

Fish and Wildlife Habitat and Harvest Areas

Background

Although all lands serve as fish or wildlife habitat and harvest areas to some degree, the most important habitat and public use lands will be retained in public ownership and managed to maintain fish and wildlife production and related public uses. State land in the planning area provides habitat for a variety of species including marine mammals, birds, moose, caribou, bear, Dall sheep, furbearers and other animals. Within the planning area, lands with the high values for fish and wildlife habitat and harvest generally occur along the coast, along the major river systems, and within important habitat areas for marine mammals, moose, bear, caribou, and furbearers. A dominant ecological attribute within the planning area is the Western Arctic Caribou Herd (WACH). At almost 500,000 (July 2003 estimate) this is the largest caribou population in Alaska. It occupies the northwestern quarter of the state, an area of about 140,000 square miles, and all of the planning area of the NWAP. These fish and wildlife resources are used extensively by local area residents as well as people throughout the state and outside of Alaska. The guidelines below apply to particularly important habitat areas throughout the planning area, such as marine mammal haulouts, sea bird rookeries, waterfowl concentration areas, moose and caribou seasonal habitats, anadromous and high value resident fish streams, lagoons and estuaries.

Goals

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

Mitigate Habitat Loss. When resource development projects or land disposals occur, avoid or minimize reduction in the quality and quantity of fish and wildlife habitat.

Contribute to Economic Diversity. Contribute to Alaska's economy by protecting the fish and wildlife resources which contribute directly or indirectly to local, regional, and state economies through commercial, subsistence, sport and non-consumptive uses.

Maintain and Protect Publicly Owned Habitat Base. Protect and maintain in public ownership and protect habitat for fish and wildlife resource protection to supply sufficient populations or a diversity of species to support commercial, recreational, or traditional uses on an optimum sustained yield basis; and protect unique or rare assemblages of a single or multiple species of regional, state, or national significance.

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.

Avoid the Introduction of and Reduce the Spread of Invasive Plant and Animal Species. State lands are to be managed to avoid or reduce the spread of non-native invasive animals and plants. This management shall be consistent with the applicable requirements of 11 AAC 34.

Manage to Maintain and Enhance the Natural Environment. DNR, in its management of habitat on state lands, shall attempt to maintain and enhance the natural environment in areas known to be important as habitat for fish and wildlife.

Management Guidelines

The management guidelines that follow apply to all habitat areas throughout the planning area, with special consideration given to marine mammal haulouts, sea bird rookeries, waterfowl concentration areas, moose and caribou seasonal habitats, anadromous fish and high value resident fish streams, lagoons and estuaries, and other areas listed in Guideline B where alteration of the habitat and/or human disturbance could result in a permanent loss of a population or sustained yield of a species.

A. Mitigation. 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 this policy.

All land use activities will be conducted with appropriate planning and implementation to avoid or minimize adverse effects on fish, wildlife, or their habitats.

DNR 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 and ADF&G will enforce stipulations and measures appropriate to their agency, and will require the responsible party to remedy 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.

When determining appropriate stipulations and measures, the DNR will apply, in order of priority, the following steps. Mitigation requirements listed in other guidelines in this plan will also follow these steps:

1. Avoid anticipated, significant adverse effects on fish, wildlife, or their habitats through siting, timing, or other management options.
2. When significant adverse effects cannot be avoided by design, siting, timing, or other management options, the adverse effect of the use or development will be minimized.

3. 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.
4. DNR shall consider requiring replacement with, or enhancement of, fish and wildlife habitat when steps 1 through 3 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. Replacement with or enhancement of similar habitats of the affected species in the same region is preferable. DNR will consider only those replacement and enhancement techniques that have either been proven to be, or are likely to be, effective and that will result in a benefit to the species impacted by the development. Replacement or enhancement will only 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 permit review process.

