated Settlement are usually larger than the actual areas of the subdivision in order to provide flexibility in the design. This plan continues that custom. Consult the Resource Allocation Table in Chapter 3 for more information.

**Objective C.** When land is transferred out of state ownership for settlement purposes, the protection, management, and enhancement of other resources is to be considered to the maximum extent practicable.

- **Guideline C-1.** *Provide State Land for Important Environmental and Resource Development Purposes*. As a general policy, DNR should retain appropriate public-use corridors, water supply areas, riparian buffer areas, roads, and other public facilities, as well as other open space, to create a desirable land use pattern. Generally, subdivision design should provide for the creation of an open space system designed to protect or maintain important uses and values. Depending on the context, DNR may either protect these areas through retaining land in state or public ownership, through the imposition of a reservation of an interest in land for the maintenance of riparian values and access, or through the use of a stipulation (i.e., ‘subject to’).

- **Guideline C-2.** *Subdivision Design.* Subdivisions will be designed to preserve and enhance the quality of the natural setting and the recreational opportunities that make an area attractive to potential buyers. State subdivision design will take account of site limitations and opportunities such as slope, drainage, soils, erosion, riparian zone buffers, and other features to ensure that sites offered are buildable and can be developed without the need for extensive public infrastructure. Vegetation clearing should be done before or after the applicable wildlife breeding seasons. Refer to the Fish and Wildlife Habitat section for breeding seasons and consult ADF&G. Check with USFWS or ADF&G for location of bald and golden eagle nests. Riparian buffers or building setbacks shall be imposed on all disposals where important riparian areas have been determined to exist. If there is some question as to whether a riparian protection area should be imposed, consult ADF&G.
- **Guideline C-3.** *Protect Life and Property.* Sensitive areas such as wetlands or potentially dangerous areas such as areas with unstable soil, riverbanks subject to active stream erosion, or within floodways or floodplains, should be:

  1. avoided in subdivision design,
  2. protected by retaining these areas in state ownership, or
  3. restricted through developmental reservations or restrictions.

  Easements or plat notes can be used for this purpose in lieu of retaining land in state ownership.
- **Guideline C-4.** *Priority of Public Uses in Stream Corridors.* Within stream corridors, DNR will set a higher priority on protecting public use values than on providing opportunities for private ownership of land.
- **Guideline C-5.** Disposals near streams with important recreation value will be designed to protect riparian habitat and protect access to and along the stream for fishing, hiking, camping, and other recreational activities.
- **Guideline C-6.** Disposals near streams that have important fish and wildlife habitat or other wildlife resources will be designed to ensure the protection of fish and wildlife and their habitats.
- **Guideline C-7.** Before lands are disposed of in stream corridors, DNR will assess existing and projected public use needs associated with the stream corridor, in consultation with other affected agencies and the public. Depending on the context, DNR may either protect these areas through retaining land in state or public ownership or through the imposition of a reservation of an interest in land for the maintenance of riparian values and access.
- **Guideline C-8.** *Protect and Enhance Scenic Features.* DNR will design and develop subdivisions to protect or maintain unique geologic and scenic features such as cliffs, bluffs, or waterfalls. These areas should be avoided altogether or protected in subdivision design and development through the use of reservations or plat restrictions. Where scenic views exist, lots should be oriented to this feature.

- **Guideline C-9.** *Protect and Enhance Recreational, Educational, and Cultural Opportunities.* DNR should determine the need for and retain appropriate areas for outdoor recreation, hunting, fishing, trails, campsites, boat launches, historic sites, and areas for scientific study. Areas for intensive and dispersed use will be preserved.

**Objective D.** *Other Guidelines affecting Settlement.* Nearly all of the resource guidelines found within Chapter 2 either directly or indirectly affect settlement in the planning area. Other resources addressed in this chapter's sections should also be considered.

# Shorelands and Stream Corridors

Rivers and other waterbodies are important highways for local residents and visitors to the area. They provide access to subsistence fishing and hunting areas and access to traditional harvest areas. For residents and visitors, lakes, rivers, and other waterbodies offer places to hunt, fish, camp, view wildlife, and travel through the area. For moose, the river corridors provide important habitat particularly for over-wintering. A variety of waterbird and landbird species are seasonally concentrated along stream corridors, lakes, and wetlands. The Goals, Objectives, and Management Guidelines that follow apply to all state waters throughout the planning area. Buffers, easements, and setbacks may be required on Navigable and Public waters in this plan. Typically, they will not be applied to ancillary waters as defined in this plan as they receive very little use compared to Navigable and Public waters.[1]

## Goals

**Water Quality.** Protect water quality to support domestic, commercial, and industrial uses; fish and wildlife production; and recreational activities.

**Water-Dependent and Water-Related Uses.** Provide for needed water-dependent and water-related uses.

**Habitat Protection.** Protect fish and wildlife habitats along lakeshores, stream corridors, and wetlands.

**Recreation.** Provide opportunities for a variety of recreational activities within publicly owned stream corridors.

## Objectives and Management Guidelines

**Objective A.** Protect high value waterbodies or waterbodies that supply drinking water in a way that protects and enhances water quality and fish and wildlife habitats along stream corridors, shorelines, and waterbodies to the maximum extent practicable.

- **Guideline A-1.** *Alaska Clean Water Actions (ACWA).* In accordance with the ACWA process, DNR will work with ADF&G and DEC to protect and improve water quality, water quantity, and fish habitat. Any activity or development that impacts anadromous fish-bearing waters or resident fish streams will require a permit from ADF&G.

[1] Navigable and Public waters are defined in the Glossary found at Appendix A.

- **Guideline A-2.** *Protection of Land Adjacent to High Value Waterbodies.* When the management intent for state land adjacent to waterbodies (including rivers, streams, or lakes) is to protect wildlife habitat, anadromous or high value resident fish streams, or provide for intensive recreation uses associated with fishing, picnicking, hunting, camping, or other similar uses, the state should retain ownership of the adjacent uplands. Alternatively, to minimize on-going management responsibilities or for some other public purpose, a riparian buffer should be imposed either through an easement or a setback. See Table 2-3 for requirements related to riparian buffers. In instances involving a land disposal, the area of a riparian buffer may be reserved as public open space to be maintained by a common interest association. Whichever method is chosen should be designed to minimize negative impacts on visual character, protect habitat value, preserve water quality, and ensure public access. Public use sites may also be reserved during the land disposal process along high value waterbodies to provide public access and use of the waterbody. State-owned buffers or riparian buffers may be retained along the full length of the waterbody or on segments of the waterbody determined to have high current or future use, public use, or to require habitat protection.
- **Guideline A-3.** ADF&G, DEC, and the DNR Water Resources Section should be consulted when issuing or approving permits or authorizations adjacent to high value waterbodies.
- **Guideline A-4.** *Public Trust Doctrine.* All activities and authorizations should take into consideration and comply with the Public Trust Doctrine. For information on the Public Trust Doctrine, see Appendix E.

**Objective B.** Protect and preserve public use and public access to waterbodies to the maximum extent practicable without restricting resource development and as required by statute and regulation.

