# Chapter 3

# *Land Use Designations and Management Policies for Planning Regions and Management Units*

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# Chapter 3

# *Land Use Designations and Management Policies for Planning Regions and Management Units*

## Introduction

This chapter presents specific land management policies for all state uplands, tidelands and submerged lands, and shorelands within the planning area. Information on these state lands is organized by region. There are twenty Regions and the numbering system from the 1984 Bristol Bay Area Plan has been retained for the convenience of the users. These twenty Regions include a total of 221 upland management units, 45 tideland management units, and 7 tideland resource management zones. Within the planning area, there are approximately 12 million acres of uplands and 7 million acres of tidelands and submerged lands. The management requirements of this area plan do not apply to non-state lands, which include University of Alaska lands and Mental Health Trust Authority lands, and state parks. The management requirements of this area plan also do not apply to other state-owned lands directly administered by the ADOT/PF and governed by a separate set of regulations.

### Organization of Chapter 3

The chapter is organized into the following sections:

- **Land Use Designations and Management Intent.** This section describes land use designations, management intent and management guidelines, and policies pertaining to the disposal and retention of state land.
- **Plan Structure.** This section describes the regions and management units used in the area plan, the types of plan maps used and their limitations, and the attributes that are identified for management units in the Resource Allocation Tables of Chapter 3.
- **Description of the Planning Area.** This section provides a generalized description of the Bristol Bay Planning Area. State lands are described, to include their size (acreages), access, physical attributes, resources and uses. Both tidelands and uplands are discussed.
- **Local and Federal Plans.** This section describes relevant community, state, and Federal agency plans that were considered in developing this plan.

- **Management Summary.** This section describes how the state-owned and state-selected uplands and tidelands are to be generally managed in the future under the Area Plan.
- **Region Descriptions.** This section constitutes the bulk of Chapter 3 and provides a generalized description of each region within the planning area, general management intent for state uplands and tidelands, and specific land use designations and management intent requirements for each management unit within a region.
- **Navigable Rivers and Lakes.** This section explains the concept of the Public Trust Doctrine and describes the management intent and designations for navigable waters within federal conservation units and state-owned and state-selected land. A table listing the principal navigable waters within the planning area and their corresponding plan designations is also provided.

# Land Use Designations and Management Intent Planning Tools

A land use **designation** recognizes uses or resources that are of major importance in a particular management unit. Management unit designations are based on current and projected future use patterns and the most significant resources identified in each management unit. DNR will manage activities in the management unit to encourage, develop, or protect the uses or resources for which the unit is designated.

When the plan assigns a designation to a management unit, the designation is accompanied by region-wide management guidelines and management intent specific to that unit. These three pieces of information – designations, management guidelines, and management intent – promote the most beneficial use and set conditions for allowing for non-designated uses.

**Primary designated use.** Many management units have a primary designated use (versus units designated General Use). Primary designated uses may take precedence over other uses. Generally, however, DNR allows multiple uses on state land. DNR initially presumes that all other uses are compatible with the primary use. However, if DNR determines that a use conflict exists and that the proposed use is incompatible with the primary use, the proposed use shall not be authorized or it shall be modified so that the incompatibility no longer exists (from 11 AAC 55.040 (c)). The plan may assign a designation to ensure a future use that will best serve the public interest, even if that use is not imminent.

**Co-designated use.** Where a management unit has two or more designated uses, DNR will avoid or minimize conflicts between designated uses by applying the management intent statement and guidelines for the unit, the regional intent, and the Chapter 2 guidelines from this plan together with existing statutes, regulations, and procedures. Only those co-designations that are generally complementary to, or compatible with, each other are included in this plan. Co-designated uses should, therefore, be viewed as compatible unless, at the time the department is considering an authorization, specific conditions exist that indicate otherwise.

## Designations Used in This Plan

The following land use designations are used in one or more management units in this Area Plan. Other types of land use designations exist but were not applied. The selected designations convey the intent of future state land management. Designations may be applied to uplands, shorelands, tidelands and submerged lands unless indicated otherwise.

**Gu - General Use.** This designation is applied to land that contains a variety of resources, none of which is sufficiently high value to merit designation as a primary use, or is large enough to accommodate a variety of uses with appropriate siting and design considerations. General use may also apply where there is a lack of resource, economic, or other information with which to assign a specific land use designation, and/or where there is a lack of current demand implying that development is unlikely within the planning period. Uplands with this classification are available for conveyance to municipalities, unless stated otherwise in the unit's management intent, but cannot be sold to individuals. Tidelands with this designation cannot be conveyed except to municipalities under AS 38.05.820 and AS 38.05.825.

The General Use designation would apply to tidelands, shorelands and submerged lands not designated in tideland management units or tideland resource management zones for specific habitat, harvest, economic, or recreation functions. These areas are generally considered appropriate for a wide variety of uses such as set net sites, mariculture facilities, or other typical uses of tidelands. Whether and how a tideland area designated General Use is to be managed will be decided through formal state and federal permitting procedures. Tidelands and submerged lands fall within the purview of the Alaska Coastal Zone Management Program, and most development proposals require a Coastal Zone Consistency Determination before a use or facility can be authorized. In instances where the Coastal Zone Management Program does not apply, tideland use will be decided by DNR permitting actions. Most tidelands and submerged lands within the planning area are recognized to contain important subsistence, recreational, or commercial fisheries. Areas not specifically identified with a designation on the plan maps, not otherwise classified in this plan, or that are acquired by the state subsequent to the approval date of this plan, are designated General Use (unless circumstances of the acquisition dictate otherwise).

**Ha – Habitat.** This designation applies to areas of various size for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in the permanent loss of a population or sustained yield of a species. This land will remain in state ownership. Except for those portions of anadromous, non-navigable streams within areas determined appropriate for conveyance under the Municipal Entitlement program.

**Hv – Harvest.** Fish and wildlife harvest areas are subsistence, recreational and/or community harvest areas of varied size where alteration of habitat could permanently limit sustained yield to traditional users; or are areas of intense harvest where the level of harvest has reached, or is projected to reach, the harvestable surplus for the resource. This land will remain in state ownership.

**Hr – Heritage Resources.** Land designated Heritage Resources is land where there is active preservation of, or research for, significant historical, prehistoric, paleontological, or other cultural values or where there is reason to believe that these values exist.

**Ma – Materials.** Sites suitable for extraction of materials which include common varieties of sand, gravel, stone, peat, pumice, pumicite, cinders, clay, and sod. Management units designated Materials are closed to new mineral location at the time the plan is signed. This land will remain in state ownership until the material on the site is no longer required for state purposes (such as road construction and maintenance, materials storage, and public or state facilities) after which these lands may be conveyed to municipalities. These lands cannot be sold without redesignation and reclassification although some sites may be suitable for settlement after material resources are exhausted. This designation applies to uplands only.

**Mi – Minerals.** Areas associated with significant resources, either measured or inferred, that may experience minerals exploration or development during the planning period are designated Minerals. This is a designation that includes surface uses in support of minerals exploration and development, including tailings deposition, waste rock disposal, mineral processing facilities, administrative facilities, and residential living quarters. Land designated Minerals is to be retained in state ownership.

**Pr – Public Facilities-Retain.** These sites are reserved for specific infrastructure to serve state interests. Land with this designation is to remain in state ownership except that it is selectable by municipalities under the special provisions of AS 38.05.810. This designation applies to uplands only.

**Rd – Public Recreation and Tourism-Dispersed.** This designation applies to those areas that offer or have a high potential for dispersed recreation or tourism and where desirable recreation conditions are scattered or widespread rather than localized. Developed facilities are generally not necessary other than trails, trail signs, primitive campsites, and other minor improvements. Land in this designation may be conveyed to municipalities depending on the management unit's management intent and the relative value of the recreation resources for which the unit was designated. These lands cannot be sold to individuals.

This designation can also apply to tidelands. If used as a tideland designation, it applies to areas that are widely used for recreation by either commercial recreation operators or the public, and are usually associated with the use of fisheries or the viewing of a unique or scenic area. Use patterns are dispersed over a fairly large area, and few public facilities are provided other than boat launches, docks, and mooring buoys. Tidelands can be conveyed to municipalities under certain conditions, but cannot be transferred to individuals.

**Rp – Public Recreation and Tourism-Public Use Site.** These are areas used by concentrations of recreationists or tourists compared to the rest of the planning area, or areas with high potential to attract concentrations of recreationists and tourists. These areas offer localized attractions, or ease of access, or developed facilities. Examples include camping sites, marinas, cabins, lodges, anchorages, scenic overlooks, and road-accessible shore locations that

are used for picnicking, sports and fishing. The recreation and tourism uses for which these units are designated may be either public or commercial. The primary management intent is to protect the opportunity of the public to use these sites, and their resource values for recreation. This land will remain in state ownership unless otherwise noted in the management intent for the management unit.

**Se – Settlement.** This designation applies to state uplands suitable for sale, leasing, or permitting to allow private recreational or residential use. This designation will generally be used for areas appropriate for land offerings and for residential uses. Unsettled or unsold land in the management unit will be managed for uses compatible with settlement. This may include uses such as selling additional lots, laying out new subdivisions, identifying greenbelts through subdivisions, reserving materials sites for subdivision roads and building lots, placing easements on access routes, or reserving lots for community facilities and open space. Areas designated Settlement or Settlement-Commercial should be closed to mineral entry prior to sale. This land may be conveyed to municipalities and individuals.

**Sc – Settlement-Commercial.** This designation applies to uplands suitable for sale, leasing, or permitting of state lands to allow private commercial, industrial, recreational, or community use. Residential use may also be appropriate in portions of an area designated Settlement-Commercial. This designation will generally be used for areas appropriate for land offerings for industrial or commercial uses. Unsettled or unsold land in the management unit will be managed for uses compatible with eventual commercial or industrial activities. Areas designated Settlement-Commercial should be closed to mineral entry prior to sale. This land may be conveyed to municipalities and to individuals.

**Wd – Waterfront Development.** This designation applies to areas of tidelands, submerged lands, or shorelands for water-dependent or water-related facilities, usually for industrial or commercial purposes. Waterfront development includes: piers, wharves, harbors, mineral transfer facilities, seafood processing facilities, commercial recreation facilities, and other resource development support facilities except for activities related to forestry, which is covered by the Forestry designation. Approving authorizations in these areas will be conducted in compliance with the coastal development standards in the Alaska Coastal Management Act (6 AAC 80.040). This land may be available for conveyance to municipalities under AS 38.05.820 and AS 38.05.825 but cannot be sold to individuals.

## Land Use Designations and Minerals

Except where state land is closed to mineral entry, DNR will treat mining as if it were a co-designated use. This is important to note because DNR plans do not always apply mineral resource designations to large areas. The problems in locating and measuring subsurface resources make it difficult and potentially misleading for a plan to apply designations to subsurface resources in the same way they are applied to surface resources. However, in a few locations, where drilling results and resource estimates are available, management units designated as Mineral Lands have been identified in this plan. Chapter 2, Mineral Resources, also includes additional guidelines and a summary of statutes regulating mining and reclamation activities.

## Management Intent

The plan can provide management guidance for a resource without designating it. For example, the plan may address the resource by providing management intent for a specific area, or through area wide guidelines. In addition, other state, federal, or local regulations will determine the conditions for using undesignated resources.

In some cases, the management intent for a management unit discourages specific uses because these uses may create conflicts with designated uses. **Discouraged uses** may be allowed if DNR determines that the use does not conflict with the management intent, designated uses, and the management guidelines. Discouraged uses include activities that should not be authorized or will not be allowed if there are feasible and prudent alternatives. If DNR determines that the discouraged use conflicts with the management intent or designated uses, and cannot be made compatible by following the management guidelines, DNR will allow it only through a plan amendment.

The plan also identifies **prohibited uses**. These are uses that have significant conflicts with other uses or resources and will not be permitted without a plan amendment. Prohibitions are rare because the plan seeks to minimize land use conflicts through plan guidelines and intent rather than through prohibitions.

Management intent statements for each management unit refer only to state management of state land. While these statements accommodate certain proposed uses on tidelands and submerged lands, there is no guarantee that other regulatory agencies will issue permits necessary for the proposed use. All proposed development uses referenced in the management intent statements are assumed to employ best management practices in siting and operating the proposed use.

**Disposal or Retention in State Ownership.** Certain land use classifications, by statute, allow land to be conveyed to municipalities under the Municipal Entitlement program. The same statute identifies those land classifications that may not be conveyed.[1] Another portion of statute (AS 38.04.015) identifies the general public interests in retaining areas of state land in public ownership. These principles were applied in developing the recommendations for retaining of state land that are identified for specific management units.

In this plan, the land use designation and classification is the general indicator of whether land should be retained in state ownership or be made available for disposal. In some cases specific recommendations for the disposal of state land are identified in the management intent for a management unit. Also, some management units have management intent that precludes disposal although the designation and classification might otherwise allow disposal. This includes management units already under management by another state agency or that contain certain unique or sensitive uses or resources that merit retention by the state. In addition,

[1] AS 29.65.130 identifies those land use classifications that permit conveyance under the Municipal Entitlement Act. In this area plan, the designations of General Use, Settlement, and Settlement-Commercial are considered appropriate for the conveyance of lands out of state ownership. These convert to the classifications of Resource Management Land and Settlement Land, respectively.

management units already under management agreements with other state agencies are usually not available for conveyance. In no case can DNR convey the subsurface estate to municipalities or individuals. Submerged lands, tidelands, and shorelands must be retained in state ownership unless law requires conveyance or the conveyance is to a political subdivision of the state. These conveyances are subject to the Public Trust Doctrine, described in this chapter in the Navigability section.

**Tidelands, Submerged Lands, and Shorelands.** DNR will provide reasonable access across state tidelands to upland owners. Upland access across state tidelands, including developed access facilities, may be allowed within all land use designations where DNR determines the proposed facilities are consistent with the management intent and applicable guidelines of the plan. However, state tideland use designations do not give the public access rights to adjacent private uplands.

## Management Guidelines

Most state lands will be managed for multiple uses. Exceptions are lands that will be offered for private lease or ownership, and recreation sites that are less than 640 acres. For this reason, the plan establishes management guidelines that allow various uses to occur without serious conflicts. Management guidelines can direct the timing, amount, or specific location of different activities to make the permitted uses compatible. For example, the plan provides guidelines that require land disposals to be designed to protect public access and recreational opportunities.

## Duration and Flexibility of Plan

This plan guides land uses for the next twenty years, subject to periodic review of designations involving settlement, industrial or commercial uses, mining, or other forms of economic or community development.

The land use designations shown on the maps and identified in the Resource Allocation Tables in this chapter are intended to be flexible. DNR may permit uses not originally designated if DNR determines they are consistent with the management intent for the management unit and consistent with applicable management guidelines.

This plan will not provide direct answers to many of the site-specific issues frequently encountered by state land managers. The plan can, however, clarify the general management objectives for the area and thereby provide the basis for a more informed decision.

Boundaries of land use designations shown on the following maps may be modified through implementation activities, such as site planning or disposal, as long as modifications adhere to the intent of the plan and follow the guidance in Chapter 4 under the section Types of Plan Changes.

## Glossary

Definitions of terms used frequently in the plan are found in the Glossary, Appendix A.

# Plan Structure

## Plan Regions

Within the boundary of the Bristol Bay Area Plan are twenty planning Regions. Regions are typically large geographic areas with generally similar characteristics that occupy a defined spatial unit. This plan revision uses the same planning regions and numbering system as those employed in the original 1984 Area Plan; the boundaries of these Regions generally correspond with large drainage basins. These are numbered 2 through 19, and 21 and 22. However, this (current) plan revision includes both tidelands and submerged lands in addition to uplands within a region. Some lands within the Bristol Bay Area Plan are not part of any of the twenty planning Regions. These include certain lands in the northeastern part of the planning area covered by Lake Clark National Park and Preserve, some lands in the eastern part of the planning area within Katmai National Park and Preserve, and all lands within the Aniakchak National Monument and Preserve. These areas were added to the planning area in order to classify state-owned shorelands and tidelands. Neither the original Bristol Bay Area Plan (1984), the Kodiak Area Plan, nor the Kenai Area Plan include these areas within their planning boundaries.

## Management Units[2]

In the area plan, portions of state uplands and tideland have been separated into smaller geographic units called management units. State resource management is specific to this level. Management units may be large or small but usually have generally similar attributes. They may be specific legal management units, like a tract within a residential subdivision, or they might be a discrete area of state land affected by a management agreement that is to be administered for a public purpose, like a port, vehicle storage facility or airport.

All management units have a discrete identifying number (i.e., unit number). These are depicted on the plan maps and are included in the Resource Allocation Tables specific to each region. Essentially this number provides a cross-reference between the plan maps and the tables containing information about the management unit. The Tables contain information on management unit designation, management intent, management guidelines, and management unit resources and uses.

Management unit numbers consist of a two-part identifier where the first part indicates the Region in which the unit is located and the second part is the unit number. Generally, management units are numbered from north to south and from west to east within the regions. Upland management unit identifiers start with “R” and are followed by the Region number; the final part is the specific management unit number (such as R06-22). With tideland management units, ‘RT’ is used in the first part of the identifier to indicate it is a tideland management unit (such as R03T-09). In some cases tidelands management units may incorporate upland areas if a particular resource is found in both tidelands and adjoining upland areas.

[2] Sometimes also referred to as “parcel”.

**Region Descriptions**
Each Region of the Bristol Bay Area Plan is described separately. The format is similar for each, with a description of the characteristics of the Region followed by a section on its resources and their uses, a section on land use management, and resource allocation tables. Maps O-1 to O-5 depict the Regions and management units (Figure 3.1). Components of each Region usually include:

**Region Boundary.** This part describes how the region's boundaries are defined and provides a general description of the region and its important features.

**State Lands: Ownership and Acreage.** The distribution of state lands within the region is explained in this part, including tideland management units. Estimated acreages are given for uplands and tidelands/submerged lands. Land status is also specified (Tentative Approval, Patent, or Selection status).

**Physical Geography.** The geography and physical characteristics of the Region are described along with important geographic features such as peaks, rivers, and lakes.

**Climate.** Characteristics of the Region's climate are described such as temperature averages and minimums and maximums, snowfall, etc.

**Other.** This section contains useful information such as the topographic quadrangles that contain the Region, and where the Region is situated with respect to the organized Boroughs and Regional Native corporations.

**Access.** This component describes how access is gained to the Region and the nature of the transportation and its infrastructure.

**Resources and Uses.** The current uses of state land, both uplands and tidelands, as well as their resources, are described. Descriptions of cultural and historic, economic, recreational, mineral, oil and gas, materials, forestry, and fish and wildlife resources and uses are provided, to the extent that they are present in the Region and information exists to adequately describe a resource or use.

**Management Considerations – Local and State Plans.** This component describes the local, state, and federal land and resource plans affecting each Region.

**Municipal Entitlements.** A general description of the location of any municipal selections is provided, should the Region be within an organized Borough that has selections pending adjudication.

**Management of State Land.** This section describes the way in which state uplands, tidelands, and submerged lands are to be generally managed. It also provides information on plan designation and management for certain categories of management units as well as specific management considerations.

**Resource Allocation Tables.** A table is included that provides detailed information on specific management units within the Region, to include land use designation, resources and uses, and management guidelines. If the Region contains coastal areas, a second similar table is provided for tideland management units.

## Region Plan Maps

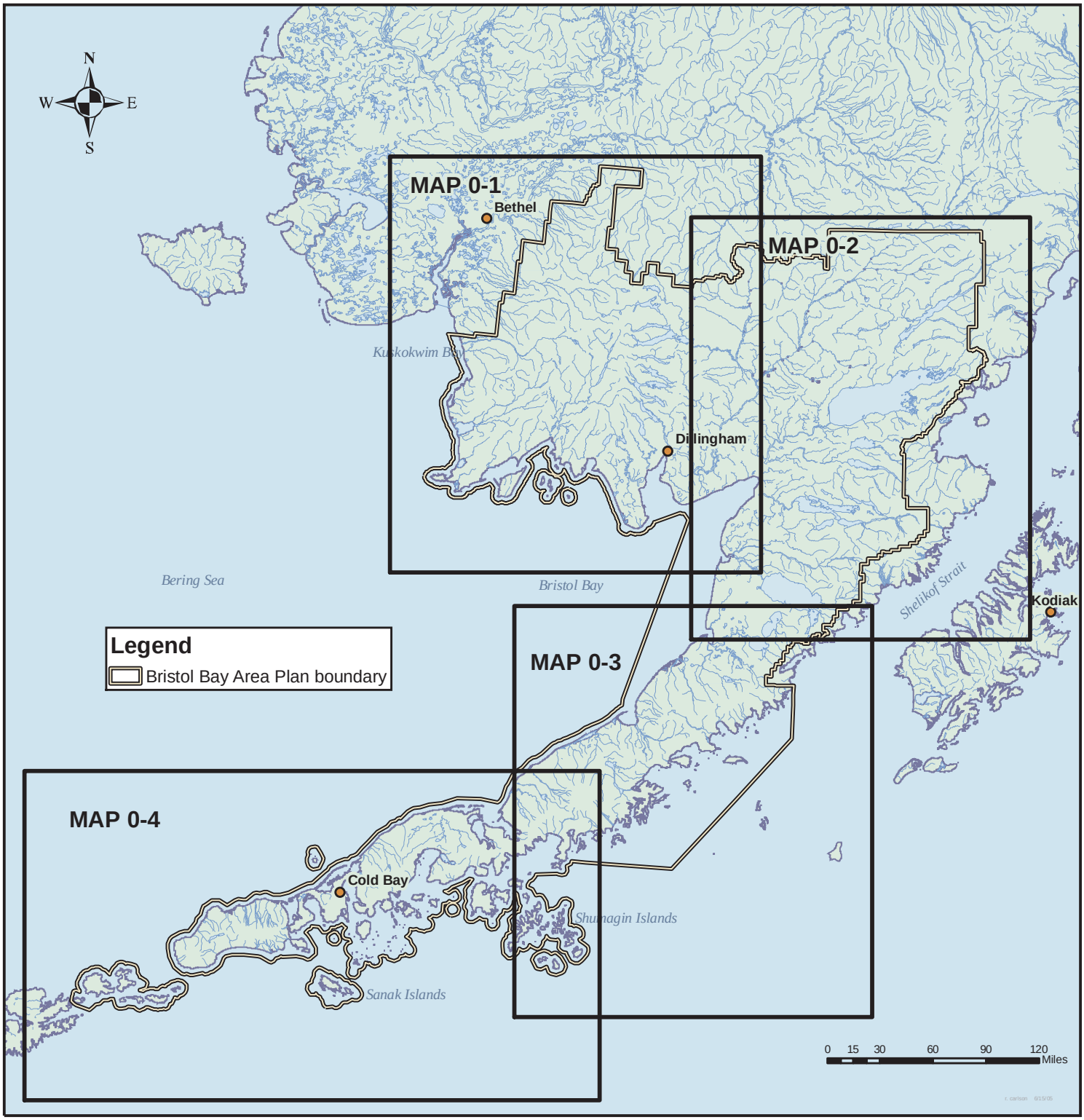
Plan maps (O-1 through O-5) show land ownership, management unit numbers, and identify land use designations (Figure 3.1). The land use designations provide the general managementintent for each management unit. However, they must be considered together with the statements of management intent and guidelines (management unit and area-wide) for a complete explanation of the management policy affecting particular units. This is essential in order to get a comprehensive understanding of the overall management intent of the area plan. The management guidelines contained in Chapter 2 are particularly critical and must be consulted in adjudication decisions affecting individual management units of state land.

## Land Status Depicted In Plan Maps

The maps referred to in Chapter 3 (O-1 through O-4) are not intended to be detailed land ownership maps. Instead, they are a representation of state and federal land records current to the time of the plan's formulation. Land status for management units is derived from the Department's land status records and Geographic Information System coverages. This information is generalized and for this reason the land status for a particular area can be misleading. In the category labeled "private", there may be lands of uncertain ownership. The Department has tried to depict general land status on the plan maps as accurately as possible, but the ownership patterns of non-state entities may not be correct. The location of state-selected land information comes from federal Master Title Plat records and the Department's land records. The plan attempts to accurately portray the status and spatial boundaries of these areas; but because state land status changes with time, caution should be used for these areas as well. For complete information, consult the land records of the Department of Natural Resources, Fish and Wildlife Service, National Park Service, Bureau of Land Management, Native corporations, and the boroughs.

The plan maps (O-1 through O-4) show general patterns of land ownership by color. This includes the various types of federal ownership (National Wildlife Refuges, National Parks, Preserves, and Monuments, BLM, and military lands), the various types of state land (general grant and other state land, Legislatively Designated Areas, limited state holdings, and lands under management agreement to another state agency), as well as municipal, Native corporation, Native-selected, and private lands. Because of the way that GIS maps are created, which entails a decision hierarchy on what land status to represent in priority sequence, the colors that represent an ownership pattern may not coincide with the actual pattern of such ownership.

# Figure 3.1 Bristol Bay Area Plan - Planning Area with Map Extents



## Resource Allocation Table

At the end of each Region write-up, a Resource Allocation Table provides information on specific upland and tideland management units. It follows the plan text and includes the land use designation and the management intent for each specific upland or tideland unit, and is directly related to the plan maps by the use of the management unit identifier. If present, a description of tideland management units follows that of the upland units. Essentially, the Table details the generalized description of state management intent included under "Region and Areas Summary".

For each management unit the table gives the unit identification number; general geographic name; general location by Meridian, Township, and Range (some sections); and size expressed in acreage. Also included is a description of the resources and uses of a management unit, the designation(s), management intent, and specific management guidelines.

More specifically, the tables include:

**Unit Identifier.** Each management unit of state land has a unique identifier with characters that indicate the Region and unit number and contain a “T” if it is a tideland unit.

**Management Unit Name.** Each management unit has a unique name that is geographic in nature and can be used to identify it.

**MTRS.** The Meridian, Township, Range and Section is indicated if it is a small management unit; large management units refer to the map. In all cases the Seward Meridian applies. The data provide only information on the general location of the unit and it is not intended to constitute a legal description.

**Acreage.** The approximate acreage in each management unit is indicated.

**Land Use Designation.** Land use designations indicate the primary and co-primary uses and resources for each management unit. There may be only one designation (primary) for a given management unit although there may be two (termed "co-designations"). Where co-designations have been used, the uses reflected in the designations are believed to be generally compatible and complementary to each other. There are instances where various parts of a single management unit are given specific designations.

**Management Intent.** This column indicates the management direction for a specific management unit. It is consistent with the recommended designation, but includes more information on how state land is to be managed. In some small-sized management units, the management intent is likely to be brief since the designation itself is often sufficient to indicate the management intent. This is not the case with large management units, and, in these instances, the management intent statement is critical to an understanding of how the various resources within the management unit are to be managed. This section also indicates if the

management unit is to be retained in state ownership, if it is appropriate for transfer to a city or borough, and those unit resources that must be taken into consideration for land disposals or other forms of development or use. In some instances the development of a management unit is not appropriate during the planning period, and this is identified.

**Resources, Uses, and Additional Information.** This column summarizes the resources and uses for which the management unit is designated and which are considered important in the management unit. It also provides a generalized description of the unit, and may indicate the presence (or absence) of certain other resources that are important to land management decisions. Typical among this type of information is whether the management unit contains a heritage site or significant concentration of wildlife, fisheries, or habitat(s), the current use of the management unit, adjacent land ownership, and applicable local zoning or comprehensive plan requirements, if known.

# Description of the Planning Area

## Background

The Bristol Bay area plan encompasses the Lake and Peninsula Borough, the Aleutians East Borough, the Bristol Bay Borough, and much of the Dillingham census area. It includes those drainage basins in southwest Alaska that flow into Kuskokwim Bay and Bristol Bay and all of the Alaska Peninsula. The planning area has been divided into twenty Regions that are based mostly on drainage boundaries and commonalities of habitat, and to a lesser extent on political boundaries. In the description that follows, state uplands and tidelands have been described in general along with those management requirements that apply to all Regions. This description is meant to be brief, focusing on general geographic themes, with general management strategy. More detailed information on state lands, including plan designations and management intent, is provided in the individual Region descriptions that follow in this Chapter.

## State Lands

**Uplands.** State-owned and state-selected uplands in the Bristol Bay Area total approximately 12 million acres[3]. Although terrain varies greatly, the majority of these lands are not mountainous and consist of rolling hills and lowlands. State land occurs in two mostly contiguous blocks – a large block in the Nushagak-Mulchatna-Iliamna Lake drainage and a large swath of acreage along the Bristol Bay side of the Alaska Peninsula. These two areas are mostly in separate physiographic regions. The northern block of state land is part of the Bristol Bay Lowlands and Lime Hills ecoregions; the southern block of state land is part of the Bristol Bay lowlands and the Alaska Peninsula ecoregions. The uplands contain a broad range of resources and uses including fish and wildlife, minerals, recreation and tourism, oil and gas, cultural and historic, and settlement; they support an economy heavily dependent upon these natural resources.

[3] Not including Wood-Tikchik State Park (1.6 million acres) or major lakes like Iliamna and Becharof.

The majority of lands in the Bristol Bay planning area are owned by the federal government and the vast majority of these are within federal conservation system units (19 million acres out of a total of 21 million acres). These include: the Yukon Delta NWR, Togiak NWR, Alaska Maritime NWR, Becharof NWR, Alaska Peninsula NWR, Izembek NWR, Lake Clark National Park and Preserve, Katmai National Park and Preserve, and Aniakchak National Monument and Preserve. The State of Alaska also has created a number of Legislatively Designated Areas, a status of protection established in Alaska Statute. These include: Wood-Tikchik State Park (the largest public State Park in the United States), several state game refuges (Cape Newenham and Izembek), the Walrus Islands State Game Sanctuary, the Bristol Bay Fisheries Reserve, and a number of critical habitat areas, including the Egegik, Pilot Point, Port Moller, Cinder River, Port Heiden, and Ugashik Bay. Accordingly, there exists a large amount of land dedicated to the protection of fish and wildlife as well as recreational resources.

**Tidelands.** The state owns the tide and submerged lands to three miles out from the mean high water line on the coast. State tidelands and submerged lands occur in those Regions that have coastlines along Kuskokwim Bay, Bristol Bay, or the Pacific and Gulf sides of the Alaska Peninsula. Many tideland areas front National Wildlife Refuges, Parks, Preserves, and Monuments[4]. Another significant concentration of tidelands occurs within protected state areas, including state game refuges, critical habitat areas, and state game sanctuaries, which are scattered throughout the planning area. There are over 270,000 acres of tidelands within protected state areas. Another significant amount of state tidelands occur in areas that adjoin private, municipal, Native, other federal and state land (about 6.7 million acres).

Most of the particularly sensitive and biologically productive tideland areas either occur adjacent to Federal Conservation Units or within protected state areas, found in state game refuges (SGR), state game sanctuaries (SGS), or critical habitat areas (CHA). There are nine state owned or managed protected areas: the Egegik, Pilot Point, Cinder River, Port Heiden, and Port Moller CHAs; the Izembek and Cape Newenham SGRs; and the Walrus Island SGS. Both federal and state protected areas are depicted on Region plan maps. The purpose of the state protected areas is generally to "protect and preserve habitat areas especially critical to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose." Use of these areas may be permitted, but the submittal of plans and specifications of the proposed use and construction work is required, and the ADF&G Commissioner must approve all such plans or specifications. The Izembek and Cape Newenham SGRs are designated, under AS 16.20.030 as SGRs, to coincide with similar Federal National Wildlife Refuges; both lands and waters are included in the SGRs.

These tidelands provide habitat for walrus rookeries and haulouts, harbor seal and spotted seal haulout concentrations, sea otter pupping and rearing areas, seasonal concentrations of waterfowl, whale calving areas (beluga), Pacific herring spawning and rearing areas, and for a wide variety of pelagic, diving, and seabirds, many of which group in colonies of large size. Many of these tideland areas consist of shallow tidal flats, which contain significant

[4] Included are the Togiak, Becharof, Alaska Peninsula, Alaska Maritime, and Izembek National Wildlife Refuges, and Aniakchak National Monument and Preserve.

concentrations of eel grass or salt marsh. Most kelp beds occur in offshore environments, typically adjacent to islands that are part of the Alaska Maritime NWR, the Izembek NWR, and the Port Moller CHA.

The distribution of these resources is uneven within these protected areas. Pacific herring spawning areas occur along northern Bristol Bay adjacent to the Togiak NWR and within the CHAs that occupy intertidal areas south of Pilot Point in Bristol Bay, and also on the Pacific side of the Alaska Peninsula adjacent to the Alaska Peninsula and Alaska Maritime NWRs. Sea otters collocate with kelp beds, and both are extensive around the offshore islands of the Alaska Maritime NWR and within the Izembek SGR and the various CHAs of southern Bristol Bay unaffected by winter ice scour, generally south of Port Moller. Walrus rookeries and haulouts concentrate within the Walrus Islands State Game Refuge south of Togiak and on the north side of the Alaska Peninsula at Amak Island, which is within the Alaska Maritime NWR. A significant concentration also occurs on state land at Cape Seniavin. Most seabird colonies, including the larger of these colonies, are situated along the southern Alaska Peninsula coast and its offshore islands within the Alaska Peninsula and Alaska Maritime NWRs. Another concentration of seabird colonies occurs on the islands south of the Togiak NWR within the Walrus Islands SGS. Other marine resources are somewhat more evenly distributed throughout the planning area. Harbor seal haulouts, waterfowl, and the various types of birds characteristic of tideland areas (shorebirds and diving) occur in the northern part of Bristol Bay adjacent to the Togiak NWR and within CHAs that occupy sheltered intertidal areas along southern Bristol Bay.

Other less sensitive areas exist that are not within these protected tideland areas, but they are more scattered and smaller in number. Whale calving (beluga) occurs in Kvichak and Nushagak Bays in northern Bristol Bay. Harbor seal haulout concentrations occur in eastern and central Kvichak Bay and in several protected embayments near CHAs in southern Bristol Bay (Port Heiden, Egegik, and Pilot Point). Harbor seal haulouts are also concentrated at the Seal Islands, situated south of the Port Heiden CHA in a protected lagoon. Spring brown bear concentrations occur south of the Port Heiden, Cinder River and Egegik CHAs and in the area of the Seal Islands. Seasonal concentrations of waterfowl are common throughout the planning area.

There are other sensitive areas, but these occupy comparatively small sites and are associated with walrus haulouts, particularly at Cape Seniavin and at several sites east of Port Moller.

A special management area [Bristol Bay State Fisheries Reserve [(AS 38.05.140(f))]] affects the waters of eastern Bristol Bay. No surface entry permit or tideland lease to develop an oil or gas lease or oil and gas exploration license may be issued on state owned or controlled land until the legislature specifically finds that the entry will not constitute a danger to the fishery. Tideland resources within the federal and state protected areas vary, reflecting the extensive size of the planning region, the configuration and bathymetry of the coast, the presence of sea ice, and unique local conditions.

## Acreage

Acreage estimates for the state upland and tideland management units are given below:

| Geographic Areas | Acreage |
|---|---|
| Upland Management units – State-Owned | 10,330,000 |
| Upland Management units – State-Selected | 1,585,000 |
| Tidelands and Submerged Lands | 7,003,000 |

## Access

The Bristol Bay planning area is huge and distances between communities are great. For instance, the distance between Akutan and Port Alsworth is 600 miles; the distance between Quinhagak and Port Alsworth is 263 miles. This far flung region hosts forty-seven populated settlements, four have first class city status and sixteen are second class cities. The population fluctuates from summer to winter within the planning area but consists of approximately 10,600 residents. The majority of travel in or out of the area is by air from Anchorage. Important air transport facilities are located at King Salmon, Dillingham, and Cold Bay.

Air and marine transportation are the mainstays of access to the Bristol Bay Planning Area and this is likely to remain so for the foreseeable future. For those in coastal areas or on navigable waterways, travel between communities is usually accomplished by boat. In winter, snowmachines are utilized to range over wide areas and between settlements. Air transportation is the principal mode of year-round access to and between communities. The planning area has sixty-eight air transportation facilities recognized by the Department of Transportation and Public Facilities. Of these sixty-eight, fifty-six are landing strips, eleven are seaplane facilities, and one is a recognized heliport. The Alaska Marine Highway system provides access to Chignik, Sand Point, King Cove, Cold Bay, False Pass, and Akutan.

In general, except for management units situated in the vicinity of Dillingham, Naknek, and King Salmon, some of which can be reached by road, most other management units must be accessed by floatplane, wheeled aircraft, boat, off-road vehicles, or snowmachines.

There is a road that extends into the planning area from Cook Inlet – the Williamsport-Pile Bay road – which is used to transport Bristol Bay fishing boats and supplies to Iliamna Lake where the boats are off-loaded and ply the waters of the Lake and down the Kvichak River to Bristol Bay. This road is considered difficult to use. A combined road and hovercraft system began construction in 2004 to join King Cove and Cold Bay.

## Physical Features: Uplands

The Bristol Bay area is quite varied, extending from the coastal lowlands of Kuskokwim Bay on the Bering Sea to the Kilbuck and Ahklun Mountains, whose summits rise to 2,000 to 5,000 feet. From these mountain ranges, which are separated by broad, flat valleys, lying in a northeast-southwest alignment, the Togiak River and its tributaries flow south into Bristol Bay, and the Kanektok and Goodnews Rivers flow west into Kuskokwim Bay.

The Wood-Tikchik Lakes system is composed of long, narrow glacial lakes separated by steep-walled mountains ranging in elevation from 3,000 to 5,000 feet. The lakes and rivers of the area drain into Bristol Bay via the Wood, Nuyakuk, and Nushagak Rivers.

The Nushagak Hills, Taylor Mountains, and Big River Hills comprise a low rolling terrain that forms the northern border of the area. These hills, and the Alaska-Aleutian Range within Lake Clark National Park and Preserve, surround the Nushagak and Kvichak River basins, which drain into Bristol Bay. The Nushagak River Basin is broad and relatively flat, containing many ponds and lakes that increase in number as they near the coast. The Kvichak River drains Iliamna Lake and all of its tributaries. Iliamna Lake is the largest lake in Alaska, 80 miles long by 20 miles wide, and the second largest in the United States.

The Alaska Peninsula consists of coastal lowlands, on the Bristol Bay side, from which the terrain rises into the Aleutian Mountains on the Pacific Ocean side. These coastal lowlands are dotted by thousands of small lakes and ponds and laced with meandering rivers that flow into extensive estuaries as they meet Bristol Bay. Naknek, Becharof, and Upper and Lower Ugashik Lakes are four large bodies of water on the northern peninsula. The peaks of the Aleutian Mountains generally average from 1,000 to 4,000 feet but may rise to volcanic peaks such as Mount Chiginagak (6,900 feet), Mount Veniaminof (8,225 feet), and Mount Pavlof (8,261 feet). Several other active and inactive volcanoes are also found along the Alaska Peninsula. The rivers and streams flowing into the Pacific Ocean are short and steep, emptying into small bays. The Pacific shoreline is imbricate, very rugged, and steep with many cliffs, offshore spires, and islets, in contrast to much of the Bristol Bay coastline which is smooth, of low relief, and characterized by wide beaches.

Unimak and the Krenitzin Islands are separated from the Alaska Peninsula – Unimak by the narrow and treacherous waters of False Pass. Unimak is dominated by five volcanoes including Shishaldin Volcano (9,387 feet) and Isanotski Peaks (8,025). Between Unimak Island and the Krenitzin Islands is Unimak Pass, a deep 10 to 20-mile wide strait between the Pacific Ocean and the Bering Sea, that provides passage for fish, marine mammals, waterfowl, and seabirds, as well as for commercial vessels.

Over 56% of the uplands in the Bristol Bay area are covered by various types of tundra – shrub/grass, open heath or grass, or lichen shrub tundra. Approximately 7% of the area is marsh-very wet bog or wet bog-meadow. Ten percent of the area is vegetated by miscellaneous deciduous vegetation such as birch, cottonwood, and tall, low, or dwarf willow. Forest comprises less than 5% of the uplands and occurs mostly along major lakes and rivers in the Nushagak-Wood River drainages and in the eastern Iliamna Lake and Lake Clark drainages. Common forest species include black spruce, white spruce, quaking aspen, balsam poplar, and white birch. There are essentially no trees south of the Naknek River. The remaining uplands are lichen covered, snow covered, or barren.

## Hydrology

Latitude, position with respect to the ocean, and elevation play significant roles in determining climate. Most of the planning area is affected by maritime climatic influences, but transition zones in the northern parts of the planning area are impacted by continental influences. In winter, as sea ice forms in northern Bristol Bay, the coastal areas are less influenced by marine climatic conditions and continental influences are felt.

**Non-Marine Hydrology.** The largest rivers in the planning area include the Nushagak, Togiak, Kvichak, Naknek, Egegik and Ugashik Rivers. The Nushagak is the largest with a drainage area of 14,100 square miles and a length of nearly 300 miles. Generally, rivers in the region are short to moderate in length, and often have a lake storage component within the basin. The lakes serve to store runoff and moderate runoff to streams. Although glaciers are present, outside of a few exceptions, regionally they do not significantly affect storage or runoff due to limited size and distribution. Streams without lakes in the drainage experience peak flows at spring breakup, a summer drop in flow, and a secondary peak during late summer and early fall in response to rainfall events. Streams with lakes usually have a spring flow peak during the late summer early fall rainy season. Local variations in this pattern are common due to differences is aspect, geology, and precipitation.

Mean annual runoff for the region varies but usually averages between 2 and 4 cfs/mi$^2$. Mean annual peak runoff averages 10 cfs.mi$^2$ in the lowland areas and up to 25-50 cfs.mi$^2$ in the more upland areas.

Most rivers and streams in the planning region freeze over by December and remain in the frozen state until April or May. Stream flow usually begins a steady decline in October after the rainy late summer-early fall period, and continues to decline until March or April, with discharges increasing dramatically with the onset of breakup in April or May. Peak annual flows generally occur in June when snowmelt is at its highest, with secondary peaks in response to high precipitation/runoff events in late summer and early fall. Winter flooding in upland streams is possible from extreme channel icing.

Storage provided by lakes is an important feature to many stream systems in the Bristol Bay region. Of the approximately 90 lakes in Alaska that exceed 10 square miles in size, 33 of them occur in the Bristol Bay area, including the state's two largest lakes – Iliamna and Becharof. Geomorphically, lakes in the Bristol Bay area are of three primary types. Most of the larger lakes are in glacially carved basins that may be dammed by glacial moraines; these are commonly elongated and deep such as the Wood River Lakes. The second type are lowland tundra lakes, which are usually small, shallow, and often unnamed. The third type of lakes, that display no inlet or outlet, are present but uncommon.

**Marine Hydrology.** Southwest Alaska is bordered by the Bering Sea, the North Pacific Ocean, and the Gulf of Alaska. Ocean basin topography, current, the extent of sea ice, water temperature and other factors greatly influence the marine ecosystem. Currents in the Gulf of

Alaska are driven by the counterclockwise flow of the Alaska Current. Currents from the North Pacific move through passes in the Aleutian Chain into the Bering Sea creating a complex but generally counterclockwise pattern.

Ocean basin topography consists of three principal features: 1) a shallow expanse of the continental shelf (<5,000 feet deep) extending from east of Kodiak, across Bristol Bay and including the Bering Sea and down the Aleutian Chain; 2) south of the Aleutians the topography deepens until dropping into the Aleutian Trench which has depths greater than 13,000 feet; and 3) north of the Aleutians the Bering Sea drops into the enormous Aleutian Basin with depths ranging between 5,000 and 13,000 feet.

Sea ice in the Bering Sea advances into Bristol Bay, arcing from Goodnews Bay to just south of Egegik. The maximum winter advance of sea ice historically extended as far south as Unimak Island. Recent fluctuations in the advance of sea ice have been difficult to predict.

Tidal action and variation is not as great in Southwest Alaska as it is in other regions of Alaska. The highest mean tidal variations occur in the Naknek River area (18.5 feet); Port Moller has a mean of 7.6 feet whereas the mean tidal variation is only 3.2 feet at Izembek Lagoon. Tidal variations tend to be greatest at river outlets and at a minimum on the Aleutian Islands.

## Resources and Uses: Uplands

**Forestry.** There are no commercial forests in the planning area. The forests are largely a mix of spruce, birch, and aspen that occur along the major drainages north of the Naknek River. Uses are restricted largely to heating fuel although some trees are large enough for house logs.

**Cultural and Historic.** The Native people of Alaska have occupied coastal and river areas for millennia. The area has a complex and poorly understood history and over time cultures intermixed and expanded and contracted. The area contains Eskimoan, Athabascan, and Aleut influences. European contact came in the mid to late 1700's and the area still shows the cultural influences of its early Russian occupation. The planning area contains approximately 1,207 cataloged archeological and historic sites, a number that continues to grow as new sites are discovered and reported. The majority of the sites are in coastal areas and along the major rivers.

**Economic.** Economic resources are several, including: commercial fishing, tourism and recreation, government, subsistence, and transportation. Historically, use of fish and wildlife resources has been the economic mainstay of the area through commercial fishing, trapping, and subsistence. In recent times the commercial fishing industry has suffered from unpredictable returns and declining fish prices. Public recreation and tourism is a growing sector of the economy and has assumed a greater relative importance in local economies.

**Recreation, Tourism, and Scenic.** Use of these resources is primarily related to outdoor activities. Fishing and hunting are perhaps the most significant but others such as river rafting, flight-seeing, and wildlife viewing are growing in importance. Most of the recreation and tourism activities occur in the north central and central part of the area and are related to Wood-

Tikchik State Park, Katmai National Park and Preserve, and Lake Clark National Park and Preserve. Commercial sport fishing is especially concentrated in the Dillingham, King Salmon, and Iliamna regions. Recreational river use is most prevalent in the major drainages to Kuskokwim Bay, the Wood River drainage, and the Nushagak-Mulchatna drainage basin.

**Minerals.** Historically, significant mineral production has come from gold placers in the Nyac district and platinum-gold placers in the Goodnews Bay district. However, the area has experienced exploration success at a number of sites. Important deposits include the Pebble Copper copper-gold-molybdenum deposit, the Shotgun gold deposit, and the Kamishak prospect. Others include the Kemuk iron-titanium deposit, which may have significant platinum potential and the Sleitat tin-tungsten deposit. The Pebble Copper deposit is presently undergoing advanced exploration and studies are underway to ascertain the economic viability of developing the resource, which is estimated to contain one of the world's largest low-grade copper-gold concentrations. Mineral sands occur on beaches along the northwest side of the Alaska Peninsula at a number of locations. Important occurrences, prospects, and deposits occur elsewhere on private lands including the Fog Lake gold prospect. Interest in developing mineral resources in the planning area has increased in recent years, especially on the large areas of state-owned lands in the northwest portion of the area.

**Coal.** Coal bearing stratigraphy is present beneath large areas on the northwest side of the Alaska Peninsula and in the lower Nushagak area. Two coal basins with estimated reserves and modest historical production occur in the central portion of the Alaska Peninsula – the Herendeen Bay and Chignik coal basins.

**Oil and Gas.** The lower Nushagak and western Alaska Peninsula have significant hydrocarbon potential related to the north Aleutian-Bristol Bay-Nushagak Basins. A thick sequence of Tertiary and Mesozoic sedimentary rocks occurs in the subsurface and scattered drilling on the Peninsula indicates showings of gas and oil. DNR is currently initiating a program of oil and gas licensing and leasing for on-shore lands with oil and gas potential.

**Fish and Wildlife.** The area is richly endowed with fish and wildlife resources. These resources are well protected in a series of state and federal conservation units that total approximately 20 million acres. All anadromous fish species found in the state are present here. The Bristol Bay region supports one of the largest sockeye salmon runs in the world. Salmon support subsistence, commercial, and sports fisheries. Caribou occur throughout most of the planning area and five herds are recognized; the Mulchatna/Kilbuck Herd is largest and was estimated at 150,200 animals in 2000. Moose have been expanding their range in the area for decades both southward and westward. Brown bear are numerous especially so in the eastern and northeastern portion of the Alaska Peninsula. The Bristol Bay Lowlands and northwest side of the Alaska Peninsula have extensive areas replete with lakes, ponds, and marshes, which provide important habitat for a wide variety of waterfowl.

## Physical Features: Tidelands

Tidelands in the Bristol Bay planning area are rich in habitat and marine resources making this a desirable area for commercial and subsistence harvest as well as public recreational activities. The tidelands along the entire coastline within the planning area are utilized in some manner for marine harvest. However, commercial harvest occurs more frequently in the vicinity of bays and lagoons that support the densest population of marine life.

**Bristol Bay.** In the Bristol Bay area commercial harvest consists almost entirely of all varieties of salmon, with some harvest of herring roe, which occurs in and around major bays and estuaries, and to the greatest extent throughout Nushagak and Kvichak Bays. Public and commercial docks, boat harbors, seaplane bases and other tideland facilities in support of the fishing industry are prevalent near the communities where the most extensive commercial harvest occurs. Tideland facilities also provide for shipping and transportation. The communities of Dillingham and King Salmon serve as the transportation and service center for the salmon industry and also serve recreational visitors to the area. Sport fishing occurs frequently around the mouths of the Nushagak and Kvichak Rivers. Subsistence harvest in Bristol Bay occurs most often in the areas around communities and villages. However, residents often migrate long distances to summer fish camps. Salmon is by far the most common subsistence staple, but residents also subsist on other fish such as herring, smelt or cod. In addition, subsistence harvest includes sea mammals (seal, sea lion, walrus, and occasionally whale) and waterfowl or waterfowl eggs. Clams are also harvested in the Egegik Bay area.

**Alaska Peninsula and Offshore Islands.** The Alaska Peninsula and offshore islands are sparsely populated so commercial harvesting ranges over longer distances than in Bristol Bay. Concentration of resources is also more scattered. Along the northern coast of the Alaska Peninsula, commercial fishing includes salmon, yellowfin sole, cod, herring, and herring roe. Subsistence harvesting concentrates around the few communities on the peninsula and includes salmon and other fish, seals, and waterfowl and eggs. Clams are harvested in the Port Heiden area, King Cove and False Pass.

Along the Pacific coast of the Alaska Peninsula commercial harvest of fish includes salmon, halibut, herring, herring sac roe (food/bait), cod, pollock, and bottomfish. Fishing fleets are extensive and range long distances. Commercial crab harvest takes place all along this coastline as well and includes red king, tanner and dungeness crab. The highest concentrations of crab occur in bays and lagoons. The richest crab harvest of red king crab and dungeness crab occurs around the Krenitzin Island group and the southern shores of Unimak Island. Shrimp is harvested in Chignik Bay and Mitrofania Bay. Fishing Fleets are based in only a few major processing or service centers: Chignik, Sand Point, King Cove, Cold Bay and Akutan. Public and commercial docks, boat harbors, seaplane bases, and other tideland facilities in support of the fishing industry, are prevalent near these communities. Tideland facilities also support shipping and water transportation. These communities serve recreational visitors, in addition to the fishing industry, and serve as ferry stops on the Alaska Marine Highway. Sport fishing occurs in the Pacific Coast tidelands and around the various Pacific islands adjacent to the Alaska Peninsula.

The few communities on the Pacific side of the Alaska Peninsula depend almost exclusively on commercial fishing for their livelihood and only engage in a small amount of subsistence harvest in the off-season. Subsistence harvest where it occurs, consists almost exclusively of salmon, but in some areas includes small amounts of halibut, clams, seal and waterfowl (birds and eggs).

# Local and Federal Plans

A variety of state, local, and federal plans exist that affect all or parts of the planning area. The authority of each is specific to the jurisdiction to which it applies, except for the two coastal district plans, which affect private, local, state, and federal actions in those instances when a permit is required for some type of federal action.

## Local Comprehensive Plans and District Coastal Zone Management Plans

Local plans consist of the comprehensive plans of a number of communities and those of the boroughs. The following cities have local comprehensive plans, but all are quite old: Sand Point (published 1981), King Cove (1981), Akutan (1982), and Dillingham (1985). The Aleutians East Borough has a comprehensive plan and the Bristol Bay Borough, an economic development plan that also serves as a comprehensive land use plan. Both plans were consulted during plan preparation. These plans, plus recommendations from the municipalities within the planning boundary, were used extensively in the formulation of tideland management and tideland designations for tideland management units in and near these municipalities.

District Coastal Zone Management Plans exist for extensive areas within the planning area, coinciding in area with the jurisdictions having such plans: Aleutians East Borough, Lake and Peninsula Borough, Bristol Bay Borough, and the two CRSAs – Bristol Bay and Cenaliulriit. The Enforceable Policies of these District Plans are extensive and typically include policies pertaining to anadromous streams, marine mammal haulout sites, sea bird colonies, bald eagle nests, oil and gas development, mining and material extraction, settlement, geotechnical hazards, wetlands and water quality, as well as other resource features. The Enforceable Policies of these plans were consulted during the preparation of the Area Plan and formed the basis for certain of the management standards in Chapter 2. Please see the web site www.alaskacoast.state.ak.us/ for more information on Enforceable Policies and for the coastal zone boundaries of the various District Plans.

## State Management Plans

There are two primary state management plans that affect resource use and development: the Bristol Bay Area Plan (1984, 2005) and the Nushagak & Mulchatna Rivers Recreation Management Plan (1990, 2005). There are a wide variety of fisheries management plans for the management of the Bristol Bay fisheries, and DNR has also prepared a number of Site Specific Plans that affect small geographic areas. Neither the site specific nor fisheries management plans are relevant to large-scale, diverse resource and land use management.

The Bristol Bay Area Plan affects all state lands in the planning area, which includes uplands, shore lands, tidelands, and submerged lands, and navigable waters (rivers and lakes). This plan is, and has been, the basis for the management of state land since its adoption in 1984. The large planning area is broken up into 22 regions. Land use designations and management standards are identified for each Region; in addition, the plan provides management standards for the variety of resources that the Department administers in this planning area. This plan can be view at www.dnr.state.ak.us/mlw/planning/ . The Nushagak & Mulchatna Rivers Recreation Management Plan guides state land management in the Nushagak and Mulchatna drainages and guides coastal consistency review by serving as an AMSA plan for the Bristol Bay CRSA. As such, it provides management direction for the 25 management units and public use sites in these drainages, and identifies specific management policies for long-term uses (over 14 days). This plan was adopted as an element of the Bristol Bay Area Plan and serves as the management plan for the drainage areas encompassed by the Rivers Recreation Management Plan.

## Federal Management Plans: National Wildlife Refuges, Katmai National Park and Preserve, and Aniakchak National Monument and Preserve

The management of National Wildlife Refuges occurs through a Comprehensive Conservation Plan (CCP), which provides broad policy guidance and establishes management direction. Each of the NWRs are to be managed consistent with the purposes of ANILCA, which include, as primary purposes, conservation of fish and wildlife populations and habitats in their natural diversity, provision of the opportunity for continued subsistence of local residents, maintenance of water quality and quantity, and satisfaction of international treaty obligations. All of these plans were reviewed for applicability. The Alaska Peninsula and Becharof National Wildlife Refuge (NWR) Comprehensive Conservation Plan (CCP) applies to lands along the Alaska Peninsula within the Becharof NWR and the Alaska Peninsula NWR. This CCP, which is in the process of revision, recommends 'Wilderness' and 'Minimal Management' as the principal management themes; these emphasize the protection of existing fish and wildlife populations and habitats. The Alaska Maritime NWR is administered under a CCP, which manages the islands and islets of the NWR to protect habitat values and fish and wildlife resources. The Togiak CCP is in the process of being revised; the current management plan recommends a similar type of resource management as used in the other CCPs. The Izembek NWR is administered according to a CCP that emphasizes the maintenance of the Refuge in an undeveloped state. This CCP is to be revised beginning in year 2004. A tidelands management zone, which identifies those uses of state tidelands that are consistent with ANILCA requirements, affects the tidelands adjacent to these national wildlife refuges.

The Katmai National Park Resource Management Plan (1994) and its General Management Plan (1986) are used to provide guidance to federal management of this National Park. Federal policy toward the management of state tidelands and submerged lands is described in the General Management Plan. It states that the National Park Service will work cooperatively with the state to ensure that existing and future activities occurring in the areas adjacent to the park boundary "are compatible with the purposes for which the park was established."

# Management Summary

## Uplands

Uplands are to be managed according to the specific land use designations and management intent in the Resource Allocation Tables that follow, and according to the Areawide Management Policies in Chapter 2.

**Areas with Specific Designations:**

**General Use (Gu).** Most upland management units situated in remote, mountainous terrain or adverse soil conditions (usually associated with wetlands), and generally inaccessible areas are designated General Use (Gu), a multiple use designation. Large portions of almost every Region contain areas of this type designated General Use. Management units for which there was insufficient information, or for which there was no apparent economic use or need, or where a number of uses could satisfactorily exist because of management unit size, were also designated General Use. These areas are to be managed to allow for a variety of uses, consistent with the management intent statement for a specific management unit and with the specific requirements for habitat protection, land disposals, and subdivision development identified in Chapter 2. Areas that are identified as having important wildlife, fisheries, or habitat values in the management intent statement of a management unit description are to be managed to protect and maintain these resources.

**Habitat (Ha).** These areas are to be managed to protect the fisheries, wildlife, and habitat values that are associated with a particular management unit. Areas designated Habitat occur at Cape Seniavin, an important walrus haulout, and within the Muklung Hills situated in the far southwestern part of Region 6. If known, the resource values are identified for each management unit designated Habitat in the Resource Allocation Tables.

**Minerals (Mi).** Areas designated Minerals are to be managed to accommodate activities related to mineral exploration, development, and operation. The five areas that are designated Minerals are associated with known subsurface resources. Areas designated Minerals are recognized to include uses and structures associated with mineral development, including settlement directly related to mining operations.

**Public Facilities-Retain (Pr).** This designation is applied to areas of small size that perform or may perform public functions, including but not limited to airports, airstrips, and community schools. Areas affected by this designation are to be retained in state ownership and managed consistent with the Management Agreement or ILMA that governs their use. Land from this designation may leave state ownership if a reverter clause exists and is exercised.

**Public Recreation and Tourism-Dispersed (Rd).** Areas designated Public Recreation and Tourism-Dispersed (Rd) are to be managed to provide continued opportunities for dispersed recreation by the public. Other uses may occur in these areas, but only to the extent that they are compatible with the principal use of dispersed recreation. Large portions of state uplands and shoreland are affected by this designation. River systems used by the public for both

personal and commercial use are designated Rd, including the Mulchatna, Nushagak, Alagnak, and Kvichak Rivers. The areas of state land recommended for inclusion in the state park system (Wood-Tikchik State Park), as well as upland areas with extensive dispersed recreation use, particularly that area of intensive sport fishing adjacent to and northwest of Iliamna Lake, are designated Rd. Major lakes within federal conservation units as well as many lakes adjoining state land are also designated Rd, reflecting this use. Although other areas of state land accommodate public recreation, they have other uses and are designated General Use.

**Settlement (Se) and Settlement-Commercial (Sc).** Areas designated Settlement are appropriate for development or disposal for the purposes of settlement during the planning period. Areas designated Settlement are distributed throughout the planning area with concentrations occurring in the central northern part of this area in Regions 5, 6, and 9. Certain of these management units are affected by municipal entitlement selections of the Lake and Peninsula, Bristol Bay, and Aleutians East Borough. Such areas are considered appropriate for conveyance to a borough, subject to a separate, subsequent DNR Best Interest Finding.

## Tidelands

State tidelands and submerged lands will be managed according to the designation and management intent given in the Resource Allocation Table or as part of a specific tidelands and submerged lands resource management zone. These areas are also subject to Alaska coastal management standards and to the state permitting system that is used to apply these standards.

**Areas with Specific Plan Designations:**

State tidelands are to be managed to: 1) protect sensitive tideland resources; 2) maintain opportunities for commercial, recreational, and subsistence harvest; and 3) ensure the continuation of important recreational activities. They will also be managed to allow for shoreline development in areas adjacent to communities where residential or commercial/industrial uses are considered appropriate by the local unit of government or appropriate land manager, or at specific sites where some form of development occurs or is planned.

**Habitat (Ha).** State tidelands designated Habitat (Ha) will be managed to protect sensitive habitats and areas important as fish and shellfish habitat, marine mammal concentration sites, wildlife movement corridors, and subsistence areas. Habitat designations are often applied to estuarine areas, the mouths of anadromous streams, special management areas that contain a rich diversity and concentration of fishery and wildlife resources, and to certain rocks and islands used for marine mammal rookeries and haulouts. They are also used as a co-designation with Public Recreation and Tourism-Dispersed in the Tideland Resource Management Zones for tidelands and tide and submerged lands adjacent to federal conservation system units. The Habitat designation is also applied to areas within CHAs. Development authorizations may be granted in areas designated Habitat, but their sensitive fisheries or wildlife resources must be protected. Development authorizations within CHAs must meet the specific standards identified in AS 16.20.530.

**Harvest (Hv).** State tidelands are also to be managed to ensure the continuation of recreational and commercial harvest and subsistence uses. Many submerged and tideland areas within the Bristol Bay region are important at some time during the year for harvest activities. Individual tideland management units that are designated Habitat (Ha) are also co-designated as Harvest (Hv) if some form of harvest activity takes place. Development authorizations issued on tidelands affected by the Harvest designation must consider impacts to the various forms of harvest and are to mitigate impacts from this activity. This requirement pertains to individual tideland management units designated Harvest, management units co-designated Harvest with another designation, and to areas designated General Use where some form of harvest occurs.

**Public Recreation and Tourism-Dispersed (Rd).** State tidelands important for some public recreational purposes have been designated Public Recreation and Tourism-Dispersed (Rd). This designation is applied as a co-designation with Habitat in the Tideland Resource Management Zone that adjoins federal conservation units. Development authorization may be granted in areas designated Rd but must ensure that public trust doctrine resources and public recreation values are maintained. Prior to issuing an authorization, DNR should consult with federal agency staff.

**Waterfront Development (Wd).** State tidelands adjacent to communities will be managed to accommodate that development considered appropriate in local land use plans or zoning maps and are designated Waterfront Development (Wd). The Wd designation is applied in tidelands with intensive commercial or industrial uses, where such uses can be expected, or where tidelands are adjacent to uplands with a residential land use pattern, or where such uses can be anticipated.

**General Use (Gu).** Tidelands and submerged lands not included within a tideland management unit or a Tideland Resource Management Zone are designated General Use (Gu). Large areas of state tidelands and submerged lands are affected by this designation, since all areas that are not identified as important for specific habitat, harvest, or recreation protection, included in tideland resource management zones, or intended for development, are affected by the Gu designation. The state coastal zone permitting system is used to determine which uses are appropriate within these areas and is to establish any particular site or operational requirements.

**Areas Affected by Tideland Resource Management Zone:**
A Tideland Resource Management Zone (TRMZ) applies to tideland and submerged lands adjacent to federal uplands under some form of protected status. The TRMZ consists of the tide and submerged lands adjacent to five National Wildlife Refuges (Togiak, Izembek, Becharof, Alaska Peninsula, and Alaska Maritime), and the Aniakchak National Monument and Preserve. The TRMZ extends one half-mile from mean high water from the coast and is co-designated Public Recreation and Tourism-Dispersed and Habitat. These designations convert, respectively, to the classifications of Public Recreation Land and Wildlife Habitat Land. Plan maps for the regions fronting Bristol Bay or the Pacific Ocean depict the TRMZ.

A Tideland Resource Management Zone is used if there is a concentration of significant marine resources or public uses within a specific area, or if individual tideland management units cannot capture the diversity and intensity of these resources within a contiguous area. It is also used when there is common upland property ownership, usually of a large area that is under a protected status, such as a state or national wildlife refuge, national park, or state park. The TRMZs of the Bristol Bay Area Plan are all of the latter type. The management objectives of this zone are to protect the habitats and wildlife that characterize this area and allow certain consumptive uses, which would include foraging, and the taking of fish and wildlife for personal, recreational, commercial, and subsistence purposes. The management intent is twofold: 1) to protect sensitive fisheries habitat, marine mammal concentration areas, shorebird and waterfowl concentration areas, anadromous streams and areas of estuarine wetlands, kelp or eel grass areas, as well as intertidal areas important for brown bears; and 2) to limit those uses and structures on tide and submerged lands to those that would generally be consistent with upland uses. Management plans exist for nearly all the upland areas and should be consulted to determine management standards. For more information on special management areas, refer to item 'D'; ‘Management Guidelines: Special Management Areas – Tidelands & Submerged Lands; Other’ in the Fish and Wildlife Habitat and Harvest Areas section of Chapter 2.

**National Wildlife Refuges and National Monuments.** The areas of state tide and submerged lands adjacent to the National Wildlife Refuges and the National Monument affected by the TRMZ will be managed for uses and structures that support subsistence, personal, recreational, and commercial activities that are consistent with these management objectives or that are authorized under ANILCA. ANILCA provides for temporary structures and facilities directly and necessarily related to the taking of fish and wildlife and for the construction of new permanent cabins and maintenance or replacement of existing cabins. Temporary structures and facilities include temporary subsistence, commercial and personal campsites, tent platforms, shelters and other temporary facilities. Permanent structures include public use cabins, commercial set net cabins, subsistence cabins, and other commercial cabins. ANILCA also allows for the construction of new cabins that are necessary for the protection of public health and safety. DNR may also authorize, with appropriate siting and design, docks in support of commercial, recreation and subsistence activities, floatplane bases, onshore support facilities for offshore oil and gas development, and other structures and facilities consistent with the basic management objective of a TRMZ.

Uses that DNR should not authorize include residential float homes, float lodges, or floating camps, or other types of residential, commercial or industrial uses of the tidelands inconsistent with the types of uses allowed under the ANILCA subsistence provisions. Certain types of mariculture facilities may be authorized if consistent with the management objectives of this zone and the management guidelines for these facilities in Chapter 2; see *Management Guideline B under ‘Aquatic Farming’*. In addition, certain types of governmental, commercial, or research floating facilities may be authorized if consistent with these objectives and the management guideline for these facilities in Chapter 2; *see Management Guideline F under ‘Floating Facilities’*. In general however, the intent is to minimize the number of

authorizations, limit any authorizations to those that are allowed under the Management Guidelines noted above, and avoid the siting of all other structures on state tide and submerged lands if they are visually intrusive or are inconsistent with the management objectives of the TRMZ. DNR shall consult with federal agency staff before authorizing uses on state tidelands and submerged lands.

# Region 2

# *Kuskokwim, Kanektok, and Goodnews*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 2 is the largest of the regions in the area plan but it contains a relatively small amount of state land. Most of the land in the Region is in federal ownership and located within the Togiak, Yukon Delta, and Cape Newenham National Wildlife Refuges. See Map O-1.

The boundaries of Region 2 are defined on the southwest by the Bering Sea, on the northwest and north by the Kuskokwim Area Plan, on the northeast by Wood-Tikchik State Park, and on the southwest and south by the drainage divide between the Kanektok and Togiak River systems. The boundaries are nearly the same as the original (1984) Bristol Bay Area Plan.

Region 2 includes coastal lands along Kuskokwim Bay from Cape Newenham to the Kanetok River encompassing the Ahklun Mountains and portions of the Kilbuk Mountains. This includes all or major portions of the drainages of the westerly flowing Goodnews, Kanektok, Kwethluk, Eek, Kisaralik, Kasigluk, and Tuluksak/Fog Rivers. Elevations range from sea level to 4,068 feet. Major settlements in Region 2 include Quinhagak (pop. 567) and Goodnews Bay (pop. 263); settlements in the Region are all coastal and the interior portion of the Region is largely unpeopled. The population of Region 2 is approximately 871.

### State Lands: Ownership and Acreage

State-owned lands are contained mostly within approximately 368,640 acres in sixteen townships in the central west portion of Region 2. Blocks of state-selected lands occur in the northern Kilbuk Mountains, in the vicinity of Nyac, and in a block northeast of Goodnews Bay. The plan applies to 775,619 acres of state-owned and state-selected uplands and 261,064 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated).

### Physical Geography

Several mountain systems, part of the greater Kuskokwim Mountains, extend from southwest to northeast through the Region; these include the Ahklun, Eek, and Kilbuk Mountains. The drainage pattern reflects the southwest to northeast structural grain of the mountains, and rivers

flow generally from southeast to northwest to the Kuskokwim River or southwest towards Kuskokwim Bay. The greatest relief is found in the northeastern portion of the region; VABM Gravel is at an elevation of 4,068 feet and the valleys below it containing the Kisaralik River are at elevations of approximately 1,200 feet – providing almost 2,900 feet of relief. This area shows enough elevation to display some lingering effects of Pleistocene glaciation – U-shaped valleys, hanging valleys, and cirque lakes. Considerable relief also occurs in the Kilbuk Mountains in the vicinity of the old mining center of Nyac. Mount Hamilton attains an elevation of 3,645 feet and Marvel Dome peaks at 3,768 feet; the surrounding valleys are at an elevation of only a few hundred feet, making for relief of 3,500 feet.

The Region displays a variety of landscapes, including mountain crags, fast-flowing rivers, deep lakes, tundra, marshy lowlands, ponds, estuaries, coastal lagoons, and sea cliffs. The broad glacial valleys of the Ahklun Mountain range cut the tundra uplands, opening into coastal plains. Trees are largely restricted to a few major river valleys such as the Tuluksak, Kisaralik, Kwethluk, and Kanektok Rivers. The sea coast north of Goodnews Bay has little relief, whereas to the south headlands and cliffs extend to the sea; significant headlands occur at Cape Newenham and Red Mountain.

## Climate

Climate conditions are variable depending upon proximity to the ocean. The settlements of Quinhagak, Goodnews Bay, and Platinum have a marine climate with annual precipitation of 22 inches with 43 inches of snowfall; summer high temperatures average 41° to 57° and winter lows average from 6° to 24°. Extremes are from 82° to -34°. Interior conditions are commonly somewhat drier and with greater differences in temperature extremes. At Nyac the average annual precipitation is 23 inches but with 70 inches of snowfall. The Region is underlain by ground with either discontinuous permafrost or ground with isolated masses of permafrost. The areas with discontinuous permafrost are generally those with elevations greater than 500 to 1,000 feet. North facing slopes are more likely to be underlain by permafrost than south facing mountain slopes.

## Other

Region 2 is within the Russian Mission, Bethel, Goodnews, and Hagemeister Island Quadrangles. It lies almost entirely within the boundaries of the Calista Regional Native Corporation Boundary. The boundary between the Calista and the Bristol Bay Native Corporations is somewhat similar to the eastern boundary of Region 2.

## Access

The settlements are highly dependent upon air transportation. There are six gravel airstrips in the Region at Quinhagak (2,600’), Goodnews Bay (2,850’), Nyac (3,650’), Cape Newenham (3,950’), Platinum (3,640’), and the private strip at the Platinum mine (2,000’ gravel). Although coastal, there are no significant port facilities although a harbor and dock exist at Quinhagak. There is no road access to the Region; a number of trails extend from and between settlements. Trails extend into the Nyac portion of the Region from Tuluksak and Aniak paralleling the Tuluksak and Aniak Rivers. Many of these are old mining trails which were used to transport personnel and equipment into the Nyac camp to support gold mining activities. A coastal trail

connects Platinum with Goodnews Bay and Quinhagak and extends northward to Bethel. Goodnews Bay is connected to Togiak by a trail, which extends overland between the two communities. Short sections of road extend south from Platinum for 6.8 miles to the platinum ore fields of the Salmon River and to the northeast from Goodnews Bay for 12.6 miles. A trail also extends from the north shore of Goodnews Bay across the upper reaches of Carter Creek, Indian River, and Jacksmith Creek to the Faro and Keno Creek area of the Arolik River.

## Resources and Uses

**Cultural and Historic.** Archaeological evidence indicates that areas within the Region have been continuously occupied for at least 2,000 years. Historically the Region was peopled by the Kukowogamiut, who occupied the area from the Kuskowkim River south to Chagvan Bay and to perhaps some extent by the Togiagamiut who lived in the area from Nanvak Bay east to Cape Constantine. The people of Nanvak, Osviak, and Chagvan Bay were known as Chingigumiut or Cape people, and are considered a branch of the Togiagamiut. The present Native peoples are collectively known as Yup'ik.

The first European contact with the Native peoples of the Region took place during the expedition of Captain James Cook when his group encountered a group of Natives in kayaks north of Cape Newenham on July 16, 1778. The Russians established a fur trading business in this fur-rich area centered around a fort at Nushagak which handled up to 4,000 pelts annually. The discovery of gold in Alaska in the 1890's brought a significant influx of people and a discovery in the vicinity of Goodnews Bay brought a stampede of miners from Nome in 1900-1901. Reindeer herding was established at Goodnews and Quinhagak in 1904-1905 but a series of extreme conditions in the mid-1940's exterminated most of the reindeer. In 1926 platinum was first discovered in the valley of the Salmon River and bucket-wheel dredging took place there until 1975.

The state Office of History and Archeology lists 245 sites in Region 2 – 181 prehistoric, 47 historic, and 17 of mixed origin; however, new sites are discovered periodically and added to the Alaska Heritage Resource Database as reported. The majority of the prehistoric sites are situated along the major river drainages, especially the Goodnews, upper Kanektok, and Kwethluk Rivers.

**Economic.** Most of the employment is with the school, government services or commercial fishing. Trapping, basket weaving, skin sewing and ivory carving also provide income. Subsistence remains an important part of the livelihood; subsistence upon salmon, seal, walrus, birds, berries, moose and bear is an integral part of the lifestyle. In Quinhagak and Goodnews Bay many residents hold commercial fishing permits for salmon net and herring roe fisheries. A sea food processing plant is located in Quinhagak and processes halibut and salmon. Platinum has been a major supplier of gravel to area villages; the community desires to develop a marine repair facility and dry dock, a seafood processing plant, specialty sea foods venture, or herring roe aquaculture project.

**Recreation.** Recreation in the Region is primarily related to outdoor activities such as hunting and sport fishing, wildlife viewing, photography, hiking and backpacking, river rafting and kayaking, as well as flightseeing. Sport fishing is especially prevalent on the Kisaralik, Kanektok, Arolik, and Goodnews Rivers. Data from the Alaska Department of Fish and Game show that in 2001 approximately 14,357 days were spent on fishing in fresh waters of the Region. The Kanektok drainage shows the most fishing pressure with 9,063 days fished. Recreational fishing lodges in the Region include the Alaska West facilities near Quinhagak and Goodnews River Lodge near Goodnews Bay. Recreational float trips on the rivers in Region 2 are gaining in popularity. Charter Services for these trips are available at Aniak, Bethel, and Dillingham. Trips vary in length from three to seven days. Difficulty varies from novice to intermediate with the most difficult stretches typed as Class III rapids (on the Kisaralik River).

**Minerals.** The Region encompasses portions of the Goodnews Bay, Bethel, Aniak, and Bristol Bay mining districts and has been an important producer of platinum and gold. From 1928 to 1975 the Goodnews Bay area was the United State's only primary producer of platinum, mostly from placer deposits dredged from the Salmon River; the district produced at least 650,000 troy ounces of platinum group metals and 72,600 ounces of gold. A number of Offshore Prospecting Permit applications have been filed on Goodnews Bay and outside waters on the basis of potential for platinum and gold in the marine sediments. Placer gold has also been produced from dredges in the Nyac area where total production exceeds 500,000 ounces of gold. State-owned land in Region 2 contains a number of placer and lode metal occurrences including the Rocky Creek gold and mercury placers and the Kisaralik placer gold and tin occurrence. Lode occurrences of gold and silver are known at Gold Lake, as well as a nearby unnamed prospect, in the upper reaches of the Kisaralik River drainage. Calista Corporation has selected considerable acreage in the Nyac district with the aim of developing precious metal deposits. Nyac Mining Company has been (2003) placer mining on Spruce Creek under a lease agreement with Calista Corporation. The state has selected approximately 332 sections (212,480 acres) in the district.

Most of the mineral potential in Region 2 is for the precious, base, and platinum group metals. The potential for rare, industrial minerals, mineral sands, oil, gas, or coal is not known. However, narrow seams of lignite coal have been reported along the banks of the upper Kanektok River.

**Materials.** There are active material sites in the vicinity of Quinhagak.

**Forestry.** Only a few percent of the Region is forested. Narrow bands of riparian, black spruce-hardwood, mixed black spruce-balsam poplar, and balsam poplar woodlands extend along the major rivers and their tributaries. None of the wooded areas contain commercially harvestable timber. Lightning-caused wildfires occur every year in the Region, but the vast majority of the land is low-lying tundra interspersed with lakes and rivers. Fires rarely exceed a few acres. Forestry resources are generally insufficient to provide a dependable fuel source for year round residents. Some local residents harvest driftwood, which is particularly abundant in the Kuskokwim Bay area due to large quantities of driftwood coming from the Kuskokwim River.

**Fish and Wildlife.** Fish and Wildlife resources are very important and support a mix of subsistence, recreational, and commercial economies. Species of major importance include caribou, bear, beaver, anadromous fish, and trout. Furbearing species considered most important include wolf, red fox, marten, beaver, lynx, wolverine, river otter, coyote, and mink. Important habitat for seabirds, shorebirds, and waterfowl also occur in the Region.

Fish and wildlife habitat in Region 2 is largely protected by inclusion in the Togiak and Yukon Delta National Wildlife Refuges. The Cape Newenham State Game Refuge is also found here, focusing on the protection of resources within Chagvan Bay. The refuges provide some of the nation's most productive sub arctic goose habitat. Although most noted for waterfowl and other migratory bird habitat, the refuges also support musk ox, caribou, brown and black bears, wolves, and moose. These species are harvested by subsistence hunters.

A large portion of the Region is a vast, flat wetland/tundra complex dotted by countless ponds, lakes, and meandering rivers. The most productive wildlife habitat is the coastal region bordering the Bering Sea. This narrow strip of land is highly productive goose nesting habitat. The refuges support one of the largest aggregations of water birds in the world. Over one million ducks and half a million geese breed here annually and in some summers, up to a third of the continent's Northern Pintails can be found on the refuges. In addition, nearly 40,000 loons, 40,000 grebes, 100,000 swans and 30,000 cranes return to the Togiak NWR each spring to nest. Millions of shorebirds use the refuge for both breeding and staging. In terms of both density and species diversity, the delta is the most important shorebird nesting area in the country, and the vast intertidal zone is the most important wetland for post-breeding shorebirds on the west coast of North America.

The refuges host approximately 80% of the continental breeding population of black brant and nearly all emperor geese. Cackling Canada and Pacific greater white-fronted geese number over 175,000 and 420,000, respectively. Principal species of ducks that occur on the refuges include northern pintail, greater scaup, and wigeon. Harlequin ducks breed in many of the watersheds draining the Kuskokwim Mountains, as well as other suitable habitats. Common eiders are locally "common" in the vicinity of some brant colonies. The formerly abundant spectacled eiders have declined precipitously over the last 25 years.

Nineteen species of raptors have been recorded on the refuges, including golden eagles, bald eagles, and peregrine falcons. The Kisaralik River is among the most important of areas for nesting raptors, and supports one of the densest populations of breeding golden eagles in North America.

Region 2 is mostly within the range of the Mulchatna and Kilbuck Caribou Herds, estimated in 2000 at 150,200 animals. Historically, caribou occurred in large numbers and were the most abundant ungulate. Numbers peaked in the 1860's and during this period, caribou ranged over much of the area. Caribou subsequently disappeared from the region with the exception of small, remnant herds in the Kilbuck and Andreafsky Mountains. In recent years, up to 40,000 animals from the Mulchatna Caribou Herd have migrated into the Region during the fall and winter period.

Including the Bering Sea, the waters provide habitat for at least 40 species of fish. The Yukon and Kuskokwim rivers, support significant salmon fisheries. Other important freshwater resident species include several species of whitefish, sheefish, Alaska blackfish, burbot, northern pike, Dolly Varden, rainbow trout, grayling, and Alaska blackfish.

Bering Sea marine mammals provide a vital subsistence resource for coastal villages.

Trapping is an important part of the culture and economy of the residents of southwest Alaska. Trapping was one of the main sources of cash income before prices paid for commercially caught salmon increased during the early 1980's. Furbearers still provide an important source of income for trappers and many furs are used domestically in the production of garments and handicrafts. Additionally, the meat from some species, particularly beaver, is highly valued as food. Commonly trapped furbearers include: beaver, red fox, river otter, wolf, wolverine, and Arctic ground (parka) squirrel. Little trapping effort is directed at the other furbearers occurring such as: mink, muskrat, Arctic fox, coyote, lynx, marten, short-tailed weasel, least weasel, red squirrel, and hoary marmot. Trapping seasons generally reflect the period of pelt primeness and typically begin in early November and finish at the end of February or March. Most trappers access their areas via snowmachines. Open water or lack of adequate snow may prohibit access and thus reduce trapping effort.

# Management Considerations: Local and State Plans and Special Use Area

A number of local, state, and federal management plans were considered in the development of this plan. Local plans include the Cenaliulriit CRSA Coastal Management Plan and the Bristol Bay CRSA Coastal Management Plan. The Bristol Bay Area Plan is the only state plan affecting this Region although a Special Use Designation is used to manage certain land uses within the planning area. Federal plans include the Togiak National Wildlife Refuge Comprehensive Conservation Plan.

Region 2 is situated partly within the Cenaliulriit CRSA CMP and the Bristol Bay CRSA CMP. State-owned land falls within each of these coastal management plans. The Enforceable and Administrative Policies of these Coastal Management Plans are extensive; policies affecting anadromous fish streams, bald eagle nests, oil and gas development, material extraction, and mining can be applicable, under certain circumstances, to state land. Please see the web site www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by the DNR prior to issuing an authorization.

The Bristol Bay Area Plan (1984) affected all state lands in the Region. This plan stated that Region 2 was to be managed for two co-designated land uses – a combination of fish and wildlife-recreation-minerals and a combination of fish and wildlife-recreation. The

management intent for state lands in the Upper Kisaralik/Kwethluk River drainages was for production of fish and wildlife and for recreation. This revision supersedes the original Area Plan.

