



**PEBBLE PROJECT
ENVIRONMENTAL BASELINE DOCUMENT
2004 through 2008**

**CHAPTER 18.
LAND AND WATER USE
Bristol Bay Drainages**

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TABLE OF CONTENTS

TABLE OF CONTENTS	18-i
LIST OF TABLES	18-ii
LIST OF FIGURES	18-iii
LIST OF APPENDICES	18-iii
ACRONYMS AND ABBREVIATIONS	18-iv
18. Land And Water Use	18-1
18.1 Introduction	18-1
18.2 Study Objectives	18-1
18.3 Study Area	18-1
18.4 Scope of Work	18-2
18.5 Methods	18-2
18.6 Results and Discussion	18-2
18.6.1 Regional Overview	18-2
18.6.1.1 State of Alaska	18-4
18.6.1.2 Federal Government	18-8
18.6.1.3 Borough and City Governments	18-10
18.6.1.4 Mining Claims and Exploration Activity	18-15
18.6.2 Central Study Area	18-17
18.6.2.1 Land Ownership, Use, and Management	18-17
18.6.2.2 Transportation Corridor Study Area	18-19
18.7 Summary	18-20
18.8 References	18-21
18.9 Glossary	18-24

LIST OF TABLES

Table 18-1, Bristol Bay Area Plan Subject Acreage in the Regional Study Area, by Planning Region

Table 18-2, Numbers of Acres for Each Land Use Designation for the Regional Study Area, by BBAP Planning Region

Table 18-3, Status of ANCSA Section 14(c)(3) Conveyances, Lakes-region Communities

Table 18-4, Village Corporation Land Entitlements under ANCSA, Lakes-region Communities

Table 18-5, Land Use Designations, Acreage by BBAP Management Units That Are Wholly or Partly in the Central Study Area

Table 18-6, Numbers of New State Mining Claims, 1998-2007, in USGS Quadrangles in the Regional Study Area

LIST OF FIGURES

Figure 18-1, Bristol Bay Drainages, Land Use Study Area

Figure 18-2, Regional Study Area, Land Ownership, and Management Units and Designations under the Bristol Bay Area Plan

Figure 18-3, Central Study Area, Land Ownership, and Management Units and Designations under the Bristol Bay Area Plan

Figure 18-4, Central Study Area, General Land Ownership

Figure 18-5, Planning Area, Bristol Bay Area Plan

Figure 18-6, Generalized Land Use Designations for the Bristol Bay Drainages Regional Study Area

Figure 18-7A, Iliamna Community Plan Map, Sheet 1

Figure 18-7B, Iliamna Community Plan Map, Sheet 2

Figure 18-7C, Iliamna Community Plan Map, Sheet 3

Figure 18-7D, Iliamna Area Use Map

Figure 18-7E, Nondalton Community Map

Figure 18-7F, Newhalen Community Map

Figure 18-7G, Pedro Bay Community Map

Figure 18-8, Current Mining Exploration Activity, Regional Study Area

Figure 18-9, Active Mining Claims on State Land, Pebble Project Vicinity, 2001-2008

LIST OF APPENDICES

Appendix 18A, Bristol Bay Area Plan, Management Intent for Management Units Wholly or Partly in Central Study Area

ACRONYMS AND ABBREVIATIONS

ACMP	Alaska Coastal Management Program
ADNR	Alaska Department of Natural Resources
ANCSA	Alaska Native Claims Settlement Act
AS	Alaska Statute
BBAP	Bristol Bay Area Plan
BBB	Bristol Bay Borough
BBCRSA	Bristol Bay Coastal Resource Service Area
BLM	Bureau of Land Management
BBNC	Bristol Bay Native Corporation
CIRI	Cook Inlet Region, Inc.
Gu	General Use (land use designation)
Ha	Habitat (land use designation)
IRTCA	Iliamna Regional Transportation Corridor Analysis
L&PB	Lake and Peninsula Borough
Ma	Materials (land use designation)
Mi	Minerals (land use designation)
NMRRMP	Nushagak and Mulchatna Rivers Recreation Management Plan
NP&P	National Park and Preserve
NPS	National Park Service
Pr	Public Facilities–Retain (land use designation)
Rd	Public Recreation and Tourism–Dispersed (land use designation)
RMP	resource management plan
Rp	Public Recreation and Tourism–Public Use Site (land use designation)
RS 2477	Revised Statute 2477
RST	Revised Statute Trail
Se	Settlement (land use designation)
SUA	Special Use Area
SWATP	Southwest Alaska Transportation Plan
USDOI	United States Department of the Interior
USGS	United States Geological Survey
Wd	Waterfront Development (land use designation)