- **Guideline B-1.** *Priority of Public Uses in Stream Corridors.* DNR will place a higher priority on protecting public use values in stream corridors than on providing opportunities for private ownership or development of land. Prior to the disposal of stream corridor lands, DNR, in consultation with other affected agencies and the public, will assess existing and projected public use needs associated with the stream corridor. Disposals near streams that have important fish or wildlife habitat, or wildlife value, will be designed to ensure the protection of fish and wildlife and the habitat through the imposition of measures to ensure riparian protection.
- **Guideline B-2.** In making determinations as to whether a riparian area should be protected and the manner of such protection, adjudicators shall consult ADF&G. These procedures emphasize retaining such areas where a significant public interest or value exists, which is common in riparian areas. Other methods may be used depending on the specific context, including setbacks and easements.
- **Guideline B-3.** *Public Access Adjacent to Waterbodies.* Pursuant to AS 38.05.127, legal public access will be reserved in order to protect the public's right to travel to

and along the ordinary high water (OHW) of a waterbody without encouraging trespass. Permits, leases, and plans of operation for commercial and industrial uses, transportation facilities, pipelines, and other water-dependent uses may be authorized on state uplands adjacent to waterbodies if their activities are consistent with the management intent for the area and if they maintain stream bank access, and protect important fish and wildlife habitat, public water supplies, and public recreation. Trails and forms of non-motorized public access are generally considered to be appropriate within these areas, if they meet the conditions listed in 11 AAC 96.025. Certain types of motorized uses may also be appropriate if consistent with 11 AAC 96.020 and 11 AAC 96.025.

- **Guideline B-4.** Where feasible and prudent, there should be setbacks between the activities described above in Guideline B-3 and adjacent waterbodies. The width of this setback may vary depending upon the type and size of the use but must be adequate to maintain public access to and along riparian areas. The amount of impervious surface created within the riparian area should be minimized.
- **Guideline B-5.** *Access Easements Adjacent to Waterbodies.* A public use easement extending at least 50 feet upland of the OHW is to be imposed on all waterbodies as required by 11 AAC 51.045 for all disposals of state land or interests in state land, unless a suitable alternative is identified or not necessary to ensure access. The public rights retained in an easement shall be identified and noted in the DNR decision document and plat, if applicable. In areas that may be sensitive to vehicular travel, the easement should be reserved for non-motorized access only. Access easements may be used in combination with state land that is to be retained for public use or for the protection of environmental resources. In these situations, easements may be used to provide access to areas of state retained sensitive land or provide access corridors between lots or parcels within the subdivision.
- **Guideline B-6.** *Protection Easements and Setbacks Adjacent to Non-Anadromous Waterbodies.* Easements or building setbacks may be used in those instances where public recreation use is moderate or where sensitive habitat or other environmental resources exist but are not of the same importance as described under Management Guideline A-2. See the requirements for Sensitive Environmental Features Buffer in Table 2-3 when an easement is to be applied. The purpose of the easement or setback should be noted in the Department decision document and on the subdivision plat. Where a protection easement or setback is to be applied, vehicular use within the area of the easement is inappropriate and should not be authorized. Building setbacks may be used in lieu of a protection easement in those instances where it is not appropriate or necessary for the state to retain any easement rights *or* they may be used in combination with buffers, access easements, and protection easements. Building setbacks used in this fashion provide an added level of protection. See the requirements for ‘Building Setback’ in Table 2-3.
- **Guideline B-7.** *Lakeshore Public Access.* Despite the remote nature of many waterbodies within this planning area, a portion of the lakefront on lakes greater than 10 acres that have or may be expected to have public recreation and all inlets and

outlets of lakes of this size shall remain in public ownership for habitat protection and public recreation. Adequate public access to these lakes shall also remain in public ownership or is to be provided through section line, 'to-and-along' easements, or other types of public access easements. The amount of public ownership may vary on a site-specific basis, but, at a minimum, some portion of these lakes shall remain public. The size of the public reservation shall be appropriate to its expected long-range recreational use and relative to the size of the lake. A width of 150 feet or more measured from OHW is to be retained or protected through an easement along inlet and outlet streams.[2] Public use sites, created through the land disposal program, on lakes of 10-20 acres shall have at least 4 contiguous acres reserved for public access. For lakes larger than 20 acres, a public use site of at least 6 acres shall be provided.

- **Guideline B-8.** *Buffer, Easement, and Building Setback Widths.*

  1. The width of state retained land, access and protection easements, and building setbacks adjacent to waterbodies (lakes and streams) will vary, depending on whether the area is a retained parcel or imposed easement, and according to management intent and the specifics of the parcel under consideration. In addition, this width may vary along the area of the stream or lake that is to be protected. Establishing widths, especially for publicly retained lands, will be based on the following considerations: recreational activities to be accommodated, floodway and floodplain widths, habitat protection and management objectives, visual quality, use compatibility, prevention of erosion, or retention of a significant hydraulic resource (like a wetland).

  2. Although these widths may vary, the following criteria are provided to establish the minimum width that can be expected on various types of buffers, easements, and setbacks. They are specified here in order to establish some consistency in application and ensure a minimum level of resource and habitat protection or public access. Distances are measured horizontally landward from OHW along streams and other inland waterbodies. Because of the linear nature of streams and certain other habitat or hydraulic features, these minimum dimensions will apply to both sides of the feature that is to be protected. For example, the total protected area along a stream with a 100-foot setback would be 200 feet (100 feet each side). If state land is to be retained, it may be preferable to retain a larger width, often 200 feet on each side. Widths greater than 200 feet may also be warranted, depending on the specific site characteristics and the importance of the habitat or resources to be protected.

     a) Riparian buffers along anadromous and high value resident fish streams and waters: 100 feet along each side of the anadromous waterbody or high value resident fish stream. Widths greater than this amount, up to 300 feet, may be authorized if, after consultation with ADF&G, it is determined that larger widths are necessary to protect fisheries, wildlife, or habitat.

[2] As measured from each bank of the inlet/outlet stream. This requirement applies whether or not the stream is anadromous.

b) Buffers on other freshwater waterbodies on retained public land: 50 feet along each side of the stream or 50 feet along the shoreline of lakes.

c) Easements used in areas of sensitive environmental features:[3] 50 feet on each side of important environmental features. Distances greater than 50 feet (up to 100 feet) may be appropriate if the feature being protected is considered to be especially sensitive to disturbance and is considered a particularly high value resource; such features might include lacustrine and riverine wetlands, springs, salt licks, or geologic hazards requiring additional distance separation for public safety. Consult ADF&G if there is a question as to whether a width greater than 50 feet should be considered.

d) Public access easements, including 'to-and-along' easements required under AS 38.05.127, or utility easements adjacent to lakes and streams: 50 feet.[4]

e) Building setbacks: 100 feet adjacent to anadromous and high value waterbodies and 50 feet adjacent to all other waterbodies. The use of a building setback is usually not required if a riparian buffer is being imposed in an authorization. Riparian buffers preclude principal and most accessory structures within the riparian area; only water-dependent uses are authorized in these areas. For more detail see 'Riparian Buffers' in Table 2-3.