The State of Alaska has designated a Special Use Area (SUA) for the Togiak National Wildlife Refuge and the Lower Goodnews River (May 10, 1991; ADL 226851). It applies to those lands generally described as shorelands within Togiak National Wildlife Refuge and lower Goodnews River as described in the Togiak National Wildlife Refuge Public Use Management Plan and Environmental Assessment. Setting up and using a camp is allowed as provided in 11 AAC 96.020 (a)(4)(A), except that the period of use is limited to three consecutive days at any one site. The period of use may be extended by permit. As part of the current collaborative Togiak NWR planning process, the state has agreed to review the existing SUA and has proposed several alternatives to the current three day camping limit. The alternatives only address length of stay and will be labeled as State of Alaska alternatives for management of the shorelands. The proposed State of Alaska alternatives will be incorporated into the table of alternatives presented in the Public Review Draft CCP text. The state will determine if the current SUA needs to be revised based on public comment, resource issues, and management goals.

Region 2 is within the Togiak and Yukon Delta National Wildlife Refuges. Both of these refuges have Comprehensive Conservation Plans and the Togiak Refuge plan is in the process of revision.

# Management Summary: Uplands

State land in Region 2 is to be managed for a variety of multiple uses, including the maintenance of sensitive wildlife habitats, dispersed public recreation, minerals exploration and development, oil and gas development, materials extraction, and public facilities development. The majority of state-owned land in Region 2 is designated General Use (Gu). In addition, all state-selected lands in Region 2 are designated as General Use. Five townships (management unit R02-03) located adjacent to Wood-Tikchik State Park are designated Public Recreation and Tourism-Dispersed (Rd); these areas have been recommended for inclusion in the Park by the DNR's Wood-Tikchik State Park Management Plan (2002). Anadromous fish streams on state-owned land are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Navigable waters in Federal lands are designated either Habitat (Ha), Public Recreation and Tourism-Dispersed (Rd), General Use (Gu), or are co-designated Habitat and Public Recreation and Tourism-Dispersed (Ha, Rd). A few small management units of land at the public airports are designated Public Facilities-Retain (Pr). No state lands are designated for Settlement in Region 2.

## Plan Designations and Management Intent

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and

Harvest Areas. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Within this Region, lands that contain one or more resource values, none of which is of sufficiently high value to merit designation as a primary use, and areas that are unlikely to be developed during the planning period, are designated General Use. This land is to be managed for a variety of uses including protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and protection of heritage resources. It is anticipated that state-selected land in the Nyac area (management unit R02-01) may be the locus of mineral exploration and development activities during periods of lucrative precious metal prices. Similarly, lands selected by the state (management unit R02-05) in the Goodnews Bay area are likely to receive minerals interest when platinum prices are elevated. Mineral exploration and development are considered appropriate uses within areas designated General Use. It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. Areas designated General Use may be conveyed to a borough, should one be formed, under the Municipal Entitlement program.
- Habitat (Ha). Generally, this designation applies to areas of varied size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in a permanent loss of a population or sustained yield of a species. In Region 2 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm). These lands are to be retained in state ownership.
- Public Recreation and Tourism-Dispersed (Rd). Lands with the designation of Public Recreation and Tourism-Dispersed are to be managed so that their public recreation values are protected and maintained. Within these areas the primary surface uses are intended to be those related to hiking, hunting, fishing, wildlife viewing, and the like. A small tract of state land adjoining the Wood-Tikchik State Park is recommended for inclusion in this Park and is designated Rd (Wood-Tikchik State Park Management Plan, October 2002, p. 11-3 and Map 11-1).
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may be (only) designated Public Recreation and Tourism-Dispersed (Rd), Habitat (Ha), or General Use (Gu).
- Public Facilities-Retain (Pr). This designation applies to sites that are reserved for a specific public infrastructure requirement. They are to be retained in state or public ownership. In this Region, this designation applies to lands containing public facilities,

commonly airports or schools. Only a small amount of acreage is affected by this designation.

### Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region except for the area affected by a Special Use Designation. The Togiak National Wildlife Refuge and Lower Goodnews River are a special use area. Setting up and using a camp is allowed as provided in 11 AAC 96.020 (a)(4)(A), except that the period of use is limited to three consecutive days at any one site. The period of use may be extended by permit. For users going to the Kanektok River, there is a one day limit at the outlet of Pegati Lake due to its frequent use.
- Addition to State Park. Management unit R02-03, which includes five townships adjacent to Wood-Tikchik State Park, is to be managed for the purposes of dispersed recreation and is designated Public Recreation and Tourism-Dispersed (Rd). This management unit is part of a larger package of land that the DNR recommended for inclusion into the Park in the Wood-Tikchik State Park Management Plan. This management unit is to be managed consistent with that of the adjoining parkland as provided for in the Wood-Tikchik State Park Management Plan (October 2002, p. 11-3 and Map 11-1).
- Mineral Closing Orders. Except for areas closed to mineral entry under existing Mineral Closing Orders, all state lands within the Region are open to mineral entry. No additional MCOs are recommended. No leasehold location orders are recommended. See the Minerals section in Chapter 2 for more detail on subsurface management requirements.
- Retained Lands. Several small management units that are designated Public Facilities-Retain are designated to be retained. Also, lands designated Ha are to be retained.
- Municipal Selections. Areas designated General Use within this Region are considered appropriate for conveyance to a Borough in the event that one is formed.

See the Resource Allocation Table for more details on the upland management units.

# Management Summary: Tidelands and Submerged Lands

Tidelands within this area either adjoin federal lands administered by BLM, federal lands within the Togiak National Wildlife Refuge (NWR), or private (Native) lands, many of which adjoin Goodnews Bay. Sensitive tideland resources concentrate in three areas: Goodnews Bay, Chagvan Bay, and along the coastal promontory called Cape Newenham.[5] These areas contain

[5] Private and Native lands adjoin Goodnews Bay. Chagvan Bay is included within both the National Wildlife Refuge and Cape Newenham State Game Refuge. Cape Newenham lies completely within the NWR.

a wide variety of wildlife and coastal resources, including pelagic birds, waterfowl and shorebirds, seabird colonies, and Pacific herring spawning and rearing areas. Less sensitive areas, primarily associated with spawning areas of Pacific herring and waterfowl concentrations (spring and fall concentrations) and occasional seabird colonies, are situated along the coast throughout the Region.

At Quinhagak and Goodnews Bay a high percentage of residents are engaged in commercial fishing for salmon and herring roe, but only a small number are so engaged in the community of Platinum. Subsistence harvest occurs around these three communities consisting of marine mammals (seal and walrus), salmon, and some waterfowl and eggs. Marine mammals provide a vital resource. Pacific walruses, spotted seals, ringed seals and Pacific bearded seals are hunted on the ice in spring and some seal hunting continues during summer in bays and estuaries.

## Plan Designations and Management Intent

**Coastal Tidelands.** The coast in that part of the Region not adjacent to the Togiak NWR consists of mixed sand and gravel beaches interspersed with areas of gravel beaches. Pacific herring spawning areas and waterfowl concentrations occur along this coast. Pelagic birds are also present. This area is designated General Use (Gu). Development authorizations are considered appropriate in these tidelands subject to the protection of sensitive resources and areas. There are a number of offshore prospecting permits along the coast south of Goodnews Bay that were located for platinum and gold deposits. Tideland authorizations to support mineral exploration and development in this area are considered appropriate. Tideland authorizations for material sites (gravel extraction) are also appropriate in this area.

**Tidelands adjacent to Togiak National Wildlife Refuge (R02T-01).** The area north of Goodnews Bay that is part of the Togiak NWR is less productive than the Cape Newenham area to the south. Pacific herring spawning areas and waterfowl concentrations occur along this part of the coast. The Cape Newenham area provides habitat for seals, sea lions, walruses and a variety of birds, such as pelagic and diving birds, seabirds, and waterfowl. A concentration of bird colonies is present at Bird Rock. Sea lion and walrus haulouts occur at scattered sites. Tidelands adjacent to the Togiak NWR are affected by a Tideland Resource Management Zone (TRMZ). TRMZs are designated Habitat and Public Recreation and Tourism-Dispersed and extend one-half mile from the coast. See *Management Summary, Tidelands in Chapter 3* for a description of these zones.

**Tidelands within Goodnews Bay (R02T-02, R02T-03).** The tidelands within Goodnews Bay (R02T-02) provide a rich and varied habitat for Pacific herring spawning, seabird colonies, and waterfowl concentrations. The bay mainly consists of mud and sand with areas of sheltered tidal flats containing a high biomass. The management unit is designated Habitat (Ha) except for areas adjacent to the community of Goodnews Bay and sites that may be required for mineral transfer.

The area adjacent to the Goodnews Bay community is designated Waterfront Development (R02T-03). Mineral development of areas to the south of Goodnews Bay may require a transshipment site. Such a facility is considered appropriate and, when ultimately sited, is

designated Waterfront Development. The management intent within areas designated Habitat is to protect Pacific herring spawning areas, seabird colonies, and waterfowl concentrations. Authorizations to support community or mineral development are considered appropriate within areas designated Waterfront Development and may also be appropriate within areas designated Habitat, subject to the protection of sensitive resources and areas.

**Tidelands within Chagvan Bay (R02T-04).** This bay is included within the Cape Newenham State Game Refuge. Chagvan Bay consists of mud and sand with areas of sheltered tidal flats having a high biomass. Eel grass is present throughout the bay. The bay provides habitat for Pacific herring spawning areas and is known for its waterfowl concentrations. Waterfowl concentrations occur during the spring and fall and include an area of molting concentration. This area is designated Habitat and development authorizations are prohibited unless authorized under AS 16.20.060. ADF&G shall be consulted before any authorizations are issued.

See the Resource Allocation Table for more detail on the tideland management units.

# Resource Allocation Table for Upland Units - Region 2

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R02-01<br>Nyac | 204,807<br>Gu -- General Use | Map O-1 | If these lands are conveyed by the Federal government they are to be managed for a variety of uses including mineral exploration and development, oil and gas exploration and development, the protection of anadromous fish and other fish and wildlife resources, and dispersed recreation and tourism. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. See specific management requirements for anadromous streams and caribou calving areas in this Chapter. Because of its remote location and lack of accessibility, it is not intended that intensive development occur within this unit during the planning period except occasionally and at specific locations, although mineral development is considered appropriate. The unit is not considered suitable for settlement. This is considered a high to medium priority selection. | This unit is comprised of various areas of state-selected land. The lands are situated in and around the Nyac mining district which is an important producer of placer gold. The lands have significant mineral potential for both lode and placer gold deposits. The area is mountainous and cut by the Tuluksak, Fog, and upper reaches of the Aniak Rivers; moist tundra and shrubs are the main vegetation types present. The area is also utilized for hunting and fishing and contains anadromous fish streams. The unit is accessed by a number of established trails including the Marvel Creek Cat trail, the Bear Creek-Saw Pit Creek trail, the Ophir Creek-Bear Creek trail, and the upper landing-Bear Creek trail. |
| R02-02<br>Kisaralik River | 252,330<br>Gu -- General Use | Map O-1 | This unit is designated General Use (Gu). These lands should be managed for a variety of uses including potential minerals exploration and development, the protection of fish and wildlife and their associated habitat, and dispersed recreation and tourism. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. See specific management requirements for bald eagles, anadromous streams, and caribou calving areas in this Chapter. Because of its remote location and lack of accessibility, it is not intended that intensive development occur within this unit during the planning period except occasionally and at specific locations, although mineral development is considered appropriate. The unit is not considered suitable for settlement. | This unit occupies a fairly mountainous area drained by the west-flowing anadromous Kisaralik and Kwethluk Rivers. It is bounded by Bulldog Creek and the Cripple Mountains to the north, Crooked Mountain and Milk Creek to the south, unit R02-03 to the east, and the Kilbuck Mountains to the west. Vegetation is primarily tall and low shrubs as well as alpine tundra. This scenic area has significant mineral potential, is utilized for recreation, and is used for hunting and fishing. Numerous nesting sites for raptors are reported on the western margin of the area and caribou are reported to calve on the eastern margins of the unit. Bears utilize anadromous fish streams in the drainages of the Kisaralik and Kwithluk Rivers. The Alaska Heritage Resources Survey (AHRS) reports many heritage sites in this unit. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R02-03<br>Kisaralik Lake | 114,544<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-1 | This unit is designated Rd and is to be managed, generally, for the purposes of dispersed recreation and the protection of fish and wildlife. This unit is to be retained by the state and is recommended for eventual inclusion in the Wood-Tikchik State Park. DNR authorizations should be limited to those that are consistent with the eventual use of this area as part of the State Park. The management of this unit should be similar to that of the adjoining area of the State Park. Consult the management requirements of Management Unit 2 (Upper Tikchik Lakes) in the State Park Plan for specific guidance. | This unit is comprised of five townships adjacent to Wood-Tikchik State Park. The unit occupies a fairly scenic, mountainous area that extends from the North Fork Lakes and the North Fork of the Kisaralik River south to Milk Creek and Cascade Lake. It is primarily vegetated in tall shrubs and alpine tundra. The unit is reported to contain caribou calving areas. Bears utilize anadromous fish streams in the drainages of the Kisaralik and Kwethluk Rivers. The unit contains Kisaralik Lake which is used by floatplanes and recreationists that float the Kisaralik River. The Wood-Tikchik State Park Management Plan (2002) recommended that the area encompassed by this unit be retained by the state and eventually added to the State Park. |
| R02-04<br>Quinhagak Airport | 77<br>Pr -- Public Facilities-Retain | Map O-1<br>S5S74W Sec. 9 | This unit is to be managed by ADOT/PF according to the conditions of the Management Right (ADL 221550) and retained in state ownership as a limited state holding (LSH 237). | This unit contains public airport facilities adjacent to the community of Quinhagak and is managed by ADOT/PF according to the conditions of ADL 221550 and LSH 237. |
| R02-05<br>Goodnews River | 203,770<br>Gu -- General Use | Map O-1 | This unit is designated General Use (Gu). If these lands are conveyed by the Federal government they are to be managed for a variety of uses including mineral exploration and development, the protection of anadromous fish and other fish and wildlife resources, and dispersed recreation and tourism. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. See specific management requirements for anadromous streams and caribou calving areas in this Chapter. Because of its remote location and lack of accessibility, it is not intended that intensive development occur within this unit during the planning period except for occasionally and at specific locations, although mineral development is considered appropriate. This is considered a medium to high priority selection. | This state-selected unit is located generally north and northwest of Goodnews Bay with a portion of the Goodnews River and the headwaters of the Arolik River flowing through the unit. The lands are in an area with significant mineral potential for platinum group metals and gold with modest potential for chromite and asbestos. The greater area has had significant past production of platinum and gold from placer deposits. For many years the Goodnews district was the only platinum producing area in the United States. The area is also utilized for commercial recreation along the anadromous Arolik and Goodnews Rivers and for hunting and fishing. The Alaska Heritage Resources Survey (AHRS) reports a number of heritage sites in this unit. The unit is accessible by the Goodnews-Arolik trail. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R02-06<br>Goodnews Bay Airport | 91<br>Pr -- Public Facilities-Retain | Map O-1<br>S12S73W Sec. 21,22,28 | This unit is to be managed by ADOT/PF according to the guidelines in the Management Agreements (ADLs 22380 and 22381) and is to retained in state ownership as limited state holdings (LSHs 269 and 270). | This unit contains public airport facilities adjacent to Goodnews Bay and the community situated there. It is managed by ADOT/PF under management agreement (ADLs 22380 and 22381) and limited state holding (LSHs 269 and 270). |

# Resource Allocation Table for Tideland Units - Region 2

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R02T-01<br>Tidelands adjacent to Togiak NWR | 17,650<br>Ha, Rd -- Habitat and Public Recreation and Tourism-Dispersed | Map O-1 | Tidelands adjacent to the Togiak National Wildlife Refuge (NWR) are affected by a Tideland Resource Management Zone (TRMZ). TRMZs are designated Habitat and Public Recreation and Tourism-Dispersed and extend one half mile from the coast. See "Management Summary, Tidelands" in Chapter 3 for a description of these zones. | Most of the tidelands in Region 2 adjoin the Togiak National Wildlife Refuge. Areas north of Goodnews Bay that adjoin the Togiak NWR consist of mixed sand and gravel beaches interspersed with areas of gravel beaches. Pacific herring spawning areas and waterfowl concentrations occur along this coast. Pelagic birds are also present. The Cape Newenham area, situated in the southern part of this region, is an especially significant coastal habitat and is associated with a rocky headland. This area, which consists of exposed rocky headlands and wave cut platforms, provides habitat for seals, sea lions, walruses, and bird colonies at Bird Rock, as well as a variety of other birds. Pelagic and diving birds, seabirds, and waterfowl are present. Sea lion and walrus haulouts occur at scattered sites.<br><br>Harvest: A limited amount of commercial fishing and subsistence harvest occurs along this coastline. The exception is the area around Quinhagak where the residents are engaged in commercial fishing for salmon and herring roe. The village of Quinhagak provides a harbor and docking facilities for fishing boats. Subsistence harvest in this area consists of salmon, seal, walrus and some waterfowl and their eggs. |
| R02T-02<br>Goodnews Bay | 34,912<br>Ha, Hv -- Habitat and Harvest | Map O-1<br>S13S75W, S13S74W, S13S73W | Because of the varied and widespread resources of Goodnews Bay, this unit is designated Habitat and Harvest except for areas that may be required in the future for possible mineral transfer. Mineral development of areas to the south of Goodnews may require a transshipment site; such a facility is considered appropriate and, when ultimately sited, is designated Waterfront Development.<br><br>Management Intent: Within areas designated Habitat and Harvest, protect Pacific herring spawning areas, seabird colonies, and waterfowl concentrations. Protect areas of estuarine wetlands and anadromous streams. Authorizations to support community or mineral development is considered appropriate within areas designated Waterfront Development. | The tidelands within Goodnews Bay provide a rich and varied habitat for Pacific herring spawning, seabird colonies, and waterfowl concentrations that occur in the spring and fall. Numerous anadromous streams empty into the bay. The bay mainly consists of mud and sand with areas of sheltered tidal flats having a high biomass. Estuarine wetlands occur in some areas.<br><br>Harvest: Commercial fishing occurs throughout Goodnews Bay for salmon and herring roe. Subsistence harvest in this area consists of salmon, seal, walrus and some waterfowl and waterfowl eggs. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R02T-03<br>Goodnews Bay Community (Goodnews) | 193<br>Wd -- Waterfront Development | Map O-1 | This area, adjacent to the small community of Goodnews, is designated Waterfront Development. Authorizations to support community or mineral development is considered appropriate within areas designated Waterfront Development. | This is a small tideland Unit intended to accommodate tideland structures necessary for commercial, industrial, or other forms of intensive development. |
| R02T-04<br>Chagvan Bay | 8,262<br>Ha -- Habitat | Map O-1<br>S16S75W, S16S74W | This unit is designated Habitat. Development authorizations are prohibited unless authorized under AS 16.20.060. Alaska Department of Fish and Game (ADF&G) shall be consulted prior to granting any authorizations.<br><br>Management Intent: Protect habitat for Pacific herring spawning, areas of waterfowl concentration, and areas of eel grass. These resources are extensive throughout the unit and any authorization that may be considered must take into account effects upon each resource. | Chagvan Bay is included within the Cape Newenham State Game Refuge. Chagvan Bay consists of mud and sand with areas of sheltered tidal flats having a high biomass. Eel grass is present throughout the bay. The bay provides habitat for Pacific herring spawning areas and is known for its waterfowl concentrations. Waterfowl concentrations occur there during the spring and fall, including an area for molting concentration. |
| R02T-05<br>Offshsore Submerged Lands | 261,064<br>Gu -- General Use | Map O-1 | Manage for a variety of uses and resources. Protect important concentrations of pelagic birds, sea birds, and waterfowl. Maintain opportunities for commercial harvest. | This tideland unit covers the area between the three mile seaward limit of state owned submerged land and the Tideland Resource Management Zone (R02T-01). There are very few such gaps; consult Plan Map 0-1. See the "Resources, Uses, and Additional Information" of R03T-01 for an indication of the resources that may exist in these areas, which are believed to be primarily associated with pelagic birds, sea birds, and waterfowl. There may be limited harvest of the resources described in R02T-01. |

# Region 3

# *Togiak, Igushik*

## Summary of Resources and Uses in the Region

### Region Boundary

The boundaries of Region 3 are defined on the south by the shores of Bristol Bay, on the west, northwest, and north by the drainage divide between the Kuskokwim and Kuskokwim Bay drainages and those of Bristol Bay. The eastern boundary is defined partly by the drainage divide between the Igushik and Weary River Systems and the western boundary of Wood-Tikchik State Park. The boundaries are nearly the same as the original (1984) Bristol Bay Area Plan. Region 3 includes coastal lands along northwest Bristol Bay from Cape Newenham to the Snake River encompassing portions of the Ahklun Mountains and of Wood Mountains. This includes all of the southerly flowing Togiak and Igushik Rivers as well as smaller drainages such as the Osviak, Matogak, Quigmy, Negukthlik, Ungalikthluk, Kulukak, Kanik, and Tunuing Rivers. This Region encompasses the Nushagak Peninsula and the uplands of Hagemeister and the Walrus Islands. Elevations range from sea level to 4,795 feet (Crooked Mountain). Major settlements in Region 3 include Togiak (pop. 762) with nearby Twin Hills (pop. 59) and Manokotak (pop. 387). Togiak is a coastal community whereas Manokotak is situated approximately twelve miles inland on the Igushik River. For the most part, the interior portion of the Region is largely unpeopled. The population of Region 3 is approximately 1,208. Almost all of the land in the Region is in federal ownership and located within the Togiak National Wildlife Refuge as well as the Alaska Maritime National Wildlife Refuge, which encompasses Hagemeister Island. The boundaries of Region 3 also include the Walrus Islands State Game Sanctuary. (See *Map O-1*.)

### State Lands: Ownership and Acreage

State-owned lands comprise a very small part of the Region and are contained mostly within portions of four townships in the northern portion of the Region, adjacent to the Wood-Tikchik State Park, and a portion of a township approximately eight miles north of Manokotak. The state also has ownership of the Walrus Islands, which are within Walrus Island State Game Sanctuary. There are no significant blocks of state-selected land in the Region. The plan applies to 58,727 acres of state-owned uplands and 732,004 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated).

## Physical Geography

Several mountain systems, part of the greater Kuskokwim Mountains, extend from southwest to northeast through the Region; these include the Ahklun, and Wood River Mountains. The drainage pattern reflects the southwest to northeast structural grain of the mountains and rivers flow generally from south or southwest towards Bristol Bay. The greatest relief is found in the northern portions of the region; Crooked Mountain is at an elevation of 4,795 feet and the valleys below it, containing Heart Lake and Milk Creek, are at elevations of approximately 1,430 feet – providing almost 3,400 feet of relief. This area shows enough elevation to display some lingering effects of Pleistocene glaciation – U-shaped valleys, hanging valleys, and cirque lakes. Considerable relief also occurs in the area around Togiak Lake. VABM Wanda is at an elevation of 2,975 feet and Pistuk Peak tops out at 4,305 feet; the surrounding valleys are at an elevation of only a few hundred feet making for relief of over 4,000 feet.

The Region displays a variety of landscapes, including mountain crags, fast-flowing rivers, deep lakes, tundra, marshy lowlands, ponds, estuaries, coastal lagoons, and sea cliffs. The broad glacial valleys of the Ahklun Mountain Range cut the tundra uplands, opening into coastal plains. Tree covered areas occur only sparingly and are largely restricted to patches in the Togiak River valley. Most of the uplands are vegetated with low to tall shrubs and low lying areas with low shrub and lichen tundra. At the highest elevations, mostly above 3,000 feet, vegetation is lacking or consists of a thin cover of alpine tundra. The sea coast is not rugged, however, significant headlands occur at Cape Newenham and where the Wood River Mountains meet Bristol Bay in the vicinity of Right Hand Point and Kulukak Bay. The Nushagak Peninsula and lower Igushik River area is low-lying marshes, lakes, and wetlands as is much of the central and lower valley of the Togiak River.

## Climate

Climate conditions are variable depending upon proximity to the ocean. The communities of Togiak and Twin Hills have a marine climate with annual precipitation of 20 to 26 inches with 52 inches of total snowfall; summer temperatures range from 37° to 66° and winter temperatures average from 4° to 30°. Extremes are from 82° to -34°. Fog and high winds are prevalent during the winter, and Togiak Bay is ice-free from June through mid-November. The Region is underlain by ground with either discontinuous permafrost or ground with isolated masses of permafrost. The areas with discontinuous permafrost are generally those with elevations greater than 500 to 1,000 feet. Of course, north facing slopes are more likely to be underlain by permafrost than south facing mountain slopes.

## Other

Region 3 is within the Bethel, Goodnews, Hagemeister Island, and Togiak Quadrangles. It lies almost entirely within the boundaries of the Bristol Bay Regional Native Corporation. The boundary between the Calista and the Bristol Bay Native Corporations is somewhat similar to the western boundary of Region 3.

## Access

The settlements are highly dependent upon air transportation and, to a lesser extent, boat. There are three major state-owned, lighted, gravel airstrips in the Region at Togiak (4,400'), Twin Hills (3,000'), and Manokotak (2,720'); Manokotak also boasts a 5,000-foot-long seaplane base. Although coastal, there are no significant port or dock facilities. In summer months, supplies brought by boat or barge can be lightered ashore. There is no road access to the Region and ground transportation is largely served by snowmachines and ATVs. A number of trails extend from and between settlements. Togiak, Twin Hills, and Manokotak are linked to the Goodnews-Togiak and Togiak-Nushagak Trails, which extend east-west from Dillingham to Goodnews Bay. Air taxis based in Dillingham provide daily air service to each of the principal communities.

## Resources and Uses

This region supports important herring and salmon fisheries that provide for commercial and subsistence users. The Togiak River also provides salmon for sports users. Waterfowl is an important wildlife resource for subsistence users in the area; there are also many seabirds in the Region. Recreational resource potential is high along the Togiak River, Togiak Lake, Amanka Lake, and the Igushik River for fishing and float trips. The Nushagak Peninsula has modest potential for shallow oil and gas as well as coalbed methane. The Region also provides important habitat for beluga whales; calving grounds are present in the vicinity of the mouth of the Igushik River.

**Cultural and Historic.** Archaeological evidence indicates that areas within the Region have been continuously occupied for at least 2,000 years. Historically the Region was peopled by the Togiagamiut who lived in the area from Nanvak Bay east to Cape Constantine and to perhaps some extent by the Kukowogamiut and who occupied the area from the Kuskowkim River south to Chagvan Bay. The people of Nanvak, Osviak, and Chagvan Bay were known as Chingigumiut or Cape people, and were considered a branch of the Togiagamiut. The present Native peoples are collectively known as Yup'ik.

The first European contact with the Native peoples of the Region took place during the expedition of Captain James Cook when his group encountered a group in kayaks north of Cape Newenham on July 16, 1778. The Russians established a fur trading business in this fur-rich area centered around a fort at Nushagak which handled up to 4,000 pelts annually. The discovery of gold in Alaska in the 1890's brought a significant influx of people to Alaska and a discovery in the vicinity of Goodnews Bay brought a stampede of miners from Nome in 1900-1901. Reindeer herding was established at Togiak and Nushagak in 1904-1905 but a series of extreme conditions in the mid-1940's exterminated most of the reindeer. In 1926 platinum was first discovered in the valley of the Salmon River and bucket-wheel dredging took place until 1975.

The state Office of History and Archeology lists 123 sites in Region 3 – 74 prehistoric, 27 historic, and 22 of mixed origin; however, new sites are discovered periodically and added to the Alaska Heritage Resource Database as reported. The majority of the prehistoric sites are

situated along the main branch of the Togiak River, the upper Igushik River, and along the coast. Sites are also known on the Walrus Islands and on northern Hagemeister Island.

**Economic.** Steady employment is restricted to a few government jobs. The economic base is primarily commercial salmon and herring fisheries. Many residents hold commercial fishing permits; fishermen use flat-bottom boats for the shallow waters of Togiak Bay. There is one onshore fish processor and several floating processing facilities near Togiak. Most people depend heavily on subsistence activities. Salmon, herring, seal, sea lion, whale, walrus, moose and caribou are among the species harvested. A few residents trap. Togiak Fisheries and other cash buyers provide a market for fishermen. The community depends heavily on subsistence activities for various food sources. Seal, sea lion, walrus, whale, salmon, clams, geese, and ducks are harvested. Most villagers leave Manokotak during the fishing season; people depend heavily on fishing and subsistence activities, and usually move to Igushik or Ekuk each summer. An exchange relationship exists between Twin Hills, Togiak and Manokotak. Seal oil is exchanged for Alaska blackfish, and handicrafts also supplement incomes.

**Recreation.** Recreation in the Region is primarily related to outdoor activities such as hunting and sport fishing, wildlife viewing, photography, hiking and backpacking, river rafting and kayaking, as well as flightseeing. Sport fishing is especially prevalent on the Togiak River drainage. Recent (2002) estimates show the Togiak drainage with approximately 2,193 days fished; this would be considered moderate for the Bristol Bay area. By comparison the Naknek and the Kvichak drainages show approximately 24,401 and 12,461 fishing days, respectively, for the same period. Some of the finest salmon and trout sport fishing waters in Alaska are on Togiak National Wildlife Refuge. The coastal portion of the refuge provides excellent opportunities for photography and wildlife viewing. River rafting is popular on several rivers. Non-guided and commercially guided opportunities are available for sport fishing, hunting, flightseeing, river rafting, and wildlife viewing.

**Minerals.** Region 3 contains no known major mineral deposits. Placer gold occurs on the upper Togiak River drainage on Trail Creek, which had a small amount of production. Formation of placers on Trail Creek has been disrupted by glaciation and the deposits proved discontinuous and difficult to work. Placer gold is also reported on the lower Togiak River and on the lower reaches of the Slug River. Base metals, principally copper, occur at Togiak Lake and associated with nickel in the ultramaphics of the Newenham Peninsula. Asbestos is also known in this area. Occurrences of chromite, gold, manganese, and copper are reported along Hagemeister Strait at a location four miles southwest of the mouth of the Osviak River.

**Oil and Gas.** Three potentially important oil and gas provinces are found in the greater Bristol Bay area: 1) the Nushagak Basin, including the northwestern lowlands of the Alaska Peninsula; 2) the extension of the Cook Inlet Mesozoic Province extending along the southeastern region of the Peninsula; and 3) the Bristol Bay or Northern Aleutians Basin on the northwest side of the Peninsula. This bodes well for the oil and gas potential of the Nushagak Peninsula. In addition, the minerals terrain map of Alaska suggests that the Nushagak Peninsula has potential for coal or coal-bearing units. As such, the area also has modest potential for shallow gas or coalbed methane. State and Native landowners are currently pursuing a new hydrocarbon exploration

licensing and leasing program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Borough have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Materials.** There are no active material sites in Region 3.

**Forestry.** Only a minor percentage of the Region is forested. Narrow bands of riparian, black spruce-hardwood, mixed black spruce-balsam poplar, and balsam poplar woodlands extend along the major rivers and their tributaries. None of the wooded areas contain commercially harvestable timber. The two major stands of noncommercial forest occur in the middle section of the Togiak River drainage, including Togiak Lake, and in the area around Manokotak. The Togiak area forest resources are considered to have a very low suitability for personal use; those around Manokotak vary from low to high suitability.

**Fish and Wildlife.** Fish and wildlife resources are very important in this region as they support a mix of subsistence, recreation, and commercial economies. Species of major importance include caribou, moose, bear, beaver, and anadromous and resident fish species. Furbearers considered the most important species include wolf, red fox, marten, beaver, lynx, wolverine, river otter, coyote, and mink. Important habitat for seabirds, shorebirds, and waterfowl also occur in the Region.

Togiak National Wildlife Refuge, which occupies most of Region 3, conserves habitat for at least 214 staging, migrating, or breeding bird species. Bird species groups include land birds, shorebirds, seabirds (including common murres), raptors, and waterfowl. Birds from the North American Pacific Flyway and several Asiatic routes funnel through the area.

The Togiak River drainage contains five species of Pacific salmon – chinook (king), sockeye (red), coho (silver), pink (humpy), chum (dog) – as well as rainbow trout, Dolly Varden, Arctic char, and Arctic grayling. The sport fishery, however, primarily targets king and coho salmon. Peak use of the river takes place from the first part of July (king season), and all of August through mid-September (coho season).

Caribou are an important resource in the area. The Mulchatna Caribou Herd has been increasing in size and expanding its range since the 1930's. Serious efforts to conduct a census of the herd have taken place since 1973; between 1981 and 1996, the Mulchatna Caribou Herd increased from 19,000 to 200,000. The herd is presently estimated at approximately 150,000 individuals (http://www.wildlife.alaska.gov/pubs/techpubs/mgt.cfm). Caribou were reintroduced to the Nushagak Peninsula in February 1988, largely to re-establish caribou in an area where they had been an important subsistence resource for local residents. The herd grew rapidly from 146 to over 1,200 animals following their reintroduction, due largely to excellent

habitat conditions and the cooperation between interested parties. The herd has since declined and stabilized at approximately 700 caribou. A limited federal subsistence hunt was initiated in 1995 for residents of six local villages.

Moose are relatively new to the Bristol Bay area, possibly moving into the area from the middle Kuskokwim drainages during the last 100 years. During the previous twenty years, moose numbers have increased and moose are now common along the Nushagak/Mulchatna Rivers and all of their major tributaries. They also occur throughout the Wood/Tikchik Lake area and have extended their range westward into the Togiak and Kulukak River drainages where a viable population has established itself since 1994 (http://www.wildlife.alaska.gov/pubs/techpubs/mgt.cfm).

Brown bears are common in the Region and most sightings occur during the summer in conjunction with salmon spawning season, especially in the Togiak drainage. There is no objective data on the status of the brown bear population. Black bears are fairly rare with most sightings along the northern edge of Togiak Refuge.

Trapping has been an important part of the economy and culture of northern Bristol Bay and at one time was the main supplier of cash to many local people prior to the growth of commercial fishing. Historically beaver have been the most important furbearer in the Region. Population trends of furbearers in the Region are favorable – either stable or increasing. This is true for important species found in Region 3 such as land otter, wolverine, and red fox, although populations of the latter can fluctuate greatly due to outbreaks of rabies.

# Management Considerations: Local and State Plans and Special Use Area

Region 3 is situated partly within the Bristol Bay CRSA CMP. Most state-owned land falls within the CRSA but is on land outside the coastal zone. The Enforceable and Administrative Policies of these Coastal Management Plans are extensive; policies affecting anadromous fish streams, bald eagle nests, oil and gas development, material extraction, and mining can be applicable, under certain circumstances, to state land. Please see the web site www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by the DNR prior to issuing an authorization.

The Bristol Bay Area Plan (1984) affected all state lands in the Region. This plan stated that Region 3 was to be managed for two co-designated land uses – a combination of fish and wildlife-recreation-minerals and a combination of fish and wildlife-recreation. The management intent for state lands in the Upper Togiak-Wood-Tikchik River drainages was for protection of fish and wildlife and for recreation. This revision (2005) supersedes the original Area Plan.

Region 3 is largely within the Togiak National Wildlife Refuge. The refuge has a Comprehensive Conservation Plan (CCP) which is in the process of revision. The State of Alaska has designated a Special Use Area (SUA) for the Togiak National Wildlife Refuge and the Lower Goodnews River (May 10, 1991; ADL 226851). It applies to those lands generally described as shorelands within Togiak National Wildlife Refuge and lower Goodnews River as described in the Togiak National Wildlife Refuge Public Use Management Plan and Environmental Assessment. Setting up and using a camp is allowed as provided in 11 AAC 96.020 (a)(4)A, except that the period of use is limited to three consecutive days at any one site. The period of use may be extended by permit. As part of the current collaborative Togiak NWR planning process, the state has agreed to review the existing SUA and has proposed several alternatives to the current three day camping limit. The alternatives only address length of stay and will be labeled as State of Alaska alternatives for management of the shorelands. The proposed State of Alaska alternatives will be incorporated into the table of alternatives presented in the Public Review Draft CCP text. The state will determine if the current SUA needs to be revised based on public comment, resource issues, and management goals.

# Management Summary: Uplands

State land in Region 3 is to be managed for a variety of multiple uses, including the maintenance of sensitive wildlife habitats, dispersed public recreation, minerals exploration and development, oil and gas exploration and development, materials extraction, and public facilities development. There is very little state land in Region 3 but the majority of it is designated Public Recreation and Tourism-Dispersed (Rd). A strip of land, approximately three miles wide and twenty-four miles long (management unit R03-01) located adjacent to Wood-Tikchik State Park is to be managed for dispersed public recreation; these lands have been recommended for inclusion in the Park by the DNR's Wood-Tikchik State Park Management Plan (2002). Approximately four sections of state land (management unit R03-05), eight miles north of Manokotak, are designated General Use (Gu). Anadromous fish streams on state-owned land are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Navigable waters in Federal lands are designated either Habitat (Ha), Public Recreation and Tourism-Dispersed (Rd), General Use (Gu), or are co-designated Habitat and Public Recreation and Tourism-Dispersed (Ha, Rd). A few small management units of land at the public airports are designated Public Facilities-Retain (Rp). No state lands are designated for Settlement in Region 3.

## Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Recreation, Tourism, and Scenic Resources. See also the description of plan designations in the first part of this Chapter; this section explains aspects of resource management and defines when state lands can be conveyed out of state ownership.

- General Use (Gu). Within this Region, lands that contain one or more resource values, none of which is of sufficiently high value to merit designation as a primary use, and areas that are unlikely to be developed during the planning period are designated General Use. The land is to be managed for a variety of uses including protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and protection of heritage resources. It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. Areas designated General Use may be conveyed to a borough, should one be formed, under the Municipal Entitlement program.
- Habitat (Ha). Generally, this designation applies to areas of varied size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in a permanent loss of a population or sustained yield of a species. In Region 3 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm). These lands are to be retained in state ownership.
- Public Recreation and Tourism-Dispersed (Rd). Lands with the designation of Public Recreation and Tourism-Dispersed are to be managed so that their public recreation values are protected and maintained. Within these areas the primary surface uses are intended to be those related to hiking, hunting, fishing, wildlife viewing, and the like. A management unit (R03-01) of state land adjoining the Wood-Tikchik State Park is recommended for inclusion in this Park and is designated Rd (Wood-Tikchik State Park Management Plan, October 2002, p. 11-3 and Map 11-1).
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See *Table 3.1* in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may only be designated Public Recreation and Tourism-Dispersed (Rd), Habitat (Ha), or General Use (Gu).
- Public Facilities-Retain (Pr). This designation applies to sites that are reserved for a specific public infrastructure requirement. They are to be retained in state or public ownership. In this Region, this designation applies to lands containing public facilities, commonly airports or schools. Only a small amount of acreage is affected by this designation.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region. The Togiak National Wildlife Refuge and Lower Goodnews River are a special use area. Setting up and using a camp is allowed as provided in 11 AAC 96.020 (a)(4)(A), except that the period of use is limited to three consecutive

days at any one site. The period of use may be extended by permit. For users going to the Kanektok River, there is a one day limit at the outlet of Pegati Lake due to its frequent use.

- Addition to State Park. Management unit R03-01, five townships adjacent to Wood-Tikchik State Park, is to be managed for the purposes of dispersed recreation and is designated Public Recreation and Tourism-Dispersed (Rd). This management unit is part of a larger package of land that the DNR has recommended for inclusion into the Park. This management unit is to be managed consistent with that of the adjoining park land as provided for in the Wood-Tikchik State Park Management Plan (October 2002, p. 11-3 and Map 11-1).
- It is intended that all uplands in the Walrus Islands State Game Sanctuary (SGS) be managed for the protection of fish and wildlife resources consistent with the sanctuary's management plan. Development authorizations are prohibited within the SGS (AS 16.20.096) except for the exploration and development of oil and minerals. State land may only be leased as mineral land (AS 16.20.098). See also tideland management unit R03T-02; this management unit provides management intent for the waters surrounding these islands.
- Mineral Closing Orders. Except for those areas closed to mineral entry under existing Mineral Closing Orders, all state lands within the Region are open to mineral entry. No additional MCOs are recommended. No leasehold location orders are recommended. See the *Minerals section in Chapter 2* for more detail on subsurface management requirements.
- Mineral Order No. 791 is an interim order (as of July 11, 2003) that precludes shallow natural gas leasing and oil and gas exploration licensing. This order has no effect on locatable or leaseable minerals other than shallow natural gas leasing and oil and gas exploration licensing. The order affects portions of the Nushagak Peninsula.

See the Resource Allocation Table for more detail on the uplands management units.

# Management Summary: Tidelands and Submerged Lands

Tidelands within this Region are extensive, stretching from Cape Newenham in the west to Nushagak Bay in the east. Several important offshore islands are also included within this Region. Most tidelands adjoin federal lands within the Togiak National Wildlife Refuge[6] and Native-owned land at and near the community of Togiak. Although a diverse set of tideland marine resources exist throughout the Region, the several offshore islands (Hagemeister and Walrus Islands) contain, by far, the richest concentration of marine mammals within the planning area.

[6] The exception is Hagemeister Island, which is within the Alaska Maritime NWR.

The geomorphology of the coast consists of several rocky headlands, marshlands at the mouths of major streams, and extensive stretches of curvilinear coast. Rocky headlands occur at Cape Newenham, Cape Pierce, and Right Hand Point. Spits with accompanying enclosed waters, often containing extensive wetlands, occur at the principal rivers, Osviak, Kulukak, and Togiak. Sheltered tidal flats with a high biomass content occur at some river mouths. Other portions of the coast are characteristically curvilinear in form and consist primarily of mixed sand and gravel beaches or gravel flats.

This is an area of diverse and high biological productivity. Pelagic birds, seabirds, waterfowl, and diving birds are common throughout large parts of the Region. Pacific herring spawning areas occur at a number of isolated locations west of Togiak Bay, but are extensive on the east side of Togiak Bay and the east side of Kulukak Bay. Marine mammals, primarily harbor seals, are present throughout the Region. The largest concentration of walruses within the planning area occurs at Summit, Crooked, High, and Round Islands, situated within the Walrus Islands State Game Sanctuary. This Sanctuary includes adjacent tidelands as well as the islands themselves. An important walrus haulout occurs at Round Island (other important haulouts in Bristol Bay include Cape Newenham, Cape Pierce, and Cape Seniavin). A sea lion haulout also occurs on Round Island.

Sac roe harvest occurs along the entire coast of this region from the beginning of Hagemeister Strait and including Togiak Bay and Kulukak Bay. Offshore leases for set net harvest occur along the northern coastline in Hagemeister Strait and along the eastern coastline of Togiak Bay for pink, chum, sockeye, coho and chinook salmon. A smaller number of set net leases are situated around Togiak. Set net harvest occurs along the west coastline of Kulukak Bay and drift (gill) net harvest occurs throughout the bay for pink, chum, sockeye, coho and chinook salmon. Subsistence harvest occurs throughout Togiak Bay for salmon, herring, seal, sea lion, whale and walrus.

## Plan Designation and Management Intent

**Coastal Tidelands.** This area includes those tidelands adjacent to Native–owned or private lands, and not within the Togiak NWR or Alaska Maritime NWR (R03T-01), or the Walrus Islands State Game Sanctuary (R03T-02). These tidelands are designated General Use, and are intended to accommodate a variety of residential, commercial, and industrial uses. Authorizations are considered appropriate in areas designated General Use, subject to the protection of sensitive resources and areas.

**Tidelands adjacent to Togiak or Alaska Maritime NWR (R03T-01).** The Tideland Resource Management Zone affects these areas. TRMZs are designated Habitat and Public Recreation and Tourism-Dispersed and extend one half-mile from the coast. See *Management Summary, Tidelands in Chapter 3* for a description of these zones. Except for Hagemeister Island, which is included within the Alaska Maritime NWR, all other areas affected by the TRMZ adjoin the Togiak NWR.

**Tidelands Adjacent to Walrus Islands State Game Sanctuary (R03T-02).** This critical sea lion and walrus haulout area (as described in AS 16.20.092) is designated Habitat. Development authorizations are prohibited within the State Game Sanctuary (AS 16.20.096) except for the exploration and development of oil and minerals. State land may only be leased as mineral land (AS 16.20.098). Consult with ADF&G prior to issuing tideland authorizations in the SGS.

See the Resource Allocation Table for more detail on the tideland management units.

# Resource Allocation Table for Upland Units - Region 3

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R03-01<br>Wood River Mountains | 45,660<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-1<br>S1S58W-S4S58W, W 1/2 of each township | This unit is designated Rd and is to be managed, generally, for the purposes of dispersed recreation and the protection of fish and wildlife. This unit is to be retained by the state and is recommended for eventual inclusion in the Wood-Tikchik State Park. DNR authorizations should be limited to those that are consistent with the eventual use of this area as part of the State Park. The management of this unit should be similar to that of the adjoining area of the State Park. Consult the management requirements of Management Unit 3 (Lower Tikchik Lakes) in the State Park Plan for specific guidance. | This mountainous unit is bounded by Wood-Tikchik State Park on the east, Togiak National Wildlife Refuge on the west, the Chikuminuk Glacier to the north, and the northern edge of Mount Waskey to the south. It is an area vegetated primarily in tall and low shrubs. The area is recommended for inclusion in the State Park by the Wood-Tikchik State Park Management Plan (2002). It contains significant scenic values and contains the headwaters of streams draining east into Wood-Tikchik State Park into Lake Kulik, Nuyakuk Lake, and Chauekuktuli Lake. |
| R03-02<br>Twin Hills Airport | 65<br>Pr -- Public Facilities-Retain | Map O-1<br>S13S66W Sec. 3,10 | This land is to be retained by the state and managed by ADOT/PF consistent with FAA standards and stipulations in the conveyance documents (OSL 1103). | This unit is comprised of state land (OSL 1103) owned and managed by ADOT/PF at the Twin Hills public airport. The special warranty deed from the Twin Hill Native Corporation conveyed (only) the surface estate to ADOT/PF. |
| R03-03<br>Togiak Airport | 227<br>Pr -- Public Facilities-Retain | Map O-1<br>S13S67W Sec. 12 | This unit is to be managed by ADOT/PF consistent with the FAA standards and the requirements of the Management Agreements (ADLs 221532 and 221549) and limited state holdings (LSH 241). | This unit contains airport facilities adjacent to the community of Togiak. Much of the state land is owned by ADOT/PF (OSL 923) and/or managed by them under arrangement agreement (ADLs 221532 and 221549) and a limited state holding (LSH 241) for the purposes of administering the airport facility. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in the vicinity of this unit. |
| R03-04<br>Togiak erosion control | 2.33<br>Pr -- Public Facilities-Retain | Map O-1<br>S13S67W Sec. 11,12,13,14 | Unit is designated Pr, is to be retained by the state for public purposes, and is to be managed consistent with the requirements of the existing easement. | This small unit of state land (OSL 1033) is adjacent to Nushagak Bay and near the Togiak airport. The unit is affected by an easement held by the City of Togiak for a wooden sheet pile wall (ADL 221444) that is intended to control erosion. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R03-05<br>Weary River | 3,178.34<br>Gu -- General Use | Map O-1<br>S12S58W | These lands are to be managed for a variety of uses including recreation and tourism, hunting and fishing, and protection of fish and wildlife and their associated habitat. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. Because of its remote location and lack of accessibility, it is not intended that intensive development occur within this unit during the planning period except occasionally and at specific locations. | This small unit is situated approximately eight miles north of Manokotak, adjacent to the Togiak NWR just east of Amanka Lake. It is an area of tall shrub vegetation. The area is west of the divide between the Weary River and Amanka Lake drainages. |
| R03-06<br>Manokotak Airport | 254<br>Pr -- Public Facilities-Retain | Map O-1<br>S14S58W | This unit is to be retained by the state and is to be managed by ADOT/PF consistent with the FAA standards and with the conditions of the Management Agreements (ADLs 220566 and 220567) and conveyance documents (OSLs 817 and 818). | This unit contains the airport facility adjacent to the community of Manokotak. The state land is owned by ADOT/PF (OSLs 818 and 817) and/or managed by them under management agreement (ADLs 220566 and 220567) for the purposes of administering an airport facility. |
| R03-07<br>Manokotak townsite | 2.83<br>Pr -- Public Facilities-Retain | Map O-1<br>S14S58W | This unit is designated Pr and is to be managed by the Department of Education for the purposes of the Manokotak school site consistent with the requirements of the Management Agreement (ADL 200426) and limited state holding (LSH 129). | This small unit of land is located within the community of Manokotak and is comprised of other state land (OSL 697) and a limited state holding (LSH 129). This area is dedicated for a school site and is managed by the Department of Education under a Management Right (ADL 200426). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R03-08<br>Walrus Islands | 9,337<br>Ha -- Fish and Wildlife Habitat | Map O-1 | The State Game Sanctuary is to be managed by ADF&G consistent with the purposes described in AS 16.20.090, which focus on the protection of fish and wildlife resources and their associated habitat. Development authorizations are prohibited within the SGS (AS 16.20.096) except for the exploration and development of oil and minerals. State land may only be leased as mineral land (AS 16.20.098). Consult with ADF&G and USFWS prior to issuing any authorization. The tidelands adjacent to the islands are included as a unit (RT-02) and are to be managed in a similar manner. | This unit includes all uplands in the Walrus Islands State Game Sanctuary, a Legislatively Designated Area under AS 16.20.090. The Walrus Islands State Game Sanctuary, a group of seven craggy islands and their adjacent waters located in northern Bristol Bay, is world famous for its unique summer concentrations of walruses. Red foxes are regularly seen on Round Island, often feeding on seabirds, eggs, chicks, voles, shrews, and beach-cast carcasses. Each summer, thousands of seabirds also return to the islands to nest and raise their young. This includes common murres, black-legged kittiwakes, pelagic cormorants, parakeet auklets, horned and tufted puffins, pigeon guillemots, and glaucous-winged gulls. Development authorizations are prohibited within the SGS (AS 16.20.096) except for the exploration and development of oil and minerals. State land may only be leased as mineral land (AS 16.20.098). |

# Resource Allocation Table for Tideland Units - Region 3

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R03T-01<br>Tidelands adjacent to Togiak NWR | 95,231<br>Ha, Rd -- Habitat and Public Recreation and Tourism-Dispersed | Map O-1 | Tidelands adjacent to the Togiak National Wildlife Refuge (NWR) are to be managed to protect sensitive habitat values, fisheries and wildlife resources, and the public recreation resources of the National Refuge. A Tideland Resource Management Zone (TRMZ) affects these tidelands. Hagemeister Island is included in the Alaska Maritime NWR and the tidelands around this island are also affected by a TRMZ. See "Management Summary, Tidelands" in Chapter 3 for a more detailed description of TRMZs and the management intent and requirements for such zones. Consult with Togiak NWR, US Fish and Wildlife Service (USFWS), and National Marine Fisheries Service (NMFS) prior to issuing authorizations. Ensure that authorizations within the portions affected are consistent with the requirements of the Bristol Bay Fisheries Reserve. | Most of the tidelands in this Region adjoin the Togiak National Wildlife Refuge. Tidelands around the Nushagak Peninsula from just east of Right Hand Point on the west coast of the peninsula to the Snake River on the east side of the peninsula are affected by the Bristol Bay Fisheries Reserve.<br><br>The geomorphology of the coast consists of several rocky headlands, marshlands at the mouths of major streams, and extensive stretches of curvilinear coast. Rocky headlands occur at Cape Pierce and Right Hand Point. Spits with accompanying enclosed waters, often containing extensive wetlands, occur at the principal rivers -- Osviak, Kulukak, and Togiak. Sheltered tidal flats with a high biomass content occur at some river mouths. Other portions of the coast are characteristically curvilinear in form and consist primarily of mixed sand and gravel beaches or gravel flats.<br><br>This is an area of diverse and high biological productivity. Pelagic birds, seabirds, waterfowl, and diving birds are common throughout many parts of the tideland unit. Pacific herring spawning areas occur at a number of isolated locations west of Togiak Bay, but are extensive on the east side of Togiak Bay and the west side of Kulukak Bay. Marine mammals, primarily harbor seals, are present. There are no known concentrations of sea lion or walrus haulouts in the tideland unit; most of these occur on offshore islands, particularly associated with the Walrus Island State Game Sanctuary. There are a large number of sea bird colonies, with principal concentrations occurring at Hagemeister Island and along the coast east and west of Right Hand Point, in the eastern part of this tideland unit.<br><br>Harvest: Sac roe harvest occurs along the entire coast of this region from the western extent of Hagemeister Strait and throughout Togiak Bay and Kulukak Bay; offshore leases for set net harvest occur along the northern coastline in Hagemeister Strait and the eastern coastline of Togiak Bay for pink, chum, sockeye, coho and chinook salmon. Subsistence harvest occurs throughout Togiak Bay for salmon, herring, seal, sea lion, whale and walrus. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R03T-02<br>Walrus Islands State Game Sanctuary (SGS) | 153,424<br>Ha -- Habitat | Map O-1<br>S17S66W, S17S67W, S17S68W | The (SGS) is designated Habitat. Development authorizations are prohibited within the SGS (AS 16.20.096) except for the exploration and development of oil and minerals. State land may only be leased as mineral land (AS 16.20.098). Consult with ADF&G prior to issuing tideland authorizations in the SGS. | This critical sea lion and walrus haulout area is legislatively designated a State Game Sanctuary (under AS 16.20.092) and has a use designation of Habitat. |
| R03T-03<br>Offshore Submerged Land | 732,004<br>Gu -- General Use | Map O-1 | Manage for a variety of uses and resources. Protect important concentrations of pelagic birds, sea birds, and waterfowl. Maintain opportunities for commercial harvest. | This tideland unit covers the area between the three mile seaward limit of state owned submerged land and the Tideland Resource Management Zone (R03T-01). There are very few such gaps; consult Plan Map O-1. See the "Resources, Uses, and Additional Information" of R03T-01 for an indication of the resources that may exist in these areas, which are believed to be primarily associated with pelagic birds, sea birds, and waterfowl. There may be limited harvest of the resources described in R03T-01. There is a moderate amount of harvest for salmon and herring in this unit and it is governed by the requirements of the Bristol Bay Fisheries Reserve. |

# Region 5

# *Dillingham, Snake Lake, Nushagak Bay*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 5 encompasses a portion of the southeastern Wood River Mountains including the lake system of the Weary and Snake Rivers and much of the Wood River. The boundaries of the Region are defined by the drainage divide of the Wood River on the west, Wood-Tikchik State Park on the north, the divide of the Nushagak and the Kvichak Rivers on the east, and the shores of Kvichak and Nushagak Bays on the south (Map O-1 and O-2). Elevations range from sea level to slightly in excess of 2,800 feet. The Region includes the southern two lakes of the Wood River lake system and the lower portion of the Nushagak River. It is the most populus Region in the Bristol Bay Area Plan. This includes the major settlement of Dillingham (pop. 2,252) as well as Aleknagik (pop. 226); approximately 60% of the inhabitants are Natives. The total population of the Region is approximately 2,600, but this increases greatly during the summer fishing season. The boundary of Region 5 is virtually the same as that of the original (1984) Bristol Bay Area Plan.

### State Lands: Ownership and Acreage

Most of the state-owned land in Region 5 is located in the northwest part, south of Wood-Tikchik State Park, and in the central northern part. The majority of land in Region 5 is Native owned. The plan applies to 409,552 acres of state-owned and state-selected uplands and 165,568 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated).

### Physical Geography

The northwestern portion of the Region lies within the Ahklun Mountains Physiographic Province and the remainder is in the Bristol Bay Lowlands. The northwest portion of the Region, especially the western part that encompasses the Wood River Mountains, is mostly mountainous and rugged. The drainage system in the northwest is dominated by the Snake and Wood Rivers and the high country displays the results of alpine glaciation which produced a series of east-west trending valleys and ridges having considerable relief (2,800 feet). Two large lakes, Lake Aleknagik and Nunavaugaluk Lake occupy major valleys. The Bristol Bay Lowlands portion of the Region is dominated by the meandering Nushagak River, which is

subject to tidal influences for forty miles upstream from its mouth at Kanakanak. Relief in the Bristol Bay lowlands is very modest – only a couple of hundred feet. In the Wood River Mountains portion of the Region the peaks are between two and three thousand feet high. The greatest relief is found south of Ice Creek where an unnamed peak has an elevation of 2,802 feet. Twelve miles southwest is Mable Mountain at 2,426 feet. Major drainages include the Weary River, a tributary to the Snake River, the Muklung and Little Muklung Rivers, the Wood River, and the Lower Nushagak River, which includes Portage Creek and Clark Slough.

The Region displays a variety of landscapes, including mountain crags, fast-flowing rivers, deep lakes, tundra, marshy lowlands, and ponds. The broad glacial valleys of the Ahklun Mountain Range cut the tundra uplands, opening into coastal plains. Forested areas occur only sparingly such as along the south shore of Aleknagik Lake and the upper reaches of the Snake River. Most of the uplands are vegetated with low to tall shrubs and low lying areas with low shrub and lichen tundra. The Nushagak valley is covered by low shrubs and lichen tundra.

## Climate

The climate of Region 5 is transitional from the maritime influence of Bristol Bay to more continental weather to the northwest. As distance from the coast increases, temperature variations increase, whereas cloudiness, humidity, and precipitation tend to decrease. The weather is generally cool and moist with relatively persistent cloud cover and occasional periods of fog. At Dillingham, summer temperatures range from 37° to 66° and average winter temperatures range from 4° to 30°; annual precipitation is 26 inches with 65 inches of snow. Heavy fog is common in July and August. Winds of up to 60-70 miles per hour may occur between December and March. The Nushagak River is ice free from June through November. Aleknagik Lake and River are also ice-free from June through mid November. The Region is predominantly underlain by ground with isolated masses of permafrost; the northwest portion of the Region is underlain by discontinuous permafrost and the valley of the Nushagak River is generally free of ground ice. The areas with discontinuous permafrost are generally those with elevations greater than 1,000 feet. North facing slopes are more likely to be underlain by permafrost than south facing mountain slopes. Winds throughout the area are usually moderate, prevailing from the southwest in summer and from the north and east in winter.

## Other

Region 5 is within the Goodnews, Dillingham, Naknek, and Nushagak Bay Quadrangles. It is entirely within the boundaries of the Bristol Bay Regional Native Corporation.

## Access

Settlements in the Region include Dillingham, Aleknagik, Clarks Point, Ekuk, and Portage Creek. Access to Region 5 is predominantly through air transportation via Dillingham. There are eleven facilities that support air transport – two seaplane bases, a heliport, and eight airports. Dillingham has a state-owned airport that provides a 6,404-foot paved runway and has regular jet flights from Anchorage. A privately owned seaplane base is available three miles west of Dillingham at Shannon's Pond. A heliport is available at Kanakanak Hospital. Dillingham is also reached by sea. There is a City-operated small boat harbor with 320 slips, a dock, barge landing, two boat launches, and boat haulout facilities. The harbor is a tidal harbor and only

used seasonally. Two barge lines make scheduled trips from Seattle. The state Department of Transportation maintains a paved road that covers the 23 miles to Aleknagik. Winter trails extends west to Manokotak as well as east to Portage Creek and thence Naknek.

## Resources and Uses

The Nushagak and Wood Rivers support a large salmon run that provides for commercial fishing and fish processing and subsistence use. The lakes and streams are intensively used for recreation. Good access throughout the Region adds to its high recreational resource potential. The Region has moderate potential for oil and gas development. Agricultural uses are primarily for small gardens around inhabited areas. An important forest resource occurs north and northeast of Dillingham. Community expansion potential is high due to the presence of services, infrastructure, and industry in the area surrounding Dillingham.

**Cultural and Historic.** Archaeological evidence indicates that areas within Region 5 have been continuously occupied for at least 2,000 years. Traditionally a Yup'ik Eskimo area, the area is now a highly mixed population of non-Natives and Natives. The outstanding commercial fishing opportunities in the Bristol Bay area are the focus of the local culture. The area was inhabited by both Eskimos and Athabascans and became a trade center when Russians erected the Alexandrovski Redoubt (Post) in 1818. Local Native groups and Natives from the Kuskokwim Region, the Alaska Peninsula, and Cook Inlet mixed together as they came to visit or live at the post. See footnote for additional details on community history.[7] The state Office of History and Archaeology lists 108 sites in Region 5 – 10 prehistoric, 89 historic, and 9 of mixed origin. The majority of these sites are situated along the east shore of Nushagak Bay and along the Wood River. New sites are discovered periodically and added to the Alaska Heritage Resource Database when reported.

**Economic.** The Dillingham district is the economic, transportation, and public service center for western Bristol Bay. Commercial fishing, fish processing, cold storage and support of the fishing industry are the primary activities. Icicle, Peter Pan, Trident and Unisea operate fish processing plants. Many residents hold commercial fishing permits. During spring and summer, the population of Dillingham doubles; the city's role as the regional center for government and services helps to stabilize seasonal employment. Many residents depend on subsistence activities, and some trap beaver, otter, mink, lynx and fox to provide additional cash income. Salmon, grayling, pike, moose, bear, caribou, and berries are harvested. In the more remote Portage Creek area, everyone depends to some extent on subsistence activities for various food sources. Most Portage Creek families have fish camps at Ekuk or Lewis Point. Salmon, moose, caribou, duck, geese and berries are harvested. An exchange relationship exists

[7] The community was known as Nushagak by 1837, when a Russian Orthodox mission was established. In 1881 the U.S. Signal Corps established a meteorological station at Nushagak. In 1884 the first salmon cannery in the Bristol Bay region was constructed by Arctic Packing Co., east of the site of modern-day Dillingham. Ten more were established within the next seventeen years. The post office at Snag Point and town were named after U.S. Senator Paul Dillingham in 1904, who had toured Alaska extensively with his Senate subcommittee during 1903. The 1918-19 influenza epidemic struck the region, and left no more than 500 survivors. A hospital and orphanage were established in Kanakanak after the epidemic, 6 miles from the present-day City Center. The Dillingham townsite was first surveyed in 1947 and the city was incorporated in 1963.

between Portage Creek and the coastal communities; walrus, seal, and herring roe are sought. The Portage Creek General Store and Lodge operate during the summer months. The Nushagak commercial fishery is one of the important fisheries in Bristol Bay. In 2002 the Nushagak fishery had an actual run of 4,538,000 sockeye salmon. The commercial harvest was 2,816,000 fish or approximately 26% of the Bristol Bay harvest; the 1982-2001 annual average harvest for the Nushagak fishery is 3,836,000 sockeye.

**Recreation.** Region five contains significant recreation resources, primarily for outdoor activities related to fishing, hunting, boating, camping, hiking, and wildlife viewing. The state manages the Lake Aleknagik State Recreation Site, located at the lower end of Lake Aleknagik, which boasts a boat launch, parking area, and ranger station. The management plan for the recreation site is found within the Wood-Tikchik State Park Management Plan (October 2002). In many respects, Dillingham is the gateway to Wood-Tikchik State Park, and many users travel to Dillingham to take charters to the interior of the Park.

At least half a dozen recreation lodges are located in the lake district northwest of Dillingham. By comparison, more than four times that many seasonal commercial sport fishing camps are located along the lower Nushagak River on Native lands. Many of these camps support fly-in day use. The Nushagak & Mulchatna Rivers Recreation Management Plan (2005) identifies five public use sites (no. 1-5) along the lower Nushagak River in Region 5. Caribou hunting is also an important component of the recreation scene. Current (1999-2000) estimates show that just over one half (56%) of the reporting hunters in the greater Bristol Bay area are nonresidents of Alaska. Alaska residents from outside the region comprise a little over one third (35%) of the hunters and residents are 8% of those reporting.

**Minerals.** Bedrock in the area is mostly interbedded, very fine- to very coarse-grained graywacke, calcareous graywacke, and siltstone. These rocks are probably correlative with Jurassic clastic sedimentary rocks like those in the southeast part of Hagemeister Island.

Region 5 contains at least five mineral prospects. Most of these are clustered in the Marsh Mountain area and are dominated by mercury occurrences and mines. These mercury deposits developed after Mesozoic clastic rocks of the area had been deformed and intruded by Cretaceous or Tertiary granitic plutons. The most significant of the mercury deposits is the Red Top Mine. The Red Top mercury mine is located on the top of the southern peak of Marsh Mountain 3.1 miles east of the village of Aleknagik. The mine has a small amount of production from veins which host cinnabar; production probably totals about 100 flasks of mercury. Mercury also occurs six miles west of the Red Top Mine; this location represents an area of occurrences on the southwest shore of Lake Aleknagik, including occurrences at the mouth of Yako Creek.

Minor placers are associated with the mercury deposits. The Iris placer gold prospect is located near the Red Top Mine on the flanks of Marsh Mountain. Mercury has also accumulated in placer deposits on the Wood River at the Wood River occurrence located approximately four miles below the confluence of the Wood and Muklung Rivers. Placer gold also occurs on the Nushagak River, notably near Portage Creek at a location known as Keffer's Bar.

**Oil and Gas.** Much of Region 5 is underlain by the Bristol Bay (Nushagak) Basin, which is one of two basins in the Bristol Bay Area (along with the North Aleutians-Alaska Peninsula basin). The Alaska Peninsula-Bristol Bay oil and gas basin form a region 500 miles long and up to 100 miles wide. In Region 5 (the northwestern part of the peninsula) the basin is underlain by up to 18,000 feet of Tertiary sediments that thicken to the south and thin to the north. The offshore Bristol Bay basin is a sediment-filled structural depression that underlies the northern continental shelf of the Alaska Peninsula. No oil and gas drilling has been conducted in Region 5. Oil seeps north of Dillingham are reported by local inhabitants.

On a regional basis, northern coastal plain hydrocarbon potential is moderate to locally high for gas and low to moderate for oil, in structural and stratigraphic traps. Oil and gas seeps occur along the Alaska Peninsula's southeastern flank, some along large anticlinal crests. Source rock data indicate that the Tertiary organic shales are prone to carry gas. Oil may be derived from deeper Mesozoic strata. Tertiary and Mesozoic sandstone reservoir characteristics are locally conducive to hydrocarbon production.

State and Native land owners are currently pursuing a new hydrocarbon exploration licensing and leasing program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Borough have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Materials.** There are at least thirty active and inactive materials sites located in the Region, principally along the Dillingham-Aleknagik road.

**Forestry.** Only a minor percentage of the Region is forested. However, local forestry resources north and northeast of Dillingham are an important source of house logs, saw logs, and fuel. Region 5 contains three types of forest resources – 1) bottomland spruce-poplar (along the Nushagak River); 2) upland spruce-hardwood (mostly north of Dillingham); and 3) lowland spruce-hardwood (northeast of Dillingham at elevations above the Nushagak River floodplain).

Upland mixed forests occur to the north of Aleknagik. These mixed forests are primarily open spruce and birch forests with numerous interspersed bogs. The most valuable of these forest resources for local use are located between Dillingham and Aleknagik.

**Fish and Wildlife.** All five species of Pacific salmon – chinook (king), sockeye (red), coho (silver), pink (humpy), and chum (dog) – spawn in the Wood River and Tikchik systems. Sockeye are the most important commercially. Freshwater sport fish are generally prolific throughout the area. Rainbow trout, Arctic grayling, lake trout, Arctic char, Dolly Varden, and northern pike abound. Whitefish are an important subsistence species in the area.

Caribou are an important resource in the area. The Mulchatna Caribou Herd has been increasing in size and expanding its range since the 1930's. Serious efforts to conduct a census of the herd have taken place since 1973; between 1981 and 1996, the Mulchatna Caribou Herd increased from 19,000 to 200,000. The herd is presently estimated at approximately 150,000 individuals (http://www.wildlife.alaska.gov/pubs/techpubs/mgt.cfm).

Moose are relatively new to the Bristol Bay area, possibly moving into the area from the middle Kuskokwim drainages during the last 100 years. During the previous twenty years, moose numbers have increased and moose are now common along the Nushagak/Mulchatna Rivers and all of their major tributaries. They also occur throughout the Wood/Tikchik Lake area and have extended their range westward.

Brown bears are common throughout the north Bristol Bay area and are seasonally abundant along salmon spawning areas in the Nushagak, Mulchatna River drainages as well as long the Wood River Lakes. These bears are also observed near aggregations of the Mulchatna Caribou Herd.

Birds nesting in the area include a wide variety of waterfowl, gulls, bald eagle, golden eagle, Arctic tern, various loons, spotted and least sandpipers, semi-palmated plover, willow ptarmigan, and spruce grouse. Numerous transients pass through as well.

Trapping has been an important part of the culture and economy of the northern Bristol Bay area and provided a ready means to acquire cash prior to development of the commercial fishing industry. Until recently, large numbers of trappers from around the area would come to Dillingham to tag and sell pelts at the annual "Beaver Roundup" in March. Fur buyers purchased thousands of pelts during the weeklong rendezvous and celebration. Historically beaver have been the most important furbearer in the Region. Population trends of furbearers in the Region are favorable – either stable or increasing. Reported harvests in recent years are only a fraction of the past, largely due to less harvest activity than in earlier years.

# Management Considerations: Local and State Plans and Special Use Area

A number of local, state, and federal management plans were considered in development of this plan. Local plans include the Bristol Bay Coastal Zone Management Plan, the Nushagak & Mulchatna Rivers Recreation Management Plan, the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, and the City of Dillingham Comprehensive Plan. State plans include the Bristol Bay Area Plan, the Wood-Tikchik State Park Management Plan, the Lake Aleknagik State Recreation Site Plan, the Nushagak & Mulchatna Rivers Recreation Management Plan, the Southwest Alaska Transportation Plan, and a state Special Use Area for the Togiak NWR. Federal plans include the Togiak National Wildlife Refuge Comprehensive Conservation Plan.

Region 5 is within the Bristol Bay CRSA Coastal Management Plan. Most state-owned land falls within the CRSA but is outside the coastal zone. The Enforceable and Administrative Policies of these Coastal Management Plans are extensive; policies affecting anadromous fish streams, bald eagle nests, oil and gas development, material extraction, and mining can be applicable, under certain circumstances, to state land. Please see the web site www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by the DNR prior to issuing an authorization.

The Bristol Bay Area Plan (1984) affected all state lands in the Region; this plan was amended in 1990 by adoption of the Nushagak & Mulchatna Rivers Recreation Management Plan. The 1984 Area Plan stated that Region 5 was to be managed to accommodate increased development while maintaining fish and wildlife habitats. The other DNR plan affecting this Region is the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) (2005), which manages recreational uses and identifies a number of public use sites. In this (current) revision of the Bristol Bay Area Plan, the requirements of the RRMP continue to apply in Region 5. This revision (2005) supercedes the original (1984) Bristol Bay Area Plan.

The State of Alaska has designated a Special Use Area for the Togiak National Wildlife Refuge and the Lower Goodnews River (May 10, 1991; ADL 226851). It applies to those lands generally described as shorelands within Togiak National Wildlife Refuge and lower Goodnews River as described in the Togiak National Wildlife Refuge Public Use Management Plan and Environmental Assessment. Setting up and using a camp is allowed, as provided in 11 AAC 96.020 (a)(4)(A), except that the period of use is limited to three consecutive days at any one site. The period of use may be extended by permit.

The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) identified a Dillingham/Bristol Bay Area Transportation Corridor, which in general extends from Levelock to Dillingham, connecting with the communities of Ekwok and Aleknagik. It includes a crossing of the Wood River at Aleknagik and a major crossing of the Nushagak River. There are several possible tie-in locations to the Bristol Bay to Cook Inlet corridor. The plan also considers a corridor from Aleknagik to Igiugig via Levelock.

The western portion of Region 5 encompasses part of the Togiak National Wildlife Refuge. The refuge has a Comprehensive Conservation Plan, which is in the process of revision.

# Management Summary: Uplands

State land in Region 5 is to be managed for a variety of multiple uses, including settlement, materials extraction, public facilities development, dispersed public recreation, mineral exploration and development, and maintenance of sensitive wildlife habitats. Oil and gas exploration and development, although only of moderate potential, is also appropriate within the Region. The majority of lands are designated General Use (Gu) and Settlement (Se). Because of the generally good topographic conditions and relatively good accessibility of certain of these lands, large tracts of state land have been designated Settlement (Se). Much of this Settlement

land is intended to facilitate the expansion of the Dillingham community. Other, more remote and generally less desirable areas, are designated General Use (Gu). Areas near the Wood-Tikchik State Park, and Lake Aleknagik State Recreation Site are designated Public Recreation and Tourism-Dispersed. Public Use Sites, used for recreation, have been designated Public Recreation and Tourism-Public Use Sites (Rp). A large number of small management units associated with facilities are designated Public Facilities-Retain (Pr). A management unit adjacent to the Togiak NWR is designated Habitat (Ha). Active materials sites are designated Materials (Ma).

## Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Within this Region, lands that contain one or more resource values, none of which is of sufficiently high value to merit designation as a primary use, and areas that are unlikely to be developed during the planning period are designated General Use. The land is to be managed for a variety of uses including protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and protection of heritage resources. It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. These lands may be appropriate for conveyance to a Borough should one be formed in the Region.
- Habitat (Ha). Generally, this designation applies to areas of various size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in a permanent loss of a population or sustained yield of a species. In Region 5 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm). Lands with this designation should be retained.
- Materials (Ma). Lands designated materials are those where active or inactive materials sites are present. These can include common varieties of sand, gravel, and stone or are sites associated with materials extraction that contain conveyors, crushing, sizing, and other processing equipment. Until the materials have been exhausted, material sites are to be retained in state ownership; thereafter, other forms of authorizations or disposals may be appropriate. Authorizations or disposals should be done in consultation with the Department of Transportation and Public Facilities.
- Public Recreation and Tourism-Dispersed (Rd). Lands with the designation of Public Recreation and Tourism-Dispersed are to be managed so that their public recreation values are protected and maintained. Within these areas the primary surface uses are

intended to be those related to hiking, hunting, fishing, wildlife viewing, and the like. A small tract of state land adjoining the Wood-Tikchik State Park is recommended for inclusion in this Park and is designated Rd (Wood-Tikchik State Park Management Plan, October 2002, p. 11-3 and Map 11-1).

- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may only be designated Public Recreation and Tourism-Dispersed, (Rd), Habitat (Ha), or General Use (Gu). This co-designation is applied to the river corridors within the Nushagak & Mulchatna Rivers Recreation Management Plan. In Region 5 this includes a portion of the corridor of the Iowithla River.
- Public Facilities-Retain (Pr). This designation applies to sites that are reserved for a specific public infrastructure requirement. They are to be retained in state or public ownership. In this Region, this designation applies to lands containing public facilities, commonly airports or schools. Only a small amount of acreage is affected by this designation.
- Public Recreation and Tourism-Public Use Site (Rp). This designation applies to areas with a concentration of recreational users or tourists or that are likely to have such concentrations. Within this Region this designation applies to specific recreation sites – the Aleknagik State Recreation Site and the public use sites identified in the Nushagak & Mulchatna Rivers Recreation Management Plan. Unless otherwise indicated in the Resource Allocation Table, these sites are to be retained by the state. In some instances they may be conveyed to the Bristol Bay Borough, subject to the Borough retaining them in public ownership and ensuring that they remain available for public use.
- Settlement (Se). This designation applies to state uplands suitable for sale, leasing, or permitting to allow private recreational or residential use. Within this Region four large areas of state land are considered appropriate for settlement and have been designated as such. These occur between the Nushagak River and Iowithla Creek, in the vicinity of Etolin Point, in an area along and east of the Wood River, and in the vicinity of Snake Lake and the Snake River. These areas are intended for Community Settlement; see Chapter 2 for specific requirements for this form of settlement. Settlement lands are appropriate for conveyance to a Borough should one be formed in the Region.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region.
- Proposed Transportation Corridor. The area identified on the Region Map as a "Potential Transportation Corridor" should be retained by the state during the planning period. Authorizations granted by DNR within or adjacent to this corridor should not preclude the future development of transportation access. Authorizations or disposals

within and adjacent to this corridor should only be allowed after consultation with ADOT/PF.

- Addition to State Park. State land adjacent to Wood-Tikchik State Park (R05-01) is recommended for inclusion in Wood-Tikchik State Park. Until included within the Park, this land is to be managed for dispersed public recreation and is designated Public Recreation and Tourism-Dispersed (Rd).
- Except for areas closed to mineral entry under existing Mineral Closing Orders, all state lands within Region 5 are open to mineral entry. No additional MCOs are recommended; the only exception applies to the areas to be disposed of by DNR for purposes of Community Settlement. Closure to mineral entry is recommended at or before plat adoption. No leasehold location orders are recommended. See the Subsurface section in Chapter 2 for more detail on subsurface management requirements.
- Mineral Closing and Opening Orders. This revision of the Bristol Bay Area Plan retains the mineral closing and opening orders largely implemented by DNR at the time of original plan adoption. These MCOs either close a proposed settlement area or close a number of major streams to mineral location. These include the following:
    - MCO 304 – Snake Lake Settlement Area
    - MCO 305 – Weary River Settlement Area
    - MCO 196 – Warehouse Mountain Settlement Area
    - MCO 443 – Wood River-Aleknagik Road
    - MOO 702 – Warehouse Mountain Settlement Area (Mineral Opening Order)
- Mineral Order. Mineral Order No. 791 is retained by this revision as an interim order (as of July 11, 2003) that precludes shallow natural gas leasing and oil and gas exploration licensing. This order has no effect on locatable minerals or leaseable minerals other than shallow natural gas leasing and oil and gas exploration licensing. The order affects portions of the Nushagak Peninsula and the vicinity of Etolin Point.
- Retained Lands. Lands within this Region that are designated to be retained are those that are recommended for inclusion in the Wood-Tikchik State Park, those reserved as a 'Potential Transportation Corridor', and those designated Public Facilities-Retain (Pr) or Public Recreation and Tourism-Dispersed (Rd). Note: Certain management units that are designated Rd may be conveyed out of state ownership to a borough, should one be formed, as part of the Municipal Entitlement Act - providing the land conveyed remains public land and the public retains access to the public use site.
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat or a co-designation of Habitat and Public Recreation and Tourism-Dispersed. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

See the Resource Allocation Table for more detail on the upland management units.

# Management Summary: Tidelands and Submerged Lands

Tidelands in this Region are extensive, extending from the Snake River on the east side of Nushagak Bay to the Kvichak River, situated at the head of Kvichak Bay. The community of Dillingham is situated at the head of Nushagak Bay, a little more than six miles from the mouth of the Nushagak River. Although not part of a tideland area proper, the Nushagak River is tidally influenced at the location of Dillingham and normally this area would be treated, in terms of designation and management intent, in this section. However, the Dillingham community is fronted by privately owned tidelands and additional tideland designations are not required. Natives own, for the most part, the uplands that adjoin the coast. Small portions of the uplands are owned by the state.

Marshes are common on the east side of Nushagak Bay, while mixed sand and gravel beaches are typical between Nushagak Bay and Kvichak Bay. Eroding peat scarps, sheltered tidal flats (high biomass content) and marshes are common along the west side of Kvichak Bay. Waterfowl and shorebirds are common as are whales (beluga) and other marine mammals. These other marine mammals are almost entirely harbor seals, although there are some spotted seals as well. There are no major sea bird colonies, sea otter concentrations, or either walrus or sea lion haulouts in this Region. A small harbor seal haulout occurs in a portion of Kvichak Bay and the central portion of Nushagak Bay is a harbor seal/spotted seal haulout concentration area. Both Kvichak and Nushagak Bays are known beluga whale calving areas. The Bristol Bay Fisheries Reserve affects Nushagak and Kvichak Bays.

The commercial harvest of pink, sockeye, chinook, chum and coho salmon occurs throughout Nushagak Bay (purse seine and drift net). Offshore leases for set net harvesting form an almost continuous line along both the east and west coastlines of Nushagak Bay, concentrating south of Dillingham and around Clarks Point and Ekuk, and continuing south of Ekuk on the eastern side of the bay. Drift (gill) net harvest occurs throughout the bay for pink, chum, sockeye, coho and chinook salmon. Chinook salmon are harvested (drift net) at Etolin Point. Subsistence harvest of fish around Dillingham consists primarily of salmon, but grayling and pike are harvested to a lesser extent. Clarks Point residents range long distances, if necessary, for subsistence harvest which includes salmon smelt and some waterfowl. A number of Bristol Bay residents migrate to Ekuk during the summer for subsistence harvest of salmon.

The commercial harvest of pink, sockeye, chinook, chum and coho salmon occurs throughout Kvichak Bay (purse seine and drift net). Set net permits occur all along the upper Kvichak Bay, on both the east and west coastlines. The densest concentrations of set net permits occur along the eastern coastline near the mouth of the Naknek River and south of Naknek. The subsistence harvest of red salmon as a food staple in Kvichak Bay is intensive.

## Plan Designations and Management Intent

**Coastal Tidelands.** These tidelands[8] are designated General Use. Development authorizations are considered appropriate subject to the protection of sensitive resources and areas.

**Nushagak Bay (R05T-01).** This tideland management unit is designated Habitat. Beluga whale feeding and calving occur throughout most of Nushagak Bay (R05T-01). The Habitat designation also includes the areas of harbor seal haulout concentration at the mouth of Nushagak Bay around Nichols Spit and Protection Point. Development authorizations may be appropriate in this tideland management unit, but must avoid or minimize impacts to the beluga whale population during the calving life-cycle stage and to the harbor seal/spotted seal haulout concentration areas.

**Kvichak Bay, (R05T-02)[9].** Kvichak Bay borders on both Region 5 and Region 11, but is being addressed as one management unit (R05T-02) so it can be managed as one unit. Both the Kvichak and the Naknek Rivers flow into this bay at it's head. The area around the river mouths consists of extensive shallow and exposed tidal flats having high biomass content. Large areas of exposed tidal flats are also common south of the Naknek River. This bay provides feeding concentration areas for Beluga whales, and is also an important beluga whale calving habitat. Harbor seals are common at Graveyard Point near the mouth of the Kvichak River. Shorebirds occur near the mouths of the Kvichak and Naknek Rivers, and both shorebirds and waterfowl are present along the coast south of the Naknek River. The headwaters of the Naknek River support particularly high densities of staging swans and geese during the spring. Development authorizations may be considered appropriate, but must avoid or minimize impacts to the beluga whale population during that part of their life-cycle involving calving and to the area of the harbor seal haulout at 'Deadman Sands'. See also, *Region 11*.

See the Resource Allocation Table for more detail on the tideland management units.

[8] Tidelands along the coast not included in R05T-01 or R05T-02.
[9] The tideland unit for Kvichak Bay consists of only one management unit (R05T-02) but the description of the eastern portion of this tideland unit is provided again in Region 11 to ensure that the tideland resources of Kvichak Bay are properly understood.