18. LAND AND WATER USE

18.1 Introduction

This chapter describes and maps the existing ownership, use, and management status of lands and surface waters in the Bristol Bay drainages study area for the Pebble Project. The chapter considers all land uses except subsistence uses, which are addressed in Chapter 23, Subsistence.

18.2 Study Objectives

The primary objective of this study was to describe and map the existing ownership, use, and management status of public and private lands and surface waters in the Bristol Bay drainages study area. It describes federal and state land management regimes and applicable local governmental regulatory powers and plans for land use and coastal management.

18.3 Study Area

Generally, the Bristol Bay drainages regional study area for the land use study encompasses the territory in the general vicinity of Pebble Project's state mining claims and the transportation corridor study area west of the boundary between the Bristol Bay and Cook Inlet drainages (Figure 18-1). The transportation study area includes various possible road routes proposed within state and local planning documents. Additionally, the regional study area encompasses the surrounding territory in the northern part of the Lake and Peninsula Borough (L&PB), the Bristol Bay Borough, and the part of the unincorporated borough that is in the Dillingham Census Division and east of the Mulchatna and Nushagak rivers. (Alaska's "unincorporated borough" is those areas of the state that are outside the jurisdiction of any incorporated borough.) The regional study area includes the communities of Igiugig, Iliamna, Kokhanok, Levelock, Newhalen, Nondalton, Pedro Bay, and Port Alsworth, referred to in this chapter as the lakes-region communities.

The land use baseline study also defines a central study area within the regional study area. It includes only the local drainage areas surrounding the general deposit location and the transportation corridor study area. The land status and management regimes for the central study area are described and mapped in greater detail than are those for the regional study area. (The regional and central land use study areas for this chapter are identical to the land use study areas discussed in Chapter 25, Recreation.)

In practice, the management units and national park boundaries described in the state's Bristol Bay Area Plan (BBAP; ADNR, 2005a) were used to define the perimeter of the Bristol Bay drainages regional study area and its geographic subunits. The national park units together constitute over 8 million acres within the regional study area; however, because their primary human uses are recreation-related, these national park lands (see Figures 25-9 and 25-10 in Chapter 25) are addressed in Chapter 25.

18.4 Scope of Work

This chapter describes the ownership and present use of major public and private landholdings and surface waters in the vicinity of the Pebble Project and the eight lakes-region communities in the northern part of the L&PB. It also describes federal and state management regimes and applicable local governmental land use and coastal management plans and activities. The ownership, use, and management of lands in the broader regional study area are generally characterized. The work was conducted by Kevin Waring Associates.

18.5 Methods

The study method is descriptive. It relies on abundant existing data sources and publications to document and map existing land ownership and use patterns and applicable state, federal, and local government management plans and regulations. Particular attention is given to defining the geographic relationship of the Pebble Deposit to existing land use plans and management programs applicable in the study area. Data sources include an extensive inventory of existing land use studies, inventories, maps, plans, and management reports. It also relies on state and federal land records and maps for information about land ownership and status. Many of these public land records are available on public websites. The regional study area is vast, and public records provide more voluminous and detailed information about land status and location than is appropriate for full inclusion in this chapter; however, the websites are cited for reference purposes.

18.6 Results and Discussion

This section gives an overview of land use issues in the regional study area, followed by a closer examination of land use in the central study area.

18.6.1 Regional Overview

The regional study area encompasses approximately 22,526 square miles of land and water. With an estimated 2007 population of 2,573 persons (ADOL&WD, 2008), the study area is very lightly populated, with an average of about one person per 9 square miles. The prevalent land uses are wilderness and natural habitat, low-intensity recreational activities, and subsistence. Intensive human uses are localized at settlement sites, at a few popular visitor destinations (such as Brooks Camp in Katmai National Park and Preserve [NP&P] and Port Alsworth in Lake Clark NP&P), seasonally in the vicinity of the Pebble Deposit, and at a few commercial fish-processing plants in the Bristol Bay Borough.