- **Guideline B-9.** *Application Requirements for Easements and Buffers Along Waterbodies and Related Environmental Features.* Table 2-3 specifies widths and other requirements for easements, buffers, and public access in order to ensure consistency between authorizations along waterbodies and related environmental features. The table captures the information provided in Management Guideline B-8 but also provides guidance on when these requirements are to be applied as well as aspects related to types of uses that may be appropriate. On a case-by-case basis, widths may be wider, in order to accommodate floodplain width, bank characteristics, size of the waterbody, extent of present or expected future public use, the need to protect important environmental features, or other relevant factors. Similarly, widths can be narrower on a case-by-case basis if it is determined that the harm intended to be avoided by the requirement is not likely to occur because of site-specific circumstances. However, the strip of land must be of sufficient width to allow for public access and to screen the waterbody from development, where possible, with an undisturbed strip of vegetation. In all instances, requirements for easements shall be noted on the lease, patent, or subdivision plat. This requirement also applies to easements described in Management Guideline B-8.

**Objective C.** *Other Guidelines affecting Shorelands and Stream Corridors.* Nearly all the resource guidelines found within Chapter 2 either directly or indirectly affect water resources in the planning area. The most commonly affected resource sections include Public Access, Fish and Wildlife, Transportation and Infrastructure, Subsurface Resources, and Recreation and Tourism; however other resources addressed in this chapter's sections should also be considered.

[3] See Table 2-3.
[4] Other types of utility easements may be less than this width, depending on the purposes of the easement.

## Table 2-3: Application Requirements for Easements and Buffers Along Waterbodies and Related Environmental Features

| Guideline/ Application | Minimum Width/ Measured from | Where it Applies | Primary Purpose | Guidelines |
|---|---|---|---|---|
| **1. Public Access (To-and-Along Easement)** Adjacent to all waters as required under 11 AAC 51.035.[5] | **50'** * Landward from OHW line. | Along: * Lakes * Streams | Provide public access to and along waterbodies. | • Prohibited: Water Dependent[6] or Water Related[7] uses or structures that would obstruct passage by the public within the area of the easement. Alternate upland access needs to be provided if access is blocked. • Allowed: Water Dependent or Water Related structures that would not significantly obstruct passage by the public within the area of the easement. • 'Along' easement is to be continuous unless topography or land status prevents a continuous easement. See 11 AAC 51.045. • The 'To' easement has a minimum width of 50 feet but may be increased to 60 feet or more if DNR determines that the need for increased public access to waters may justify construction of a road along an easement. • A section line easement can function as a 'To' easement if it provides a practical route to the shore or a river. See 11 AAC 51.045. |
| **2. Riparian Buffers** Adjacent to anadromous waterbodies and high value fish streams. | **100'** * Landward from ordinary high water line. | Along: * Anadromous and high value resident fish streams and lakes. | Protect riparian areas adjacent to anadromous and high value fish streams. | • Allowed: Water Dependent uses or structures that do not require extensive de-vegetation and/or land clearing. This requirement applies to the first 60' measured from OHW. 'Extensive' means more than 20% of affected area within the project site. Water related uses or structures that do not de-vegetate more than 40% of the affected area are allowed in areas greater than 60' measured from OHW. • Prohibited: Water related uses within the first 60 feet measured from OHW. • The width of riparian buffers may be increased along waterbodies if recreation use is heavy, a wildlife corridor needs to be provided, or if increased protection of a riparian area is warranted. Consult with ADF&G on decisions to increase buffer width. Note: the requirements for an 'along' easement also apply within the 50' upland of OHW. |
| **3. Freshwater Waterbodies Buffer** Adjacent to waterbodies that are not protected under #2 but where a significant public use or resource is determined to exist. | **100'** * Landward from OHW line along streams and lakes that are not covered in item #2 but are considered to have public significance or from the edge of the waterbodies, including wetlands, that are to be protected. | Along freshwater waterbodies that are determined to have public significance but where the requirements of #2 do not apply. | Protect areas adjacent to freshwater waterbodies that are important riparian areas or may be important for other public purposes. | • Allowed: Water Dependent uses or structures that do not require extensive de-vegetation and/or land clearing. This requirement applies to the first 60' measured from OHW. 'Extensive' means not more than 20% of affected area within the project site. Water related uses or structures that do not de-vegetate more than 40% of the affected area are allowed in areas greater than 60' measured from OHW. • Prohibited: Water related uses within the first 60 feet measured from OHW. • The width of riparian buffers may be increased along waterbodies if recreation use is heavy, a wildlife corridor needs to be provided, or if |

[5] See 11 AAC 51.035 for determination of Navigable and Public Water. See also 11 AAC 51.045 for easements 'To and Along Navigable and Public Water'. Other waters may be considered on a case-by-case basis.
[6] Water Dependent: means a use or an activity that can be carried out only on, in, or adjacent to a waterbody because the use requires access to the waterbody.
[7] Water Related: means a use or activity that is not directly dependent upon access to a waterbody, but which provides goods or services that are directly associated with water-dependent use and which, if not located adjacent to a waterbody, would result in a public loss of quality in the goods or services offered.

| Guideline/ Application | Minimum Width/ Measured from | Where it Applies | Primary Purpose | Guidelines |
|---|---|---|---|---|
| | | | | increased protection of a riparian area is warranted. Consult with ADF&G on decisions to increase buffer width. |
| **4. Sensitive Environmental Features Buffer** | **50'**<br>** Measured from edge of sensitive environmental feature. | Areas of important environmental features. These may include hydrologic features (wetlands, marshes), sensitive habitat areas, or areas subject to geotechnical constraints. | Protect sensitive environmental features not otherwise protected under Public Access, Riparian Buffers, or Freshwater Waterbodies. | • Sensitive environmental features may include wetlands, important upland habitat, prominent scenic features, and the like.<br>• The imposition of this requirement is discretionary and depends on the type and value of the area or resource that is to be protected.<br>• Prohibited: Residential (or other) structures and associated out buildings but not including utilities or minor accessory structures.<br>• Buffers can be created through easements or building setbacks, or both.<br>• Where this easement is imposed as part of a municipal entitlement action, this width is also 50 feet.<br>• Areas greater than 50 feet (up to 100') may be imposed on a case-by-case basis. Consult with ADF&G. |
| **5. Building Setback**<br>Adjacent to all public or navigable waters except anadromous and high-value resident fish waters (see guideline 6 below). | **50'**<br>* Landward from OHW. | Non-anadromous and non-high-value resident fish:<br>* Lakes<br>* Streams | Protect riparian habitat including access, recreation, and water quality along all waterbodies. | • This requirement is imposed where feasible and prudent, and necessary to protect public values along the stream.<br>• Does not apply to the exceptions listed at bottom of this table.<br>• The imposition of this requirement is discretionary and depends on the type and value of the area or resource that is to be protected.<br>• It is intended that the area of the setback remain vegetated to maintain habitat values or protect riparian areas.<br>• Areas greater than 100 feet may be imposed on a case-by-case basis. Consult with ADF&G. |
| **6. Building Setback**<br>Adjacent to anadromous and high-value resident fish waters. | **100'**<br>* Landward from OHW. | Anadromous and high-value resident fish:<br>* Lakes<br>* Streams | Protect riparian fish habitat, water quality, and recreation values along anadromous and high-value resident fish waters. | • This requirement may be imposed if necessary to achieve or protect riparian areas or other sensitive environmental features.<br>• The imposition of this requirement is discretionary and depends on the type and value of the area or resource that is to be protected.<br>• Does not apply to the exceptions listed at bottom of this table.<br>• It is preferred that the area of the setback remain vegetated to maintain habitat values or protect riparian areas.<br>• Areas greater than 100 feet may be imposed on a case-by-case basis. Consult with ADF&G. |

Where widths apply: * Freshwater areas ** Sensitive Environmental Features

For the definition of *anadromous waters* and *high-value resident fish waters* (derived from AS 41.17.950) see the Glossary in Appendix A. Exceptions that apply to items 5 and 6 above: a) Structures such as docks, bridges, and culverts whose purpose is access to or across the stream or lake; b) Water-dependent or water-related uses such as placer mining, fish culturing, and water supply intakes will be evaluated for exception on a case specific basis in consultation with ADF&G.

