

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 3-10). 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. 3,074) and a feature known as Big Mountain (elev. 2,161).

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 northward 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 <http://www.alaskacoast.state.ak.us/>²³ 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.

²³ The Alaska Coastal Management Program was terminated on July 1, 2011, pursuant to AS 44.66.030.

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 3-10, 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. Lands not conveyed to the Borough are to be retained 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 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://www.adfg.alaska.gov/sf/SARR/AWC/index.cfm?ADFG=main.interactive>).
- **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). Land designated General Use and not conveyed to the Borough are also to be retained by the state during the planning period. 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. The entirety of Iliamna Lake, a portion of which occurred in this region in the 2005 plan, is co-designated Habitat and Dispersed Recreation. For expediency, the entirety of this lake is included in region 9 in Table 3-1. Table 3-1 assigns designations to navigable waterbodies.

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

Resource Allocation Table for Upland Management Units - Region 10

Unit # / Name	Acres / Designation(s)	MTRS	Management Intent	Resources, Uses, Additional Info
R10-01 Upper Talarik Creek	45,743 Gu - General Use	Map 3-10	<p>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. Upper Talarik Creek and its riverine area are to be protected, for its habitat, recreation, and water resource values.</p> <p>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. Authorization should include a 150' vegetated buffer from OHW of Talarik Creek. 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. Any proposed development will need to evaluate the potential effects on moose wintering habitat and either avoid or mitigate these impacts to the maximum extent practicable. State land selections in this unit are considered to be a high level selection priority. If conveyed, this land is to be retained by the state during the planning period.</p>	<p>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. It occupies uplands east and southeast of Groundhog Mountain. 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. 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 transportation and road corridor extend through the middle of the unit. The unit is affected in part by MCO 393.</p> <p>This unit was affected by the 2013 Plan Amendment process.</p>
R10-02 Pebble2	16,674 Mi - Minerals Ha - Habitat	Map 3-10	<p>The general resource management intent for the Pebble Copper area is to consider mineral exploration and development, while ensuring the protection of important habitat areas, and to allow DNR the discretion to make specific decisions as to how development may occur, through the authorization process. That portion of Talarik Creek and its riverine area (100' from OHW) within this unit are to be managed to maintain its habitat, water resources, and recreational values. Also, see plan designations and management intent for the two units that border the area – R06-23 and R06-24.</p> <p>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. Any proposed development authorization must consider potential impacts to moose wintering habitat and either avoid such areas or include stipulations that will reduce impacts to the maximum extent practicable.</p>	<p>This unit is the portion of the Pebble Copper unit that extends 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 winter concentration area for moose. The unit is partly affected by MCO 393, which requires the maintenance of a 100' riverine area adjacent to this creek. The Pebble Road Corridor transects the unit.</p> <p>This unit was affected by the 2013 Plan Amendment process.</p>
R10-03 Iliamna Lake NW	205,117 Rd - Public Recreation and Tourism- Dispersed Ha - Habitat Wr - Water Resources	Map 3-10	<p>This unit is to be retained in state ownership and managed to maintain the recreational, habitat, and water resource values and uses of this large area, although mineral exploration and development are considered appropriate within the unit. DNR authorizations shall consider siting requirements that avoid or minimize impacts to sensitive habitats, principal recreational use areas, and wetland complexes. Lower Talarik Creek is one such area. Such authorizations shall also ensure that impacts to anadromous streams, moose wintering areas, and waterfowl 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</p>	<p>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, includes a regionally important fishery, 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. This unit contains waterfowl molting areas, as a tundra swan concentration occurs in the central part of the unit. There are extensive areas of wetland and numerous lakes are scattered throughout the unit. The area also has significant mineral potential, indicated by the proximity to the Pebble Copper deposit and other nearby</p>