The major landowners in this region are state and federal governments, and Alaska Native village and regional corporations established pursuant to the Alaska Native Claims Settlement Act (ANCSA). Other landowners include borough and city governments, the state's Municipal Land Trustee Program¹, Alaska Native allotment owners and applicants, and various other private landowners.

1. Under state law (AS 44.33.755), the Municipal Land Trustee Program accepts, administers, and disposes of land conveyed to the State of Alaska in trust for unincorporated communities in accordance with ANCSA Section 14(c)(3).

Figures 18-1, 18-2, and 18-3, collectively, show the major governmental jurisdictions and the public and private land ownership and management units in the regional and central study areas. Figure 18-4 shows the general land ownership in the central study area. The pattern of land ownership and management is complex and multifaceted, with intermingled land ownership, still-pending land transfers, and overlapping federal, state, local, and private management regimes and activities.

Numerous federal and state laws have authorized land transfers from federal ownership to state and private ownership and from state ownership to private and municipal ownership. Among the most important of these laws are the following:

- The 1959 Alaska Statehood Act provided for transfer of approximately 103,500,000 acres of federal land in Alaska to the State of Alaska.
- The 1971 ANCSA provided for transfer of up to 44 million acres of federal lands in Alaska to Alaska Native regional and village corporations.
- ANCSA Section 14(c)(3) provided for conveyance of some village corporation lands to local municipalities for municipal uses or to the State of Alaska in trust for unincorporated communities.
- The 1906 Native Allotment Act, until its repeal by ANCSA, provided for transfer of allotments of up to 160 acres of federal land to Alaska Native occupants.
- The Native Townsite Act of 1926 authorized the U.S. Department of the Interior to survey and subdivide townsites in Alaska Native villages and to deed townsite lots to occupants or reserve townsite lots for future use.
- Public Law 94-204 and Public Law 94-456 approved the Cook Inlet Land Exchange, whereby the Department of the Interior, Cook Inlet Region, Inc. (an Alaska Native regional corporation), and the State of Alaska agreed to an expansive three-way land exchange.
- The State of Alaska's Municipal Entitlement Act (AS 29.65) provides for a general grant land entitlement of a specified amount of "vacant, unappropriated, unreserved state uplands" within their boundaries to incorporated boroughs and cities.

The newly formed State of Alaska had a serious interest in lands in the Bristol Bay region. The region possessed substantial fish, recreation, and mineral resources, and the state was dissatisfied with the history of federal management of the region's fisheries. For these reasons, the state sought to use its land entitlement under the Statehood Act to select and to obtain management authority over lands in the Bristol Bay watershed. This would enable the state to manage Bristol Bay resources for the benefit of the state's economy. State selection would also prevent permanent federal ownership and management of these economically valuable resource lands. In 1966, however, Alaska Native land claims prompted the U.S. Department of the Interior (USDOI) to institute a freeze on the disposition of most federal lands, pending resolution of the Native land claims. Passage of ANCSA in 1971 entitled Native regional and village corporations to select up to 44 million acres of federal lands. One regional corporation, Cook Inlet Region, Inc. (CIRI), believed that its ability to select its entitlement was severely limited by the Interior Department's failure, in CIRI's view, to withdraw and make available for selection appropriate federal lands and by the overall scarcity of suitable selectable federal lands in the CIRI region. CIRI's villages, however, did make valid land selections surrounding Lake Clark, an area which the federal government regarded as highly valuable for conservation purposes.

In 1973, CIRI initiated negotiations with USDOJ to improve its land-selection options. The negotiations were unproductive, and CIRI began litigation in 1974. In 1975, the State of Alaska realized that some litigation settlement proposals would adversely affect the state's interests, and it began three-way negotiations with CIRI and USDOJ to find a settlement that would be fair and acceptable for all parties. The outcome was the 1976 Cook Inlet Land Exchange. The three-way land exchange was large and complex, but its principal relevant features can be summarized as follows:

- CIRI and its villages agreed to relinquish their valid selections (49,000 acres) in the Lake Clark area, receiving in exchange valuable state-selected lands nearer CIRI villages in the Matanuska and Susitna valleys and on the Kenai Peninsula.
- The State of Alaska agreed to refrain from selecting any lands in a 675,000-acre area in the vicinity of Lake Clark. In exchange, the federal government agreed to give the state selection rights to 525,000 acres in the Kvichak and Nushagak drainages that were being considered for permanent federal withdrawal for conservation purposes and that were withdrawn from state selection under ANCSA Section 17 (d)(1). The state subsequently selected lands in those two drainages for multiple resource purposes. The state selections included lands at and around the Pebble Deposit that were chosen specifically for their mineral potential. Consistent with that intent, the state's initial (1984) and revised (2005) Bristol Bay Area Plans designated state selections in the vicinity of Pebble Deposit to be managed for mineral exploration and development.
- The USDOJ added the selection opportunities that the state chose to forgo to the ANCSA Section 17(d)(2) lands being considered for permanent federal withdrawal for conservation purposes. Those lands subsequently became part of the newly created Lake Clark National Park and Preserve.

Many land transfers authorized by the laws described above, as well as several other federal and state laws that authorize transfer of small tracts to new ownership, have been concluded; other transfers are pending or continuing. In some cases, multiple applicants have filed overlapping or excessive land selections. As a result, the ownership and management status of some lands in the study area is currently unresolved, and in some cases, may remain so for many years.

Generally, large blocks of federal, state, and Alaska Native corporation landholdings (which are private land) account for most land in the regional study area (Figure 18-2). Local governmental and non-ANCSA private landholdings are more modest in scale. The landholdings of Alaska Native village corporations, ANCSA Section 14(c)(3) conveyances, and Native allotments and other non-ANCSA private lands tend to be located in or near settlements. Some private tracts and allotments are at remote locations, however, usually at sites with superior subsistence, recreational, access, or other values.

18.6.1.1 State of Alaska

Bristol Bay Area Plan

The BBAP (ADNR, 2005a) governs the management of most state-owned and state-selected lands in the study area. The BBAP is the management plan for all state-owned and state-selected uplands, tidelands, submerged lands, and shorelands in a 48.8 million-acre planning area that includes the Alaska Peninsula,

the Bristol Bay region, part of the eastern Aleutian Islands, and part of the Kuskokwim River drainage (Figure 18-5). The plan was first adopted in 1984, and the current revised BBAP was approved in 2005.

The BBAP inventories resources and defines the land use designations, management intent, and management guidelines for all state lands within its planning boundary. It incorporates the state's current resource inventory and policies for management of lands. The BBAP does not apply to federal or municipal lands or to private lands.

The BBAP is divided into twenty-one large planning regions (Figure 18-5). Five planning regions (Regions 7 through 11) are wholly within the land use regional study area and are discussed here. The eastern portion of Region 6 also is within the bounds of the study area. (Because the area covered by the Nushagak and Mulchatna Rivers Recreation Management Plan [NMRRMP] overlaps Region 6 and that plan's resource inventory and management guidelines are more detailed than the BBAP's, Region 6 is treated as part of the NMRRMP; however, the NMRRMP does not include Management Unit R06-16, Upper Chulitna Area, in the eastern part of Region 6.) The state owns or has selected approximately 5.2 million acres that are in both the land use study area and these six planning regions (Table 18-1). Over three-quarters of this acreage is located in Region 6 (1,634,257 acres), Region 7 (1,606,959 acres), and Region 10 (823,566 acres) in the northwestern and western parts of the study area. The state owns less acreage in Region 8 (71,779 acres), Region 9 (690,646 acres), and Region 11 (395,824 acres). Each planning region is subdivided into many management units (Figure 18-2), each of which has its own specific land use designation(s) and management guidelines.

The BBAP designates specific uses for subject lands. The BBAP defines 12 primary land use designations. Nine of these apply to planning units in the regional study area (Figure 18-6). (Note that Figure 18-6 presents a generalized depiction of the management units that obscures several small units. See Figures 18-2 and 18-3 for a more precise depiction of the units in the regional and central study areas, respectively.) The primary use designation does not preclude other compatible uses, but takes precedence over incompatible uses. Also, some management units may have co-designations for two or more compatible uses. The definitions of the designations applicable to the study area are summarized and paraphrased below, and the full BBAP definitions are presented in full in the glossary (Section 18.9).