# Subsistence and Harvest

Subsistence use refers to the customary and traditional uses of wild, renewable resources for direct personal or family consumption, such as food, shelter, fuel, clothing, tools, or transportation. Subsistence use also includes the making and selling of handicrafts made from nonedible byproducts of fish and wildlife resources taken for personal or family consumption and for barter.

The harvesting of fish, game, and other wild resources is an important part of subsistence culture for the residents within the planning area. Subsistence and harvest activities throughout the planning area are diverse, with unique regional and temporal concentrations. Subsistence use is extensive not only in terms of geographic extent but also in terms of the number and variety of species harvested and used. Oftentimes, these activities are based on important cultural traditions that are intertwined with the existence of the rural indigenous communities across the region.

Black bears are an important food source for many residents across the Yukon Flats. Moose hunting occurs along every major river system in the area, including the Teedriinjik (Chandalar), Sheenjek, Christian, Coleen, Porcupine, Draanjik (Black), Ikheenjik River (Birch Creek), and Yukon rivers, as well as by lakes and gravel strips. Sustained hunting pressure occurs throughout major river corridors. Residents of local communities have historically harvested moose and continue to rely on moose as a primary source of wild food.

Salmon are highly valuable to subsistence fishers along the Yukon River. Residents of the planning area have a long history of harvesting fish for subsistence, including anadromous species (Dolly Varden, whitefishes *spp.*, and chum and Chinook salmon *spp.*), and resident species (Arctic grayling, burbot, and northern pike). While subsistence harvest data is limited, research from the ADF&G, Division of Subsistence suggests that up to 100,000 pounds of salmon and up to 15,000 lbs of whitefish *spp*. and 4,000 lbs of other non-salmon species are harvested annually by the communities within the planning area. Bering cisco harvests make up a substantial component of annual whitefish *Coregonus sp*. and sheefish *Stenodus leucichthys* harvests from the Yukon River. Chinook salmon stocks have experienced over a decade of low productivity with subsequent restrictions to subsistence fishing opportunities. As a result, restrictions and/or closures to sport fishing for Chinook salmon have been implemented each year since 2011. Chum salmon harvested in the sport fishery were assumed to be summer chum, caught incidentally with Chinook during midsummer. From 2021 to 2023, the sport fishery was closed to summer chum due to poor returns and corresponding closures and/or restrictions to the subsistence fishery. Although the 2024 summer chum run met escapement goals and the sport fishery remained open, the fall chum salmon run did not materialize, resulting in an additional closure. Within the planning area, the majority of lands and waters are used for traditional subsistence activities, including the harvest of fish, game, and other wild resources; however, the most important areas for these uses are specifically identified in this plan. These areas will be retained in

public ownership and managed to maintain subsistence and traditional use harvest opportunities.

Climate change is affecting wildlife habitat, which in turn affects hunters' ability to harvest. Travel for hunting is more dangerous because of changes in ice conditions. Drying fish is difficult with more summer precipitation and cooler temperatures. Decreases in wetland habitat make accessing waterfowl hunting areas more difficult. Warmer fall temperatures shift moose movement so they are less likely to be accessible during the legal hunting season. These changes are expected to continue to affect fish and wildlife populations and distributions over the course of the planning period, making it important to evaluate how activities will affect species in the context of on-going climate change. Therefore, adjudicators should consult with the appropriate state or federal agency to determine the most current information on fish and wildlife resources within the planning area. This section will consider the subsistence needs of rural Alaska residents that extensively utilize these resources.

## Goals

**Maintain Resource Areas.** Maintain in public ownership and protect subsistence resources sufficient to conserve a diversity of biological resources to support traditional harvest opportunities in areas that receive high levels of subsistence use.

**Maintain Traditional Use of Resources.** Maintain resources necessary to support traditional use for cultural activities and practices.

**Manage for Sustained Yield.** DNR management of state land and resources is to be consistent with the requirements of sustained yield, as expressed in the State Constitution.

**Contribute to Economic Diversity.** Protect fish and wildlife resources which contribute directly or indirectly to local, regional, and state economies through subsistence, personal use, and non-consumptive uses.

## Objectives and Management Guidelines

**Objective A.** Use and implement adequate protection measures to ensure the sustainability of fish and wildlife habitat, populations, and the continuation of other uses of the area.

- **Guideline A-1.** The management of state land and resources are to be consistent with the requirements of maximum use and sustained yield consistent with the public interest, as described in Article VIII of the State Constitution.
- **Guideline A-2.** Consider subsistence and harvest needs of Alaska residents and the communities that extensively utilize these resources.

- **Guideline A-3.** Consult ADF&G regarding uses and activities that potentially impact the harvest of subsistence resources in areas designated for Harvest.

**Objective B.** Maintain and enhance the natural environment in areas known to be important as habitat for fish and wildlife necessary for subsistence harvest.

- **Guideline B-1.** Maintain to the maximum extent practicable the underlying integrity of the ecological systems supporting this traditional way of life within the planning area.
- **Guideline B-2.** When resource development projects occur, avoid or minimize changes in the quality and quantity of fish and wildlife habitat.
- **Guideline B-3.** DNR decisions are to carefully consider the effects of a proposed project or activity upon these uses and resources, and authorizations are to ensure that adverse impacts are avoided, minimized, or mitigated consistent with the requirements of this section of Chapter 2 and, specifically, with Management Objective A within areas designated for Harvest.

**Objective C**. *Other Guidelines Affecting Subsistence and Harvest.* Nearly all of the resource guidelines found within Chapter 2 either directly or indirectly affect subsistence and harvest activities within the planning area. The most commonly affected resource sections include Public Access, Water Resources, Fish and Wildlife Habitat, and Recreation and Tourism; however other resources addressed in this chapter's sections should also be considered.

# Subsurface Resources

The planning area in Northeast Alaska contains moderate amounts of subsurface resources, mainly gold, with potential for coal, oil and gas, and geothermal resources.

**Oil and Gas Resources**

It is probable that oil and gas resources are present within the planning area. Exploration for petroleum reserves has been the focus of several investigations since the 1970s in the Yukon Flats Region. Those efforts have been centered around the Ikheenjik River (Birch Creek) area but extend eastward across the Yukon Flats and southeast into the Kandik sedimentary basin. In the Kandik basin, hydrocarbon source rocks have been identified and characterized through geochemical analysis as having oil-generating potential. The potential for petroleum reserves is believed to be moderate to high within these interior basins. Private industry is presently exploring in the area through agreements with the landowner – Doyon, Limited.