B. Allowing Uses in Fish and Wildlife Habitats (Ha). These habitats are defined as areas that serve as concentrated use area for fish and wildlife species during a sensitive life history stage where alteration of the habitat and/or human disturbance could result in a permanent loss of a population or sustained yield of the species. Fish and wildlife categories used to identify Habitat (Ha) designations in this plan include the following:

- Anadromous fish spawning rearing and overwintering areas in fresh water or brackish intertidal waters.
- Estuaries important for the rearing, overwintering or schooling of anadromous fish, waterfowl and shorebird concentration areas, or marine mammal concentration and feeding areas.
- Eel grass or kelp beds covering large areas that are important marine nurseries.
- Pacific herring spawning and rearing concentration areas.
- Lagoons important for feeding or migration of whales, rearing and overwintering of anadromous fish, waterfowl and shorebird concentration areas, or marine mammal concentration and feeding areas.
- Arctic peregrine falcon and American peregrine falcon nest sites and known concentrations.
- Waterfowl and/or shorebird concentration areas.
- Seabird breeding habitat within each colony area of 1,000 birds and a two-mile radius around major breeding colonies (more than 20,000 birds).
- Sea lion, walrus, and seal haulouts, rookeries and feeding areas.
- Bear concentration areas (particularly seasonal concentrations along the coast or along streams).
- Moose winter range, calving and rutting areas.
- Caribou seasonal habitats (winter range, calving areas, insect relief areas, concentration areas, etc).

- Important caribou migration corridors.
- Important wildlife movement corridors, including marine migration routes.
- Muskox seasonal habitats (winter range, calving areas, concentration areas, etc).

The areas designated Habitat (Ha) in Chapter 3 of the plan were defined using the best available information when the plan was written. These data sources were of a generalized nature. Thus, the wildlife and fishery information identified for specific management units in Chapter 3 may occupy either part or all of the area of a unit, or it is possible that part of a management unit designated Habitat may not contain the resource or habitat that identified as requiring protection. Additionally, due to widespread distributions and lack of detailed surveys, not all the important fish and wildlife and harvest areas have been identified within the planning area. Hence, important fish and wildlife habitat areas may exist within units with designations other than Ha. In the granting of authorizations, DNR adjudicators should consult with the ADF&G and the appropriate federal management agency (USFWS and NMFS) to acquire more detailed and more recent information pertaining to fish and wildlife use and habitat values if there is some question as to the appropriateness of the use that is under consideration for authorization. Adjudicators may also find it useful to consult with local communities and boroughs since they often possess useful information that may not otherwise be available.

The resources that were used to make the determination that an area should be designated “Ha” are identified in the parcel descriptions contained in Resource Allocation Tables in Chapter 3 under the column, “Resources and Uses”. In some cases, there is only a single resource but in other instances, several resources exist, with these resources sometimes occupying differing portions of the parcel. The spatial distribution of habitat resources is described in the management intent language, if known. Units are to be managed to protect the resource(s) identified in these tables. The fish and wildlife associated with the Habitat designation are listed in the Glossary under the term ‘Habitat’.

Since there is an often distinct seasonality associated with the critical life periods of certain species, seasonality should be taken into consideration during project review and approval. Seasonality and critical life cycle stages are identified in ADF&G publications. Thus, it may be possible that uses and facilities may be appropriate within areas designated Habitat if the seasonality criteria are satisfied by including mitigating measures in project design. Seasonality and critical life cycle stage information are identified in various ADF&G publications, however, the ADF&G should be consulted to determine life cycle and seasonality requirements.

Upland and tideland uses that are not consistent with the types of uses associated with the approved designation or are not authorized in the management intent statement for a specific unit and that, if permitted, would result in the degradation of the resource(s) associated with areas designated “Ha”, are to be considered incompatible with the plan's management intent and, specifically, with the “Ha” designation. Degradation of the resource might result from variety of actions including but not limited to: dredging, filling, significant compaction of

vegetation and sediment, alteration of flow patterns, discharge of toxic substances, or disturbance during sensitive periods. 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.

Non-designated uses that cause significant adverse impacts to the resources identified within a given “Ha” parcel can be allowed if:

- DNR determines through new information or a more detailed analysis that the management unit in question does not possess those attributes characteristic of a Habitat designation as defined in the plan; or
- 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
- The use (project) is found consistent under the ACMP or with this plan in a DNR best interest finding (AS 38.05.035) and significant adverse impacts are mitigated under Management Guideline A.

C. Allowing Uses Outside of Designated Fish and Wildlife Habitat Areas. Important fish and wildlife habitat or harvest areas may exist within units designated other than Ha. In the granting of authorizations, DNR adjudicators should consult with the ADF&G and the appropriate federal management agency (USFWS and NMFS) to acquire more detailed and more recent information pertaining to fish and wildlife habitat and harvest values.