# Resource Allocation Table for Upland Units - Region 5

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R05-01<br>Upper Aleknagik Lake | 10,523<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-1<br>S9S58W Sec. 2-13 | This unit is designated Rd and is to be managed, generally, for the purposes of dispersed recreation and the protection of fish and wildlife. It is to be retained by the state and is recommended for eventual inclusion in the Wood-Tikchik State Park. DNR authorizations should be limited to those that are consistent with the eventual use of this area as part of the State Park. The management of this unit should be similar to that of the adjoining area in the State Park. Consult the management requirements of Management Unit 7 (Lake Nerka) in the State Park Plan for specific guidance. Refer also to the specific management requirements for calving areas in the Fish and Wildlife Habitat and Harvest Areas section of Chapter 2. | This unit of approximately 12 sections of state land is situated south of Wood-Tikchik State Park, along the southwest shores of Lake Aleknagik, and is bisected by Youth Creek. It is an area vegetated in tall shrub. This unit has been recommended for inclusion into Wood-Tikchik State Park by the Wood-Tikchik State Park Management Plan. The unit includes moose calving areas, bear denning sites, and anadromous fish streams and areas utilized for recreation. The unit is affected in part by MCO 718. |
| R05-02<br>Nunavaugaluk Lake | 61,466<br>Gu -- General Use | Map O-1 | This unit is General Use and is to be managed for a variety of resources, including dispersed recreation, fish and wildlife protection, and habitat protection. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. Because of its somewhat remote location and lack of accessibility, it is not intended that intensive development occur within this unit during the planning period except occasionally and at specific locations. The unit is not considered suitable for settlement. Instead, settlement should be directed to nearby areas designated Settlement or in areas already conveyed to private individuals or Native corporations. | This unit is a large noncontiguous area of land that includes Ice Creek and Nunvak Mountain in its northern extent, the Weary River along the western and southern extents, and Lake Aleknagik and Nunavaugaluk Lake on the eastern side. The area is vegetated mostly in tall shrubs. The unit contains several anadromous fish streams, which are utilized by bear during the spawning season, and is used by moose for calving. Parts of the unit are affected by MCO 305. |
| R05-03<br>Table Mountain | 20,421<br>Gu -- General Use | Map O-1 | This unit is designated General Use (Gu). These lands should be managed for a variety of uses including the protection of fish and wildlife and their associated habitat, anadromous fish streams, and dispersed recreation and tourism. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations. The unit is not considered suitable for settlement. | This is a unit comprised of state land and state-selected land. It is a fairly mountainous area with tall and low shrub vegetation. Jackknife Mountain makes up the very western extent of the unit with Table Mountain to the south, Lake Nerka and Wood-Tikchik State Park to the north, and the Muklung river on the eastern boundary. The unit contains anadromous fish streams and supports moose calving areas. The eastern part of the unit is affected by MCO 393. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R05-04<br>Snake Lake | 28,339<br>Se -- Settlement | Map O-1 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the Management Guideline pertaining to Remote Settlement in the Settlement section and to those of the Caribou and Moose Rutting and Calving Area Management Guideline in the Fish and Wildlife Habitat and Harvest Areas section, both of which are found within Chapter 2. | This unit mostly surrounds Nunavaugaluk Lake and is in turn encompassed by unit R05-02. The area includes hills and lowlands vegetated in tall shrub types. The state has offered and patented various land units in this area through the land sales program. The area is used for recreation, hunting and fishing, and contains anadromous fish streams, bear denning sites, and moose. Portions of this unit, along Nunavaugaluk Lake are affected by MCO 304. |
| R05-05<br>Lake Aleknagik | 1,284<br>Se -- Settlement | Map O-1<br>S1S56W Sec. 18,28, 29 | If conveyed by the Federal government, these lands are considered suitable for Settlement and are appropriate for disposal during the planning period. Disposals should conform to the requirements of a Community Settlement Area in the Settlement section of Chapter 2. Buffers along anadromous fish streams should conform to the management guidelines in Chapter 2. This is considered a high priority selection. | This unit is comprised of two noncontiguous portions of state-selected land on the southwest shore of Lake Aleknagik. One unit is situated east of Mable Mountain and the other, northeast of Mable Mountain. Both occupy areas of level terrain with tall shrubs, and are considered suitable for settlement. The northern unit has lake front access and is close to Aleknagik. Anadromous fish streams, Bear Creek and Yake Creek, exist between and south of the units. Bears use these streams when salmon are spawning. |
| R05-06<br>Lake Aleknagik 2 | 554<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-1<br>S1S56W Sec. 25,36 | If these lands are conveyed by the Federal government they are to be managed for public recreation and tourism. Authorizations related to commercial recreation uses may be appropriate subject to the protection of these resources and the requirements of Chapter 2. Intensive development is not intended during the planning period except occasionally and at specific locations. If conveyed, the unit is to be retained in state ownership. This is considered a high priority selection. | This unit is comprised of two noncontiguous portions of state-selected land along the eastern shore of the lower end of Lake Aleknagik. It is an area of level terrain and tall shrub vegetation. The area is utilized for public recreation, hunting, and fishing and is adjacent to the Aleknagik State Recreation Site. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit. |
| R05-07<br>Aleknagik Airport | 67.90<br>Pr -- Public Facilities-Retain | Map O-1<br>S1S55W Sec. 19,30 | This unit is to be managed by ADOT/PF consistent with FAA standards and the conditions of the Management Agreements (ADLs 220386 and 220387) and limited state holdings (LSHs 178 and 179). | This unit contains airport facilities situated near the community of Aleknagik. It is managed by ADOT/PF under Management Agreement (ADLs 220386 and 220387) and limited state holding stipulations (LSHs 178 and 179). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R05-08<br>Lake Aleknagik | 1.02<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-1<br>S1S55W Sec. 31 | This small unit is adjacent to the Aleknagik Lake State Recreation Area and is to be managed consistent with the management plan for the recreation area as provided for in the Wood-Tikchik State Park Management Plan (2002). The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This land (OSL 1170) is located on the south shore of the east end of Lake Aleknagik adjacent to Aleknagik Lake State Recreation Area. It is an area of tall shrub vegetation and level terrain. The area has important recreational values. |
| R05-08a<br>Aleknagik State Recreation Site | 5.75<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-1<br>S1S56W Sec. 36 | This unit is to be managed as Lake Aleknagik State Recreation Area by DPOR under the stipulations of the ILMA (ADL 227395) and in accordance with provisions in the Wood-Tikchik State Park Management Plan (2002). The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This land (OSL 1112) is located on the south shore of the east end of Lake Aleknagik. Along with the shorelands of the lake, it forms Aleknagik Lake State Recreation Area under an ILMA issued to DPOR (ADL 227395). It is an area of level terrain and tall shrub vegetation. |
| R05-09<br>Aleknagik Research Station | 5.61<br>Pr -- Public Facilities-Retain | Map O-1<br>S1S55W Sec. 32 | This unit is to be retained in state ownership and managed to accommodate a field research station. Public access to the river is to be maintained by way of a 50-foot stream access buffer and a building set back of 150 feet is to be maintained. | This state-selected unit is located at the east end of Lake Aleknagik situated on the south bank of the Wood River, an anadromous fish stream. There is an ANILCA 906(k) concurrence (ADL 17883) issued to ADF&G for the site to be utilized as a Bristol Bay Fisheries field research station. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit. |
| R05-10<br>Weary River | 16,054<br>Se -- Settlement | Map O-1 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and those for the Caribou and Moose Rutting and Calving Area, both of which are described in the Settlement and Fish and Wildlife sections, respectively, of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. | This unit occupies an area of rolling hills and lowlands between the Weary River on the west and Nunavaugaluk Lake to the east. This area is considered suitable for settlement and the state has offered and patented portions of the unit through the land sales program. The area is utilized for recreation including hunting and fishing. The unit includes anadromous portions of Eagle Creek and is close to the anadromous Weary and Snake Rivers. The area contains wintering areas for moose; bear utilize the anadromous fish streams during the salmon runs. Much of this unit is affected by MCO 305; also see MCO 304. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R05-11<br>Nuyakuk | 1,270<br>Se -- Settlement | Map O-1<br>S11S56W Sec. 19,20 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development shall conform to the requirements of Chapter 2, particularly those found in the Settlement section. | This unit consists of two sections of land immediately east of the Otter Creek drainage and two to fours miles east of Nunavaugaluk Lake. The terrain is vegetated primarily in tall shrub-type plants. The land contains both level and steep components. Otter Creek is cataloged as anadromous downstream from the unit. |
| R05-11a<br>Silver Salmon Creek | 3,840<br>Se -- Settlement | Map O-1<br>S11S56W Sec. 1,2,15, 23,34,35 | If conveyed by the Federal government, the unit is appropriate for settlement and should be considered for disposal during the planning period. Development is to conform to the requirements of Remote Settlement in Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. This is considered a high priority selection. | This unit is made up of several portions of state-selected land located south of Silver Salmon Creek and north of Otter Creek. The Aleknagik-Dillingham road passes through the east part of the unit. It is an area of fairly level terrain, low and tall shrub, and moist tundra vegetation that is considered suitable for settlement. |
| R05-12<br>Wood River-Aleknagik Road | 34,481<br>Se -- Settlement | Map O-1 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Disposals should conform with the Management Guideline Community Settlement Area in Chapter 2. The Bristol Bay transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known or without consultation with the ADOT/PF. | This is a large unit of state-owned and state-selected land situated east of the Dillingham-Aleknagik Road. It is a level lowland area vegetated in low shrub and moist tundra types along the Wood and Muklung Rivers that is suitable for settlement. The City of Dillingham has been conveyed land by the state and established a landfill (ADL 227310) adjacent to the lower southwest corner of this unit. The Wood and Muklung Rivers are cataloged as anadromous fish streams. They are utilized by bear when the salmon are spawning. The unit has good access along the rivers, is near the road system, and has high recreation values. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit. The unit is affected in part by MCO 443 and in part by MCO 393. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R05-13<br>Muklung Hills | 6,385<br>Gu -- General Use | Map O-1<br>S11S54W Sec. 11,15, 24,25,36; S12S54W Sec. 1,12, 13,14,23 | This unit is designated General Use (Gu). These lands should be managed for a variety of uses including protection of fish and wildlife, protection of fish and wildlife habitat, minerals exploration and development, and dispersed recreation and tourism. The unit is not suitable for Settlement. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. Intensive development is not intended within this unit during the planning period except occasionally and at specific locations. The Bristol Bay transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known or without consultation with the ADOT/PF. | This unit is made up of state-owned and state-selected land along the border with Region 6, one to four miles west of the Little Muklung River. It is a lowland area of wet tundra along the edge of the Muklung Hills. The Little Muklung River is not cataloged as anadromous and few fish and wildlife resources are identified on the unit. The unit has low scenic and recreational values. The area is utilized for caribou and moose hunting. |
| R05-14<br>Dillingham Road | 840<br>Se -- Settlement | Map O-1<br>S12S56W portions of Sec. 1,12, 13,24,25 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Because of its proximity to the Dillingham-Aleknagik Road the unit may have potential for a variety of uses. The potential for other uses than residential should be evaluated prior to creating a land disposal. Disposals should conform to the requirements for Community Settlement Area in the Settlement section of Chapter 2. | This unit is comprised of three noncontiguous areas located along the west side of the Dillingham-Aleknagik road. This area of rolling lowlands is vegetated primarily in shrub tundra types. It is considered suitable for settlement. This unit has relatively good access and portions may be of high value and are potentially suitable for commercial property or subdivision. It contains a materials potential, and could be developed for a variety of uses, including commercial, industrial, and/or residential. The Alaska Heritage Resources Survey (AHRS) reports a heritage site in or near this unit. |
| R05-15<br>Snake River | 15,963<br>Se -- Settlement | Map O-1 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and those for Caribou and Moose Rutting and Calving Area, both of which are described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections, respectively, of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. | This land is located generally south of Nunavaugaluk Lake with the Snake River flowing through the northeastern portion of the unit and the Weary River flowing through the very southwestern corner of the unit. The area is vegetated in tall and low shrubs and considered suitable for settlement. Both the Weary and Snake Rivers are cataloged as anadromous and bears utilize these streams during the salmon runs. Moose over winter in the Snake River drainage and near the outlet to Nunavaugaluk (Snake) Lake. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R05-16<br>Warehouse Mountain | 16,061<br>Se -- Settlement | Map O-1 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and those for Caribou and Moose Rutting and Calving Area, both of which are described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections, respectively, of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. | This land is located generally between the Snake River and the Dillingham-Aleknagik road in terrain drained by Otter Creek. The unit, vegetated in tall and low shrub types, is comprised of state land and state-selected lands. Because of its topography and proximity to the road system and river, it is considered suitable for settlement. The state has offered and patented many areas within the unit through the land sales program. The Snake River is cataloged as an anadromous fish stream, and the area is utilized by both bear and moose. This unit is affected by MCO 196 and by MOO 702. |
| R05-17<br>Lower Wood River/Dillingham | 2,517<br>Gu -- General Use | Map O-1<br>S13S55W Sec 7,15,16; S13S56W Sec. 13 | This unit is designated General Use (Gu). If these lands are conveyed by the Federal government they are to be managed for a variety of uses including mineral exploration and development, the protection of anadromous fish and other fish and wildlife resources, and dispersed recreation and tourism. Intensive development is not intended during the planning period except occasionally and at specific locations related to minerals or commercial recreation. This is considered to be a high value selection. | This unit consists of several areas of state-selected land near the City of Dillingham. They are approximately one mile northwest and east of the Dillingham airport. The areas are flat to rolling terrain dotted with small lakes and creeks with low shrub and moist tundra vegetation. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit. The unit is affected in part by MCO 393. |
| R05-18<br>Dillingham Airport | 84<br>Pr -- Public Facilities-Retain | Map O-1<br>S13S55W Sec. 17,18, 19 | Unit is to be managed by ADOT/PF consistent with FAA standards and the conditions given in the Management Agreement (ADL 17963), conveyance documents (OSL 36), and limited state holdings (LSH 46). Unit is to be retained in state ownership. | This unit of land contains airport facilities situated adjacent to the City of Dillingham. It is comprised of a limited state holding (LSH 46) and state land (OSL 36) managed by ADOT/PF under ILMT (ADL 17963) and the stipulations of the LSH and OSL. |
| R05-19<br>Downtown Dillingham | 9.92<br>Pr -- Public Facilities-Retain | Map O-1<br>S13S55W Sec. 16,21 | This land is designated as Public Facilities-Retain (Pr). A portion of this unit is to be managed by ADF&G under a Management Agreement (ADL 224662). Another portion is to be managed by ADOT/PF under an ILMT (ADL 61051) for a maintenance camp site. The remainder of the unit is to be managed by DNR as commercial property for lease or rent. A portion of this unit may be transferred to the City of Dillingham under title 38.05.810 without reclassification. A portion of lands covered by ADL 61051 and ADL 224662 are considered appropriate for conveyance to another governmental entity for public purposes. | This unit is comprised of state land (OSLs 72, 165, 115 and 312) located in Dillingham. A portion of the unit has an ILMT (ADL 61051) issued to ADOT/PF for the purposes of a maintenance camp site. A portion of this unit is to be managed by ADF&G under management agreement (ADL 224662). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R05-20<br>Nushagak River | 23,326<br>Gu -- General Use | Map O-1<br>S13S54W; and S13S53W Sec. 18,19, 20,25 | The unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitats, mineral exploration and development, and dispersed recreation. Some forms of recreation use, including commercial recreation, may be appropriate if these recreational uses are found to be compatible with the management intent for adjacent river corridors designated Ha-Rd or Rd in the Area Plan. Development authorizations may be appropriate subject to the protection of these resources, consistency with the recreation uses specified in the RRMP, and the specific requirements of Chapter 2; see particularly the requirements for Management Guideline J, "Nushagak & Mulchatna Rivers Recreation Management Plan", in the Recreation, Tourism and Scenic Resources section of Chapter 2. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional (recreational) uses by RRMP Management Unit. Management Guideline J in the Recreation, Tourism and Scenic Resources section of Chapter 2 specifically defines the relationship between the RRMP and the BBAP, and must be consulted in adjudication decisions. Intensive development is not expected within this unit during the planning period, except occasionally and at specific locations associated with recreation uses and mineral exploration and development. Settlement is not considered an appropriate use. | This unit is made up of areas of state-owned and state-selected land straddling the Nushagak River east of Dillingham. The area north of the Nushagak River is drained by the Little Muklung River and by Black Slough. It is a flat wetland area vegetated in low shrub and lichen tundra types. The unit is affected by MCO 393 which closes the Nushagak River to mineral location. The unit can be accessed by the Dillingham-Lewis Point trail which extends across the unit from west to east. The Togiak-Nushagak trail also extends into the unit. |
| R05-21<br>Scandinavian Slough | 59,979<br>Se -- Settlement | Map O-1 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and those for the Caribou and Moose Rutting and Calving Area, both of which are described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. | This unit of state-owned and state-selected land located north of the Nushagak River and Scandinavian Slough and south of the Iowithla River occupies an area of fairly flat to rolling terrain vegetated in low shrub and moist tundra that is suitable for settlement. Trails extend to the unit from Dillingham, and a number of lakes are navigable. Lands not part of the unit, along the Nushagak and Iowithla Rivers are used by moose for calving; both rivers are anadromous. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R05-22<br>Corridor of the Iowithla River | 4,949<br>Rd and Ha -- Public Recreation and Tourism-Dispersed, and Habitat | Map O-1 | This unit, which consists of the navigable portions of the Iowithla River and its adjoining uplands as depicted in Map O-1, is co-designated Public Recreation and Tourism-Dispersed (Rd) and Habitat (Ha). Unit is to be retained by the state and managed to maintain the recreational uses of the Iowithla River and the adjoining upland corridor, its fish and wildlife resources, and public recreation values. The management requirements of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) are to be followed by DNR in the granting of authorizations related to certain types of recreational uses and structures. See the Management Intent and Management Guidelines in the RRMP for Management Unit 2. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional uses by RRMP management unit. Management Guideline J in the Recreation, Tourism and Scenic Resources section of Chapter 2, which more specifically defines the relationship between the RRMP and the BBAP, also applies and should be consulted in adjudication decisions.<br><br>In general, authorizations should not be issued for non-recreational uses that are incompatible with the management intent of this unit and the management objectives of the RRMP. Oil, gas, and mineral exploration and development are considered appropriate uses if compatible with the management intent for this unit or if in the best interest of the state. | The unit is the corridor of the Iowithla River as depicted in the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP). The unit consists of that portion of RRMP Management Unit 2 within state-owned lands in Region 5. The width of the corridor varies, and may be up to four miles wide, measured from each side of the river system. Vegetation consists of lichen tundra and low shrub. The Iowithla River is cataloged as an anadromous fish stream and is utilized by brown bear, especially during the salmon spawning season. The river corridor is used as a calving area by moose. Note: This corridor is continued in Region 6. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R05-23<br>Portage Creek | 42,561<br>Gu -- General Use | Map O-1 | The unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitats, mineral exploration and development, and dispersed recreation. Some forms of recreation use, including commercial recreation, may be appropriate if these recreational uses are found to be compatible with the management intent for adjacent river corridors designated Ha-Rd or Rd in the Area Plan. Development authorizations may be appropriate subject to the protection of these resources, consistency with the recreation uses specified in the RRMP, and the specific requirements of Chapter 2; see particularly the requirements for Management Guideline J, "Nushagak & Mulchatna Rivers Recreation Management Plan", in the Recreation, Tourism and Scenic Resources section of Chapter 2. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional (recreational) uses by RRMP Management Unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapted 2 specifically defines the relationship between the RRMP and the BBAP, and must be consulted in adjudication decisions. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations associated with recreation uses and mineral exploration and development. Settlement is not considered an appropriate use. | This unit, comprised of several noncontiguous pieces of state-owned and state-selected land, occupies an area from Keefer Cutoff and the Nushagak River to the west, north to the southern boundary of Region 6 and south beyond Portage Creek. It is flat to rolling terrain vegetated in low shrub and moist tundra types with a winter trail that passes through the unit just north of Portage Creek. |
| R05-24<br>Kvichak River | 16,765<br>Gu -- General Use | Map O-2 | This unit is designated General Use (Gu). If conveyed by the Federal government, this unit is to be managed for a variety of uses including mineral exploration and development, the protection of fish and wildlife resources and their associated habitat, and dispersed recreation and tourism. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations related to minerals or recreation. This is considered a high priority selection. | This unit of state-selected land is located west of the Kvichak River on the eastern margin of planning Region 5 on level terrain vegetated primarily in low shrub and lichen tundra. There is a winter trail that bisects the unit at its southern end near Squaw Creek and King Salmon Creek. The unit has been utilized as a rutting area by moose. The Lewis Point-Naknek trail extends across the southern part of the unit. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R05-25<br>Togiak NWR | 3,076<br>Ha -- Habitat | Map O-1<br>S14S56W Sec. 6,7,18, 19,30 | If conveyed by the Federal government, this unit is to be managed for the protection of fish and wildlife habitat and the maintenance of dispersed recreation. It is designated Habitat and is to be retained in state ownership. Development authorizations may be appropriate but only if the resources and values of the unit are maintained. Consult with the Togiak NWR prior to issuing any authorization. This is considered to be a low-priority selection. | This state-selected land is situated between the Nushagak Bay and the Snake River, and borders the Togiak National Wildlife Refuge. It is an area of low-lying, flat poorly-drained terrain with low shrub vegetation. Because of its remote and isolated location, development of the unit is considered difficult. Since it adjoins the Togiak NWR, the management of this unit should focus on habitat protection and the maintenance of dispersed recreation. |
| R05-26<br>PU1/ Blood Beach | 230<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-1<br>S14S52W Sec. 27,34 | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and tourism. The unit is to be retained in state ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This unit is located along the southern shore of the Nushagak River just west of the Scandinavian Slough and is primarily used for angling. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU1). |
| R05-27<br>PU5/Keefer Cutoff | 80<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-1<br>S14S51W Sec. 25 | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and tourism. The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This is a shoreland area on Keefer Cutoff and the Nushagak River north of Portage Creek used for camping and angling. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU5). |
| R05-28<br>PU3/Keefer Cutoff | 41<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-1<br>S14S51W Sec. 25 | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and tourism. The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This is a shoreland area on Keefer Cutoff and the Nushagak River north of Portage Creek. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU3). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R05-29<br>PU4/N. Portage Creek | 41<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-1<br>S14S51W Sec. 25 | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and tourism. The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This is a shoreland area adjacent to an upland site designated by Choggiung Ltd as a public camping site. It lies north of Portage Creek on Keefer Cutoff and the Nushagak River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU4). |
| R05-30<br>PU2/ Keefer Cutoff | 117<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-1<br>S15S51W Sec. 2 | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and tourism. The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This unit is located along the Nushagak River in a braided section west of the Portage Creek airport, primarily used for angling. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU2). |
| R05-31<br>Portage Creek Airport | 85<br>Pr -- Public Facilities-Retain | Map O-1<br>S15S51W Sec. 1 | This unit is to be managed by ADOT/PF consistent with FAA standards and the conditions given in Management Agreements (ADLs 221494, 221495 and 224242) and limited state holdings (LSHs 231, 234 and 309). The land is to be retained in state ownership. | This unit of land hosts the airport facilities located near the community of Portage Creek. The unit is located on land managed by ADOT/PF under the stipulations of limited state holdings (LSHs 231, 234 and 309) and management agreements (ADLs 221494, 221495 and 224242). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R05-32<br>Scandinavian Slough | 1,920<br>Gu -- General Use | Map O-1<br>S15S52W Sec. 23,24, 25 | The unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitats, mineral exploration and development, and dispersed recreation. Some forms of recreation use, including commercial recreation, may be appropriate if these recreational uses are found to be compatible with the management intent for adjacent river corridors designated Ha-Rd or Rd in the Area Plan. Development authorizations may be appropriate subject to the protection of these resources, consistency with the recreation uses specified in the RRMP, and the specific requirements of Chapter 2; see particularly the requirements for Management Guideline K, "Caribou and Moose Calving and Rutting Areas", in the Fish and Wildlife Habitat and Harvest Areas section and with Management Guideline J, "Nushagak & Mulchatna Rivers Recreation Management Plan", in the Recreation, Tourism, and Scenic Resources section of Chapter 2. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional (recreational) uses by RRMP Management Unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2 specifically defines the relationship between the RRMP and the BBAP, and must be consulted in adjudication decisions. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations associated with recreation uses and mineral exploration and development. Settlement is not considered an appropriate use. | This land consists of three sections of state-selected lands south of the Nushagak River and southeast of Portage Creek. The unit occupies an area of level terrain and low shrub and lichen tundra vegetation. The unit is in an area used by moose for calving. |
| R05-33<br>Clarks Point Airport | 70<br>Pr -- Public Facilities-Retain | Map O-1<br>S15S55W Sec. 25,26, 36 | This unit is to be managed consistent with the stipulations of the limited state holding (LSH 265) and is to be retained in state ownership. | This unit of land contains the public airport facilities adjacent to the community of Clarks Point. It is to be managed by ADOT/PF under the stipulations of a limited state holding (LSH 265) for the purposes of administering an airport facility. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R05-34<br>Etolin Point | 36,139<br>Se -- Settlement | Map O-1<br>S17S54W; S18S54W; S18W53W | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and those for the Caribou and Moose Rutting and Calving Area, both of which are described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections, respectively, of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. | This unit extends north from the shores of Nushagak and Kvichak Bays and includes Etolin Point to the west. It is an area of fairly flat terrain and low shrubs that is suitable for settlement. The unit contains several large navigable lakes and opens onto Nushagak and Kvichak Bay. The area is largely surrounded by Native-owned lands; some of these are 12b village pool lands that have been designated for development purposes by the Bristol Bay Native Association. |

# Resource Allocation Table for Tideland Units - Region 5

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R05T-01<br>Nushagak Bay | 82,480<br>Ha and Hv -- Habitat and Harvest | Map O-1<br>S14S56W, S16S56W, S17S55W-58W, S18S55W-58W | Nushagak Bay, with its numerous and varied marine and fishery resources, is designated Habitat. Management intent: Tideland development authorizations are considered appropriate, but must avoid or minimize impacts to the beluga whale population during the calving life-cycle stage. Consult with NMFS before issuing authorizations. Ensure that any authorizations are consistent with the requirements of the Bristol Bay Fisheries Reserve. | This large bay includes calving areas for beluga whales and is used by waterfowl as a concentration area.<br><br>Commercial harvest of pink, sockeye, chinook, chum and coho salmon occurs throughout Nushagak Bay (purse seine and drift net). Offshore leases for set net harvesting are continuous along both the east and west coastlines of Nushagak Bay, concentrating south of Dillingham, around Clarks Point to Ekuk and extending south of Ekuk on the eastern side of the bay. Drift net harvest occurs throughout the bay for pink, chum, sockeye, coho and chinook salmon. Chinook salmon are harvested (drift net) at Etolin Point. Subsistence harvest of fish around Dillingham consists of primarily salmon, but grayling and pike are harvested to a lesser extent. Clarks Point residents range long distances, if necessary, for subsistence harvest which includes salmon, smelt and some waterfowl. A number of Bristol Bay residents migrate to Ekuk for subsistence harvest of salmon. The western coastal tidelands of Nushagak Bay are adjacent to the Togiak NWR and are affected by a TRMZ (See R02T-01). All of Nushagak Bay is affected by the Bristol Bay Fisheries Reserve. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R05T-02<br>Kvichak Bay | 26,920<br>Ha and Hv -- Habitat and Harvest | Map O-1<br>S16S47W, S17S47W-50W, S18S48W-53W | Kvichak Bay is designated Habitat. Although the eastern part of Kvichak Bay contains extensive areas of sheltered tidal flats and is only considered moderately productive biologically, the remainder of the bay is a sensitive habitat area. Tideland development authorizations may be appropriate but must avoid or minimize impacts to the beluga whale population during the calving life cycle stage and to harbor seal haulout concentration areas. Consult with the NMFS and USFWS before issuing authorizations.<br>Management Intent: Protect beluga whale population, harbor seal haulout concentrations, anadromous streams, areas of estuarine wetlands, and areas of waterfowl concentration. Ensure that any authorizations are consistent with the requirements of the Bristol Bay Fisheries Reserve. | Habitat: Kvichak Bay fronts on both Regions 5 and 11. Eroding peat scarps, sheltered tidal flats, and marshes are common along the west side of the Bay. The eastern part, extending from its mouth to the mouth of the Naknek River, consists of extensive shallow areas of exposed tidal flats having high biomass content. Large areas of exposed tidal flats are also common south of the Naknek River, but are considered to be of only moderate biomass. Both the Kvichak and Naknek Rivers empty into the Bay; the communities of King Salmon and Naknek are situated on the Naknek River. See Region 11 for descriptions of these communities.<br><br>The Kvichak River is an important anadromous stream, provides habitat for waterfowl during the spring and fall, is used by belugas for both feeding and calving, and contains numerous harbor seal haulout concentrations. Kvichak Bay merges imperceptibly into this river. The bay provides somewhat similar habitat to Kvichak River and is important as a beluga whale feeding and calving concentration area, the belugas arriving in the bay in May. While in this area, some feed in shallow tidal flats while others ascend the rivers, traveling as far as 10-20 miles inland. They depart Kvichak Bay in August. This bay also contains areas important for harbor seal haulouts and spring waterfowl concentrations. The area of 'Deadman Sands', situated in the central part of Kvichak Bay generally within or near sections 1, 2, 11, 12, 13, 14, 23, and 24 of T17SR50W, is especially important as a harbor seal haulout concentration. Another harbor seal haulout concentration area occurs west of Graveyard Point on the east side of the bay. The highest density of shorebirds and diving and dabbling ducks on the north coast of the Alaska Peninsula occurs in this bay. Kvichak Bay is affected by the Bristol Bay Fisheries Reserve.<br><br>Harvest: Commercial harvest of pink, sockeye, chinook, chum and coho salmon occurs throughout Kvichak Bay (purse seine and drift net). Set net permits occur all along the upper Kvichak Bay, on both the east and west coastlines. The densest concentration of set net permits exist along the eastern coastline near the mouth of the Naknek River and south of Naknek. There is intense subsistence harvest of red salmon as a food staple in Kvichak Bay. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R05T-03<br>Tidelands and Offshore Submerged Lands | 165,569<br>Gu -- General Use | Map O-1 | Manage for a variety of uses and resources. Protect areas with concentrations of seabirds and waterfowl. Consult with NMFS to determine if whales or other marine mammals are present prior to issuing an authorization. Maintain opportunities for personal and commercial harvest. This unit is included within the Bristol Bay Fisheries Reserve. | This tideland unit occupies the area between Nushagak and Kvichak Bays. The more sensitive resources within this Region are associated with these bays and are to be managed according to the requirements listed for tideland units R05T-01 (Nushagak Bay) and R05T-02 (Kvichak Bay). The tidelands in this units as well as R05T-01 and -02 are governed by the restrictions of the Bristol Bay Fisheries Reserve.<br><br>The area encompassed by this tideland unit is characterized by mixed sand and gravel beaches. Eroding peat scarps, some sheltered tidal flats, and marshes occur near Kvichak Bay, and marshes occur near Nushagak Bay. Watefowl and shorebirds are common throughout the unit, and both whales and marine mammals are known to be present, but not at the concentration levels experienced in either R05T-01 and R05T-02.<br><br>The commercial harvest of pink, sockeye, and chinook, chum, and coho salmon occurs within parts of this unit by purse seine and drift net. Set nets are present as well. There is also some subsistence harvest of salmon and herring in this unit. |

# Region 6

# *Nushagak, Mulchatna*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 6 is the second largest of the planning regions in the Bristol Bay Plan and encompasses the most state-owned land. See *Plan Map O-2*. The Region includes much of the Nushagak and Mulchatna River drainages. The boundaries of the Region are defined by Wood-Tikchik State Park on the west, the drainage divide to the Kuskokwim (Holitna and Aniak Rivers) on the north, and the divide between the Nushagak River system and the Kvichak on the southeast. The eastern boundary is somewhat arbitrary and attempts to separate the upper Mulchatna River drainage from the Region. Elevations range from less than 200 feet in the south to over 3,000 feet in the Shotgun Hills. However, the Region is not very mountainous; it encompasses the southern portion of the Shotgun Hills and Nushagak Hills in the north and the Muklung Hills in the southwest. There are few settlements in the Region; the largest is New Stuyahok (pop. 452). The boundary of Region 6 is virtually the same as that of the original (1984) Bristol Bay Area Plan.

### State Lands: Ownership and Acreage

The majority of land within Region 6 is owned by the State of Alaska. Much of the land along the middle and lower Nushagak River is Native-owned, flanked by Federal lands. The plan applies to 4,340,384 acres of state-owned and state-selected uplands.

### Physical Geography

The Region is within four physiographic provinces: the central and southern portion is dominated by the Bristol Bay Lowlands; the northwest portion is within the Ahklun Mountain Province; the north part is within the Kuskowkim Mountain physiographic province; and the northeast portion is part of the Lime Hills province. The Nushagak-Mulchatna drainage basin is large and incorporates the east flowing rivers from Wood-Tikchik State Park such as the Iowithla, Kokwok, Nuyakuk, Klutuspak, and King Salmon Rivers. Northern tributaries include the Klutapak Creek, and the Chichitnok and Mosquito Rivers. Eastern and Southeastern tributaries include the Swan, Koktuli, and Stuyahok Rivers. Topographic relief is modest with most of it developed in the west and north. The highest elevations occur in the glaciated Shotgun Hills where over 2,000 feet of relief is present. Most other mountainous areas of the Region show relief of less than 1,500 feet.

The Region displays a variety of landscapes, including mountains, fast-flowing rivers, tundra, marshy lowlands, and ponds. The glacial valleys of the Wood River Mountains and the Shotgun Hills open into the broad rolling Bristol Bay lowlands. Forested areas occur only sparingly; they are found at restricted locales in the western margins of the Region, near the border with Wood-Tikchik State Park and in the eastern-southeastern portion of the Region at higher elevations near the drainage divide which separates Region 6 and Region 10. Most terrain above 1,000 feet in elevation is vegetated with tall shrubs. Terrain below 1,000 feet is largely covered by low shrub and or lichen tundra with low lying areas marked by wet sedge tundra.

## Climate

The climate of Region 6 is transitional from the maritime influence of Bristol Bay to the continental influences to the north. As distance from the coast increases, temperature variations increase whereas cloudiness, humidity, and precipitation tend to decrease. The settlement of New Stuyahok is located in a climatic transition zone. The primary influence is maritime, although a continental climate affects the weather. Average summer temperatures range from 37° to 66°; winter temperatures average 4° to 30°. Annual precipitation ranges from 20 to 35 inches. Fog and low clouds are common during the summer and strong winds often preclude access during the winter. The Nushagak River at New Stuyahok is generally ice-free from June through mid-November. Most of the Region is underlain by isolated masses of permafrost. Generally the areas immediately under or adjacent to the main course of the Nushagak and Mulchatna Rivers are free of permafrost.

## Other

Region 6 is within the Dillingham, Taylor Mountains, Lake Clark, and Iliamna Quadrangles. It is entirely within the boundaries of the Bristol Bay Regional Native Corporation. The eastern portion of the Region is within the Lake and Peninsula Borough.

## Access

Settlements in Region 6 include Ekwok, New Stuyahok, and Koliganek. Access to the Region is predominantly through air or river transportation. Region 6 contains airstrips at each of the three settlements: a state-owned 1,800-foot lighted gravel airstrip at New Stuyahok; a new 3,000-foot state-owned runway at Koliganek; and a state-owned 2,720-foot-long gravel strip at Ekwok. A new runway at New Stuyahok was under construction in 2004. During summer months, goods can be lightered to all three communities from Dillingham but no good docking facilities are present. Skiffs, ATV's, and snowmachines are prevalent forms of local transportation. There are no improved trails linking the settlements.

## Resources and Uses

The Nushagak and Mulchatna River drainages support a major salmon resource for subsistence and recreational harvest. Caribou, moose, and some brown bear are also used heavily by subsistence and recreational hunters. Over one quarter of the caribou harvested annually in Alaska are taken from the Mulchatna Caribou Herd. Exploration by mining companies has brought about the development of significant metal resources at Pebble Copper and Shotgun; the Region contains significant mineral potential for base, precious, rare, and strategic minerals.

Part of the Nushagak oil and gas basin extends into the southern part of the area; it is currently the locus of renewed interest in oil and gas exploration. Recreation use is heaviest along the Nushagak, Mulchatna, Koktuli, Nuyakuk, King Salmon, Stuyahok, and Mosquito Rivers. There is little in the way of agricultural resources within the Region except for village gardens. There are no commercial forestry activities but the resource does support uses for house logs and fuel. In the past, sawmills were located at Ekwok, New Stuyahok, and Nondalton.

**Cultural and Historic.** Hunting and fishing camps along the Naknek River date from 3,000 to 4,000 B.C. In 1818, the first Russian traders arrived. The Russians explored and maintained dominance of the area until the U.S. purchase of Alaska in 1867. U.S. interests were directed primarily at the fur and fishery potential of the region. In 1883, the first salmon cannery in Bristol Bay was opened which brought an influx of non-Native fishermen and cannery workers. A flu epidemic in 1918 was tragic to the Native population. Reindeer were introduced to assist the survivors, but the experiment eventually failed. The state Office of History and Archeology lists 71 sites in Region 6 – 33 historic, 24 prehistoric, and 14 of mixed origin. The majority of these sites are located along the Nushagak and Mulchatna Rivers.

New Stuyahok is located on the Nushagak River, about 12 miles upriver from Ekwok and 52 miles northeast of Dillingham. The present location is the third site that villagers can remember. The village moved downriver to the Mulchatna area from the "Old Village" in 1918. During the 1920s and 30s, the village was engaged in herding reindeer for the U.S. government. However, by 1942 the herd had dwindled to nothing; the village had been subjected to flooding; and the site was too far inland even to receive barge service. So in 1942, the village moved downriver again to its present location. Stuyahok appropriately means "going downriver place." The first school was built in 1961.

Koliganek is located on the left bank of the Nushagak River, and lies 65 miles northeast of Dillingham. It is an Eskimo village first listed in the 1880 Census as "Kalignak." The name is local, recorded by the U.S. Geological Survey in 1930. Since that time, the village has moved four miles downstream from the original site.

Ekwok is the oldest continuously occupied Yup'ik Eskimo village on the river. During the 1800s, the settlement was used in the spring and summer as a fish camp, and in the fall as a base for berry-picking. By 1923, it was the largest settlement along the river. In 1930, a BIA school was constructed. Mail was delivered by dog sled from Dillingham until a post office opened in 1941. Many of the earliest homes in Ekwok were located in a low, flat area near the riverbank. After a severe flood in the early 1960s, villagers relocated on higher ground, to the current location.

**Economic.** The primary economic base is the salmon fishery; many residents hold commercial fishing permits. Many people trap as well. The entire community relies upon subsistence foods and subsistence items are often traded between communities. Salmon, moose, caribou, rabbit, ptarmigan, duck and geese are the primary sources of meat and fowl.

**Recreation.** Recreation and tourism is experiencing modest growth in the Region. In general, southwest Alaska shows the lowest level of tourism compared to all other areas of the state. Approximately 17% of Alaska visitors report traveling to Southwest and only 3% report that southwest Alaska is their sole destination; the majority of these visits are to Katmai National Park and Preserve and Wood-Tikchik State Park. Tourism in Region 6 is primarily related to sport hunting and fishing. Most recreational or back-country lodges and camps are located on the lower Nushagak River below Ekwok. This lower stretch of the Nushagak River experiences the most commercial recreational activity of the Region. One commercial lodge site is located on the upper Mulchatna River. In general, most recreational activity in Region 6 is concentrated along the major drainage corridors and is primarily related to river rafting and floating or sport fishing activities.

**Minerals.** Region 6 geology consists of several tectonic-stratigraphic terranes. The northern portion of the Region is underlain by Cretaceous flysh of the Kuskokwim Group. The southeast portion of the Region is underlain by a mixture of Late Cretaceous to Tertiary granitic rocks and middle Tertiary volcanics. Much of the central and southern portions of the Region are underlain by Tertiary clastic sedimentary rocks, which thicken southwards as part of the Bristol Bay oil and gas basin. Region 6 contains a significant mineral endowment. It has a number of important base and precious metal deposits and prospects; these include deposits such as the Shotgun gold deposit, which has in excess of one million ounces of contained gold, and the Pebble Copper deposit which contains over a billion tons of low-grade copper-gold mineralization. Other significant mineral potential occurs at Kemuk Mountain for iron, titanium, and platinum group metals and Sleitat Mountain for tin and tungsten with associated arsenic and zinc.

The Shotgun prospect is located in the south part of the Shotgun Hills, a rugged, glaciated upland at the divide between the King Salmon and Kogrukluk/Holitna River drainages. A large granitic pluton makes up the core of the Shotgun Hills and Shotgun is located in hornfels adjacent to the granitic rocks. Novagold Resources Inc. (2000) made the following resource estimates: using a cutoff pf 0.018 ounce of Au per ton, the resource is 32,765,000 tons grading 0.033 ounce of Au per ton; using a cutoff of 0.026 ounce of Au per ton, the resource is 16,550,000 tons grading 0.045 ounce of Au per ton; using a cutoff of 0.035 ounce of Au per ton, the resource is 11,650,000 tons grading 0.05 ounce of gold per ton.

Pebble Copper is located in the extreme eastern part of Region 6 in hills drained by the upper reaches of the Koktuli River. The Pebble porphyry copper-gold-molybdenum deposit was discovered and generally outlined by Cominco American through drilling on the property to 1997. Recent geochemical and geophysical surveys have substantiated that the Pebble deposit is only part of a much larger series of metal-rich, coalescing hydrothermal sulfide systems[10]. The mineralized zone is approximately 1.7 kilometers by 1.3 kilometers in size. A recently-

[10] The deposit consists of disseminated chalcopyrite and molybdenite, accompanied by minor to trace galena, sphalerite, and arsenopyrite in a stockwork vein system. This mineralization is hosted in early Tertiary granodiorite porphyry that intrudes Tertiary dacite tuffs, lahars, and breccia.

completed (2003) independent mineral resource estimate has established the Pebble deposit as one of the world's largest gold and copper resources, containing 13.1 million ounces of gold and 6.8 billion pounds of copper[11].

The Kemuk deposit is located 12 miles east-northeast of the summit of Kemuk Mountain. The site is at the south end of the boundary between sections 19 and 20, T5SR49W, (Seward Meridian). This is an area of extensive surficial deposits with few conspicuous topographic features. Buried below 90 to 140 feet of unconsolidated Quaternary deposits, the deposit consists of a large, composite ultramafic and mafic pluton. This prospect is believed to contain 2.6 billion tons averaging 15 to 17 percent total iron. The average grade is 10.5 to 12 percent magnetic iron and 15 to 17 percent total iron. The platinum-group metal (PGM) potential of this prospect is unknown but may be significant.

The Sleitat prospect is centered on a saddle at an elevation of 1,725 feet, between the two high peaks of Sleitat Mountain (1,979 and 1,903 feet elevation). Sleitat Mountain is the highest part of northeast-southwest trending uplands between the valleys of Harris Creek and the Nushagak River. The occurrence of granite and peripheral gold-bearing quartz gash veins was reported as early as 1938, but subsequent exploration has shown that the principal mineral deposit is a tin-, tungsten-, and silver-bearing sheeted greisen system. A bulk sample contained 0.37 percent tin, 0.04 percent tungsten, and 17 ppm silver; the Sleitat deposit is estimated to contain a total of 28.6 million tons with the average grade of this bulk sample. This size and grade is consistent with that found in other large cassiterite-bearing greisen deposits around the world.

**Oil and Gas.** The southwestern portion of Region 6 is underlain by the Nushagak Basin, which is one of two basins in the Bristol Bay Area (along with the Bristol Bay basin). The Alaska Peninsula-Bristol Bay basin is 500 miles long and up to 100 miles wide. In Region 5 (the northwestern part of the peninsula) the basin is underlain by up to 18,000 feet of Tertiary sediments that thicken to the south and thin to the north. The offshore Bristol Bay basin is a sediment-filled structural depression that underlies the northern continental shelf of the Alaska Peninsula. Northern coastal plain hydrocarbon potential is moderate to locally high for gas and low to moderate for oil; both are believed to occur in structural and stratigraphic traps. Oil and gas seeps occur along the peninsula's southeastern flank; some along large anticlinal crests. Source rock data indicate gas prone Tertiary organic shales. Oil may be derived from deeper Mesozoic strata. Tertiary and Mesozoic sandstone reservoir characteristics are locally conducive to hydrocarbon production.

[11] The mineral inferred resources include 1.0 billion tonnes grading 0.61% copper-equivalent (0.40 grams gold per tonne, 0.30% copper, and 0.015% molybdenum above a cut-off grade of 0.30% copper-equivalent). Importantly, Snowden estimates that the Pebble deposit contains significant amounts of high-grade resources: 141 million tonnes of 0.67 grams gold per tonne, 0.48% copper and 0.019% molybdenum, or 0.97% copper-equivalent above a cut-off grade of 0.80% copper-equivalent. The resource estimate is based on approximately 18,353 meters of drilling in 110 core holes. During 2003 North Dynasty Minerals conducted an additional 30,000 feet of drilling in 18 holes at Pebble and other nearby prospects.

The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Materials.** There are few active materials sites in the Region except for those found near villages such as New Stuyahok.

**Forestry.** Region 6 and 7 contain most of the forest resources of the Bristol Bay Area. These non commercial forests are found primarily in the Nushagak-Mulchatna drainages. The trees are largely concentrated in the river valleys and consist of spruce, birch, and aspen. Some are large enough for house and saw logs. Most resources are for personal use to meet some modest building needs and for fuel. Upland mixed forests occur in the Muklung Hills and east of the Wood River Mountains. The most valuable of the forest resources for local use are located in the lower Nushagak area near New Stuyahok, Ekwok, and Portage Creek; in the Nushagak and Nuyakuk River above Koliganek; and the Mulchatna River.

**Fish and Wildlife.** All five species of Pacific salmon – chinook (king), sockeye (red), pink, coho (silver), pink (humpy), and chum (dog) – spawn in the Nushagak-Mulchatna River systems. Sockeye are the most important commercially. Freshwater sport fish including rainbow trout, Arctic grayling, lake trout, Arctic char, Dolly Varden, and northern pike are generally prolific throughout the area.

Caribou are an important resource in the area. The Mulchatna Caribou Herd has been increasing in size and expanding its range since the 1930's. Serious efforts to conduct a census of the herd have taken place since 1973; between 1981 and 1996, the Mulchatna Caribou Herd increased from 19,000 to 200,000. The herd is presently estimated at approximately 150,000 individuals (http://www.wildlife.alaska.gov/pubs/techpubs/mgt.cfm). Important areas for Caribou include the calving area which extends from the upper Koktuli drainage south to Iliamna Lake and from Kemuck Mtn. east to the Nushagak River.

Moose are relatively new to the Bristol Bay area, possibly moving into the area from the middle Kuskokwim drainages during the last 100 years. During the last twenty years, moose numbers have increased and moose are now common along the Nushagak/Mulchatna Rivers and all of their major tributaries. They also occur throughout the Wood/Tikchik Lake area and have extended their range westward.

Brown bears are common throughout the north Bristol Bay area and are seasonally abundant along salmon spawning areas in the Nushagak, Mulchatna River drainages as well as long the Wood River Lakes. These bears are also observed near aggregations of the Mulchatna Caribou Herd. Important denning areas occur in the Muklung Hills and the Shotgun Hills.

Birds nesting in the area include a variety of waterfowl, gulls, bald eagle, golden eagle, Arctic tern, various loons, willow ptarmigan, and spruce grouse. Numerous transients pass through as well. Eagle nests occur only sporadically along the Nushagak River; nesting sites for eagles and other raptors are slightly more abundant on the Mulchatna and lower Koktuli Rivers.

Trapping has been an important part of the culture and economy of the Northern Bristol Bay area and provided a ready means to acquire cash prior to development of the commercial fishing industry. Historically beaver have been the most important furbearer in the Region. Population trends of furbearers in the Region are favorable – either stable or increasing. This is true for important species found in Region 6 such as land otter, wolverine, and red fox, although populations of the latter can fluctuate greatly due to outbreaks of rabies.

# Management Considerations: Local and State Plans and Special Use Area

A number of local, state, and federal management plans were considered in development of this plan. Local plans include the Bristol Bay CRSA Coastal Zone Management Plan, the Lake and Peninsula Borough Coastal Zone Management Plan, the Lake and Peninsula Borough Comprehensive Plan, the Nushagak & Mulchatna Rivers Recreation Management Plan, and the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008. State plans include the Bristol Bay Area Plan, the Wood-Tikchik State Park Management Plan, the Nushagak & Mulchatna Rivers Recreation Management Plan, and the Southwest Alaska Transportation Plan. Federal plans include the Nushagak and Wood Rivers Flood Plain Management Study.

Region 6 is within the Bristol Bay CRSA Coastal Zone Management Plan. Most state-owned land falls within the CRSA but is on land outside the coastal zone. The Enforceable and Administrative Policies of these Coastal Management Plans are extensive; policies affecting anadromous fish streams, bald eagle nests, oil and gas development, material extraction, and mining can be applicable, under certain circumstances, to state land. Please see the web site www.alaskacoast.state.ak.us for more information on enforceable policies. These policies should be consulted by the DNR prior to issuing an authorization.

The eastern portion of Region 6 is located within the boundaries of the Lake and Peninsula Borough. Both the Comprehensive Plan and the District Coastal Management Plan of the Lake and Peninsula Borough apply to this portion of Region 6. The Comprehensive Plan focuses on economic and infrastructure development issues and does not contain specific land use standards or a land use map. The Enforceable Policies of the District Coastal Management Plan are extensive; policies affecting anadromous streams, bald eagle nests, oil and gas development, material extraction and mining can be applicable, under certain instances, to state lands. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by DNR prior to issuing an authorization.

Region 6 is also subject to the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP; April 2005). This plan treats recreation uses on the two river systems and was adopted as an amendment to the Bristol Bay Area Plan (1984) and as part of the Coastal Zone Management Plan. The RRMP provides the basis for the management of recreation use in areas co-designated Habitat and Public Recreation and Tourism-Dispersed within the Nushagak-Mulchatna drainage.

Region 6 is also within the area covered by the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, which was developed for the U.S. Department of Commerce Economic Development Administration by the Southwest Alaska Municipal Conference (July 2003). This document developed a number of goals, objectives, and strategies to facilitate and support efforts that retain and grow the region's wealth, including diversifying the economic base.

The Bristol Bay Area Plan (1984) affected all state lands in the Region. This version of the area plan stated that Region 6 was to be managed in conjunction with Region 7 for fish and wildlife habitat and harvest and for recreation. Land use designations in Region 7 included fish and wildlife habitat, minerals, and recreation. This revision supersedes the 1984 area plan. The Area Plan (2005) provides the basis for the management of all state land within the Region except for recreational uses, which are managed under the auspices of the RRMP.

The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) identified a Dillingham/Bristol Bay Area Transportation Corridor, which in general extends from Levelock to Dillingham, connecting with the communities of Ekwok and Aleknagik. It includes a crossing of the Wood River at Aleknagik and a major crossing of the Nushagak River. There are several possible tie-in locations to the Bristol Bay to Cook Inlet transportation corridor. The plan models a corridor from Aleknagik to Igiugig via Levelock.

The State of Alaska has issued a Special Use Area (ADL 226852) defining three Public Use sites on the Nushagak River at the mouth of the Iowithla River (PU6), near Ekwok (PU9), and at New Stuyahok (PU21). These public use sites limit uses not requiring a permit to seven consecutive days.

## Municipal Selections

Municipal selections by the Lake and Peninsula Borough occur along the Mulchatna River, in the upper Koktuli drainage, and at an unnamed lake in the upper Stuyahok River drainage. These selections total approximately 11,705 acres in Region 6 and are distributed along streams and lakes with attractive recreation and development features. See *Map O-2, Appendix C, and the Municipal Entitlement section of Chapter 4.*

# Management Summary: Uplands

State land in Region 6 is to be managed for a variety of multiple uses, including settlement, materials extraction, public facilities development, dispersed public recreation, mineral exploration and development, and maintenance of sensitive wildlife habitats. Oil and gas potential, although only moderate to low, may lead to exploration and development in the future, and is considered appropriate within the Region. The majority of lands in Region 6 are designated General Use (Gu). Most of the major river corridors have been co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd); they mostly correspond to the river corridors as defined in the Nushagak & Mulchatna Rivers Recreation Management Plan. The Minerals (Mi) land use designation has been applied to four areas where mineral resources are known and activity is expected during the planning period. A management unit adjacent to the Wood-Tikchik State Park in the Muklung Hills is designated Habitat (Ha). The corridor of the Mulchatna River, within the Lake and Peninsula Borough, is designated dispersed recreation (Rd); this sole designation is used in order to facilitate conveyance of the Borough's municipal selections in this area. Public Use Sites (identified in the Nushagak & Mulchatna Rivers Recreation Management Plan and used for recreation) have been designated Public Recreation and Tourism-Public Use Sites (Rp). A large number of small management units associated with airport or other such facilities are designated Public Facilities-Retain (Pr). Active materials sites are designated Materials (Ma).

## Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Within this Region, lands that contain one or more resource values, none of which is of sufficiently high value to merit designation as a primary use, and areas that are unlikely to be developed during the planning period are designated General Use. The land is to be managed for a variety of uses including protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and protection of heritage resources. It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. Municipal land selections, under the Municipal Entitlement program, are conveyable to the municipality subject to a Best Interest Finding by the State. The Lake and Peninsula Borough has made a small land selection on General Use lands in the vicinity of the south fork of the Koktuli River.
- Habitat (Ha). Generally, this designation applies to areas of various size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in a permanent loss of a

population or sustained yield of a species. In Region 6 this designation is applied to waterbodies cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm) and to an area important for caribou, moose calving, and brown bear denning in the Muklung Hills. The designation is to be retained in state ownership. This designation is also applied as a co-designation with Public Recreation and Tourism-Dispersed in certain areas affected by the Nushagak & Mulchatna Rivers Recreation Management Plan.

- Materials (Ma). Lands designated materials are those where active or inactive materials sites are present. These can include common varieties of sand, gravel, and stone or are site associated with materials extraction that contain conveyors, crushing, sizing, and other processing equipment. Until the materials have been exhausted, material sites are to be retained by the state; thereafter, other authorizations or disposals may be appropriate. Authorizations should be done in consultation with the Department of Transportation and Public Facilities.
- Minerals (Mi). Areas associated with significant resources, either measured or inferred that may experience minerals exploration or development during the planning period are designated Minerals. This is a designation that includes surface uses in support of minerals exploration and development, including tailings deposition, waste rock disposal, mineral processing facilities, administrative facilities, and residential living quarters. Land designated Minerals are to be retained in state ownership. This designation has been applied at the Shotgun, Sleitat, Kemuk, and Pebble Copper deposits.
- Public Recreation and Tourism-Dispersed (Rd). Lands with the designation of Public Recreation and Tourism-Dispersed are to be managed so that their public recreation values are protected and maintained. Within these areas the primary surface uses are intended to be those related to hiking, hunting, fishing, wildlife viewing, and the like. Selections on these lands may be appropriate for conveyance to a Borough under the Municipal Entitlement program (subject to a Best Interest Finding by the state). This designation is applied to a specific section of the Mulchatna River that is affected by a municipal selection of the Lake and Peninsula Borough.
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See the Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may (only) be designated Public Recreation and Tourism-Dispersed, (Rd), Habitat (Ha), or General Use (Gu). This co-designation is applied to the river corridors within the Nushagak & Mulchatna Rivers Recreation Management Plan. In Region 6 this includes the corridors of the Iowithla, Kokwok, Nuyakuk, upper Nushagak, and Mulchatna drainages.
- Public Facilities-Retain (Pr). This designation applies to sites that are reserved for a specific public infrastructure requirement. They are to be retained in state or public ownership. In this Region, this designation applies to lands containing public facilities,

commonly airports or schools. Only a small amount of acreage is affected by this designation.

- Public Recreation and Tourism-Public Use Site (Rp). This designation applies to areas with a concentration of recreational users or tourists or that are likely to have such concentrations. Within this Region this designation applies to specific recreation sites – such as the public use sites identified in the Nushagak & Mulchatna Rivers Recreation Management Plan. Unless otherwise indicated in the Resource Allocation Table, these sites are to be retained by the state. In some instances they may be conveyed to a Borough, subject to the Borough retaining them in public ownership and ensuring that they remain available for public use.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region.
- Proposed Transportation Corridor. The area identified on the Region Map as a "Potential Transportation Corridor" should be retained by the state during the planning period. Authorizations granted by DNR within or adjacent to this corridor should not preclude the future development of transportation access. Authorizations or disposals within and adjacent to this corridor should only be allowed after consultation with ADOT/PF.
- Except for areas closed to mineral entry under existing Mineral Closing Orders, all state lands within Region 6 are open to mineral entry. No additional MCOs are recommended; the only exception applies to the areas to be disposed of by DNR for purposes of Community Settlement. Closure to mineral entry is recommended at or before plat adoption. No leasehold location orders are recommended. See the Minerals section in Chapter 2 for more detail on subsurface management requirements.
- Mineral Closing and Opening Orders. This revision of the Bristol Bay Area Plan retains the mineral closing and opening orders largely implemented by DNR at the time of original plan adoption. These MCOs either close a proposed settlement area or close a number of major streams to mineral location. These include the following:
    - MCO 393 – Major streams in the Nushagak and Mulchatna drainage basin
    - MCO 294 – Jack Rabbit Hills (T1R, R40W, Seward Meridian)
- Leasehold Location Orders. Leasehold Location Order No. 1 covers small portions of Region 6, much of Region 7, portions of Region 8, and 9. Under this order, rights to locatable minerals may be acquired only under the Leasehold Location System, AS 38.05.205, and may not be acquired by locating a mining claim under AS 38.05.195. In the affected area, an approved Plan of Operations for a mineral lease takes the place of a Land Use Permit required for unleased land. If the proposed lease activities are minor, a plan of operations is not required (11 AAC 86.800). The Plan of Operations must show how the operator proposes to comply with the lease stipulations and other pertinent guideline in this plan.

- Retained Lands. There are no state lands within this Region that are designated to be retained except for those that are reserved as a 'Potential Transportation Corridor', and those designated Public Facilities-Retain (Pr), Mineral (Mi), or Habitat (Ha). Note: Certain management units designated Pr in the Resource Allocation Table may be conveyed out of state ownership and to a Borough, should one be formed as part of the Municipal Entitlement Act, providing the land conveyed remains public land and the public retains access to the public use site.
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat or a co-designation of Habitat and Public Recreation and Tourism-Dispersed. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

See the Resource Allocation Table for more detail on the upland management units.

# Resource Allocation Table for Upland Units - Region 6

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-01<br>RRMP 14 | 754,027<br>Gu -- General Use | Map O-2 | The unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitats, mineral exploration and development, and dispersed recreation. Some forms of recreation use, including commercial recreation, may be appropriate if these recreational uses are found to be compatible with the management intent for adjacent river corridors designated Ha-Rd or Rd in the Area Plan. Development authorizations may be appropriate subject to the protection of these resources, consistency with the recreation uses specified in the RRMP, and the specific requirements of Chapter 2; see particularly the requirements for Management Guideline K, "Caribou and Moose Calving and Rutting Areas", in the Fish and Wildlife Habitat and Harvest Areas section and with Management Guideline J, "Nushagak & Mulchatna Rivers Recreation Management Plan", in the Recreation, Tourism, and Scenic Resources section of Chapter 2. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional (recreational) uses by RRMP Management Unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2 specifically defines the relationship between the RRMP and the BBAP, and must be consulted in adjudication decisions. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations associated with recreation uses and mineral exploration and development. Settlement is not considered an appropriate use. | The unit encompasses uplands in the upper Nushagak River, King Salmon River, and Chichitnok River drainages and coincides with that of Management Unit 14 of the Nushagak & Mulchatna Rivers Recreation Management Plan. Vegetation consists primarily of tall shrublands. These major drainages are cataloged as anadromous and contain moose rutting areas (although not part of the unit) and brown bear denning areas (in the Shotgun Hills). The management of this unit is governed by the requirements of the Bristol Bay Area Plan. (Previous to this revision, DNR authorizations relating to recreation uses and structures were guided by the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP)). The requirements of the RRMP have been carried over except for prohibitions on structures, trapping cabins, boat storage and docks. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-02<br>Corridor of the Nushagak River system | 318,982<br>Rd and Ha -- Public Recreation and Tourism-Dispersed, and Habitat | Map O-2 | This unit, which consists of the navigable portions of the Nushagak River and its adjoining uplands as depicted in Map O-2, is co-designated Public Recreation and Tourism-Dispersed (Rd) and Habitat (Ha). Unit is to be retained by the state and managed to maintain the recreational uses of the Nushagak River and the adjoining upland corridor, its fish and wildlife resources, and public recreation values. The management requirements of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) are to be followed by DNR in the granting of authorizations related to certain types of recreational uses and structures. See the Management Intent and Management Guidelines in the RRMP for Management Units 10, 12, and 13. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional uses by RRMP management unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2, which more specifically defines the relationship between the RRMP and the BBAP, also applies and should be consulted in adjudication decisions.<br><br>In general, authorizations should not be issued for non-recreational uses that are incompatible with the management intent of this unit and the management objectives of the RRMP. Oil, gas, and mineral exploration and development are considered appropriate uses if compatible with the management intent for this unit or if in the best interest of the state. | This unit is the corridor of the upper Nushagak River as depicted in the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP). The unit consists of that portion of RRMP Management Units 10, 12, and 13 within state-owned lands in Region 6. The RRMP calls for these management units to be managed for either a 'primitive' or 'semi-primative' experience. The RRMP also specifies those recreational uses that are appropriate. It includes the Nushagak, King Salmon, and Chichitnok River corridors as well as that of lower Vukpalik Creek. The width of the corridor varies, and may be up to four miles wide. Vegetation consists of lichen tundra and low and tall shrublands. The corridors contain streams cataloged as anadromous; these are utilized by brown bear, especially during the salmon spawning season. Moose use the cooridors as calving areas. The Alaska Heritage Resources Survey (AHRS) reports many heritage sites in this unit. The unit is partly affected by MCO 393. This corridor does not include the specific public use sites identified in the RRMP. These are specific, individual units. |
| R06-03<br>Shotgun | 35,409<br>Mi -- Minerals | Map O-2<br>S4N51W; S3N51W | The land is designated Minerals (Mi) and is to be managed for the exploration and development of mineral deposits, subject to state permitting requirements. The unit is to be retained in state ownership. The Nushagak & Mulchatna Rivers Recreation Management Plan does not apply within this unit (p. 1-2; p.2-11). Refer to the Recreation, Tourism, and Scenic Resources section of Chapter 2 for a listing of allowed and prohibited uses. However, permanent facilities related to commercial recreation are prohibited in this unit. | This land is located in the Shotgun Hills. Vegetation is primarily tall shrubs and barren land. The unit encompasses the Shotgun Hills mineral district, which consists of a number of known prospects, occurrences, and the Shotgun gold deposit. The Shotgun deposit has a drill measured resource of approximately 979,660 ounces of gold. Areas along the main valley of the King Salmon River, immediately south of the unit, are used by moose for calving. The area is utilized by brown bear for denning. Exploration and other mining related activities are permitted throughout the DNR's Annual Placer Mining Permit. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-04<br>PU20/Chichitnok River | 206<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S3N46W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation. It is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | The unit consists of a campsite at the mouth of the Chichitnok River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU20). |
| R06-05<br>RRMP 19 | 1,196,780<br>Gu -- General Use | Map O-2 | The unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitats, mineral exploration and development, and dispersed recreation. Some forms of recreation use, including commercial recreation, may be appropriate if these recreational uses are found to be compatible with the management intent for adjacent river corridors designated Ha-Rd or Rd in the Area Plan. Development authorizations may be appropriate subject to the protection of these resources, consistency with the recreation uses specified in the RRMP, and the specific requirements of Chapter 2; see particularly the requirements for Management Guideline K, "Caribou and Moose Calving and Rutting Areas", in the Fish and Wildlife Habitat and Harvest Areas section and with Management Guideline J, "Nushagak & Mulchatna Rivers Recreation Management Plan", in the Recreation, Tourism, and Scenic Resources section of Chapter 2. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional (recreational) uses by RRMP Management Unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2 specifically defines the relationship between the RRMP and the BBAP, and must be consulted in adjudication decisions. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations associated with recreation uses and mineral exploration and development. Settlement is not considered an appropriate use. | The unit encompasses uplands in the lower Mulchatna drainage basin and coincides with Management Unit 19 of the Nushagak & Mulchatna Rivers Recreation Management Plan. The unit contains anadromous fish streams which include Old Man, Mosquito, and Keefer Creeks, and the Swan River. Vegetation consists of scattered spruce woodlands and tall shrublands at higher elevations and low shrub and lichen tundra. The unit contains some moose calving areas, and tundra swans in the general vicinity of the Swan River. Considerable mineral potential is present and a large block of claims has been staked on state land east of the mouth of the Mulchatna River. The management of this unit is governed by the requirements of the Bristol Bay Area Plan. (Previous to this revision, DNR authorizations relating to recreation uses and structures were guided by the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP)). The requirements of the RRMP have been carried over except for prohibitions on permanent facilities and docks. Parts of the unit are affected by MCOs 393 and 249. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-06<br>PU33/Upper Mulchatna River | 161<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S4N37W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | Unit consists of a campsite and floatplane and wheeled plane landing area on the upper Mulchatna River 5 miles downstream from Springway Creek. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) as a public use site (PU33). The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-07<br>Corridor Middle Mulchatna River | 19,946<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-2 | This unit, which consists of the navigable portions of the Mulchatna River and its adjoining uplands as depicted in Map O-2, is designated Public Recreation and Tourism-Dispersed (Rd). Except for those areas that may be conveyed under the Municipal Entitlement program, the unit is to be retained by the state and managed to maintain the recreational uses of the Mulchatna River and the adjoining upland corridor, its fish and wildlife resources, and public recreation values. The management requirements of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) are to be followed by DNR in the granting of authorizations related to certain types of recreational uses and structures. See the Management Intent and Management Guidelines in the RRMP for Management Unit 20. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional uses related to recreational facilities by RRMP Management Unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2, which more specifically defines the relationship between the RRMP and the BBAP, also applies and should be consulted in adjudication decisions.<br><br>In general, authorizations should not be issued for non-recreational uses that are incompatible with the management intent of this unit and the management objectives of the RRMP. Oil, gas, and mineral exploration and development are considered appropriate if consistent with these management objectives or if in the best interest of the state. The municipal selections affecting this unit are considered appropriate for conveyance, subject to a separate and subsequent Best Interest Finding by DNR. If conveyed to the Borough, neither the requirements of the RRMP or the Area Plan will apply. | This unit consists of the uplands corridor adjacent to either side of the Mulchatna River upstream of the boundary of the Lake and Peninsula Borough and within Region 6. Its outer boundary corresponds to that of Management Unit 20 of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP). The width of the corridor, adjacent to the streams, varies, and may be up to four miles wide, measured from each side of the river system. Vegetation consists of lichen tundra and low shrub, tall shrub, and scattered spruce-birch-alder woodlands. The river is cataloged as an anadromous fish stream and is utilized by brown bear, especially during the salmon spawning season. Moose utilize the area for calving. Raptors nest along the river. The unit is partly affected by MCO 393 and LLO 1. This corridor does not include the specific public use sites identified in the RRMP. These are specific, individual units. The unit contains a large number of land selections by the Lake and Peninsula Borough under the Municipal Entitlement program. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-08<br>PU32/Mulchatna River | 173<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S3N39W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit consists of a campsite on the north bank of the Mulchatna River, 2 miles southeast of Red Bluff. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) as a public use site (PU32). |
| R06-09<br>Corridor of the Lower Mulchatna River | 199,246<br>Rd and Ha -- Public Recreation and Tourism-Dispersed, and Habitat | Map O-2 | This unit, which consists of the navigable portions of the Mulchatna River and its adjoining uplands as depicted in Map O-2, is co-designated Public Recreation and Tourism-Dispersed (Rd) and Habitat (Ha). Unit is to be retained by the state and managed to maintain the recreational uses of the Mulchatna River and the adjoining upland corridor, its fish and wildlife resources, and public recreation values. The management requirements of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) are to be followed by DNR in the granting of authorizations related to certain types of recreational uses and structures. See the Management Intent and Management Guidelines in the RRMP for Management Units 15, 18, and 20. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional uses by RRMP management unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2, which more specifically defines the relationship between the RRMP and the BBAP, also applies and should be consulted in adjudication decisions.<br><br>In general, authorizations should not be issued for non-recreational uses that are incompatible with the management intent of this unit and the management objectives of the RRMP. Oil, gas, and mineral exploration and development are considered appropriate uses if compatible with the management intent for this unit or in the best interest of the state. | The unit is the corridor of the Lower Mulchatna River as depicted in the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP). The unit consists of that portion of RRMP Management Units 15, 18, and parts of 16, 17, and 20 within state-owned lands in Region 6. It includes the Mulchatna River up stream to the boundary of the Lake and Peninsula Borough and includes the corridors of the Stuyahok and lower Koktuli Rivers. The width of the corridor varies, and may be up to four miles wide. Vegetation consists of lichen tundra and low shrub in the lower reaches and tall shrubland and scattered spruce woodlands in the upper reaches of the river corridors. The rivers are cataloged as anadromous fish streams and utilized by brown bear for feeding, especially during the salmon spawning season. Moose utilize the river corridors as calving areas. Raptor nests occur along the main course of the Mulchatna River and especially along the lower reaches of the Koktuli River. The Alaska Heritage Resources Survey (AHRS) reports many heritage sites in this unit. The unit is partly affected by MCO 393. This corridor does not include the specific public use sites identified in the RRMP. These are specific, individual units. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-10<br>PU18/King Salmon River | 174<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S2N51W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation. It is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit consists of a campsite and floatplane landing area on unnamed lake near the headwaters of the King Salmon River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) as a public use site (PU18). |
| R06-11<br>PU19/Nushagak River | 157<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S2N46W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation. It is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit consists of a campsite on the east bank of the Nushagak River 2 miles north of the mouth of the King Salmon River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) as a public use site (PU19). |
| R06-12<br>PU15/King Salmon River | 161<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S2N46W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation. It is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit consists of a campsite and floatplane landing area at the mouth of the King Salmon River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) as a public use site (PU15). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-13<br>RRMP 11 | 587,500<br>Gu -- General Use | Map O-2 | The unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitats, mineral exploration and development, and dispersed recreation. Some forms of recreation use, including commercial recreation, may be appropriate if these recreational uses are found to be compatible with the management intent for adjacent river corridors designated Ha-Rd or Rd in the Area Plan. Development authorizations may be appropriate subject to the protection of these resources, consistency with the recreation uses specified in the RRMP, and the specific requirements of Chapter 2; see particularly the requirements for Management Guideline K, "Caribou and Moose Calving and Rutting Areas", in the Fish and Wildlife Habitat and Harvest Areas section and with Management Guideline J, "Nushagak & Mulchatna Rivers Recreation Management Plan", in the Recreation, Tourism, and Scenic Resources section of Chapter 2. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional (recreational) uses by RRMP Management Unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2 specifically defines the relationship between the RRMP and the BBAP, and must be consulted in adjudication decisions. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations associated with recreation uses and mineral exploration and development. Settlement is not considered an appropriate use. | The unit encompasses uplands east and west of the Nushagak River generally in the drainages of the Nuyakuk River as well as Klutuspak, Cranberry and Vukpalik Creeks. The unit coincides with that of Management Unit 11 of the Nushagak & Mulchatna Rivers Recreation Management Plan. Vegetation consists of tall shrub lands and lichen tundra. The unit contains moose calving areas; the major streams, including Klutuspak Creek are cataloged as anadromous. The management of this unit is governed by the requirements of the Bristol Bay Area Plan. (Previous to this revision, DNR authorizations relating to recreation uses and structures were guided by the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP)). The requirements of the RRMP have been carried over except for prohibitions on permanent facilities and docks. |
| R06-14<br>PU16/Klutuspak Creek | 197<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S1N48W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation. It is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit includes a wheeled airplane landing area on upper Klutuspak Creek. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) as a public use site (PU16). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-15<br>PU17/Vukpalik Creek | 234<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S1N45W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation. It is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Wheeled plane landing area in uplands 3 miles southeast of Vukpalik Creek. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) as a public use site (PU17). |
| R06-16<br>Upper Chulitna Area | 107,402<br>Gu -- General Use | Map O-2 | Unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitat, mineral exploration and development, and dispersed recreation. Development authorizations may be considered appropriate subject to the protection of these resources and the specific requirements of Chapter 2. Intensive development is not expected within this unit during the planning period. | The unit encompasses portions of the upper Chulitna River in Region 6. Vegetation consists of tall and low shrublands and lichen tundra. The unit is partly affected by LLO 1. Note: Area is not included as part of the Nushagak & Mulchatna Rivers Recreation Management Plan. |
| R06-17<br>PU14/Klutuspak Creek | 235<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S1S47W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and tourism. The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit consists of a campsite on the Nushagak River at the mouth of Klutuspak Creek. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) as a public use site (PU14). |
| R06-18<br>Sleitat | 73,099<br>Mi -- Minerals | Map O-2 | The land is designated Minerals (Mi) and is to be managed for the exploration and development of mineral deposits. The unit is to be retained in state ownership. The Nushagak & Mulchatna Rivers Recreation Management Plan does not apply within this unit (p. 1-2; p.2-11). Refer to the Recreation, Tourism, and Scenic Resources section of Chapter 2 for a listing of allowed and prohibited uses. However, permanent facilities related to commercial recreation are prohibited in this unit. | This land is located east of the Nushagak River in the vicinity of Sleitat Mountain and Harris Creek. Vegetation consists of low shrub and lichen tundra. A tundra swan concentration is reported on the northern margin of the unit. The area is the locus of significant tin-tungsten-silver mineralization with peripheral gold. The Sleitat deposit has inferred resources of 64,000 to 106,000 tons of tin contained in 29 million tons of ore. One drill hole intercept contains 85 feet averaging 1.8% tin and 0.4% tungsten. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-19<br>Stuyahok | 40<br>Hr -- Heritage Resources | Map O-2<br>S4S43W Sec. 16 | This unit is designated Hr - Heritage Resources and is to be managed for the protection of the heritage resources present. Development authorizations are inappropriate except for those facilities related to the scientific examination or preservation of the site. No surface disturbance is authorized unless related to scientific inquiry. The site is to be retained in state ownership. | This unit is located at the former Eskimo village of Old Stuyahok (Stuyahok) near the confluence of the Stuyahok River with the Mulchatna River. The site is approximately 985 feet by 250 feet in a semicircular clearing. The foundations of ten to fifteen cabins are present. These cabins were probably dismantled when the village was abandoned in 1939-1940 due to persistent flooding. Two dilapidated cabins are also present. |
| R06-20<br>PU27/Koktuli River | 80<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S2S40W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit consists of a campsite on the Koktuli River at the mouth of the Swan River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) as a public use site (PU27). |
| R06-21<br>PU23/Mulchatna River | 87<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S3S42W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit consists of a campsite and floatplane landing area on the Mulchatna River at the mouth of the Koktuli River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) as a public use site (PU23). |
| R06-22<br>PU22/Mulchatna River | 142<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S3S42W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation. The unit is to be retained in state ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit consists of a campsite and floatplane landing area on the Mulchatna River 1.5 miles downstream from the mouth of the Koktuli River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) as a public use site (PU22). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-23<br>Pebble | 48,526<br>Mi -- Minerals | Map O-2 | The general resource management intent for the Pebble Copper area is to accommodate mineral exploration and development and to allow DNR the discretion to make specific decisions as to how development may occur, through the authorization process. Also, see plan designations and management intent for the two units that border the area – R06-24 and R10-02.<br><br>Mineral development in this unit is expected to be authorized after a public process that is as extensive as this Area Plan, and with the benefit of site-specific data and design that is prepared for the development and not now available. For that reason, mineral development that is subject to an extensive public and agency process that involves public meetings and comment in the area, and that involves site-specific design may require different widths and habitat-protection measures than those specified in Chapter 2.<br><br>The Pebble Copper road corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known or without consultation with the ADOT/PF. Notes: 1) The requirements of the Nushagak & Mulchatna Rivers Recreation Management Plan do not apply within this unit; the requirements of the Area Plan apply instead. Refer to Recreation, Tourism, and Scenic Resources Management Guideline J in Chapter 2 for a listing of allowed and prohibited uses. Permanent facilities related to commercial recreation are prohibited in this unit. 2) The habitat resources of the two stream corridors that traverse this unit (R06-24) are to be protected. (See management intent for R06-24.) | This land is located generally in the upper Koktuli River drainage in the area of Groundhog mountain and Sharp Mountain. The unit is adjacent to another minerals unit (R10-02) and is bisected by two stream corridors (R06-24). The terrain is of low to moderate relief and vegetation consists of low to tall shrub. The unit is host to several mineral deposits, prospects, and discoveries and hosts the Pebble Copper deposit. The Pebble deposit is a very large copper-gold resource; the drill indicated resource is estimated at over 2 billion tons. Upper portions of the Koktuli River support anadromous fish. The area is also a calving area for caribou. Note to adjudicators: See units R06-24 and R10-02. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-24<br>Pebble Streams | 36,508<br>Mi -- Minerals | Map O-2 | The general resource management intent for the Pebble Copper area is to accommodate mineral exploration and development and to allow DNR the discretion to make specific decisions as to how development may occur, through the authorization process. Also, see plan designations and management intent for the two units that border the area – R06-23 and R10-02.<br><br>Mineral development in this unit is expected to be authorized after a public process that is as extensive as this Area Plan, and with the benefit of site-specific data and design that is prepared for the development and not now available. For that reason, mineral development that is subject to an extensive public and agency process that involves public meetings and comment in the area, and that involves site-specific design may require different widths and habitat-protection measures than those specified in Chapter 2.<br><br>Mineral development within R06-24 should be performed in such a manner as to ensure that impacts to the anadromous and high value resident fish streams are avoided or reduced to levels deemed appropriate in the state/federal permitting processes related to mineral deposit development. Mineral entry and location within the two streams is not allowed pursuant to MCO 393. Consult with ADF&G and other appropriate agencies to determine appropriate best management practices. This general management intent replaces and supercedes the management requirement of the Nushagak & Mulchatna Rivers Recreation Management Plan. | The unit consists of the two separate stream corridors that adjoin units R06-23 and R10-02, the Pebble Copper deposit. The area of Upper Talarik Creek is utilized by moose as a wintering area. Talarik Creek is an anadromous fish stream and supports a recreational sports fishery for trout. The area is used by caribou for calving. The unit is affected by MCO 393. The unit is part of the Pebble unit which contains the Pebble Copper copper-gold deposit -- a very large copper-gold resource; the drill indicated resource is estimated at over 2 billion tons. Note to adjudicators: The requirements of the Area Plan apply to these corridors, not the RRMP. The requirements of the 2005 RRMP have been incorporated into the revised Area Plan. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-25<br>Corridor of the Nuyakuk River | 40,319<br>Rd and Ha -- Public Recreation and Tourism-Dispersed, and Habitat | Map O-2 | This unit, which consists of the navigable portions of the Nuyakuk River and its adjoining uplands as depicted in Map O-2, is co-designated Public Recreation and Tourism-Dispersed (Rd) and Habitat (Ha). Unit is to be retained by the state and managed to maintain the recreational uses of the Nuyakuk River and the adjoining upland corridor, its fish and wildlife resources, and public recreation values. The management requirements of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) are to be followed by DNR in the granting of authorizations related to certain types of recreational uses and structures. See the Management Intent and Management Guidelines in the RRMP for Management Units 10, 12, and 13. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional uses by RRMP management unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2, which more specifically defines the relationship between the RRMP and the BBAP, also applies and should be consulted in adjudication decisions.<br><br>In general, authorizations should not be issued for non-recreational uses that are incompatible with the management intent of this unit and the management objectives of the RRMP. Oil, gas, and mineral exploration and development are considered appropriate uses if compatible with the management intent for this unit or if in the best interest of the state. | The unit is the corridor of the Nuyakuk River as depicted in the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP). The unit consists of that portion of RRMP Management Unit 8 within state-owned lands in Region 6. The width of the corridor varies, and may be up to four miles wide, measured from each side of the river system. Vegetation consists of lichen tundra, tall and low shrublands, as well as scattered spruce woodlands. The river is cataloged as an andaromous fish stream. Brown bear use the corridor for feeding, especially during the salmon spawning season. Moose use the corridor as a calving area. The Alaska Heritage Resources Survey (AHRS) reports a heritage site in this unit. The unit is partly affected by MCO 393. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-26<br>Corridor of the Lower Nushagak River | 12,495<br>Rd and Ha -- Public Recreation and Tourism-Dispersed, and Habitat | Map O-2 | This unit, which consists of the navigable portions of the Nushagak River and its adjoining state-selected uplands as depicted in Map O-2, is co-designated Public Recreation and Tourism-Dispersed (Rd) and Habitat (Ha). Unit is to be retained by the state and managed to maintain the recreational uses of the Nushagak River and the adjoining upland corridor, its fish and wildlife resources, and public recreation values. The management requirements of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) are to be followed by DNR in the granting of authorizations related to certain types of recreational uses and structures. See the Management Intent and Management Guidelines in the RRMP for Management Units 1, 3, 5, and 7. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional uses by RRMP management unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2, which more specifically defines the relationship between the RRMP and the BBAP, also applies and should be consulted in adjudication decisions.<br><br>In general, authorizations should not be issued for non-recreational uses that are incompatible with the management intent of this unit and the management objectives of the RRMP. Oil, gas, and mineral exploration and development are considered appropriate uses if compatible with the management intent for this unit or if in the best interest of the state. | The unit consists of a number of scattered, non-contiguous small land blocks of state-selected lands along the lower Nushagak and lower Mulchatna Rivers and within the river corridor of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP). One small selection is located on the Kokwok River corridor. The scattered land units are parts of the RRMP Management Units 4, 5, 15, 7, and 9. The area contains moose calving areas, anadromous fish streams, raptor nesting sites, and streams utilized by brown bear. Some portions may be affected by MCO 393. Many cultural and historic sites are located along the river corridor. |
| R06-27<br>PU21/Nushagak SUA | 361<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S4S43W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation, consistent with the requirements of the Special Use Designation. The unit is to be retained in state ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This unit contains a campsite and floatplane landing area on the Mulchatna River at the mouth of the Stuyahok River. It is affected by a Special Use Area (ADL 226852), which limits use to personal, non-commercial uses for a period of seven consecutive days. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU21). Includes Old Stuyahok site. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-28<br>PU28/Koktuli River | 161<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S4S38W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | Unit consists of a wheeled plane landing area on the Koktuli River 1 mile downstream from the confluence of the north and south forks. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |
| R06-29<br>PU29/Koktuli River | 82<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S4S38W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit consists of a campsite on the Koktuli River at the confluence of the north and south forks. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU29). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-30<br>Corridor Upper Koktuli River | 20,636<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-2 | This unit, which consists of the navigable portions of the Upper Koktuli River and its adjoining uplands as depicted in Map O-2, is designated Public Recreation and Tourism-Dispersed (Rd). Except for those areas that may be conveyed under the Municipal Entitlement program, unit is to be retained by the state and managed to maintain the recreational uses of the Koktuli River and the adjoining upland corridor, its fish and wildlife resources, and public recreation values. The management requirements of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) are to be followed by DNR in the granting of authorizations related to certain types of recreational uses and structures. See the Management Intent and Management Guidelines in the RRMP for Management Unit 17. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional uses related to recreational facilities by RRMP Management Unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2, which more specifically defines the relationship between the RRMP and the BBAP, also applies and should be consulted in adjudication decisions.<br><br>In general, authorizations should not be issued for non-recreational uses that are incompatible with the management intent of this unit and the management objectives of the RRMP. Oil, gas, and mineral exploration and development are considered appropriate if consistent with these management objectives or if in the best interest of the state. | This unit consists of the uplands corridor adjacent to either side of a portion of the Koktuli River. Its outer boundary corresponds to that of Management Unit 17 of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP). The width of the corridor, adjacent to the streams, varies, and may be up to four miles wide, measured from each side of the river system. Vegetation consists of lichen tundra and low and tall shrublands. The river is cataloged as an anadromous fish stream. Moose over-winter in the area and caribou use the area as a calving ground. The unit is partly affected by MCO 393. This corridor does not include the specific public use sites identified in the RRMP. These are specific, individual units. The unit contains a land selection by the Lake and Peninsula Borough under the Municipal Entitlement program. |
| R06-31<br>PU30/Koktuli River | 491<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S4S37W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and tourism. The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | This unit consists of a floatplane landing area on unnamed lake 1 mile south of the upper Koktuli River and campsite on the Koktuli River, connected by a trail. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-32<br>PU31/Upper Koktuli River | 241<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S4S35W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in state ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is not appropriate since the preponderance of land surrounding the unit is designated Minerals (Mi). | This unit consists of a floatplane landing area on unnamed lake on the south side of the upper Koktuli River 2.5 miles northeast of Sharp Mountain. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU31). The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |
| R06-33<br>PU13/Nuyakuk Creek | 357<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S4S47W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation. The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This unit consists of a campsite and floatplane landing area on shorelands on the Nushagak River at the mouth of Nuyakuk Creek. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU13). |
| R06-34<br>PU12/Kemuk Mountain | 161<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S6S53W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation. It is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Campsite and floatplane landing area on an unnamed lake 15 miles north of Okstukuk Lake. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU12). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-35<br>Corridor of the Kokwok River | 85,089<br>Rd and Ha -- Public Recreation and Tourism-Dispersed, and Habitat | Map O-2 | This unit, which consists of the navigable portions of the Kokwok River and its adjoining uplands as depicted in Map O-2, is co-designated Public Recreation and Tourism-Dispersed (Rd) and Habitat (Ha). Unit is to be retained by the state and managed to maintain the recreational uses of the Kokwok River and the adjoining upland corridor, its fish and wildlife resources, and public recreation values. The management requirements of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) are to be followed by DNR in the granting of authorizations related to certain types of recreational uses and structures. See the Management Intent and Management Guidelines in the RRMP for Management Unit 4. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional uses by RRMP management unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2, which more specifically defines the relationship between the RRMP and the BBAP, also applies and should be consulted in adjudication decisions.<br><br>In general, authorizations should not be issued for non-recreational uses that are incompatible with the management intent of this unit and the management objectives of the RRMP. Oil, gas, and mineral exploration and development are considered appropriate uses if compatible with the management intent for this unit or if in the best interest of the state. | The unit is the corridor of the Kokwok River as depicted in the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP). The unit consists of that portion of RRMP Management Unit 4 within state-owned lands in Region 6. The width of the corridor varies, and may be up to four miles wide, measured from each side of the river system. Vegetation consists of lichen tundra and low shrub in the lower reaches and tall shrubland in the upper reaches of the river corridor. The drainage is cataloged as an anadromous fish stream. Brown bear utilize the upper reaches of the drainage for feeding during the salmon spawning season and moose use the upper reaches as a calving area. The Alaska Heritage Resources Survey (AHRS) reports a heritage site in this unit. The unit is partly affected by MCO 393. This corridor does not include the specific public use sites identified in the RRMP. These are specific, individual units. |
| R06-36<br>Kemuk | 108,390<br>Mi -- Minerals | Map O-2 | The land is designated Minerals (Mi) and is to be managed for the exploration and development of mineral deposits, subject to state permitting requirements. Unit is to be retained in state ownership. The Nushagak & Mulchatna Rivers Recreation Management Plan does not apply within this unit (p. 1-2; p.2-11). Refer to the Recreation, Tourism, and Scenic Resources section of Chapter 2 for a listing of allowed and prohibited uses. However, permanent facilities related to commercial recreation are prohibited in this unit. | This land is located generally west of Koliganek and on the upper reaches of Napotoli and Klutuk Creeks, to the east of Kemuk Mountain. This land is the locus of a mafic-ultramafic hosted iron deposit with potential for titanium, platinum group metals, and chromium. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-37<br>Koliganek Airport | 167<br>Pr -- Public Facilities-Retain | Map O-2<br>S5S47W Sec. 21,28 | This land is to be managed consistent with FAA and ADOT/PF guidelines for airport use and in accordance with the Management Right. Unit is to be retained in state ownership. | This unit is located at the Koliganek public airport and is managed by the Department of Transportation and Public Facilities (ADOT/PF) for airport use pursuant to Management Rights (ADLs 200348 and 200341). |
| R06-38<br>PU24/Stuyahok River | 445<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S5S41W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and tourism and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit consists of a wheeled plane landing area on the Stuyahok River 20 miles southeast of old Stuyahok. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU24). |
| R06-39<br>PU25/Stuyahok River | 432<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S5S41W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit consists of a floatplane and wheeled plane landing area near the Stuyahok River on an unnamed lake 21 miles southeast of old Stuyahok. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU25). |
| R06-40<br>PU26/Unnamed Lake | 693<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S5S40W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp), is to be managed for public recreation, and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | Unit consists of a campsite and floatplane landing area on an unnamed lake drained by the Stuyahok River 23 miles southeast of old Stuyahok. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU26). The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
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| R06-41<br>Stuyahok Hills | 2,109<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-2<br>S5S40W | The unit is designated Public Recreation and Tourism-Dispersed (Rd). Land selections by the Lake and Peninsula Borough as part of it's municipal entitlement are considered appropriate for conveyance. | This relatively small unit consists of state-owned land south of the Stuyahok River in the vicinity of Public Use Site 26 as identified in the Nushagak & Mulchatna Rivers Recreation Management Plan. The Public Use site itself is a separate unit. Vegetation consists of spruce woodland. The unit contains a land selection by the Lake and Peninsula Borough under the Municipal Entitlement program. |
| R06-42<br>RRMP 6 | 577,023<br>Gu -- General Use | Map O-2 | The unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitats, mineral exploration and development, and dispersed recreation. Some forms of recreation use, including commercial recreation, may be appropriate if these recreational uses are found to be compatible with the management intent for adjacent river corridors designated Ha-Rd or Rd in the Area Plan. Development authorizations may be appropriate subject to the protection of these resources, consistency with the recreation uses specified in the RRMP, and the specific requirements of Chapter 2; see particularly the requirements for Management Guideline K, "Caribou and Moose Calving and Rutting Areas", in the Fish and Wildlife Habitat and Harvest Areas section and with Management Guideline J, "Nushagak & Mulchatna Rivers Recreation Management Plan", in the Recreation, Tourism, and Scenic Resources section of Chapter 2. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional (recreational) uses by RRMP Management Unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2 specifically defines the relationship between the RRMP and the BBAP, and must be consulted in adjudication decisions. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations associated with recreation uses and mineral exploration and development. Settlement is not considered an appropriate use. | The unit consists of a number of non-contiguous upland blocks of state-owned and state-selected land in the lower Nushagak drainage that are part of Management Unit 6 in the Nushagak & Mulchatna Rivers Recreation Management Plan. The lagest area of state-owned land in the unit is located between the lower Nushagak River and Wood-Tikchik State Park. Vegetation consists of tall and low shrub lands and lichen tundra. The uplands are within the Koksetna and Iowithla drainages. The unit includes moose calving and over wintering areas. The management of this unit is governed by the requirements of the Bristol Bay Area Plan. (Previous to this revision, DNR authorizations relating to recreation uses and structures were guided by the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP)). The requirements of the RRMP have been carried over except for prohibitions on permanent facilities and docks. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-43<br>PU11/Okstukuk Lake | 247<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S8S53W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and tourism. The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This unit contains a campsite and floatplane landing area near the outlet of Okstukuk Lake. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU11). |
| R06-44<br>PU10/Kokwok River | 161<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S8S52W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and tourism. The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This unit consists of a campsite on the Kokwok River near the Okstukuk Hills. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU10). |
| R06-45<br>New Stuyahok Airport | 71<br>Pr -- Public Facilities-Retain | Map O-2<br>S8S47W | The unit is to be managed consistent with FAA and ADOT/PF guidelines for airport use and in accordance with provisions of the Management Right (ADL 221465; OSL 900). The unit is to be retained in state ownership. | This unit of land is located at the New Stuyahok public airport and contains airport facilities managed by the ADOT/PF. |
| R06-46<br>New Stuyahok School | 7.89<br>Pr -- Public Facilities-Retain | Map O-2<br>S8S47W<br>Sec. 29 | This land is to be managed consistent with the management right (ADL 201852; OSL 707) for a new school site. The unit is to be retained in state ownership. | This unit is located in New Stuyahok and is managed by the Department of Transportation and Public Facilities (ADOT/PF) and is a school site. |
| R06-47<br>New Stuyahok | 41<br>Ma -- Materials Site | Map O-2<br>S8S48W<br>Sec. 29 | This unit is designated Materials (Ma) and is to be managed consistent with Alaska regulations and the management guidelines for materials sites specified in Chapter 2. Unit is to be retained in state ownership. | This unit (ADL 23739) is located in New Stuyahok on shorelands of the Nushagak River and has been used for the production or staging of material extraction. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-48<br>Iowithla River | 46,449<br>Ha -- Fish and Wildlife Habitat | Map O-2 | The unit is designated Habitat (Ha) and is to be managed for the protection of fish and wildlife habitat. Development authorizations may be appropriate, subject to the protection of these resources and the requirements of Chapter 2. This is considered to be a low priority state selection. | This management unit is state-owned and state-selected land located generally in the Muklung Hills, both west and east of the Iowithla River. The Iowithla River is cataloged as an anadromous fish stream and is utilized by brown bear during the spawning season. Brown bear also use the area for denning. The area contains calving areas for moose and is used for subsistence and recreational fishing and hunting. |
| R06-49<br>Corridor of the Iowithla River | 45,205<br>Rd and Ha -- Public Recreation and Tourism-Dispersed, and Habitat | Map O-2 | This unit, which consists of the navigable portions of the Iowithla River and its adjoining uplands as depicted in Map O-2, is co-designated Public Recreation and Tourism-Dispersed (Rd) and Habitat (Ha). Unit is to be retained by the state and managed to maintain the recreational uses of the Iowithla River and the adjoining upland corridor, its fish and wildlife resources, and public recreation values. The management requirements of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) are to be followed by DNR in the granting of authorizations related to certain types of recreational uses and structures. See the Management Intent and Management Guidelines in the RRMP for Management Unit 2. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional uses by RRMP management unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2, which more specifically defines the relationship between the RRMP and the BBAP, also applies and should be consulted in adjudication decisions.<br><br>In general, authorizations should not be issued for non-recreational uses that are incompatible with the management intent of this unit and the management objectives of the RRMP. Oil, gas, and mineral exploration and development are considered appropriate uses if compatible with the management intent for this unit or if in the best interest of the state. | The unit is the corridor of the Iowithla River as depicted in the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP). The unit consists of that portion of RRMP Management Unit 2 within state-owned lands in Region 6. The width of the corridor varies, and may be up to four miles wide, measured from each side of the river system. Vegetation consists of lichen tundra and low shrub in the lower reaches and tall shrubland in the upper reaches of the river corridor. The Iowithla River is cataloged as an anadromous fish stream and is utilized by brown bear, especially during the salmon spawning season. The river corridor is used as a calving area by moose. The unit is partly affected by MCO 393. This corridor does not include the specific public use sites identified in the RRMP. These are specific, individual units. Note: This corridor continues into Region 5. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-50<br>PU8/Muklung Hills | 297<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S10S53W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation. It is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | Unit contains a campsite and floatplane landing area on an unnamed lake near the Muklung Hills. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU8). |
| R06-51<br>PU7/Iowithla River | 347<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S10S53W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation. It is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This unit consists of wheeled plane landing area on the Iowithla River near the Muklung Hills. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, (April 2005) as a public use site (PU16). |
| R06-52<br>Ekwok Airport | 94<br>Pr -- Public Facilities-Retain | Map O-2<br>S9S49W Sec. 35,36 | This unit is to be managed consistent with FAA and ADOT/PF guidelines for airports and according to the Management Right and the Limited State Holding. It is to be retained in state ownership. | This land contains airport facilities at the Ekwok public airport and is managed by ADOT/PF under a Management Right (ADLs 220376 and 224131) and requirements of a Limited State Holding (LSH 268). (OSL 850) |
| R06-53<br>Ekwok School | 5.66<br>Pr -- Public Facilities-Retain | Map O-2<br>S9S49W Sec. 35 | Unit is to be managed for public purposes and retained in state ownership. | This land (OSL 496) is located at Ekwok and utilized by the public school system. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R06-54<br>PU9/Nushagak SUA | 147<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S1S49W Sec. 19 | Unit is to be retained in state ownership and managed to support public recreation, consistent with the requirements of the Special Use Area. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This unit is located on the Nushagak River near the junction with the Kokwok River. This unit is a portion of a Special Use Area (ADL 226852). It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU9). |
| R06-55<br>PU6/Nushagak SUA | 40<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S5S5W Sec. 31 | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation, consistent with the requirements of the Special Use Designation. The unit is to be retained in state ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This unit is located on the Nushagak River near the junction of the Iowithla River. It contains a campsite and floatplane landing area on shoreland at the mouth of the Iowithla River and is affected by a Special Use Designation (ADL 226852). Personal, non-commercial use of the land is limited to seven consecutive days. The Nushagak & Mulchatna Rivers Recreation Management Plan (April 2005) identifies this unit as a public use site (PU6). (Note: The location of this land is improperly shown in some state records; but is shown correctly on Map O-2.) |