- **Gu — General Use.** This designation is applied to land that contains a variety of resources, none of which is of sufficiently high value to merit designation as a primary use, or areas that are large enough to accommodate a variety of uses. General use may also be applied where there is a lack of resource, economic, or other information on which to base a specific land use designation and/or where there is a lack of current demand, suggesting that development within the planning period is unlikely.
- **Ha — Habitat.** This designation applies to habitat 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 a permanent loss of a population or sustained yield of a species.
- **Ma — Materials.** This designation pertains to sites suitable for extraction of materials, which include common varieties of sand, gravel, stone, peat, pumice, pumicite, cinders, clay, and sod.
- **Mi — Minerals.** This designation is applied to areas associated with significant mineral resources; either measured or inferred, that may experience minerals exploration or development during the planning period. The designation includes areas for surface uses in support of minerals

exploration and development, including tailings deposition, waste rock disposal, mineral processing facilities, administrative facilities, and residential living quarters.

- **Pr — Public Facilities–Retain.** These sites (uplands only) are reserved for specific infrastructure to serve state interests.
- **Rd — Public Recreation and Tourism–Dispersed.** This designation applies to areas that have a high potential for dispersed recreation or tourism and where desirable recreation conditions are scattered or widespread rather than localized. Developed facilities, other than trails, trail signs, primitive campsites, and other minor improvements, are generally not necessary.
- **Rp — Public Recreation and Tourism–Public Use Site.** These sites are local areas used by concentrations of recreationists or tourists or areas with a high potential to attract concentrations of recreationists and tourists. The primary management intent is to protect the public’s opportunity to use these sites and the sites’ resource values for recreation. This land remains 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 for private recreational or residential use. This designation is generally used for areas appropriate for land offerings and for residential uses.
- **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.

Over three-quarters of state lands in the regional study area—about 4 million acres—are designated for general use (Table 18-2, Figure 18-2). Of the balance, 789,790 acres are designated for dispersed recreation and tourism, 299,313 acres are for settlement, 200,167 acres are for habitat, and 114,560 acres are for mineral development. Minor acreages are designated for public use sites for recreation and tourism (8,447 acres), public facilities to be retained in state ownership (3,715 acres), waterfront development (305 acres), and materials sites (293 acres). A few parcels are designated for multiple uses (see footnote to Table 18-2). All the management units that are designated for recreation-related uses (Ha, Rd, and Rp) are governed by the NMRRMP (see below). The management units designated Mi are not subject to the NMRRMP.

Nushagak and Mulchatna Rivers Recreation Management Plan

Under the umbrella of the BBAP, the Nushagak and Mulchatna Rivers Recreation Management Plan (NMRRMP; ADNR, 2005b) governs management of state recreational resource lands in the Nushagak and Mulchatna drainages (those recreational resource lands and the NMRRMP are discussed in greater detail in Chapter 25, Recreation). The NMRRMP was first adopted in 1990 and was revised in conjunction with the recent BBAP revision. The NMRRMP is a component of the BBAP, and its planning area overlaps Regions 5, 6, and 7 of the BBAP (Figure 25-5 in Chapter 25). The NMRRMP incorporates the BBAP’s land use designations. All the state lands to which the NMRRMP applies are designated and managed for recreation-related uses. The NMRRMP sets additional management guidelines for lands designated by the BBAP for Public Recreation—Dispersed or for General Use or co-designated for Public Recreation—Dispersed and Wildlife Habitat. The NMRRMP does not apply to federal or municipal lands or to private lands.

Where the NMRRMP and the BBAP overlap in the eastern part of the Mulchatna drainage, the NMRRMP supersedes the BBAP on lands designated for recreation-related uses. The Pebble Partnership's state mining claims are located on state lands which the BBAP designates for minerals use and which are, therefore, not subject to the NMRRMP; however, as shown in Figure 18-3, within these areas designated for mineral use are some small, isolated tracts designated for recreation-related uses.