**Coal Resources**

Historically, coal has been harvested for personal use at Tramway Bar, but there have been no commercial operations in the planning area. There are two areas where coal potential has been identified, near Coldfoot and Central, including some research that identifies likely coal resources within the Kandik sedimentary basin.

**Locatable Minerals**

The development of locatable minerals has been an important part of the settlement and economy of this part of Alaska. There are extensive placer mining operations near Central, Wiseman, and Chandalar, but no major mines exist in the planning area. Placer mining in these areas focuses on gold.

There is some potential for harvest of Rare Earth Elements (REE). REEs recorded in the planning area, listed from greatest concentrations to least, are Cerium (Ce), Lanthanum (La), Scandium (Sc), Samarium (Sm), Dysprosium (Dy), Ytterbium (Yb), Europium (Eu), Terbium (Tb), and Lutetium (Lu). Based on the available data, state lands within the planning area with the highest concentrations are centered around Chandalar and the Dalton Highway.

## Goals

**Opportunities for Mineral Exploration and Development.** Provide opportunities for mineral exploration and development through state land management.

**Job Opportunities and Economic Growth.** Contribute to Alaska's economy by making subsurface resources available for development, which will provide job opportunities and stimulate economic growth.

**Environmental Quality and Cultural Values.** When developing subsurface resources, protect the integrity of the environment and affected cultural features to the extent feasible and prudent.

## Objectives and Management Guidelines

**Objective A.** Where deemed appropriate, provide opportunities for mineral exploration and development to the maximum extent practicable without jeopardizing other resources.

- **Guideline A-1.** *Mineral Exploration*. By statute, exploration for locatable minerals is allowed on all state lands. A land use permit is required under most circumstances. Hand prospecting and exploration activities generally do not require a permit. DNR may determine that some forms of access will not be allowed in specific areas to avoid resource damage.
- **Guideline A-2.** *Open to Mineral Location.* By statute, all state lands are open to mineral entry unless specifically closed. Where an area is open to mineral location, a miner has the right to stake a mining location regardless of the surface use designation or classification. Any adverse effects of mining on surface resources or uses will be managed through compliance with state laws and regulations and the management guidelines in this plan. Except for areas designated Settlement, Public Facilities, or Water Resources, state land is considered appropriate for mineral exploration and development consistent with applicable state law, administrative regulation, and management intent and guidelines. Areas designated Settlement, Public Facilities, or Water Resources may be appropriate for mining activity but will likely require the use of stipulations to avoid or mitigate impacts to important public facilities, settlement areas, and large wetland complexes. Reclamation activities are directed by the Mining Reclamation Act (AS 27.19) and regulations (11 AAC 97).
- **Guideline A-3.** *Mineral Closures.* The decision to apply mineral location closures will be made by the Commissioner of DNR within the standards set by Alaska Statutes. AS 38.05.185(a) requires that the Commissioner determine that mining is incompatible with a significant surface use before an area can be closed to mining. The same section of the statute requires that the Commissioner determine that a potential use conflict exists before imposing leasing requirements for development of locatable minerals. The fact that an area is closed to new mineral location will not be cause for denying access across state land. Mineral closures do not affect valid existing mineral locations.
- **Guideline A-4.** *Lands Closed to Mineral Entry.* State mining law stipulates that mining must be determined to be in conflict with significant surface uses before an area can be closed to mineral entry (AS 38.05.300). This plan creates one mineral order, and the current mineral closing orders will be retained since these occur within streams and land disposal areas. The management intent section of parcels should be consulted to determine if a management unit is affected by a leasehold location order or mineral order recommendation. To determine the location of areas closed to

mineral entry in the planning area consult the DNR Alaska Mapper, available online at: https://mapper.dnr.alaska.gov/

- **Guideline A-5.** *Leasable Mineral Development.* State land within the planning area may be leased or opened for mineral or coal exploration and development if the Department determines it is in the best interest of the state to enter into a lease for such resources. Before authorization of a lease, the Department will determine if the surface values are significant enough to warrant restricting surface entry. The surface impacts of proposed underground mining shall be fully considered as part of the permitting process.
- **Guideline A-6.** All coal activities shall be completed in compliance with all applicable provisions provided by 11 AAC 90 and AS 27.21: The Alaska Surface Coal Mining Control and Reclamation Act.
- **Guideline A-7.** The DNR Mining Section shall be consulted when authorizing any subsurface coal activities.
- **Guideline A-8.** *Oil and Gas Resources*. The planning and decision-making processes for oil, gas, and geothermal resource allocation and development follow their own section of the Alaska Statutes (AS 38.05.125 through AS 38.05.184) as well as AS 38.05.035. These processes are not included as part of DNR area plans. State land, with few exceptions, is subject to oil and gas exploration and development, either through areawide leasing under AS 38.05.180 or by exploration licensing under AS 38.05.131. In addition, geothermal exploration and development may occur under AS 38.05.181. For this reason, the Plan does not make any allocation or development decisions regarding these resources. All decisions regarding oil, gas, and geothermal resources are subject to DNR's existing oil, gas and geothermal permitting, licensing, and leasing processes.

    1. Oil and gas sales are not subject to the regional planning process; instead they follow the planning process identified under AS 38.05.180. The land use classifications of the Plan are multiple use in character and do not preclude oil and gas development.
    2. It should be noted that mineral closing orders under AS 38.05.185 do not apply to oil and gas exploration and leasing, nor do they preclude reasonable surface access to these resources. However, rights reserved under AS 38.05.125 may not be exercised until provision is made for payment for all damages sustained by the landowner (AS 38.05.130).
    3. Geophysical exploration permits issued under 11 AAC 96 will conform to the maximum extent possible with the management guidelines in the applicable plans.

**Objective B.** When subsurface exploration and development is permitted, the protection, management, and enhancement of the environment, fish and wildlife species and habitat, and cultural values, is to be considered to the maximum extent practicable.

- **Guideline B-1.** To protect environmental and cultural values, DNR staff shall coordinate applications for subsurface resource exploration and development with appropriate ADF&G, DEC, and OHA staff.
- **Guideline B-2.** *Reclamation of Mined Land.* Reclamation activities are directed by the Mining Reclamation Act (AS 27.19) and regulations (11 AAC 97). The reclamation of mining operations, including placer mining, must meet the reclamation standards given in AS 27.19. The reclamation law provides a standard that miners must meet during and after mining. The mining operation must be conducted in a manner that prevents unnecessary and undue degradation of land and water resources and requires that reclamation occur "contemporaneously" with the mining operation. 11 AAC 97 (Mining Reclamation) details the specific requirements that must be followed. In designated habitat areas, annual reclamation will be required concurrent with mining and will be required to restore degraded fish and wildlife habitat and prevent hazards to navigation.
- **Guideline B-3.** *Mining in Fish and Wildlife Habitat.* A permit for mining in or adjacent to designated fish habitat will require, as stipulations of the permit, any necessary measures that will allow the operation to meet water quality standards, statutes, and regulations governing the protection of fish, such as: levees, berms, seasonal restrictions, and settling ponds. Mining in fish habitat requires permits from DEC and ADF&G. A Special Area Permit issued by ADF&G is required if the project is located within a legislatively designated area, including uplands, estuaries, or tidelands. Waterbodies listed within the ADF&G Anadromous Waters Catalog (AWC) represent a fraction of those actually used by anadromous species, and documentation of resident fish streams is not centralized. Therefore, DNR shall consult with ADF&G prior to the issuance of an authorization where stream channels are present and the likelihood of anadromous or high value resident fish is high, at least seasonally.
- **Guideline B-4.** *Mining in Areas Co-Designated Minerals and Habitat.* If this co-designation is used, it means that high mineral and habitat values exist within all or portions of the management unit. Mineral exploration and development are considered appropriate uses within units affected by this co-designation, although there may be sites within a management unit that may not be appropriate for mineral development. Determinations of this type are to be made as part of the regulatory/permitting processes related to the authorization of these uses. Although mineral exploration and development within the planning area are considered appropriate or may be appropriate with stipulations, mining or authorizations granted by DNR shall carefully consider the effects of a proposed development on the area's fish and wildlife and their associated habitats, and the short- and long-term effects on human access to those resources. Those habitats considered significant within a management unit are identified in the Resource Allocation Table in Chapter 3. Some of these habitat areas are used on a seasonal basis and activities that occur at other times of the year than these periods may be appropriate. Consult the Fish and Wildlife Habitat section of this chapter for when these seasonal use periods occur. In all