# Region 7

# *Upper Mulchatna and Upper Hoholitna*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 7 is situated in the northeastern part of the Bristol Bay planning area and encompasses the upper Mulchatna River basin (Map O-2). The boundaries of the Region are defined on the north by the boundary of the Lake and Peninsula Borough and on the east by the boundary of the Lake Clark National Park and Preserve. The boundary is similar to that in the 1984 Bristol Bay Area Plan but has been modified to correspond to the Lake and Peninsula boundary on the north and thus encompasses slightly more land to the northwest than did the original area plan. Elevations range from less than 300 feet in the Nikabuna Lakes area in the south to over 4,200 feet in the Bonanza Hills. There are no settlements in the Region. The nearest settlement is Nondalton (pop. 221), a few miles to the south.

### State Lands: Ownership and Acreage

The majority of land within Region 7 is owned by the State of Alaska. Approximately two townships are held by the Federal Government and approximately one and a half townships are in possession of the Bristol Bay Native Corporation. Conveyances to the Lake and Peninsula Borough total approximately 14,575 acres. The plan applies to 1,606,959 acres of state-owned and state-selected uplands.

### Physical Geography

Region 7 is within the Lime Hills ecological province. The upper Mulchatna drainage basin includes the Chilikadrotna, Chilchitna, Chulitna, and Koksetna Rivers. Other significant drainages include Bonanza Creek, Ptarmigan Creek, and Black Creek. Due to the change in the northwest boundary of Region 7, also included are the upper portions of the Holitna drainage including the South Fork of the Hoholitna River, Gnat Creek, McKinley Creek, and Weasel Creek. Major lakes include Nikabuna, Long, Tutna, and Half Cabin Lakes. Named Mountains include Groundhog Mountain in the south, Mesa Mountain in the central area and Marys and Halfway Mountain in the north. Topographic relief is modest with most of it developed in the north and east. The highest elevations occur in the Bonanza Hills where over 2,800 feet of relief is present.

The Region displays a variety of landscapes, including mountains, fast-flowing rivers, tundra, marshy lowlands, and ponds. Higher elevations in the Bonanza Hills are marked by alpine tundra and barrens. Tree covered areas occur along the valleys of the Mulchatna and Holitna Rivers; these areas consist of spruce woodland and shrubs, or at some locales an open spruce forest-shrub-bog mosaic. Most terrain in the low-lying country of the Long Lake-Nikabuna Lakes-Chulitna River area has cover consisting of low shrub and lichen tundra. At intermediate elevations the spruce woodland and tundra give way to tall shrub vegetation.

## Climate

Region 7 lies in the transitional climatic zone. Average summer temperatures range from 42° to 62°; winter temperatures average 6° to 30°. The record high is 91° and the record low is -47°. Annual average rainfall is 26 inches, with 64 to 70 inches of snowfall. Most of the Region is underlain by isolated masses of permafrost. Generally the areas immediately under or adjacent to the main course of the Mulchatna and South Fork of the Hoholitna Rivers are free of permafrost.

## Other

Region 7 is within the Lake Clark and Iliamna Quadrangles. It is within the boundaries of the Bristol Bay Regional and the CIRI Native Corporations. It is also within the Lake and Peninsula Borough.

## Access

Access to Region 7 is quite limited. There are no airports in the Region and no roads. An unimproved trail, the Telaquana-Nondalton Trail (RST No. 291) extends through the southeast portion of this planning region and connects with the Telaquana Trail (No. 1508) five miles southwest of Twin Lakes within Lake Clark National Park and Preserve. Of course, floatplanes can access many waterbodies in the Region.

## Resources and Uses

**Cultural and Historic.** There has been little in the way of excavation of prehistoric sites in the Region. However, archaeologists believe evidence suggests that people of the Paleoarctic Tradition were active in the Lake Clark area about 6,000 years ago, and perhaps earlier. A site near Twin Lakes and another along the Tazimina River suggest occupation as early as 8,000 B.C. Historically the principal native group in the area is the Tanaina Indians and evidence indicates an indigenous Na-Dene population in the Lake area prior to Russian contact. Fourteen historic and archaeological sites have been cataloged in Region 7 – three historic, four prehistoric, and seven of mixed origin.

**Recreation.** Most recreational uses in Region 7 are related to outdoor activities such as sport fishing, hunting, camping, river travel, and wildlife viewing. Since the region borders Lake Clark National Park and Preserve, recreational uses are similar to those of Park users. The majority of activities are concentrated along the Mulchatna River. The upper reaches of the Mulchatna and the Chilikadrotna Rivers, within the National Park, are designated with Wild and Scenic River status; these extend partially into the Region and are the focus of recreational river

use. Where the Mulchatna River flows through the Bonanza Hills, the shallow and rocky river channel is more suitable for rafts and kayaks than canoes; west of Bonanza Creek, where the valley broadens, the river is gentle. The Chilikadrotna is a swift, twisting, narrow river most suitable for rafts or kayaks.

**Minerals.** Region 7 is underlain by three principal rock packages: 1) Cretaceous sedimentary clastic rocks, chiefly deep marine shale and conglomerate, underlie the northwest portion of the Region; 2) the central portion of the Region is underlain by intermediate Early Tertiary and Late Cretaceous volcanic and associated plutonic rocks; and 3) the southeast portion of the Region is underlain by Middle Tertiary felsic volcanic rocks. The Alaska Resource Data Files compilation by the U.S.G.S. shows thirteen mines, prospects, and occurrences in Region 7 and the MILS database from the U.S. Bureau of Mines shows nine. Most of these locations indicate that gold is the principal commodity of interest with one being silver and copper with minor gold.

The Bonanza Hills are the locus of a number of important mineralized areas. One of the most significant mineral deposits is the Synneva (Scynneva) Creek placer gold mine located near the confluence of Bonanza Creek and Synneva Creek. Production began in 1957 in the valley alluvials; the principal commodity was gold but significant cassiterite and tungsten occur in the concentrates. The valley alluvials are mostly uniform gravels with some boulders, interpreted as reworked glacial deposits. The Bonanza Creek placer mine is located near the intersection of Bonanza Creek and Little Bonanza Creek and the deposit extends from Gill's camp at least 6 km upstream to above Cabin (or Cash) Creek and about 6 km downstream to Caribou Creek. Bonanza Creek is both a placer and a gold-quartz vein occurrence. The Bonanza Creek placers are also considered to be reworked glacial deposits. A number of quartz-veins and shear zones are present in the bedrock, at least some of which contain free gold, minor arsenopyrite, and 5 to 6 % pyrite. Seventy-four active mining claims and leasehold locations are on Little Bonanza Creek.

Other gold occurrences in the Region include the Finnbear lode, an unnamed placer west of Long Lake, Charlie Creek, Lambert's Bar (at the confluence of the Mulchatna and Chilikadrotna Rivers), and the Mulchatna River placer occurrences (where the southeast flowing Springway Creek enters the Mulchatna River).

**Oil and Gas.** Bedrock underlying Region 7 is composed chiefly of granitic rocks, metamorphic aureoles surrounding these intrusives, volcanics, and Cretacous flysh. The oil and gas potential of these rocks is considered very low.

**Materials.** There are no active materials sites in Region 7.

**Forestry.** Regions 6 and 7 contain most of the forest resources of the Bristol Bay Area. These noncommercial forests are found primarily in the Nushagak-Mulchatna drainages. Along the Mulchatna River valleys are trees that can be used for house logs. Trees are largely concentrated in the river valleys and consist of spruce, birch, and aspen. The timberline is found at approximately 1,800 feet in Region 7. Spruce is the most common tree type and grows to

heights of 30 to 40 feet and up to 10 or 12 inches in diameter. Birch is common and some trees attain thicknesses of 8 to 10 inches. Perhaps the most extensive spruce forest in the Region is in the Koksetna and Chulitna River drainages.

**Fish and Wildlife.** Region 7 contains important habitat for moose along the river valleys and for caribou. Many streams host returns of anadromous sockeye (red), chinook (king), and coho (silver) salmon. Eagles and other raptors nest along the Mulchatna River corridor and the lower reaches of the Chilchitna River. The subsistence harvest is small and most hunting pressure on fish and game is from sportsman. The majority of hunts are unguided though commercial services commonly include transport to the field.

Moose are relatively new to the Bristol Bay area, possibly moving into the area from the middle Kuskokwim drainages during the last 100 years. During the previous twenty years, moose numbers have increased and moose are now common along the Nushagak/Mulchatna Rivers and all of their major tributaries.

Caribou are an important resource in the area. The Mulchatna Caribou Herd has been increasing in size and expanding its range since the 1930's. Serious efforts to conduct a census of the herd have taken place since 1973; between 1981 and 1996, the Mulchatna Caribou Herd increased from 19,000 to 200,000. The herd is presently estimated at approximately 150,000 individuals (http://www.wildlife.alaska.gov/pubs/techpubs/mgt.cfm). Region 7 contains significant numbers of caribou and contains areas that are important for calving. The area east of Tutna Lake and extending northeast to Turquoise Lake has been identified as calving grounds in the past. Recently calving has expanded throughout the upper Hoholitna River and northeastern Nushagak Hills.

Brown bear occur throughout the area and the density can be considered high. Bear streams include the Chilikadrotna drainage, the Mulchatna River, and the Chilchitna River. Spring habitat is found along the lowermost reaches of the Koksetna River.

# Management Considerations: Local and State Plans

A number of local, state, and federal management plans were considered in development of this plan. Local plans include the Lake and Peninsula Borough Coastal Zone Management Plan, the Lake and Peninsula Borough Comprehensive Plan, and the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008. State plans include the Bristol Bay Area Plan, the Kuskokwim Area Plan, and the Nushagak & Mulchatna Rivers Recreation Management Plan. Federal plans include the Lake Clark National Park General Management Plan (1984).

Region 7 is located within the boundaries of the Lake and Peninsula Borough. Both the Comprehensive Plan and the District Coastal Management Plan of the Lake and Peninsula Borough apply to this portion of Region 7. The Comprehensive Plan focuses on economic and

infrastructure development issues and does not contain specific land use standards or a land use map. The Enforceable Policies of the District Coastal Management Plan are extensive; policies affecting anadromous streams, bald eagle nests, oil and gas development, material extraction and mining can be applicable, under certain instances, to state lands. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by DNR prior to issuing an authorization.

Region 7 is also subject to the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP; April 2005). This plan manages recreation uses on the two river systems and was adopted as an amendment to the Bristol Bay Area Plan (1984) and as part of the Coastal Zone Management Plan. The RRMP continues to provide the basis for the management of state lands affected by the designation of Public Recreation and Tourism-Dispersed within the river corridors of the Nushagak-Mulchatna system. The Area Plan forms the basis for the management of state lands with different designations.

Region 7 is also within the area covered by the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, which was developed for the U.S. Department of Commerce Economic Development Administration by the Southwest Alaska Municipal Conference (July 2003). This document developed a number of goals, objectives, and strategies to facilitate and support efforts that retain and grow the region's wealth, including diversifying the economic base.

The original Bristol Bay Area Plan (1984) affected all state lands in the Region. This plan stated that Region 7 was to be managed in conjunction with Region 6 for fish and wildlife habitat and harvest and for river-oriented recreation. The northwest portion of the Region, within the Holitna drainage basin, was previously covered by the Kuskokwim Area Plan (1988), which managed the area as general use and for wildlife resources. Mineral exploration and development was also permitted, subject to leasehold location. This revision supersedes the original Area Plan. The Nushagak & Mulchatna Rivers Recreation Management Plan is retained as an element of the Area Plan in this revision.

### Municipal Selections

Region 7 contains a large number of municipal selections by the Lake and Peninsula Borough. The selections are distributed throughout the Region and total approximately 43,565 acres. A number of selections are clustered along the Mulchatna River, Tutna Lake, Nikabuna Lakes, and Weasel Creek.

# Management Summary: Uplands

### Plan Designations and Management

State land in Region 7 is to be managed for a variety of multiple uses, including settlement, materials extraction, public facilities development, dispersed public recreation, mineral exploration and development, and maintenance of sensitive wildlife habitats. Oil and gas exploration and development, although of only moderate to low potential, is also appropriate

within the Region. The majority of lands in Region 7 are designated General Use (Gu). A relatively large amount of land has been designated Settlement (Se); this Settlement land is intended to facilitate recreation uses in the Nikabuna Lakes and Tutna Lake areas. Lands at Half Cabin Lakes, designated Settlement in the 1984 Bristol Bay Area Plan, remain designated Settlement in this (current) revision. Most of the major river corridors have been designated Public Recreation and Tourism-Dispersed (Rd); they mostly correspond to the major river corridors as defined in the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) and include the Mulchatna and Chilikadrotna Rivers. Public Use Sites that were identified in the RRMP which are used for recreation have been designated Public Recreation and Tourism-Public Use Sites (Rp).

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement.

- General Use (Gu). Within this Region, lands that contain one or more resource values, none of which is of sufficiently high value to merit designation as a primary use, and areas that are unlikely to be developed during the planning period are designated General Use. The land is to be managed for a variety of uses including protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and protection of heritage resources. It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. Municipal land selections, under the Municipal Entitlement program, are conveyable to the municipality subject to a Best Interest Finding by the state. The Lake and Peninsula Borough has made a number of municipal selections of lands designated General Use; these are in Weasel Creek, the Tutna Lake vicinity, and adjacent to Lake Clark National Park and Preserve.
- Habitat (Ha). Generally, this designation applies to areas of various size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in a permanent loss of a population or sustained yield of a species. In Region 6 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm). The land use designation Ha is to be retained in state ownership.
- Public Recreation and Tourism-Dispersed (Rd). Lands with the designation of Public Recreation and Tourism-Dispersed are to be managed so that their public recreation values are protected and maintained. Within these areas the primary surface uses are intended to be those related to hiking, hunting, fishing, wildlife viewing, and the like. Selections on these lands are considered appropriate for conveyance to a Borough under the Municipal Entitlement program (subject to a Best Interest Finding by the state). This designation is used along the corridor of the Mulchatna River, the Chilikadrotna River, and the Tutna Lake drainage.

- Public Recreation and Tourism-Public Use Site (Rp). This designation applies to areas with a concentration of recreational users or tourists, or that are likely to have such concentrations. Within this Region this designation applies to the specific recreation sites identified in the Nushagak & Mulchatna Rivers Recreation Management Plan. Unless otherwise indicated in the Resource Allocation Table, these sites are to be retained by the state. In some instances they may be conveyed to a Borough, subject to the Borough retaining them in public ownership and ensuring that they remain available for public use. The Lake and Peninsula Borough has made municipal selections on most of the public use sites in Region 7.
- Settlement (Se). This designation applies to state uplands suitable for sale, leasing, or permitting to allow private recreational or residential use. Lands designated Settlement occur at Half Cabin Lakes, the Tutna Lake vicinity, Nikabuna Lakes, and a unit of state-selected lands southeast of the Chulitna River. All are intended for remote recreational use. The Lake and Peninsula Borough has a number of municipal selections on land designated Settlement at Nikabuna Lakes and the Tutna Lake vicinity. Settlement lands are appropriate for conveyance to the Borough under the Municipal Entitlement program. See *Chapter 2* for specific requirements for remote settlement.

## Specific Management Considerations

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region.
- Except for areas closed to mineral entry under existing Mineral Closing Orders, all state lands within Region 7 are open to mineral entry. No additional MCOs are recommended; the only exception applies to the areas to be disposed of by DNR for purposes of Community Settlement. Closure to mineral entry is recommended at or before plat adoption. No leasehold location orders are recommended. See the *Minerals section in Chapter 2* for more detail on subsurface management requirements.
- Mineral Closing and Opening Orders. This revision of the Bristol Bay Area Plan retains the mineral closing and opening orders largely implemented by DNR at the time of original plan adoption. These MCOs either close a proposed settlement area or close a number of major streams to mineral location. This includes the following:
    - MCO 393 – Major streams in the Nushagak and Mulchatna drainage basin
- Leasehold Location Orders. Leasehold Location Order No. 1 covers small portions of Region 6, much of Region 7, and portions of Regions 8 and 9. Under this order, rights to locatable minerals may be acquired only under the Leasehold Location System, AS 38.05.205, and may not be acquired by locating a mining claim under AS 38.05.195.

In the affected area, an approved Plan of Operations for a mineral lease takes the place of a Land Use Permit required for unleased land. If the proposed lease activities are minor, a plan of operations is not required (11 AAC 86.800). The Plan of Operations must show how the operator proposes to comply with the lease stipulations and other pertinent guidelines in this plan. See *Chapter 2, section F*.

- Municipal Selections. Those management units considered appropriate for conveyance to the Lake and Peninsula Borough are identified in the Resource Allocation Table.
- Retained Lands. There are no state lands within this Region that are designated to be retained except for those designated Habitat (Ha). Note: Certain management units that are designated Public Recreation and Tourism-Public Use Sites (Rp) may be conveyed out of state ownership and to the Borough as part of the Municipal Entitlement program – providing the land conveyed remains public land and the public retains access to the public use site.
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, or a co-designation of Habitat and Public Recreation and Tourism-Dispersed. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies. Adjacent to Region 7, this also includes the navigable waters of Lake Clark National Park and Preserve.

See the Resource Allocation Table for more detail on the upland management units.

# Resource Allocation Table for Upland Units - Region 7

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R07-01<br>Hoholitna | 343,586<br>Gu -- General Use | Map O-2 | The unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitat, mineral exploration and development, and dispersed recreation. Development authorizations may be considered appropriate subject to the protection of these resources and the specific requirements of Chapter 2. Intensive development is not expected within this unit during the planning period. Land selections by the Lake and Peninsula Borough are considered appropriate for conveyance, subject to a separate and subsequent Best Interest Finding. | This unit is located in the northwest portion of Region 7. It encompasses the headwaters of the South Fork of the Hoholitna River including Weasel Creek and McKinley Creek. This unit is in an area which was previously part of the Kuskokwim Area Plan. It has been included as part of the Bristol Bay Area Plan in order to address municipal entitlement selections by the Lake and Peninsula Borough in the general vicinity of upper Weasel Creek. Vegetation consists of spruce, birch, and aspen woodlands with tall shrub at higher elevations. The South Fork of the Hohlitna River, Weasel Creek, McKinley Creek, Gnat Creek, and lower Killae Creek are cataloged as anadromous fish streams. The Holitna-Hoholitna sub-basin is perhaps the largest producer of salmon in the Kuskokwim River drainage - predominantly chinook, chum, and coho. Spawning populations of sockeye and pink salmon are also present. Additionally, it is a popular system for recreational fishing for pike and sheefish. The area is used by sport fish and hunting guides. The Lake and Peninsula Borough has selected land in the unit as part of its municipal entitlement. Part of the unit is affected by LLO 1. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R07-02<br>RRMP 25 | 565,591<br>Gu -- General Use | Map O-2 | The unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitats, mineral exploration and development, and dispersed recreation. Some forms of recreation use, including commercial recreation, may be appropriate if these recreational uses are found to be compatible with the management intent for adjacent river corridors designated Ha-Rd or Rd in the Area Plan. Development authorizations may be appropriate subject to the protection of these resources, consistency with the recreation uses specified in the RRMP, and the specific requirements of Chapter 2; see particularly the requirements for Management Guideline K, "Caribou and Moose Calving and Rutting Areas", in the Fish and Wildlife Habitat and Harvest Areas section and with Management Guideline J, "Nushagak & Mulchatna Rivers Recreation Management Plan", in the Recreation, Tourism, and Scenic Resources section of Chapter 2. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional (recreational) uses by RRMP Management Unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2 specifically defines the relationship between the RRMP and the BBAP, and must be consulted in adjudication decisions. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations associated with recreation uses and mineral exploration and development. Settlement is not considered an appropriate use. | This unit is located in the upper Mulchatna River drainage and largely corresponds to Management Unit 25 from the Nushagak & Mulchatna Rivers Recreation Management Plan. The unit ecompasses the uplands area drainaged by the Mulchatna River, Chilikadrotna River, Chilchitna River, and the Tutna Lake streams which are cataloged as anadromous. The unit contains caribou calving grounds and moose wintering areas. Two land selections by the Lake and Peninsula Borough occur within the unit that are located generally west and east of Tutna Lake. The unit is affected by LLO 1. The management of this unit is governed by the requirements of the Bristol Bay Area Plan. (Previous to this revision, DNR authorizations relating to recreation uses and structures were guided by the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP)). The requirements of the RRMP have been carried over except for prohibitions on permanent facilities and docks. |
| R07-03<br>PU38/Bonanza Creek | 75<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S8N33W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and tourism. The unit is to be retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | Campsite on the Mulchatna River 5 miles upstream of the mouth of Bonanza Creek. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU38). The area is affected by LLO 1. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R07-04<br>Half Cabin Lake | 12,666<br>Se -- Settlement | Map O-2 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and those for the Caribou and Moose Rutting and Calving Area, both of which are described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections, respectively, of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. | This land consists of three blocks located on the upper Mulchatna River drainage in the vicinity of Half Cabin Lake, generally east of the river and west of the Bonanza Hills. The terrain is modest with vegetation of spruce woodland (spruce, birch, and aspen) and shrub. Lakes in the unit provide excellent sites for floatplane landings. The unit also enjoys access to the upper Mulchatna River. There is a campsite and floatplane landing area at the outlet of Half Cabin Lake, a campsite and floatplane landing area at the outlet of an unnamed lake west of Loon Lake (local name), and a campsite and floatplane landing area at the outlet of Loon Lake. The main valley of the Mulchatna River contains wintering and calving areas for moose. Brown bear also utilize this stream, especially during the spawning season of anadromous fish. Raptors also nest along the Mulchatna River valley. The state may offer land for remote settlement in this area. The unit is affected in part by MCO 393 and LLO 1. |
| R07-05<br>PU49/Bonanza Hills | 40<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S9N30W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | This unit contains a campsite and floatplane landing area on an unnamed lake in the northern margin of the Bonanza Hills. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU49). The area is affected by LLO 1. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R07-06<br>Corridor of the Upper Mulchatna River | 157,126<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-2 | This unit, which consists of the navigable portions of the Mulchatna River and its adjoining uplands as depicted in Map O-2, is designated Public Recreation and Tourism-Dispersed (Rd). Except for those areas that may be conveyed under the Municipal Entitlement program, the unit is to be retained by the state and managed to maintain the recreational uses of the Mulchatna River and the adjoining upland corridor, its fish and wildlife resources, and public recreation values. The management requirements of the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP) are to be followed by DNR in the granting of authorizations related to certain types of recreational uses and structures. See the Management Intent and Management Guidelines in the RRMP for Management Units 20, 21, 22, and 23. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional uses related to recreational facilities by RRMP Management Unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2, which more specifically defines the relationship between the RRMP and the BBAP, also applies and should be consulted in adjudication decisions.<br><br>In general, authorizations should not be issued for non-recreational uses that are incompatible with the management intent of this unit and the management objectives of the RRMP. Oil, gas, and mineral exploration and development are considered appropriate if consistent with these management objectives or if in the best interest of the state. The municipal selections affecting this unit are considered appropriate for conveyance, subject to a separate and subsequent Best Interest Finding by DNR. If determined appropriate for conveyance, a public use easement of 200 feet, measured from OHW, shall be imposed. It is intended that this area shall remain vegetated and undisturbed, except for isolated sites necessary for public facilities or public recreation facilities. The purpose of this easement will be to protect resources and values of riverine areas, and provide for public access. | This unit consists of uplands adjacent to the rivers of the upper Mulchatna River drainage, including the Chilikadrotna River, and Tutna Lake drainage within Region 7 as depicted in the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP). The unit consists of RRMP Management Units 21, 22, 23 and part of 20. The width of the corridor, adjacent to the streams, varies, and may be up to four miles wide. Vegetation consists of lichen tundra and low shrub in the lower reaches and tall shrubland and scattered spruce-birch-aspen woodlands in the upper reaches of the river corridors. The corridors contain streams cataloged as anadromous; these are utilized by brown bear, especially during the salmon spawning season. Moose use the cooridors as calving areas and over-winter in the upper reaches of the Mulchatna River. Raptors nest along the main valley of the Mulchatna. The unit is partly affected by MCO 393 and LLO 1. This corridor does not include the specific public use sites identified in the RRMP. These are specific, individual units. The unit contains a large number of land selections by the Lake and Peninsula Borough under the Municipal Entitlement program. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R07-07<br>PU37/Mulchatna River | 171<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S7N34W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | This unit consists of a campsite on the Mulchatna River, 3 miles upstream of the mouth of Big Bonanza Creek. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU37). The area is affected by LLO 1. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |
| R07-08<br>PU47/Ptarmigan Creek drainage | 227<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S7N30W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | Floatplane landing area on unnamed lake in the Ptarmigan Creek drainage. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU47). The area is affected by LLO 1 and by a municipal selection of the Lake and Peninsula Borough under its municipal entitlement. |
| R07-09<br>PU48/Big Bonanza Creek | 84<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S6N33W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the parcel remain in public ownership as a Public Use Site. | Campsite and floatplane landing area on an unnamed lake drained by Big Bonanza Creek. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU48). The area is affected by LLO 1. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |
| R07-10<br>PU35/Chilikadrotna River | 162<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S6N35W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | This unit consists of a campsite on the upper Mulchatna River at the mouth of the Chilikadrotna River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU35). The area is affected by LLO 1. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R07-11<br>PU42/Chilikadrotna River | 151<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S6N34W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | This unit consists of a campsite and floatplane landing area on the Chilikadrotna River at the mouth of an unnamed creek. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU42). The area is affected by LLO 1. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |
| R07-12<br>PU43/Chilikadrotna River | 160<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S6N32W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | This unit consists of a campsite and floatplane landing area on the Chilikadrotna River at the mouth of Ptarmigan Creek. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU43). The area is affected by LLO 1. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |
| R07-13<br>PU44/Little Mulchatna River | 38<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S6N30W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | Campsite on the Chilikadrotna River at the mouth of the Little Mulchatna River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU44). The area is affected by LLO 1. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |
| R07-14<br>PU45/Chilikadrotna River | 248<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S6N30W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | Campsite on the Chilikadrotna River at the mouth of the creek which drains Snipe Lake. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU45). The area is affected by LLO 1. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R07-15<br>PU34/Chilchitna River | 276<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S5N36W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This unit consists of a campsite and floatplane landing area on the Mulchatna River below the mouth of the Chilchitna River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU34). The area is affected by LLO 1 and by a municipal selection of the Lake and Peninsula Borough. |
| R07-16<br>RRMP 19 | 40,343<br>Gu -- General Use | Map O-2 | The unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitats, mineral exploration and development, and dispersed recreation. Some forms of recreation use, including commercial recreation, may be appropriate if these recreational uses are found to be compatible with the management intent for adjacent river corridors designated Ha-Rd or Rd in the Area Plan. Development authorizations may be appropriate subject to the protection of these resources, consistency with the recreation uses specified in the RRMP, and the specific requirements of Chapter 2; see particularly the requirements for Management Guideline J, "Nushagak & Mulchatna Rivers Recreation Management Plan", in the Recreation, Tourism, and Scenic Resources section of Chapter 2. For convenience, Table 2.2 contains a listing of allowed, prohibited, and conditional (recreational) uses by RRMP Management Unit. Management Guideline J in the Recreation, Tourism, and Scenic Resources section of Chapter 2 specifically defines the relationship between the RRMP and the BBAP, and must be consulted in adjudication decisions. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations associated with recreation uses and mineral exploration and development. Settlement is not considered an appropriate use. | This unit consists of state-owned uplands generally located to the west of Tutna Lake. It encompasses that portion of Management Unit 19 from the Nushagak & Mulchatna Rivers Recreation Mangement Plan that extends into Region 7. It mostly includes lands that form the headwaters of Keefer Creek and an unnamed large creek northwest of Keefer Creek. Vegetation consists primarily of tall shrublands. Anadromous fish streams occur within the unit. The unit is affected by LLO 1. The management of this unit is governed by the requirements of the Bristol Bay Area Plan. (Previous to this revision, DNR authorizations relating to recreation uses and structures were guided by the Nushagak & Mulchatna Rivers Recreation Management Plan (RRMP)). The requirements of the RRMP have been carried over except for prohibitions on permanent facilities and docks. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R07-17<br>PU36/Tutna Lake | 348<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S3N35W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | This unit consists of a campsite and floatplane landing area on the north side of Tutna Lake. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU36). The area is affected by LLO 1. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |
| R07-18<br>PU46/Chilchitna River | 82<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S4N34W | This unit is designated Public Recreation and Tourism-Public Use Site (Rp) and is to be managed for public recreation and retained in public ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. Conveyance of the unit to the Lake and Peninsula Borough is appropriate with the stipulation that the unit remain in public ownership as a Public Use Site. | Floatplane landing area on unnamed lake drained by the Chilchitna River. It is identified in the Nushagak & Mulchatna Rivers Recreation Management Plan, April 2005, as a public use site (PU46). The area is affected by LLO 1. The unit is part of a land selection by the Lake and Peninsula Borough under its municipal entitlement. |
| R07-19<br>Chulitna | 344,379<br>Gu -- General Use | Map O-2 | This unit is designated General Use (Gu). These lands should be managed for a variety of uses including protection of fish and wildlife and their associated habitats, dispersed recreation and tourism, and minerals exploration and development. The unit is not suitable for Settlement. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. Intensive development is not intended within this unit during the planning period except occasionally and at specific locations. Municipal selections are considered appropriate for disposal, subject to a separate and subsequent Best Interest Finding. | This unit consists of the majority of the state-owned uplands in the southern portion of Region 7. The terrain displays modest relief and is well dissected. Vegetation consists primarily of spruce, birch, and aspen woodlands, tall shrublands, and tundra at lower elevations. The unit encompasses uplands of drainages flowing into the Lake Clark system including the Koksetna and Chulitna drainages. There are few anadromous streams. Many of the major drainages are used as wintering areas for moose which also utilize the main course of the Mulchatna River as a calving area. A large area east of Tutna Lake has been used as calving grounds by the Mulchatna Caribou Herd. The Lake and Peninsula Borough has made a land selection in the unit, adjacent to Lake Clark National Park straddling the Koksetna River, as part of its municipal entitlement. The Telaquana-Nondalton trail passes through the eastern portion of the unit. The Alaska Heritage Resources Survey (AHRS) reports few sites within this unit, but this likely represents remoteness and lack of surveys. Much of the unit is affected by LLO 1. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R07-20<br>Tutna Lake | 68,672<br>Se -- Settlement | Map O-2 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. This land is considered appropriate for conveyance to the Lake and Peninsula Borough. | This management unit is located on the upper Mulchatna River drainage in the vicinity of Tutna Lake. The lands are located generally south of Mesa Mountain in the valley of Black Creek in terrain of low relief suitable for settlement. Vegetation consists of spruce woodlands and shrubs. Access is principally via waterways or floatplane. The area around Tutna Lake and Black Creek is used as a wintering area by moose. The Telaquana-Nondalton trail passes through the eastern part of the unit. The area is affected by LLO 1. Within the unit are four selections by the Lake and Peninsula Borough. |
| R07-21<br>Nikabuna Lakes | 63,692<br>Se -- Settlement | Map O-2 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. This land is considered appropriate for conveyance to the Lake and Peninsula Borough. | This land is located on the upper Mulchatna River drainage in the vicinity of Nikabuna Lakes. The area is generally north and west of groundhog Mountain and west of Long Lake. The area has several large lakes that are accessible by floatplane. The area is used as a wintering area by moose. The Telaquana-Nondalton trail passes through the eastern part of the unit. The area is affected by LLO 1. Within this unit are three land selections by the Lake and Peninsula Borough. |
| R07-22<br>Chulitna River | 8,842<br>Se -- Settlement | Map O-2 | If these lands are conveyed by the Federal government, they are considered appropriate for settlement and for disposal during the planning period. Development is to conform to the requirements of Remote Settlement of Chapter 2 and the other requirements of Chapter 2. | This state-selected land is located generally south of the Chulitna River approximately four miles east of Long Lake and adjacent to Lake Clark National Park and Preserve. The terrain is moderate with tall shrub woodlands. The area is utilized by moose for wintering, and is near to a moose rutting area and a raptor nesting area. The area is affected by LLO 1. |

# Region 8

# *Lake Clark, Newhalen*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 8 is the smallest of the planning regions in the Bristol Bay Area Plan and is situated in the area surrounding the Newhalen River encompassing the communities of Nondalton (pop. 221), Newhalen (pop. 177), and Iliamna (pop. 103). The boundaries are the same as the 1984 BBAP; it is largely defined by the drainage basin of the Newhalen River and the north shore of Iliamna Lake (see Map O-2). Elevations range from 47 feet at Iliamna Lake to 3,170 at the summit of Roadhouse Mountain. Plan designations and management intent for state land in the adjacent Lake Clark National Park and Preserve are also included in this Region, for reasons of convenience.

### State Lands

The majority of land within Region 8 is Native-owned. Approximately two townships are held by the state and 1.25 townships are in possession of the Federal Government. The plan applies to 55,992 acres of state-owned and state-selected uplands.

### Physical Geography

Region 8 is within the Lime Hills and Alaska Peninsula ecological provinces. The drainage basin includes the Newhalen River, and Bear and Eagle Bay Creeks. Other significant waterbodies include Sixmile Lake as well as the much smaller Alexcy, Negro, and Roadhouse Lakes. Named Mountains include Roadhouse Mountain east of Iliamna and Groundhog Mountain north of Nondalton. Topographic relief is significant with over 3,100 feet from Iliamna Lake to the top of Roadhouse Mountain, all developed within about six miles of the shore.

The Region displays a variety of landscapes, including vistas overlooking Iliamna Lake, the largest lake in Alaska, mountains, fast-flowing rivers, tundra, marshy lowlands, and ponds. The higher elevations of Roadhouse Mountain show evidence of glaciation and are marked by alpine tundra and barrens; the summit of Groundhog basin is similarly barren. Tree covered areas occur along the valley of the Newhalen River; these areas consist of spruce woodland and shrubs or at some locales an open spruce forest-shrub-bog mosaic. Most terrain in the low-lying country of the Newhalen flood plain has cover consisting of low shrub and lichen tundra. At intermediate elevations the spruce woodland and tundra give way to tall shrub vegetation.

## Climate

The climate of Region 8 lies in the transitional climatic zone. Average summer temperatures range from 42° to 62°; winter temperatures average 6° to 30°. The record high is 91° and the record low is -47°. Annual average rainfall is approximately 26 inches, with 64 inches of snowfall. Most of the Region is underlain by isolated masses of permafrost.

## Other

Region 8 is within the Lake Clark and Iliamna Quadrangles. It is entirely within the boundaries of the Bristol Bay Regional Native Corporation. It is also within the Lake and Peninsula Borough.

## Access

Access to Region 8 is good. Airports are located at Nondalton and Newhalen-Iliamna. A state-owned 4,800-foot runway is located five miles north of Newhalen, between Newhalen and Iliamna. A paved road connects these communities and the airport. Barges deliver bulk goods via the Kvichak River, which are lightered to shore. Nondalton is serviced by a state-owned 2,800-foot gravel runway. An unimproved trail, the Iliamna-Pile Bay Trail (No. 2173) extends along the north side of Iliamna Lake and connects the Newhalen and Iliamna communities with Pedro Bay and Pile Bay Village. Pile Bay Village is connected to the Cook Inlet by road. The following RS 2477 trails are partially or wholly within the Region:

- Newhalen River Portage (RST No. 1641)
- Iliamna-Pile Bay (RST No. 396)
- Telaquana-Nondalton (RST No. 291)

## Resources and Uses

**Cultural and Historic.** There has been little excavation of prehistoric sites in the Region. However, archaeologistical evidence suggests that people of the Paleoarctic Tradition were active in the Lake Clark area about 6,000 years ago, and perhaps earlier. A site near Twin Lakes and another along the Tazimina River suggest occupation as early as 8,000 B.C. Historically the Tanaina Indians were the principal native group in the area but there also has been influence and occupation by the Ogulmiut Eskimo. There are two native settlements: Iliamna and Nondalton. The state Office of History and Archeology lists twenty-five sites in Region 8; eight of these are prehistoric, fifteen are historic, and two are of mixed origin. New sites are discovered periodically and added to the Alaska Heritage Resource Database when reported.

Prior to 1935, "Old Iliamna" was located near the mouth of the Iliamna River, a traditional Athabascan village. A post office was established there in 1901. Around 1935, villagers moved to the present location, approximately 40 miles from the old site. Iliamna's current size and character can be attributed to the development of fishing and hunting lodges. The first lodge opened in the 1930s.

The 1890 census listed the Eskimo village of "Noghelingamiut," meaning "people of Noghelin," at the present site of Newhalen. The “Newhalen” is an anglicized version of the original. The village was established in the late 1800s due to the bountiful fish and game in the immediate area. The village was originally located on the north shore of Six Mile Lake, but in 1940, wood depletion in the surrounding area and growing mud flats caused the village to move to its present location on the west shore. Nondalton formed an incorporated city government in 1971.

**Economic.** Commercial fishing, sport fishing, and tourism are the major sources of income for the community. A number of residents hold commercial fishing permits, and many depart each summer to fish in Bristol Bay. Iliamna Lake is the second largest lake in the U.S., and tourism is increasing. Thousands of sport fishermen visit the area each summer for trophy rainbow trout fishing on the lake. However, most lodge employees are hired from outside Alaska. Many residents participate in subsistence hunting and fishing activities. Some families travel to fish camp each summer. Salmon, trout, grayling, moose, caribou, bear, dall sheep, seal, porcupine and rabbits are utilized. Northern Dynasty Minerals Ltd. is evaluating the gold, copper and molybdenum potential of the Pebble Deposit, 15 miles from Iliamna.

**Recreation.** The Lake Clark-Newhalen River area is an important recreation corridor for outdoor recreation activities, especially sport fishing, river excursions, and wildlife viewing. The corridor contains at least half a dozen commercial recreation lodges with up to a dozen more located around Lake Clark itself. The Newhalen River is also utilized for commercial rafting and jetboat tours. The Newhalen River Gorge is Class V+ water and provides a thrilling experience for those interested in white water adventure. The clear turquoise-colored waters of the river contain all five species of anadromous Pacific salmon, trout, Arctic grayling, and Dolly Varden. The corridor is also used by wildlife such as eagles, other raptors, brown bear, moose, and caribou.

**Minerals.** Region 8 is underlain principally by middle Tertiary felsic volcanics overlain by Quaternary alluvium. One copper-gold-silver occurrence is known in the area – the Millet prospect, found near the shore of Iliamna Lake near the east boundary of the Region. Little is known of the occurrence. However, due to the proximity of significant mineral occurrences, the exploration potential for base and precious metals should be considered high.

**Oil and Gas.** The bedrock underlying Region 8 precludes a high potential for oil and gas.

**Materials.** There are no active materials sites in Region 8.

**Forestry.** Forestry resources are present in limited areas along Lake Clark; this resource is used for house logs and heating fuel by some of the villages. Most of the forestry resources in Region 8 are considered to have a very low, to low suitability for local personal use.

**Fish and Wildlife.** The Lake Clark drainage is a major sockeye salmon spawning area, and the fisheries resources are used locally by both subsistence and sport fishermen. The Newhalen River is noteworthy for its clear water and good habitat; the river and its tributaries are important sockeye spawning grounds, contributing to 16 percent of the world’s commercial wild

red salmon harvest. All five Pacific salmon species are found, as are rainbow trout, Dolly Varden, and Arctic grayling, caribou, moose, and brown bear are also important to subsistence and recreational users. Eagles and other raptors are found in the Region.

# Management Considerations: Local and State Plans

A number of local, state, and federal management plans were considered in development of this plan. Local plans include the Lake and Peninsula Borough Coastal Zone Management Plan, the Lake and Peninsula Borough Comprehensive Plan, and the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008. State plans include the Bristol Bay Area Plan. Federal plans include the Lake Clark National Park General Management Plan (1984).

Region 8 is located wholly within the boundaries of the Lake and Peninsula Borough. Both the Comprehensive Plan and the District Coastal Management Plan of the Lake and Peninsula Borough apply to this portion of Region 8. The Comprehensive Plan focuses on economic and infrastructure development issues and does not contain specific land use standards or a land use map. The Enforceable Policies of the District Coastal Management Plan are extensive; policies affecting anadromous streams, bald eagle nests, oil and gas development, material extraction and mining can be applicable, under certain instances, to state lands. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by the DNR prior to issuing an authorization.

Region 8 is also within the area covered by the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, which was developed for the U.S. Department of Commerce Economic Development Administration by the Southwest Alaska Municipal Conference (July 2003). This document developed a number of goals, objectives, and strategies to facilitate and support efforts that retain and grow the region's wealth, including diversifying the economic base.

The Bristol Bay Area Plan (1984) affected all state lands in the Region until this revision. Under the 1984 plan the Region was to be managed for fish and wildlife harvest and habitat. Lake Cark and the Newhalen River were to be managed for recreation and fisheries production. Some community expansion is encouraged in the Iliamna, Nondalton, and Newhalen areas. The 1984 Bristol Bay Area Plan for Region 8 includes land use designations for Fish and Wildlife, Recreation, Minerals, and Remote Settlement. This revision supersedes the 1984 Area Plan.

The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) identified a Cook Inlet to Bristol Bay Transportation Corridor which, in general, extends from Cook Inlet to South Naknek connecting with the communities of Pedro Bay, Iliamna, Newhalen, Igiugig, Levelock, King Salmon, and Naknek. The transportation plan would connect the rich seafood resources and communities in the Bristol Bay, as well as the Iliamna Lake communities, with resupply, support and market centers in the Alaskan railbelt. It consists of a marine segment (Cook Inlet),

an intermodal transfer location at Williamsport or Iniskin Bay, and primarily overland and riverine routes along Iliamna Lake and the Kvichak River valley that terminate at the port town of Naknek on Bristol Bay. A tie-in to the Pebble Copper mine is also a possibility. The function of the route is primarily logistical. Transportation improvements along this corridor would lower the cost of transport, thus yielding benefits to the quality of life for residents and stimulating economic growth. Other ADOT/PF priorities in Region 8 include completion of the Nondalton to Newhalen road and construction of the Newhalen River Bridge. The Southwest Alaska Transportation Plan contains specific plans for the Nondalton-Newhalen River corridor including a bridge over the Newhalen River. The proposed road to the Pebble Copper deposit would branch from the Bristol Bay road in Region 8, but the exact location of a bridge across the Newhalen River that is capable of handling large trucks is not known. The Bristol Bay transportation corridor would transect Region 8 in the Iliamna-Newhalen area.

### Municipal Selections

There are no municipal selections by the Lake and Peninsula Borough in Region 8.

# Management Summary: Uplands

State land in Region 8 is to be managed for a variety of multiple uses, including settlement, materials extraction, public facilities development, dispersed public recreation, mineral exploration and development, and maintenance of sensitive wildlife habitats. Oil and gas exploration and development, although of low potential, is also appropriate within the Region. Although the majority of state lands are designated General Use (Gu), a large amount has been designated Settlement (Se). This Settlement land (predominantly state-selected land) is intended to facilitate recreation and community expansion in the area west of the Newhalen River. The Newhalen River, Sixmile Lake and other anadromous streams have been co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Several small management units associated with airport or other such facilities are designated Public Facilities-Retain (Pr).

### Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Within this Region, lands that contain one or more resource values, none of which is of sufficiently high value to merit designation as a primary use, and areas that are unlikely to be developed during the planning period are designated General Use. The land is to be managed for a variety of uses including protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and protection of heritage resources. It is expected that

little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. Any municipal land selections under the Municipal Entitlement program are conveyable to the municipality subject to a Best Interest Finding by the state. However, the Lake and Peninsula Borough has made no land selections on General Use lands in Region 8.

- Habitat (Ha). Generally, this designation applies to areas of various size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in a permanent loss of a population or sustained yield of a species. In Region 8 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm). The designation is to be retained in state ownership.
- Public Facilities-Retain (Pr). This designation applies to sites that are reserved for a specific public infrastructure requirement. They are to be retained in state or public ownership. In this Region, this designation applies to lands containing public facilities, commonly airports or schools. Only a small amount of acreage is affected by this designation.
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may (only) be designated Public Recreation and Tourism-Dispersed, (Rd), Habitat (Ha), or General Use (Gu).
- Public Recreation and Tourism-Dispersed (Rd). Lands with the designation of Public Recreation and Tourism-Dispersed are to be managed so their public recreation values are protected and maintained. Within these areas the primary surface uses are intended to be those related to hiking, hunting, fishing, wildlife viewing, and the like. There are no lands in Region 8 with this designation, although a unit of state-selected land in the adjoining Lake Clark National Park and Preserve has been designated for dispersed Recreation.
- Settlement (Se). This designation applies to state uplands suitable for sale, leasing, or permitting to allow private recreational or residential use. Within this Region one area of state land is considered appropriate for settlement and has been designated Settlement. This occurs on the west side of the Newhalen River (on mostly state-selected land) and is intended for remote recreational use and community expansion; see Chapter 2 for specific requirements for this form of settlement. Settlement lands are appropriate for conveyance to the Borough.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region.
- Proposed Transportation Corridor. The areas identified on the Region Map as a "Potential Transportation Corridor" should be retained by the state during the planning period. Authorizations granted by DNR within or adjacent to this corridor should not preclude the future development of transportation access. Authorizations or disposals within and adjacent to this corridor should only be allowed after consultation with ADOT/PF.
- Except for areas closed to mineral entry under existing Mineral Closing Orders, all state lands within Region 8 are open to mineral entry. No additional MCOs are recommended; the only exception applies to the areas to be disposed of by DNR for purposes of Community Settlement. Closure to mineral entry is recommended at or before plat adoption. No leasehold location orders are recommended. See the Minerals section in Chapter 2 for more detail on subsurface management requirements.
- Mineral Closing and Opening Orders. This revision of the Bristol Bay Area Plan retains the mineral closing and opening orders largely implemented by DNR at the time of original plan adoption. These MCOs either close a proposed settlement area or close a number of major streams to mineral location. These include the following:
    - MCO 393 – Newhalen River and tributaries to Iliamna Lake
- Leasehold Location Orders. Leasehold Location Order No. 1 covers small portions of Region 6, much of Region 7, and portions of Regions 8 and 9. Under this order, rights to locatable minerals may be acquired only under the Leasehold Location System, AS 38.05.205, and may not be acquired by locating a mining claim under AS 38.05.195. In the affected area, an approved Plan of Operations for a mineral lease takes the place of a Land Use Permit required for unleased land. If the proposed lease activities are minor, a plan of operations is not required (11 AAC 86.800). The Plan of Operations must show how the operator proposes to comply with the lease stipulations and other pertinent guidelines in this plan.
- Retained Lands. There are no state lands within this Region that are designated to be retained except for those that are reserved as a 'Potential Transportation Corridor', and those designated Public Facilities-Retain (Pr) or Habitat (Ha). Note: Certain management units that are designated Rp may be conveyed out of state ownership and to a Borough as part of the Municipal Entitlement Act – providing the land conveyed remains public land and the public retains access to the public use site.
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a co-designation of Habitat and Public Recreation and Tourism-Dispersed. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

- Three land management units are located outside of Region 8 and inside Lake Clark National Park and Preserve. They are denoted LC-01, LC-02, and LC-03 and described more fully in the Resource Allocation Table at the end of this section.

See the Resource Allocation Table for more details on the upland management units in Region 8.

# Resource Allocation Table for Upland Units - Region 8

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| LC-01<br>Chulitna | 8,196<br>Gu -- General Use | Map O-2<br>S2N31W Sec. 4,5,8,9,16-21,28-33 | The unit is designated General Use (Gu) and is to be managed for a variety of uses including dispersed public recreation and tourism, fish and wildlife harvest, and protection of fish and wildlife habitat. Development authorizations may be considered appropriate subject to the protection of these resources and the specific requirements of Chapter 2. | The unit consists of state-owned land within the boundaries of Lake Clark National Park and Preserve. It is located approximately six miles northwest of Chulitna Bay. The northern portion of the unit is in steep mountainous terrain and the southern part is within the flat valley of the Chulitna River. Vegetation is a mixture of tall and low shrub and wet sedge tundra. The unit contains areas utilized by caribou for calving and by moose for over-wintering. It contains areas considered essential for brown bear spring use. |
| LC-02<br>Pickerel Lake | 7,680<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-2 | The unit is designated Public Recreation and Tourism-Dispersed. If the land is conveyed by the federal government it is to be consistent with surrounding recreation uses. | The unit consists of state-selected land within Lake Clark National Park and Preserve. It is approximately twelve sections of land located south of Pickerel Lake and north of the Tazimina River. The unit contains little topographic relief and includes the south end of Pickerel Lake and several unnamed lakes. Vegetation consists of low shrub and lichen tundra. The outlet of Pickerel Lake and the lower Tazimina River are anadromous streams that are utilized by brown bear, especially during the spawning season. |
| LC-03<br>Tazimina River | 10<br>Pr -- Public Facilities-Retain | Map O-2<br>S3S32W | The unit is to be retained in state ownership (see ADL 226877). | This is a small unit of land within the boundaries of Lake Clark National Park and Preserve. It is located on the Tazimina River and contains a private easement to the Iliamna-Newhalen-Nondalton Electric Coop. for a channel control sill (ADL 226877). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R08-01<br>Groundhog Mountain | 23,284<br>Gu -- General Use | Map O-2 | Unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitats, mineral exploration and development, and dispersed recreation. Some forms of recreation use, including commercial recreation may be appropriate. Development authorizations may be appropriate subject to the protection of these resources and the specific requirements of Chapter 2. See especially those requirements relating to "Mineral Resources". Intensive development is not expected within this unit during the planning period except occasionally and at specific locations associated with recreation uses and mineral exploration and development. Settlement may be considered appropriate. The Bristol Bay transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known or without consultation with the ADOT/PF. State land selections in this unit are considered to be a high level selection priority. | The unit consists of state-owned and state-selected uplands in two noncontiguous blocks west of the Newhalen River in Region 8. Vegetation consists of tall shrubland. The area has moderate to high exploration potential for base and precious metals. The unit is partly affected by LLO1. The proposed Pebble Copper road and transportation corridor extends through the unit. |
| R08-02<br>Nondalton | 2,552<br>Se -- Settlement | Map O-2 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Disposals are to conform to the requirements of Remote Settlement and other applicable management guidelines in Chapter 2. | The unit consists of approximately three sections of state-owned land and one section of state-selected land located west of Nondalton. The moderate terrain supports a tall shrub woodland. Nearby waters support anadromous fish, and raptors nest in the vicinity. The Newhalen River valley supports moose, caribou, and brown bear. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit in the vicinity of Sixmile Lake. The Telquana-Nondalton trail extends through the unit. |
| R08-03<br>Nondalton Airstrip | 82<br>Pr -- Public Facilities-Retain | Map O-2<br>S2S32W Sec. 19,20, 29,30 | This unit is to be managed by the ADOT/PF consistent with FAA and ADOT/PF guidelines for such use. The unit is to be retained in state ownership. | This unit of state land (OSL 1125) is located at the Nondalton public airport and managed by the Department of Transportation and Public Facilities (ADOT/PF). The area is affected by LLO 1. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R08-04<br>Nondalton | 18.09<br>Pr -- Public Facilities-Retain | Map O-2<br>S2S32W Sec. 30,31 | This unit is to be managed by the ADOT/PF for public purposes related to the airport and is to be retained in state ownership. | This management unit (OSL 686) is located near the Nondalton public airport and managed by the Department of Transportation and Public Facilities (ADOT/PF). The area is affected by LLO 1. |
| R08-05<br>Newhalen River | 16,806<br>Se -- Settlement | Map O-2 | If these lands are conveyed by the Federal government, they are considered suitable for settlement. The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement in the Settlement section of Chapter 2. The Pebble Copper road corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known, or without consultation with the ADOT/PF. | This unit consists of state-selected land west of the Nondalton River. The unit contains several lakes that are accessible by floatplane. The moderate terrain is suitable for settlement and supports a tall shrub woodland. The area is partly affected by Leasehold Location Order LLO 1. |
| R08-06<br>Roadhouse Mountain | 11,622<br>Gu -- General Use | Map O-2 | Unit is designated General Use (Gu) and, if conveyed by the Federal government, is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitats, mineral exploration and development, and dispersed recreation. Some forms of recreation use, including commercial recreation, may be appropriate. Development authorizations may be appropriate subject to the protection of these resources and the specific requirements of Chapter 2. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations associated with recreation uses and mineral exploration and development. Settlement is not considerated appropriate. The land selection is considered to be of moderate priority. | The unit consists of state-selected land in the Roadhouse Mountain area. Vegetation consists of tall shrubland. Moose overwinter in part of the unit. The unit is partly affected by LLO1. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R08-07<br>Iliamna Airport | 1,203<br>Pr -- Public Facilities-Retain | Map O-2<br>S5S33W Sec. 4,8,9, 16,17,12 | The unit is to be managed by ADOT/PF consistent with FAA and ADOT/PF guidelines for airport and ancillary facilities use. The land is to be retained in state ownership. | This land (OSL 321) is located at the Iliamna public airport and managed by the Department of Transportation and Public Facilities (ADOT/PF). This unit also includes land two miles east of the airport that is managed by ADOT/PF. |
| R08-08<br>Iliamna | 326<br>Se -- Settlement | Map O-2<br>S5S32W Sec. 12,13 | If these lands are conveyed by the Federal government, they are considered appropriate for settlement and disposal during the planning period. Development should follow the requirements of Remote Settlement in the Settlement section of Chapter 2. | The unit consists of small amounts of state-selected lands in the immediate vicinity of the community of Iliamna within sections 12 and 13. The unit has road access and may be appropriate for subdivision or other community expansion. |

# Region 9

# *Eastern Iliamna Lake*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 9 encompasses the eastern portion of Iliamna Lake; the northern, eastern, and southern borders are largely defined by the boundary of Lake Clark National Park and Preserve, the boundary of the Lake and Peninsula Borough, and the boundary of Katmai National Park and Preserve. The Eastern Iliamna Lake Planning Region includes the communities of Pedro Bay (pop. 37), Kokhanok (pop. 168), and Pope-Vannoy Landing (pop. 5). See Map O-2.

### State Lands and Municipal Selections: Ownership and Acreage

The majority of land within Region 9 is state or Native owned[12]. The Region contains some large land selections by the Lake and Peninsula Borough. State-owned and state-selected lands total 690,645 acres. Most state lands occur in areas of steep topography and are situated some distance away from Iliamna Lake. Borough-selected land (63,206 acres) coincides with important river drainages or lakes scattered throughout the Region. Map O-2 depicts the boundaries of this Region, generalized land status, and the distribution of state owned, state selected, and borough-selected uplands.

### Physical Geography

State land within Region 9 occurs in four large areas scattered throughout the Region. The Region displays a variety of landscapes, including mountains, fast-flowing rivers, tundra, marshy lowlands, and ponds. Most of this land is covered by, depending on elevation and location, alpine tundra, low or tall shrubs, or areas of mixed broadleaf and spruce trees.

The Region is characterized by steep and mountainous terrain except for the major river drainages and areas around the larger lakes. The drainage basins on the east end of Iliamna Lake include the Pile, Iliamna and Copper Rivers as well as Chekok, Canyon, Knutson, Chinkelyes, and Dennis Creeks. Major waterbodies include east Iliamna Lake and Gibraltar, Kokhanok, Meadow, Moose, and Upper and Lower Copper Lakes. Significant topographic relief is present; named peaks include Roadhouse, Knutson, Three Sisters Mountains as well as Big Hill. Topographic relief is significant with over 4,600 feet from Iliamna Lake to the summit of Three Sisters Mountain, all developed within about six miles of the shore. Vegetation cover

[12] Primarily the Bristol Bay Native Corporation.

consists of alpine tundra and barrens at elevation, and a mixture of short and tall shrub throughout the remainder of the Region except for riverine areas where there tends to be a mix of spruce and broadleaf forest. Several broad bands of the latter occupy the flat areas next to the principal drainages east of Kakhonak Lake.

## Climate

The climate of Region 9 is within the transitional climatic zone. Average summer temperatures range from 40° to 64°; winter temperatures average 3° to 30°. The record high is 84° and the record low is -47°. Annual precipitation is between 26 and 32 inches, with 64 to 89 inches of snowfall. Most of the Region is underlain only by isolated masses of permafrost.

## Access

Access to Region 9 is relatively good compared to other parts of the planning area. Pedro Bay is accessible by air and water; there is a state-owned 3,000-foot gravel airstrip that is undergoing improvements. Barge service is available from Naknek via the Kvichak River. Goods are also sent by barge from Homer to Iliamna Bay, on the Cook Inlet side, and portaged over a fourteen-mile road to Pile Bay. Fishing vessels that fish the waters of Bristol Bay are commonly transported by truck over this Williamsport-Pile Bay road to Iliamna Lake where they travel across the Lake and down the Kvichak River to the waters of Bristol Bay. At Kakhonak the state owns a 4,400-foot gravel airstrip and a seaplane base. Skiffs, ATV's and trucks are common forms of local transportation.

## Resources and Uses

Most uses in the Region are associated with subsistence by the locals and dispersed commercial recreation related to sport fishing during the summer. The population of the Region is concentrated at the two villages of Pedro Bay and Kakhonak. Settlement potential is considered relatively good because of the presence of attractions (streams, lakes, and recreation opportunities), relatively good access and building terrain. Many areas within the Region are affected by Municipal entitlement selections of the Lake and Peninsula Borough. There are no known areas of state land with grazing, agriculture, or commercial timber harvest potential.

**Cultural and Historic.** The Dena'ina Indians have occupied this area historically. The Dena'ina warred with Russian fur traders over trade practices in the early 1800s. There are a relatively large number of historic and prehistoric uses within the Region. Most of these occur along the shores of Iliamna Lake. There are 14 historic, 14 prehistoric, and 2 mixed historic/prehistoric sites within the Region.

**Economic.** Most residents obtain summer employment in the Bristol Bay fishery or in Iliamna Lake tourism services. Several backcountry lodges operate in Pedro Bay. Commercial fishing has declined since several limited entry permits were sold. Most families depend heavily on subsistence activities, utilizing salmon, trout, moose, bear, rabbit and seal.

**Recreation.** Recreation resources and uses are primarily related to use of Iliamna Lake for boating and fishing, and to commercial and noncommercial sport fishing and hunting. A number of sport fishing lodges are clustered in the Pedro Bay, Copper River, and Kakhonak areas.

**Minerals.** Mineral resources associated with mafic intrusives occur north of Pedro Bay and east of Kakhonak. A wide range of commodities is represented by the occurrences including copper, molybdenum, gold, silver, and arsenic. The most significant mineral occurrence within Region 9 is perhaps the Fog Lake (Fog Pond) gold prospect, considered to be a gold- and silver-bearing prospect with minor copper values. Significant amounts of exploration have been conducted on the Kamishak prospect on the southern boundary of Region 9. Seventeen drill holes totaling 3,755 feet of drilling has been completed on this porphyry copper-gold prospect.

**Oil and Gas.** The bedrock of the region consists predominantly of a mix of volcanic, intrusive, and metamorphic terranes. Thus, there is little oil and gas potential.

**Materials.** There are no active materials sites in the Region.

**Forestry.** The forest resources found on the eastern shores of Iliamna Lake and Lake Clark are the most concentrated, and the most extensive, in the Bristol Bay planning area. The forests around Kakhonak, Kakhonak Lake, Pedro Bay, and Pile Bay include extensive stands of conifers (white Spruce) and mixed forests (birch and white spruce) along the shoreline and extending far up major drainages.

**Fish and Wildlife.** This Region has significant moose and caribou populations and contains many waterbodies utilized by anadromous fish. Moose rutting areas occur near Kakhonak, on non-state lands, and moose calving areas occur along the Pile River and both Knutson and Chekok Creeks. The upper portions of these drainages occupy state land. Caribou frequent small portions of the far western part of the Region, but there are no known calving or rutting areas within the Region. All five species of Pacific salmon occur in the streams of the region; sockeye are the most important species commercially. Brown bears concentrate along streams throughout the Region during spawning periods. Freshwater sport fish are generally prolific and, along with sockeye salmon, provide the basis for the commercial sport fishing industry.

# Management Considerations: Local and State Plans

Several local and state management plans affect this Region. These were reviewed during the preparation of the Area Plan.

Both the Comprehensive Plan and the District Coastal Management Plan of the Lake and Peninsula Borough apply to Region 9. The Comprehensive Plan focuses on economic and infrastructure development issues and does not contain specific land use standards or a land use

map. The Enforceable Policies of the District Coastal Management Plan are extensive; policies affecting anadromous streams, bald eagle nests, oil and gas development, material extraction and mining can be applicable, under certain instances, to state land. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by DNR prior to issuing an authorization.

The two state management plans affecting this Region include the Bristol Bay Area Plan and the Southwest Alaska Transportation Plan (SATP), prepared by ADOT/PF in 2002. The original Bristol Bay Area Plan has affected the management of state lands throughout the Region since its adoption in 1984. This revision replaces and supersedes the original plan. Many of the settlement areas identified in the 1984 area plan are continued in this revision. The SATP identifies needed access facilities, which include a Bristol Bay Transportation Corridor. This Corridor extends from Iniskin Bay in Cook Inlet over the Chigmit Mountains, and then continues westward, paralleling the north shoreline of Iliamna Lake until extending inland to the west with a spur eventually ending at the Pebble Copper deposit (Map O-2).

### Municipal Selections

Municipal selections by the Lake and Peninsula Borough occupy extensive areas of state uplands; these total approximately 63,206 acres and are distributed along streams and lakes with attractive recreation and development features. See *Plan Map O-2*, *Appendix C*, and the *Municipal Entitlement section of Chapter 4*.

# Management Summary: Uplands

Region 9 is to be managed for a variety of multiple uses, including: 1) the maintenance of sensitive habitats, wildlife, and fisheries; 2) dispersed public recreation; and, 3) in certain areas, remote settlement. Because of the extent of the state land, the absence of discernible economic patterns, and the potential to accommodate a variety of differing uses through siting and other development requirements, most state land is designated General Use. Smaller parts of the Region are designated Minerals, Settlement, and Public Recreation and Tourism-Dispersed.

### Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, Subsurface Resources, and Settlement.

- General Use (Gu). Extensive areas throughout the Region (R09-01, R09-07) are designated General Use, for the reasons given above. Such areas are typically remote, inaccessible, and characterized by either steep or rolling terrain. Vegetation patterns are typically low and tall shrubs, or alpine adapted vegetation. These areas are less suitable for development than areas designated Settlement. Within areas designated General Use, a variety of uses may occur; nonetheless, because of the inherent limitations to development, it is expected that little development will occur during the planning period

and as a matter of policy it is not intended that intensive forms of development occur in these areas other than occasionally and at specific sites, usually associated with mining, oil and gas exploration and development, or recreation. The requirements of the section 'Caribou and Moose Rutting and Calving Areas' in the Fish and Wildlife Habitat and Harvest Areas section of Chapter 2 are to be followed in development authorizations.

- Settlement (Se). There are three separate areas of varying size that are designated Settlement. These areas are appropriate for remote settlement; see *Chapter 2* for specific requirements on this form of settlement. Settlement areas occur near lakes and rivers that are surrounded with generally flat to moderately rolling terrain. Portions of these areas are affected by Municipal Entitlement selections. Areas designated Settlement are considered appropriate for conveyance to the borough, subject to a separate, subsequent DNR Best Interest Finding.
- Public Facilities-Retain (Pr). There are a number of small management units that are designated Public Facilities-Retain. These are either local or state structures or facilities of public importance (schools, airports, etc.). These management units are to be retained in state ownership.
- Public Recreation and Tourism-Dispersed (Rd). Islands within Iliamna Lake are designated Public Recreation and Tourism-Dispersed. These management units, because of their unique scenic and cultural values, are to be retained in state ownership. Development authorizations, if issued, must ensure that public recreation and scenic values be maintained.
- Habitat (Ha). Generally, this designation applies to areas of varied size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in a permanent loss of a population or sustained yield of a species. In Region 9 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm). The designation is to be retained in state ownership.
- Minerals (Mi). The Fog Lake (Pond) area, a significant mineral occurrence with gold- and silver-bearing prospects, is designated Minerals and is to be retained in state ownership. Authorizations related to mining and its associated facilities are considered appropriate in these areas.
- Public Recreation and Tourism-Dispersed and Habitat – Co-designation. The designations of Public Recreation and Tourism-Dispersed (Rd) and Habitat (Ha) apply to Iliamna Lake. The navigable waters of this Lake are to be managed so that its public recreation and habitat values are maintained. Development authorizations within these waters may be appropriate insofar as essential habitat and public recreation values are maintained. This co-designation also applies to the navigable rivers in this Region, which are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations within these waterbodies should not interfere with navigability, important habitat values or recreational uses.

Consult the Resource Allocation Table for more information about these management units.