D. Habitat Manipulation: General Requirements. Fish and wildlife 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, water control, timber management practices, removal of pollution sources, or other measures may be allowed. Enhancement activities likely to attract significant public use, including sport fishing use, will be designed and located to minimize the impact of additional public use on the existing recreation resources, including anchorages, campsites, and existing and intended wilderness values.

E. Habitat Manipulation: Management of Invasive Plant and Animal Species. The state will manage its lands and waters to avoid the introduction of and reduce the spread of invasive non-native species, consistent with the requirements of 11 AAC 34. Although the strategic management plan for noxious and invasive plant species recognizes this as a statewide issue, this problem is typically best handled at the local level. The local Soil and Water Conservation District has a program in place that currently concentrates on surveying areas of infestation and providing landowners with treatment options and Best Management Practices in an effort to control these species. The ADF&G has management authority over invasive fish and wildlife species. The ADF&G, Division of Sport Fish, has developed the

Alaska Aquatic Nuisance Species Management Plan (2002) and the Management Plan for Invasive Northern Pike in Alaska (2007) to provide management options for aquatic invasive species. Contact the S&WCD or ADF&G for more information.

F. Hatchery and Aquatic Farm Source Waters. To preserve the quality of an existing hatchery's water supply, uses should not be located on state land where they would risk reducing water quality or quantity below that needed by an existing or proposed hatchery.

G. Water Intake Structures. 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 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.

Water intake structures should be screened, and intake velocities will be limited to prevent entrapment, entrainment, or injury to fish. The structures supporting intakes should be designed to prevent fish from being led into the intake. Other effective techniques may also be used to achieve the intent of this guideline. DNR, DMLW and ADF&G should be consulted to determine screen size, water velocity, and intake design if the intake structure is in fish habitat.

H. Alteration of the Riverine Hydrologic 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.

I. Threatened and Endangered Species. 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. Specific mitigation recommendations should be identified through interagency consultation for any land use activity that potentially affects threatened or endangered species. Ten species are identified by the federal government as either Threatened (T) or Endangered (E) within the planning area, while the state identifies four of these ten as Endangered. These species are under the jurisdiction of the U.S. National Marine Fisheries Service, U.S. Fish and Wildlife Service, or ADF&G. The table, below, identifies the species identified by the federal government as Threatened or Endangered. The four species identified as Threatened or Endangered by the state are noted.

Species	Status
Short-tailed albatross (<i>Diomedea albatros</i>)*	E
Spectacled eider (<i>Somateria fishcheri</i>)	T
Stellar's eider (<i>Polysticta stelleri</i>)	T
Humpback whale (<i>Megaptera novaeangliae</i>)*	E
Blue whale (<i>Balaenoptera musculus</i>)*	E
Fin whale (<i>Balaenoptera physalus</i>)	E

North Pacific right whale (<i>Eubalaena japonica</i>)*	E
Sperm whale (<i>Physeter macrocephalus</i>)	E
Bowhead whale (<i>Balaena mysticetus</i>)	E
Stellar sea lion (<i>Eumetopias jubatus</i>)	E (western population)

* Also included on the State's Threatened and Endangered list.

The U.S. Fish and Wildlife Service, Division of Ecological Services, or the National Marine Fisheries Service should be consulted on questions that involve endangered species.

J. Eagles. Authorizations or disposals that potentially affect bald eagles will be consistent with the state and federal Endangered Species acts and the Bald Eagle Protection Act of 1940 as amended. Applicable standards are drawn from a cooperative agreement signed by the U.S. Forest Service and the U.S. Fish and Wildlife Service (USFWS), or such subsequent standards that may be promulgated. These standards, however, may not be adequate in all circumstances, and the USFWS may determine that additional measures are necessary. In addition, meeting the guidelines does not absolve the party from the penalty provisions of the Bald Eagle Protection Act; therefore, the USFWS should be consulted when activities may affect bald or golden eagles.