instances, consult ADF&G prior to issuing an authorization for mineral or coal exploration or development.

- **Guideline B-5.** Although mining is considered an appropriate use in areas designated Mineral or Mineral/Habitat and in areas designated Resource Management, there may be sites within a management unit that may not be appropriate for coal development or mining. Determinations of this type are to be made as part of the regulatory review/permitting processes related to the authorizations of these activities. It may also be appropriate in areas with other designations, except for areas designated Settlement. Although mining within the aforementioned areas is considered appropriate or may be appropriate with stipulations, mining authorizations granted by DNR shall carefully consider the effects of proposed mining operations on the Central Arctic Herd (CAH), the Porcupine Caribou Herd (PCH), the Fortymile Caribou Herd (FCH), and the Teshekpuk Caribou Herd (TCH) activities. CAH, PCH, FCH, and TCH activities often only affect an area on a seasonal basis. Consult the Resource Allocation Table and the Fish and Wildlife section of this chapter for the specific periods that such use may occur and the types of use that may be present. ADF&G shall be consulted prior to issuing an authorization for mining exploration or development.

**Objective C.** *Other Guidelines affecting Subsurface Resources.* Nearly all of the resource guidelines found within Chapter 2 either directly or indirectly affect subsurface resources in the planning area. The most commonly affected resource sections include Public Access, Transportation and Infrastructure, Water Resources, Subsistence and Harvest, Fish and Wildlife Habitat, and Recreation and Tourism; however other resources addressed in this chapter's sections should also be considered.

# Transportation and Infrastructure

Much of the infrastructure within the planning area is along the Dalton and Steese Highways, reflecting the high concentration of mining activities. Generally, the infrastructure includes roads, gravel roads, and support infrastructure for mining. Major transportation resources in the planning area include community airports, the Dalton Highway, and the Steese Highway.

**Transportation**

Transportation throughout the region varies significantly between the winter and summer months. Ground transportation throughout the planning area is centralized around the Dalton Highway and Steese Highway. The James Dalton Highway was originally built in 1974 as a haul road to provide industrial access to the newly discovered oil field in Prudhoe Bay and allowed for the construction of the Trans-Alaska Pipeline System (TAPS). The Alaska Department of Transportation and Public Facilities (DOT/PF) is responsible for maintaining the highway and its associated structures. The highest pass on the Dalton Highway (4,739 feet) is at Atigun Pass at milepost 244, about 15 miles north of the planning area. The primary purpose of the Dalton Highway was to support oil and gas industry activities; however, it is open to use by the public and serves as an important transportation link for residents of local communities. The Alaska Legislature designated the Dalton Highway Corridor a Legislatively Designated Area (LDA), under AS 19.40. Numerous restrictions and stipulations are laid out in this statute and in the James Dalton Highway Master Plan, including motorized use within and outside of the highway corridor. Almost the entirety of the corridor adjacent to the Dalton Highway is federally owned lands managed by BLM. These lands are subject to Public Land Order 5150 and were unavailable for State selection under its statehood entitlement. Section 906(e) of the Alaska National Interest Lands Conservation Act (ANILCA) allowed the State to file future selection applications (so called top filings) on lands previously unavailable for selection, which the state did on the lands subject to PLO 5150. The lands within PLO 5150 are the highest priority selections for the state. This plan establishes management intent for these lands in anticipation of their conveyance to the state.

The Steese Highway provides important access to recreation, mining claims, and communities. The highway was built to serve the Circle Mining District, where gold was booming in the late 19$^{th}$ century. The highway follows a trail that was originally used to carry mail by dogsled from Circle (on the Yukon River) southwest to the gold mines. The Steese Highway is a designated Scenic Byway, with three summits: Cleary, Twelve Mile, and Eagle.

Air transportation is the primary, year-round mode of transportation throughout the area. Most air transportation is centralized around the Fairbanks and Fort Yukon airports. Each community has a designated airport that provides passenger and cargo services as well as Search and Rescue and emergency services. There are 12 public airports in the planning area managed by the State. The Arctic Village and Venetie airports are owned by the Venetie

Tribal Government. The runways are gravel surfaced, and few have runway lights. Frequency of air service varies, but several communities have regularly scheduled air service.

Commercial riverine transportation opportunities are limited to the communities along the Yukon River. Barges deliver freight and fuel to Fort Yukon and other communities along the Yukon River by request. Riverine transportation is seasonally limited due to freezing rivers.

**Infrastructure**

Infrastructure across the area varies greatly between communities. All of the Native villages have roads, but only Circle is connected to the state road system. Central, Wiseman, and Coldfoot are also on the road system. Airports provide a vital year-round link for these remote communities. Electrical power is generated through diesel or natural gas and most communities have associated infrastructure serving their homes and facilities. Education for students is provided by the Yukon Flats School District or correspondence schools. All villages and most communities have solid waste sites for disposal of refuse. For additional information about the communities, visit the Department of Commerce, Community, and Economic Development Alaska Community Database online.

Aside from the communities and the Steese and Dalton Highway areas, industrial infrastructure throughout the remainder of the planning area is extremely limited and dispersed. Infrastructure along the Dalton and Steese Highways is primarily related to the maintenance of the Dalton and Steese Highways and the Trans-Alaska Pipeline System (TAPS). Infrastructure in the communities include, but are not limited to, roads, pipelines, utility lines and facilities, and airports.

**Mineral Infrastructure, Oil Wells, Pipelines, and Facilities**

Most mineral infrastructure is located on state lands within twenty miles of the Steese Highway. Since mineral exploration and development began, many placer mines have been developed.

There are three oil wells in the far eastern portion of the planning area, on Native land (Doyon, Ltd.). All are plugged and abandoned.

The 800-mile Trans-Alaska Pipeline System (TAPS) originates at Pump Station 1 in Prudhoe Bay and transports oil to the Valdez Marine Terminal. Within the Plan boundary, this pipeline runs generally parallel to the Dalton Highway and traverses a variety of terrain, crossing the Brooks Range. Of the 800-miles of pipeline, some 380 miles are buried while the remaining 420 miles are found above ground due to the presence of permafrost. Since TAPS was completed in May 1977, over 19 billion barrels of North Slope crude oil have passed through the pipeline.