## Specific Management Considerations:

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region; there are no areas affected by 11 AAC 96.010 requiring a permit before being authorized.
- Mineral Closing Orders and Leasehold Location Orders. Except for areas closed to mineral entry under Mineral Closing Order #393 or Leasehold Location Order No. 1, all lands within the Region are open to mineral entry. No additional MCOs are recommended; the only exception applies to areas to be disposed of by DNR for remote settlement purposes. In these instances, closure of the settlement area prior to sale is required. The MCOs in areas not selected for staking within three years of the land sale are to revert to 'open to mineral entry'. In addition, no additional leasehold location orders are recommended. See the Mineral Resources section in Chapter 2 for more details on subsurface management requirements.
- Municipal Entitlement Selections. The municipal selections within this Region are either designated General Use or Settlement, which convert to the classifications of Resource Management Land and Settlement Land, respectively. Both classifications are conveyable to municipalities under the Municipal Entitlement Act. All lands so designated are considered appropriate for disposal, subject to a separate and subsequent Best Interest Finding.
- Proposed Transportation Corridors. The area identified on the Region Map as 'Potential Transportation Corridor' shall be retained by the state during the planning period. Authorizations granted by DNR within the area of this corridor shall not preclude the opportunity for the development of access at some time in the future. Authorizations or disposals within and adjacent to this corridor should only be allowed after consultation with ADOT/PF.
- Retained Lands. There are few state lands within this Region that are designated by the area plan to be retained other than the islands in Iliamna Lake or the upland areas that are used as public facilities. Lands that are identified as a Proposed Transportation Corridor are not to be conveyed out of state ownership unless ADOT/PF determines that it is in excess of state needs. A reasonable portion of lands within management unit R09-13 are to be retained in state ownership to suit the needs of the public for recreation on the south shore of Iliamna Lake.
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

# Resource Allocation Table for Upland Units - Region 9

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R09-01<br>Knutson Creek-Three Sisters Mt. | 183,905<br>Gu -- General Use | Map O-2 | Unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitat, and dispersed recreation. Development authorizations may be considered appropriate subject to the protection of these resources and the specific requirements of Chapter 2. See particularly the requirements for "Caribou and Moose Calving and Rutting Areas" in this Chapter. Intensive development is not expected within this unit during the planning period except occasionally and at isolated sites. | Unit largely consists of mountainous terrrain between the Pile River and Chekok Creek drainages as well as similar terrain east of the Pile River. Vegetation consists of either alpine tundra and barrens or tall shrub in the less mountainous areas. Because of the steep topographic conditions, little development can be expected within this unit with the possible exception of the upper drainages of Knutson Creek. A moose rutting area occupies portions of this unit. Leasehold Location Order #1 affects parts of this unit. |
| R09-02<br>Upper Chekok Creek | 25,022<br>Se -- Settlement | Map O-2 | The unit is designated Settlement and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and those for the Caribou and Moose Rutting and Calving Area, described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections of Chapter 2. | This land is located in the general vicinity of Chekok Lake and valley, a fairly flat area near the lake and river but increasing in elevation to the west and east. Vegetation cover is predominantly tall shrub. Chekok Creek and Chekok Lake are anadromous. Portions of a moose rutting area occupy parts of the unit. Unit is affected by Municipal selections of the Lake and Peninsula Borough, some of which have already been conveyed in the northern part of the Upper Chekok Creek drainage. MCO 393 affects Chekok Creek. |
| R09-03<br>Pile River | 20,758<br>Se -- Settlement | Map O-2 | This land is designated Settlement and is considered appropriate for disposal during the planning period. Authorizations and disposals on land that is not conveyed to the Borough shall adhere to the requirements of Remote Settlement and Caribou and Moose Calving and Rutting Areas in Chapter 2. The areas of municipal selection are considered appropriate for conveyance to the Lake and Peninsula Borough, subject to a separate and subsequent Best Interest Finding. | This unit is located in the valley of the Pile River, an anadromous stream with predominantly sockeye salmon. The terrain is gently rolling near the Pile River but increases quickly in elevation to the west and east. The vegetative cover is predominantly tall shrub. A moose calving area covers large portions of the unit. The lower portion of the Pile River drainage contains numerous ponds, lakes, and wetlands. MCO 393 affects the Pile River, and LLO 1 affects the entirety of the unit. Large portions of the unit are affected by municipal entitlement selections of the Lake and Peninsula Borough. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R09-04<br>Pedro Bay Airport | 46<br>Pr -- Public Facilities-Retain | Map O-2<br>S4S28W Sec. 29,32 | The unit is to be retained in state ownership and managed consistent with the requirements of the Management Right (ADL 221516). | This land (ADL 221516; OSL 915) is located at the Pedro Bay public airport and managed by the Department of Transportation and Public Facilities (ADOT/PF). |
| R09-05<br>Pedro Bay School | 0.92<br>Pr -- Public Facilities-Retain | Map O-2<br>S4S28W Sec. 33 | The unit is to be retained by the state and is to be managed consistent with the terms and conditions of the lease and Management Right. | This unit (ADL 221497) is located at Pedro Bay. The land is subject to a lease with the public school system and is affected by Management Right (ADL 221497). |
| R09-06<br>Iliamna Lake Islands | 19,833<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-2 | These units are designated Public Recreation and Tourism-Dispersed, are to be managed for dispersed public recreation purposes, and retained by the state. | This unit consists of over 10 islands in Lake Iliamna, all of which are vacant and undeveloped. They are of varying size, the largest being Tangle, Flat, and Porcupine Islands in the eastern part of Lake Iliamna. |
| R09-07<br>Tommy Creek/Chigmit | 352,970<br>Gu -- General Use | Map O-2 | Unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitat, and dispersed recreation. Development authorizations may be considered appropriate subject to the protection of these resources and the specific requirements of Chapter 2. See particularly the requirements for "Caribou and Moose Calving and Rutting Areas" in this Chapter. Intensive development is not expected within this unit during the planning period except occasionally and at isolated sites. Areas affected by Municipal selections of the Lake and Peninsula Borough are considered appropriate for conveyance, subject to a separate and subsequent Best Interest Finding. | This large unit consists of three separate parts: a mountainous area west of the Chigmit Mountains that is predominately covered by tall shrub, a similarly mountainous area centering on Tommy Creek south of Lake Iliamna, an area that occupies both fairly flat to rolling terrain near Big Mountain and an area of similar topography but with numerous lakes situated generally south of the Kakhonak River and Lake. Low or tall shrub predominates throughout the two latter areas except for a few sites in the far eastern part which are comprised of closed spruce forest. A moose calving area occupies portions of lowlands generally near Denny Creek in the southwestern part of the unit. MCO 393 closes several streams to mineral entry. Portions of the unit are affected by Municipal selections of the Lake and Peninsula Borough. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R09-08<br>Kakhonak Lake | 64,628<br>Se -- Settlement | Map O-2<br>S6S28W-S8S28W; S7S29W-S8S29W | This unit is designated Settlement and is considered appropriate for disposal during the planning period. Development should conform to the requirements for Remote Settlement in the Settlement section of Chapter 2. The lands selected by the Borough are considered appropriate for conveyance, subject to a separate and subsequent Best Interest Finding. The proximity of the Fog Lake gold prospect should be noted and authorizations should not be granted that will impede exploration or development efforts at Fog Lake. Authorizations shall be consistent with LLO 1. | This large unit is situated south of Iliamna Lake and occupies lands around and near Boot, Moose, and Meadows, as well as portions of Kakhonak Lakes. Most of the land that adjoins this unit, as well as areas within the unit proper, are affected by Municipal selections of the Lake and Peninsula Borough and some of these selection have already been conveyed to the Borough. This area is considered suitable for remote settlement and has been designated Settlement since the original Bristol Bay Area Plan. Much of the land borders lakes or streams and is flat to gently rolling. Depending on location, the vegetation is either tall shrub or mixed spruce and broadleaf forest, the latter predominating in the eastern portions of the unit. There are relatively few wetlands. Anadromous streams are common in the northern part of the unit. LLO 1 affects portions of this unit. |
| R09-09<br>Copper River | 921<br>Ha -- Fish and Wildlife Habitat | Map O-2<br>S7S29W | The unit is designated Habitat (Ha) and is to be managed for the protection of fish and wildlife habitat. Development authorizations may be appropriate, subject to the protection of these resources and the requirements of Chapter 2. | This management unit is located southeast of Iliamna Lake along the Copper River downstream of the falls. The Copper River is cataloged as an anadromous fish stream and has important fishery value. Brown bear also use the area. |
| R09-10<br>Fog Lake | 4,480<br>Mi -- Minerals | Map O-2<br>S7S3W, S8S3W | If conveyed by the Federal government, this unit is to be retained in state ownership and managed for the exploration and development of subsurface resources. | This unit encompasses state-selected land adjacent to the Fog Lake gold prospect, considered to be a gold- and silver-bearing prospect with minor copper values. |
| R09-11<br>Kakhonak School | 4.94<br>Pr -- Public Facilities-Retain | Map O-2<br>S8S32W Sec. 32 | The unit is to be retained by the state and is to managed according to the terms and conditions of the lease or its successors. | This unit is located in the community of Kakhonak. The land is subject to a lease (ADL 221395) with the public school system. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R09-12<br>Kakhonak Airport/Road | 111<br>Pr -- Public Facilities-Retain | Map O-2<br>S8S32W;S8S33W;S9S33W | The unit is to be retained by state and to is to be managed consistent with the Management Right (ADL 221396). | This unit (ADL 221396; LSH 200) is located at the Kakhonak public airport and managed by the Department of Transportation and Public Facilities (ADOT/PF) under a Management Right. Also included is a road, approximately 1.5 miles in length (ADL 221392; LSH 199). |
| R09-13<br>Dennis | 2,268<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-2<br>S9S34-35W | This unit is to be managed for dispersed recreation and the protection of fish and wildlife resources and their habitats. DNR authorizations shall consider siting requirements that avoid or minimize impacts to principal recreational use areas and other recreation values. Such authorizations shall also ensure that impacts to anadromous streams are minimized and are consistent with the requirements for such uses in Chapter 2. See Chapter 2 for guidelines dealing with moose rutting and calving areas. | The unit consists of state-owned land in the vicinity of Big Mountain, south of Iliamna Lake. Vegetation consists of low shrublands and tundra. The mouth of Dennis Creek, an anadromous fish stream, is within this unit. Streams are utilized by brown bear, especially during the salmon spawning season. Moose calving and rutting areas occur in the unit. Raptors are located in or near the unit. The unit is partly affected by LLO 1 and MCO 393. |
| R09-14<br>Kamishak | 15,698<br>Gu -- General Use | Map O-2 | The unit is designated General Use (Gu) and is to be managed for a variety of uses including minerals exploration and development, dispersed public recreation and tourism, fish and wildlife harvest, and protection of fish and wildlife habitat. Development authorizations may be considered appropriate subject to the protection of these resources and the specific requirements of Chapter 2. The unit is not suitable for settlement. | The unit consists of a sliver of state-owned land between Katmai National Park and Preserve, and the McNeil River State Game Sanctuary. It is located in the headwaters region of Dream Creek and the Lake Fork of the Pain River. The unit is within steep mountainous terrain but includes the valley of Lake Fork and several other lakes. The unit contains significant mineral potential; the Kamishak prospect occurs on the south edge of the unit and claims associated with the deposit overlap into the Bristol Bay Planning Area. The unit contains a number of other mineral prospects and occurrences. |

# Region 10

# *Western Iliamna Lake, Kvichak River*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 10 encompasses the Western portion of Iliamna Lake and the Kvichak River to its mouth in Bristol Bay (Map O-2). The eastern boundary is defined as a line from the point of land near VABM Newhalen southeast through the peak of Peters Plug; the southern boundary of the Region follows the boundary of Katmai National Park and Preserve and the drainage divide of the Alagnak River as well as the northern boundary of the Bristol Bay Borough. The western and northern boundary of the Region largely follows the drainage divide between the Kvichak and Nushagak-Mulchatna drainage basins. The communities of Igiugig (pop. 46) and Levelock (pop. 115) are within Region 10. The Region has little to moderate topographic relief.

### State Lands: Ownership and Acreage

The majority of land within Region 10 is in Federal ownership; Native-owned holdings are extensive, largely along the Kvichak and lower Alagnak River as well as along the west and southern shores of Iliamna Lake. State-owned land is but a small part of the Region, mostly in the center and in the Big Mountain area; however, the state has a large number of land selections in the central part of Region 10. The plan applies to 783,904 acres of state-owned and state-selected uplands.

### Physical Geography

The eastern portion of Region 10 is within portions of the Alaska Peninsula ecological provinces whereas the western portion is part of the Bristol Bay Lowlands. The drainage basins on the west end of Iliamna Lake include the southwesterly flowing Kvichak River, which discharges from Iliamna Lake, and the Alagnak River which flows from Kukaklik Lake in Katmai National Park and Preserve. Important tributaries to the Kvichak River include Kaskanak, Yellow, and Bear Creeks; Pecks Creek and Ole Creek are major tributaries to the Alagnak River. Drainages also within Region 10, that flow directly into Iliamna Lake include Lower and Upper Talarik Creek and Pete Andrews Creek, on the north side of the lake, and

Belinda Creek on the south. Major waterbodies include east Iliamna Lake. The Region as a whole exhibits little topographic relief. However, the northeast portion of the region includes the southern slope of Groundhog Mountain (elev. 3074) and a feature known as Big Mountain (elev. 2161).

The Region displays a variety of landscapes, including vistas overlooking Iliamna Lake, mountains, rivers, tundra, marshy lowlands, and ponds. Iliamna Lake is a huge body of water – 75 miles long and 20 miles wide with a surface area of more than 1,000 square miles and a water depth exceeding 2,000 feet in places. The highest elevations in Region 10 are marked by tundra and barrens; elevations above 1,500 feet are sparsely vegetated.

## Climate

The climate of Region 10 is mostly within the transitional climatic zone; however, it is maritime on the west. Average summer temperatures range from 30° to 66°; winter temperatures average 4° to 30°. The record high is 91° and the record low is -47°. Annual precipitation is 26 inches, with 70 inches of snowfall. The Kvichak River is ice-free from June through mid-November. Most of the Region west of Iliamna Lake is wetlands and underlain by isolated masses of permafrost; the floodplains of the lower Kvichak and Alagnak Rivers are generally free of permafrost.

## Other

Region 10 is within the Dillingham, Iliamna, Naknek, and Mount Katmai Quadrangles. It is within the boundaries of the Bristol Bay Regional Native Corporation and the Lake and Peninsula Borough.

## Access

Access to Region 10 is good, utilizing river, lake, or air transport. There are five airport facilities in the Region, and a number of others nearby. Airports are located at the communities of Igiugig and Levelock as well as at Big Mountain, Koggiung, and Kvichak/Diamond J. Of course floatplanes and amphibious aircraft can land throughout the area. The state owns and maintains a 3,000-foot gravel runway at Igiugig and a 1,900-foot lighted gravel runway with an 1,800-foot crosswind runway at Levelock. Barges negotiate the Kvichak River from Dillingham and Naknek, delivering bulk items. Trails are present along the Kvichak River and from the Big Mountain airstrip to the summit of Big Mountain. The Coffee Creek Channel-Kvichak River Trail and the Nakeen-Igiugig Winter Trail follow along the route of the Kvichak River. Skiffs and ATV's are common forms of local transportation. Bristol Bay boats ply the water across Iliamna Lake from Pile Bay and down the Kvichak River for delivery to Bristol Bay. The following RS 2477 designated trails are wholly or partially in the Region:

- Coffee Creek Channel-Kvichak River (RST No. 1215)
- Lewis Point-Naknek (RST No. 128)
- Nakeen-Igiugig Winter Trail (RST No. 90)

## Resources and Uses

The Kvichak River System, including the Alagnak (Branch) River and Iliamna Lake, is the single most important source of salmon in the Bristol Bay area. This resource provides for commercial, subsistence, and sport users. Recreational potential is high; the Alagnak River is designated a Wild and Scenic River. Most of Region 10 is part of the Nushagak oil and gas basin and has recently been proposed for Exploration Licensing; the area has potential for oil and gas as well as coalbed methane. Other important resources include caribou, beaver, waterfowl, and brown bear.

**Cultural and Historic.** There have been little in the way of excavations of prehistoric sites in the Region. However, archaeologists believe that people of the Paleoarctic Tradition were active in the Lake Clark area about 6,000 years ago, and perhaps earlier. Cultural influences from the Bering Sea Coast can be seen in the presence on Paleoarctic sites at Ugashik Lake and at the mouth of the Kvichak River. The Northern Archaic tradition appeared in the area about 5,000 BP as indicated by archeological sites along the Kvichak River and in Katmai National Park and Preserve. There are two native settlements in the Region: Levelock, situated on the west bank of the Kvichak River, and Igiugig, located on the south shore of the Kvichak River. The state Office of History and Archeology lists fourteen sites in Region 10; two of these are prehistoric, eleven are historic, and one is of mixed origin. Most of the historic and archeological sites occur along the courses of the Kvichak and Alagnak Rivers. New sites are discovered periodically and added to the Alaska Heritage Resource Database when reported.

Igiugig is located on the south shore of the Kvichak River, which flows from Iliamna Lake. Kiatagmiut Eskimos originally lived on the north bank of the Kvichak River in the village of Kaskanak, and used Igiugig as a summer fish camp. At the turn of the century, these people moved upriver to the present site of Igiugig. Many locals can trace their roots back to the Branch River village.

Levelock is located on the west bank of the Kvichak River, 10 miles inland from Kvichak Bay. Early Russian explorers reported the presence of Levelock, which they called "Kvichak." The smallpox epidemic of 1837 killed more than half of the residents of the Bristol Bay region, and left entire villages abandoned. A measles epidemic hit the region in 1900. A 1908 survey of Russian missions identified "Lovelock's Mission" at this site. The worldwide influenza epidemic in 1918-19 again devastated area villages. Koggiung Packers operated a cannery at Levelock in 1925-26. A large fire at the cannery threatened the entire village in 1926, but residents dug fire lines, which saved their homes. The fire depleted the scarce wood resources used to heat homes.

**Economic.** As is typical for the area, salmon fishing is the mainstay of the economy. Many residents hold commercial fishing permits; people commonly travel to Naknek each summer to fish or work in the canneries. Subsistence is an important part of the residents' lifestyle. Salmon, trout, whitefish, moose, caribou and rabbit are utilized. Some trapping occurs. Trophy rainbow trout attract sport fishermen. There are seven commercial lodges that serve sports fishermen and hunters seasonally in Igiugig.

**Recreation.** Sport fishing is an important seasonal resource in Region 10. Lower Talarik Creek is popular for trout fishing and the Alagnak River area is renowned for its stream fishing for salmon and trout. Lower Talarik Creek is known for its large rainbow trout and is a fly-fishing only stream. The Alagnak River is designated as a Wild and Scenic River. The Alagnak River rainbow trout fishery has a reputation of being a world-class fishery and therefore attracts large numbers of anglers. It is considered to be one of the most popular fly-in fishing destinations in southwest Alaska supporting important salmon (chinook, sockeye, pink, chum, and coho), Arctic grayling, Arctic char, and lake trout sport fisheries. About a dozen commercial recreation fishing lodges and camps are located on the Kvichak and Alagnak Rivers. Several lodges on the main stem of the Alagnak, at the outlet of Nonvianuk Lake, and one on the Kulik River provide guided fishing services. Together these lodges support the majority of the visitation for fishing. The amount of use is a cause of concern to some users and managers. The Alaska Department of Fish and Game reports that visitor use for fishing has increased from approximately 1,900 angler days per year (a 4-month fishing season) in 1981 to over 13,000 in 1995. This has since fallen to 10,614 in 2002.

**Minerals.** Region 10 is underlain principally by middle Tertiary volcanics and a Tertiary on-lap assemblage that is the northern extension (Nushagak basin) of the Bristol Bay basin. The U.S. Bureau of Mines MILS database lists but two mineral occurrences on opposite sides of Iliamna Lake. The Anelon gold prospect is located near VABM Newhalen on the north side of the lake and the Aukney gold prospect is located on the north flank of Big Mountain. Bedrock in these two areas is composed primarily of Tertiary volcanics. A large claim block has been staked in an area 26 miles west of Igiugig and 16 miles northeast of Levelock as part of a recent exploration effort. It is possible that a significant geophysical anomaly (airborne and ground) is present representing buried intrusive rocks. The exploration target at the Iliamna project is a gold-enriched porphyry deposit. Significant exploration potential occurs in the extreme northeast portion of Region 10 in the Sheep Mountain-Talarik Creeks area due to the proximity of the Pebble Copper deposit (see Region 6).

**Oil and Gas.** The Alaska Peninsula-Bristol Bay region is a frontier basin in southwest Alaska -- 500 miles long and up to 100 miles wide. The northwestern part of the peninsula is underlain by up to 18,000 feet of Tertiary sediments that thicken northwestward into the Bristol Bay basin. Gently folded Mesozoic and Tertiary sedimentary rocks, and Quaternary volcanic rocks crop out on the southeastern peninsula. The offshore Bristol Bay basin is a sediment-filled structural depression that underlies the northern continental shelf of the Alaska Peninsula. The shallow portion of the basin, which underlies the western and southern portion of Region 10 has potential for coalbed methane and perhaps gas and oil. Most of the potential for oil and gas in Region 10 is in the area between Kvichak Bay and Iliamna Lake.

State and Native landowners are currently pursuing a new hydrocarbon exploration licensing and leasing program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska

Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Materials.** There are no active materials sites in the Region.

**Forestry.** The forestry resources in Region 10 are located primarily along the Kvichak and Alagnak River valleys and along the side of Iliamna Lake. These are non-commercial forests and have very low suitability for local personal use. Most trees are too small for house logs but can be used as a source of fuel.

**Fish and Wildlife.** All five species of Pacific salmon – king, sockeye, pink, silver, and chum – spawn in the Kvichak and Alagnak river systems. Sockeyes are the most important commercially. However, king and silver salmon are important to the recreational sport fishing industry, as are trout and char. The Alagnak River corridor and Ole, Belinda, Dennis, and Kaskanak Creeks are heavily used by bears. The south side of Iliamna Lake and the Alagnak River drainage are moose calving and rutting areas.

Eagles and other raptors nest along the Alagnak River and on the west end of Iliamna Lake. The lowlands west of Iliamna Lake contain a plethora of lakes, ponds, and marshes that are used by waterfowl; high concentrations of red-breasted mergansers, black scoters, scaup, mallards, and tundra swans occur in this area.

Iliamna Lake is also home to this continent's sole population of freshwater seals. This phenomenon only occurs in one other lake in the world, Lake Baikal in Russia.

# Management Considerations: Local and State Plans and Special Use Site

A number of local, state, and federal management plans were considered in development of this plan. Local plans include the Bristol Bay CRSA Coastal Zone Management Plan, the Lake and Peninsula Borough Coastal Zone Management Plan, the Lake and Peninsula Borough Comprehensive Plan, and the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008. State plans include the Bristol Bay Area Plan and the Southwest Alaska Transportation Plan. Federal plans include the Katmai National Park and Preserve, Aniakchak National Monument and Preserve, and the Alagnak Wild River Compendium – 2003.

Most of Region 10 is located within the boundaries of the Lake and Peninsula Borough. Both the Comprehensive Plan and the District Coastal Management Plan of the Lake and Peninsula Borough apply to this portion of Region 10. The Comprehensive Plan focuses on economic and infrastructure development issues and does not contain specific land use standards or a land use map. The Enforceable Policies of the District Coastal Management Plan are extensive; policies affecting anadromous streams, bald eagle nests, oil and gas development, material extraction

and mining can be applicable, under certain instances, to state lands. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by DNR prior to issuing an authorization.

Region 10 is also within the area covered by the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, which was developed for the U.S. Department of Commerce Economic Development Administration by the Southwest Alaska Municipal Conference (July 2003). This document developed a number of goals, objectives, and strategies to facilitate and support efforts that retain and grow the region's wealth, including diversifying the economic base.

The Bristol Bay Area Plan (BBAP) affects all state lands in the Region. The original version of the Area Plan (1984) stated the Region is to be managed for fish and wildlife with an emphasis on fisheries production and public recreation on the Talarik Creeks and the Kvichak and Alagnak Rivers. This revision replaces and supercedes the 1984 BBAP.

The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) identified a Cook Inlet to Bristol Bay Transportation Corridor, which in general extends from Cook Inlet to South Naknek connecting with the communities of Pedro Bay, Iliamna, Newhalen, Igiugig, Levelock, King Salmon, and Naknek. The transportation corridor connects the rich seafood resources and communities in Bristol Bay, as well as the Iliamna Lake communities, with resupply, support and market centers in the Alaskan railbelt. It consists of a marine segment (Cook Inlet), an intermodal transfer location at Williamsport or Iniskin Bay, and then primarily overland and riverine routes along Iliamna Lake and the Kvichak River valley to the port town of Naknek on Bristol Bay. A tie-in to the Pebble Copper mine is also a possibility. The function of the route is primarily logistical. Transportation improvements along this corridor would lower the cost of transport, thus yielding benefits to the quality of life of residents and helping to stimulate economic growth.

The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) also identified a Dillingham/Bristol Bay Area Transportation Corridor, which in general extends from Levelock to Dillingham, connecting with the communities of Ekwok and Aleknagik. It includes a crossing of the Wood River at Aleknagik and a major crossing of the Nushagak River. There are several possible tie-in locations to the Bristol Bay to Cook Inlet corridor. The plan models a corridor from Aleknagik to Igiugig via Levelock.

The state DNR established the Lower Talarik Creek Special Use Area (ADL 227445) in 1999 in recognition that both the uplands and shorelands within the affected area of the SUA have a high value for fish and wildlife habitat and harvest as well as recreation. Commercial recreation activities are limited to day use only, if registration has been completed under 11 AAC 96.018. Between August 1 and October 31, setting up and using a camp for personal, noncommercial use is allowed without a permit but only in a designated area that is adjacent to the Department of Fish and Game cabin (in section 26) and for no more than five consecutive days.

### Municipal Selections

Municipal selections by the Lake and Peninsula Borough occur along Lower Talarik Creek, the northwestern shore of Iliamna Lake, and Kvichak River. These selections total approximately 26,745 acres and are distributed along streams and lake with attractive recreation and development features. See *Map O-2*, *Appendix C*, and the *Municipal Entitlement section of Chapter 4*.

# Management Summary: Uplands

State land in Region 10 is to be managed for a variety of multiple uses, including settlement, materials extraction, public facilities development, dispersed public recreation, mineral exploration and development, and maintenance of sensitive wildlife habitats. Oil and gas potential, although only of moderate to low potential, is also appropriate within the Region. The majority of state-owned lands in Region 10 are designated Public Recreation and Tourism-Dispersed (Rd) and most of the state-selected land is designated (Rd) or General Use (Gu). Most of the state-owned or state-selected land along the river corridors has been designated Public Recreation and Tourism-Dispersed (Rd) and the anadromous streams and shorelands are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Areas associated with the Pebble Copper deposit that overlap into Region 10 are designated Minerals (Mi). A small amount of land at Big Mountain remains designated Settlement (Se); this designation was utilized in the original (1984) BBAP and the designation is retained in this revision. The Lower Talarik Creek Special Use Area is designated Recreation and Tourism-Public Use Sites (Rp). A number of small management units associated with airports or other such facilities are designated Public Facilities-Retain (Pr). Active materials sites are designated Materials (Ma).

### Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Within this Region, lands that contain one or more resource values, none of which is of sufficiently high value to merit designation as a primary use, and areas that are unlikely to be developed during the planning period are designated General Use. The land is to be managed for a variety of uses including the protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and the protection of heritage resources. It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. Lands designated General Use may be appropriate for conveyance to the Lake and Peninsula Borough under the Municipal

Entitlement program, subject to a Best Interest Finding by the state. The Borough has made a large municipal selection on lands designated Gu in the vicinity of Big Mountain.

- Habitat (Ha). Generally, this designation applies to areas of varied size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in a permanent loss of a population or sustained yield of a species. In Region 10 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm).
- Minerals (Mi). Areas associated with significant resources, either measured or inferred, that may experience minerals exploration or development during the planning period are designated Minerals. This is a designation that includes surface uses in support of minerals exploration and development, including tailings deposition, waste rock disposal, mineral processing facilities, administrative facilities, and residential living quarters. Land designated Minerals is to be retained in state ownership. This designation has been applied to lands associated with potential developments at the Pebble Copper deposit, which overlap into Region 10.
- Public Recreation and Tourism-Dispersed (Rd). Lands with the designation of Public Recreation and Tourism-Dispersed are to be managed so that their public recreation values are protected and maintained. Within these areas the primary surface uses are intended to be those related to hiking, hunting, fishing, wildlife viewing, and the like.
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may (only) be designated Public Recreation and Tourism-Dispersed, (Rd), Habitat (Ha), or General Use (Gu).
- Public Facilities-Retain (Pr). This designation applies to sites that are reserved for a specific public infrastructure requirement. They are to be retained in state or public ownership. In this Region, this designation applies to lands containing public facilities, commonly airports or schools. Only a small amount of acreage is affected by this designation.
- Public Recreation and Tourism-Public Use Site (Rp). This designation applies to areas with a concentration of recreational users or tourists, or that are likely to have such concentrations. Within this Region this designation applies to specific recreation sites, such as the Lower Talarik Special Use Area. Unless otherwise indicated in the Resource Allocation Table, these sites are to be retained by the state.
- Settlement (Se). This designation applies to state uplands suitable for sale, leasing, or permitting to allow private recreational or residential use. A single area of state land (R10-10) is considered appropriate for residential settlement and has been designated Settlement. This is an area near Big Mountain and is intended for either remote recreation use or subdivision development, the type to be determined at the time when

these areas are considered for disposal by the DNR. See Chapter 2 for specific requirements for these forms of settlement. Settlement lands are appropriate for conveyance to the Lake and Peninsula Borough through the Municipal Entitlement program.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region.
- Proposed Transportation Corridor. The area identified on the Region Map as a "Potential Transportation Corridor" should be retained by the state during the planning period. Authorizations granted by the DNR within or adjacent to this corridor should not preclude the future development of transportation access. Authorizations or disposals within and adjacent to this corridor should only be allowed after consultation with ADOT/PF.
- Except for areas closed to mineral entry under existing Mineral Closing Orders, all state lands within Region 10 are open to mineral entry. No additional MCOs are recommended; the only exception applies to the areas to be disposed of by the DNR for purposes of Community Settlement. Closure to mineral entry is recommended at or before plat adoption. No leasehold location orders are recommended. See the *Mineral Resources section in Chapter 2* for more details on subsurface management requirements.
- Mineral Closing and Opening Orders. This revision of the Bristol Bay Area Plan retains the mineral closing and opening orders largely implemented by DNR at the time of original plan adoption. These MCOs either close a proposed settlement area or close a number of major streams to mineral location. These include the following:
    - MCO 393 – Kvichak River, Peck's Creek, and others draining into Iliamna Lake
- Leasehold Location Orders. Leasehold Location Order No. 1 covers small portions of Region 10 within T9S535W, T9SR36W, T10SR35W, and T10SR36W (Seward Meridian). Under this order, rights to locatable minerals may be acquired only under the Leasehold Location System, AS 38.05.205, and may not be acquired by locating a mining claim under AS 38.05.195. In the affected area, an approved Plan of Operations for a mineral lease takes the place of a Land Use Permit required for unleased land. If the proposed lease activities are minor, a plan of operations is not required (11 AAC 86.800). The Plan of Operations must show how the operator proposes to comply with the lease stipulations and other pertinent guidelines in this plan.
- Retained Lands. There are no state lands within this Region that are designated to be retained except for those that are reserved as a 'Potential Transportation Corridor', and those designated Public Facilities-Retain (Pr), Mineral (Mi), or Habitat (Ha), and the Lower Talarik Special Use Area which is designated Public Recreation and Tourism-Public Use Site (Rp). Note: Certain management units that are designated Rp may be

conveyed out of state ownership and to the Borough as part of the Municipal Entitlement Act – providing the land conveyed remains public land and the public retains access to the public use site. Management unit R10-13 (Pr) is to be retained in state ownership.

- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

See the Resource Allocation Table for more detail on the upland management units.

# Resource Allocation Table for Upland Units - Region 10

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R10-01<br>Upper Talarik Creek | 41,962<br>Gu -- General Use | Map O-2 | The unit is designated General Use (Gu) and is to be managed for a variety of uses including mineral exploration and development, public recreation and tourism, and protection of anadromous fish and wildlife resources and habitat. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. See specific management requirements for anadromous streams and caribou calving areas in this Chapter. The proposed Pebble Copper transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known, or without consultation with the ADOT/PF. State land selections in this unit are considered to be a high level selection priority. | This unit consists of state-owned and state-selected land in the eastern portion of Region 10, in the general vicinity of Upper Talarik Creek. Upper Talarik Creek is cataloged as an anadromous fish stream and is noted for its good sport fishing. The area is used by moose for over-wintering and is a caribou calving area. Brown bear utilize the stream for feeding during the salmon spawning season. The unit has high exploration potential for base and precious metals. The proposed Pebble Copper transporation and road corridor extend through the middle of the unit. The unit is affected in part by MCO 393. |
| R10-02<br>Pebble2 | 25,046<br>Mi -- Minerals | Map O-2 | The general resource management intent for the Pebble Copper area is to accommodate mineral exploration and development and to allow DNR the discretion to make specific decisions as to how development may occur, through the authorization process. Also, see plan designations and management intent for the two units that border the area – R06-23.<br><br>Impacts to dispersed recreation along Talarik Creek should also be avoided. Permanent facilities related to commercial recreation are prohibited in this unit. The unit is to be retained in state ownership. | This unit is the portion of the Pebble Copper unit that extend into Region 10 from Region 6. It includes a portion of Talarik Creek. The unit is adjacent to another minerals unit (R06-23). The terrain is of low to moderate relief and vegetation consists of low to tall shrub. The unit is host to several mineral deposits, prospects, and discoveries and hosts the Pebble Copper deposit. The Pebble deposit is a very large copper-gold resource; the drill indicated resource is estimated at over 2 billion tons. Talarik Creek supports anadromous fish. The area is also a calving area for caribou. The unit is partly affected by MCO 393. The Pebble Road Corridor transects the unit. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R10-03<br>Iliamna Lake NW | 171,321<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-2 | This unit is to be retained in state ownership and managed to maintain the recreational values and uses of this large area, although mineral exploration and development are considered appropriate within the unit. Such uses are to maintain the recreational values of this area to the maximum extent practicable. DNR authorizations shall consider siting requirements that avoid or minimize impacts to principal recreational use areas. Such authorizations shall also ensure that impacts to anadromous streams and tundra swan concentrations are minimized and are consistent with the requirements for such uses in Chapter 2. The Bristol Bay transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known, or without consultation with the ADOT/PF. | This large unit is situated on the northwest side of Iliamna Lake that includes the Lower Talarik Creek and Kaskanak Creek drainages. It contains many anadromous fish streams and raptor nesting areas; Lower Talarik Creek is noteworthy for its outstanding trout fishing. The recreational values of the unit are considered to be very high and are primarily related to sport fishing. An area of tundra swan concentration occurs in the central part of the unit. The area also has significant mineral potential, indicated by the proximity to the Pebble Copper deposit and other nearby prospects. The unit is partly affected by MCO 393. |
| R10-04<br>Lower Talarik Creek | 3,120<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S6S37W Sec. 22,23, 24,25,26,27 | The unit is designated Public Recreation and Tourism-Public Use Site (Rp), managed consistent with the requirements of the Special Use Designation, and is to be retained in state ownership. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. | This unit coincides with the Special Use Area (ADL 227445) located on Lower Talarik Creek on the north shore of Iliamna Lake. Lower Talarik Creek is an anadromous fish stream and is noted for its recreational trout fishing. Under the requirements of the Special Use Area, setting up and using a camp for personal, noncommercial use is allowed between August 1 and October 31 without a permit only in a designated area adjacent to the Alaska Department of Fish and Game Cabin located in Section 26 and for no more than five consecutive days. Between August 1 and October 31, commercial recreation activities are limited to day use only, if registration has been completed under 11 AAC 96.018. This unit is affected by a municipal selection of the Lake and Peninsula Borough. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R10-05<br>Lower Talarik Creek SUA | 161<br>Rp -- Public Recreation and Tourism-Public Use Site | Map O-2<br>S6S37W | This unit is subject to cooperative agreement between the Alaska Department of Fish and Game, the Department of Natural Resources, and The Nature Conservancy, and is to be managed in accordance with the conditions of the agreement. The land is subject to restrictions on camping as outlined in the Lower Talarik Creek Special Use Area. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2. The unit is to be retained in state ownership. | This land (OSL 1285; LSH 419) is located at Lower Talarik Creek on the north shore of Iliamna Lake and within the Lower Talarik Creek Special Use Area (ADL 227445). |
| R10-06<br>Kvichak River | 265,565<br>Gu -- General Use | Map O-2 | If conveyed by the Federal government, this unit is to be managed for a variety of uses including mineral and oil and gas exploration and development, the protection of fish and wildlife resources and their habitats, dispersed recreation and tourism, and potential development of a transportation access corridor to mineral and other resources. Intensive development is not intended within the unit during the planning period except occasionally and at specific locations unless related to mineral development. The Bristol Bay transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known, or without consultation with the ADOT/PF. This is considered to be a high priority selection. | The unit consists of mostly of state-selected lands north of the Kvichak River along a potential transportation route. The terrain is mostly low-lying with little relief. Vegetation consists of lichen tundra, low shrub, and moist herbaceous tundra. The southwest portion of the unit is an area where moose are believed to rut. The unit contains anadromous fish streams including Yellow Creek. The unit contains significant mineral potential. A large number of claims have been staked in T9SR44W, T9SR43W, and T10SR44W (Seward Meridian). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R10-07<br>Kvichak/Alagnak Rivers | 187,025<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-2 | This unit, consisting of upland adjoining the Kvichak and Alagnak Rivers, is designated Public Recreation and Tourism-Dispersed (Rd) and is to be managed to maintain the current recreational values and uses of these uplands. The unit contains several municipal selections, which are considered appropriate for conveyance to the Lake and Peninsula Borough subject to a separate and subsequent Best Interest Finding. Development authorizations may be appropriate subject to the requirements of Chapter 2 and with the management intent given above. Such authorizations shall be limited to those uses that are related to commercial recreation, public facilities, or other economic activities that are of a recreation type and are consistent with the management intent given above. Leases or disposals should be limited to those uses that are related to commercial recreation, public facilities, or other economic activities that are of a recreation type. It is intended that these disposals and leases be confined to areas no greater than 5 acres in size and that there be distance separation of at least three miles, unless site conditions warrant a lesser distance. Settlement is not considered suitable in this unit. The Bristol Bay transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be issued within or near the corridor until the road alignment is known or without consultation with the ADOT/PF. | The unit consists mostly of state-selected land along the Kvichak and Alagnak Rivers. This low-lying country receives heavy use by commercial and non commercial recreationists and subsistence users. The Alagnak River is designated a Wild and Scenic River. Both rivers support large populations of anadromous fish and are important transit areas for anadromous fish as well. The Kvichak River is a navigable waterway utilized for shipping and barging. The area contains moose calving and rutting areas, streams essential to brown bears and areas used by raptors for nesting. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit, primarily scattered along the Kvichak and Alagnak Rivers. The unit encompasses part of the Nakeen-Igiugig trail. |
| R10-08<br>Big Mountain | 58,137<br>Gu -- General Use | Map O-2 | This unit, including lands that may be eventually conveyed by the Federal government, is to be managed for a variety of uses including mineral or oil and gas exploration and development, the protection of fish and wildlife resources and their habitats, and dispersed recreation. See Chapter 2 for guidelines dealing with moose calving areas. Intensive development is not intended within the unit during the planning period except occasionally and at specific locations. State land selections in this unit vary from high to low priority. | The unit consists of state-owned and state-selected land in the general vicinity of Big Mountain, south of Iliamna Lake. Vegetation consists of low shrublands and tundra. Several andaromous fish streams are present, including Pecks Creek and Belinda Creek. These streams are utilized by brown bear, especially during the salmon spawning season. Moose calving and rutting areas occur in the unit. Raptors are located in or near the unit. The unit is partly affected by LLO 1 and MCO 393. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R10-09<br>Eagle Bluff | 2600<br>Rd -- Public Recreation and Tourism-Dispersed | Map O-2<br>S9S35W | This unit is to be managed for dispersed recreation and the protection of fish and wildlife resources and their habitats. DNR authorizations shall consider siting requirements that avoid or minimize impacts to principal recreational use areas and other recreation values. Such authorizations shall also ensure that impacts to anadromous streams are minimized and are consistent with the requirements for such uses in Chapter 2. See Chapter 2 for guidelines dealing with moose rutting and calving areas. | The unit consists of state-owned land in the vicinity of Big Mountain, south of Iliamna Lake. Vegetation consists of low shrublands and tundra. Streams are utilized by brown bear, especially during the salmon spawning season. Moose calving and rutting areas occur in the unit. Raptors are located in or near the unit. The unit is partly affected by LLO 1 and MCO 393. |
| R10-10<br>Big Mountain | 1,455<br>Se -- Settlement | Map O-2<br>S9S36W | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and those for the Caribou and Moose Rutting and Calving Area, both of which are described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. | This unit is located on the south shore of Iliamna Lake and on the west flank of Big Mountain. The unit is accessible by boat or floatplane from Iliamna Lake. The road from Big Mountain airstrip is also close to the south end of the unit. The unit is utilized by moose as a rutting and calving area. The unit is affected by LLO 1 and in part by MCO 393. |
| R10-11<br>Igiugig | 171<br>Pr -- Public Facilities-Retain | Map O-2<br>S1S39W<br>Sec. 7,8 | The unit is to be managed consistent with FAA and ADOT/PF guidelines for public airport use. | This land (ADLs 221403 and 224031) is located at the Igiugig public airport and managed by the Alaska Department of Transportation and Public Facilities (ADOT/PF). The unit also includes an easement (ADL 226067) on the Newhalen River to protect the aircraft approach and departure path, as well as the transitional slopes adjacent to the runway. |
| R10-12<br>Alagnak River | 66,923<br>Gu -- General Use | Map O-2 | This unit, if eventually conveyed by the Federal government, is to be managed for a variety of uses including mineral or oil and gas exploration and development, the protection of fish and wildlife resources and their habitats, and dispersed recreation. Intensive development is not intended within the unit during the planning period except occasionally and at specific locations. The Bristol Bay transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known, or without consultation with the ADOT/PF. This is considered to be a high level selection priority. | The unit consists of two noncontiguous blocks of state-selected uplands generally north and south of the Kvichak River. Lands in the unit have little relief, and vegetation consists of tundra and low shrubland. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R10-13<br>Levelock Airport | 80<br>Pr -- Public Facilities-Retain | Map O-2<br>S12S45W Sec. 21,22, 27,28 | This land is designated Public Facilities-Retain and is to be managed by the ADOT/PF according to FAA and ADOT/PF guidelines for public airport use and in accordance with the Management Right (ADL 221434). The unit is to be retained in state ownership. | This land (ADL 221434; OSL 889) is located at the Levelock public airport and managed by the Alaska Department of Transportation and Public Facilities (ADOT/PF). |

# Region 11

## *Bristol Bay Borough Area*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 11 includes the entire uplands portion of the Bristol Bay Borough and also additional lands south and northeast of the Borough; it encompasses most of the Naknek River and King Salmon and Pauls Creek drainages (Map O-2). The western boundary is Kvichak Bay and the eastern boundary in Katmai National Park and Preserve. The Principal communities are King Salmon (pop. 478), Naknek (pop. 640), and South Naknek (149). The Region has little topographic relief.

### State Lands: Ownership and Acreage

The majority of land within Region 11 is state-owned, although Native land holdings are almost as great and are composed of the land surrounding the three principal communities. The southeast portion of the Region is Federally owned and lies within the Becharof National Wildlife Refuge. The plan applies to 325,902 acres of state-owned and state-selected uplands and 69,615 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated).

### Physical Geography

Most of Region 11 is within the Bristol Bay ecological province; a portion of the northeast and southeast area of the Region are in hilly country classified as part of the Alaska Peninsula province. Drainage is generally westward towards Kvichak Bay and the principal watercourse is that of the Naknek River which flows out of Naknek Lake. Important tributaries of the Naknek River are the southwestward flowing King Salmon and Pauls Creeks as well as the northward flowing Smelt and Chimenchun Creeks. The Region as a whole exhibits little topographic relief. However, the northeast portion of the region includes hills of the upper King Salmon Creek drainage, which have peak elevations of 2,442 feet. Most of the Region west of Naknek Lake is wetlands and underlain by only isolated masses of permafrost. Most of the country is tundra covered, although some areas northeast of King Salmon support spruce woodland.

## Climate

The climate of Region 11 is mostly maritime, characterized by cool, humid, and windy weather. Average summer temperatures range from 62° to 63°; winter temperatures average 29° to 44°. The record high is 88° and the record low is -47°. Annual precipitation is 20 inches, with 45 inches of snowfall. Fog is common in the summer months. The River is ice-free from June through mid-November.

## Other

Region 11 is almost entirely within the Naknek Quadrangle. It is within the boundaries of the Bristol Bay Native Corporation and includes the Bristol Bay Borough – Alaska's first borough, formed in 1962.

## Access

Access to Region 11 is very good since marine, river, road, and air transport are available. Despite the small size of the region, it contains seven airport facilities, and a number of others are nearby. King Salmon is a transportation hub for Bristol Bay. Formerly an Air Force Base, the state-owned airport offers an 8,500-foot paved and lighted runway, sports a 4,000-foot asphalt/gravel crosswind runway, and an FAA air traffic control tower. A 4,000-foot stretch of the Naknek River is designated for floatplanes. Four docks are available on the Naknek River. These docks are owned by the U.S. National Park Service, U.S. Fish and Wildlife Service, Alaska State Troopers, and the Bristol Bay Borough. Cargo goods are delivered to Naknek by barge and trucked upriver to King Salmon via a fifteen-mile connecting road. During winter, an ice road provides access to South Naknek. Automobiles are the primary means of local transportation; skiffs are utilized during summer.

The Port of Bristol Bay, with the main facility in Naknek, remains the largest commercial freight dock in Bristol Bay and a "hub" for Southwestern Alaska cargo. It has maintained a steady growth since beginning operations in 1983. During 1995, the port's cargo handling placed 10th in volume and 4th in dollars in exports (fish) out of all ports in the United States. Cargo operations have kept the port in the Top 25 Ports by volume and by dollars for at least the last decade.

A dirt road extends east of King Salmon to Lake Camp on the edge of Katmai National Park and Preserve. Lake Camp provides boat access to Naknek Lake. Trails extend northeast a few miles from King Salmon towards the King Salmon Creek drainage. Two RS 2477 trails extend north and south; this includes the following:

- Lewis Point-Naknek (RST No. 128)
- Naknek-Egegik (RST No. 148)

## Resources and Uses

**Cultural and Historic.** This area was settled over 6,000 years ago by Yup'ik Eskimos and Athabascan Indians and was historically Sugpiaq Aleut territory. The Sugpiaqs traveled between Katmai and the Naknek River, pursuing seasonal food sources. In 1821, the original Eskimo village of "Naugeik" was noted by Capt. Lt. Vasiliev. By 1880, the village was called Kinuyak. It was later spelled Naknek by the Russian Navy. The Russians built a fort near the village and fur trappers inhabited the area for some time prior to the U.S. purchase of Alaska. South Naknek was settled permanently after the turn of the century as a result of salmon cannery development. Some villagers relocated from New and Old Savonoski, near the "Valley of Ten Thousand Smokes." South Naknek is one of the many villages along the coast where Laplanders were brought in to herd reindeer. The herds were purchased in the 1930s by the BIA for the local Native economy.

The first salmon cannery opened on the Naknek River in 1890. By 1900, there were approximately 12 canneries in Bristol Bay. The Homestead Act enabled canneries to acquire land for their plants, and also made land available to other institutions and individuals. The management unit, owned by the Russian Orthodox Church on the north bank of the River, was the first land recorded in Naknek. Squatters built shelters on the church property and were eventually sold lots in what became the center of Naknek. A post office was established in 1907.

In the 1930s, an air navigation silo was built at the site of present-day King Salmon. At the beginning of World War II, the U.S. built an Air Force base. It was maintained by the Federal Aviation Administration throughout the war. In 1949, a post office was established, and the U.S. Army Corps of Engineers constructed a road to Naknek. Other government quarters, such as National Park Service, Fish & Game, and the weather bureau, were developed. The community has grown as a government, transportation, and service center for the commercial red salmon and recreational visitor industries. The air force base was closed in 1993.

The state Office of History and Archeology lists fifty-two sites in Region 11; thirty-five of these are historic, eight are prehistoric, and nine are of mixed origin. Most of the historic and archeological sites occur along the course of the Naknek River. New sites are discovered periodically and added to the Alaska Heritage Resource Database when reported.

**Economic.** Government jobs, transportation and fishing-related employment are the mainstays of the King Salmon area economy. Many residents hold commercial fishing permits. Air services employ an important segment of the community; King Salmon is a major air trans-shipment point for Bristol Bay salmon. The Bristol Bay red salmon fishery is the largest in the world, although there have been relatively poor seasons in recent years. Processed salmon are trucked over the Naknek-King Salmon road each summer, where jets transport the fish to the lower 48. King Salmon is also a departure point for the McNeil River State Game Sanctuary and Katmai National Park and Preserve, which includes Brooks Camp and the Valley of Ten Thousand Smokes. Fishing for all five species of salmon and rainbow trout are one of this area's top attractions. King Salmon airport is the summer hub for backcountry and fishing

adventures in the area. The Air Force Base has been closed, although it is maintained under contract by Chugach Development Corp. Trident Seafoods, North Pacific Processors, Ocean Beauty and other fish processors operate facilities in Naknek. Naknek is the seat of the Bristol Bay Borough and King Salmon is headquarters for the Lake and Peninsula Borough.

**Recreation.** The Bristol Bay Borough can be considered the "gateway" to Katmai National Park and Preserve. Most travelers to the park pass through King Salmon airport. The Katmai National Monument was first established in 1918 to preserve the Valley of Ten Thousand Smokes, an area of streaming ash flows created by Novarupta Volcano. The Park is famous for brown bear, fish, wilds, and is the site of the Brooks River National Historic Landmark with North America's highest concentration of prehistoric human dwellings (approximately 900).

Sport fishing is a very important seasonal resource in Region 11. The Naknek River is host to a variety of sport fish including king, silver, and red salmon as well as large rainbow trout and Arctic char. A number of lodges and guides in the Naknek-King Salmon area cater to the recreational and commercial recreational sport fishing industry.

**Minerals.** The Region has no known mineral occurrences and most of the bedrock is covered by Quaternary alluvium.

**Oil and Gas.** Potential exists in the subsurface for both oil and gas resources. Because the Tertiary sedimentary on-lap assemblage contains some intercalations of subbituminous coal, there is also potential for coalbed methane production. The northern half of the Alaska Peninsula is geologically promising for oil and gas development, including most of Region 11.

State and Native landowners are currently pursuing a new hydrocarbon exploration licensing and leasing program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Materials.** Most materials sites are located along the Naknek-King Salmon road. Several materials sites are present.

**Forestry.** Region 11 is at the southern extent of the treed areas of Bristol Bay. In general, there are no forested lands of significance south of Region 11; on a regional scale the Naknek River is commonly considered the southern extent of forested lands. The non-commercial forests in the Naknek-King Salmon area have a modest to very low suitability for human use.

**Fish and Wildlife.** All five species of Pacific salmon – king, sockeye, pink, silver, and chum – spawn in the Naknek River system. Sockeye are the most important commercially. Freshwater sport fish, including rainbow trout, Arctic char, Dolly Varden, and northern pike, are generally

prolific throughout the area. The Naknek drainage experiences some of the highest levels of sport fishing effort in the Bristol Bay area; in 2002 the drainage is estimated to have experienced 24,401 angler-days.

King Salmon Creek and Pauls Creek support moose and King Salmon Creek is noted as an important bear stream. The Region is within game management unit no. 9 which has the highest brown bear harvest in Alaska (682 in 2001-2002). Region 11 is within the range of both the Mulchatna Caribou Herd and the Northern Alaska Peninsula Herd.

Eagle nesting sites are concentrated along the middle and upper Naknek River as well as King Salmon Creek. The western two-thirds of Region 11 consists of low-lying, poorly drained land that contains an abundance of lakes, ponds, and marshes. This area, combined with the Naknek River, is good waterfowl habitat that supports mallards, gadwalls, teal, and some northern shovelers.

# Management Considerations: Local and State Plans

A number of local, state, and federal management plans were considered in development of this plan. Local plans include the Bristol Bay Borough Coastal Zone Management Plan, the Lake and Peninsula Borough Coastal Zone Management Plan, the Lake and Peninsula Borough Comprehensive Plan, and the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008. State plans include the Bristol Bay Area Plan and the Southwest Alaska Transportation Plan. Federal plans include the Katmai National Park and Preserve, Aniakchak National Monument and Preserve, and Alagnak Wild River Compendium – 2003.

Region 11 encompasses the Bristol Bay Borough and portions of the Lake and Peninsula Borough. Both the Comprehensive Plan and the District Coastal Management Plan of the Lake and Peninsula Borough and Bristol Bay Borough apply to portions of Region 11. The Comprehensive Plan focuses on economic and infrastructure development issues and does not contain specific land use standards or a land use map. The Enforceable Policies of the District Coastal Management Plan are extensive; policies affecting anadromous streams, bald eagle nests, oil and gas development, material extraction and mining can be applicable, under certain instances, to state lands. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by DNR prior to issuing an authorization.

Region 11 is also within the area covered by the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, which was developed for the U.S. Department of Commerce Economic Development Administration by the Southwest Alaska Municipal Conference (July 2003). This document developed a number of goals, objectives, and strategies to facilitate and support efforts that retain and grow the region's wealth, including diversifying the economic base.

The Bristol Bay Area Plan (1984) affected all state lands in the Region until this revision. The original Area Plan managed the Region for fisheries, including harvest and processing, wildlife harvest, recreation, community expansion and transportation, and oil and gas exploration and development in upland areas. This revision replaces and supersedes the 1984 Area Plan.

The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) identified a Cook Inlet to Bristol Bay Transportation Corridor, which in general extends from Cook Inlet to South Naknek connecting with the communities of Pedro Bay, Iliamna, Newhalen, Igiugig, Levelock, King Salmon, and Naknek. The transportation corridor connects the rich seafood resources and communities in Bristol Bay, as well as the Iliamna Lake communities, with resupply, support and market centers in the Alaskan railbelt. It consists of a marine segment (Cook Inlet), an intermodal transfer location at Williamsport or Iniskin Bay, and then primarily overland and riverine routes along Iliamna Lake and the Kvichak River valley to the port town of Naknek on Bristol Bay. A tie-in to the Pebble Copper mine is also a possibility. The function of the route is primarily logistical. Transportation improvements along this corridor would lower the cost of transport, thus yielding benefits to the quality of life for residents and helping to stimulate economic growth.

The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) also identified an Alaska Peninsula Transportation Corridor, which in general extends from South Naknek to the Chigniks connecting with the communities of Egegik, Pilot Point, Ugashik, and Port Heiden. The Alaska Peninsula Corridor is an overland route linking the communities of the Alaska Peninsula from Ivanof Bay to Naknek. The key facility in this corridor is the port at Chignik, from which fuel and supplies can be disbursed to other communities via road connection. From Chignik the corridor extends west along the Gulf of Alaska coast to Perryville and Ivanof Bay. It also extends from Chignik to Chignik Lake and Chignik Lagoon, then crosses the Alaska Peninsula to Port Heiden. From Port Heiden the corridor extends north, connecting Pilot Point, Ugashik, Egegik and South Naknek, and tying into the Cook Inlet to Bristol Bay Corridor at Naknek.

### Municipal Selections

Most of the Bristol Bay Borough selections, under its municipal entitlement, have been satisfied. The Borough is still entitled to approximately 350 acres of state land.

# Management Summary: Uplands

State land in Region 11 is to be managed for a variety of multiple uses, including settlement, materials extraction, public facilities, dispersed public recreation, mineral exploration and development, and maintenance of sensitive wildlife habitats. Oil and gas exploration and development is also appropriate within the Region. The majority of lands are designated General Use (Gu). Because of the generally good topographic conditions and relatively good accessibility of certain of these lands, several tracts of state land in the King Salmon Creek area have been designated Settlement (Se) in order to allow for community expansion and make

available additional lands for selection by the Bristol Bay Borough. Anadromous fish streams are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). A large number of small management units associated with public facilities and administration are designated Public Facilities-Retain (Pr). Active materials sites are designated Materials (Ma).

## Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Within this Region, lands that contain one or more resource values, none of which is of sufficiently high value to merit designation as a primary use, and areas that are unlikely to be developed during the planning period are designated General Use. The land is to be managed for a variety of uses including protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and protection of heritage resources. It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. Selections within these lands may be appropriate for conveyance to a Borough under the Municipal Entitlement program, subject to a Best Interesting Finding by the state.
- Habitat (Ha). Generally, this designation applies to areas of varied size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in the permanent loss of a population or sustained yield of a species. In Region 11 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm). The lands are to be retained in state ownership.
- Materials (Ma). Lands designated materials are those where active or inactive materials sites are present. These can include common varieties of sand, gravel, and stone or are sites associated with materials extraction that contain conveyors, crushing, sizing, and other processing equipment. Until the materials have been exhausted, these areas are to be retained in state ownership; thereafter, other forms of authorizations or disposals may be appropriate. Authorizations should be done in consultation with the Department of Transportation and Public Facilities.
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may (only) be designated Public Recreation and Tourism-Dispersed, (Rd),

Habitat (Ha), or General Use (Gu). Navigable waterbodies, stream and lakes, in Katmai National Park and Preserve, east of Regions 10 and 11 are designated for Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd).

- Public Facilities-Retain (Pr). This designation applies to sites that are reserved for a specific public infrastructure requirement. They are to be retained in state or public ownership. In this Region, this designation applies to lands containing public facilities, commonly airports or schools. Only a small amount of acreage is affected by this designation.
- Settlement (Se). This designation applies to state uplands suitable for sale, leasing, or permitting to allow private recreational or residential use. Within this Region one area of state land is considered appropriate for settlement and has been designated Settlement (Se). This area is generally located on the north and south sides of King Salmon Creek. These areas are intended for Community Settlement; see Chapter 2 for specific requirements for this form of settlement. Settlement lands are appropriate for conveyance to the Borough.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region.
- Proposed Transportation Corridor. The area identified on the Region Map as a "Potential Transportation Corridor" should be retained by the state during the planning period. Authorizations granted by DNR within or adjacent to this corridor should not preclude the future development of transportation access. Authorizations or disposals within and adjacent to this corridor should only be allowed after consultation with ADOT/PF.
- Except for areas closed to mineral entry under existing Mineral Closing Orders, all state lands within Region 11 are open to mineral entry. No additional MCOs are recommended; the only exception applies to the areas to be disposed of by DNR for purposes of Community Settlement. Closure to mineral entry is recommended at or before plat adoption. No leasehold location orders are recommended. See the *Mineral Resources section in Chapter 2* for more details on subsurface management requirements.
- Mineral Closing and Opening Orders. This revision of the Bristol Bay Area Plan retains the mineral closing and opening orders, largely implemented by DNR at the time of original plan adoption. No streams in Region 11 are affected by MCO 393.
- Mineral Order No. 791 is an interim order (as of July 11, 2003) that precludes shallow natural gas leasing and oil and gas exploration licensing. This order has no effect on locatable or leaseable minerals other than shallow natural gas leasing and oil and gas exploration licensing. The order affects the southern two-thirds of Region 11.
- Retained Lands. There are no state lands within this Region that are designated to be retained except for those that are reserved as a 'Potential Transportation Corridor', and those designated Public Facilities-Retain (Pr) or Habitat (Ha). Note: Certain

management units that are designated Rd may be conveyed out of state ownership and to the Borough as part of the Municipal Entitlement Act – providing the land conveyed remains public land and the public retains access to the public use site.

- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

See the Resource Allocation Table for more detail on the upland management units.

# Management Summary: Tidelands and Submerged Lands

There are few tideland management units within Region 11, reflecting the relatively small size of the region itself. Tidelands adjoining this region occupy the eastern portion of Kvichak Bay, extending from its mouth to the mouth of the Naknek River where it flows into the bay. Naknek and South Naknek are situated on the north and south banks of the Naknek River near its mouth. King Salmon is situated on the river about 15 miles upstream from the river mouth. This portion of the Naknek River to King Salmon is tidally influenced, and the designation and management intent for this part of the river is covered in this section. Much of this area consists of extensive shallow and exposed tidal flats with high biomass content. Large areas of exposed tidal flats are also common south of the Naknek River, but are only of moderate biomass. Native and private lands adjoin these tidelands.

This region is the major commercial fisheries center for Bristol Bay, and the community of King Salmon is the central shipping point for the salmon industry. There are several canneries and fish processing facilities in and around Naknek. Commercial harvest consists almost entirely of salmon. Pink, sockeye, chinook, chum and coho salmon (purse seine and drift net) are harvested in large quantities at the mouth of the Naknek River around Naknek, South Naknek and Libbyville. The harvesting of fish and fish products is the primary subsistence activity around Naknek and King Salmon, and consists almost exclusively of salmon, but occasionally other fish. Sea mammals and seabirds and their eggs are also harvested, to a lesser extent, as a food staple.

## Plan Designations and Management Intent

**Coastal Tidelands.** These tidelands[13] are designated General Use. Development authorizations are considered appropriate subject to the protection of sensitive resources and areas.

**Kvichak Bay (R05T-02).**[14] Kvichak Bay borders on both Region 5 and Region 11, but is being addressed as one management unit (R05T-02) in order that it can be managed as one unit. Both the Kvichak and the Naknek Rivers flow into this bay at it's head. Description of the eastern portion of this management unit is being discussed here to the extent it affects the management units in Region 11.

The eastern part of Kvichak Bay consists of extensive shallow and exposed tidal flats having high biomass content. Large areas of exposed tidal flats are also common south of the Naknek River. This bay provides feeding concentration areas for Beluga whales, and is also an important beluga whale calving habitat. Harbor seals are common at Graveyard Point near the mouth of the Kvichak River. Shorebirds occur near the mouths of the Naknek River, and both shorebirds and waterfowl are present along the coast south of the Naknek River. The headwaters of the Naknek River support particularly high densities of staging swans and geese during the spring. See also, *Region 5*.

Development authorizations may be considered appropriate but must avoid or minimize impacts to the beluga whale population during that part of their life-cycle involving calving and impacts to the area of the harbor seal haulout, which is situated in the central part of Kvichak Bay called 'Deadman Sands'.

**Naknek Community (R11T-01) and King Salmon (R11T-02).** The areas of the Naknek River near the community of Naknek (R11T-02) and King Salmon (R11T-02) are designated Waterfront Development, to accommodate the needs of the extensive fishery in this area, including its tideland support facilities. Development authorizations are considered appropriate subject to the protection of sensitive resources and areas.

See the Resource Allocation Table for more detail on tideland management units R11T-01 and R11T-02. See also, the *Resource Allocation Table for Region 5* for more detail on tideland management unit R05T-02.

[13] Tidelands along the coast not included in R05T-02.

[14] The tideland management unit for Kvichak Bay consists of only one unit (R05T-02), but the description of the eastern portion of this tideland unit is provided in this region to ensure that the tideland resources of Kvichak Bay are properly understood.

# Resource Allocation Table for Upland Units - Region 11

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R11-01<br>North Region 11 | 145,038<br>Gu -- General Use | Map O-2 | This unit is designated General Use (Gu). These lands should be managed for a variety of uses including minerals, oil and gas exploration and development, protection of fish and wildlife and associated habitat, and dispersed recreation and tourism. The unit is not suitable for settlement. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations. The Bristol Bay transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known, or without consultation with the ADOT/PF. Lands crossed by the Pike Ridge Trail have been proposed for a land exchange. This trail, currently used by off-road vehicles (ORVs), follows a prominent ridge line. The stair-step boundary of Katmai National Park and Preserve crosses the ridgeline back and forth, thus alternating management of the trail between DNR and the National Park Service. The park boundary is difficult to identify in the field and differences between the two agencies' ORV regulations creates management problems and uncertainty for trail users. The intent of the exchange is to reconfigure the park boundary and land ownership through a land exchange that would generally place the park boundary along the ridgeline, excluding the trail, so the trail would no longer cross lands managed by the National Park Service. Those lands that come into state ownership will be managed consistent with intent for Unit R11-01. Lands that are within this unit can be traded to the Park Service without amending the plan. | This is a large unit of state-owned and state-selected land in the northern portion of Region 11. A variety of terrain is present from the hilly country in upper Salmon Creek to low-lying poorly drained lands west of King Salmon Creek. It is vegetated in low shrub and lichen tundra. King Salmon and Pauls Creek are cataloged as anadromous fish streams. Brown bear utilize these streams during the spawning season. Moose use the upper King Salmon and Pauls Creeks areas for rutting. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R11-02<br>King Salmon Creek | 13,894<br>Se -- Settlement | Map O-2<br>S17S44W, S17S45W | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and those for the Caribou and Moose Rutting and Calving Area, both of which are described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. Should the Bristol Bay Borough make land selections in the unit under the Municipal Entitlement program, such selections are appropriate for conveyance. The Bristol Bay transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known or without consultation with the ADOT/PF. Lands crossed by the Pike Ridge Trail have been proposed for a land exchange. This trail, currently used by off-road vehicles (ORVs), follows a prominent ridge line. The stair-step boundary of Katmai National Park crosses the ridgeline back and forth, thus alternating management of the trail between DNR and the National Park Service. The park boundary is difficult to identify in the field and differences between the two agencies' ORV regulations creates management problems and uncertainty for trail users. The intent of the exchange is to reconfigure the park boundary and land ownership through a land exchange that would generally place the park boundary along the ridgeline, excluding the trail, so the trail would no longer cross lands managed by the National Park Service. Those lands that come into state ownership will be managed consistent with intent for Unit R11-01. Lands that are within this unit can be traded to the Park Service without amending the plan. | This unit is made up of two areas of state-owned and state-selected land northeast of the community of King Salmon in the vicinity of Eskimo Creek. This area of level terrain is vegetated in tall and low shrubs or tundra and considered suitable for settlement. Trails from King Salmon extend into the unit. King Salmon Creek is an anadromous fish stream and the area is utilized by moose for rutting. |
| R11-03<br>North Naknek Airport | 90<br>Pr -- Public Facilities-Retain | Map O-2<br>S17S47W Sec. 3 | This unit is to be managed by ADOT/PF consistent with the FAA standards and the conditions given in conveyance documents, management agreements, and limited state holdings. The unit is to be retained in state ownership. | This unit is an airport facility adjacent to the community of Naknek. Much of the state land is owned by ADOT/PF (OSL 905) and/or managed by them under management agreement (ADLs 221493 and 18247) and limited state holding (LSH 223) for the purposes of administering an airport facility. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R11-04<br>Naknek Admin. Site | 6.96<br>Pr -- Public Facilities-Retain | Map O-2<br>S17S47W Sec. 2 | The unit is to be managed as public facilities for the administration of road and airport maintenance according to the provisions of the Management Right. The unit is to be retained in state ownership. | This small unit of state land (OSL 121) is located in the community of Naknek and is used as an administrative site for road and airport maintenance at the Naknek airport under a management agreement (ADL 221982). |
| R11-05<br>Naknek Materials Site | 53<br>Ma -- Materials Site | Map O-2<br>S17S46W Sec. 4 | The unit is to be managed as a materials site. Upon exhaustion of the resource, it is to be rehabilitated according to state reclamation standards and may eventually be appropriate for disposal. | This is a small unit between the communities of Naknek and King Salmon. This area had been used as a materials site under a sale agreement with the Moorcroft Construction Co. (ADL 226516) that has since closed. |
| R11-06<br>Naknek Road | 57<br>Pr -- Public Facilities-Retain | Map O-2<br>S17S46W | This unit is to be retained by the state and managed as a public road. | This unit is the Naknek road that connects units R11-05 and R11-07. It is surrounded by land that has been conveyed to the municipality. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit. |
| R11-07<br>Naknek DOT Sites | 240<br>Ma -- Materials Site | Map O-2<br>S17S46W Sec. 1,2 | The unit is to be managed as a materials site by the ADOT/PF. Upon exhaustion of the resource it is to be rehabilitated under state reclamation standards and may eventually be appropriate for disposal. No disposals should be authorized without consulting with the ADOT/PF. | This unit is comprised of two small areas between the communities of Naknek and King Salmon that are managed by ADOT/PF under an ILMT agreement (ADLs 19371, 19893, and 19380) and used as materials sites. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit. |
| R11-08<br>South Naknek Airport | 263<br>Pr -- Public Facilities-Retain | Map O-2<br>S17S47W Sec. 14,15 | This unit is to be managed by ADOT/PF consistent with FAA standards and the conditions given in the management agreement and limited state holding. The unit is to be retained in state ownership. | This unit contains airport facilities adjacent to the community of South Naknek. Much of the state land is owned by ADOT/PF (OSL 921) and/or managed by them under management agreements (ADLs 33646 and 221506) and limited state holdings (LSH 298) for the purposes of administering an airport facility. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R11-09<br>King Salmon Airport | 1,558<br>Pr -- Public Facilities-Retain | Map O-2<br>S17S45W Sec. 22-26 | This unit is to be managed by ADOT/PF consistent with FAA standards and as conditioned by the conveyance (OSL 332). The unit is to be retained in state ownership. | This unit is an airport facility adjacent to the community of King Salmon. Much of the state land is owned by ADOT/PF (OSL 332 ) and managed by them for the purposes of running an airport facility. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit. |
| R11-10<br>ADF&G Admin Site | 13.21<br>Pr -- Public Facilities-Retain | Map O-2<br>S17S45W Sec. 23,26 | This unit is to be managed by ADF&G consistent with the standards and the conditions given in management agreements and conveyance documents. The unit is to be retained in state ownership. | This unit is adjacent to the King Salmon Airport and the Naknek river on state-owned land (OSL 374). It is managed by ADF&G under an ILMT (ADL 41020) and is used as their King Salmon headquarters and office facility. There are easements on the property issued to the US Fish and Wildlife Service for a leach field for a sewer system (ADL 220685) and the Bristol Bay Borough for a right of way for the King Salmon City's sewer pipeline (ADL 225700). |
| R11-11<br>South Region 11 | 164,691<br>Gu -- General Use | Map O-2 | This unit is designated General Use (Gu). These lands should be managed for a variety of uses including minerals and oil and gas exploration and development, protection of fish and wildlife and their associated habitat, and dispersed recreation. The unit is not suitable for settlement. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. See particularly the requirements for tundra swans protection in this Chapter. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations. The Alaska Peninsula transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known or without consultation with the ADOT/PF. | This is a large unit of state-owned and state-selected land in the southern portion of Region 11. The terrain consists of low-lying lands vegetated with low shrub and lichen tundra. The unit contains many lakes, ponds, marshes and other wetlands. Several of the lakes are large enough to accommodate floatplane landings. Moose and caribou both use the eastern portion of the unit for rutting grounds. Concentrations of tundra swans occur in the central portion of the unit. The unit has potential for discovery of oil and gas resources. |

# Resource Allocation Table for Tideland Units - Region 11

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R11T-01<br>Naknek | 45<br>Wd -- Waterfront Development | Map O-2<br>S17S47W | Unit is designated Waterfront Development. Manage unit to support commercial and industrial uses and structures. | Unit is situated on the Naknek River, near the mouth, at the community of Naknek. Unit consists of a number of subunits within the Naknek River, many of which are affected by tideland leases issued to seafood processors. Uplands are often occupied by industrial structures associated with the seafood processing industry. The river at Naknek contains a number of private facilities, which support the seafood industry. |
| R11T-02<br>King Salmon | 260<br>Wd -- Waterfront Development | Map O-2<br>S17S45W | Unit is designated Waterfront Development. This unit is to be managed so as to accommodate commercial and industrial in-river uses. | Unit is situated within the Naknek River adjacent to the community of King Salmon. Unit is affected by a number of tideland leases issued for in-river structures, principally seasonal docks.<br><br>King Salmon is the air transportation and shipping center for all of the Bristol Bay commercial salmon industry. Scheduled jet service is provided at the state-owned upland airport and the in-river tidelands include an extensive floatplane landing area. King Salmon is also the transportation hub for wilderness, sport fishing and recreational excursions to the several parks, preserves and sanctuaries in the Bristol Bay area and on the Alaska Peninsula. Salmon is the primary subsistence staple for area residents. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R11T-03<br>Kvichak Bay, South | 69,615<br>Gu -- General Use | Map O-2 | Manage for a variety of uses and resources. Protect important concentrations of pelagic birds, sea birds, and waterfowl. Consult with NMFS for the occurrence of whales and harbor seals within this tideland unit prior to issuing an authorization. Maintain opportunities for commercial and subsistence harvest. This unit is included within the Bristol Bay Fisheries Reserve. | This unit occupies a very small part of the coast within Region 11; almost the entirety of the tide and submerged lands within this Region are contained within R05T-02, which occupies Kvichak Bay proper. This unit occupies a small area immediately south of R05T-02. Consult Plan Map O-2.<br><br>This unit is characterized by shallow areas consisting of either exposed or sheltered tidal flats, the latter are common south of the Naknek River. Shorebirds and waterfowl are present within this unit. Marine mammals (primarily harbor seals) and whales are common in R05T-02 and may also occur at times within this unit, although the highest concentration areas of both occur in R05T-02.<br><br>There is a commercial and subsistence harvest of salmon in this unit. |

# Region 12

# *Egegik, Becharof*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 12 includes the uplands and tidelands on a portion of the Alaska Peninsula, generally south of the Bristol Bay Borough, that contains most of the Egegik-Becharof Lake drainage and borders on the western shore of the Ugashik Lake system (Maps O-2 and O-3). The Region is bounded on the northeast by the Katmai National Park and Preserve, the Lake and Peninsula Borough boundary, and the western shore of Ugashik Lake. The southern boundary is generally north of Pilot Point. The principal community is Egegik (pop. 127).

### State Lands: Ownership and Acreage

State-owned land dominates the western one third of the Region while much of the eastern two-thirds is Federally owned. Native ownership of land is concentrated around the community of Egegik and west of Becharof Lake. The eastern portion of the Region is within the Becharof and Alaska Peninsula National Wildlife Refuges. The Egegik Critical Habitat Area is contained within Region 12. The plan applies to 884,300 acres of state-owned and state-selected uplands and 127,229 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated).

### Physical Geography

The western portion of Region 12 is within the Bristol Bay Lowlands ecological province; the eastern portion of the Region is in the Alaska Peninsula ecological province. Drainage is predominantly westward towards Bristol Bay. The principal drainages are the King Salmon River, which flows westward from Katmai National Park and Preserve, and the Egegik River, which flows from Becharof Lake; also included is the upper section of the Ugashik River and the Kejulik River. The western two-thirds of the Region is low-lying country with abundant lakes, ponds, and marshes. The eastern one-third encompasses the spine of the Aleutian Range and has considerable relief. The greatest relief occurs around Mount Peulik (elev. 4,835) where over 4,921 feet of relief is present. In addition to this peak, other notable topographic and geographic features include Mount Simeon, Mount Burls, Mount Lees, and Mount Ugashik and The Gas Rocks, south of Becharof Lake, and Whale Mountain north of the lake. Blue Mountain is a notable topographic feature on the west side of Upper Ugashik Lake.

## Climate

The climate of Region 12 is predominantly maritime, characterized by cool, humid, and windy weather. Average summer temperatures range from 44° to 65°; winter temperatures range from 24° to 40°. The record high is 88° and the record low is -47°. Annual precipitation is 20 to 26 inches, with 45 inches of snowfall. Fog is common in the summer months. The King Salmon River is usually ice-free from June through mid-November.

## Other

Region 12 is primarily within the Naknek, Ugashik, Mt. Katmai, and Karluk Quadrangles. It is within the boundaries of the Bristol Bay Regional Native Corporation and the Lake and Peninsula Borough.

## Access

Access to Region 12 is limited to marine, river, or air transport. Egegik is accessible by air and water. A new City-owned 5,600' long by 100' wide lighted gravel runway with crosswind airstrip is located 2 miles southwest of Egegik. Scheduled and charter flights are available. The Bartletts also maintain a private 2,800' airstrip across from Coffee Point. A new public dock was recently completed; the boat harbor accommodates up to 150 vessels. A boat haulout is available. Two privately-owned docks and marine storage are also available. Barge services are provided from Anchorage and Seattle. Skiffs, ATVs and snowmachines are the primary means of local transportation.

Numerous trails (RS 2477) extend from Egegik to other portions of the Region. Trails extend from Egegik to Becharof Lake and around both sides of the lake; trails also extend along the coast north from Egegik to South Naknek and south to Pilot Point. Trails wholly or partially in the Region include the following:

- Egegik-Cold Bay (RST No. 221)
- Egegik-Kanatak (RST No. 68)
- Egegik-Pilot Point-Ugashik (RST No. 1211)
- Island Bay-Salmon Creek Trail (RST No. 282)
- Kanatak-Becharof Lake Road (RST No. 1176)
- Naknek-Egegik (RST No. 148)
- Portage Bay-Mt. Demian Oil Camp (RST No. 367)

## Resources and Uses

**Cultural and Historic.** According to anthropologists, settlement of the Bristol Bay region first occurred over 6,000 years ago. Yup'ik Eskimos and Athabascan Indians jointly occupied the area. Aleuts arrived in later years. The first recorded contact by non-Natives was with Russian fur traders between 1818 and 1867. Local people would travel each year from Kanatak on the Gulf coast through a portage pass to Becharof Lake, and hiked or kayaked on to the Egegik Bay area for summer fish camp. In 1895, an Alaska Packers Association salmon saltery was established at the mouth of Egegik River, and a town developed around the former fish camp.

During the influenza outbreaks beginning in 1918, Natives from other villages moved to Egegik in an attempt to isolate themselves from the disease. During World War II, men from Egegik were enlisted to help build the King Salmon airport, with many subsequently serving in Dutch Harbor and elsewhere. Egegik later grew into a major salmon production port. Egegik incorporated as a second-class city in 1995.

The state Office of History and Archeology lists twenty-two sites in Region 12; fifteen of these are prehistoric, three are historic, and four are of mixed origin. Most of the historic and archeological sites occur near Egegik and along the western shore of Becharof Lake. Others are found along the major streams and near the connection between Upper and Lower Ugashik Lakes. New sites are discovered periodically and added to the Alaska Heritage Resource Database when reported.

**Economic.** The economy is based on subsistence harvest, commercial fishing and fish processing. During the commercial fishing season, the population swells by 1,000 to 2,000 fishermen and cannery workers. Forty-five residents hold commercial fishing permits. Five on-shore processors are located on the Egegik River, three on the north shore and two on the south shore, including Woodbine Alaska Fish Co., Big Creek Fish Co., Clark Fish Co. and Alaska General Seafoods. Numerous floating processors participate in the Egegik fishery. Subsistence hunting and fishing activities are an important part of the lifestyle and local diet. Seal, beluga, salmon, trout, smelt, grayling, clams, moose, bear, caribou, porcupine, waterfowl and ptarmigan are utilized. Locals also gather berries and wild greens each season.

**Recreation.** Sport fishing is a seasonal resource in Region 12. A few fishing lodges and hunting and fishing guides are centered in the Region. These occur in the vicinity of Egegik and near Blue Mountain. The area offers outstanding bear hunting and sport fishing for trophy-size Arctic char, Arctic grayling, and salmon. Commercial guide services are available for hunting and fishing activities. Other recreational opportunities include flightseeing, observing and photographing wildlife, hiking, boating, and camping.

**Minerals.** Mineral sands are known to occur along the beaches on the west side of the Alaska Peninsula and several have been sampled by U.S. Bureau of Mines personnel. One of the occurrences is on the beaches south of the Egegik Critical Habitat Area. The Egegik Iron-Titanium Beach placers occur on the west side of the Alaska Peninsula, ten miles southwest of the village of Egegik. The placer occurrences are located along approximately eight miles of beach, facing Bristol Bay. There are no active mining claims in the area. The beach varies in width from a hundred yards to a mile or more. The only work of significance has been a sampling program by the U.S. Bureau of Mines (RI 6214) in 1963; during this program twenty-six auger and one shovel sample were collected and analyzed for iron and titanium. The deposits should be considered potentially economic since sampling was wide-spaced and some samples are within the range of grades being exploited in Australia and South Africa. Considerable work will be necessary to develop the resource. Another mineral sand occurrence (Azure prospect) is found along the beach approximately 14.3 miles south of the Egegik placer.

No lode occurrences have been identified on state lands in Region 12. However, a number of these as well as associated placer occurrences are on Federal and Native land along the spine of the Alaska Peninsula in the extreme eastern portion of the Region. Approximately one dozen prospects and occurrences are known. The majority of these are gold and copper prospects and some have associated placer occurrences; molybdenum, iron, silver, and uranium are also found and are commodities of interest.

**Oil and Gas.** Region 12 has high potential for the discovery of oil and gas. The western portion of the Region is underlain by Tertiary Milky River, Bear Lake, Stepovak, and Meshik formations. Elsewhere on the Alaska Peninsula the Milky River and Stepovak formations are known to contain oil and gas shows. Oil and gas seeps occur naturally in the Region, especially the eastern portion and the Gas Rocks are on Lake Becharof is a well known gas seep. Three widely spaced wells have previously been drilled on state land in Region 12: the Great Basins No. 2 well, drilled to 8,865 feet in 1959 by General Petroleum Corp.; Great Basins No. 1 well, drilled to 11,080 feet in 1959, also by General Petroleum Corp.; and the Becharof No. 1, drilled in 1985 to a depth of 9,023 feet by Amoco Production Company.

State and Native landowners are currently pursuing a new hydrocarbon exploration licensing and leasing program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Geothermal.** Two thermal springs occur in the Region – both are located near the Gas Rocks area near the south shore of Becharof Lake. West Ukinek Spring has a temperature of 178° F, and nearby Gas Rocks Hot Spring issues forth at 127° F. Both are too far from an inhabited location to be utilized.

**Materials.** There are no active materials sites in the Region.

**Forestry.** There are no significant forestry resources in Region 12.

**Fish and Wildlife.** The eastern portion of Region 12 encompasses the Becharof National Wildlife Refuge. It encompasses about 1.2 million acres. Landforms on the Refuge include volcanic mountains, sea cliffs, glacial lakes including Becharof Lake (second largest lake in Alaska) and low tundra wetlands. The eastern one-third of the refuge is designated Wilderness. Important fish and wildlife resources include some of the densest concentrations of brown bears in the world. Barren-ground caribou are common, as are moose and wolves. Other mammals include wolverines, river otters, red fox and beaver. The western portion of the Region is low lying with many lakes, ponds, marshes and other waterbodies; waterfowl, seabirds and other migratory birds are abundant in the summer. Five species of Pacific salmon inhabit the Region, as do rainbow trout, Arctic char and Arctic grayling. Region 12 also encompasses the Egegik

Critical Habitat Area. This legislatively designated area was created to protect habitat that supports migratory stopover areas for large number of ducks, geese, and shorebirds in the spring on their way to northern nesting grounds and in the fall on their return to southern wintering area.

# Management Considerations: Local and State Plans

A number of local, state, and federal management plans were considered in development of this plan. Local plans include the Lake and Peninsula Borough Coastal Zone Management Plan, the Lake and Peninsula Borough Comprehensive Plan, and the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008. State plans include the Bristol Bay Area Plan and the Southwest Alaska Transportation Plan. Federal plans include the Alaska Peninsula and Becharof National Wildlife Refuges Draft Comprehensive Conversation Plan.

Region 12 is located within the boundaries of the Lake and Peninsula Borough. Both the Comprehensive Plan and the District Coastal Management Plan of the Lake and Peninsula Borough apply to portions of Region 12. The Comprehensive Plan focuses on economic and infrastructure development issues and does not contain specific land use standards or a land use map. The Enforceable Policies of the District Coastal Management Plan are extensive; policies affecting anadromous streams, bald eagle nests, oil and gas development, material extraction and mining can be applicable, under certain instances, to state lands. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by DNR prior to issuing an authorization.

Region 12 is also within the area covered by the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, which was developed for the U.S. Department of Commerce Economic Development Administration by the Southwest Alaska Municipal Conference (July 2003). This document developed a number of goals, objectives, and strategies to facilitate and support efforts that retain and grow the region's wealth, including diversifying the economic base.