Unit # / Name	Acres / Designation(s)	MTRS	Management Intent	Resources, Uses, Additional Info
			<p>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.</p> <p>Municipal selections exist within this unit. If the adjudicatory decision determines that conveyance to the borough is appropriate, the designations of Habitat, Dispersed Recreation, and Water Resources are extinguished, and a classification of Settlement is effected, which converts to a conveyable classification. This action only affects the area of the selection.</p>	<p>prospects. The unit is partly affected by MCO 393. It also functions as an important watershed for Lake Iliamna. A number of municipal selections occur within scattered portions of this unit.</p> <p>This unit was affected by the 2013 Plan Amendment process.</p>
R10-04 Lower Talarik	3,158 Rp - Public Recreation and Tourism-Public Use Site Ha - Habitat	Map 3-10 S006S037W Sec. 22,23,24,25,26,27	<p>The unit is designated Habitat and Public Recreation and Tourism-Public Use Site (Rp), and is to be managed consistent with the requirements of the Special Use Designation, and is to be retained in state ownership. It is also subject to the 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. See also the Management Guideline for "Public Use Sites" in the Recreation, Tourism, and Scenic Resources section of Chapter 2.</p>	<p>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.</p> <p>This unit was affected by the 2013 Plan Amendment process.</p>
R10-05 Lower Talarik Creek SUA	161 Rp - Public Recreation and Tourism-Public Use Site Ha - Habitat	Map 3-10 S006S037W	<p>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.</p>	<p>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). This unit occupies the site of a former native allotment which was acquired for inclusion in the Special Use Area.</p> <p>This unit was affected by the 2013 Plan Amendment process.</p>
R10-06 Area N. of Kvichak River	180,208 Gu - General Use	Map 3-10	<p>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, wetland complexes, 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, and the unit is to be retained by the state during the planning period. 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.</p>	<p>The unit consists of state-owned lands north of the Kvichak River along a potential transportation route. The terrain is mostly low-lying with little relief and extensive wetlands. Vegetation consists of lichen tundra, low shrub, and moist herbaceous tundra. The unit contains anadromous fish streams including Yellow Creek. The unit contains significant mineral potential. A large number of claims have been staked in T009SR044W, T009SR043W, and T010SR044W (Seward Meridian).</p> <p>This unit is affected by the 2013 Plan Amendment process.</p>
R10-06A Moose Habitat, N. Kvichak River	40,240 Ha - Habitat	Map 3-10	<p>Manage unit for its wetland and habitat values and, in particular, the protection of moose rutting and wintering habitat.</p> <p>Other than utilities, communication, roads/bridges, and similar facilities providing a public service, development is not appropriate within this unit.</p>	<p>This unit was created during the 2013 Plan Amendment process in order to provide different management intent than that associated with the parent unit, R10-06, and this unit acknowledges this. This unit contains significant moose wintering and rutting habitat. The other characteristics of this unit are similar to R10-06. Numerous wetlands are present.</p>

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			In any authorization that may be issued, avoid significant winter disturbances to moose calving and wintering or to activities that would appreciably reduce the utility of the unit for moose habitat. Consult with ADF&G prior to issuing an authorization.	
R10-07 Kvichak/Alagnak Rivers	150,261 Rd - Public Recreation and Tourism-Dispersed Ha - Habitat Wr - Water Resources	Map 3-10	This unit, consisting of upland adjoining the Kvichak and Alagnak Rivers, is co-designated Dispersed Recreation, Habitat, and Water Resources, and is to be managed to maintain the current recreational, habitat, and water resource 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. If the adjudutory decision on municipal entitlement selections determines that conveyance to the Borough is appropriate, the designations of Habitat and Water Resources are extinguished, leaving the designation of Dispersed Recreation, which converts to a conveyable classification.	The unit consists mostly of state-owned 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, caribou wintering areas, streams essential to brown bears and areas used by raptors for nesting and an extensive waterfowl concentration area (molting) in its upper reaches close to Lake Iliamna. 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. There are extensive wetlands scattered throughout this unit. This unit was affected by the 2013 Plan Amendment process.
R10-07A Kvichak/Alagnak Rivers: Moose wintering habitat	23,466 Ha - Habitat Wr - Water Resources	Map 3-10	Manage unit for its wetland and habitat values. Retain in state ownership. Other than utilities, communication, roads/bridges, and similar facilities providing a public service, development is not appropriate within this unit. In any authorization that may be issued, avoid or mitigate impacts to wetland areas through stipulations.	This unit was created during the 2013 Plan Amendment process to encompass areas of wetlands that are situated adjacent to an anadromous stream (Yellow Creek) and within the watershed of Kvichak River. The terrain is flat and vegetation consists mostly of shrub, sedge, and woody wetlands. There are a large number of lakes and lakelets. A waterfowl concentration area (molting) exists immediately to the east of this unit.
R10-08 Big Mountain	57,145 Ha - Habitat Rd - Public Recreation and Tourism-Dispersed	Map 3-10	This unit is to be managed for its habitat and recreation values, and retained in state ownership, except for areas that are the subject of entitlement selections. See below. If the adjudutory decision on a municipal selection determines that it is appropriate to convey land to the Borough, the Habitat designation is extinguished and converts to the Settlement designation, which, in turn, converts to a conveyable land classification.	The unit consists of state-owned land in the general vicinity of Big Mountain, south of Iliamna Lake. Vegetation consists of low shrublands and tundra. Several anadromous fish streams are present, including Pecks Creek and Belinda Creek. These streams are utilized by brown bear, especially during the salmon spawning season. Extensive moose calving, wintering, 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. Several municipal entitlement selections affect this unit.
R10-09 Eagle Bluff	3,896 Rd - Public Recreation	Map 3-10 S009S035W	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	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.

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	and Tourism- Dispersed Ha - Habitat		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.	Moose calving, wintering, 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 Big Mountain	1,455 Se - Settlement	Map 3-10 S009S036W	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 calving area. The unit is affected by LLO 1 and in part by MCO 393.
R10-11 Igiugig	171 Pr - Public Facilities- Retain	Map 3-10 S001S039W 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 Alagnak River	60,471 Gu - General Use	Map 3-10	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. If conveyed, this land is to be retained by the state during the planning period.	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. This unit is known to contain caribou wintering habitat.
R10-13 Levelock Airport	78 Pr - Public Facilities- Retain	Map 3-10 S012S045W 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).