Lower Talarik Creek Special Use Area

The Lower Talarik Creek Special Use Area (SUA; Figure 25-8 in Chapter 25) is on the shore of Lake Iliamna approximately 21 miles south-southwest of the Pebble Deposit and approximately 27 miles west-southwest of the community of Iliamna. The Alaska Department of Natural Resources (ADNR) created this SUA in 1999 (ADNR, 1999) "for the purpose of enhancing the world class recreational rainbow trout fishery, protecting high value fish and wildlife habitat, and providing recreational opportunities for commercial and noncommercial users." The Lower Talarik Creek watershed is separate from the north and south fork Koktuli watersheds and distinct from the Upper Talarik Creek watershed; the three watersheds in the vicinity of the Pebble Deposit. Additional information on the Lower Talarik Creek SUA is found in Chapter 25.

State Easements and Rights-of-way

Revised Statute (RS) 2477 from the Mining Act of 1866 granted public rights-of-way across unreserved federal land to guarantee access as federal land was transferred to state or private ownership. Under RS 2477, the State of Alaska claims several rights-of-way on federal lands in the regional study area, the latter four of which are located in or partially in the central study area:

- Revised Statute Trail (RST) 57, Telaquana Trail.
- RST 90, Nakeen-Igiugig Winter Trail.
- RST 490, Katmai-Savonoski Trail.
- RST 396, Iliamna-Pile Bay Road, an unimproved overland trail from Roadhouse Bay in Iliamna along the north shore of Iliamna Lake to Pile Bay Village.
- RST 1641, Newhalen River Portage Trail, an unimproved 7-mile overland trail from Roadhouse Bay in Iliamna to the Newhalen River one mile south of the mouth of Bear Creek.
- RST 1876, Cottonwood Bay-Old Iliamna Trail, an unimproved overland trail from Cottonwood Bay on western Cook Inlet to Old Iliamna Village.
- RST 291, Telaquana Trail-Nondalton Trail, an unimproved 70-mile overland trail that connects Nondalton to the Telaquana Trail north of Lake Clark.

(The locations of these claimed RS 2477 rights-of-way can be found at http://www.dnr.state.ak.us/mlw/trails/re2477/rst_legal.cfm. Detailed information about the historic use, routes, and land status of these RS 2477 trails can be found at http://dnr.alaska.gov/mlw/trails/rs2477/rst_srch.cfm.)

The State of Alaska also owns numerous easements or rights-of-way across certain Alaska Native corporation and other non-state lands in the regional study area. The *Bristol Bay Easement Atlas* (ADNR, 1990) documents the location of the easements and rights-of-way as of 1990.

Alaska Coastal Management Program

The Alaska Coastal Management Program (ACMP) has been substantially revised by a combination of state legislation (ALAA 2007, 2005, 2003) and gubernatorial action (Executive Order 106, April 15, 2003). In 2003, the legislature transferred overall administrative responsibility for the ACMP from the Division of Governmental Coordination to ADNR's Division of Coastal and Ocean Management. ADNR also was given regulatory authority to adopt statewide standards and district coastal-management-plan criteria governing the coastal management activities of state agencies and local coastal-resource districts. ADNR is now also the responsible agency for determining whether covered projects and activities in the coastal zone are consistent with the federal Coastal Zone Management Act and with state requirements (ADNR, 2005c).

The legislative revisions narrowed the policy and geographic scope of oversight by local coastal-resource districts. For example, local districts may no longer adopt and enforce policies that directly address air, land, or water quality issues or mining activities (except sand and gravel extraction). However, local districts may still address mining-related activities by adopting enforceable policies for utility and transportation routes and facilities, subsistence, sand and gravel extraction, and recreation. Districts were required to amend their coastal management programs to be consistent with the new statutory and regulatory revisions. The status of district programs in the study area is discussed in later subsections.

18.6.1.2 Federal Government

Two federal agencies, the National Park Service (NPS) and the Bureau of Land Management (BLM), own and manage most federal lands in the study area.

National Park Service

Most federal lands in the study area are managed by the NPS. The properties it manages are included in Lake Clark National Park and Preserve (3.4 million federal acres), Katmai National Park and Preserve (4.0 million federal acres), and the Alagnak Wild River (27,218 federal acres). These federal park units are regarded as recreational lands. The ownership, management, and use of federal and non-federal lands within their boundaries are described in Chapter 25.