The original Bristol Bay Area Plan (1984) affected all state lands in the Region, and managed the Region for fish and wildlife habitat and harvest. Recreation and oil and gas activities were also recognized uses. This revision replaces and supercedes the 1984 Bristol Bay Area Plan.

The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) identified an Alaska Peninsula Transportation Corridor, which in general extends from South Naknek to the Chigniks connecting with the communities of Egegik, Pilot Point, Ugashik, and Port Heiden. The Alaska Peninsula Corridor is an overland route linking the communities of the Alaska Peninsula from Ivanof Bay to Naknek. The key facility in this corridor is the port at Chignik, from which fuel and supplies can be disbursed to other communities via road connection. From Chignik the

corridor extends west along the Gulf of Alaska coast to Perryville and Ivanof Bay. It also extends from Chignik to Chignik Lake and Chignik Lagoon, then crosses the Alaska Peninsula to Port Heiden. From Port Heiden the corridor extends north, connecting Pilot Point, Ugashik, Egegik and South Naknek, and tying into the Cook Inlet to Bristol Bay Corridor at Naknek.

### Municipal Selections

The Lake and Peninsula Borough has made several selections in Region 12 that total approximately 6,657 acres. Selections have been made on the coast northwest of Egegik and on the coast midway between Egegik and Pilot Point. Selections have also been made on the King Salmon and Egegik Rivers, and near the outlet to Lower Ugashik Lake.

# Management Summary: Uplands

State land in Region 12 is to be managed for a variety of multiple uses, including settlement, materials extraction, public facilities development, dispersed public recreation, mineral exploration and development, and maintenance of sensitive wildlife habitats. Oil and gas exploration and development is also appropriate within the Region. The vast majority of lands are designated General Use (Gu). Because of the generally good topographic conditions and relatively good accessibility of certain of these lands, tracts of state land in the Egegik and Jensen Airstrip areas have been designated Settlement (Se) in order to allow for community expansion and remote recreation sites. Anadromous fish streams are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd).

### Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Within this Region, lands that contain one or more resource values, none of which is of sufficiently high value to merit designation as a primary use, and areas that are unlikely to be developed during the planning period are designated General Use. The land is to be managed for a variety of uses including protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and protection of heritage resources. It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. Selections within these lands may be appropriate for conveyance to the Lake and Peninsula Borough under the Municipal Entitlement program (subject to a Best Interesting Finding by the state).

- Habitat (Ha). Generally, this designation applies to areas of varied size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in the permanent loss of a population or sustained yield of a species. In Region 12 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm). The lands are to be retained in state ownership.
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may only be designated Public Recreation and Tourism-Dispersed, (Rd), Habitat (Ha), or General Use (Gu). Navigable waterbodies, stream and lakes in Katmai National Park and Preserve, east of Regions 10 and 11 are designated for Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd).
- Settlement (Se). This designation applies to state uplands suitable for sale, leasing, or permitting to allow private recreational or residential use. Within this Region two areas of state land are considered appropriate for settlement and have been designated Settlement (Se). One tract of approximately three sections is located near the community of Egegik. The second tract is located in the Jensen airstrip area and is affected by land selections of the Lake and Peninsula Borough. These areas are intended for Community Settlement (Egegik) and Remote Recreation (Jensen airstrip); see Chapter 2 for specific requirements for this form of settlement. Settlement lands are appropriate for conveyance to the Borough.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region.
- Proposed Transportation Corridor. The area identified on the Region Map as a "Potential Transportation Corridor" should be retained by the state during the planning period. Authorizations granted by DNR within or adjacent to this corridor should not preclude the future development of transportation access. Authorizations or disposals within and adjacent to this corridor should only be allowed after consultation with ADOT/PF.
- Except for areas closed to mineral entry under existing Mineral Closing Orders, all state lands within Region 12 are open to mineral entry. No additional MCOs are recommended; the only exception applies to the areas to be disposed of by DNR for purposes of Community Settlement. Closure to mineral entry is recommended at or before plat adoption. No leasehold location orders are recommended. See the *Minerals section in Chapter 2* for more detail on subsurface management requirements.

- Mineral Closing and Opening Orders. This revision of the Bristol Bay Area Plan retains the mineral closing and opening orders largely implemented by DNR at the time of original plan adoption (1984). No streams in Region 12 are affected by MCO 393.
- Mineral Order No. 791 is an interim order (as of July 11, 2003) that precludes shallow natural gas leasing and oil and gas exploration licensing. This order has no effect on locatable or leaseable minerals other than shallow natural gas leasing and oil and gas exploration licensing. The order affects all state land in Region 12.
- Retained Lands. There are no state lands within this Region that are designated to be retained except for those that are reserved as a 'Potential Transportation Corridor' and Habitat (Ha).
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

The Alaska State Legislature has designated the Egegik Critical Habitat Area, which consists of upland as well as tideland areas, for the protection of fish and wildlife habitat. Management of this area is the responsibility of the Alaska Department of Fish and Game (ADF&G). A special area permit is required for any habitat altering work, including any construction activity. A special area permit application form can be obtained from the ADF&G office in Anchorage. See also tideland management unit R12T-01.

See the Resource Allocation Table for more details on the upland management units.

# Management Summary: Tidelands and Submerged Lands

Tidelands in this Region adjoin state owned uplands, except for some Native-owned land in the northern part of the Region. Extensive tidal flats border the shoreline, although coarse sand beaches and mixed sand and gravel beaches characterize the near-shore area. Beluga whales are present in the northern part of this region, although Egegik Bay is not known to contain calving areas, as in Regions 5 and 11. Harbor seals, shorebirds, and waterfowl are common throughout the tidelands of this region. Pacific herring spawning areas occur at the mouth of Big Creek.

The community of Egegik is a major commercial salmon fishing area. Pink, chum, sockeye, coho and chinook salmon are harvested (drift net) commercially in Egegik Bay and at the mouth of the Egegik River. Set net permits line the coast from Big Creek along the northern coast of Egegik Bay to the mouth of the Egegik River. There is also a line of set net permits around the Community of Egegik. Subsistence harvesting includes salmon, trout, smelt, grayling, seal, beluga whale, clams, and waterfowl (birds and eggs).

## Plan Designations and Management Intent

**Coastal Tidelands.** These tidelands[15] are designated General Use. Development authorizations are considered appropriate subject to the protection of sensitive resources and areas.

**Egegik Bay (R12T-01, R12T-02).** Although tideland areas adjacent to the coast are important for providing habitat to some species of birds as well as harbor seals, by far the most important and sensitive habitat area occurs at the mouth of the Egegik River within Egegik Bay. Because of the importance of this area, portions of the uplands that adjoin Egegik Bay as well as the tidelands within that bay are included within the Egegik Critical Habitat Area, a legislatively designated area (AS 16.20.565). All uplands and tidelands within the CHA (R12T-01) are designated Habitat. The remainder of Egegik Bay[16] is included within tideland management unit R12T-02 and contains extensive areas of eel grass, harbor seal haulouts, and waterfowl use. This management unit is also designated Habitat. Development authorizations are prohibited within the CHA unless the requirements of AS 16.20.530 and AS 16.20.520 are fulfilled. Development authorizations within tideland management unit R12T-02 may be considered appropriate if sensitive resources and areas are protected.

**Egegik Community (R12T-03).** Areas within Egegik Bay, not part of the CHA or tideland management unit R12T-02 and important to the industrial, commercial, and residential uses of the Egegik community, are designated Waterfront Development to accommodate fisheries activities and its tideland support industries. This area is encompassed by tideland management unit R12T-03. Development authorizations are considered appropriate in these areas subject to the protection of sensitive resources and areas.

See the Resource Allocation Table for more details on the tideland management units.

[15] Tidelands along the coast not included in R12T-01 or R12T-02.
[16] Except for areas adjacent to the community of Pilot Point.

# Resource Allocation Table for Upland Units - Region 12

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R12-01<br>West Region 12 | 872,496<br>Gu -- General Use | Map O-2 | This unit is designated General Use (Gu). These lands should be managed for a variety of uses including minerals or oil and gas exploration and development, protection of fish and wildlife and their associated habitat, and dispersed recreation. The unit is not suitable for settlement. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. See especially the requirements for the protection of tundra swans in this Chapter. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations. The Alaska Peninsula transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known or without consultation with the ADOT/PF. | This is a large unit that comprises most of the state-owned and state-selected land in Region 12. The unit is on mostly low-lying terrain that is poorly drained and contains numerous lakes. The unit contains several anadromous fish streams that are used by brown bear for feeding during the spawning season. Waterfowl utilize the extensive wetlands and tundra swans concentrate at several locations in the southwest portion of the unit. The unit has significant potential for oil and gas and mineral sands. The combined Egegik-Kanatak and Egegik Cold Bay trail extends through the central portion of the unit. The Egegik-Naknek and Egegik-Pilot Point trails follow along the coastal portions of the unit. |
| R12-02<br>Egegik | 1,904<br>Se -- Settlement | Map O-2<br>S22S50W | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement described in Chapter 2. | This is a unit of land comprised of three sections just north of Egegik Bay situated on level terrain and vegetated in low shrub and lichen tundra. This area is considered suitable for settlement and to provide for community expansion. Brown bear utilize nearby anadromous fish streams, although these streams are not on the unit. |
| R12-03<br>Egegik 2 | 0.84<br>Gu -- General Use | Map O-2<br>S23S49W<br>Sec. 6 | The unit is designated General Use (Gu) and is to be managed for a variety of uses. Prior to issuing an authorization or a disposal, review deed condition described in the next column. | This small piece of state land (OSL 1020) is situated adjacent to the community if Egegik on level terrain near the airport. The unit is subject to the following deed conditions: If the land ceases to be used for a public purpose, grantee will deed the land to the incorporated municipality established under state law, or if no municipality exists, grantee will deed the land to the trustee or her successor in interest. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R12-04<br>Jensen Airstrip | 9,898<br>Se -- Settlement | Map O-2<br>S26S48W, S27S48W Sec. 34-36, 1-3,10-15, 22-24 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement described in Chapter 2. The unit contains land selections by the Lake and Peninsula Borough as part of its municipal entitlement (ADL 227027). The selections are considered appropriate for conveyance to the Borough, subject to a separate and subsequent Best Interest Finding. | This unit consists of approximately eighteen sections of land in areas of level terrain around and south of Jensen airstrip; the area is dotted with various small lakes, ponds, and marshes. It is vegetated in small shrubs and lichen tundra. The area is considered suitable for settlement. |

# Resource Allocation Table for Tideland Units - Region 12

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R12T-01<br>Egegik Critical Habitat Area | 8,259<br>Ha -- Habitat | Map O-2<br>S23S50W, S23S51W | Unit is designated Habitat. Unit is to be managed to protect the sensitive upland and tideland resources associated with this Critical Habitat Area. Only development authorizations that meet the requirements of AS 16.20.520 and AS 16.20.530 are appropriate. Applications must be submitted to ADF&G for review and approval. Consult with NMFS and USFWS prior to issuing authorizations. Ensure that authorizations are consistent with the requirements of the Bristol Bay Fisheries Reserve. | Tideland unit consists of the Egegik Critical Habitat Area, a Legislatively Designated Area (AS 16.20.565), established to protect sensitive habitat. Unit consists of both upland and tideland areas, generally coinciding with a spit at the mouth of the bay called 'South Spit', and tideland areas within the western portions of the bay. Tideland areas are rich in marine resources, including eel grass, waterfowl, and a brown bear spring concentration area. A beluga whale feeding area occurs in the eastern part of the unit and a harbor seal haulout concentration area occupies the northern part of the unit. Waterfowl concentrations occur in both the spring and fall and the unit is important as a waterfowl molting concentration area. Sandhill cranes use the bay as a staging area. The Bristol Bay Fisheries Reserve affects this unit. See also unit R12T-02, which adjoins this unit and contains similar sensitive resources. |
| R12T-02<br>Egegik Bay | 20,167<br>Ha and Hv -- Habitat and Harvest | Map O-2<br>S23S50W, S23S51W | Unit is designated Habitat. Unit is to be managed to protect sensitive resources and habitat areas. Development authorizations may be appropriate within this unit if these resources are protected. Most development authorizations should occur within or near the area of the Egegik community. ADF&G must be consulted if a tideland development application abuts the Critical Habitat Area. Consult with NMFS and USFWS prior to issuing authorizations. Ensure that development authorizations are consistent with the requirements of the Bristol Bay Fisheries Reserve. | Tideland unit is situated within Egegik Bay, generally north and east of the Egegik Critical Habitat Area. Sensitive resources within the unit include eel grass, waterfowl molting concentration areas, and an extensive area at the mouth of Egegik Bay that is used as a harbor seal haulout concentration area. Waterfowl concentrations during the spring and fall are also present. Portions of the unit are also used by beluga whales for feeding. The bay is an important staging area for sandhill cranes. This unit is included within the Bristol Bay Fisheries Reserve.<br><br>Harvest: Pink, chum, sockeye, coho and chinook salmon are harvested (drift net) in Egegik Bay and at the mouth of the Egegik River. Set net permits occur along the northern coast of the bay from Big Creek to the mouth of the Egegik River, with concentrations around Egegik Community. Subsistence harvesting includes salmon, trout, smelt, grayling, clams, seal, whale and waterfowl and eggs. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R12T-03<br>Egegik Community | 6<br>Wd -- Waterfront Development | Map O-2<br>S23S50W | Unit is designated Waterfront Development. Manage unit to accommodate commercial and industrial uses related to the fishery or to intensive forms of upland development. Development authorizations are to be consistent with the requirements of the Bristol Bay Fisheries Reserve. | Unit is situated at the Egegik community in Egegik Bay. The Bristol Bay Fisheries Reserve affects the unit. Seafood processing or related types of development occupy adjacent and nearby uplands. Egegik relies heavily on commercial salmon fishing. Tideland use includes private tideland facilities to support the fishing industry. |
| R12T-04<br>Tide and Submerged Lands, Bristol Bay | 127,229<br>Gu -- General Use | Map O-2 | Manage for a variety of uses and resources. Protect Pacific Herring spawning areas and minimize impacts upon shorebirds and waterfowl. Consult with NMFS prior to issuing authorizations, to determine if marine mammals are present. Maintain opportunities for commercial and subsistence harvest. This unit is governed by the restrictions of the Bristol Bay Fisheries Reserve. | This unit consists of the tide and submerged lands occupying the coast along Region 12. The primary concentration of tideland resources occurs in Egegik Bay; see units R12T-01 and R12T-02 for the description of resources present in these units.<br><br>Extensive tidal flats border the shoreline, although some nearshore areas are characterized by coarse sand beaches or mixed sand and gravel beaches. Pacific herring spawn at a number of locations, particularly at the mouth of Big Creek. Shorebirds, waterfowl, and some marine mammals (walrus) are present throughout the unit. Whales are reported in the northern part of the unit.<br><br>Some harvest of pink, chum, sockeye, coho, and chinook salmon occurs in the unit, largely at the mouths of anadromous streams, although most commercial harvest occurs in Egegik Bay and Egegik River. Set net permits occur along the northern coast of Bristol Bay from Big Creek to Egegik. There is some limited subsistence harvest, which probably concentrates at the mouth of Big Creek. |

# Region 13

# *Ugashik Lakes*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 13 includes the uplands on a portion of the Alaska Peninsula that includes the Ugashik Lakes and the area eastwards to the boundary of the Lake and Peninsula Borough (Map O-3). The Region is bounded on the west and north by Region 12, on the east by the Kodiak Island Borough. The southern boundary is generally along the Dog Salmon River corridor. There are no communities in the Region. Except for navigable waterbodies and three sections, there are no other state-owned or selected uplands in Region 13.

### State Lands: Ownership and Acreage

State-owned navigable waterbodies, notably Upper and Lower Ugashik Lakes, dominate the western one-quarter of the Region. Much of the remainder is in Federal ownership and within the Alaska Peninsula National Wildlife Refuge. Native ownership of land is concentrated southwest of Lower Ugashik Lake between the Ugashik River and the Dog Salmon River. The plan applies to 1,541 acres of state-owned uplands. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated).

### Physical Geography

Region 13 is within the Alaska Peninsula ecological province and encompasses some well dissected but rugged terrain. Drainage is predominantly westward towards Bristol Bay. The principal drainages are the Ugashik Lakes and tributaries including Ugashik, Crooked, Moore, Deer, and Black Creeks. The western portion of the Region rises to the spine of the Alaska Peninsula; thus the highest elevations are attained along the eastern boundary of the Region in the vicinity of Deer Mountain (elev. +3,000 ft.), Mount Shannon (elev. 2,055 ft.), and Mount Alai (elev. 2,850 ft.). The greatest relief occurs around Mount Peulik (elev. 4,835 ft.) where over 4,822 feet of relief is present.

### Climate

The climate is characterized by cool, humid and windy weather. The average summer temperatures range from 41° to 60°; winter temperatures average 12° to 37°. Annual precipitation is 19 inches, with snowfall of 38 inches. The Ugashik Lakes are usually ice-free from June through mid-November.

## Other

Region 13 is within the Ugashik Quadrangle. It is within the boundaries of the Bristol Bay Regional Native Corporation and the Lake and Peninsula Borough.

## Access

Access to Region 13 is limited to river or air transport. An RS 2477 trail, the Chignik Lagoon-Aniakchak River trail (RST No. 394) extends from Chignik Lagoon northeast into the Aniakchak National Monument and Preserve.

## Resources and Uses

**Cultural and Historic.** The state Office of History and Archeology lists nine sites in Region 13; six of these are prehistoric, one is historic, and two are of mixed origin. Most of the historic and archeological sites occur near the Ugashik Lakes. New sites are discovered periodically and added to the Alaska Heritage Resource Database when reported.

**Economics.** Subsistence activities provide food sources, including salmon, trout, grayling, moose, caribou, and bear. Region 13 also provides fish and wildlife resources for commercial hunting and fishing recreation.

**Recreation.** Sport fishing and hunting are seasonal resources in Region 13. A few fishing lodges and hunting and fishing guide sites occur in the Region on the Ugashik Lakes. The area offers outstanding bear hunting and sport fishing for trophy-size Arctic char, grayling, and salmon. Commercial guide services are available for hunting and fishing activities. Other recreational opportunities include flightseeing, observing and photographing wildlife, hiking, boating, and camping.

**Minerals.** Only a few mineral occurrences are found in Region 13. Placer gold prospects occur on a few Creeks in the eastern portion of the area. The geology is permissive for precious and base metal deposits.

**Oil and Gas.** Region 13 has modest potential for the discovery of oil and gas. The western portion of the Region is underlain by Tertiary Milky River, Bear Lake, Stepovak, and Meshik formations. Elsewhere on the Alaska Peninsula the Milky River and Stepovak formations are known to contain oil and gas shows. Oil and gas seeps occur naturally in the Ugashik Creek-Mount Demian area where at least half a dozen are known. Four wells have previously been drilled in the Mount Demian area. Standard Oil of California drilled three wells, the McNally No. 1 in 1925 to 510 feet, the Lathrop No. 1 in 1923 to 500 feet, and the Lee No. 1 in 1923 to 5,034 feet. Associated Oil Company drilled the Alaska No. 1 in 1926 to a depth of 3,033 feet.

State and Native landowners are currently pursuing a new hydrocarbon exploration licensing and leasing program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) to support oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation and the DNR and Bristol Bay Native Corporation.

**Materials.** There are no active materials sites in the Region.

**Forestry.** There are no significant forestry resources in Region 13.

**Fish and Wildlife.** Most of Region 13 is within the Alaska Peninsula National Wildlife Refuge. Important fish and wildlife resources include some of the densest concentrations of brown bears in the world. Barren-ground caribou are common, as are moose and wolves. Other mammals include wolves, wolverines, river otters, red foxes and beavers. All five species of Pacific salmon inhabit the Region, as do rainbow trout, Arctic char and, Arctic grayling.

# Management Considerations: Local and State Plans

A number of local, state, and federal management plans were considered in development of this plan. Local plans include the Lake and Peninsula Borough Coastal Zone Management Plan, the Lake and Peninsula Borough Comprehensive Plan, and the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008. State plans include the Bristol Bay Area Plan and the Southwest Alaska Transportation Plan. Federal plans include the Alaska Peninsula and Becharof National Wildlife Refuges Draft Comprehensive Conversation Plan.

Region 13 is located within the boundaries of the Lake and Peninsula Borough. Both the Comprehensive Plan and the District Coastal Management Plan of the Lake and Peninsula Borough apply to portions of Region 13. The Comprehensive Plan focuses on economic and infrastructure development issues and does not contain specific land use standards or a land use map. The Enforceable Policies of the District Coastal Management Plan are extensive; policies affecting anadromous stream, bald eagle nests, oil and gas development, materials extraction and mining can be applicable, under certain instances, to state lands. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by DNR prior to issuing an authorization.

Region 13 is also within the area covered by the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, which was developed for the U.S. Department of Commerce Economic Development Administration by the Southwest Alaska Municipal Conference (July 2003). This document developed a number of goals, objectives, and strategies to facilitate and support efforts that retain and grow the region's wealth, including diversifying the economic base.

The Bristol Bay Area Plan (1984) affected all state lands in the Region until this revision. Region 13 was to be managed for fish and wildlife habitat and harvest and recreation; it also provided for the development of a transportation corridor and a port site at Wide Bay.

The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) identified an Alaska Peninsula Transportation Corridor, which in general extends from South Naknek to the Chigniks connecting with the communities of Egegik, Pilot Point, Ugashik, and Port Heiden. The Alaska Peninsula Corridor is an overland route linking the communities of the Alaska Peninsula from Ivanof Bay to Naknek. The key facility in this corridor is the port at Chignik, from which fuel and supplies can be disbursed to other communities via road connection. From Chignik the corridor extends west along the Gulf of Alaska coast to Perryville and Ivanof Bay. It also extends from Chignik to Chignik Lake and Chignik Lagoon, then crosses the Alaska Peninsula to Port Heiden. From Port Heiden the corridor extends north, connecting Pilot Point, Ugashik, Egegik and South Naknek, and tying into the Cook Inlet to Bristol Bay Corridor at Naknek.

### Municipal Selections

There are no municipal selections in Region 13.

# Management Summary: Uplands

The few areas of state owned uplands in Region 13 are to be managed for a variety of multiple uses, including dispersed public recreation, mineral exploration and development, and the maintenance of sensitive wildlife habitats. Oil and gas exploration and development is also appropriate within the Region. The vast majority of lands, because they are waterbodies, are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). The few areas of state-owned or state selected uplands are designated General Use (Gu).

### Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Within this Region, lands that contain one or more resource values, none of which is of sufficiently high value to merit designation as a primary use, and areas that are unlikely to be developed during the planning period are designated General Use. The land is to be managed for a variety of uses including protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and protection of heritage resources. It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. Selections within these lands may be appropriate for conveyance to the Lake and Peninsula Borough under the Municipal Entitlement program (subject to a Best Interesting Finding by the state).

- Habitat (Ha). Generally, this designation applies to areas of varied size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in the permanent loss of a population or sustained yield of a species. In Region 13 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm). The lands are to be retained in state ownership.
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may (only) be designated Public Recreation and Tourism-Dispersed, (Rd), Habitat (Ha), or General Use (Gu).

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region.
- Proposed Transportation Corridor. The area identified on the Region Map as a "Potential Transportation Corridor" should be retained by the state during the planning period. Authorizations granted by DNR within or adjacent to this corridor should not preclude the future development of transportation access. Authorizations or disposals within and adjacent to this corridor should only be allowed after consultation with ADOT/PF.
- Except for areas closed to mineral entry under existing Mineral Closing Orders, all state lands within Region 13 are open to mineral entry. No additional MCOs are recommended.
- Mineral Closing and Opening Orders. This revision of the Bristol Bay Area Plan retains the mineral closing and opening orders largely implemented by DNR at the time of original plan adoption. No streams in Region 13 are affected by MCO 393.
- Mineral Order No. 791 is an interim order (as of July 11, 2003) that precludes shallow natural gas leasing and oil and gas exploration licensing. This order has no effect on locatable minerals or leaseable minerals other than shallow natural gas leasing and oil and gas exploration licensing. The order affects all state uplands in Region 13.
- Retained Lands. There are no state lands within this Region that are designated to be retained except for those that are reserved as a 'Potential Transportation Corridor' and Habitat (Ha).
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and

Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies. Navigable waters in the Becharof and Alaska Peninsula NWR are co-designated (Rd, Ha).

See the Resource Allocation Table for more details on the upland management unit.

# Resource Allocation Table for Upland Units - Region 13

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R13-01<br>Ugashik | 1,541<br>Gu -- General Use | Map O-3<br>S31S49W<br>Sec. 5, 8, 9 | The unit is to be managed for a variety of resources, including oil and gas exploration and development, dispersed recreation, and the protection of fish and wildlife, including their associated habitat. Development authorizations may be appropriate subject to the protection of these resources and the requirements of Chapter 2. See especially the requirements for the protection of caribou calving areas in this Chapter. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations. Most development is anticipated either within the areas designated Settlement or in areas already conveyed to private individuals or Native corporations. | This unit consists of approximately three sections of land (the only state land in Region 13). The unit is located in the southeast corner of the Region, three to five miles south of the Ugashik River in low-lying terrain vegetated with low shrub and tundra. The unit is within a caribou calving area. |

# Region 14

# *UGASHIK BAY AREA*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 14 comprises areas of tidelands within Ugashik Bay and adjacent uplands, most of which are situated to the east and south (Map O-3). The Pilot Point Critical Habitat Area (CHA) occupies the westernmost part of the Region. The Region is bordered on the west by Bristol Bay, on the north by Region 12, on the east by Region 13, and on the south by Region 15. Uplands are typically low and flat with extensive areas of wetlands, ponds, and lakes. Ugashik Bay consists largely of extensive sheltered tidal flats that extend inland along the Ugashik River to the community of Ugashik. The bay is a biologically productive habitat and much of it is used by waterfowl and as haulout areas for harbor seals. The small communities of Ugashik (pop. 12) and Pilot Point (pop. 70) are situated within the Region. There are relatively small amounts of state-owned uplands within this Region and no areas of state-selected uplands. There are no areas of municipal-selected land.

### State Lands: Ownership and Acreage

Land ownership within this Region is primarily private or Native corporation, supplemented by holdings of state land in its northeastern and eastern parts of the Region adjacent to the Ugashik River. The plan applies to 52,648 acres of state-owned uplands and 56,300 acres of state-owned tidelands in this Region.

### Physical Geography

Extensive areas of low, flat terrain consisting either of wetlands or low and dwarf shrub characterize this Region. There are relatively few areas of dry uplands; these occur near the community of Pilot Point and along the coast north of Smokey Point. The hydrology of the Region reflects the topographic differences. Numerous lakes, ponds, and extensive areas of wetlands, particularly south of Ugashik Bay and east along the Ugashik River, characterize lowland areas. Rivers are characteristically low gradient and meandering, and the principal drainages are associated with the Ugashik, Dog Salmon, and King Salmon Rivers.

Extensive areas of sheltered tidal flats characterize tideland areas. The central, western parts of these tidelands are situated within the Pilot Point CHA; some uplands are also situated within this CHA. Both the CHA and other tidelands are described in more detail in the 'Tidelands and Shorelands' section that follows.

## Climate

Region 14 has a maritime climate characterized by cool, humid, and windy weather. Average summer temperatures range from 41° to 60°; average winter temperatures range from 20° to 37°. Low cloud cover and fog are common. Precipitation averages 19 inches per year, with 38 inches of snowfall. The Region is generally free of permafrost.

## Access

This region is accessible by air and water. A state owned gravel airstrip is available at Pilot Point and a gravel airstrip owned by BLM is available at Ugashik Bay. Air taxi service is provided on a regular basis. Barge service to Pilot Point is provided from Seattle in the spring and fall. Modes of local transport include ATVs, snowmachines, skiffs, and trucks. There are no roads except for those in and adjacent to the community of Pilot Point.

## Resources and Uses

Most of the Region is used for subsistence and commercial fishing. There is limited subsistence and recreational hunting of moose and caribou, and some trapping for red fox, beaver, lynx, mink, and marten. There are few people within the region; most of these cluster around or near the community of Pilot Point since most use is associated with commercial fishing in offshore waters; see the use description in the section on 'Tidelands and Shorelands' that follows.

**Cultural and Historic.** These mixed Aleut and Eskimo communities of Pilot Point and Ugashik developed around a fish salting plant and canneries established in the 1880's. Many different nationalities came to work in the canneries, such as Italians, Chinese and northern Europeans. Reindeer herding experiments at Ugashik helped to repopulate the area after the devastating 1918 flu epidemic, although the herding eventually failed. The deterioration of the harbor forced the cannery at Pilot Point to close in 1958. Numerous cultural resource sites exist within the region, reflecting the long history of human occupancy. There are four historic, 22 prehistoric, and four mixed historic/prehistoric sites. Most of these are concentrated at or near the communities of Ugashik or Pilot Point or along parts of the Ugashik River.

**Economic.** The residents of Pilot Point and Ugashik depend upon commercial fishing for the majority of their cash income. Many residents hold commercial fishing permits. Up to 700 commercial boats fish in the district. Subsistence is an important part of the community lifestyle and trapping is a source of income during the off-season. Salmon, caribou, moose, geese and porcupine are harvested.

**Recreation.** Recreation is primarily related to outdoor activities, especially fishing and hunting, wildlife viewing, hiking, and the like.

**Minerals and Coal.** There are no known mineral resources within the Region. Coal-bearing units are projected to occur in the subsurface.

**Oil and Gas.** The oil and gas potential of Region 14 is believed to be moderate to high based on wells drilled in adjoining Regions and the continuity of geology in the subsurface. State and Native landowners are currently pursuing a new hydrocarbon exploration licensing and leasing

program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Fish and Wildlife.** The resources of this region are primarily those associated with fisheries and wildlife. Chum, coho and sockeye salmon exist in the three major streams that empty into Ugashik Bay – the Dog Salmon, King Salmon, and Ugashik Rivers. Moose are present and a portion of a moose calving area occurs east of the Ugashik River near the boundary with Region 13. Caribou are also present, but there are no known caribou rutting or calving areas. There are few raptors that frequent the uplands, and most shorebirds and waterfowl are associated with near-shore areas, particularly within and near Ugashik Bay. Marine resources are particularly significant and the section on 'Tidelands and Shorelands' should be consulted for a description of the type and distribution of these resources.

# Management Considerations: Local, State, and Federal Plans

There are no local plans that affect this area except for the Lake and Peninsula Borough CZMP. This plan contains extensive enforceable policies and should be consulted by DNR prior to granting an authorization. See the web site www.alaskacoast.state.ak.us/ for more information on the enforceable policies of the Coastal District Plan.

The single state resource management plan that affects this Region is the DNR Bristol Bay Area Plan (1984). It affects all state lands in the planning area, which includes uplands, shorelands, tidelands, submerged lands, and navigable waters, and has been in force since its adoption. This revision supersedes and replaces the original (1984) Plan.

A regional transportation plan has recently been developed by ADOT/PF that identifies a number of transportation corridors. The Southwest Alaska Transportation Plan (November 2002) identifies an Alaska Peninsula Transportation Corridor, which in general extends from South Naknek to the Chigniks connecting with the communities of Egegik, Pilot Point, Ugashik, and Port Heiden. This route coincides with areas of state land, including state land within Region 14.

## Municipal Selections

There are no areas of municipal selections within the Region.

# Management Summary: Uplands

Region 14 is to be managed for a variety of multiple uses, including the maintenance of sensitive habitats, the protection of sensitive wildlife and fisheries, and for the purpose of dispersed public recreation and harvest. Because of the absence of discernible economic patterns, generally unsuitable building topography, and the potential to accommodate a variety of uses, such as oil and gas exploration and development and others, through siting and other types of development stipulations, nearly all state land within this Region is designated General Use, except for the area of the Pilot Point Critical Habitat Area, which is designated Habitat in its upland areas. A few upland management units are designated for settlement or public use.

## Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement. See the section on 'Tidelands and Shorelands' that follows for designations and management intent for these areas, which are quite extensive.

- General Use (R14-02) (Gu). Extensive areas throughout the Region are designated General Use. Areas designated General Use are typically remote, inaccessible, and, within this Region, are generally not considered suitable for development except in the case of site-specific uses, as may occur with oil and gas exploration and development. Within areas designated General Use, a variety of uses may occur. Nonetheless, because of the absence of demand and unfavorable building conditions, little development is likely to occur during the planning period and, as a matter of policy, it is not intended that intensive forms of development occur within this Region.
- Settlement (R14-01) (Se). An area of fairly flat land along the coast north of Smokey Point, consisting of 1,545 acres, is considered suitable for development and is designated Settlement. The type of residential development (community or remote settlement) is to be determined at the time of disposal by DNR.
- Habitat (R14T-01) (Ha). Generally, this designation applies to areas of varied size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in the permanent loss of a population or sustained yield of a species. This designation is applied to the upland areas encompassed by the Pilot Point Critical Habitat Area and to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm).

Consult the Resource Allocation Table for Region 14 for more information on upland management units, which includes a number of small units intended for public use or potential settlement.

### Specific Management Considerations:

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region; there are no areas affected by 11 AAC 96.010 requiring a permit before being authorized except for the Pilot Point CHA.
- Proposed Transportation Corridor. The area identified on the Region Map as a "Potential Transportation Corridor" should be retained by the state during the planning period. Authorizations granted by DNR within this corridor should not preclude the future development of transportation access. Authorizations or disposals within and adjacent to this corridor should only be allowed after consultation with ADOT/PF.
- Mineral Closing Orders and Leasehold Location Orders. Except for areas closed to mineral entry under existing Mineral Closing Orders, all lands within the Region are open to mineral entry. (MCO 791 closes the Region to shallow oil and gas exploration and development.) No additional MCOs are recommended; the only exception applies to areas that may be disposed of by DNR for the purposes of settlement, should such areas be selected for this purpose in the future. In these instances, closure of the settlement area prior to sale is required. The MCOs in areas not selected for staking within three years of the land sale shall revert to 'open to mineral entry'. No leasehold location orders are recommended. See also the *Mineral Resources section in Chapter 2* for more details on subsurface management requirements.
- Retained Lands. There are no state lands that are designated to be retained by the state, except for those that serve a public purpose, are included within the Pilot Point Critical Habitat Area, or are identified as a Proposed Transportation Corridor.
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of the waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

# Management Summary: Tidelands and Submerged Lands

The tidelands within this Region essentially encompass the area of Ugashik Bay. The bay consists largely of extensive tidal flats that extend inland up the Ugashik River to the community of Ugashik. Portions of the state tidelands and uplands are included within the Pilot Point CHA, although much of the central portion of the bay is not. Nonetheless, essentially the entirety of the Bay is a productive habitat, and is used in much of the western and central parts as a harbor seal haulout. Waterfowl use the entire Bay during the spring and fall; it is also a waterfowl molting concentration area. The Bristol Bay Fisheries Reserve affects Ugashik Bay.

Sockeye, chinook, chum and pink salmon are harvested in Ugashik Bay (purse seine and drift net). Set net leases dot the coastline of the bay both north and south of Pilot Point and at the mouth of the Ugashik River, some within the Pilot Point CHA. Pilot Point residents depend heavily on commercial salmon fishing for their livelihood. Commercial harvest is processed at Ugashik. Subsistence harvest consists almost entirely of salmon and occasionally, waterfowl or geese.

## Plan Designations and Management

**Coastal Tidelands.** These tidelands[17] are designated General Use. Development authorizations are considered appropriate subject to the protection of sensitive resources and areas.

**Ugashik Bay (R14T-01, R14T-02).** Ugashik Bay is separated into two tideland management units; the area of the Pilot Point CHA (R14T-01), and that part of the Bay that is not included within the CHA (R14T-02). The tidelands in each management unit are designated Habitat, and the management intent is to protect the harbor seal haulouts and waterfowl concentration areas. Development authorizations are prohibited within the CHA unless the requirements of AS 16.20.520 and AS 16.20.530 are fulfilled. Development authorizations within tideland management unit R14T-02 may be considered appropriate if sensitive resources and areas are protected.

**Pilot Point Community (R14T-03).** Water dependent commercial or industrial activity to support the community of Pilot Point is considered appropriate, but authorizations issued by DNR shall ensure that the significant resource values of this area are protected.

See the Resource Allocation Table for more details on tideland management units.

[17] Tidelands along the coast not included in R14T-01 or R14T-02.

# Resource Allocation Table for Upland Units - Region 14

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R14-01<br>Smokey Point | 1,545<br>Se -- Settlement | Map O-3<br>S29S52W, S3S52W | The unit is considered appropriate for settlement and is designated Settlement. Development shall conform to the requirements for Remote Settlement. Disposal of this unit during the planning period is considered appropriate. | Unit occupies an area of generally low, flat terrain that appears to be reasonably well drained. It is situated adjacent to the coast and northwest of the community of Pilot Point. A cabin may occupy portions of Section 3 in S30S52W. |
| R14-02<br>Ugashik Bay Uplands | 50,580<br>Gu -- General Use | Map O-3 | The unit is to be managed for a variety of resources, including dispersed recreation and the protection of fish and wildlife, including their associated habitat. Development authorizations, such as oil and gas exploration and development, may be appropriate subject to the protection of these resources and the requirements of Chapter 2. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations. Most development is anticipated either within the areas designated Settlement or in areas already conveyed to private individuals or Native corporations. The Alaska Peninsula transportation corridor traverses the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known or without consultation with ADOT/PF. | This unit consists of most of the uplands within the Region, totaling 50,580 acres. Much of these areas are characterized by low, flat terrain consisting either of wetlands or low and shrub. There are numerous lake, ponds, and wetland areas. Little human use of these occurs, with the exception of subsistence hunting and fishing. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit, most notably in the vicinity of the Ugashik River. |
| R14-03<br>Pilot Point North | 298<br>Pr -- Public Facilities-Retain | Map O-3<br>S3S51W Sec. 20, 21 | The unit is to be managed by the ADOT/PF consistent with FAA and ADOT/PF guidelines for airports and ancillary facilities. The land is to be retained in state ownership. | The unit consists of OSL 1214 and LSH 452. It is the site of the new Pilot Point airport (the runway is 3,280 feet). |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R14-04<br>Pilot Point Central | 21.30<br>Gu -- General Use | Map O-3<br>S29S51W<br>Sec. 29 | The unit, if considered for disposal, should be carefully evaluated prior to making any decisions. Additional land title research is recommended in order to establish the degree and kind of ownership that is vested with the state. A similar caution exists for the granting of authorizations other than those of a temporary type not involving the construction of permanent facilities. | Unit consists of a 21.4 acre area of generally flat land in the community of Pilot Point adjacent to Ugashik Bay. The unit is situated to the northwest of the Pilot Point airstrip, R14-05. The land was acquired through foreclosure. The degree and kind of state ownership of this unit is somewhat uncertain. |
| R14-05<br>Pilot Point Airstrip | 132<br>Pr -- Public Facilities-Retain | Map O-3<br>S3S51W<br>Sec. 28, 29 | Retain the unit in state ownership and management consistent with the management right. | This unit consists of LSH 306 and OSL 917. A management right (ADL 221520) was issued to the ADOT/PF. It is the former location of the Pilot Point airport which is now located one mile to the north. |
| R14-06<br>Ugashik Airport | 72<br>Pr -- Public Facilities-Retain | Map O-3<br>S31S5W<br>Sec. 3,4 | Retain the unit in state ownership and manage consistent with the requirements of the Management Agreement. | Unit is affected by a Management Right (ADL 221537) to ADOT/PF for the purpose of an airport lease for the community of Ugashik. Unit contains a state-owned 3000' long gravel runway. |

# Resource Allocation Table for Tideland Units - Region 14

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R14T-01<br>Pilot Point CHA | 46,555<br>Ha -- Habitat | Map O-3<br>S30S51W, S30S52W | Unit is designated Habitat. Management Intent: Unit is to be managed to protect the sensitive upland and tideland resources associated with this Critical Habitat Area. Only development authorizations that meet the requirements of AS 16.20.520 and AS 16.20.530 are appropriate. Applications must be submitted to ADF&G for review and approval. Ensure that authorizations are consistent with the requirements of the Bristol Bay Fisheries Preserve. | This tideland unit consists of the Pilot Point Critical Habitat Area (CHA), a Legislatively Designated Area (AS 16.20.565), established to protect sensitive habitat. Unit consists of both upland and tideland areas, the upland areas generally coinciding with a spit at the head of the bay called 'South Spit' as well as areas northwest and south of the community of Ugashik. The tidelands portion generally consists of the western portion of Ugashik Bay, especially the area near Smoky Point. The resources of the CHA are principally associated with areas of sheltered tidelands and seasonal waterfowl concentrations. The latter occur in the spring and fall. The bay is also important as a waterfowl molting concentration area. The Bristol Bay Fisheries Reserve affects the CHA. See also unit R14T-02 which adjoins this unit and also contains senstive resources. |
| R14T-02<br>Ugashik Bay | 16,396<br>Ha and Hv -- Habitat and Harvest | Map O-3<br>S30S52W | Unit is designated Habitat. Unit is to be managed to protect sensitive resources and habitat areas. Development authorizations may be appropriate within this unit if these resources are protected. Most development authorizations should occur within or near the area of the Pilot Point community, however. ADF&G must be consulted if a tideland development application abuts the Critical Habitat Area. Ensure that development authorizations are consistent with the requirements of the Bristol Bay Fisheries Reserve. | This tideland unit is situated within Ugashik Bay, generally north and east of the Pilot Point Critical Habitat Area. Sensitive resources within the unit include eel grass, a waterfowl molting concentration area, and an extensive area at the mouth of Egegik Bay which is used as a harbor seal haulout concentration area. Waterfowl concentrations during the spring and fall are also present.<br><br>Harvest: Sockeye, chinook, chum and pink salmon are harvested in Ugashik Bay (drift net). Set net leases also occur in the coastal tidelands both north and south of Pilot Point and at the mouth of the Ugashik River. There are a few set net leases within the CHA. Several hundred fishing boats operate in, and in the vicinity of, Ugashik Bay. Pilot Point residents depend heavily on commercial salmon fishing for their livelihood. Commercial salmon harvest is transported upriver to the cannery at Ugashik for processing. Subsistence harvest consists almost entirely of salmon and occasionally geese. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R14T-03<br>Pilot Point Community | 16<br>Wd -- Waterfront Development | Map O-3<br>S30S51W Sec. 20 | Manage unit to be consistent with the requirements of the Management Agreement with ADOT/PF. Consult with Alaska Department of Transportation and Public Facilities (ADOT/PF) prior to issuing a tideland application. | This tideland unit is located immediately west of the Pilot Point airstrip. It is affected by a Management Agreement with ADOT/PF (ADL 227429). |
| R14T-04<br>Tide and Submerged Lands, Bristol Bay | 56,300<br>Gu -- General Use | Map O-3 | Manage for a variety of uses and resources. Minimize impacts to shorebird and waterfowl concentrations. Maintain opportunities for commercial and subsistence harvest. This unit is included within the Bristol Bay Fisheries Reserve. | This unit consists of a small area of tide and submerged lands north of the Pilot Point Critical Habitat Area and Ugashik Bay. The primary concentration of tideland resources occurs in Ugashik Bay; see units R14T-01 and R14T-02 for the description of resources present in these units. The majority of the tidelands within Region 14 occur within these two units.<br><br>Tidal flats border the southern part of the unit, although the northern nearshore areas may have mixed sand and gravel beaches. Shorebirds, waterfowl, and some marine mammals are present.<br><br>Commercial and subsistence harvest occurs in R14T-01 and R14T-02, although there may a limited amount of such activity in the southern part of the unit that borders R14T-02. See R14T-02 for a description of harvest activities. |

# Region 15

## *Cinder River, King Salmon River*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 15 includes the state uplands on a portion of the Alaska Peninsula generally southeast of Pilot Point and north of Port Heiden; it also includes tidelands on both the Bristol Bay side and the Pacific Ocean side of the Alaska Peninsula, northwest and southeast respectively (Map O-3). The upland areas contain most of the Cinder River, and King Salmon drainage system. The Region encompasses portions of the Alaska Peninsula National Wildlife Refuge. There are no communities within the Region.

### State Lands: Ownership and Acreage

State-owned land dominates the western one third of the Region while much of the eastern two-thirds is Federally owned. Native-owned land is only a small percentage of the Region and is concentrated on the northern and southern boundaries. The Cinder River Critical Habitat Area is contained within Region 15. The plan applies to 513,061 acres of state-owned and state-selected uplands and 439,401 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated).

### Physical Geography

The western portion of Region 15 is within the Bristol Bay Lowlands ecological province; the eastern portion of the Region is in the Alaska Peninsula ecological province. Drainage flow is predominantly westward towards Bristol Bay and eastward toward the Pacific Ocean. The principal drainages are the Dog Salmon, King Salmon, and Cinder Rivers, which flow westward from the National Wildlife Refuge. Yantarni Creek flows eastward into Yantarni Bay. The two coastlines differ significantly – the Bristol Bay side is straight and has little protection while the Pacific side is indented with many bays. Notable embayments include Yantarni, Nakalilok, Chiginagak, and Agripina Bays. The western one-third of the Region is low-lying country with abundant lakes, ponds, and marshes. The eastern two-thirds encompasses the spine of the Aleutian Range and has considerable relief. The most significant feature is Mount Chiginagak, an active volcano that erupted last in 1971, with an elevation exceeding 6,800 feet. Adjacent to Region 15, in Aniakchak National Monument and Preserve, is Aniakchak caldera, which last erupted in 1931; the caldera holds Surprise Lake, the source of the Aniakchak River, which empties from the caldera eastwards through a 1,500-foot deep gorge.

## Climate
The climate of Region 15 is predominantly maritime, characterized by cool, humid, and windy weather.

## Other
Region 15 is primarily within the Ugashik, Bristol Bay, Sutwik Island, and Chignik Quadrangles. It is within the boundaries of the Bristol Bay Regional Native Corporation, and the Lake and Peninsula Borough.

## Access
Access to Region 15 is limited to marine, river, or air transport. Skiffs, ATVs and snowmachines are the primary means of local transportation. Travel on the western beaches is possible with four-wheel drive vehicles.

The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) identified an Alaska Peninsula Transportation Corridor, which in general extends from South Naknek to the Chigniks connecting with the communities of Egegik, Pilot Point, Ugashik, and Port Heiden. The Alaska Peninsula Corridor is an overland route linking the communities of the Alaska Peninsula from Ivanof Bay to Naknek. The key facility in this corridor is the port at Chignik, from which fuel and supplies can be disbursed to other communities via road connection. From Chignik the corridor extends west along the Gulf of Alaska coast to Perryville and Ivanof Bay. It also extends from Chignik to Chignik Lake and Chignik Lagoon, then crosses the Alaska Peninsula to Port Heiden. From Port Heiden the corridor extends north, connecting Pilot Point, Ugashik, Egegik and South Naknek, and tying into the Cook Inlet to Bristol Bay Corridor at Naknek.

## Resources and Uses
**Cultural and Historic.** The state Office of History and Archeology lists eleven sites in Region 12; eight of these are prehistoric, two are historic, and two are of mixed origin. Most of the historic and archeological sites occur near Egegik and along the Dog Salmon River, the King Salmon River, and Mother Goose Lake.

**Economic.** Subsistence hunting and fishing activities are an important part of the lifestyle and local diet. Seal, beluga, salmon, trout, smelt, grayling, clams, moose, bear, caribou, porcupine, waterfowl and ptarmigan are utilized. Locals also gather berries and wild greens each season. Commercial recreational hunting and fishing occur sparingly in the region.

**Recreation.** Much of the recreational resources and uses are related to the Alaska Peninsula National Wildlife Refuge and the adjacent Aniakchak National Monument and Preserve. Recreational resource use along the Pacific Coast is limited because of inaccessibility.

**Minerals.** Mineral sands are known to occur along the beaches on the west side of the Alaska Peninsula. An unnamed beach placer enriched in gold, iron, and titanium occurs south of Hook Lagoon. A number of lode occurrences have been identified on Federal lands in the National Wildlife Refuge. Most of these are porphyry copper and polymetallic occurrences. Two

porphyry copper prospects are notable – Mike and Rex. Mike is a porphyry molybdenum prospect of later Tertiary to Quaternary age with grades up to 0.21% Mo. There is potential for moderate reserves to be developed. Rex is a porphyry copper prospect with grades of up to 0.3% copper. The potential is similar to that at Mike.

**Oil and Gas.** Region 15 has high potential for the discovery of oil and gas. The western portion of the Region is underlain by Tertiary Milky River, Bear Lake, Stepovak, and Meshik formations. Elsewhere on the Alaska Peninsula the Milky River and Stepovak formations are known to contain oil and gas shows. Three widely spaced wells have been drilled in Region 15: Chevron USA Inc. drilled the Koniag Chevron USA No. 1, onshore between Yantarni and Nakalilok Bays, in 1981 to a depth of 10,907 feet; Cities Service Oil Co. drilled the Painter Creek No. 1, four miles southwest of Mother Goose Lake, in 1967 to a depth of 7,912 feet; and Great Basins Petroleum Co. drilled the Ugashik No. 1, eleven miles southwest of Pilot Point, in 1966 to a depth of 9,476 feet.

State and Native landowners are currently pursuing a new hydrocarbon exploration licensing and leasing program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Geothermal.** One thermal spring occurs in the Region east of Mother Goose Lake; it has a temperature of 138° F. A second thermal spring, Surprise Lake Hot Spring, occurs within Aniakchak National Monument and has been measured at 78° F. Neither spring is utilized for commercial or residential purposes.

**Materials.** There are no active materials sites in the Region.

**Forestry.** There are no significant forestry resources in Region 15.

**Fish and Wildlife.** Caribou, brown bear, waterfowl, and moose are the major wildlife resources in the Region. The Dog Salmon, Cinder, and King Salmon Rivers and Mother Goose Lake provide habitat for salmon, which are harvested by commercial, recreational, and subsistence users. This is also true for a number of streams on the Pacific side of the peninsula. The Region contains important brown bear habitat; the distribution of important and essential brown bear habitat is mostly within the National Wildlife Refuge and the National Monument; on state land, this habitat is found between Aniakchak National Monument and Preserve and Port Heiden. Much of the lowlands provide calving grounds for caribou. Moose also tend to calve in much of the central portion of the Region. The eastern portion of Region 15 encompasses the Alaska Peninsula National Wildlife Refuge. The Region supports a wide variety of wildlife including caribou, brown bear, river otter, wolves, wolverine, and moose. Moose are relative newcomers

to the area, first observed on the peninsula in the early 1900's. The coastal portions of the region provide nesting areas for eagles and other raptors. Peregrine falcon occur on the eastern coast.

Region 15 also encompasses the Cinder River Critical Habitat Area, managed by the Alaska Department of Fish & Game. This legislatively designated area was created to protect habitat that supports migratory stopover areas for large number of ducks, geese, and shorebirds in the spring on their way to northern nesting grounds and in the fall on their return to southern wintering areas. In the fall, the Cinder River area is an important feeding and staging area for cackling Canada geese. The Cinder River shorelands support a nesting population of marbled godwits and sea ducks winter in the protected ice-free waters.

# Management Considerations: Local and State Plans

A number of local, state, and federal management plans were considered in development of this plan. Local plans include the Lake and Peninsula Borough Coastal Zone Management Plan, the Lake and Peninsula Borough Comprehensive Plan, and the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008. State plans include the Bristol Bay Area Plan and the Southwest Alaska Transportation Plan. Federal plans include the Alaska Peninsula and Becharof National Wildlife Refuges Draft Comprehensive Conservation Plan.

The Bristol Bay Area Plan (1984) affected all state lands in the Region until this revision. The 1984 Area Plan managed this area for fish and wildlife habitat and harvest, recreation, and oil and gas development. This revision supersedes the original Area Plan.

Region 15 is within the Lake and Peninsula Borough. Both the Comprehensive Plan and the District Coastal Management Plan of the Borough apply to Region 15. The Comprehensive Plan focuses on economic and infrastructure development issues and does not contain specific land use standards or a land use map. The Enforceable Policies of the District Coastal Management Plan are extensive; policies affecting anadromous streams, bald eagle nests, oil and gas development, material extraction and mining can be applicable, under certain instances, to state lands. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by DNR prior to issuing an authorization.

Region 15 is also within the area covered by the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, which was developed for the U.S. Department of Commerce Economic Development Administration by the Southwest Alaska Municipal Conference (July 2003). This document developed a number of goals, objectives, and strategies to facilitate and support efforts that retain and grow the region's wealth, including diversifying the economic base.

The Comprehensive Conservation Plan of the Alaska Peninsula National Wildlife Refuge guides the management of federal uplands within the Refuge. See the section on *Local and Federal Plans in Chapter 3* for a description of these plans and how they apply to federal lands.

### Municipal Selections

The Lake and Peninsula Borough has made several selections in Region 15. Selections have been made along the east side of the King Salmon River, on Old Creek, between the Cinder River and Mud Creek, and at a remote landing strip adjacent to Painter Creek. The selections total approximately 8,293 acres in Region 15.

# Management Summary: Uplands

State land in Region 15 is to be managed for a variety of multiple uses, including public recreation and tourism, hunting and fishing, minerals exploration and development, oil and gas exploration and development, public facilities, and maintenance of sensitive wildlife habitats. Because of the difficulty associated with development and the absence of discernible demand, all state-owned and state-selected land is designated General Use – except for those uplands within tidelands management units that are designated Habitat (Ha).

### Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Land that contains one or more resource values, none of which is of sufficiently high value to merit designation as a primary use. The land is to be managed for a variety of uses including protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and protection of heritage resources. It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. Land in this designation may be appropriate for conveyance to municipalities unless stated otherwise in the unit's management intent.
- Habitat (Ha). This designation applies to areas of varied size for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in the permanent loss of a population or sustained yield of a species. This land will remain in state ownership except for areas where a tidelands conveyance to a municipality is allowed under AS 38.05.820 and AS 38.05.825. In Region 15 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous.

- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may (only) be designated Public Recreation and Tourism-Dispersed, (Rd), Habitat (Ha), General Use (Gu).

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur on state-owned land throughout the Region with the exception of the Cinder River Critical Habitat Area.
- Proposed Transportation Corridor. The area identified on the Region Map as a "Potential Transportation Corridor" should be retained by the state during the planning period. Authorizations granted by DNR within this corridor should not preclude the future development of transportation access. Authorizations or disposals within and adjacent to this corridor should only be allowed after consultation with ADOT/PF.
- The Alaska State Legislature has designated the Cinder River Critical Habitat Area for the protection of fish and wildlife habitat. Management of this area is the responsibility of the Alaska Department of Fish and Game (ADF&G). A special area permit is required for any habitat altering work, including any construction activity. A special area permit application form can be obtained from any Department of Fish and Game office and should be submitted to the Division of Sport Fish Regional Office in Anchorage representing the area in which the proposed activity will occur. See also tideland management unit R15T-01.
- Mineral Closing Leasehold Location Orders. There are no Mineral Closing Orders that affect this Region, and no MCOs or Leasehold Location Orders are recommended.
- Mineral Order No. 791 is an interim order (as of July 11, 2003) that precludes shallow natural gas leasing and oil and gas exploration licensing. This order has no effect on locatable or leaseable minerals other than shallow natural gas leasing and oil and gas exploration licensing. This order is retained and affects all state land in Region 15.
- Retained Lands. There are no state lands within this Region that are designated to be retained except for those that are reserved as a 'Potential Transportation Corridor' and those designated Habitat (Ha).
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

See the Resource Allocation Table for more detail on these upland management units.

# Management Summary: Tidelands and Submerged Lands

Region 15 includes tidelands in the northern part of the Region that adjoin Bristol Bay as well as tidelands that adjoin the Pacific Ocean in its southern part.

**Bristol Bay Tidelands.** The tidelands in this area consist almost uniformly of coarse sand beaches, although extensive areas of exposed and sheltered tide flats occur at the mouth of the Cinder River and in the extensive wetland areas that adjoin the Cinder River, especially to the south thereof. The most critical habitat area within this Region occurs at and within the Cinder River CHA (R15T-01). This CHA provides habitat for spring and fall concentrations of waterfowl (including tundra swans), waterfowl molting concentrations, spring concentrations of brown bear, and a harbor seal haulout concentration area at the mouth of the Cinder River. This biologically productive area extends south from the mouth of the Cinder River, including the area of Hook Lagoon (R15T-02), which is not within the Cinder River CHA. The Hook Lagoon management unit includes the area of the lagoon and coastal near shore area. These areas are important habitats for spring and fall brown bear concentrations, spring and fall waterfowl concentrations, and waterfowl molting concentrations.

Sockeye, pink and chum salmon are commercially harvested (purse seine) along the Bristol Bay coastline and coho salmon at mouth of Cinder River (purse seine). Seining for salmon is not currently allowed east of Cape Seniavin along the Bering Sea Coastline. Chinook, sockeye, and coho salmon are targeted by set gillnets and occasionally by drift gillnets in Cinder River Lagoon. Coho salmon are fished by drift gillnet gear outside of Cinder Lagoon after August 1.

**Pacific Ocean Tidelands.** The tidelands in this area primarily provide habitat for seabird colonies situated along the coast on rocky islets and several offshore islands. Kelp concentrations are reported along much of the coastline and on several offshore islands. Some of the tidelands are known sea otter concentration areas, and several harbor seal and sea lion haulouts exist. Most of the tidelands in the northern part of the region adjoin the Alaska Peninsula NWR. The southern half adjoins areas of private and Native corporation land.

Red king, tanner and dungeness crab are harvested in the tidelands that adjoin the Pacific Ocean, concentrating in the bays and lagoons. Shrimp harvest is concentrated in Amber Bay, Nakalilok Bay, and Chiginagak Bay. Guided sport fishing occurs in the coastal tidelands on the Pacific side of the Alaska Peninsula.

## Plan Designations and Management Intent

**Plan Designations and Management Intent: Bristol Bay**
**Bristol Bay Coastal Tidelands.** Areas of tideland in Bristol Bay not within the CHA (R15T-01) or the Hook Lagoon tideland management unit (R15T-02) are designated General Use. Development authorizations in this area are considered appropriate subject to the protection of sensitive resources and habitats.

**Cinder River CHA (R15T-01).** The CHA is designated Habitat and is to be managed to protect the concentrations of waterfowl, brown bear, and harbor seal haulouts. Development authorizations are prohibited within the CHA unless the requirements of AS 16.20.530 and AS 16.20.530 are fulfilled.

**Hook Lagoon (R15T-02).** Hook Lagoon and the area adjacent to it (R15T-02) are designated Habitat and are to be managed to protect the hydrology of the lagoon, eel grass and areas of salt marsh, and habitats essential to brown bear and waterfowl concentrations. Tideland authorizations may be appropriate in the areas designated Habitat subject to the protection of sensitive resources and habitats.

**Plan Designations and Management Intent: Pacific Ocean**
**Pacific Coast Tidelands.** Areas of tideland along the Pacific Ocean not within the Alaska Peninsula NWR are designated General Use. Development authorizations in this area are considered appropriate subject to the protection of sensitive resources and habitats.

**Tidelands adjacent to the Alaska Peninsula NWR (R15T-03).** Tidelands adjacent to the Alaska Peninsula NWR[18] are to be managed to protect habitat values and public recreation resources and are affected by a Tideland Resource Management Zone (TRMZ). See the description of a TRMZ in the section on *Tidelands Summary in Chapter 3* for a more detailed description of management intent for such zones. See also the footnote. This TRMZ also applies to the Aniakchak National Monument and Preserve.

See the Resource Allocation Table for more details on these tideland management units.

[18] Note: The requirements of the TRMZ also apply to the Aniakchak National Monument and Preserve. This National Monument is not included within a region in the BBAP, but the tidelands of this area need to be classified.

# Resource Allocation Table for Upland Units - Region 15

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| AN-01<br>Aniakchak | 5,486<br>Gu -- General Use | Map O-3<br>S36S51W | The unit is designated General Use (Gu) and is to be managed for a variety of uses including protection of anadromous fish and wildlife resources and habitat, dispersed recreation, and mineral and oil and gas exploration and development. Development authorizations may be considered appropriate subject to the protection fish and wildlife resources and the specific requirements of Chapter 2. The unit is not suitable for settlement. | This unit consists of state-owned land that extends into the northern portion of Aniakchak National Monument and Preserve. It consists of approximately eight sections of land in steep terrain near the headwaters of Pumice Creek. Pumice Creek is cataloged as an anadromous fish stream and the area is used by brown bear for denning. |
| R15-01<br>Cinder River | 499,667<br>Gu -- General Use | Map O-3 | The unit is designated General Use (Gu). It is to be managed for a variety of uses including minerals or oil and gas exploration and development, the protection of fish and wildlife resources and their associated habitat, and dispersed recreation. Authorizations should carefully review the guidelines provided in the Fish and Wildlife section of Chapter 2 prior to issuance, particularly those related to caribou calving areas, anadromous streams, and tundra swans. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations related to mineral development or oil and gas extraction, if found economically practicable to develop. The Alaska Peninsula transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known or without consultation with the ADOT/PF. | This is a large state-owned unit that comprises most of the state land in Region 15. It consists mostly of low-lying, poorly drained, wetlands on the west side of the Alaska Peninsula. Vegetation consists of low shrub and tundra. Caribou calving grounds have been identified in the western portion of the unit and moose calving areas are found in the eastern portion of the unit. Large areas are also considered denning areas for brown bear. Tundra swan concentrations occur northeast and southwest of Cinder River estuary. The unit contains several large anadromous fish streams. Commercial and other recreational sport fishing and hunting uses occur. The unit has significant potential to contain deposits of oil and gas. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R15-02<br>King Salmon River | 3,195<br>Gu -- General Use | Map O-3 | The unit is designated General Use (Gu). It is to be managed for a variety of uses including minerals or oil and gas exploration and development, the protection of fish and wildlife resources and their associated habitat, and dispersed recreation. Authorizations should carefully review the guidelines provided in the Fish and Wildlife section of Chapter 2 prior to issuance, particularly those related to caribou moose calving areas. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations related to mineral development or oil and gas extraction, if found economically practicable to develop. | This unit consists of approximately five sections of state-selected land west of the King Salmon River in the northern part of Region 15. The unit contains areas used by waterfowl, for moose calving, and has oil and gas potential. |
| R15-03<br>Reindeer Creek | 10,200<br>Gu -- General Use | Map O-3 | This unit is designated General Use (Gu). If conveyed by the federal government, these lands are to be managed for a variety of uses including oil and gas exploration and development, the protection of fish and wildlife resources and their associated habitat, and dispersed recreation. Authorizations should carefully review the guidelines provided in the Fish and Wildlife section of Chapter 2 prior to issuance, particularly those related to caribou calving areas. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations related to oil and gas extraction, if found economically practicable to develop. The Lake and Peninsula Borough has made a number of land selections within the unit as part of its municipal entitlement. These include lands at Painter Creek and the landing strip, lands east of the King Salmon River, a selection on Old Creek, and several selections between Mud Creek and the Cinder River. Conveyance of these selections is considered appropriate, subject to a separate, subsequent Best Interest Finding. The Alaska Peninsula transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known or without consultation with the ADOT/PF. | The unit consists of approximately sixteen sections of state-selected land along the southeast margin of Region 15 in the vicinity of Reindeer Creek. The unit contains anadromous fish streams, may have brown bear denning areas, and is within a caribou calving area. The unit is utilized for dispersed recreation, primarily related to fishing and hunting. The Alaska Heritage Resources Survey (AHRS) reports a heritage site in or near this unit near the coast. The unit has potential for the discovery of oil and gas. |

# Resource Allocation Table for Tideland Units - Region 15

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R15T-01<br>Cinder River CHA | 22,930<br>Ha -- Habitat | Map O-3<br>S33S55W, S33S56W | Unit is designated Habitat and is to be managed to protect the sensitive upland and tideland resources associated with this Critical Habitat Area. Only development authorizations that meet the requirements of AS 16.20.520 and AS 16.20.530 are appropriate. Applications must be submitted to ADF&G for review and approval. Ensure that authorizations are consistent with the requirements of the Bristol Bay Fisheries Reserve. Consult with NMFS and USFWS prior to granting authorizations. | This tideland unit consists of the uplands and tidelands within the Cinder River CHA, created under AS 16.20.560. Tideland resources include a harbor seal haulout concentration area at the mouth of Cinder River, and both waterfowl seasonal concentrations (spring and fall periods) and molting concentration areas. This is an important staging area for sandhill cranes. The southern portion of the unit contains areas used by brown bears during spring concentrations. A caribou calving area is located in the vicinity of the Cinder River lagoon. A number of anadromous streams empty into the extensive area of sheltered tidal flats that occur to the south of the mouth of Cinder River. See also unit R15T-02, which contains tidelands immediately to the south of the CHA. |
| R15T-02<br>Hook Lagoon | 26,220<br>Ha and Hv -- Habitat and Harvest | Map O-3<br>S35S57W | This unit is designated Habitat. Management intent: protect areas of eel grass and estuarine wetlands, waterfowl seasonal and molting concentration areas, and areas along the coast used during brown bear spring concentrations. Tideland authorizations may be appropriate in this unit but must protect these resources and habitats. | A portion of this unit occupies the lagoon; extensive wetland areas adjoin the lagoon. Tideland resources include areas of eel grass and salt marsh and habitats essential to brown bears and waterfowl. Brown bears use the area adjacent to the coast as spring concentration areas. Waterfowl also use this area extensively for seasonal concentrations (spring and fall) and as molting concentration areas.<br><br>Harvest: Commercial harvest of pink, chum and sockeye salmon (purse seine) occurs along the western coastline of Region 15. Purse seine harvest of coho salmon occurs at the mouth of Cinder River and set net harvest of coho salmon occurs in the vicinity of Hook Lagoon. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R15T-03<br>Tidelands adjacent to the Alaska Peninsula NWR and Aniakchak National Monument and Preserve | 75,200<br>Ha, Rd -- Habitat and Public Recreation and Tourism-Dispersed | Map O-3 | Tidelands adjacent to the Alaska Peninsula NWR and the Aniakchak National Monument and Preserve (National Preserve) are to be managed to protect sensitive habitat values, fisheries and wildlife resources, and the public recreation resources of the National Preserve. Offshore islands are also included in the Alaska Maritime NWR. A Tideland Resource Management Zone (TRMZ) affects tidelands adjacent to the NWRs and the National Preserve. See "Management Summary, Tidelands" in Chapter 3 for a more detailed description of TRMZs and the management intent and requirements for such zones. Consult with the National Preserve, USFWS, and NMFS prior to issuing authorizations. | The tidelands adjacent to the Aniakchak National Monument and Preserve primarily provide habitat for sea bird colonies, most of which are situated on offshore islands. Many of the tidelands adjacent to this part of the Alaska Peninsula contain eel grass beds, some are known sea otter concentration areas, and several harbor seal haulout sites are present. Eel grasses and kelp concentrations are also reported on several offshore islands. Bald eagle concentrations are high along this portion of the Alaska Peninsula coast.<br><br>Harvest: Commercial harvest of red king, tanner and dungeness crab occurs in the tidelands adjacent to the Pacific shore of this region concentrating in bays and lagoons. There is a concentration of shrimp harvest in Amber Bay, Nakalilok Bay and Chiginagak Bay. Commercial harvest of halibut and Pacific herring occurs in the offshore tidelands of this unit (domestic trawl and longline) particularly around Sutwik Island. Recreational halibut fishing also occurs in the Pacific tidelands of this region. |
| R15T-04<br>Tide and Submerged Lands, Bristol Bay | 439,401<br>Gu -- General Use | Map O-3 | Manage for a variety of uses and resources. Minimize impacts to shorebird and waterfowl concentrations. Consult with NMFS prior to issuing authorizations. Maintain opportunities for commercial and subsistence harvest. | This unit consists of two relatively small areas of tide and submerged lands; one part being located north of the Cinder River Critical Habitat Area and the other, south of unit R15T-02. Consult Plan Map O-3 for location.<br><br>The majority of the significant biological resources within tidelands in this Region are associated with the Critical Habitat Area (R15T-01) and R15T-02. See these units for a description of sensitive resources.<br><br>The shoreline consists almost uniformly of coarse sand beaches. Waterfowl and seabirds are known to be present within the unit. Portions of the walrus range exist.<br><br>Commercial harvest of pink, chum, and sockeye salmon occurs along the western coastline of this Region. |

# Region 16

# *Port Heiden*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 16 includes the uplands on a portion of the Alaska Peninsula generally around Port Heiden. This includes the lower Meshik River drainage system (Map O-3). The Region borders Region 15 to the northwest, Aniakchak National Monument and Preserve on the east, and is defined on the south and southwest by the Port Heiden drainage divide; it includes only those lands that are drained by streams flowing into Port Heiden. The principal community is Port Heiden (pop. 87).

### State Lands: Ownership and Acreage

State-owned land occupies approximately twenty percent of the Region and is found south of Port Heiden and southwest of the community of Port Heiden. Native-owned land occurs east of Port Heiden and along the southeastern boundary. The majority of land is owned by the Federal government. The Port Heiden Critical Habitat Area is contained within Region 16. The plan applies to 62,299 acres of state-owned and state-selected uplands and 85,677 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated).

### Physical Geography

The western portion of Region 16 is within the Bristol Bay Lowlands ecological province; the eastern portion of the Region is in the Alaska Peninsula ecological province. Drainage flow is predominantly westward towards Bristol Bay. The principal drainage is the Meshik River system. The western two-thirds of the Region is low-lying country with abundant lakes, ponds, and marshes. The eastern one-third encompasses the spine of the Aleutian Range and has considerable relief. The most significant topographic features are Big Butte, Black Peak (3,385 feet), and Range Peak (3,000 feet).

### Climate

Port Heiden has a maritime climate, with cool summers, relatively warm winters, and rain. Snowfall averages 58 inches per year. January temperatures average 25°, and July temperatures average 50°.

## Other

Region 16 is primarily within the Chignik and Bristol Bay Quadrangles. It is within the boundaries of the Bristol Bay Regional Native Corporation, and partly with both the Lake and Peninsula and Aleutians East Boroughs.

## Access

Access to Region 16 is limited to marine, river, or air transport. Skiffs, ATVs and snowmachines are the primary means of local transportation. Travel on the western beaches is possible with four-wheel drive vehicles.

## Resources and Uses

**Cultural and Historic.** Port Heiden is a traditional Alutiiq community, with a commercial fishing and subsistence lifestyle. The community recently relocated inland because storm waves had eroded much of the old townsite and threatened to destroy community buildings. There are a total of 28 cultural sites in this Region: twenty-one are prehistoric, four are historic, and three are of mixed origin. Most of the historic and archeological sites occur at the community of Port Heiden or to the east along the Meshik River corridor.

**Economic.** Commercial fishing and government jobs provide the majority of cash income. Many residents hold commercial fishing permits. Subsistence harvests of salmon, other fish and marine mammals is important to the inhabitants. Game, birds, plants and berries are also an integral part of villagers' diets.

**Recreation.** Recreational activities are primarily outdoor activities tied to hunting, fishing, and wildlife viewing. Recreation and tourism are highly tied to the adjoining Aniakchak National Monument and Preserve which is utilized for river rafting and commercially guided hunting and fishing.

**Minerals and Materials.** There are no reported mineral occurrences in Region 16. Mineral sands are known to occur at locations along the beaches on the west side of the Alaska Peninsula. There are no active material sites in this Region.

**Oil and Gas.** Region 16 has high potential for the discovery of oil and gas. The western portion of the Region is underlain by Tertiary Milky River, Bear Lake, and Meshik formations. Elsewhere on the Alaska Peninsula the Bear Lake formation is known to contain oil and gas shows. State and Native landowners are currently pursuing a new hydrocarbon exploration licensing and leasing program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Fish and Wildlife.** Caribou, brown bear, waterfowl, and moose are the major wildlife resources in the Region. The Meshik River drainage system provides habitat for salmon, which are harvested by commercial, recreational, and subsistence users. Much of the lowlands in Region 16 provide calving grounds for the Northern Alaska Peninsula Caribou Herd. Moose also tend to calve at the southern and eastern fringes of the Region.

Region 16 encompasses the Port Heiden Critical Habitat Area, which consists of both upland and tideland areas. This legislatively designated area was created to protect habitat that supports migratory stopover areas for large numbers of ducks, geese, and shorebirds in the spring on their way to northern nesting grounds and in the fall on their return to southern wintering areas. A more detailed description of the resources of this CHA is provided in the Tideland section that follows.

# Management Considerations: Local and State Plans

Several local and state management plans affect this Region and were considered in development of this plan. The comprehensive plans and district coastal plans of the Lake and Peninsula Borough and the Aleutians East Borough apply to Region 16. These comprehensive plans focus on economic and infrastructure development issues and do not contain specific land use standards or a land use map. The Enforceable Policies of the District Coastal Plans are extensive; policies affecting anadromous streams, bald eagle nests, oil and gas development, materials extraction and mining can be applicable, under certain instances, to state lands. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by DNR prior to issuing an authorization.

Region 16 is also within the area covered by the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, which was developed for the U.S. Department of Commerce Economic Development Administration by the Southwest Alaska Municipal Conference (July 2003). This document identifies a number of goals, objectives, and strategies to facilitate and support efforts that retain and grow the region's wealth, including diversifying the economic base.

The two state management plans affecting this Region include the Bristol Bay Area Plan and the Southwest Alaska Transportation Plan. The BBAP, first developed in 1984, has provided the basis for the management of state land until this plan revision, which replaces and supercedes the 1984 BBAP. The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) identifies needed access facilities within the planning region, which includes an Alaska Peninsula Transportation Corridor that generally extends from South Naknek to the Chigniks connecting with the communities of Egegik, Pilot Point, Ugashik, and Port Heiden. The Alaska Peninsula Corridor is an overland route linking the communities of the Alaska Peninsula from Ivanof Bay to Naknek.

### Municipal Selections
There are no Borough selections in Region 16.

# Management Summary: Uplands

State land in Region 16 is to be managed for a variety of multiple uses, including public recreation and tourism, hunting and fishing, oil and gas exploration and development, public facilities, and maintenance of sensitive wildlife habitats.

### Plan Designations and Management
The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to caribou calving areas and tundra swans in Fish and Wildlife Habitat and Harvest Areas, and to those guidelines pertaining to Settlement.

- General Use (Gu). Land designated General Use is to be managed for a variety of uses including the protection of fish and wildlife habitat and harvest, dispersed public recreation, oil and gas development, and the protection of heritage resources. Development during the planning period is considered unlikely given the remote, inaccessible character of the land and, as a matter of policy, it is not intended that intensive development occur within this designation, except as may be related to mineral or oil and gas development.
- Habitat (Ha). This designation is applied to streams and shorelands that are considered navigable by the state and cataloged by ADF&G as anadromous. See the Map O-5 for their distribution and Table 3.1 in the Navigability section of this Chapter for a partial listing of these streams. Certain of these streams are co-designated Public Recreation and Tourism-Dispersed.
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may (only) be designated Public Recreation and Tourism-Dispersed, (Rd), Habitat (Ha), or General Use (Gu).
- Public Facilities-Retain (Pr). The area of the Port Heiden airport designated Public Facilities-Retain and is to be retained by the state.
- Settlement (Se). Two relatively small areas of state-selected land situated along Barbara Creek are considered appropriate for remote settlement and for disposal during the planning period.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur on state-owned land throughout the Region with the exception of the Cinder River Critical Habitat Area.
- The Alaska Peninsula Transportation Corridor occupies portions of Region 16. Land within this corridor is to be retained by the state. Authorizations or disposals along this corridor should be allowed only after consultation with the ADOT/PF.
- Authorizations within the uplands of the Cinder River Critical Habitat Area may be appropriate subject to the protection of sensitive resources and habitats, but are prohibited unless the requirements of AS 16.20.520 and AS 16.20.530 are fulfilled. A special area permit issued by ADF&G is required for any habitat altering work, including any construction activity. Consult with ADF&G prior to issuing an authorization. See also the management requirements affecting the tidelands within the CHA that follow.
- Mineral Closing Orders and Leasehold Location Orders. No new mineral closing orders or leasehold location orders are recommended in this Region except for areas that are to be disposed of for settlement purposes. In these instances, closure of the area prior to sale is required. The MCOs in areas not selected for settlement within three years of the land sale, however, shall revert to 'open to mineral entry'. See the *Mineral Resources section in Chapter 2* for more details on subsurface management requirements.
- Mineral Order No. 791 affects this Region. It precludes shallow natural gas leasing and oil and gas exploration licensing, but has no effect on locatable or leaseable minerals.
- Retained lands and lands suitable for disposal. Except for the one small management unit of state land occupied by the community airport and the area of the CHA, there are no state lands that are designated to be retained by the state. Please note the requirement above to retain lands along the Transportation Corridors.
- Municipal Selections. Management units designated Settlement are considered appropriate for disposal to boroughs under the Municipal Entitlement Act or to individuals. Areas designated General Use may also be appropriate for disposal, subject to a Best Interest Finding.
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

See the Resource Allocation Table for more details on these upland management units.

# Management Summary: Tidelands and Submerged Lands

Tidelands in this Region adjoin Port Heiden Bay. Much of the bay consists of extensive tidal flats, with portions of this area occupied by eel grass and salt marshes. Uplands that adjoin the bay in its southern part, and tidelands immediately adjacent to the uplands, are included within the Port Heiden CHA. With the exception of these tidelands, the remainder of the bay is excluded from the CHA. The bay and the uplands, which form the spit terminating at Strogonof Point, provide a diverse and productive habitat. Near the mouth of the bay there are a number of seabird colonies and a harbor seal haulout concentration area. The uplands that adjoin the bay, as well as upland areas adjacent to the coast extending south to the area of the Seal Islands, are important brown bear spring concentration areas. Waterfowl concentrations occur throughout these upland areas and Port Heiden Bay during the spring and fall. Large portions of this area are also used as waterfowl molting concentration areas.

An extensive yellowfin sole harvest occurs in the Port Heiden area. Drift and set gillnet salmon harvests occur in Port Heiden Bay and west of Strogonof Point. This area is sparsely populated, but the Port Heiden community relies on commercial and subsistence fishing for their livelihood. Subsistence harvest includes salmon and other fish, clams, seals, and waterfowl (birds and eggs). Walrus are not hunted, but households salvage walrus tusks from the beach for ivory carving.

## Plan Designations and Management Intent

**Coastal Tidelands.** Areas of tideland not within the Port Heiden CHA (R16T-01) or Port Heiden Bay (R16T-02) are designated General Use. Development authorizations in this area are considered appropriate subject to the protection of sensitive resources and habitat.

**Port Heiden CHA (R16T-01) and Port Heiden (R16T-02).** Both the area of the Port Heiden CHA (R16T-01) and Port Heiden itself (R16T-02) are designated Habitat, except for a small area adjacent to the Port Heiden community (R16T-03). The management intent in both tideland management units is to protect the marine mammals, spring brown bear concentration areas, the waterfowl concentration areas, the areas of seabird colonies and harbor seal haulouts that focus on Chistiakof Island and Strogonof Point. Development authorizations in tideland management unit R16T-02 may be appropriate subject to the protection of sensitive resources and habitats, but are prohibited within the CHA unless the requirements of AS 16.20.520 and AS 16.20.530 are fulfilled. See also the management guideline affecting the upland portion of the CHA, described previously.

**Port Heiden Community (R16T-03).** Water dependent commercial and industrial facilities to support Port Heiden are considered appropriate in this management unit, and this area is designated Waterfront Development. Development authorizations for these types of uses are considered appropriate subject to the protection of sensitive resource values and habitats.

See the Resource Allocation Table for more details on these tideland management units.