**Spill, Contaminated, and Solid Waste Sites**

Spills, contaminated sites, and solid waste sites are present within the Plan boundary. Spill and contaminated sites are areas impacted by a release of oil or hazardous substances, and are regulated under 18 AAC 75 and also by DEC's Prevention Preparedness and Response

Program (PPRP). Some spills have been transferred to DEC's Contaminated Sites Program (CSP). Solid waste sites within the planning area include Class III landfills and monofils and are regulated under 18 AAC 60.

Contamination and solid waste sites are cataloged within existing DEC databases where known. These sites may be associated with oil and gas operations, early statehood military activities, municipal landfills, grind and inject facilities, treatment facilities, drilling waste monofils, and reserve pits. Where EPA Orders apply, DEC and EPA may coordinate their regulatory efforts in consultation and coordination with DNR and other landowners.

Information on known spill, contaminated, and solid waste sites can be obtained through the following resources:

DEC Contaminated sites database:
https://dec.alaska.gov/Applications/SPAR/PublicMVC/CSP/Search/

DEC Solid Waste Sites map:
https://gis.data.alaska.gov/datasets/DEC::solid-waste-sites/explore

DEC Solid Waste database of facilities:
https://dec.alaska.gov/Applications/EH/SWIMS/Default.aspx

DEC Spills database:
https://dec.alaska.gov/Applications/SPAR/PublicMVC/PERP/SpillSearch

For information regarding spills in the planning area, contact:
decsparspilldata@alaska.gov.

**Abandoned and Derelict Vessels**

Commercial and residential goods are transported into the area seasonally via tug and barge to support communities. Other smaller vessels are used by local residents for hunting, fishing, and in support of subsistence activities. This area has the potential for abandoned and derelict vessels (ADVs) on state shorelands.

## Goals

**Industrial Infrastructure.** Prioritize and encourage shared infrastructure and facilities within industrial areas to reduce the cost and footprint of new infrastructure.

**Community Connectivity.** Encourage opportunities for community connectivity through the development of new transportation routes, as well as through opportunities to plan industry infrastructure to support community access and use.

**Regional Transportation.** Encourage the use and development of shared ground, air, and water transportation routes and facilities that provide for both community and industry needs.

**Economic Development.** Contribute to Alaska's economy by improving access to various resources throughout the region to stimulate economic growth, generate job opportunities, and develop community connectivity.

**Spill, Contaminated, and Solid Waste Sites.** Identify these sites early in planning or adjudicating projects to avoid complications or delays. Consistently address site response, characterization, and closure.

**Pollution Liability Prevention.** Prevent releases of hazardous substances or contamination and avoid the acquisition of pollution liability for the state. Clearly document existing liabilities and work with responsible parties prior to expiration of their authorization to characterize and clean contamination to an unrestricted use standard when technically practicable.

**Contamination Management.** Ensure sites are cleaned with a goal of achieving unrestricted use.

**Spills and Releases.** When possible, a responsible party shall investigate, contain, and perform a cleanup of hazardous substance and oil and achieve site closure per 18 AAC 75.315 in consultation with DNR.

**Safety and Well Being.** Prioritize use of appropriate safety measures to encourage the well-being of Alaskans.

**Abandoned and Derelict Vessels.** Prevent and deter the abandonment of derelict vessels in the waters of the state and on state, municipal, and private property.

## Objectives and Management Guidelines

**Objective A. Industrial Transportation.** All transportation systems should be constructed in such a way that minimizes potential adverse impacts to the environment and surrounding resources to the maximum extent practicable without jeopardizing other resources and activities.

- **Guideline A-1.** *Protection of the Environment.* In the siting of regional and industrial facilities, consideration is to be given to the effect of the proposed project or improvement on the natural environment, fish and wildlife species, and habitats identified in this plan as significant. ADF&G shall be consulted prior to the issuance of an authorization to determine whether significant impacts to fish or wildlife resources or their associated habitats are anticipated and can be mitigated.

- **Guideline A-2.** Development within the Dalton Highway Corridor LDA shall comply with the provisions of AS 19.40.
- **Guideline A-3.** Gravel roads, pads, and airstrips may be permitted on a case-by-case basis where year-round infrastructure is warranted, in consultation with DOG and ADF&G.

**Objective B. Community Transportation.** Transportation throughout the region should accommodate and balance the needs of resource development, subsistence uses, and community connectivity.

- **Guideline B-1.** When designing or authorizing transportation systems that may affect communities, consider the potential impacts on subsistence use, health and safety, and cultural preservation.
- **Guideline B-2.** When designing or authorizing transportation systems that may impact communities, consult with ADF&G, DEC, DOT/PF, and DNR Northern Regional Land Office.

**Objective C. Facilities and Infrastructure.** All facilities should be sited and constructed in such a way that minimizes potential adverse impacts to the environment and surrounding resources to the maximum extent practicable without jeopardizing other resources and activities.

- **Guideline C-1.** When designing or authorizing transportation systems that may affect communities, consider the potential impacts on subsistence use, health and safety, and cultural preservation.
- **Guideline C-2.** All new pipelines and other types of linear infrastructure should be co-located to minimize the area of resource disturbance and be built to specifications that will not impede fish and wildlife movements.
- **Guideline C-3.** When considering authorizations within the planning boundary, adjudicators should consult the DEC contaminated sites map for more information regarding the locations and extent of known and potential sites.

**Objective D. Spill, Contaminated, and Solid Waste Sites.** Ensure coordination between agencies responsible for mitigation of contaminated sites.

- **Guideline D-1.** DNR has the lead responsibility for determining cleanup standards and the approval of cleanup plans on state land before permittees or lessees are released from further liability. DNR will coordinate clean-up requirements with Alaska Oil and Gas Conservation Commission and DEC. This includes active and inactive reserve pits, contaminated sites, and hazardous releases to state land.

**Objective E. Safety and Well Being.** Ensure long term health and safety of Alaskans by prioritizing projects that either construct, upgrade, or rehabilitate existing health & safety facilities as well as those that improve or provide access to these facilities.

**Objective F. Abandoned and Derelict Vessels.** Mitigate the potential impacts of these vessels to State shorelands and the habitats they support.

- **Guideline F-1.** When notified of an abandoned or derelict vessel, DMLW will take steps to identify the vessel owner and have the responsible party recover the vessel and minimize the impacts to public resources. Where the vessel cannot be recovered, DMLW will work with the responsible party to develop a plan to address the vessel that minimizes impacts to public resources.

**Objective G.** *Other Guidelines affecting Transportation and Infrastructure.* Nearly all of the resource guidelines found within Chapter 2 either directly or indirectly affect transportation and infrastructure in the planning area. The most commonly affected resource sections include Public Access, Fish and Wildlife Habitat, Materials, Water Resources, Subsistence and Harvest, Subsurface Resources, and Recreation and Tourism; however other resources addressed in this chapter's sections should also be considered.

# Water Resources

The planning area is hydrologically dynamic, containing a wide variety of water sources. There are a vast number of lakes, ponds, streams, and rivers present throughout the planning area. The area is also characterized by expansive wetlands. Wetlands are essential to the regulation and replenishment of stream flow and the maintenance of water quality throughout the region. These waterbodies collectively contribute significantly to the hydrology and ecology of the planning area.