- 1. Siting Facilities to Avoid Eagle Nests.** Facilities determined by the U.S. Fish and Wildlife Service to cause significant disturbance to nesting eagles will not be allowed within 330 feet of any bald eagle nest site, whether the nest is currently active or not.
- 2. Activities Disturbing Nesting Eagles.** Activities the U.S. Fish and Wildlife Service determines likely to cause significant disturbance to nesting eagles will be prohibited within 330 feet of active bald eagle nests between March 15 and August 31. Temporary activities and facilities that do not alter eagle nesting habitat or disturb nesting eagles, as determined by the USFWS, may be allowed at other times.

K. Moose Winter Concentration, Calving and Rutting Areas. Portions of the planning area are important for moose calving and rutting, or are used as winter concentration areas. Calving typically occurs from May through June, depending upon location. Rutting typically occurs from late September through mid October. Uses that are likely to produce levels of acoustical or visual disturbance sufficient to disturb calving, rutting, or post-calving aggregations that cannot be seasonally restricted should not be authorized in these areas. Uses may be authorized in these areas at other times of the year. DNR authorizations should include seasonal restrictions on activities that would produce significant acoustical or visual disturbance during sensitive periods.

Moose calving and rutting areas change over time. ADF&G should be consulted prior to issuing an authorization in an area suspected to contain such concentrations in order to better determine: 1) the location of calving and rutting areas; 2) when activities within these areas should be avoided; and 3) identify appropriate mitigation measures if no feasible or prudent

alternative site exists. Refer to a management unit's 'Uses and Resources' section in the Resource Allocation Tables to determine whether the presence of a rutting or calving area is likely or if it is a winter concentration area.

L. Caribou Calving Areas, Winter Range, Summer Range and Insect Relief Areas.

The Western Arctic Caribou Herd (WACH) is the dominant herd within the planning area, however other caribou herds are occasionally present in the planning area. The WACH occupies the northwestern quarter of the state, an area of about 140,000 square miles, and all of the planning area of the NWAP. The most significant habitats include calving grounds, summer range (including insect relief habitat), migratory area (including identified travel corridors) 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 guidelines under this Chapter are to be consulted to determine management intent and the level of protection accorded the WACH within each unit. Other management requirements pertain to the 'Subsurface Resources' component of Chapter 2 and should be consulted prior to authorizing locatable, leasing, or licensing activities. Many of the areas used by the WACH are designated Habitat and in those areas not so designated, specific management requirements exist and are noted in the Resource Allocation Table.

Uses that are likely to produce levels of acoustical or visual disturbance sufficient to disturb calving, rutting, or post calving aggregations that cannot be seasonally restricted should not be authorized in these areas. Uses may be authorized in these areas at other times of the year. DNR authorizations should include seasonal restrictions on activities that would produce significant acoustical or visual disturbance during sensitive periods.

M. Reindeer Herd Management and Overwintering Moose and Caribou. Authorizations for reindeer herding will be reviewed by ADF&G to address limitations on herding activities in riparian moose winter habitats and important caribou habitats. The intent is to avoid conducting winter activities that will disturb moose and cause them unnecessary energy expenditures and reduce conflicts with the WACH.

N. Tundra Swan Nesting Areas. In tundra swan nesting areas, uses that would disturb nesting swans or detrimentally alter the nesting habitat should be avoided. The siting of permanent facilities, including roads, material sites, storage areas, and other forms of permanent structures should be avoided within one-quarter mile of known nesting sites. Surface entry should also be avoided within one-quarter mile of nesting sites between April 1 and August 31. Leases or permits may require seasonal restrictions on activities to avoid disturbance to swans. Consult with ADF&G and USFWS to identify current or potential nesting habitat and to determine guidelines to follow and activities to avoid. The standards of Guideline P, 'Activities in Important Waterfowl Habitat', also apply. Refer to an upland/tideland management unit's 'Resources and Uses' section in the Resource Allocation Tables to determine if the presence of a nesting area is likely.

O. Seabird Colonies and Marine Mammal Rookeries and Haulouts. Seabird colonies and walrus, sea lion, and seal haulouts and rookeries shall not be physically altered. Structures or activities that would preclude or significantly interfere with the continued use of these areas should not be authorized and should be situated at least one-half mile distant from haulouts or seabird colonies. Uses with high levels of acoustical or visual disturbance should not be allowed within: one mile of seabird colonies from April 15 through August 31; one-half mile of walrus haulouts from May 1 through December 1; and one-half mile of seal or sea lion haulouts from May 1 through July 31. Consult with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and ADF&G prior to granting authorizations to identify marine mammal haulout, rookery and seabird colony locations more specifically and to define minimum distance separation requirements and specific use restrictions. Consult the 'Resources & Uses' section of tideland management units in the Resource Allocation Tables to determine haulouts, rookeries, or seabird colonies likely to be present within areas of an identified tideland unit. Also consult the plan maps and ADF&G to determine the location of these sensitive features.