# Resource Allocation Table for Upland Units - Region 16

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R16-01<br>Port Heiden | 538<br>Gu -- General Use | Map O-3<br>S37S57W Sec, 15,16 | This unit is designated General Use (Gu). If conveyed by the federal government, these lands are to be managed for a variety of uses including oil and gas exploration and development, the protection of fish and wildlife resources and their associated habitat, and dispersed recreation. Authorizations should carefully review the guidelines provided in the Fish and Wildlife section of Chapter 2 prior to issuance, particularly those related to caribou calving areas. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations related to oil and gas extraction, if found economically practicable to develop. The Alaska Peninsula transportation corridor transects the unit; the actual position of the road alignment has yet to be determined. No authorizations or disposals should be considered that are within or near the corridor until the road alignment is known or without consultation with the ADOT/PF. | This unit consists of two noncontiguous, small units of state-selected land north of Port Heiden. Vegetation consists of low and dwarf shrublands. The unit is within an area used by caribou for calving. The unit has potential for the discovery of oil and gas resources. The Alaska Heritage Resources Survey (AHRS) reports several heritage sites in or near this unit. |
| R16-02<br>Port Heiden Airport | 3,542<br>Pr -- Public Facilities-Retain | Map O-3 | This unit is to be managed by ADOT/PF consistent with the FAA standards and the conveyance document, and is to be retained in state ownership. | This unit (OSL 331) encompasses the Port Heiden public airport and associated facilities and is managed by the ADOT/PF. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R16-03<br>Barbara Creek North | 6,970<br>Se -- Settlement | Map O-3 | The unit is designated Settlement (Se). If conveyed by the Federal government, it is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and Caribou and Moose Rutting and Calving Area, described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. Should the Bristol Bay Borough make land selections in the unit under the Municipal Entitlement program, these selections are considered appropriate for conveyance, subject to a separate and subsequent Best Interest Finding. | This unit consists of approximately four sections of state-selected land in the vicinity of Barbara Creek, roughly five miles southeast of the community of Port Heiden. The terrain has little relief, is vegetated with tundra and low shrub, and considered suitable for settlement. Roads extend to within one mile of the unit. Barbara Creek is an anadromous fish stream. A caribou calving area occupies portions of this unit. The unit has potential for the discovery of oil and gas. |
| R16-04<br>Barbara Creek | 13,992<br>Se -- Settlement | Map O-3 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and Caribou and Moose Rutting and Calving Area, described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. Should the Bristol Bay Borough make land selections in the unit under the Municipal Entitlement program, these would be considered appropriate for conveyance, subject to a separate and subsequent Best Interest Finding. | This unit consists of approximately seven sections of state-owned land in the vicinity of Barbara Creek, roughly six miles southeast of the community of Port Heiden. The terrain has little relief, is vegetated with tundra and low shrub, and considered suitable for settlement. Roads extend to within two miles of the unit. Barbara Creek is an anadromous fish stream and the unit is within a caribou calving area. A caribou calving area occupies portions of this unit. The unit has potential for discovery of oil and gas. |
| R16-05<br>Charles Creek | 37,256<br>Gu -- General Use | Map O-3 | This unit is designated General Use (Gu). It is to be managed for a variety of uses including minerals or oil and gas exploration and development, the protection of fish and wildlife resources and their associated habitat, and dispersed recreation. See Chapter 2 guidelines for caribou calving areas and tundra swans. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations related to oil and gas exploration and development or recreation. | The unit consists of state-owned uplands in the southern portion of Region 16. The unit is in low-lying terrain with tundra and low shrub vegetation. The unit is affected by a caribou calving area, and includes areas used by brown bear in spring, summer, and fall, and contains concentrations of tundra swans. The unit has potential for the discovery of oil and gas resources. |

# Resource Allocation Table for Tideland Units - Region 16

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R16T-01<br>Port Heiden CHA | 69,719<br>Ha -- Habitat | Map O-3<br>S37S59W, S37S60W | Unit is designated Habitat and is to be managed to protect the sensitive upland and tideland resources associated with this Critical Habitat Area. Only development authorizations that meet the requirements of AS 16.20.520 and AS 16.20.530 are appropriate. Applications must be submitted to ADF&G for review and approval. | This unit consists of the Port Heiden CHA, established under AS 16.20.555, which contains a mixture of upland and tideland areas. Most of the CHA occupies upland areas to the south and east of Port Heiden. The relatively small areas of tidelands are primarily associated with waterfowl seasonal concentration areas (spring and fall) and waterfowl molting concentrations. Large concentrations of sea otters have been documented within Port Heiden. Note: Most tideland resources in the Port Heiden area are contained within tideland unit R16T-02. |
| R16T-02<br>Port Heiden bay | 51,973<br>Ha and Hv -- Habitat and Harvest | Map O-3<br>S37S59W, S38S59W, S38S60W | Unit is designated Habitat.<br><br>Management intent: Protect areas of eel grass, waterfowl seasonal and molting concentration areas, sea bird colonies, and the harbor seal haulout area. Tideland authorizations may be appropriate in this unit but must protect sensitive resources and habitats. Consult with USFWS prior to issuing authorizations. In general, tideland authorizations should be concentrated along the shore near the community of Port Heiden. | Most of the sensitive tideland resources and habitats within Port Heiden bay occur within this tideland unit. Sensitive upland areas are primarily associated with the Port Heiden CHA (R16T-01). There is a large harbor seal haulout area situated at the mouth of Port Heiden, just east of the spit (Strogonof Point). Sea bird colonies exist at Strogonof Point and Chistiakof Island, both of which are also situated at the mouth of the bay, and in a nearby upland area (Goldfish Lake). Areas within the bay are important as seasonal waterfowl concentration areas (spring and fall) and as waterfowl molting concentration areas, while offshore areas within this unit are important as a fall concentration area. Numerous anadromous streams empty into the bay. There are large areas of sheltered tidal flats, some of which may contain eel grass. Large concentrations of sea otters have been documented within Port Heiden.<br><br>Harvest: Extensive yellowfin sole harvest occurs in the offshore tidelands of this region. Set net harvest occurs at Strogonof Point and set net and drift net harvest occur in the eastern portion of Port Heiden (bay), south of Port Heiden community. This region is sparsely populated, and the local community relies heavily on commercial and subsistence fishing. Subsistence harvesting includes salmon and other fish, clams, seals and waterfowl (birds and eggs). Walrus are not hunted in this area, but households salvage walrus tusks and bones from the beach for ivory carving. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R16T-03<br>Tide and Submerged Lands, Bristol Bay | 85,677<br>Gu -- General Use | Map O-3 | Manage for a variety of uses and resources. Protect concentrations of waterfowl and seabirds. Consult with USFWS and NMFS prior to issuing authorizations. Maintain opportunties for commercial harvest. | This unit consists of those offshore submerged lands not included within the Port Heiden Critical Habitat Area (R16T-01) or unit R16T-02, which occupies the remainder of Port Heiden. Consult Plan Map O-3.<br><br>Waterfowl and seabirds are present in the unit. It is also likely that marine mammals (harbor seals) that concentrate within Port Heiden may also transit or use this unit at times. Portions of the walrus range also occurs.<br><br>Yellowfish sole harvest occurs in these offshore tidelands. |

# Region 17

## *Chignik, Perryville*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 17 includes the uplands of a portion of the Alaska Peninsula on the eastern side of the Aleutian Mountain Range from Stepovak Bay to Chignik Lagoon as well as the coastal islands (Maps O-3 and O-4). It includes the Black Lake-Chignik River-Chignik Lake system. The western boundary of the Region is the drainage divide between Bristol Bay and the Pacific Ocean. Communities include Chignik (pop. 89), Chignik Lake (113), Chignik Lagoon (92), Perryville (106), and Ivanof Bay (3).

Except for small tracts of land that are used for public purposes or that represent continuation of state land in the adjoining Region (18), there are no state uplands within this Region. Native entities or the federal government own the uplands. Federal land consists of uplands within the Alaska Peninsula NWR and the islands of the Chiachi and Mitrofania Islands group that are part of the Alaska Maritime NWR. The focus of state management in this Region is tidelands and submerged lands.

### State Lands: Ownership and Acreage

There is but little state-owned land in Region 17 except for small management units at community airports at Perryville and the Chigniks as well as the navigable waterbodies. The majority of land is Federally owned and within the Alaska Peninsula National Wildlife Refuge. Native-owned lands are a sizeable portion of the Region and dominate the land situation around the Ivanof Bay-Perryville area and around the Chigniks. The plan applies to 3,641 acres of state-owned and state-selected uplands and 848,249 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated).

### Physical Geography

Region 17 is within the Alaska Peninsula ecological province. Most of the Region is steep, rugged, and mountainous with headlands that jut into the ocean. Drainage flow is predominantly eastward towards the Pacific Ocean. Principal drainages include the Black Lake-Chignik River-Chignik Lake system and the Kametolook River. The Pacific Coast has multiple embayments such as Stepovak Bay, Ivanof Bay, Mitrofania Bay, Kuiukta Bay, Chignik Bay,

and Kujulik Bay. By far, the most significant topographic feature is Mount Veniaminof, an active volcano, which rises from sea level to an elevation of 7,075 feet; it has a base with a diameter of thirty miles.

## Climate

The maritime climate is characterized by cool summers, warm winters and rainy weather. Along the coast, summer temperatures range from 39° to 60°; winter temperatures average 21° to 50°. Low clouds, rain squalls, fog and snow showers frequently limit visibility. Average annual precipitation is 127 inches, including 58 inches of snow.

## Other

Region 17 is primarily within the Chignik and Stepovak Bay Quadrangles. It is within the boundaries of the Bristol Bay Regional Native Corporation, and the Lake and Peninsula Borough.

## Access

Access to the major communities and the Region is primarily restricted to marine and air travel; ATV's and skiffs are the primary modes of local transportation. At Ivanof Bay, there is a private 1,500' gravel airstrip, and the bay is accessible by floatplane. Scheduled flights arrive to and from King Salmon. Bulk cargo goods are barged to Chignik Bay. There is no public dock or harbor, although it is a local priority to develop one.

Perryville is accessible by air and sea. There is a state-owned 2,467' long by 50' wide gravel runway and seaplane base, and scheduled and charter flights are available from King Salmon. Cargo barges deliver fuel and supplies each spring.

Chignik has a state-owned 2,600' long by 60' wide gravel runway and a seaplane base. Regular flights run from King Salmon and Port Heiden. There is also a 1,630' private gravel airstrip. Barge services arrive weekly from late spring through early fall, and monthly during the remainder of the year. The state ferry operates bi-monthly from Kodiak between May and October. A 600-foot privately-owned dock and a boat haulout are available. A breakwater, 110-slip small boat harbor and public dock are under development. There is a strong regional interest in constructing roads between Chignik, Chignik Lagoon, Chignik Lake and the City landfill.

Chignik Lagoon is primarily accessible by air and sea. There is a state-maintained 1,600' by 60' gravel airstrip and public small boat harbor and seaplane base. Regular and charter flights are available from King Salmon. A cargo ship brings supplies annually, and goods are lightered to shore. Boat haulouts are available.

At Chignik Lake, there is a state-owned 2,800' long by 60' gravel airstrip; seaplanes may land at Chignik Lagoon. Regularly scheduled and charter flights are provided. Goods are lightered to the Lake via Chignik Lagoon weekly during the summer and monthly during the winter, and transported overland. The state ferry provides service to Chignik Lagoon four times per year. There is no harbor, dock, barge access or boat haulouts.

## Resources and Uses

**Cultural and Historic.** The community of Perryville was founded in 1912 as a refuge for Alutiiq people driven away from their villages by the eruption of Mt. Katmai. The present population of Chignik Lake traces its roots from the Alutiiq near Ilnik and the old village of Kanatak near Becharof Lake. The community was the winter residence of a single family in 1903. Other families moved from surrounding communities in the early 1950s when a school was built. The communities are a mixture of non-Natives and Alutiiq.

The state Office of History and Archeology lists fifty-six sites in Region 17; seventeen of these are historic and thirty-nine are prehistoric. Most of the historic and archeological sites occur in the Chignik Lake-Chignik River drainage, in the vicinity of Cape Kumliun, and near Perryville.

**Economic.** Villages in the Region typically have an economy based upon commercial fishing and subsistence activities. Residents commonly hold commercial fishing permits. Two fish processing plants operate in Chignik. Salmon, herring roe, halibut, cod and crab are processed here; between 600 to 800 people come to Chignik to fish or work in the plants each summer. The people depend upon subsistence hunting and fishing, and use salmon, trout, crab, clams, moose, caribou, bear, porcupine and seals.

**Recreation.** The Region is not heavily used for tourism and commercial recreation although it has abundant fish and wildlife resources and high scenic values. Recreational activities are related to outdoor uses such as hunting, fishing, wildlife viewing, and river use. Several commercial recreation operators use Chignik as a base.

**Minerals and Coal.** Region 17 contains a large number of base and precious metal occurrences and prospects. It also includes the Chignik coal basin. The identified resources for the Chignik and Herendeen Bay coalfields range up to 200 million short tons; hypothetical and speculative resources range to three billion short tons. Coal occurs as Cretaceous bituminous and subbituminous coals of the Coal Valley Member of the Chignik Formation; the coal units are typically less than seven feet thick ranging from less than two to seventeen feet. At least forty-nine base and precious metal occurrences are found in the Region. Most are porphyry or polymetallic deposits. One of the most significant porphyry copper deposits is Bee Creek, located on the north side of Chignik Bay. Disseminated chalcopyrite occurs in an arkosic sandstone near a late Tertiary dacite stock which displays zoned alteration patterns with a potassic-altered core.

**Oil and Gas.** The oil and gas potential of the Region is not known; part of an oil and gas basin lies in a small portion of the southwestern part of the Region and near Black Lake indicating potential in these areas. State and Native landowners are currently pursuing a new hydrocarbon exploration licensing and leasing program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Geothermal.** There are no thermal springs in Region 17.

**Materials.** Materials sites along the beaches are used from time to time.

**Forestry.** There are no significant forestry resources in Region 17.

**Fish and Wildlife.** Salmon resources of the Black Lake, Chignik Lake, and Chignik River drainage support an important commercial and subsistence harvest as well as commercial fish processing. Wildlife resources include a large brown bear population, caribou, some moose, raptors, abundant marine mammals, and seabirds. Moose and caribou are harvested by subsistence users. The coastal portions of the region provide nesting areas for eagles and other raptors including peregrine falcons.

# Management Considerations: Local and State Plans

A number of management plans were considered in development of this plan. These include: the Bristol Bay Area Plan; the Lake and Peninsula Coastal Zone Plan; the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008; and the Southwest Area Transportation Plan. The management plans for the Alaska Peninsula and Alaska Maritime National Wildlife Refuges were also considered.

The Bristol Bay Area Plan (1984) affected all state lands in the Region until this revision. Region 17 was to be managed for fish and wildlife habitat and harvest. Mineral exploration and development and community expansion settlement were encouraged. This revision replaces and supersedes the original (1984) Area Plan.

Region 17 is within the Lake and Peninsula Borough. Both the Comprehensive Plan and the District Coastal Management Plan of the Borough apply to Region 17. The Comprehensive Plan focuses on economic and infrastructure development issues and does not contain specific land use standards or a land use map. The Enforceable Policies of the District Coastal Management Plan are extensive; policies affecting anadromous streams, bald eagle nests, oil and gas development, material extraction and mining can be applicable, under certain instances, to state lands. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by DNR prior to issuing an authorization.

Region 17 is also within the area covered by the Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, which was developed for the U.S. Department of Commerce Economic Development Administration by the Southwest Alaska Municipal Conference (July 2003). This document developed a number of goals, objectives, and strategies to facilitate and support efforts that retain and grow the region's wealth, including diversifying the economic base.

The Southwest Alaska Transportation Plan (ADOT/PF, November 2002) identified an Alaska Peninsula Transportation Corridor, which in general extends from South Naknek to the Chigniks connecting with the communities of Egegik, Pilot Point, Ugashik, and Port Heiden. The Alaska Peninsula Corridor is an overland route linking the communities of the Alaska Peninsula from Ivanof Bay to Naknek. The key facility in this corridor is the port at Chignik, from which fuel and supplies can be disbursed to other communities via road connections. From Chignik the corridor extends west along the Gulf of Alaska coast to Perryville and Ivanof Bay. It also extends from Chignik to Chignik Lake and Chignik Lagoon, then crosses the Alaska Peninsula to Port Heiden. From Port Heiden the corridor extends north, connecting Pilot Point, Ugashik, Egegik and South Naknek, and tying into the Cook Inlet to Bristol Bay Corridor at Naknek.

The Comprehensive Conservation Plans of the Alaska Peninsula and Alaska Maritime National Wildlife Refuges guide the management of federal uplands within these Refuges. See the section on *Local and Federal Plans in Chapter 3* for a description of these plans and how they apply to federal lands.

### Municipal Selections

The Lake and Peninsula Borough has no outstanding municipal selections in Region 17.

# Management Summary: Uplands

The small amount of state land within this Region is associated with state public facilities (primarily airports), small tracts of land on the western boundary of the Region, and one small management unit at Black Lake west of Chignik. Tracts used for public facilities are to be retained by the state. The isolated areas of state uplands are to be managed for multiple uses; no development is expected within these management units during the planning period, except possible isolated and site-specific development locations, as may occur with oil and gas or mineral exploration and development.

### Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Land that contains one or more resource values, none of which is of sufficiently high value to merit designation as a primary use. The land is to be managed for a variety of uses including protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals, oil and gas exploration and development, and protection of heritage resources. It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at

specific sites. Land designated General Use may be considered for conveyance to municipalities, subject to a Best Interest Finding. There are currently no municipal selections in this Region, however.

- Public Facilities-Retain (Pr). These sites are reserved for a specific infrastructure to serve state interests. They are to be retained by the state and managed under for public purposes, usually as airports.
- Habitat (Ha). Generally, this designation applies to areas of varied size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in the permanent loss of a population or sustained yield of a species. In Region 17 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm). Land with this designation is to be retained in state ownership.
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may (only) be designated Public Recreation and Tourism-Dispersed, (Rd), Habitat (Ha), or General Use (Gu).

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur on state-owned land throughout the Region.
- Proposed Transportation Corridor. The area identified on the Region Map as a "Potential Transportation Corridor" should be retained by the state during the planning period. Authorizations granted by DNR within this corridor should not preclude the future development of transportation access. Authorizations or disposals within and adjacent to this corridor should only be allowed after consultation with ADOT/PF.
- Mineral Closing and Opening Orders. No mineral closing or opening orders affect this Region. No new MCOs are recommended.
- Retained lands and Lands suitable for Disposal. Except for the several small management units allocated to Public Facilities-Retain, there are no state lands that are designated to be retained by the state. However, see the paragraph above on Proposed Transportation Corridors.
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of

Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

# Management Summary: Tidelands and Submerged Lands

Tidelands represent the majority of state lands within this Region, and are the focus of management within the Region. Most of the tidelands adjoin federal National Wildlife Refuges (Alaska Peninsula and Alaska Maritime) or Native-owned tracts. Those adjacent to the coastal islands are particularly important. The tidelands adjacent to the Chiachi and Mitrofania Island groups provide valuable habitats for numerous seabird colonies. There are also several harbor seal and sea lion haulouts. Tidelands adjacent to the Alaska Peninsula coast frequently contain eel grass beds, but are hardly used by harbor seals or sea lions and are unpopulated by sea otters except for the established populations at Kupreanof Point and Chignik Bay. The Chiachi Islands are also unpopulated by sea otter.

The community of Chignik, where there are two operating canneries, is the commercial fishing hub for this area, servicing primarily Chignik Lagoon, Chignik Lake and Perryville. Salmon, herring roe, halibut, cod and crab are processed here.

A commercial herring sac roe harvest occurs primarily in Kujulik Bay, Castle Bay and Chignik Bay, and herring sac roe (food/bait) occurs in Stepovak Bay. Pacific herring trawl occurs in the vicinity of Sutwik Island and the Mitrofania Islands. Purse Seine harvest of pink, sockeye, chinook, chum and coho salmon occurs extensively in Chignik Bay and Chignik Lagoon. Purse seine harvest for pink and chum salmon also occurs along the coast of this region, most especially in Kuiukta, Mitrofania, Ivanof, Humpback, and Stepovak Bays. Substantial harvests of pink, sockeye, chum, and coho salmon occur along the capes between Castle Bay and Kupreanof Point and in Stepovak Bay. Red king, tanner, and dungeness crab are harvested all along the southern coast of this region in bays and lagoons, with the highest concentrations of harvest being in the Chignik Bay and Lagoon areas. Shrimp are harvested in Chignik, Castle, and Mitrofania Bays.

## Plan Designations and Management Intent

**Coastal Tidelands.** Tidelands adjacent to Native or private land are designated General Use. Tideland authorizations in these areas are considered appropriate but such authorizations shall minimize disturbance to sensitive marine resources.

**Tidelands adjacent to Alaska Maritime and Alaska Peninsula NWRs (R17T-01).** Both refuges are affected by a Tideland Resource Management Zone. Tidelands within this Zone are designated Public Recreation and Tourism-Dispersed and Habitat and are to be managed to protect habitat values and maintain the public recreation value of these areas. For a detailed description of this Tideland Resource Management Zone, see *Tidelands Summary in Chapter 3*.

See the Resource Allocation Table for more details on this tideland management unit.

# Resource Allocation Table for Upland Units - Region 17

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R17-01<br>Black | 3,284<br>Gu -- General Use | Map O-3 | This unit is designated General Use (Gu). It is to be managed for a variety of uses including minerals or oil and gas exploration and development, the protection of fish and wildlife resources and their associated habitat, and dispersed recreation. See Chapter 2 guidelines for anadromous fish and caribou calving areas. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations related to oil and gas or recreation. | The unit consists of state-owned land approximately three miles northwest of Black Lake. Vegetation consists of low and dwarf shrub. The unit contains anadromous fish streams, caribou calving areas, and areas utilized by brown bear during spring-summer-fall. |
| R17-02<br>Chignik Lagoon Airport | 29.47<br>Pr -- Public Facilities-Retain | Map O-3<br>S45S59W | The unit is to be managed by the ADOT/PF in accordance with FAA and ADOT/PF guidelines for public airports, in accordance with the management right and with the stipulations of the conveyance. The unit is to be retained in state ownership. | This unit (ADL 224035; LSH 263 and OSL 263) consists of land encompassing the public airport facilities at Chignik Lagoon. It is managed by the ADOT/PF. |
| R17-03<br>Chignik Airport | 123<br>Pr -- Public Facilities-Retain | Map O-3<br>S45S58W | The unit is to be managed by the ADOT/PF in accordance with FAA and ADOT/PF guidelines for public airports, in accordance with the management right and with the stipulations of the conveyance document. The unit is to be retained in state ownership. | The unit (ADL 64601, ADL 220384, and OSL 640) consists of land encompassing the airport associated facilities at Chignik. It is managed by the ADOT/PF. |
| R17-04<br>Chignik Lake Vicinity | 18.58<br>Gu -- General Use | Map O-3<br>S45S60W | The unit is designated General Use (Gu). It is to be managed for a variety of uses including minerals, protection of fish and wildlife resources and their habitat, and dispersed recreation. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations. | This is a small unit of state-owned uplands north of Mensis Point in the area where the Chignik River empties into Chignik Bay. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R17-05<br>Chignik Lake ADF&G Admin Site | 5.35<br>Pr -- Public Facilities-Retain | Map O-3<br>S45S60W Sec, 19,30 | The unit is designated as Public Facilities-Retain (Pr) and is to be managed in accordance with the terms of the management right and the conditions of the limited state holding (LSH 522). The unit is to be retained in state ownership. | The unit is located on the lower Chignik River; it consists of two small non-contiguous tracts of land (ADL 228432 and LSH 522) administered by the ADF&G. This river front site is utilized by Fish and Game to administer the Chignik Lagoon fisheries. The Chignik River is cataloged as an anadromous fish stream. |
| R17-06<br>Chignik Lake DOT Admin Site | 2.72<br>Pr -- Public Facilities-Retain | Map O-3<br>S45S61W | The unit is to be managed by the ADOT/PF under the terms of the management right. The unit is to be retained in state ownership. | This small unit (ADL 224227 and OSL 973) consists of land managed by the ADOT/PF near the Chignik Lake public airport. |
| R17-07<br>Chignik Lake Airport | 102<br>Pr -- Public Facilities-Retain | Map O-3<br>S45S61W | The unit is to be managed by the ADOT/PF according to guidelines established by the FAA and ADOT/PF for public airport facilities, in accordance with the management right, and terms of the limited state holding. The unit is to be retained in state ownership. | The unit consists of land (ADL 224226 and LSH 264) encompassing the Chignik Lake public airport and associated facilities; it is managed by the ADOT/PF. |
| R17-08<br>Perryville Airport | 76<br>Pr -- Public Facilities-Retain | Map O-3<br>S49S64W | The unit is to be managed by the ADOT/PF in accordance with guidelines established by the FAA and ADOT/PF for public airports and in accordance with the management rights. The unit is to be retained in state ownership. | The unit consists of lands (ADLs 224246 and 221514) which encompass the Perryville public airport and are administered by the ADOT/PF. |

# Resource Allocation Table for Tideland Units - Region 17

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R17T-01<br>Tidelands adjacent to NWRs | 206,246<br>Ha, Rd -- Habitat and Public Recreation and Tourism-Dispersed | Map O-3 | Tidelands adjacent to the Alaska Maritime and Alaska Peninsula National Wildlife Refuges are to be managed to protect sensitive habitat values, fisheries and wildlife resources, and the public recreation resources of the National Refuges. A Tideland Resource Management Zone (TRMZ) affects these tidelands. See "Management Summary, Tidelands" in Chapter 3 for a more detailed description of TRMZs and the management intent and requirements for such zones. As appropriate, consult with Alaska Maritime and Alaska Peninsula NWRs, USFWS, and NMFS prior to issuing authorizations. | This tideland Unit adjoins the Alaska Peninsula NWR and the islands of the Chiachi and Mitrofania Islands group that are part of the Alaska Maritime NWR. Resources associated with the tidelands adjoining the Alaska Peninsula NWR include occasional sea bird colonies, a fairly heavy concentration of bald eagle nests, and scattered areas of kelp. The tidelands adjacent to the Chiachi and Mitrofania Island groups are particularly valuable as habitats for numerous seabird colonies. Tidelands are little used by sea lions or harbor seals with the exception of established harbor seal haulout areas on the eastern coastline of Unavikshak Island and the northern coastline on Cape Kumliun in Kujulik Bay. Kujulik Bay is the only sea otter concentration area with the exception of established populations in Chignik Bay and Kupreanof Point. Kujulik Bay is also the site of shrimp egg hatching and rearing concentrations. Herring spawning areas occur near the head of Kujulik Bay at Bear Creek and in Hook Bay south of Cape Kumliun. The Chiachi Islands are not populated by sea otter, but there are several harbor seal and sea lion haulouts and occasional areas with kelp beds.<br><br>Harvest: Commercial herring sac roe harvest occurs in the tidelands of this region, primarily in Kujulik, Castle, and Chignik Bays and further west in Stepovak Bay. Pacific herring trawl occurs around the Mitrofania Island group. Purse seine harvest of pink, sockeye, chinook and chum salmon occurs along the coast of this region, but is concentrated in the vicinity of Chignik Bay and Chignik Lagoon. Purse seine harvest of salmon extends westerly along the Alaska Peninsula concentrating in Kuiukta, Mitrofania, and Stepovak Bays and in the vicinity of the Mitrofania and Chiachi Island groups. Pacific herring trawl also occurs around the Mitrofania Island group. Sport fishing is prevalent in the tidelands along the coastline in this region.<br><br>The community of Chignik is a commercial fishing hub for the area. Private tideland facilities support the fish processing industry at Chignik and provide commercial docking facilities for the State Ferry which docks at Chignik bi-monthly. The villages of Chignik Lagoon and Perryville are heavily |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| | | | | dependent on commercial fishing. Red king, tanner and dungeness crab are harvested in bays and lagoons in this region, with the highest concentrations of harvest being in the Chignik and Chignik Lagoon area. Shrimp are also harvested in Chignik, Castle and Mitrofania Bays.<br><br>Subsistence harvest only occurs in the Chignik Bay and Chignik Lagoon area and consists of salmon and other fish, crab, clams, occasional marine mammals and waterfowl (birds and eggs). |
| R17T-02<br>Tidelands and Offshore Submerged Lands | 848,249<br>Gu -- General Use | Map O-3 | Manage for a variety of uses and resources. Protect sea bird colonies and eel grass concentration area. Maintain opportunities for commercial, sport, and subsistence harvest. | This unit consists of the tide and submerged lands adjoining privately owned uplands (including Native corporation land) and the submerged lands offshore of the Tideland Resource Management Zone (TRMZ) of this Region (R17T-01). See R17T-01 for a description of the resources and management guidelines for the TRMZ.<br><br>The majority of the sensitive biological resources within this Region are included within the TRMZ. Outside of the TRMZ there are a few eel grass locations and sea bird colonies.<br><br>Some commercial herring sac roe harvest occurs in the tidelands of the Region, although it primarily concentrates at Kujulik, Castle, and Chignik Bays, and further west in Stepovak Bay. Purse seine harvest of pink, sockeye, chinook, and chum salmon occurs along the coast, concentrating in the vicinity of Chignik Bay and Chignik Lagoon. Sport fishing is prevalent in the tidelands along the coastline. |

# Region 18

## *Cape Seniavin, Seal Islands*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 18 includes both upland and tideland areas (see *Plan Maps O-3 and O-4*). The uplands occupy a portion of the Alaska Peninsula on the western side of the Aleutian Mountain Range, generally extending from Port Moller to a drainage divide approximately 7 miles southwest of Port Heiden. It includes all drainages flowing northwest into Bristol Bay, excluding those that drain into Port Heiden. The only settlement is Port Moller, which presently consists of a cannery but has no resident population. Tidelands are situated along curvilinear sand beaches except for a large lagoon in the area called 'Seal Islands'. The lagoon is an important habitat area for a variety of marine and terrestrial mammals, and waterfowl.

### State Lands: Ownership and Acreage

State-owned lands comprise most of the lands in Region 18. Approximately three quarters of the land is state-owned and the remainder is Federally-owned. There are virtually no Native-owned lands in Region 18. The plan applies to 762,915 acres of state-owned and state-selected uplands and 178,496 acres of state-owned tidelands in this Region.

### Physical Geography

Region 18 is within the Alaska Peninsula ecological province. Drainage flow is predominantly northwestward towards Bristol Bay. Principal drainages include the Bear, Milky, Sandy, Muddy, Ocean, Ilnik, and Unangashak Rivers as well as Fog, Fracture, Fireweed, and Blueberry Creeks. Notable lakes include Bear, Sandy, and Wildman Lakes. The most significant topographic feature is Mount Veniaminof, an active volcano which rises from sea level to an elevation of 7,075 feet and has a base with a diameter of thirty miles. The western half of the Region is predominantly wetlands with little relief.

### Climate

The Region has a maritime climate, with cool summers, relatively warm winters, and rain. Frequent and dramatic weather changes occur, with a constant prevailing wind of 20 to 25 mph. Snowfall averages 57 inches per year, with a total annual precipitation of approximately 33 inches. January temperatures average 25°, and July temperatures average 50°.

## Other

Region 18 is primarily within the Chignik, Port Moller, and Stepovak Bay Quadrangles. It is within the boundaries of the Bristol Bay Regional Native Corporation, The Aleut Regional Native Corporation and Aleutians East Borough as well as the Lake and Peninsula Borough.

## Access

Access to the Region is primarily restricted to marine, river, and air travel; ATV's and skiffs are the primary modes of local transportation. At Port Moller there is a private gravel airstrip, and the bay is accessible by floatplane. Other airstrips are located in the region such as the Bear Lake airstrip (unattended) that is located on the west side of Bear Lake that is used by a lodge and sportsmen. A road and trail extend from the coast eastwards up the Sandy River drainage for approximately nine miles connecting to the Sandy River landing strip and an old oil well site. A few miles of roads and trails extend around the vicinity of Port Moller.

## Resources and Uses

**Cultural and Historic.** The state Office of History and Archeology lists nine sites in Region 18; six of these are historic, two are prehistoric, and one is both. Most of the sites occur in the vicinity of Port Moller, Bear Lake, or near the Seal Islands tidal lagoon.

**Economic.** The Region's economy is based on commercial fishing and fish processing, subsistence activities, commercial guiding, and recreational hunting and fishing.

**Recreation.** The Region is not heavily used for tourism and commercial recreation although it has abundant fish and wildlife resources. Recreational activities are related to outdoor uses such as hunting, fishing, wildlife viewing, and river use. The Sandy River airstrip and road and the Bear Lake airstrip are used as sites for commercial recreational activities primarily related to hunting and fishing. Scenic recreational resources are primarily related to Mt. Veniaminof.

**Materials, Minerals and Coal.** Except for occasional use of beach areas, there is little material extraction and no active material sites. Mineral sands are known to occur along the beaches on the west side of the Alaska Peninsula; these include placers at the Port Moller spit, Ilnik spit, and on a stretch of beach between the Seal Islands lagoon and Port Heiden. The placers contain iron, titanium, manganese, and gold in varying amounts. Because most of the region is low-lying and covered by alluvium, there are few known metalliferous lode occurrences. A few copper, lead, and gold prospects occur at the southern boundary of the Region at the headwaters of the Bear Lake drainage. There are no known coal resources.

**Oil and Gas.** The Region has high potential for oil and gas. One well has been drilled in the Region, approximately two miles east of the Sandy River airstrip. The Sandy River No.1 well was drilled by Gulf Oil Corporation in 1963 to a depth of 13,068 feet. The drill hole encountered the Milky River, Bear Lake, and Stepovak formations and had both oil and gas showings. The underlying basin is projected to have a very thick sequence of potentially petroliferous units.

**Forestry.** There are no significant forestry resources in Region 18.

**Fish and Wildlife.** Waterfowl, caribou, and brown bear are the most important resources in Region 18. Important salmon runs occur on the King Salmon, Bear, and Sandy Rivers as well as the lower reaches of streams between the Muddy River and the Seal Island area. The Region also includes caribou calving grounds for the Northern Alaska Peninsula Caribou Herd and most of the Region is considered a calving area. Moose are becoming more established in the Region and have become a significant species for hunters. Moose calving areas are known to be especially prevalent in the Bear Lake/Port Moller portion of the Region. The Cape Seniavin area has developed into a walrus haulout of growing importance and has important nesting colonies of seabirds and concentrations of waterfowl. A Special Use Designation for sensitive areas at Cape Seniavin is under consideration by the DNR but will be developed in a separate process. Seabird colonies are also located in the Seal Islands and at Entrance Point and Left Triangle at Port Moller. Sea otters inhabit coastal areas, especially between Cape Seniavin and the Sandy River. Seals are also known to inhabit areas between Bear River and King Salmon River. Forage fish, especially rainbow smelt and herring, concentrate in coastal areas, notably northwest of the mouth of the Muddy River to Port Heiden and beyond.

# Management Considerations: Local and State Plans

A number of local and state management plans were considered in development of this plan. Region 18 is within portions of both the Lake and Peninsula Borough and the Aleutians East Borough. Both the Comprehensive Plans and the District Coastal Management Plans of these Boroughs apply to Region 18. The Comprehensive Plans focus on economic and infrastructure development issues and do not contain specific land use standards or a land use map. The Enforceable Policies of the District Coastal Management Plan are extensive; policies affecting anadromous streams, bald eagle nests, oil and gas development, material extraction and mining may be applicable, under certain instances, to state lands. See www.alaskacoast.state.ak.us/ for more information on enforceable policies. These policies should be consulted by DNR prior to issuing an authorization.

The Southwest Alaska Comprehensive Economic Development Strategy 2003-2008, which was developed for the U.S. Department of Commerce Economic Development Administration by the Southwest Alaska Municipal Conference (July 2003), also affects this Region. This document developed a number of goals, objectives, and strategies to facilitate and support efforts that could retain and grow the region's wealth.

The Bristol Bay Area Plan (1984) has affected the management of all state lands in the Region until this revision. Region 18 was to be managed for "fish and wildlife habitat and harvest, recreation, and oil and gas exploration and development" in the original Area Plan. This revision replaces and supersedes the original (1984) Area Plan.

### Municipal Selections

Both the Lake and Peninsula Borough and the Aleutians East Borough have made selections in the Region as part of their respective municipal entitlements. The Aleutians East Borough has selections on the north side of Bear Lake and on the Sandy River. The Lake and Peninsula Borough has selections in the Wildman Lake area and on the upper reaches of the Unangashak River. Municipal selections in Region 18 total approximately 8,047 acres.

# Management Summary: Uplands

State land in Region 18 is to be managed for a variety of multiple uses, including settlement, public recreation and tourism, protection of fish and wildlife habitat and harvest, exploration and development of oil and gas, and general use. Because of the absence of discernible economic trends, generally unsuitable topography, and the potential to accommodate a variety of uses through siting and other types of development stipulations, nearly all state land in this Region is designated General Use, except for two areas that are considered appropriate for settlement and are designated Settlement. Two small areas that are used for public facilities are designated Public Facilities-Retain.

### Plan Designations and Management

The plan designations that are used within this Region have the following management intent. Designations also follow the requirements of the section 'Definitions Used in this Plan' in this Chapter, which includes general management requirements pertinent to plan designations.

Additional policies and management intent guidelines in Chapter 2 affect specific designations. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Land designated General Use is to be managed for a variety of uses including the protection of fish and wildlife habitat and harvest, dispersed public recreation, minerals and oil and gas development, and protection of heritage resources. Development during the planning period is considered unlikely given the remote, inaccessible character of the land and, as a matter of policy, it is not intended that intensive development occur within this designation, except as may be related to mineral or oil and gas development.
- Public Facilities-Retain (Pr). Two small areas of public facilities are designated Public Facilities-Retain. These are to be retained by the state.
- Habitat (Ha). This designation is applicable to areas of sensitive wildlife habitat and is also applied to streams and shorelands that are considered navigable by the state and cataloged by ADF&G as anadromous. See *Map O-5* for their distribution and Table 3.1 in the Navigability section of this Chapter for a partial listing of these streams. Authorizations may be appropriate in areas designated Habitat subject to the protection of habitat resources and public recreation values.

- Settlement (Se). Two relatively small areas at King Salmon River and Bear Lake are considered appropriate for remote settlement and for disposal during the planning period. This land may be conveyed to municipalities and individuals. See the *Settlement section of Chapter 2* for more requirements affecting the disposal and development of land for residential purposes.
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain streams may (only) be designated Habitat or General Use.

See the Resource Allocation Table for more detail on these upland management units.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur on state-owned land throughout the Region. A Special Use Designation for this tideland management unit is under consideration by DNR, but will be developed as a separate process.
- Mineral Closing and Opening Orders. MCO 393 closes a large number of major streams in the Bristol Bay Area to minerals location, including the Bear River downstream of Bear Lake, a tributary north of the Bear River, and the Sandy River below Sandy Lake. Mineral Order No. 791 precludes shallow natural gas leasing and oil and gas exploration licensing. This Order has no effect on locatable or leaseable minerals other than that noted. No other mineral closing orders are recommended; the only exception applies to areas that are to be disposed of for the purposes of settlement. In these instances, closure of the area prior to sale is required. The MCO in areas not selected for settlement within three years of the land sale shall revert to 'open to mineral entry'. No leasehold locations orders are recommended. See the *Mineral Resources section in Chapter 2* for more detail of subsurface management requirements.
- Retained Lands and Lands Suitable for Disposal. Except for the two small management units designated Public Facilities-Retain, there are no state lands that are designated to be retained by the state. Management units designated Settlement are considered appropriate for disposal to boroughs under the Municipal Entitlement Act or to individuals. Areas designated General Use may be appropriate for disposal but the reasonability of disposal must be determined on a case-by-case basis.
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of

Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

# Management Summary: Tidelands and Submerged Lands

The area of the Seal Islands and Cape Seniavin are unique habitat areas that are distinct from the remainder of the region in terms of the type and concentration of marine resources and the unusual assemblage of wetlands and lagoons that characterize the Seal Islands area. Other areas along the Bristol Bay coast are less rich biologically except for Cape Seniavin and the Seal Islands areas. This region also includes the historical settlement of Port Moller.

An extensive yellowfin sole harvest occurs offshore in this region. Drift gillnetting occurs along the entire coast of this region targeting sockeye salmon. Set gillnets target sockeye salmon in the Seal Islands area and sockeye salmon are occasionally harvested with purse seine gear between Cap Seniavin and Port Moller. There are a few set net sites northeast of the Seal Islands area, but this region is sparsely populated and consequently there is little subsistence harvest along this coastline.

## Plan Designations and Management Intent

**Tideland areas adjacent to coast.** The shoreline in this Region consists of coarse sand beaches with some sand and gravel beaches near Cape Kutuzof. Marine mammals (sea otter[19] and harbor seals) are present throughout the region. Waterfowl and shorebirds are also common. Seabirds concentrate at the Seal Islands and at Cape Seniavin. Pacific herring spawning areas are also present, especially north of the Seal Islands near Ilnik Lake and at scattered sites south of Cape Seniavin. This area is designated General Use. Tideland authorizations are considered appropriate for this area, but must ensure the protection of sea bird colonies and Pacific herring spawning sites. Sea otter occupy off shore areas up to depths of 60 meters in areas characterized by offshore reefs and kelp beds. Authorizations granted by DNR should also ensure that pupping areas are protected.

**Seal Islands (R18T-01).** The area of the 'Seal Islands' (R18T-01) actually consists of a long narrow sand spit, an enclosed saltwater lagoon, and adjacent estuarine type wetlands. The area of the lagoon consists of extensive tidal flats that are reported to have eel grass and salt marshes. This area is situated some five miles south of the Port Heiden CHA (See Region 16 Tidelands description) and has many of the same habitat and resource attributes. This area provides

[19] Sea otter populations north of Port Moller have varied considerably in past years, reflecting the presence or absence of sea ice. The population should grow in this Region and the range expand northward from Port Moller to Port Heiden in the absence of severe sea ice conditions.

habitat for a seabird colony and a harbor seal haulout. The area of the lagoon is an important waterfowl concentration and molting area. This extensive area of sand spit, lagoon, and wetland is designated Habitat. Generally, authorizations in this area are discouraged and should only be considered appropriate if the resources and habitats of this wetland/sand spit/lagoon complex can be effectively protected.

**Cape Seniavin (R18T-02).** The headland at Cape Seniavin (R18T-02) contains a significant walrus haulout area as well as several seabird colonies. The Cape Seniavin site is one of the four major walrus haulout sites in Alaska[20]. The size of the walrus population at this site during the summer use period varies from about 40 walruses to an average maximum count of 2,900. The designation of this area is Habitat, and authorizations in this area are prohibited except for activities related to research and/or the protection of the walrus haulout area. A Special Use Designation for this tideland management unit is under consideration by DNR, but will be developed as a separate process.

**Port Moller Community (R18T-03).** Water dependent commercial and industrial facilities to support the historical settlement of Port Moller are considered appropriate, and this area (R18T-03) is designated Waterfront Development. Development authorizations for these types of uses are considered appropriate subject to the protection of sensitive resource values and habitats.

See the Resource Allocation Table for more details on these tideland management units.

[20] The other major haulout sites occur in Regions 2 and 3: Round Island, Cape Pierce, and Cape Newenham.

# Resource Allocation Table for Upland Units - Region 18

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R18-01<br>Port Moller | 744,580<br>Gu -- General Use | Map O-4 | This unit is designated General Use (Gu). It is to be managed for a variety of uses including minerals or oil and gas exploration and development, the protection of fish and wildlife resources and their associated habitat, and dispersed recreation. See Chapter 2 guidelines for caribou calving areas and tundra swans. Several land selections have been made in this unit by the Lake and Peninsula and Aleutians East Boroughs; the selections may be appropriate for disposal, subject to a separate and subsequent Best Interest Finding. Intensive development is not expected within this unit during the planning period except occasionally and at specific locations related to oil and gas or recreation. | This unit consists of most of the state-owned and state-selected uplands in Region 18. The unit is low-lying terrain, vegetated by tundra, and dwarf and low shrub land; the terrain is poorly drained and contains numerous lakes, ponds, and marshes. Caribou calving is believed of occur throughout the unit; moose calving areas are found in the southern end of the unit, especially around Bear Lake. The northern and coastal portions of the unit contain areas utilized by brown bear in the spring, summer, and fall. Significant recreational and commercial sports hunting and fishing activities take place, especially in the Sandy River and Bear Lake areas. The unit has high potential for the discovery of oil and gas resources. |
| R18-02<br>Cape Seniavin | 2,098<br>Ha -- Habitat | Map O-3<br>S44S69W | The unit is to be managed for the protection of wildlife habitat important for marine mammals and seabirds. No authorizations or uses should be allowed in the unit that are not consistent with protection of the walrus haulout and seabird colonies, and with the guidelines in Chapter 2, Section J under Fish and Wildlife Habitat and Harvest Areas. Leases and permits for commercial recreation facilities will not be issued within the unit. Leases and permits for other activities, compatible with the fish and wildlife resources, will be considered on a case by case basis. Permits for research related facilities/activities may be allowed on a case by case basis within the unit. Issuance of permits for temporary guide/outfitter camps and other temporary facilities and activities beyond the one mile radius of the walrus haulout will be considered on a case by case basis. Applications for the use of sites located within a one mile radius of the haulout will not be considered. | The unit is located at Cape Seniavin on the Bristol Bay coast. The unit includes the NW1/4 of Section 2 and all of Sections 3,4, 9, and 10. The unit includes a permitted commercial recreation site (ADL 24056). Cape Seniavin is an important haulout area for walrus and contains significant seabird colonies. Between feeding cycles, walrus come to shore to rest at this isolated haulout. In recent years the number of walrus using this haulout site has increased substantially and it has evolved into one of the most important resting areas for walrus in Alaska. The FAA has also issued guidelines for aircraft avoidance at Cape Seniavin. The unit is to be retained in state ownership. A tideland unit adjoins this unit; it has a similar management intent. See unit R18T-02. Because of the importance of this haulout, protection under a Special Use Designation may be warranted. The development of a SUD, or similar approach, is under consideration by the ADF&G, DNR, and USFWS. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R18-03<br>King Salmon River | 6,659<br>Se -- Settlement | Map O-4 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and Caribou and Moose Rutting and Calving Area, both of which are described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. | The unit consists of approximately ten sections of land on the Bristol Bay coast on the north and south side of the King Salmon River and generally north of Franks Lagoon. The terrain is of low relief and suitable for settlement. The area is sparsely vegetated with tundra and low and dwarf shrubs. The unit contains the lower reaches of the King Salmon River, an anadromous fish stream. The unit is within a caribou calving area and the beach area is utilized by brown bear. The unit has potential for discovery of oil and gas resources. The unit is partly affected by MCO 393. |
| R18-04<br>Bear Lake Vicinity | 5.49<br>Pr -- Public Facilities-Retain | Map O-4<br>S48S70W Sec. 7 | The unit and facilities are to be managed by the ADF&G according to the management right. The unit is to be retained in state ownership. | This is a small unit of land (ADL 79954 and OSL 645) located near the Bear Lake aircraft landing strip at the west end of Bear Lake. The terrain is well drained, has but little relief, and is vegetated by tundra, and dwarf and low shrub. Bear Lake and the Bear River are anadromous and the unit is within an area used for caribou calving. |
| R18-05<br>Bear Lake | 9,572<br>Se -- Settlement | Map O-4 | The unit is designated Settlement (Se) and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement and Caribou and Moose Rutting and Calving Area, which are described in the Settlement, and Fish and Wildlife Habitat and Harvest Areas sections of Chapter 2. Buffers along anadromous fish streams must also conform to the management guidelines in Chapter 2. The Aleutians East Borough has made a land selection within the unit as part of its municipal entitlement. Conveyance of these selections is considered appropriate, subject to a separate and subsequent Best Interest Finding. | The unit is located on the west, north and northwest side of Bear Lake. The terrain is well drained, has little relief, and is vegetated by tundra, and dwarf and low shrub. The terrain is considered suitable for settlement. Bear Lake and the Bear River are anadromous and the unit is within an area used for caribou calving. The Alaska Heritage Resources Survey (AHRS) reports a small number of heritage sites in this unit. The unit has potential for discovery of oil and gas resources. The unit is partly affected by MCO 393. |
| R18-06<br>Fish and Game Cabin | 0.71<br>Pr -- Public Facilities-Retain | Map O-4<br>S48W72W | The unit is to be managed subject to the conditions of LSH 390 for use as a cabin site by the ADF&G. | This small unit of land (LSH 390) is located in the settlement of Port Moller and contains a cabin used by the Alaska Department of Fish and Game. |

# Resource Allocation Table for Tideland Units - Region 18

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R18T-01<br>Seal Islands | 44,363<br>Ha and Hv -- Habitat and Harvest | Map O-3 | This extensive area of sand spit, lagoon, and wetland is designated Habitat.<br><br>Management intent: To protect the sensitive habitats of this area, brown bear and waterfowl concentration area, the sea bird colony site, and harbor seal haulout concentration areas. Generally, authorizations in this area are discouraged and should only be considered appropriate if the resources and habitats of this wetland/lagoon/sand spit complex can be effectively protected. Consult with NMFS and USFWS prior to granting authorizations. | This tideland unit, which encompasses an area known as the 'Seal Islands' actually consists of a long narrow sand spit, an enclosed saltwater lagoon, and adjacent estuarine type wetlands. Portions of this sand spit are within the Alaska Maritime NWR. The area of the lagoon consists of extensive tidal flats that are reported to have eel grass and salt marshes. This area is situated some five miles south of the Port Heiden CHA (See Region 16 Tidelands description) and has many of the same habitat and resource attributes. A seabird colony is situated at the northern part of the lagoon on a portion of the sand spit. A harbor seal haulout concentration area occupies much of the central part of the sand spit and lagoon. A spring concentration area for brown bear occurs in the extensive wetland areas to the east of the lagoon, along the sand spit, and south to the Ilnik River. The area of the lagoon is an important waterfowl concentration area during the spring and fall; it is also an important waterfowl molting concentration area.<br><br>Harvest: Extensive yellowfin sole harvest occurs in the offshore tidelands of this region. Drift net harvest occurs in the tidal coastlands of this region, particularly in the vicinity of Cape Seniavin, for sockeye and chinook salmon. Purse seine harvest for sockeye chinook and chum salmon occurs from Muddy River to Port Moller. There are a few set net leases northeast of the Seal Island area. This region is sparsely populated and there is little subsistence harvest. |
| R18T-02<br>Cape Seniavin | 443<br>Ha -- Habitat | Map O-3<br>S44S69W | The designation of this area is Habitat. Authorizations in this area are prohibited except for activities related to research and/or the protection of the walrus haulout area. Consideration should be given to the use of a Special Land Use Designation if some generally allowed uses (primarily use of fixed wing aircraft and ATVs) significantly affect the large walrus population. Consult with ADF&G and USFWS prior to granting authorizations. | The headland at Cape Seniavin (R18T-02) contains a very significant walrus haulout area as well as several sea bird colonies. The Cape Seniavin site is one of the four major walrus haulout sites in Alaska. The size of the walrus population at this site during the summer use period varies from about 40 walruses to an average maximum count of 2,900. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R18T-03<br>Port Moller | 1,592<br>Wd -- Waterfront Development | Map O-4<br>S48S72W | Unit is designated Waterfront Development, to accommodate the historic use of this area as an anchorage for seafood processors. Protect waterfowl concentrations when granting authorizations. Consult with ADOT/PF prior to granting authorizations in the NW1/4 of Section 30. | Unit is situated adjacent to lands approved for conveyance to the Aleutians East Borough. Established seafood processing facilities are sited on a spit at the mouth of Port Moller bay called 'Entrance Point'. Portions of this area are important as an anchorage for seafood processors. Waterfowl seasonal concentration areas (spring and fall) occur within this unit and also walrus haulout concentrations at 'Entrance Point'. |
| R18T-04<br>Coastline Seal Islands to Port Moller | 178,496<br>Gu -- General Use | Map O-4 | Manage unit for a variety of uses and resources. Protect marine mammals and Pacific herring spawning areas. Consult with NMFS prior to issuing authorizations. Maintain opportunities for commercial and subsistence harvest. | This unit consists of the extensive tide and submerged lands adjoining the coast of this Region, except for the two units at the Seal Islands ((R18T-01) and Cape Senivian (R18T-02), and the smaller unit at Port Moller (R18T-03). Consult Plan Maps O-3 and O-4.<br><br>The shoreline consists of coarse sand beaches with some mixed sand and gravel beaches near Cape Kutuzof. Marine mammals (walrus, sea otter and harbor seals) are present throughout the unit although the known concentration areas occur within units R18T-01 and R18T-02. Waterfowl and shorebirds are common, but also concentrate in the aforementioned units. Pacific herring spawning areas also occur, especially south of the Seal Islands area near Ilnik Lake and at scattered locations south of Cape Seniavin.<br><br>Yellow fin sole harvest occurs in the vicinity of offshore tidelands of this Region. Drift net harvest occurs in the tidal coastlines, particularly in the vicinity of Cape Seniavin, for sockeye and chinook salmon. Purse seine harvest for sockeye, chinook, and chum salmon occurs from Muddy River to Port Moller. There are a few set nets/leases northeast of the Seal Islands. There is little subsistence harvest. |

# Region 19

# *Herendeen Bay, Port Moller and Shumagin Islands*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 19 encompasses the area of the Shumagin Islands and a section of the Alaska Peninsula lying south of Port Moller. Unga, Nagai and Popof Islands, as well as the dozens of other islands that make up the Shumagin Islands, are a part of this region (Map O-4). The mountainous southern half of the Alaska Peninsula, from Beaver Bay in the southwest to Stepovak Bay in the northeast, comprises the mainland part of Region 19. The boundaries of this region are the same as the original (1984) Bristol Bay Area Plan. Elevations range from sea level to the highest of the glaciated mountaintops in the northeast corner of this region at 5,402 feet. Almost the entire population of this region is located on Popof Island in the city of Sand Point, the largest community in the Aleutians East Borough with 952 year-round residents. Most of the land in the Region is in federal ownership and located within the Alaska Peninsula and Alaska Maritime National Wildlife Refuges. See *Map O-4*.

### State Lands: Ownership and Acreage

Most of the state land in Region 19 is the tidelands and shorelands. Almost all of the state-owned uplands are found at the heads of Herendeen Bay and Port Moller and includes most of the peninsula that divides these two bodies of water. Other small blocks of state-selected lands are found in the vicinity of Sand Point and on Nagai Island. The plan applies to 83,962 acres of state-owned and state-selected uplands and 1,093,144 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated).

### Physical Geography

This region is situated on the edge of the North American Tectonic Plate where it meets the Pacific Plate. The resulting Aleutian Range of mountains forms the steep mountainous terrain of the mainland portion of Region 19. Numerous bays cut into the rocky coastline along the Pacific Ocean. On the north side of this Region the only contact with Bristol Bay waters is in the upper reaches of Herendeen Bay and Port Moller where the terrain is a little more gentle,

reaching out into extensive mud flats around the peninsula that divides these two bays. Volcanoes reside just beyond this Region's boundaries. Mount Dana at 4,442 feet is to the southwest and Mount Kupreanof at 6,220 feet is to the northeast, with the latter most recently active in 1987. The region as a whole is considered seismically active.

The offshore islands in the Pacific Ocean also exhibit relatively mountainous terrain with Unga Island, the largest of the Shumagin Islands, having a high point of 2,283 feet. A much smaller Big Koniuji Island also quickly rises to an elevation of 1,878 feet. This island group is characterized by indented coastlines with cliffs lining the shore in many places.

## Climate

Given that all land within Region 19 is in such close proximity to the open sea, it enjoys a maritime climate. This moderates the temperatures to a monthly average low of 27°F in February to a high of 58°F in August (representative weather data for Sand Point). Frequent storms carry moisture from the North Pacific resulting in 33 inches of precipitation annually with 52 inches coming in the form of snow. Winds are commonly moderate to strong. The area is generally free of permafrost.

## Other

Region 19 is within the Port Moller, Stepovak Bay, and Simeonof Island Quadrangles. It lies entirely within the boundaries of the Aleut Regional Native Corporation and the Aleutians East Borough.

## Access

Residents are dependent upon air or marine transportation. Sand Point is the only major airstrip in this Region with a 4,000 foot paved runway. There are daily flights from Anchorage. Other locales within this Region are served by charter aircraft or boat. Marine cargo arrives monthly from Seattle. The Alaska Marine Highway System services Sand Point but only runs from May to October. There is no road access to the Region.

## Resources and Uses

**Cultural and Historic.** Archaeological evidence indicates that areas within the Region have been continuously occupied for at least 8,000 years by the Unangan, known in modern times as the Aleut. The 1700s brought tremendous change as the Russians established a fur trading business here and many Natives were forcibly transplanted to the Pribilofs to work in the seal trade. Scandinavians and other Europeans immigrated here in the 1800s to work in the whaling and fishing industries. The Saint Nicholas Chapel in Sand Point is on the National Register of Historic Places. The state Office of History and Archeology lists 106 sites in Region 19 – sixty-seven prehistoric, thirty-three historic, five of mixed origin, and one paleontological.

**Economic.** Commercial fishing and government jobs provide the majority of cash income. Many residents hold commercial fishing permits. Subsistence harvests of salmon, other fish and marine mammals are important to the residents. Game, birds, plants and berries are also an integral part of villagers' diets.

**Recreation.** Recreation in the Region is primarily related to outdoor activities such as hunting, sport fishing, wildlife viewing, photography, and hiking. The Alaska Peninsula and Alaska Maritime National Wildlife Refuges receive the majority of this use.

**Minerals and Coal.** The mineral potential of Region 19 is high. The Alaska Resource Data Files show 100 prospects and mineral occurrences in the Region; they occur throughout the Peninsula and the Shumagin Islands. The mineral showings fall into several categories based on commodity: 1) silver-gold; 2) gold; 3) copper; 4) copper-molybdenum; and, 5) lead-zinc. Mineralization is mostly related to hydrothermal activity associated with volcanism and the emplacement of shallow intrusive rocks. Four prospects are most significant – Pyramid (north of Balboa Bay), Apollo-Sitka and Shumagin (on Unga Island), and Centennial. Pyramid is a porphyry copper type deposit of late Tertiary age; reserves of 125 million tons grading 0.4% Cu and 0.03% Mo are inferred. The Apollo-Sitka mines are important gold producers with production exceeding 107,600 ounces from ore averaging 0.22 oz/ton gold. Inferred reserves are 748,000 tons grading 0.76 oz/ton gold and 2.16 oz/ton silver. Shumagin is an epithermal gold vein similar to Apollo-Sitka; it has an estimated 540,000 tonnes grading 10.3 g/t Au, 34.3 g/t Ag.

The portion of Region 19 that is on the Alaska Peninsula is primarily underlain by the Herendeen Bay coal basin. The Herendeen Bay coalfield is similar in geology to that of the nearby Chignik coalfield in Region 17. The identified resources for the Chignik and Herendeen Bay coalfields range up to 200 million short tons; hypothetical and speculative resources range to three billion short tons. Coal occurs as Cretaceous bituminous and subbituminous coals of the Coal Valley Member of the Chignik Formation; the coal units are typically less than seven feet thick ranging from less than two to seventeen feet.

**Oil and Gas.** There is modest potential for oil and gas resources in Region 19, primarily in the area between Port Moller and Herendeen Bay. No wells have been drilled in the Region although several have been drilled in adjacent Regions. State and Native landowners are currently pursuing a new hydrocarbon exploration licensing and leasing program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Materials.** There are no active material sites in Region 19.

**Forestry.** There are no significant economic timber resources in Region 19.

**Fish and Wildlife.** This region is rich in fish and wildlife resources. Offshore waters harbor pollock, halibut, cod (gray and black), salmon (sockeye, chum and pink), herring, and crab (red and brown king, and tanner). Whales, sea otters, seal and sea lion are also found in nearby waters. Seabird colonies line the coast. Some of the larger terrestrial mammals found here include brown bear, moose, caribou, wolf, fox, wolverine, and land otter.

Most of the streams in this region support anadromous fish runs that contribute to the subsistence and commercial fisheries that are an important part of the local economy. The currently declining sea lion and northern sea otter populations inhabit this region. Most of this coast and offshore area is ideal seabird habitat. Of the terrestrial mammals, the one that draws the most attention is the brown bear. The numerous salmon streams of the Alaska Peninsula provide ideal habitat for this large omnivore.

Region 19 also encompasses the Port Moller Critical Habitat Area, which was created to protect habitat that supports migratory stopover areas for large number of ducks, geese, and shorebirds in the spring on their way to northern nesting grounds and in the fall on their return to southern wintering areas.

# Management Considerations: Local and State Plans

There are a number of local, state, and federal management plans that affect this Region and that were considered in the development of the revision of this Plan.

The Aleutians East Borough Coastal District Plan affects the entire coastal zone within this region. This plan contains extensive enforceable policies affecting state lands and should be consulted by DNR prior to issuing authorizations. The coastal plan's enforceable policies can be found on the web at: www.alaskacoast.state.ak.us .

Only one state management plan affects this region, the Bristol Bay Area Plan, which has been the basis for the management of state lands since its adoption in 1984. This revision replaces and supersedes the 1984 plan.

Most of the uplands in this region are federal and fall within one of two National Wildlife Refuges (NWRs). The Alaska Peninsula and Alaska Maritime NWRs each have Comprehensive Conservation Plans (CCPs) that guide refuge activities. See the section on *Local and Federal Plans in Chapter 3* for a description of these plans and how they apply to federal lands.

# Management Summary: Uplands

Region 19 is to be managed for multiple uses including wildlife habitat, settlement, public facilities, and dispersed public recreation. While the potential for oil and gas is considered to be modest, exploration and development activity that is protective of other resources and uses is appropriate under this designation. The largest amount of state land, situated to the south and east of Port Moller, is designated General Use and is to be managed for multiple uses, although during the planning period it is likely that the most appropriate use of this land is for dispersed recreation and wildlife habitat protection. Most of the coastal lands in Port Moller are within the Port Moller Critical Habitat Area and are to be managed primarily for habitat. An area of residential settlement is identified near the head of Herendeen Bay. State lands in Sand Point are to be managed for public facilities, and state-selected lands in the vicinity are for community expansion.

## Plan Designations and Management

The plan designations that are used within this region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (Gu). Four blocks of state-owned and state-selected lands are located in the vicinity of Port Moller and one on Nagai Island. These areas are designated for General Use to allow for a variety of uses. While most of the land will be managed for public recreation and wildlife habitat, other uses may be compatible. One possible use for land at the back of Herendeen Bay to be used for trans-peninsular transport and associated development. ADOT/PF should be consulted prior to the issuance of authorizations or disposals in this area. Another possible use is oil and gas exploration and development activities that are protective of other resources and uses, as permitted by DNR.

  It is expected that little development will occur in these areas during the planning period, and it is not intended as a matter of policy that intensive forms of development occur in these areas other than occasionally and at specific sites. Any municipal land selections, under the Municipal Entitlement program, are conveyable to the municipality subject to a Best Interest Finding by the state. However, the Lake and Peninsula Borough has made no land selections on General Use lands in this Region.
- Habitat (Ha). This designation applies to areas of varied size for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in the permanent loss of a population or sustained yield of a species. This land will remain in state ownership except for areas where a tidelands conveyance to a municipality is allowed under AS 38.05.820 and AS 38.05.825. This designation applies to uplands, tidelands, and submerged lands. In Region 19 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous and to the area within the Port Moller Critical Habitat Area.

- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may (only) be designated Public Recreation and Tourism-Dispersed (Rd), Habitat (Ha), or General Use (Gu).
- Public Facilities-Retain (Pr). This designation is used for land upon which public infrastructure is or can be built. It is commonly used for airports as these are typically retained in state ownership.
- Settlement (Se). An area at the head of Port Moller within this Region is considered appropriate for remote settlement and is designated Settlement. Note: One of the valleys at the back of Herendeen Bay may provide the best route for a transportation corridor across the Alaska Peninsula and any future developments here should not obstruct this potential. ADOT/PF should be consulted prior to issuing any authorizations in this area.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur on state-owned land throughout the Region with the exception of the Port Moller Critical Habitat Area.
- Port Moller Critical Habitat Area. The Alaska State Legislature has designated the Port Moller Critical Habitat Area for the protection of fish and wildlife habitat. A special area permit is required for any habitat altering work, including any construction activity and should be submitted to the Division of Sport Fish Regional Office in Anchorage representing the area in which the proposed activity will occur.
- Anadromous rivers and streams. Anadromous rivers and streams, including shorelands, as depicted in the anadromous stream catalog (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd).
- Mineral Closing and Opening Orders. MCO 393, which closes a large number of major streams in the Bristol Bay Area to mineral entry, does not affect this Region. The following Mineral Closing Orders (MCO) each affect less than 60 acres: MCOs 598, 622 and 644 in Sand Point. No new Mineral Closing Orders are recommended for this Region.
- Mineral Order. Mineral Order No. 791 is an interim order (as of July 11, 2003) that precludes shallow natural gas leasing and oil and gas exploration licensing. This order has no effect on locatable or leaseable minerals other than shallow natural gas leasing and oil and gas exploration licensing. The order affects state land in Region 19.
- Retained Lands. Except for the several small management units allocated to Public Facilities-Retain, there are no state lands that are designated to be retained by the state.

- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

# Management Summary: Tidelands and Submerged Lands

Tidelands represent the majority of state lands within this Region, and are the focus of management within the Region. Most of the tidelands adjoin federal National Wildlife Refuges (Alaska Peninsula and Alaska Maritime) or Native owned tracts. Those adjacent to the coastal islands are particularly important. The tidelands adjacent to Unga Island and the Shumagin Island group are especially valuable, providing habitat for numerous seabird colonies, harbor seal haulout sites, and both sea lion rookeries and haulouts. Eel grass beds are common throughout many of the islands of this group and extensive kelp beds are located offshore. Tidelands adjacent to the Alaska Peninsula are known sea otter concentration areas or have established populations of sea otters.

Commercial fishing is carried on extensively in this region. Pacific herring sac roe harvest occurs at Beaver Bay (Cape Aliaksin). A halibut harvest occurs around the Shumagin Islands and Unga Island. Foreign trawl for sablefish, pollock, cod and ocean perch occurs in this region. Purse seine harvest of all varieties of salmon occurs all along the coastline of this region, most intensely in the bays and lagoons, from Stepovak Bay to Unga Strait. Salmon are also harvested by purse seine, mostly on the east coast of Unga Island. There is a more sporadic purse seine harvest on other islands in the Shumagin Island group. Commercial fishing and fish processing (bottomfish, pollock, salmon and fish meal) are currently the dominant activities in the Sand Point area. It is the home of the largest fishing fleet in the Aleutian Chain. A large number of residents hold commercial fishing permits, but there is also a large influx of transient population during the fishing season. A small number of set net permits occur along the eastern coastline of Balboa Bay and in Lefthand Bay, scattered set net permits occur around southern portions of Unga Island, and a few set net permits are scattered along the southern coastline of the Alaska Peninsula in this region. Although the community of Unga is no longer occupied year-round, it is occupied in summer for subsistence harvest of salmon and other fish. Local subsistence harvest consists of mostly salmon.

Red king and tanner crab are harvested all along the southern coast of the Alaska Peninsula, with the highest concentrations of harvest in the bays and lagoons. Dungeness crab are harvested in Stepovak and Beaver Bays.

## Plan Designations and Management Intent

**Coastal and Municipal Tidelands.** Tidelands adjacent to native or private land are designated General Use except for areas within municipalities, which are designated Waterfront Development[21]. There are other specific, scattered sites that are associated with transportation or various forms of economic development that are also designated Waterfront Development[22]. Tideland authorizations in these areas are considered appropriate, but such authorizations shall protect sea lion rookeries and haulouts, harbor seal haulouts, established sea otter pupping areas and sea bird colonies, and shall minimize disturbance to kelp and eel grass beds.

**Tidelands adjacent to National Wildlife Refuges (R19T-01).** These areas are affected by a Tideland Resource Management Zone. Tidelands within this Zone are designated Public Recreation and Tourism-Dispersed and Habitat and are to be managed to protect habitat values and maintain the public recreation value of these areas, particularly for the tideland resources described above. For a detailed description of this Tideland Resource Management Zone, see *Tidelands Summary in Chapter 3*.

See the Resource Allocation Table for more details on these tideland management units.

[21] Municipal tideland management units: Sand Point: R19T-03 through 06, Squaw Harbor: R19T-03.
[22] R19T-02.

# Resource Allocation Table for Upland Units - Region 19

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R19-01<br>Nagai Island and Port Moller | 63,576<br>Gu, Ha -- General Use and Habitat | Map O-4 | The large inland portion of this unit is designated General Use (Gu) and is to be managed for a variety of uses, including subsistence and recreational harvest, the protection of sensitive habitats and fish/wildlife, the possible development of the Herendeen coalfield, oil and gas exploration and development, and dispersed recreation. Development authorizations may be considered appropriate subject to the protection of these resources and the specific requirements of Chapter 2. Intensive development is not expected within this unit during the planning period. That portion of the unit covering Nagai Island is designated Habitat and is to be retained in state ownership. | This unit covers several townships of state land near the Port Moller area and state-selected land on Nagai Island. Near Port Moller the mountainous terrain rises quickly from the coast in many places. Numerous valleys containing anadromous streams provide more gentle gradients for access. The Port Moller Critical Habitat Area (R21T-01) covers the majority of this unit's coastline. Waterfowl concentrate in these waters. The state selections on Nagai Island are a top-filing of Native selected lands. They are located on the north end of Nagai Island around protected harbors. Some coastal land is accessible while other areas of the coast are steep and covered with seabird rookeries. Marine mammals and seabirds use this area. The Herendeen coalfield underlies the majority of this unit. |
| R19-02<br>Herendeen Bay | 20,322<br>Se -- Settlement | Map O-4 | Unit is designated Settlement and is considered appropriate for disposal during the planning period. Development is to conform to the requirements of Remote Settlement in Chapter 2. It is intended that land disposals locate along the coast and in the valleys in a manner that mitigates wildlife impacts and maintains a right-of-way for a future transportation corridor. One of the valleys at the back of Herendeen Bay may provide the best route for a transportation corridor across the Alaska Peninsula and any future developments here should not obstruct this potential. ADOT/PF shall be consulted prior to issuing any authorizations in this area. Portions of this area may be closed to mineral entry when a land disposal is under consideration. | This unit is comprised of all state land at the head of Herendeen Bay. The area lies just south of the Port Moller Critical Habitat Area. Abutting this unit to the south is the Alaska Peninsula National Wildlife Refuge. A potential trans-peninsular transportation corridor should be maintained. Marine mammals, seabirds and waterfowl use the area. Herring and blue crab spawn in the bay. Lawrence, Grass and Deer valleys all branch off of the bay and are spring concentration areas and/or feeding concentration areas for brown bear. Cannery ruins, old cabin sites, borough land and a Native allotment occupy scattered lots around the shore. The Alaska Heritage Resources Survey (AHRS) reports a heritage site in this unit on the east side of Herendeen Bay. The Herendeen coalfield underlies this unit. |
| R19-03<br>Sand Point | 1.29<br>Pr -- Public Facilities-Retain | Map O-4<br>S56S73W Sec. 8 | These units are to be retained by the state. OSL 691 is to be managed by ADF&G under Interagency Land Management Agreement ADL 200414. OSL 458 is to be managed by ADF&G as residential quarters or office. | OSL 691 is a 2.7 acre lot in Sand Point to be used for an ADF&G warehouse. OSL 458 is a 0.28 acre lot in Sand Point (Lot 15 of Humboldt Harbor Estates) to be used for ADF&G residential quarters or office. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R19-04<br>Sand Point Airport | 61<br>Pr -- Public Facilities-Retain | Map O-4<br>S56S73W Sec. 19 | This unit is to be retained by the state to provide an airport for Sand Point. It will be managed by ADOT/PF pursuant to Management Rights ADLs 220568 and 224241. | This unit contains the Sand Point Airport and is comprised of OSLs 52, 841 and 989 and LSH 177 and is to be managed by ADOT/PF. MCOs 598, 622 and 644 affect this unit. |

# Resource Allocation Table for Tideland Units - Region 19

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R19T-01<br>Tidelands adjacent to NWR | 25,434<br>Ha, Rd -- Habitat and Public Recreation and Tourism-Dispersed | Map O-4 | Tidelands adjacent to the Alaska Maritime and Alaska Peninsula National Wildlife Refuges are to be managed to protect sensitive habitat values, fisheries and wildlife resources, and the public recreation resources of the NWR. A Tideland Resource Management Zone (TRMZ) affects these tidelands. See "Management Summary, Tidelands" in Chapter 3 for a more detailed description of TRMZs and the management intent and requirements for such zones. As appropriate, consult with Alaska Maritime and Alaska Peninsula NWRs, USFWS, and NMFS prior to issuing authorizations. | The tidelands associated with offshore islands, principally Unga Island and the various islands in the Shumagin Island Group, contain the majority of the sensitive habitats and marine resources within the Region. All of the offshore islands are included within the Alaska Maritime NWR.<br><br>The tidelands adjacent to Unga Island and the Shumagin Island group are particularly valuable, providing habitat for numerous large seabird colonies (spring, fall and winter concentrations of 10,000 to 100,000 birds or more), harbor seal haulout sites, both sea lion rookeries and haulouts, and an area of herring spawning. Kelp beds are located offshore of many such islands within this group and also occur on the eastern shore of Unga Island. Tidelands adjacent to the Alaska Peninsula are known sea otter concentration areas or have established populations of sea otters. A herring spawning area occurs in Lefthand Bay.<br><br>Harvest: Purse seine harvest occurs along the Pacific coastline of the Alaska Peninsula in this region, most intensely in bays and lagoons from Stepovak Bay to Unga Strait for pink, sockeye, chinook, chum and coho salmon. Herring sac roe are harvested at Beaver Bay (Cape Aliaksin). A few scattered set net permits occur along the coastline of the Alaska Peninsula, mostly on the eastern coastline of Balboa Bay and in Lefthand Bay. Red king and tanner crab are harvested along the southern coastal tidelands in this region with the highest concentrations being in bays and lagoons. Dungeness crab harvest is concentrated in Stepovak and Beaver Bays.<br><br>The tidelands around the Shumagin Islands are highly desirable for commercial fishing and fish processing, particularly Unga and Popof Islands. Salmon are harvested by purse seine, mostly on the east coast of Unga Island and also around other islands in the Shumagin group. Domestic trawl harvest of halibut occurs in tidelands around this island group and foreign trawl occurs for sablefish, pollock, cod and ocean perch. There are a few set net permits around these islands particularly around the southern portions of Unga Island (community of Unga). The community of Unga is occupied |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| | | | | only in the summer for subsistence harvest of salmon and other fish. Subsistence harvest around Unga and Popof Islands consists of mostly salmon. Sport fishing is also prevelant in the tidelands of this region. |
| R19T-02<br>Lefthand Bay/Balboa Bay | 14,488<br>Wd -- Waterfront Development | Map O-4<br>S53S75W | The unit is to be managed to accommodate tideland industrial uses, including those related to a potential oil and gas terminal. Development in tidelands must be coordinated with upland development, which, if it were to occur, would take place within Native owned lands. | The unit consists of a tideland tract at the head of Balboa Bay, and extending to the head of Lefthand Bay, in an area that is considered to have potential for an oil and gas terminal or as a transshipment point for processed mineral resources. Adjacent uplands are occupied by units owned by Native corporations or individuals. |
| R19T-03<br>Squaw Harbor | 1,744<br>Wd -- Waterfront Development | Map O-4<br>S57S74W | The unit is to be managed to accommodate tideland commercial and industrial uses. Note: It is unlikely that all of the area within this unit will be used for future commercial and industrial tideland uses. A fairly large area of tidelands is designated Waterfront Development given the uncertainty of the exact location of future facilities needed to support this community. | The unit is situated generally within Baralof Bay, adjacent to the community of Squaw Harbor on Unga Island. This area is considered appropriate for tideland commercial and industrial uses. This tideland unit excludes all private tidelands. |
| R19T-04<br>Humboldt Harbor | 3,860<br>Wd -- Waterfront Development | Map O-4<br>S56S73W | The unit is to be managed to accommodate tideland commercial and industrial uses. Note: It is unlikely that all of the area within this unit will be used for future commercial and industrial tideland uses. A fairly large area of tidelands is designated Waterfront Development given the uncertainty of the exact location of future facilities needed to support this community. | The unit is situated generally on Humboldt Harbor, adjacent to the community of Sand Point on Popof Island. This area is considered appropriate for tideland commercial and industrial uses. This tideland unit excludes all private tidelands.<br><br>Commercial fishing and fish processing are currently the dominant activities involving tidelands around Sand Point. Sand point is the home of the largest fishing fleet in the Aleutian Chain and includes local fishermen as well as a large number of transients during the fishing season. Tideland facilities support the fish processing industry and provide commercial docking facilities for the State Ferry which docks at Sand Point bi-monthly between May and October. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R19T-05<br>Sand Point | 187<br>Wd -- Waterfront Development | Map O-4<br>S56S73W | The unit is to be managed to be consistent with airport operations and with the requirements of the ILMA. | The unit encompasses an area of an ILMA (ADL 228251) to ADOT/PF related to the operations of the Sand Point airport. |
| R19T-06<br>Popof Strait | 2,855<br>Wd -- Waterfront Development | Map O-4<br>S56S73W | The unit is to be managed to accommodate tideland commercial and industrial uses. Note: It is unlikely that all of the area within this unit will be used for future commercial and industrial tideland uses. A fairly large area of tidelands is designated Waterfront Development given the uncertainty of the exact location of future facilities needed to support this community. | The unit is situated generally within Popof Strait, adjacent to the community of Sand Point on Popof Island. This area is considered appropriate for tideland commercial and industrial uses. This tideland unit excludes all private tidelands as well as tideland unit R19T-04.<br><br>Commercial fishing and fish processing are currently the dominant activities involving tidelands around Sand Point. Sand point is the home of the largest fishing fleet in the Aleutian Chain and includes local fishermen as well as a large number of transients during the fishing season. Tideland facilities support the fish processing industry and provide commercial docking facilities for the State Ferry which docks at Sand Point bi-monthly from May to October. |
| R19T-07<br>Herendeen Bay - South | 440<br>Wd -- Waterfront Development | Map O-4 | The unit is to be managed to accommodate tideland uses associated with residential settlement. | Uplands are intended to be developed for settlement; see unit R19-02. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R19T-08<br>Alaska Peninsula, South | 1,093,144<br>Gu -- General Use | Map O-4 | Manage for a variety of uses and resources. Protect eel grass beds, Pacific herring spawning areas, and sea otter concentration areas used for pupping. Consult USFWS and NMFS prior to issuing authorizations. Maintain opportunities for commercial, subsistence, and sport harvest. | This unit consists of those tide and submerged lands not situated within the Tideland Resource Management Zone (R19T-01) or areas adjoining other tideland units, particularly those situated adjacent to municipalities (R19T-02 through - 07). They adjoin lands either owned privately or by Native corporations.<br><br>The majority of the sensitive biological resources within this Region are included within the TRMZ. Within this unit there are no known harbor seal, sea lion or walrus haulout areas or rookeries, or significant sea bird colonies. Nonetheless, some areas with significant resources exist. Tidelands adjacent to some portions of the coast may have sea otter concentrations or established populations of sea otter. A herring spawning area occurs in Lefthand Bay and there are eel grass beds situated at the headlands between Beaver Bay and Balboa Bay.<br><br>Purse seine harvest occurs along the Pacific coastline of the Alaska Peninsula in this region, most intensely in bays and lagoons from Stepovak Bay to Unga Strait for pink, sockeye, chinook, chum and coho salmon. Herring sac roe are harvested at Beaver Bay (Cape Aliaksin). A few scattered set net permits occur along the coastline of the Alaska Peninsula, mostly on the eastern coastline of Balboa Bay and in Lefthand Bay. Red king and tanner crab are harvested along the southern coastal tidelands in this region with the highest concentrations being in bays and lagoons. Dungeness crab harvest is concentrated in Stepovak and Beaver Bays. Sport fishing is also prevalent in the tidelands of this region. |

# Region 21

# *NELSON LAGOON, MOFFET LAGOON*

## Summary of Resources and Uses in the Region

### Region Area and Boundary

Region 21 encompasses a large area consisting of generally flat and lake filled topography in its central portions and by mountainous terrain in the more southern parts (Map O-4). Most of the state-owned land is associated with the low, flat, lake filled area of the northern and interior portions of this Region. Region 21 is situated at the extreme west end of the Alaska Peninsula. It is bordered on the north by Bristol Bay, on the west by the Izembek National Wildlife Refuge, on the south by the Pacific Ocean, and on the east by the eastern edge of Port Moller, a large embayment having a rich and diverse population of marine mammals, waterfowl and shorebirds, walrus and seal haulouts, and by extensive areas of eel grass. The small community of Nelson Lagoon (pop. 64) occurs within the Region.

### State Lands: Ownership and Acreage

Most of this Region consists of extensive areas of state owned uplands, much of which occurs within the Port Moller Critical Habitat Area, a protected area of sensitive habitat and diverse biological resources. Essentially that area adjoining the coast and inland about 10-15 miles are owned by the state. Much of the remaining part of the Region is separated into native and federal ownership. Native-owned lands adjoin parts of Port Moller and Nelson Lagoon in the northern part of the Region but also occur along Canoe Bay and within the Sapsuk River drainage, areas situated in the southern and central parts of the Region, respectively. Portions of the Alaska Peninsula south of the state owned areas are occupied by the Alaska Peninsula National Wildlife Refuge. These principally occur near Mt. Dana or occupy portions of the large peninsula to the east of Pavlof Harbor.

The plan applies to 494,697 acres of state-owned and state-selected uplands and 495,999 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated). There are relatively few areas of state-selected land, with most of these concentrated at the west end of the region along the coast and directly inland, following the Cathedral River drainage. There are few areas of municipal selections in this Region; there is one fairly large area (1,985) occupying a part of the northern coast of Pavlof Bay and a smaller area (450 acres) along the north coast at Salt Water Lagoon.

## Physical Geography

This region is characterized by two types of landscapes. There are broad, flat to undulating lowlands in the north punctuated by numerous lakes and ponds and by extensive wetland areas. Mountainous terrain occupies the remainder of the Region, particularly in the southwest at the Aghileen Pinnacles and adjacent to Pavlof Volcano and its associated peaks, and in the southeast, generally coinciding with the mountainous topography of Hoodoo Mountain and Mt. Dana. The hydrology of the Region reflects the topographic differences. Lowland areas are characterized by seemingly endless lakes, ponds, and wetlands, with numerous streams. This condition is particularly true of the area north of Pavlof Bay to Nelson Lagoon where the rivers are characteristically low gradient and meandering. The principal drainages are the Sapsuk and Caribou Rivers. The relatively few major rivers occupying the areas of mountainous topography are characteristically fast, with steep gradients. The principal drainage within the more mountainous terrain is associated with the Canoe Bay River, which drains into Canoe Bay proper. There is, however, a general similarity of vegetation types, with some differentiation, reflecting the effects of altitude. Low and dwarf shrub dominates extensive areas, much of which is associated with wetland complexes in the area with a large number of lakes and ponds north of Pavlov Bay. Tall shrubs and alpine tundra/barrens dominate in mountainous areas except for a fairly small area of dwarf shrub tundra near the Aghileen Pinnacles. Palustrine wetlands occupy large areas of the flat interior and northern parts of the Region.

A special, unique physiographic feature within this Region is the Nelson Lagoon, situated in the northern part of the Region and adjoining Port Moller to the east. The area of the lagoon proper as well as some adjoining uplands are contained within the Port Moller Critical Habitat Area (CHA). Parts of Port Moller are also contained within this CHA. Both the lagoon and Port Moller are described in more detail in the 'Tidelands and Shorelands' section that follows.

## Climate

The climate of Region 21 is considered to be maritime, with much of its weather being formed by storms emanating from either the North Pacific or the Bering Sea. Annual precipitation ranges between 25 and 60 inches, including an annual snowfall of 55 inches. The Region is generally free of permafrost.

## Access

Access to and within Region 21 is poor. There are no roads, airstrips, or ports, although generally good port facilities and airstrips are available at Cold Bay and Port Heiden. Access is provided by water, and most of this is associated with commercial fishing.

## Resources and Uses

Most of the uses in this Region are associated with subsistence by native peoples and a limited amount of sport fishing, most of which is associated with saltwater. There is also limited subsistence and recreational hunting of moose and caribou. Some trapping also occurs for red fox, beaver, lynx, mink, and marten. There are few people within the region; most of these cluster around Nelson Lagoon. Most use is associated with commercial fishing in offshore waters; see the use description in the section on 'Tidelands and Shorelands' that follows.

**Cultural and Historic.** Nelson Lagoon was used historically as a Unangan summer fish camp. A salmon saltery operated from 1906 to 1917, which attracted Scandinavian fishermen; however, there has been no cannery since. In 1965 a school was built and the community began to be occupied year-round. There is only one reported prehistoric site, situated on the west side of Herendeen Bay.