Snow is the most common form of precipitation in the region and remains on the land surface until it melts during the warmer spring and summer months. The majority of streamflow takes place during a brief two to three-week break-up period typically between late May and early June. Streamflow in all waterbodies, even the largest rivers, throughout the region comes to an almost complete stop during the winter months.

Major lakes in the planning area include the Chandalar, Chloya, Twin Island, and Bob Johnson lakes, and each support activities by a variety of users. Major river corridors in the planning area include the Yukon, Teedriinjik (Chandalar), Charley, Porcupine, Grass, Draanjik (Black), Christian, Coleen, Dall, Hodzana, Ikheenjik (Birch Creek), Nation, and Kandik rivers. While all of these river corridors are important to the region, some support frequent use by local residents, industry, subsistence hunters, hunting guides, and recreational users. Some of the largest and most important rivers include the Yukon, Teedriinjik (Chandalar), and Porcupine Rivers.

The State holds and controls all state water in trust for the use of the people of the state, maintaining legal access to and along waterbodies through easements or rights-of-way. For more information, please see the *Public Trust Doctrine* in the Appendix E. Where private property exists along waterbodies, the state will manage any state-owned beds of those waterbodies up to the ordinary high-water mark. The northern boundary of NEAAP was chosen because it approximately abuts the lands covered under PLO 82, which is a valid pre-Statehood withdrawal. The State did not receive title to the beds of the waters under PLO 82, and therefore NEAAP does not need to classify those shorelands; all other lands above the northern boundary are federal. The State asserts title to other beds of navigable “in fact” bodies of water in the planning area under the Submerged Lands Act and equal footing doctrine.

**Categories of Waterbodies**

For the purposes of and within this plan, waterbodies are discussed as Navigable, Public, or Ancillary, as defined below. These definitions, for management purposes, are not necessarily the same as those used for conveyance purposes.

**Navigable Waters.** Waters that, at the time of statehood, were used, or were susceptible to being used, in their ordinary condition as highways for commerce over which trade and travel were or could have been conducted in the customary modes of trade and travel on

water ("navigable in fact"); the use or potential use does not need to have been without difficulty, extensive, or long and continuous. "Navigable Waters" include rivers, lakes, creeks, streams, sloughs, anabranches, passages, or canals, or any other body of water or waterway within the territorial limits of the state or subject to its jurisdiction, that is navigable in fact for any useful public purpose, including but not limited to water suitable for commercial navigation, floating of logs, and public boating. "Navigable Waters" include all downstream distributaries, deltas, and braided channels containing the flowing waters of any navigable in fact waters. Those "Navigable Waters" in their liquid state remain navigable in their frozen state. (AS 38.05.965(14)).

**Public Waters.** Public waters are those not included within "Navigable Waters," but that are or could be used for recreational, commercial, mining, trapping, fishing, hunting, landing and takeoff of aircraft, industrial or other public purpose in any season in a frozen or liquid state. "Public Waters" may be meandered or unmeandered and may include small lakes, perennial streams, perennial creeks, and small sloughs. "Public Waters" include waters through which anadromous fish species pass and from which fish or shellfish are or could be taken for human consumption. Those "Public Waters" in their liquid state remain public in their frozen state. (AS 38.05.965(21)).

**Ancillary Waters.** Waters that due to their small catchment area, small surface area, small width, small depth, lack of anadromous or other fish population, lack of shellfish population or other limitations render them unsuitable for significant public purposes. "Ancillary Waters" mean isolated small lakes or ponds (normally with a surface area of less than 10 acres), small headwater streams or creeks with small catchment areas, intermittent streams or creeks, ditches, swales, springs, flushes, surface runoff, and ephemeral waters. "Ancillary Waters" include wetlands (areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions such as swamps, marshes, bogs, muskeg, and similar areas).

**Uses of Water**

People, fish, wildlife, resource development, and mineral activities all require the use of water. Communities throughout the area use water resources, such as lakes and rivers, for subsistence resources such as anadromous and resident fish and waterfowl and to supply drinking and potable water. Recreational activities and other public uses on major waterbodies have increased in some parts of the planning area. Water resources across the area shall be managed in such a way that meets the needs of users while simultaneously maintaining the long-term sustainability of the resource.

The Alaska Water Use Act (AS 46.15.010) states that the Department of Natural Resources "shall determine and adjudicate rights in the water of the state, and in its appropriation and distribution." A number of water resource management practices have been established to satisfy this requirement and are defined in AS 46.15. Basic information related to these water resource management practices can be found in the guidelines below while more specific

information can be found in the Alaska Water Use Act and other applicable state statutes and regulations.

This section will consider the water resources within the planning boundary. The Goals, Objectives, and Management Guidelines that follow apply to all state-owned waters throughout the planning area regardless of land classification.

## Goals

**Water Quality.** Protect water quality to support domestic, commercial and industrial uses, fish and wildlife production, and recreational activities. Protect watersheds that supply community drinking water.

**Water Dependent and Water Related Uses.** Provide for needed water-dependent and water-related uses.

**Habitat Protection.** Protect fish and wildlife habitats within and along lakeshores, stream corridors, and wetlands.

**Recreation.** Provide opportunities for a variety of recreational activities within publicly owned stream corridors.

## Objectives and Management Guidelines

**Objective A.** Manage water responsibly and reserve sufficient water to maintain a specified instream flow or level of water on a stream or waterbody to protect and ensure the continuation of other uses of the area.

- **Guideline A-1.** ADF&G, DEC, and DNR Water Resources Section should be consulted when issuing or approving permits or authorizations affecting waterbodies within the planning area.
- **Guideline A-2.** *Public Trust Doctrine.* All activities and authorizations should take into consideration and comply with the Public Trust Doctrine. For information on the Public Trust Doctrine, see Appendix E.
- **Guideline A-3.** Proposals for new developments requiring the use of a significant amount of water as defined by 11 AAC 93.035 shall submit to the Department an application for water rights or temporary water use authorizations.
- **Guideline A-4.** *Process for Determining Reservations.* Applications for instream flow reservations are submitted to DNR for adjudication following the procedures identified in 11 AAC 93.141-147.

- **Guideline A-5.** *Considerations for Reservations of Water (General).* Streams, lakes, and other waterbodies may be considered for reservations of water under AS 46.15.145. Such reservations are intended to reserve sufficient water to maintain a specified instream flow or level of water on a stream or body of water for one or more purposes: 1) protection of fish and wildlife habitat, migration, and propagation; 2) recreation and park purposes; 3) sanitary and water quality purposes; and 4) navigation and transportation purposes.
- **Guideline A-6.** *Priorities.* Reservations of Water have been established according to AS 46.15.145 on the Middle Fork Koyukuk River and Beaver Creek (see DMLW Water Reservations webpage for current information). See Appendix F for applications pending on water bodies in the planning area.

**Objective B.** *Other Guidelines affecting Water Resources.* Nearly all of the resource guidelines found within Chapter 2 either directly or indirectly affect water resources in the planning area. The most commonly affected resource sections include Public Access, Fish and Wildlife, Shorelands and Stream Corridors, Transportation and Infrastructure, Subsurface Resources, and Recreation and Tourism; however other resources addressed in this chapter's sections should also be considered.

1