Individual marine mammal haulouts and rookeries and seabird colonies³ not contained within specific tideland management units or state protected tideland areas⁴ are designated Habitat (Ha) and are to be managed according to Management Guideline B, 'Allowing Uses in Fish and Wildlife Habitats (Ha)' and the restrictions described above.

P. Activities in Important Waterfowl Habitat. In important waterfowl 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 or vehicle traffic, vegetation clearing, construction, blasting, dredging, and seismic operations, will be avoided during sensitive periods such as nesting, staging, or brood-rearing periods. Where it is not feasible and prudent to avoid such activities, other mitigation measures may be required to avoid significant adverse impacts. Consult with ADF&G to identify areas of important waterfowl in addition to those identified in the tidelands management units in this plan and to determine appropriate mitigation or avoidance measures.

Q. Grizzly and Polar Bear Denning Sites. Exploration and production activities shall not be conducted within one-half mile of occupied grizzly bear dens, unless alternative mitigation measures are approved by ADF&G. Operations must avoid known polar bear dens by one mile. If a polar bear should den within an existing area of development, off-site activities shall be restricted to minimize disturbance. Known den sites can be obtained from the ADF&G Division of Wildlife Conservation. ADF&G should be consulted prior to issuing authorizations near existing or possible denning sites.

³ Defined as 1000 or more seabirds.

⁴ The term 'state protected areas' includes state game refuges, state game sanctuaries, and state critical habitat areas.

R. Arctic Peregrine and American Peregrine Falcon. The Arctic peregrine and American peregrine falcon are listed as a species of special concern by the ADF&G. Arctic peregrine falcons occur on the coastal perimeter and in suitable habitat along rivers in tundra areas of the planning area. American peregrine falcons are found in boreal forest habitats south of the Brooks Range where suitable cliff nesting habitat occurs. Authorizations or disposals should take into consideration any effects on nest sites of these species. Consult with ADF&G and USFWS to identify current or potential nesting habitat and to determine guidelines to follow and activities to avoid.

S. Fish and Wildlife Enhancement on State Lands. Fish and wildlife enhancement activities on state lands, whether by ADF&G or other parties, will be consistent with the management intent for those lands. Enhancement activities likely to attract significant public use, including sport fishing use, will be designed and located to minimize the impact of additional public use on the existing recreation resources, including anchorages, campsites, and existing and intended wilderness values.

T. Protection of Fish and Wildlife Resources – Transportation and Utility Facilities. Important fish and wildlife habitats such as those described as anadromous streams, riparian areas, important seasonal habitats for moose or caribou, fish and wildlife movement corridors, important wintering areas, and threatened or endangered species habitat should be avoided in siting transportation routes unless no other feasible and prudent alternatives exist. Where transportation or utility facilities intersect these habitats, and where no feasible and prudent alternative exists, fish and wildlife movement corridors and habitats will be maintained through the use of alternative designs. Location of routes and timing of construction should be determined in consultation with the ADF&G.

U. Anadromous Stream Mouths within Tidelands. Anadromous stream mouths⁵ shall be protected by a management zone. Only activities compatible with the protection or maintenance of anadromous fish resources are to be authorized in a zone occurring within a 300' radius measured seaward from MHW at the mouth of these streams. Leases, disposals, and other authorizations should not be approved within this zone unless consultation with ADF&G determines that the proposal is compatible with the intent of protecting anadromous fish resources.

V. Avoidance of Conflicts with Traditional Users of Fish and Game. Surface activities authorized under permit, lease, or 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

⁵ As identified in the Catalog of Waters Important for Spawning, Rearing, or Migration of Anadromous Fishes and its associated Atlas.

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, the borough, and local communities to ascertain their interests and concerns.

W. Other Guidelines Affecting Fish and Wildlife Habitat. Other guidelines may affect the protection and management of fish and wildlife habitat. See other sections of this chapter.