**Economic.** Nelson Lagoon is situated in the middle of a rich and productive salmon fisheries area. Many residents hold commercial fishing permits, primarily salmon gillnet. Subsistence activities balance the seasonal nature of the fishery, and some trapping occurs.

**Recreation.** Recreation in the Region is primarily related to outdoor activities such as hunting, sport fishing, wildlife viewing, photography, and hiking. State lands occupy the majority of this Region and therefore receive the majority of this use. However, small portions of the Alaska Maritime and Alaska Peninsula National Wildlife Refuges are in this Region and draw some recreational use.

**Minerals.** Region 21 contains at least eleven known mineral occurrences. A wide variety of commodities are present; these include porphyry, hot-springs, and polymetallic lode-types. Copper, gold, silver, lead, zinc, antimony, arsenic, and silver prospects are known. Mineral sand placers occur along many beaches in the Bristol Bay area. In Region 21 ilmenite sands occur on the beaches in the Nelson Lagoon and Moffet Point areas. The Herendeen coalfield extends partly into Region 21. The identified resources for the Chignik and Herendeen Bay coalfields range up to 200 million short tons; hypothetical and speculative resources range to three billion short tons. Coal occurs as Cretaceous bituminous and subbituminous coals of the Coal Valley Member of the Chignik Formation; the coal units are typically less than seven feet thick ranging from less than two to seventeen feet.

**Oil and Gas.** Oil and gas potential is considered to be high. Five wells have been drilled in the Region. In 1970 Pan American drilled the Hoodoo Lake No. 1 and 2 just west of Herendeen Bay to depths of 8,049 ft. and 11, 243 ft. respectively. The company also drilled the David River No. 1 (2,300 ft.) and 1-A (13,769 ft.) in 1969. In 1974, BP Exploration drilled the Cathedral River No. 1 to a depth of 14,301 feet. Oil and gas shows were encountered in the Bear Lake, Stepovak, and Tolsoi formations; these formations are absent in the Cathedral River well. State and Native landowners are currently pursuing a new hydrocarbon exploration licensing and leasing program. The Alaska Department of Natural Resources, Lake and Peninsula, Bristol Bay, and Aleutians East Boroughs have signed a memorandum of understanding (MOU) in support of oil and gas lease sales and licensing of state land in the Bristol Bay and Alaska Peninsula region (March 17, 2004). Similar MOUs are in effect between the DNR and The Aleut Regional Native Corporation (December 18, 2003) and the DNR and Bristol Bay Native Corporation (July 10, 2003).

**Geothermal.** Although thermal springs are found northwest, southeast, and south of Region 21, there are no known thermal waters in the Region.

**Fish and Wildlife.** The resources of this Region are primarily those associated with fisheries and wildlife. Most of the larger streams draining into Bristol Bay are anadromous, with chum, coho, and king salmon present. There are somewhat fewer anadromous streams that drain into the Pacific Ocean, with most concentrating within the Canoe Bay and Canoe Bay River drainages. Pink, king, and sockeye salmon are present in these streams. Brown bears congregate along the coast, along the Sapsuk and Canoe Bay River drainages, and along the drainages that flow into Bristol Bay south of Franks Point. Moose are present in the region in fewer numbers, reflecting the sparse habitat for this animal. Although present, there are no known moose rutting or calving areas. Caribou are common throughout the region and are part of the Southern Alaska Peninsula Herd, which, at a population of about 3,000, is the smallest herd in the planning area. An extensive caribou calving area occupies most of the lowland to the west of Nelson Lagoon and north of the mountain range dominated by the Pavlof Volcano, Mt. Hague, Pavlof Sister, and the Aghileen Pinnacles. There are few raptors that frequent the uplands, and most shorebirds and waterfowl are associated with near shore areas, Nelson Lagoon, and both Port Moller and Herendeen Bay. Marine resources are particularly significant and the section on 'Tidelands and Shorelands' should be consulted for a description of the type and distribution of these resources.

# Management Considerations: Local, State, and Federal Plans

Local, state, and federal management plans affect portions of this Region.

There are no local plans that affect this area except for the Aleutians East Borough Coastal District Plan. This plan contains extensive enforceable policies and should be consulted by DNR prior to granting an authorization. See the web site www.alaskacoast.state.ak.us/ for more information on the enforceable policies of the Coastal District Plan.

The single state resource management plan that affects this Region is the DNR Bristol Bay Area Plan. It affects all state lands in the planning area, which includes uplands, shorelands, tidelands, and submerged lands, and navigable waters, and has been in force since its adoption in 1984. This revision supersedes and replaces the 1984 plan.

The Alaska Peninsula and Becharof National Wildlife Refuge (NWR) Comprehensive Conservation Plan (CCP) applies to the Alaska Peninsula NWR. There is a separate federal CCP for the Izembek NWR. See the section on *Local and Federal Plans in Chapter 3* for a more detailed description of these plans and how they apply to federal lands. DNR has consulted these plans in its preparation of the revised plan.

### Municipal Selections

Two municipal selections by the Aleutians East Borough total approximately 2,207 acres in Region 21. One fairly large area (1,715) occupies a part of the northern coast of Pavlof Bay and a smaller area (492 acres) occurs along the north coast at Salt Water Lagoon. See *Plan Map O-4* for the location of these selections and refer to *Appendix C*.

# Management Summary: Uplands

The Region is to be managed for a variety of multiple uses, including the maintenance of sensitive habitats, wildlife, and fisheries; and for dispersed public recreation and harvest. Because of the extent of the state land, the absence of discernible economic patterns, and the potential to accommodate a variety of uses through siting and other types of development stipulations, many areas of state land are designated General Use. Most of the state land situated in interior locations north of the mountain range dominated by Pavlof Volcano is considered an essential calving area for a portion of the Southern Alaska Peninsula Caribou Herd. Because of the importance of this area for calving habitat, development authorizations must conform to the requirements of Chapter 2 under the section 'Caribou and Moose Rutting and Calving Areas'.

### Plan Designations and Management

The plan designations that are used within this Region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. Refer especially to those guidelines relating to Fish and Wildlife Habitat and Harvest Areas, and Settlement. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- General Use (R21-01 and R21-04) (Gu). Extensive areas throughout the Region are designated General Use, for the reasons given above. Areas designated General Use are typically remote, inaccessible, and, within this Region, are generally not considered suitable for development. Within areas designated General Use, a variety of uses may occur; nonetheless, it is expected that, owing to their physical characteristics, little development will occur during the planning period and, as a matter of policy, it is not intended that intensive forms of development occur in these areas. Site specific development, such as occurs with oil and gas exploration and development, would be acceptable in these areas with protection of other resources and uses.
- Settlement (R21-02 and R21-05) (Se). The two areas of state land selected by the Aleutians East Borough under the Municipal Entitlement Act are designated Settlement. Areas designated Settlement may be conveyed to municipalities under AS 29.65.130. These areas are considered appropriate for conveyance to the borough, subject to a separate and subsequent Best Interest Finding by DNR.

- Habitat (R21T-01) (Ha). This designation is applied to the upland areas encompassed by the Port Moller Critical Habitat Area. Note: Extensive tideland areas are also affected by the Habitat designation. Anadromous streams depicted in the ADF&G Anadromous Stream Catalog are also designated Habitat.
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain streams may be only designated Habitat or General Use.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur throughout the Region; there are no areas affected by 11 AAC 96.010 requiring a permit before being authorized.
- Mineral Closing Orders and Leasehold Location Orders. Except for areas closed to mineral entry under existing Mineral Closing Orders, all lands within the Region are open to mineral entry. (There are two MCOs that affect this Region: MCO 791 closes the Region to shallow oil and gas exploration and development, and MCO 393 closes certain streams to mineral entry.) No additional MCOs are recommended; the only exception applies to the areas to be disposed of by DNR for purposes of settlement, should such areas be selected for this purpose in the future within this Region by DNR. In these instances, closure of the settlement area prior to sale is required. The MCO in areas not selected for staking within three years of the land sale shall revert to 'open to mineral entry'. No leasehold location orders are recommended.
- Municipal Entitlement Selections. Land designated Settlement is conveyable to municipalities under the Municipal Entitlement Act. All lands so designated are appropriate for disposal, subject to a DNR Best Interest Finding.
- Retained Lands. There are no state lands within this Region that are designated by the area plan to be retained other than those affected by the Habitat designation, which coincides with the Port Moller CHA and certain anadromous streams.
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

See the Resource Allocation Table for more details on these upland management units.

# Management Summary: Tidelands and Submerged Lands

The tidelands in Region 21 stretch along the coastline from Port Moller and Nelson Lagoon, west to Moffet Lagoon on the Bristol Bay side of the Peninsula. On the Pacific Ocean side, this region extends south to include Pavlof Bay and Coal Bay. Nelson Lagoon and the northwestern part of Port Moller are the most sensitive habitat areas and include a variety of marine mammals, seabirds and seabird colonies, harbor seal and walrus haulouts, and extensive areas of waterfowl concentrations (all seasons) and waterfowl nesting. Eel grass and salt marshes are reported to occupy large areas of sheltered tidal flats in this bay and lagoon system. The Port Moller Critical Habitat Area (CHA) encompasses probably the most biologically productive and sensitive of these areas. There are also significant herring spawning areas and brown bear spring concentrations at the southern tip of Herendeen Bay.

Tidelands along the Pacific Coast are less biologically productive and are not known to include significant walrus or sea lion haulouts or rookeries, bald eagle concentrations or areas of kelp, except for specific locations in Coal Bay and the outer coast. The Pacific Coast area does provide sheltered tidal flats, sheltered rocky shore and exposed rocky headlands, which support clams, bivalves and mussels. Estuaries are created at the mouths of anadromous streams, which provide sub-tidal habitat for king and dungeness crab, and shrimp.

Commercial harvest of a variety of fish occurs along the Bristol Bay coastline in this region, particularly around the Nelson Lagoon / Port Moller area. Purse seine and drift (gill) net harvest of chinook salmon occurs in the vicinity of Cape Seniavin and for chum salmon in the eastern portions of Herendeen Bay. Several varieties of salmon are harvested by drift net in Nelson Lagoon. Extensive harvest of yellowfin sole and cod occurs in the Port Moller area, and herring sac roe are harvested in Nelson Lagoon, Port Moller bay, Herendeen Bay and around Deer Island. There are numerous set net sites within Nelson Lagoon. Subsistence harvest activity around Nelson Lagoon Village occurs during commercial off-season and consists of fishing. There is also some subsistence harvest of waterfowl and eggs.

Herring sac roe is harvested commercially in Pavlof Bay, Cape Tolstoi and Canoe Bay on the Pacific side of this region. Intensive purse seine harvest of pink, chum and some sockeye salmon occurs along the western coast of Pavlof Bay, concentrating in Canoe Bay. Red king and tanner crab are harvested along the Pacific Coast concentrating in sheltered tidal areas in bays and lagoons.

[23] Region 18 includes the tidelands adjacent to the settlement of Port Moller (R18T-03).

## Plan Designations and Management Intent

### Bristol Bay Tidelands

**Coastal Shoreline.** The Bristol Bay shoreline consists of coarse sand beaches with some mixed sand and gravel beaches. Waterfowl, shorebirds, sea otters, and harbor seals are present throughout this sub region. There are also some small, isolated Pacific herring spawning areas. This part of the Region is designated General Use and is to be managed to accommodate multiple tideland uses. Tideland authorizations are considered appropriate subject to the protection of sensitive resources and habitats.

**Port Moller CHA, Port Moller West (R21T-01, R21T-02).** Nelson Lagoon is the primary waterbody in this management unit and consists of extensive areas of sheltered tidal flats that are reported to consist, in part, of eel grass. It is a biologically rich and diverse lagoon system, with portions of the lagoon extending eastward to include the Kudobin Islands, which are used for harbor seal and walrus haulouts and contain a number of large seabird colonies. Most of the Lagoon is part of the Port Moller CHA, although significant areas of seabird colonies, harbor seal haulouts, and walrus haulouts are outside the CHA. Nelson Lagoon is split into two tideland management units; the area of the CHA itself (R21T-01), and the area not included in the CHA, titled Port Moller West (R21T-02). Both management units are designated Habitat and are to be managed to protect the critical biological resources of Nelson Lagoon. Tideland authorizations are not considered appropriate within this area and may only be granted if the resources of the area are protected, if there is no other feasible and prudent site, and the authorization is in the overall best interest of the state.

**Port Moller Bay (R21T-03).** Port Moller bay consists of extensive areas of sheltered tidal flats some of which may contain eel grass. This bay is a biologically productive area that includes a site used for walrus haulout situated near the settlement of Port Moller at Entrance Point, areas important for harbor seal haulouts in the western part of this management unit, and extensive areas important for waterfowl winter concentrations and waterfowl molting. Except for the tidelands adjacent to the settlement of Port Moller (R18T-03) that are intended to support waterfront development and are designated Waterfront Development, the remainder of the bay is designated Habitat. Authorizations within the areas designated Habitat may be appropriate, but authorizations shall ensure that walrus and harbor seal haulout areas are protected. Note: The area of harbor seal haulout concentration is included in management unit R21T-02, since it is part of the larger area used as haulouts in management unit 21T-01, Port Moller CHA.

### Pacific Ocean Tidelands

**Coastal Tidelands.** Tidelands adjacent to the relatively small areas of Native or private lands are designated General Use except for areas within municipal selections or that are otherwise specifically designated. The northernmost part of Pavlof Bay (R21T-04) is designated Waterfront Development, to accommodate potential marine industrial development. An upland management unit, R21-03, adjoins this tideland management unit and is designated Settlement, a use designation that also accommodates these types of uses. Tideland authorizations in these areas are considered appropriate, but authorizations must protect sensitive resources and must be consistent with specific, applicable management requirements for a management unit.

**Tidelands adjacent to the Alaska Peninsula NWR (R21T-05).** A Tideland Resource Management Zone (R21T-05) affects tidelands adjacent to the Alaska Peninsula National Wildlife Refuge. Tidelands within this Zone are designated Public Recreation and Tourism-Dispersed and Habitat and are to be managed to protect habitat values and maintain public recreation values. For a detailed description of this Tideland Resource Management Zone, see *Tidelands Summary in Chapter 3*.

See the Resource Allocation Table for more details on these tideland management units.

# Resource Allocation Table for Upland Units - Region 21

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R21-01<br>Nelson Lagoon/Moffet Lagoon | 432,067<br>Gu -- General Use | Map O-4 | Unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitat, oil and gas exploration and development, the possible development of the Herendeen coalfield, and dispersed recreation. Development authorizations may be considered appropriate subject to the protection of these resources and the specific requirements of Chapter 2. See particularly the requirements for "Caribou and Moose Calving and Rutting Areas" in this Chapter. Intensive development is not expected within this unit during the planning period except occasionally and at specific sites, such as oil and gas developments, if determined practicable. | This large unit, consisting of over 432,000 acres, contains nearly all of the areas that are designated General Use (Gu) in this Region, except for those areas of state-selected land designated Gu within unit R21-04. Except for the mountainous area in the far southwestern part of the unit near and adjacent to the Aghileen Pinnacles, the terrain is generally flat to gently rolling with vegetation consisting almost entirely of low and dwarf shrub. Extensive areas of wetland occur throughout the unit and are particularly evident near and within the lower drainages of the Caribou and Sapsuk Rivers. An isolated area of spruce and broadleaf forest occurs in a single area within the southeastern part of the unit, coinciding with areas of higher elevation and better drainage near the Aghileen Pinnacles. The Southern Alaska Peninsula Caribou Herd uses most parts within the unit at some time of year and an extensive area used for rutting occurs within the middle parts of the unit, generally coinciding with the areas of poor drainage and soils. Few moose are present. Numerous anadromous streams exist, with all four species of salmon as well as Dolly Varden and Arctic char present in many streams. Few historic or prehistoric resources exist, reflecting the relatively little human use that has occurred within this Region. The unit is believed to contain oil and gas potential. The Herendeen coalfield underlies the eastern portion of this unit. |
| R21-02<br>Salt Water Lagoon | 501<br>Se -- Settlement | Map O-4<br>S49S80W | Unit is designated Settlement and is considered appropriate for disposal during the planning period. Conveyance to the Aleutians East Borough is considered appropriate, subject to a separate and subsequent Best Interest Finding. | Unit consists of both water areas and uplands. The water areas occur within portions of Salt Water Lagoon; the uplands occupy the higher elevation land to the south and east of the Lagoon. Estuarine wetlands are present at the edges of the Lagoon. Upland areas are relatively well drained and are suitable for development (settlement). Dwarf and low shrub characterize the upland areas. There are no known prehistoric or historic sites. This unit is affected by a municipal selection of the Aleutians East Borough. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R21-03<br>David River | 35,012<br>Se -- Settlement | Map O-4 | The unit is designated Settlement and is considered appropriate for disposal during the planning period. Development should conform to the requirements for Remote Settlement in Chapter 2. See requirements for caribou calving areas in Chapter 2. | The unit occupies generally level terrain containing numerous wetlands and lakes, of varying size. Vegetation is either dwarf low shrub or that type characteristic of palustrine wetlands. A caribou calving area occupies much of the unit. David River, which constitutes the principal drainage of the area within the unit, is an anadromous fish stream. Unit may be suitable for settlement in areas adjacent to lakes. Access would be by means of floatplane. Portions of the unit are considered to have oil and gas potential. |
| R21-04<br>Sapsuk River - Cape Leontovich | 25,401<br>Gu -- General Use | Map O-4 | If conveyed, the unit is designated General Use (Gu) and is to be managed for a variety of uses, including subsistence and recreational harvest, the protection of fish and wildlife resources and their associated habitat, oil and gas exploration and development, and dispersed recreation. Development authorizations may be considered appropriate subject to the protection of these resources and the specific requirements of Chapter 2. See particularly the section on "Caribou and Moose Calving and Rutting Areas" in this Chapter. Intensive development is not expected within this unit during the planning period except occasionally and at specific sites, such as isolated oil and gas development, if determined practicable. | This unit consists of three separate parts (subunits), occupying areas of state selected land at Cape Leontovich and east of several large lakes near the Sapsuk River in the eastern, central part of the Region. The Cape Leontovich area, situated in the western part of the unit, occupies areas adjacent to the coast. These areas are generally low, flat and are relatively well drained, compared to other areas within this Region. They are covered by low and dwarf shrub. Moose and caribou are believed to be present at times during the year, but there are no reported caribou rutting areas. The area near the Sapsuk River is more characteristic of unit R21-01; it is low, flat, land not well drained, consisting of extensive wetland areas. The vegetation is a mix of palustrine wetlands and low and dwarf spruce, which also occupies wetland areas. A portion of the caribou rutting area is believed to occur within the Sapsuk River subunits. There are no known historic or prehistoric resources in the subunit. There are several anadromous streams within the subunits, most of which contain sockeye salmon, although other species may also be present. The potential for oil and gas development may exist in several areas. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R21-05<br>Pavlof Bay | 1,716<br>Se -- Settlement | Map O-4<br>S52S79W Sec. 26,34, 35,36 | The unit is designated Settlement and is considered appropriate for disposal during the planning period. Conveyance of this unit to the Aleutians East Borough is considered appropriate, subject to a separate and subsequent Best Interest Finding. | The unit is situated on fairly flat terrain at the head of Pavlof Bay in an area characterized by low and generally flat to gently rolling topography. The predominate vegetation is dwarf shrub. There are numerous ponds, lakes, and wetlands. There are no known anadromous streams or historic/prehistoric sites. This area has been considered at various times as appropriate for various forms of commercial or industrial development associated with a transportation related marine facility. This unit is affected by a municipal entitlement selection of the Aleutians East Borough. |

# Resource Allocation Table for Tideland Units - Region 21

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R21T-01<br>Port Moller CHA | 129,164<br>Ha -- Habitat | Map O-4 | The unit is designated Habitat. Unit is to be managed to protect the sensitive upland and tideland resources associated with this Critical Habitat Area. Only development authorizations that meet the requirements of AS 16.20.520 and AS 16.20.530 are appropriate. Applications must be submitted to ADF&G for review and approval. Also consult with NMFS and USFWS prior to granting authorizations. Note: The management of the sensitive tideland resources in the Port Moller area requires consideration of those resources in the adjacent tideland units, R21T-02 and R21T-03. This larger tideland area is to be managed as an integrated unit. See management intent for R21T-02 and R21T-03. Development authorizations to support the needs of the Nelson Lagoon community may be appropriate, subject to the protection of sensitive resources and consistency with overall unit management intent. | The Port Moller CHA, established under AS 16.20.550, consists mostly of an area of lagoon (Nelson Lagoon) as well as most adjoining uplands. Nelson Lagoon consists of extensive areas of sheltered tidal flats that are reported to consist, in part, of eel grass. It is a biologically rich and diverse lagoon system, with portions extending eastward to include the Kudobin Islands, which are used for harbor seal and walrus haulouts and contain a number of large seabird colonies. There are a variety of sensitive resources within the lagoon. These include eel grass beds and an extensive area used for harbor seal haulouts, while the entirety of the CHA is important as a waterfowl seasonal concentration area (spring, fall, and winter) and as a waterfowl concentration area for molting. Large concentrations of sea otters have been reported in Nelson Lagoon. A walrus haulout is located at the end of the Kudobin Islands, at Walrus Island. Most of the Lagoon is part of the Port Moller CHA, whose purpose is to protect the marine resources of this area. However, large portions of the lagoon are not included within the CHA yet contain important sea bird colonies, harbor seal haulouts, and walrus haulouts. These resources are contained in tideland unit R21T-02. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R21T-02<br>Port Moller West | 87,626<br>Ha, Hv -- Habitat and Harvest | Map O-4 | This unit is designated Ha and is to be managed as an integrated unit with the adjacent tideland unit, R21T-01, which contains the Port Moller CHA. Tideland authorizations may be appropriate within this unit but are to ensure that the sensitive resources of this unit and the adjoining unit, R21T-01, are protected. Consult with NMFS, ADF&G, and USFWS prior to granting authorizations. | This tideland unit is situated immediately to the east of the Port Moller CHA, which is tideland unit R21T-01, and contains many of the same resources. A large harbor seal haulout area is included within this unit, and is an extension of the same haulout area in the CHA. The remainder of the unit is important as a waterfowl seasonal concentration area (spring, fall, winter) and as a waterfowl molting concentration area. Herring spawning areas occur at the head of Herendeen Bay around the mouths of anadromous streams emptying into the bay. Spring concentrations of brown bear also occur along this coastline. Large rafts of sea otters have been observed in Herendeen Bay.<br><br>Harvest: Domestic trawl for cod occurs in the tidelands along the northern coastline of this unit. Herring sac roe harvest occurs in Nelson Lagoon and the northern part of Herendeen Bay around Deer Island. There are a few set net sites in this area. Purse seine and drift net harvest for sockeye chinook, chum and coho salmon occurs throughout this unit. The village of Nelson Lagoon is sited on a long spit which encloses the western portion of Nelson Lagoon. Residents rely on commercial drift net (gill net) harvest of salmon. Subsistence harvest of salmon by area residents also occurs during commercial off-season, and seabirds and eggs are also harvested. |
| R21T-03<br>Port Moller bay | 68,726<br>Ha, Hv -- Habitat and Harvest | Map O-4 | Port Moller Bay is designated Habitat. Development authorizations may be appropriate within this unit but are to ensure that impacts upon the extensive waterfowl concentrations found throughout the Bay are minimized. | This unit includes the main portion of Port Moller bay. Not included in this tideland unit are tideland units R21T-01 and R21T-02. The resources of the main part of Port Moller bay are associated with waterfowl seasonal concentration areas (primarily winter). Large rafts of sea otters have been observed in Port Moller bay.<br><br>Harvest: Yellowfin sole and cod are harvested in the Port Moller bay area and sac roe is also harvested in this bay. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R21T-04<br>Pavlof Bay | 860<br>Wd -- Waterfront Development | Map O-4<br>S50S75W, S50S76W, S51S75W | Unit is to be managed to accommodate tideland industrial uses, including those related to a potential oil and gas terminal. Development in tidelands must be coordinated with upland development, which, if it were to occur, would take place within state land designated General Use. The use of upland areas (Unit R21-03) for commercial/industrial purposes is considered appropriate. | Unit consists of a tideland tract at the head of Pavlof Bay in an area that is considered to have potential for an oil and gas terminal. Adjacent uplands are situated on state land and are designated Settlement. |
| R21T-05<br>Tidelands adjacent to Alaska Peninsula NWR | 26,996<br>Ha and Rd -- Habitat and Public Recreation and Tourism-Dispersed | Map O-4 | Tidelands adjacent to the Alaska Peninsula NWR are to be managed to protect sensitive habitat values, fisheries and wildlife resources, and the public recreation resources of the NWR. A Tideland Resource Management Zone (TRMZ) affects these tidelands. See "Management Summary, Tidelands" in Chapter 3 for a more detailed description of TRMZs and the management intent and requirements for such zones. As appropriate, consult with Alaska Peninsula NWR; USFWS; and NMFS prior to issuing authorizations. | Unit adjoins the Alaska Peninsula NWR. Tidelands adjacent to the NWR are not known to include significant walrus or sea lion haulouts or rookeries, concentrations of bald eagle nests, or areas of kelp, except for specific locations in Coal Bay and the outer coast.<br><br>Harvest: Herring sac roe is harvested commercially in the tidelands along the southern coast of this region in Pavlof Bay, around Cape Tolstoi and in Canoe Bay. There is a concentration of commercial purse seine harvest of pink, chum and sockeye salmon in Pavlof Bay and Canoe Bay. Red king and tanner crab are harvested in the many bays and lagoons along this southern coastline. Sport fishing is prevelant in the tidelands along the southern coast of the Alaska Peninsula. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R21T-06<br>Bristol Bay and Pacific Ocean, South | 495,999<br>Gu -- General Use | Map O-4 | Manage unit for a variety of uses and resources. Protect areas of Pacific herring spawning, sea bird colonies, sea otter concentration and established population areas, and eel grass beds. Consult with USFWS and NMFS prior to issuing authorizations. Maintain opportunities for commercial, subsistence, and sport fish harvest. | This unit consists of extensive areas of coast adjacent to state owned uplands on Bristol Bay and areas along the Pacific Ocean. Areas along the Pacific Ocean are either owned by the state, Native corporations/private individuals, or are part of a Tideland Resource Management Zone. On the Bristol Bay side, the units at Nelson Lagoon (R21T-01 through -03) are excluded; while on the Pacific Ocean side, the TRMZ and R21T-04, in Pavlof Bay, are excluded.<br><br>The shoreline on the Bristol Bay side is characterized by coarse sand beaches with some mixed sand and coarse gravel beaches. The Pacific Ocean side is pocketed with both small and large bays, in contrast to the nearly continuous curvilinear coastline along Bristol Bay.<br><br>The majority of the sensitive biological resources are included within the Nelson Lagoon and Port Moller bay units and within the TRMZ. Nonetheless, significant resources exist in this unit. On the Bristol Bay side, waterfowl, shorebirds, and sea otter concentrations occur throughout. Some isolated, small Pacific herring spawning areas also occur. On the Pacific Ocean side sea otter concentrations or established populations of sea otter are reported, there are numerous sea bird colonies situated on rocks within Pavlof Bay, and fairly extensive eel grass beds exist south of the community of Pavlof, at the headland between Pavlof Bay and Beaver Bay.<br><br>Domestic trawl for cod occurs in the tidelands and submerged lands along the north coast, and there are several set net sites. It is also likely that purse seine and drift net harvest for sockeye chinook, chum, and coho salmon occurs, although most commercial and subsistence harvest occurs in Nelson Lagoon and Port Moller. Sac roe is harvested commercially in the tidelands along the southern coastal area in Pavlof Bay, around Cape Tolstoi and in Canoe Bay. Red king and tanner crab are harvested in some of the bays and lagoons. Sport fishing is prevalent along the southern coast. |

# Region 22

# *Lower Alaska Peninsula – Unimak & Krenitzin Islands*

## Summary of Resources and Uses in the Region

### Region Boundary

Region 22 occupies the extreme westerly part of the Alaska Peninsula, Unimak Island, and the Pavlof, Cherni, and Sanak Island groups situated south of the Alaska Peninsula (Map O-4). Except for several small holdings in the communities within this Region, there are no state-owned uplands. Native corporations or the federal government own almost all of the land within Region 22. There are three National Wildlife Refuges within the Region – Izembek, Alaska Peninsula, and Alaska Maritime. Izembek is also designated as a state game refuge, although the federal government owns all of the uplands. The boundaries of this region are the same as the original (1984) Bristol Bay Area Plan with one addition. In order to address all of the land within the Aleutians East Borough, the Krenitzin Islands were added to the planning area. Communities are coastal and include King Cove (pop. 691), Akutan (pop. 420), Cold Bay (pop. 85), and False Pass (pop. 64).

### State Lands: Ownership and Acreage

Almost all state land in Region 22 is the tidelands and shorelands. The few areas of state-owned uplands are in the vicinity of the four major settlements. The plan applies to 9,164 acres of state-owned and state-selected uplands and 2,449,977 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands.[24]

### Physical Geography

The physical geography of this Region is dominated by a series of volcanoes, mostly glaciated, that occupy the southern half of the Alaska Peninsula and most of the major islands. A nearly flat coastal plain occupies the northern half of the Peninsula. The volcanoes form a northeast spine of mountains that descend rapidly to sea level. Rocky headlands and sandy beaches characterize the coast on the south side of the Peninsula. There are two bays, Morzhovoi and Cold Bays, which cut so deeply that they almost transect the peninsula. Offshore islands include the Pavlof Islands and Deer Island, which have steep terrain, and the relatively flat Sanak Islands. On the north side of the Alaska Peninsula there is a broad coastal plain

[24] Acreages of shorelands have not been calculated.

separating the mountains from Bristol Bay. This plain is characterized by gently rolling tundra surrounding numerous lakes and wetlands. Barrier Islands on the north shore, with their long sandy beaches, protect an extensive lagoon system that provides the unique set of conditions to attract millions of migrating birds in seasonal congregations.

Off the southwest end of the Alaska Peninsula, less than a mile across Isanotski Strait (False Pass) lies Unimak Island, which is also characterized by steep terrain. Thirteen-mile-wide Unimak Pass separates Unimak Island from the first of the Krenitzin Islands. This group of six major islands and numerous small ones has mostly mountainous terrain with many small embayments. Akutan Island is the largest island in the group.

## Climate

Region 22 has a maritime climate. Temperatures range from a monthly average low of 23°F in February to a high of 56°F in August. Frequent storms carry moisture from either the Bering Sea or the North Pacific resulting in 33 inches of precipitation annually with 52 inches coming in the form of snow. Winds are commonly moderate to strong. The area is generally free of permafrost.

## Other

Region 22 is within the Unalaska, Unimak, False Pass, Cold Bay, and Port Moller Quadrangles. It lies entirely within the boundaries of the Aleutians East Borough and the Aleut Regional Native Corporation Boundary.

## Access

The settlements are dependent upon air or marine transportation. Cold Bay serves as a regional air transportation hub with a 10,000-foot paved and lighted runway. This also serves as an international hub for private aircraft. There are gravel airstrips at King Cove (3,360') and False Pass (2,100') with a seaplane base at Akutan. All four communities have regularly scheduled air service.

Marine cargo arrives monthly from Seattle. The Alaska Marine Highway System services all four settlements but only runs from May to October. There is no road access to the Region, but each community has a local network of roads. Cold Bay has the most extensive with 40 miles of gravel roads. Under a plan approved in 2004, a road and hovercraft ferry will provide a more reliable link between King Cove and the major airport at Cold Bay.

## Resources and Uses

**Cultural and Historic.** Akutan began in 1878 as a fur storage and trading port for the Western Fur and Trading Company. Commercial cod fishing and processing attracted nearby Natives to the community. The community was evacuated by the military following the Japanese attack on Unalaska in June 1942. The village was restored in 1944 but many chose not to return. The False Pass area was originally homesteaded in the early 1900s and grew with the establishment of a cannery in 1917. Natives moved to False Pass from Morzhovoi, Sanak Island, and Ikatan when the cannery was built. It operated until 1981 when it was destroyed by fire. The

community of King Cove was founded in 1911 when Pacific American Fisheries built a cannery, which operated until 1976 when it was partially destroyed by fire. Archeological sites dating to the last ice age indicate that the area around Cold Bay was inhabited by a large Native population. During World War II, Cold Bay was the site of the strategic air base Fort Randall. Archaeological evidence indicates that areas within the Region have been continuously occupied for at least 8,000 years by the Unangan, known in modern times as the Aleut. There are 157 cultural sites within Region 22 – 96 prehistoric, 45 historic, and 16 of mixed origin, which are concentrated at the first two breaks in the Aleutian Chain, False and Unimak passes, and along the Bering Sea coastline. Fishing and fish processing are still the dominant industries in the Region to this day.

**Recreation.** Recreation in the Region is primarily related to outdoor activities such as hunting, sport fishing, wildlife viewing, photography, and hiking. Cold Bay draws the majority of recreationists due to its relative ease of access and proximity to the Izembek National Wildlife Refuge.

**Minerals and Materials.** There are 36 mineral occurrences in Region 22; the majority of these are epithermal precious metal occurrences of gold and silver. A few other polymetallic prospects and porphyry copper-type occurrences are known. The mineral occurrences are distributed on the Krenitzin Islands and from False Pass to the Belkofski vicinity. There is a gap with no mineral occurrences on most of Unimak Island due to volcanic cover. Potential for discovery of precious metals in the Region is high. There are no active material extraction sites.

**Coal, Oil and Gas.** The oil and gas potential of the Region is not well known. The most potential occurs along the coastal area west of Bechevin Bay to Coal Oil Creek and Cape Lapin; this area is underlain by the North Aleutians basin. No wells have been drilled in the Region and most potential probably lies beneath the waters of Bristol Bay. There are no significant deposits of coal.

**Forestry.** There are no significant economic timber resources in Region 22.

**Fish and Wildlife.** This region is rich in fish and wildlife resources. Seabird colonies line the coast and the diversity and numbers of waterfowl and shorebirds that utilize this region was the major reason for the establishment of the Izembek National Wildlife Refuge. Some of the larger terrestrial mammals in the region include brown bear, caribou, wolf, fox, wolverine, and land otter. Most of the streams support anadromous fish runs that are important to the subsistence and commercial fisheries of the local economy. Izembek Lagoon, a state wildlife refuge, contains extensive eel grass beds and provides important habitat for the numerous seabird and waterfowl that use this area as part of their annual migration. The majority of the eastern Pacific population of black brant geese and half of the world population of emperor geese use this lagoon.

# Management Considerations: Local and State Plans

A variety of local, state, and federal management plans affect this Region. These plans have been consulted in the process of revising the BBAP.

The Aleutians East Borough Coastal District Plan affects the entire coastal zone within this region. This plan contains extensive enforceable policies affecting state lands and should be consulted by DNR prior to issuing authorizations. The coastal plan's enforceable policies can be found on the web at: www.alaskacoast.state.ak.us .

Only one state management plan affects this region, the DNR Bristol Bay Area Plan, adopted in 1984. This revision replaces and supersedes that plan.

Most of the uplands are part of three National Wildlife Refuges (NWRs). The Alaska Peninsula, Izembek, and Alaska Maritime NWRs all have Comprehensive Conservation Plans that guide refuge activities. See the section on *Local and Federal Plans in Chapter 3* for a description of these plans and how they apply to federal lands.

# Management Summary: Uplands

There are very few state uplands in Region 22. These exist only as small management units in the vicinity of the major settlements and are related primarily to public facilities, particularly airstrips. Several other management units of state land at Cold Bay and King Cove are not known to be required for public use, and are designated Settlement-Commercial (Sc). The areas of the airstrips are designated Public Facilities-Retain and the other management units as Settlement.

## Plan Designations and Management

The plan designations that are used within this region have the following management intent. The policies and management intent guidelines described in Chapter 2 affect all DNR authorizations. See also the descriptions of the plan designations in the first part of this Chapter; this section indicates which lands can be conveyed out of state ownership and those that must be retained.

- Public Facilities-Retain (Pr). A number of small management units (R22-02, R22-04, R22-05, and R22-06) are to be retained for public purposes.
- Settlement (Se). Some small management units (such as R22-05) are designated Settlement and are appropriate for disposal during the planning period, if conveyed by the federal government. They should be developed according to the management guideline for Community Settlement Areas in the Settlement section of Chapter 2.

- Settlement-Commercial (Sc). Lands that are considered appropriate for commercial leasing, permitting, or other authorizations are designated Settlement-Commercial. Please refer to the guidelines in the Settlement section of Chapter 2.
- Habitat (Ha). Generally, this designation applies to areas of varied size that are important for fish and wildlife species during a sensitive life-history stage where alteration of the habitat or human disturbance could result in the permanent loss of a population or sustained yield of a species. In Region 22 this designation is applied to streams and shorelands cataloged by the Alaska Department of Fish and Game as anadromous (http://gis.sf.adfg.state.ak.us/AWC_IMS/viewer.htm). Land with this designation is to be retained in state ownership.
- Public Recreation and Tourism-Dispersed and Habitat (Co-designation). Certain navigable waterbodies (lakes and streams) are co-designated Habitat (Ha) and Public Recreation and Tourism-Dispersed (Rd). Authorizations within these waterbodies should not interfere with important habitat or public recreation values. See Table 3.1 in the Navigability section of this Chapter for a listing of these streams. Note: Certain waterbodies may (only) be designated Public Recreation and Tourism-Dispersed, (Rd), Habitat (Ha), or General Use (Gu).

See the Resource Allocation Table for more details on these upland management units.

## Specific Management Considerations

- Generally Allowed Uses. The Generally Allowed Uses in 11 AAC 96.020 can occur on state-owned land throughout the Region with the exception of the area within the Izembek State Game Refuge. The specific standards of a national/state game refuge apply in this area. The General Use designation also provides for site-specific development, such as occurs in oil and gas exploration and development activities, with appropriate protections of other resources and uses.
- Mineral Closing Orders and Mineral Order. Except for areas closed to mineral entry under existing Mineral Closing Orders or Mineral Order, all lands within the Region are open to mineral entry. (Existing Mineral Closing Orders, each effecting less than 200 acres, occur in King Cove (MCO 650), Cold Bay (MCO 552), Morzhovoi Bay (MCO 521), and False Pass (MCO 642)). Mineral Order No. 791 is an interim order that precludes shallow natural gas leasing and oil and gas exploration licensing. This order has no effect on locatable or leaseable minerals other than shallow natural gas leasing and oil and gas exploration licensing. No Leasehold Location Orders (LLO) exist.

  No additional MCOs or LLOs are recommended; the only exception applies to areas that are to be disposed of by DNR for settlement purposes, should such areas be selected for this purpose in the future. In these instances, closure of the settlement area prior to sale is required. The MCOs in areas not selected for staking within three years of the land sale shall revert to ‘open to mineral entry’. See also the *Mineral Resources section in Chapter 2* for more detail on subsurface management requirements.

- Retained Lands. There are no state lands that are designated to be retained except for those few management units that serve a public purpose and are designated Public Facilities-Retain or are part of the Izembek State Game Refuge.
- Navigable Waters. Shorelands (rivers and lakes) that are believed to be navigable are listed in Table 3.1 in the Navigability section of this Chapter. Authorizations in these waters must ensure the continued use of a waterway by the public for purposes of trade, travel, and commerce. Note: These waterbodies are assigned a plan designation of Habitat, Public Recreation and Tourism-Dispersed, a co-designation of Habitat and Public Recreation and Tourism-Dispersed, and, sometimes, General Use. Authorizations issued by DNR are to maintain the habitat and public recreation values of these waterbodies.

# Management Summary: Tidelands and Submerged Lands

Tidelands represent the majority of state lands within this Region, and are the focus of management within the Region. Most of the tidelands adjoin federal National Wildlife Refuges (Alaska Peninsula, Izembek, and Alaska Maritime) or Native-owned tracts. Those adjacent to the coastal islands and within the Izembek Lagoon on the northern side of the Alaska Peninsula are particularly important.

The tidelands in Region 22 include areas that are very significant biologically and that contain a variety of fisheries and marine mammal concentrations, extensive seabird colony sites, and shellfish concentrations. Two areas of particular importance are Amak Island and Sea Lion Rock, situated off the northern shore of the peninsula, and Izembek Lagoon. Another significant area is that of the Cherni and Sanak Islands groups. Amak Island and Sea Lion Rock contain extensive sea lion rookeries and haulouts, as well as areas of walrus haulouts. Izembek Lagoon, which is a National Wildlife Refuge as well as a State Game Refuge, contains extensive areas of eel grass as well as areas used for harbor seal haulouts, waterfowl seasonal concentrations (all seasons) and waterfowl molting. Portions of the lagoon are also used for brown bear spring concentrations. The exposed tidal flats on the north side of the Kudiakof Islands, part of the Izembek Lagoon NWR, are rich in razor clam concentrations. There are also high concentrations of razor clams found in the tidal flats on the northeast side of Unimak Island in Bechevin Bay. The Cherni and Sanak island groups provide habitat for a large number of seabird colonies as well as for sea lion rookeries and haulout sites. There are also known concentration areas of established sea otter habitat, particularly around Sanak, Deer, and the Pavlof Islands. Kelp beds occur off Sanak Island. The remainder of the tidelands in this region, while somewhat less important biologically, include areas of kelp and eel grass, seabird colonies, and both sea lion rookeries and haulouts. The tidelands of this region provide, in general, areas of extensive and productive habitat. Many sheltered tidelands in bays and lagoons, particularly around the southern side of Unimak Island and the Krenitzin Island group, provide habitat for king, tanner and dungeness crab.

Commercial harvest of salmon occurs in and around Izembek Lagoon and Moffet Bay on the northern coast of this region. Halibut is harvested extensively throughout the southern tidelands of this region, especially around Sanak Islands, the south side of Unimak Island and the Krenitzin Island area. Pollock, cod and herring sac roe (food/bait) are harvested in the Krenitzin Island area as well. Pink, chum and coho salmon are harvested all along the southern coast of this region, most extensively in Pavlof Bay, Belkofski Bay, King Cove and Cold Bay. Intensive purse seine and drift (gill) net harvest occurs around False Pass, Akutan Bay and Peninsula, and Cape Lazaref on the south side of Unimak Island. Purse seine and drift (gill) net harvest also occurs at Unimak Bight. There are scattered set net sites along the southern coast of this region particularly in bays and lagoons where there is a high concentration of salmon.

Red king crab and tanner crab are harvested all along the southern coastal tidelands within this region; the highest concentrations of harvest being in the bays and lagoons. The richest harvest areas are around the Krenitzin Islands where dungeness crab are also harvested. Small concentrations of dungeness crab occur in Belkofski Bay and along the south shore of Unimak Island from Cape Lazaref to Unimak Bight.

Seasonal subsistence fishing occurs around Belkofski. King Cove subsistence harvest consists almost entirely of salmon with some harvest of seabirds and eggs. In False Pass, subsistence harvest consists mainly of salmon, halibut, geese and seals. Subsistence harvest by local Akutan resident population includes seal, salmon, halibut, clams and waterfowl (birds and eggs).

## Plan Designations and Management Intent

The extensive tidelands within this Region either abut native corporation land or national wildlife refuges, and tideland management reflects this ownership pattern.

**Coastal and Municipal Tidelands.** Tidelands adjacent to native or private land are designated General Use. Areas within municipalities, which are designated Waterfront Development as are units at Lenard Harbor and Hot Springs Cove. Municipal tidelands[25] occur at Cold Harbor, False Pass, and Akutan. Tideland authorizations in these areas are considered appropriate, but authorizations must protect sensitive resources and must be consistent with specific, applicable management requirements for a management unit.

**Tidelands adjacent to National Wildlife Refuges are affected by a Tideland Resource Management Zone (R22T-01).** Tidelands within this Zone are designated Public Recreation and Tourism-Dispersed and Habitat and are to be managed to protect habitat values and maintain the public recreation value of these areas, particularly for the tideland resources described above. For a detailed description of this Tideland Resource Management Zone, see *Tidelands Summary in Chapter 3*.

See the Resource Allocation Table for more details on this tideland management unit.

[25] Cold Bay: R22T-07 and RT22T-08; False Pass: R22T-02 through R22T-04; Akutan: R22T-05 and R22T-06.

# Resource Allocation Table for Upland Units - Region 22

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R22-01<br>Pavlof Bay | 6,656<br>Gu -- General Use | Map O-4<br>S52S79-8W | The unit is designated General Use (Gu) and is to be managed for a variety of uses, including the protection of fish and wildlife resources and their associated habitat, oil and gas exploration and development, and dispersed recreation. Development authorizations may be considered appropriate subject to the protection of these resources and the specific requirements of Chapter 2. | The unit is situated on fairly flat terrain at the head of Pavlof Bay in an area characterized by low and generally flat to gently rolling topography. The predominate vegetation is dwarf shrub. There are numerous ponds, lakes, and wetlands. There are no known anadromous streams or historic/prehistoric sites. |
| R22-02<br>Cold Bay Airport | 1,702<br>Pr -- Public Facilities-Retain | Map O-4<br>S57S89W, S57S88W | The unit is to be retained in state ownership and managed by ADOT/PF consistent with FAA and state guidelines for airport management. | This unit is comprised of OSL 350 and contains the Cold Bay Airport. Some rights-of-way and lots within the townsite are also a part of this unit. |
| R22-03<br>Cold Bay | 286<br>Sc -- Settlement-Commercial | Map O-4<br>S58S89W, S58S88W | The unit is to be managed for a variety of uses, including possible community expansion. This land is adjacent to the airport and borough lands, and could be used for future community expansion by providing commercial land compatible with the airport. It is considered appropriate for a state land disposal. Development authorizations may be considered appropriate subject to the protection of these resources and the specific requirements of Chapter 2. | This unit is comprised of OSL 1111 south of the Cold Bay airport. This level tundra is covered with low shrubs and has an anadromous fish stream running through it. |
| R22-04<br>King Cove Airport | 381<br>Pr -- Public Facilities-Retain | Map O-4<br>S58S86W, S58S85W | The unit is to be retained in state ownership and managed by the ADOT/PF consistent with the Management Rights in ADLs 224220, 221398 and 221399. | This unit is comprised of LSHs 75 and 188 and contains the King Cove Airport. |

| Unit #: / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R22-05<br>King Cove DOT Facilities | 0.90<br>Pr -- Public Facilities-Retain | Map O-4<br>S59S86W | The unit is to be retained in state ownership and managed by ADOT/PF under the terms of LSHs 75 and 288 and as a public right-of-way. | This unit is comprised of LSHs 75 and 288 and OSL 981. There is a small lot within the townsite of King Cove that contains equipment storage for the airport. The remainder of this unit is the road connecting the town to the airport. |
| R22-06<br>False Pass Airport | 138<br>Pr -- Public Facilities-Retain | Map O-4<br>S61S94W Sec. 28,33-34 | The unit is to be retained in state ownership and managed by the Department of Transportation and Public Facilities (ADOT/PF) consistent with ADOT/PF guidelines and the Management Right (ADL 224133). | This unit is comprised of OSL 977 and contains the False Pass Airport. |

# Resource Allocation Table for Tideland Units - Region 22

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R22T-01<br>Tidelands adjacent to NWRs | 47,556<br>Ha, Rd -- Habitat and Public Recreation and Tourism-Dispersed | Map O-4 | Tidelands adjacent to the three National Wildlife Refuges (NWR) and the State Game Refuge are to be managed to protect sensitive habitat values, fisheries and wildlife resources, and the public recreation resources of the NWRs. A Tideland Resource Management Zone (TRMZ) affects these tidelands. See "Management Summary, Tidelands" in Chapter 3 for a more detailed description of TRMZs and the management intent and requirements for such zones. As appropriate, consult with Alaska Maritime, Izembek, and Alaska Peninsula NWRs; USFWS; and NMFS prior to issuing authorizations. | This tideland unit adjoins three National Wildlife Refuges -- Izembek, Alaska Peninsula, and Alaska Maritime. Most of the Ikatan Peninsula and adjacent tidelands are included in the Alaska Maritime National Wildlife Refuge. The Izembek State Game Refuge includes the tidelands within Izembek Lagoon and north of the Kudiakof Islands. This tideland unit contains a rich diversity of habitats and resources.<br><br>There are a variety of marine resources that are scattered throughout this Region, including eel grass and kelp beds, numerous seabird colonies, sea lion rookeries and haulouts, as well as walrus rookeries and haulouts. This Region also contains a significant population of sea otter. The outstanding resource areas within this Region coincide with the area of the Izembek National Wildlife Refuge, Izembek State Game Refuge and with the Alaska Maritime NWR at Amak Island and rocks. Izembek SGR consists of an extensive lagoon system that is rich in eel grass and kelp beds, and contains extensive areas used for harbor seal haulouts, brown bear concentrations (spring), and waterfowl seasonal concentrations (spring and fall). The Izembek Lagoon portion of the SGR is enclosed within the Izembek NWR which consists of uplands bordering the lagoon including spits and the Kudiakof Islands. Amak Island and rocks contain a large population of walrus and sea lions and has haulout areas for both. Sea bird colonies are also present on this island. The remaining parts of the Region also possess significant resources, with most of these concentrated on the south side of the Alaska Peninsula. Within the latter area, there are numerous sea bird colonies, concentration areas of kelp and eel grass, and sea lion rookeries and haulouts. The Sanak Island group contains the majority of the sea lion rookery and haulout areas.<br><br>Harvest: Salmon are harvested in the tidelands on the northern side of the peninsula in this region, particularly around Izembek Lagoon and Moffet Bay. Commercial harvest of a variety of resources occurs along the southern coast and islands of this region. Pink chum and coho salmon are harvested throughout the tidelands but most extensively in Pavlof Bay, Belkofski Bay, King Cove and Cold Bay. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| | | | | Intensive purse seine and gill net harvest of salmon occurs around False Pass, Akutan Bay and also from Akutan Peninsula to Cape Lazaref on the south side of Unimak Island, including Unimak Bight. There are scattered set net sites along the southern coast of this region particularly in bays and lagoons where there is a high concentration of salmon. Halibut harvest occurs throughout the southern tidelands of this region, especially around the Sanak Islands, the south side of Unimak Island and the Krenitzin Islands area. Pollock, cod and herring sac roe (food/bait) are harvested in the Krenitzin Islands area as well. Red king and tanner crab are harvested in the bay and lagoons all along the southern coast of the Alaska Peninsula. Dungeness crab are harvested in the highest numbers in Belkofski Bay and along the south shore of Unimak Island from Cape Lazaref to Unimak Bight. There are also concentrations of dungeness crab around the shores of the Krenitzin Islands.<br><br>Sport fishing is prevalent in the tidelands adjacent to this region. Seasonal subsistence fishing occurs around Belkofski, King Cove, False Pass, Cold Bay and Akutan. Subsistence harvest consists mainly of salmon, but also includes halibut, clams, geese, other waterfowl and eggs and seals. |
| R22T-02<br>False Pass North | 403<br>Wd -- Waterfront Development | Map O-4<br>S61S94W<br>Sec. 22,27 | Unit is to be managed to accommodate tideland commercial and industrial uses, including a new boat harbor for the community of False Pass. | The unit is situated to the north of the False Pass community in an area that is considered appropriate for tideland commercial and industrial uses. A new harbor may go in this unit. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R22T-03<br>False Pass Central | 13<br>Wd -- Waterfront Development | Map O-4<br>S61S94W<br>Sec. 28 | The unit is to be managed to accommodate tideland commercial and industrial uses. | The unit is situated near the main part of the False Pass community in an area that is considered appropriate for tideland commercial and industrial uses. There are a number of private tideland units near this unit, some of which have industrial and fisheries use.<br><br>Commercial fishing and fish processing are currently the dominant activities involving tidelands around False Pass. Tideland facilities support the fish processing industry and provide commercial docking facilities for the State Ferry which docks bi-monthly between May and October. False Pass also provides docking facilities for barge service from Seattle. |
| R22T-04<br>False Pass South | 308<br>Wd -- Waterfront Development | Map O-4<br>S61S94W<br>Sec. 33,34 | The unit is to be managed to accommodate tideland commercial and industrial uses. | The unit is situated south of the False Pass community in an area that is considered appropriate for tideland commercial and industrial uses. There a number of private tideland units near this unit, some of which have industrial and fisheries use. Note: This tideland unit excludes ATS 58. |
| R22T-05<br>Akutan Community North | 449<br>Wd -- Waterfront Development | Map O-4<br>S70S112W<br>Sec. 8-12 | The unit is to be managed to accommodate tideland commercial and industrial uses. Note: It is unlikely that all of the area within this unit will be used for future commercial and industrial tideland uses. A fairly large area of tidelands is designated Waterfront Development given the uncertainty of the exact location of future facilities needed to support this community. | The unit is situated at, and east of, the community of Akutan in an area that is considered appropriate for tideland commercial and industrial uses. There are a number of private tideland units that adjoin this unit, some of which have industrial and fisheries use. This tideland unit excludes all private tidelands. Commercial fishing and fish processing dominates Akutan's economy. |
| R22T-06<br>Akutan Community South | 503<br>Wd -- Waterfront Development | Map O-4<br>S70S112W<br>Sec. 9-13 | The unit is to be managed to accommodate tideland commercial and industrial uses. Note: It is unlikely that all of the area within this unit will be used for future commercial and industrial tideland uses. A fairly large area of tidelands is designated Waterfront Development given the uncertainty of the exact location of future facilities needed to support this community. | The unit is situated generally west and south of the community of Akutan in an area that is considered appropriate for tideland commercial and industrial uses. There are a number of private tideland units that adjoin this unit, some of which have industrial and fisheries use. This tideland unit excludes all private tidelands. Commercial fishing and fish processing dominates Akutan's economy. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R22T-07<br>Cold Bay North | 869<br>Wd -- Waterfront Development | Map O-4<br>S57S88W, S57S89W | The unit is to be managed to accommodate tideland commercial and industrial uses. Note: It is unlikely that all of the area within this unit will be used for future commercial and industrial tideland uses. A fairly large area of tidelands is designated Waterfront Development given the uncertainty of the exact location of future facilities needed to support this community. | The unit is situated generally north and east of the community of King Cove in an area that is considered appropriate for tideland commercial and industrial uses. This tideland unit excludes all private tidelands.<br><br>Commercial fishing and fish processing are currently the dominant activities involving tidelands around King Cove. Seafood processing in this area occurs year-round and the north harbor provides ice-free moorage for fishing boats. Tideland facilities support the fish processing industry and provide commercial docking facilities for the State Ferry which docks bi-monthly between May and October. |
| R22T-08<br>Cold Bay South | 3,415<br>Wd -- Waterfront Development | Map O-4<br>S57S88W, S58S88W | The unit is to be managed to accommodate tideland commercial and industrial uses. Note: It is unlikely that all of the area within this unit will be used for future commercial and industrial tideland uses. A fairly large area of tidelands is designated Waterfront Development given the undertainty of the exact location of future facilities needed to support this community. | The unit is situated generally southeast of the community of King Cove in an area that is considered appropriate for tideland commercial and industrial uses. This tideland unit excludes all private tidelands. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R22T-09<br>Aleutians West | 2,449,977<br>Gu -- General Use | Map O-4 | Manage unit for a variety of uses and resources. Protect eel grass beds and sea bird colonies. Maintain opportunities for commercial, subsistence, and sport fish harvest. | This unit consists of that portion of the Region not included within the Tideland Resource Management Zone (R22T-01) or in areas where tidelands adjoin municipalities (units R22T-02 through -08).<br><br>The vast majority of the sensitive biological resources occur with the TRMZ, particularly within the Izembek Lagoon, Amak Island and rocks, and the offshore islands on the Pacific side of the unit. Within R22T-09 there are scattered areas of eel grass beds and sea bird colonies.<br><br>Salmon are harvested in the tidelands on the northern side of the peninsula in this region, particularly around Izembek Lagoon and Moffet Bay. Commercial harvest of a variety of resources occurs along the southern coast. Pink chum and coho salmon are harvested throughout the tidelands but most extensively in Pavlof Bay, Belkofski Bay, King Cove and Cold Bay. Intensive purse seine and gill net harvest of salmon occurs around False Pass. There are scattered set net sites along the southern coast of this region particularly in bays and lagoons where there is a high concentration of salmon. Halibut, red king and tanner crab are harvested in the bay and lagoons all along the southern coast of the Alaska Peninsula. Dungeness crab are harvested in the highest numbers in Belkofski Bay.<br><br>Sport fishing is prevalent in the tidelands adjacent to this region. Seasonal subsistence fishing occurs around Belkofski, King Cove, False Pass, Cold Bay and Akutan. Subsistence harvest consists mainly of salmon, but also includes halibut, clams, geese, other waterfowl and eggs and seals. |
| R22T-10<br>Lenard Harbor | 1,213<br>Wd -- Waterfront Development | Map O-4<br>S58S87W, S58S88W | The unit is to be managed to accommodate tideland commercial and industrial uses. Note: It is unlikely that all of the area within this unit will be used for future commercial and industrial tideland uses. A fairly large area of tidelands is designated Waterfront Development given the uncertainty of the exact location of future facilities. | The unit is situated on the southeast side of Cold Bay near the road to King Cove. The tide and submerged lands have a brown sandy substrate and moderate slope. Deep waters of Lenard Harbor are known to contain red king and tanner crab. Dungeness crab inhabit the seagrass fringe at the head of Lenard Harbor. Bivalves are abundant near the head and southeast side of Lenard Harbor but not particularly so in this management unit. Herring concentrate in the unit and waterfowl concentrate in the area during spring staging. |

| Unit # / Name | Acres / Designation(s) | MTRS | Management Intent | Resources, Uses, Additional Info |
|---|---|---|---|---|
| R22T-11<br>Hot Springs Bay | 625<br>Wd -- Waterfront Development | Map O-4<br>S69S112W | Unit is to be managed to accommodate tideland commercial and industrial uses. Note: It is unlikely that all of the area within this unit will be used for future commercial and industrial tideland uses. A fairly large area of tidelands is designated Waterfront Development given the uncertainty of the exact location of future facilities. | The unit is located at the head of Hot Springs Bay adjacent to an area of geothermal activity that is considered one of the most promising in the State. Thermal waters capable of electrical generation may also be suitable for space heating and industrial direct-use applications. Hot Springs Harbor is one of the few sheltered deep water harbors in the Aleutians. The beaches contain material from sand to boulders, gravel beaches typically form an apron leading to dunes behind the beach. Boulder beaches consist of blocks derived from cliffs located immediately behind the beach; these boulder beaches typically are small and are exposed only at low tide. There are no large concentrations of seabirds in the bay. Although sea lions haulout and have a rookery outside of Hot Springs Bay, none utilize the inner bay. The entire Krenitzin Islands area, including Hot Springs Bay, has concentrations of waterfowl in the spring, fall, and winter. |

# Navigable Rivers and Lakes

## Management Intent of Navigable Waterbodies

### Background

The intent of the plan is to designate and provide management intent for the shorelands under all navigable waterbodies. There are so many navigable rivers and lakes in the planning area that it is not practical to state the management intent for each individual waterbody. Therefore the plan identifies general management intent and designations for most of the waterbodies within the planning area. In some cases, however, specific designations are identified for a particular waterbody because of the size, uniqueness, or particular values and functions of a river or lake.

The term "shorelands" is defined as land belonging to the state, which is covered by non-tidal water that is navigable under the laws of the United States up to the ordinary high water mark as modified by accretion, erosion, or reliction (AS 38.05.965). See *Figure 1.1* at the beginning of Chapter 1 for a diagram that illustrates the differences between shorelands, submerged lands, and uplands.

Shorelands are not identified on the preceding plan designation maps within this Chapter. Identification of all such waterbodies is impractical on maps of the scale used in this plan. *The DNR records on navigability and hydrology must be consulted in order to determine whether a specific stream or lake is likely to be navigable*. These records are available in the Public Access Assertion & Defense Unit, Division of Mining, Land, and Water in Anchorage.

For further information on the state's navigability policy, go to
http://www.dnr.state.ak.us/mlw/nav/nav_policy.htm

### Public Trust Doctrine

The Public Trust Doctrine provides that public trust lands, waters and living natural resources in a state are held by the state in trust for the benefit of all the people, and establishes the right of the public to fully utilize the public trust lands, waters, and resources for a wide variety of public uses. Each state has the authority and responsibility for managing these public trust assets to assure the public rights are upheld.

The Public Trust Doctrine applies whenever navigable waters or the lands beneath those waters are altered, developed, conveyed, or otherwise managed. It also applies whether the trust lands are publicly or privately owned. Shorelands below the ordinary high water mark are considered public trust lands. In summary, all submerged lands – including tidelands out to the three-mile-limit and the beds of navigable lakes, streams and rivers – are all public trust lands.

The Alaska Constitution contains numerous provisions embracing principles of the Public Trust Doctrine that require the state to exercise authority to ensure that the right of the public to use navigable waters for navigation, commerce, recreation, and related purposes is protected. In Alaska, the Public Trust Doctrine extends beyond those submerged lands in which the state holds title to include all waters that are navigable. The state's waters are themselves reserved to the people for common use.

The Alaska Constitution (Article VIII, sections 1, 2, 3, 6, 13, and 14) and Alaska Statutes (38.05.127 and 38.05.128) contain some of the provisions, which are the legal basis for applying the Public Trust Doctrine in Alaska. In Alaska, this doctrine guarantees the public's right to engage in activities such as commerce, navigation, fishing, hunting, trapping, and swimming, while also providing for the protection of areas for ecological study.

The Alaska Constitution provides that "free access to the navigable or public waters of the state, as defined by the legislature, shall not be denied any citizen of the United States or resident of the state, except that the legislature may by general law regulate and limit such access for other beneficial uses or public purposes." The Alaska Supreme Court has concluded "the provisions in Article VIII [of the Constitution] were intended to permit the broadest possible access to and use of state waters by the general public." *Wernberg v. State*, 516 P. 2d 1191, 1198-9 (Alaska 1973). The Alaska legislature has broadly defined the navigable and public waters available for public use in AS 38.05.965. Moreover, the legislature has endorsed a broad interpretation of the Public Trust Doctrine in Article VIII of Alaska's Constitution in finding that:

"Ownership of land bordering navigable or public waters does not grant an exclusive right to the use of the water and any rights of title to the land below the ordinary high water mark are subject to the rights of the people of the state to use and have access to the water for recreational purposes or any other public purposes for which the water is used or capable of being used consistent with the public trust." Sec. 1, Ch. 82, SLA 1985.

The legislature has also declared that the right to use state waters does not include the right to enter or trespass upon private lands. Nevertheless, with 99 percent of Alaska in public ownership at statehood, state laws regarding the transfer of land to private parties say the transfers must provide for public access to navigable waters. For instance, AS 38.05.127 implements the state's constitutional guarantee of access to navigable waters under Article VIII, Section 14. Under the statute, the Commissioner of the Alaska Department of Natural Resources must "provide for the specific easements or rights-of-way necessary to ensure free access to and along the body of water, unless the Commissioner finds that regulating or eliminating access is necessary for other beneficial uses or public purposes." The state's responsibilities to implement the Public Trust Doctrine are considered and used throughout this plan. Any management actions will be consistent with the Public Trust Doctrine as defined by the Alaska Constitution, statutes, court decisions, and public involvement.

## Management Intent: Specific Rivers and Lakes

Because of their importance for recreation, commerce and habitat, certain rivers and lakes are given specific use designations. The plan designations applied to shorelands are identical to those used for uplands, tidelands, and submerged lands. In addition to shorelands crossing state, Native, or private land that are navigable, the state asserts ownership of such shorelands within federal conservation units. Within the planning area there are five National Wildlife Refuges, two National Parks/Preserves, and one National Monument, all of which have navigable rivers or lakes, or both.[26]

A listing of rivers and lakes that, at a minimum, are considered to be navigable is identified in Table 3.1 that follows. These are the largest waterbodies within each of the Regions.[27], [28]

## Navigable Rivers and Lakes within Federal Conservation System Units

Certain rivers and lakes within Federal Conservation System Units (CSUs) are significant for their habitat and recreational values. For example, streams with high bear concentrations are important for their habitat value and as popular viewing areas. The navigable portions of waterbodies within CSUs that contain spawning and rearing areas for anadromous fish are designated Habitat. All such areas are also designated Public Recreation and Tourism-Dispersed.[29], [30] The Habitat designation converts to the land use classification of Wildlife Habitat Land and the designation of Public Recreation and Tourism-Dispersed, to Public Recreation Land. Navigable waterbodies that are not anadromous and that are not otherwise designated Public Recreation and Tourism-Dispersed are designated General Use. See the following table for the specific designations applied to the larger navigable rivers and lakes within the planning area.

## State Navigable Rivers and Lakes: General

The designation and management intent for navigable waterbodies that cross or are surrounded by state-owned and state-selected lands not within federal conservation units, State Parks, or State Game Refuges[31] are the same as those of the upland tract, except for those streams that are specifically designated Public Recreation and Tourism-Dispersed and those portions of navigable, anadromous streams where spawning and rearing occur, which are designated

[26] National Wildlife Refuges: Togiak, Becharof, Alaska Peninsula, Izembek, and Alaska Maritime. National Parks: Katmai National Park and Preserve, Lake Clark National Park and Wilderness. National Monument: Aniakchak National Park and Preserve.

[27] Although it is likely that much or most parts of these waterbodies are navigable, portions may not be. Consult with DNR's Public Access Assertion & Defense Unit in the Division of Mining, Land, and Water to determine if a waterbody is navigable at a particular site. See also footnote #29.

[28] There are other waterbodies that are navigable. Consult with DNR's Public Access Assertion & Defense Unit to determine the navigability to a particular waterbody. See also footnote #28.

[29] Thus, all such navigable waterbodies are co-designated Habitat and Public Recreation – Dispersed. Consult the ADF&G anadromous stream catalog to determine if a stream is anadromous and with ADF&G to determine if a specific portion of a stream is considered by that agency to be either a spawning or rearing area.

[30] See also the discussion of specific lakes within federal conservation units that are important for public recreation purposes, following.

Habitat. These waterbodies are to be managed to be consistent with the designated upland uses. See Table 3.1 below for the specific designations applied to the larger navigable rivers and lakes within the planning region. Many navigable rivers and lakes are designated Public Recreation and Tourism-Dispersed because of their importance for public recreation.

Navigable rivers and lakes that are not within State Parks or State Game Refuges, and are not within state-owned, or state-selected upland management units, and are not otherwise designated in the table below, are designated General Use. These waterbodies are to be managed to allow a diversity of uses consistent with the uses authorized on adjoining uplands in federal, private, or other state entity ownership (e.g. Mental Health, University, and state tracts quitclaimed to a state agency other than DNR). Upland uses are usually designated in an adopted land use or resource management plan, or can be inferred from the actual or planned use of the management unit.

**Table 3.1: Some Navigable Waters – Bristol Bay Area Plan**

| Region | Waterbody | Waters Flowing Through State Uplands (owned & Selected) | Waters Flowing Through Federal Lands (including CSUs) | Land Use Designation | | |
|---|---|---|---|---|---|---|
| | | | | Gu | Ha | Rd |
| 2 | Akulikutak River | | Yes | Yes | | |
| 2 | Arolik Lake | | Yes | | Yes | Yes |
| 2 | Arolik River | Yes | Yes | | Yes | Yes |
| 2 | Eek Lake | | Yes | Yes | | |
| 2 | Eek River | | Yes | | Yes | Yes |
| 2 | Fog River | | Yes | | Yes | Yes |
| 2 | Goodnews River | Yes | Yes | | Yes | Yes |
| 2 | Indian River | | Yes | | Yes | Yes |
| 2 | Kagati Lake | | Yes | | Yes | Yes |
| 2 | Kanektok River | | Yes | | Yes | Yes |
| 2 | Kanuktik Lake | | Yes | | | Yes |
| 2 | Kasigluk River | | Yes | | Yes | Yes |
| 2 | Kinegnak River | | Yes | | Yes | Yes |
| 2 | Kisaralik Lake | Yes | | | Yes | Yes |
| 2 | Kisaralik River | Yes | Yes | | Yes | Yes |
| 2 | Kukaktlik River | | Yes | | Yes | Yes |
| 2 | Kwethluk River | | Yes | | Yes | Yes |
| 2 | Middle Fork Eek River | | Yes | | Yes | Yes |
| 2 | Nanvakfak Lake | | Yes | | | Yes |
| 2 | Pegati Lake | | Yes | | Yes | Yes |
| 2 | Salmon River | | Yes | | Yes | Yes |
| 2 | Tuluksak River | Yes | Yes | | Yes | Yes |
| 2 | Ugaklik River | | Yes | Yes | | |
| 3 | Amanka Lake | | Yes | | Yes | Yes |
| 3 | Gechiak Creek | | Yes | | Yes | Yes |
| 3 | Gechiak Lake | | Yes | | Yes | Yes |
| 3 | Heart Lake | | Yes | | Yes | Yes |
| 3 | Igushik River | | Yes | | Yes | Yes |
| 3 | Izavieknik River | | Yes | | Yes | Yes |

| Region | Waterbody | Waters Flowing Through State Uplands (owned & Selected) | Waters Flowing Through Federal Lands (including CSUs) | Land Use Designation | | |
|---|---|---|---|---|---|---|
| | | | | Gu | Ha | Rd |
| 3 | Kanik River | | Yes | | Yes | Yes |
| 3 | Kemuk River | | Yes | | Yes | Yes |
| 3 | Kikertalik Lake | | Yes | | | Yes |
| 3 | Kulukak River | | Yes | | Yes | Yes |
| 3 | Matogak River | | Yes | | Yes | Yes |
| 3 | Nagugun Lake (Reg 3) | | Yes | | | Yes |
| 3 | Nayororun River | | Yes | | Yes | Yes |
| 3 | Negukthlik River | | Yes | | Yes | Yes |
| 3 | Nisua River | | Yes | | Yes | Yes |
| 3 | Norseman Lake | | Yes | | | Yes |
| 3 | Ongoke River | | Yes | | | Yes |
| 3 | Osviak River | | Yes | | Yes | Yes |
| 3 | Pungokepuk Creek | | Yes | | Yes | Yes |
| 3 | Pungokepuk Lake | | Yes | | | Yes |
| 3 | Quigmy River | | Yes | | Yes | Yes |
| 3 | Slug River | | Yes | | Yes | |
| 3 | Togiak Lake | | Yes | | Yes | Yes |
| 3 | Togiak River | | Yes | | Yes | Yes |
| 3 | Tuklung River | | Yes | | Yes | Yes |
| 3 | Tunuing River | | Yes | | Yes | Yes |
| 3 | Ualik Lake | | Yes | | Yes | Yes |
| 3 | Ungalikthluk River | | Yes | | Yes | Yes |
| 3 | Upper Togiak Lake | | Yes | | | Yes |
| 4 | Not subject to BBAP | | | | | |
| 5 | Aleknagik Lake | Yes | | | Yes | Yes |
| 5 | Iowithla River | Yes | Yes | | Yes | Yes |
| 5 | Muklung River | Yes | Yes | | Yes | Yes |
| 5 | Nunavaugaluk (Snake) Lake | Yes | | | Yes | Yes |
| 5 | Nushagak River | Yes | | | Yes | Yes |
| 5 | Snake River | Yes | Yes | | Yes | Yes |
| 5 | Weary River | Yes | Yes | | Yes | Yes |
| 5 | Wood River (part) | Yes | | | Yes | Yes |
| 6 | Chichitnok River | Yes | | | Yes | Yes |
| 6 | Cranberry Creek | Yes | Yes | | Yes | Yes |
| 6 | Iowithla River | Yes | | | Yes | Yes |
| 6 | Keefer Creek | Yes | | | Yes | Yes |
| 6 | King Salmon River | Yes | | | Yes | Yes |
| 6 | Klutuk Creek | Yes | Yes | | Yes | Yes |
| 6 | Klutuspak Creek | Yes | | | Yes | |
| 6 | Koktuli River | Yes | | | Yes | Yes |
| 6 | Kokwok River | Yes | | | Yes | Yes |
| 6 | Mosquito River | Yes | | | Yes | Yes |
| 6 | Mulchatna River | Yes | | | Yes | Yes |
| 6 | Napotoli Creek | Yes | | | Yes | |
| 6 | Nushagak River | Yes | | | Yes | Yes |
| 6 | Nuyakuk River | Yes | | | Yes | Yes |
| 6 | Old Man Creek | Yes | | | Yes | |

| Region | Waterbody | Waters Flowing Through State Uplands (owned & Selected) | Waters Flowing Through Federal Lands (including CSUs) | Land Use Designation | | |
|---|---|---|---|---|---|---|
| | | | | Gu | Ha | Rd |
| 6 | Stuyahok River | Yes | | | Yes | Yes |
| 6 | Vukpalik Creek | Yes | | | Yes | |
| 7 | Chilchitna River | Yes | | | Yes | |
| 7 | Chilikadrotna River | Yes | Yes | | Yes | Yes |
| 7 | Chulitna | Yes | Yes | | | Yes |
| 7 | Koksetna River | Yes | | | | Yes |
| 7 | Long Lake | Yes | Yes | | | Yes |
| 7 | McKinley Creek | Yes | | | Yes | |
| 7 | Mulchatna River | Yes | Yes | | Yes | Yes |
| 7 | Nikabuna Lakes | Yes | | | | Yes |
| 7 | Tutka Lake | Yes | | | Yes | |
| 8 | Newhalen River | Yes | | | Yes | Yes |
| 8 | Sixmile Lake | Yes | | Yes | Yes | Yes |
| 8 | Tazimina River | | Yes | | Yes | Yes |
| 9 | Boot Lake | Yes | | Yes | | |
| 9 | Chekok Lake | Yes | | | Yes | |
| 9 | Copper River | Yes | | | Yes | Yes |
| 9 | Fog Lake | Yes | | Yes | | |
| 9 | Gibraltar Lake | Yes | | | Yes | |
| 9 | Iliamna Lake | Yes | | | Yes | Yes |
| 9 | Iliamna River | Yes | | | Yes | Yes |
| 9 | Kakhonak Lake | Yes | | Yes | | |
| 9 | Kakhonak River | Yes | | | Yes | |
| 9 | Long Lake | Yes | | Yes | | |
| 9 | Lower Copper Lake | Yes | | Yes | | |
| 9 | Meadow Lake | Yes | | Yes | | |
| 9 | Moose Lake | Yes | | Yes | | |
| 9 | Pile River | Yes | | | Yes | Yes |
| 9 | Upper Copper Lake | Yes | | Yes | | |
| 10 | Alagnak River | Yes | Yes | No | Yes | Yes |
| 10 | Kaskanak Creek | Yes | Yes | | Yes | Yes |
| 10 | Kvichak River | Yes | Yes | | Yes | Yes |
| 10 | Ole Creek | | Yes | | Yes | Yes |
| 10 | Pecks Creek | Yes | Yes | | Yes | Yes |
| 10 | Yellow Creek | Yes | Yes | No | Yes | Yes |
| 11 | King Salmon River | Yes | | | Yes | Yes |
| 11 | Naknek River | Yes | | | Yes | Yes |
| 11 | Pauls Creek | Yes | Yes | | Yes | Yes |
| 11 | Smelt Creek | Yes | | | Yes | |
| 12 | Becharof Lake | | Yes | | Yes | Yes |
| 12 | Big Creek | Yes | | Yes | | |
| 12 | Egegik River | Yes | Yes | | Yes | Yes |
| 12 | Kejulik River | | Yes | | Yes | Yes |
| 12 | King Salmon River | Yes | Yes | | Yes | Yes |
| 12 | Swampy River | Yes | | Yes | | |
| 13 | Lower Ugashik Lake | Yes | Yes | | Yes | Yes |
| 13 | Ugashik River | Yes | | | Yes | Yes |
| 13 | Upper Ugashik Lake | | Yes | | Yes | Yes |

| Region | Waterbody | Waters Flowing Through State Uplands (owned & Selected) | Waters Flowing Through Federal Lands (including CSUs) | Land Use Designation | | |
|---|---|---|---|---|---|---|
| | | | | Gu | Ha | Rd |
| 14 | Dog Salmon River | Yes | | | Yes | Yes |
| 14 | King Salmon River | Yes | | | Yes | Yes |
| 14 | Ugashik River | Yes | | | Yes | Yes |
| 15 | Cinder River | Yes | | | Yes | Yes |
| 15 | Dog Salmon River | | Yes | | Yes | Yes |
| 15 | King Salmon River | Yes | Yes | | Yes | Yes |
| 15 | Mother Goose Lake | | Yes | | Yes | Yes |
| 15 | Needle Lake | | Yes | | | Yes |
| 15 | Pumice Creek | | | | Yes | Yes |
| 16 | Meshik River | Yes | Yes | | Yes | Yes |
| 16 | Plenty Bear Creek | | Yes | | Yes | Yes |
| 17 | Black Lake | | Yes | | Yes | Yes |
| 17 | Chignik Lake | | Yes | | Yes | Yes |
| 17 | Chignik River | | Yes | | Yes | Yes |
| 17 | Kametolook River | | Yes | | Yes | Yes |
| 18 | Bear Lake | Yes | | | Yes | Yes |
| 18 | Bear River | Yes | | | Yes | Yes |
| 18 | Ilnik Lake | Yes | | | Yes | |
| 18 | Ilnik River | Yes | | | Yes | |
| 18 | Muddy River | Yes | Yes | Yes | | |
| 18 | Ocean River | Yes | | | Yes | Yes |
| 18 | Sandy Lake | Yes | Yes | | Yes | Yes |
| 18 | Sandy River | Yes | Yes | | Yes | Yes |
| 18 | Unangashak River | Yes | Yes | | Yes | Yes |
| 18 | Wildman Lake | Yes | | | Yes | Yes |
| 19 | Beaver River | | Yes | | Yes | Yes |
| 19 | Bishop Creek | | Yes | | Yes | Yes |
| 19 | Coal Creek | Yes | | | Yes | Yes |
| 19 | Coleman Creek | | Yes | | Yes | Yes |
| 19 | Foster Creek | | Yes | | Yes | Yes |
| 19 | Johnson Creek | | Yes | | Yes | Yes |
| 19 | Lawrence Creek | Yes | Yes | | Yes | Yes |
| 19 | Portage Creek | | Yes | | Yes | Yes |
| 19 | Susie Creek | | Yes | | Yes | Yes |
| 21 | Big Fish Lake | Yes | | | Yes | |
| 21 | Canoe Bay River | | Yes | | Yes | |
| 21 | Caribou River | Yes | Yes | | Yes | |
| 21 | Cathedral River | Yes | Yes | | Yes | |
| 21 | David River | Yes | | | Yes | |
| 21 | Sapsuk Lake | | Yes | | Yes | |
| 21 | Sapsuk River | Yes | Yes | | Yes | |
| 22 | Barney's Creek | | Yes | | Yes | Yes |
| 22 | Blinn Lake | | Yes | | | Yes |
| 22 | Coal Oil Creek | | Yes | | | Yes |
| 22 | Delta Creek | | Yes | | Yes | Yes |
| 22 | Emmons Lake | | Yes | | | Yes |
| 22 | Fisher Caldera Lakes | | Yes | Yes | | |
| 22 | Joshua Green River | | Yes | | Yes | Yes |

| Region | Waterbody | Waters Flowing Through State Uplands (owned & Selected) | Waters Flowing Through Federal Lands (including CSUs) | Land Use Designation | | |
|---|---|---|---|---|---|---|
| | | | | Gu | Ha | Rd |
| 22 | Lake Hess | | Yes | | | Yes |
| 22 | Lake Trelford | | Yes | | | Yes |
| 22 | Lazaref River | | Yes | | Yes | Yes |
| 22 | North Creek | | Yes | | Yes | Yes |
| 22 | Pogromni River | | Yes | | Yes | Yes |
| 22 | Rescue Lake | | Yes | | | Yes |
| 22 | Southern Creek | | Yes | | Yes | Yes |
| 22 | Winding Creek | | Yes | | Yes | Yes |
| Aniakchak | Aniakchak River | | Yes | | Yes | Yes |
| Aniakchak | Meshik Lake | | Yes | | | Yes |
| Aniakchak | Meshik River | | Yes | | Yes | Yes |
| Aniakchak | Northeast Creek | | Yes | | Yes | Yes |
| Aniakchak | Surprise Lake | | Yes | | | Yes |
| Katmai | American Creek | | Yes | | Yes | Yes |
| Katmai | Battle Lake | | Yes | | Yes | Yes |
| Katmai | Hammersley Lake | | Yes | | | Yes |
| Katmai | Idavain Lake | | Yes | | | Yes |
| Katmai | Kukaklek Lake | | Yes | | Yes | Yes |
| Katmai | Lake Brooks | | Yes | | | Yes |
| Katmai | Lake Coville | | Yes | | | Yes |
| Katmai | Lake Grosvenor | | Yes | | Yes | Yes |
| Katmai | McNeil Lake | | Yes | | | Yes |
| Katmai | Murray Lake | | Yes | | | Yes |
| Katmai | Naknek Lake | | Yes | | Yes | Yes |
| Katmai | Nonvianuk Lake | | Yes | | Yes | Yes |
| Katmai | Savonoski River | | Yes | | Yes | Yes |
| L.C. | Chilikadrotna River | | Yes | | Yes | Yes |
| L.C. | Chulitna River | | Yes | | Yes | Yes |
| L.C. | Currant Creek | | Yes | | Yes | Yes |
| L.C. | Fishtrap Lake | | Yes | | | Yes |
| L.C. | Kijik Lake | | Yes | | | Yes |
| L.C. | Koksetna River | | Yes | | | Yes |
| L.C. | Kontrashibuna Lake | | Yes | | | Yes |
| L.C. | Lachbuna Lake | | Yes | | | Yes |
| L.C. | Lake Clark | | Yes | | Yes | Yes |
| L.C. | Little Lake Clark | | Yes | | Yes | Yes |
| L.C. | Little Mulchatna River | | Yes | | Yes | Yes |
| L.C. | Lower Tazimina Lake | | Yes | | | Yes |
| L.C. | Pickerel Lakes | | Yes | | | Yes |
| L.C. | Portage Lake | | Yes | | | Yes |
| L.C. | Tanalian River | | Yes | | Yes | Yes |
| L.C. | Tazimina River | | Yes | | Yes | Yes |
| L.C. | Tlikakila River | | Yes | | Yes | Yes |
| L.C. | Turquoise Lake | | Yes | | | Yes |
| L.C. | Twin Lakes | | Yes | | Yes | Yes |
| L.C. | Upper Tazimina Lake | | Yes | | | Yes |