Bureau of Land Management Bay Resource Management Plan

The BLM manages the unencumbered federal lands in the study area that are not managed by the NPS or other federal agencies. BLM recently approved the *Bay Proposed Resource Management Plan and Final Environmental Impact Statement* (BLM, 2007). This resource management plan (RMP) provides a comprehensive land use plan to guide management of BLM-managed public lands and resources in the bay planning area, which covers southwest Alaska from the Bristol Bay drainage divide to Kuskokwim Bay (Figure 25-11 in Chapter 25). Most unencumbered BLM lands in the regional study area are in the Iliamna West, Kvichak, Alagnak, or Yellow Creek planning blocks, west and southwest of western Iliamna Lake (Figure 25-13 in Chapter 25). None of these lands are nearer than 30 miles to the Pebble Deposit. There also is a small, remote, unencumbered upland tract in the Iliamna East planning block west of Lake Clark and approximately 25 miles northeast of the Pebble Deposit (Figure 25-14 in Chapter 25).

Additionally, the state or ANCSA corporations, or both, have selected many unconveyed, unrelinquished tracts in the Iliamna East planning block (Figure 25-12 in Chapter 25). BLM is the interim manager for the unconveyed ANCSA Native corporation selections in the study area. As interim manager, BLM is required to seek and consider comments from the appropriate ANCSA Corporation for any authorization to use Native-selected lands. If the unconveyed state or Native corporation selections are relinquished, they revert to BLM management, and RMP recommendations for management of the selections would be implemented only upon relinquishment of the selections to the federal government.

When the RMP was prepared, the unencumbered lands remaining under BLM's management consisted of lands not designated for incorporation into national parks or wild rivers, not selected by the state of Alaska or ANCSA regional and villages corporations, not claimed as Native allotments, not at settlement sites, and not subject to other valid claims. That is, they consisted of the federal lands left after other parties had selected lands for settlement, traditional uses, economic potential, habitat and other natural values, or recreation.

The RMP adopted BLM's preferred management alternative, Alternative D. Unlike some land management plans, Alternative D does not designate tracts for specific uses. Generally, the RMP contemplates multiple uses for the subject federal lands, but with appropriate protection measures. The RMP's pertinent features for management of BLM's lands in the study area are summarized below:

- The Kvichak, Iliamna West, and Alagnak planning blocks are open to exploration for and development of mineral resources.
- The State of Alaska continues to manage fish and wildlife resources on BLM lands in accordance with the existing Memorandum of Agreement between the state and BLM.
- Federal agencies are required to consult with the U.S. Secretary of Commerce on all actions or proposed actions that may adversely affect "essential fish habitat" (in accordance with Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation Act). Essential fish habitat is defined as those waters or substrate necessary to fish for spawning, breeding, feeding, or growth to maturity and can include fresh and saltwater habitats. For Alaska, freshwater essential fish habitat includes all streams, lakes, ponds, wetlands, and other waterbodies that have been historically accessible to salmon.
- All unencumbered BLM-managed lands and selected lands until they are conveyed are managed for semi-primitive motorized use (i.e., use by specialized off-highway vehicles).
- The planning process considered but did not finally propose any additional designations under the Wild and Scenic Rivers Act or any designation of "areas of critical environmental concern" in the study area.

Department of the Interior Review of Land Withdrawals under the Alaska Land Transfer Acceleration Act

Section 207 of the Alaska Land Transfer Acceleration Act of 2004 directed the Secretary of the Interior to review and report to Congress on

... the [federal land] withdrawals made pursuant to section 17(d)(1) of the Alaska Native Claims Settlement Act to determine if any portion of the lands withdrawn pursuant to that

provision can be opened to appropriation under the public land laws or if their withdrawal is still needed to protect the public interest in those lands.

The Department of Interior delivered its report to Congress in June 2006 (BLM, 2006a). The report contained its recommendations to Congress for the disposition of the subject land withdrawals (termed “d-1 withdrawals”).

Most d-1 withdrawals in the Bristol Bay study area are managed by NPS or BLM, or are segregated for potential selection by the State of Alaska or by ANCSA corporations. USDOI’s report incorporated NPS’s recommendation to lift existing d-1 withdrawals on lands that NPS managed and that those lands be managed consistent with existing plans and procedures. The report also recommended that d-1 withdrawals be lifted on BLM-managed lands (now managed according to the Bay RMP) and that these lands be opened to entry. The report notes the following (Area 10 includes the Bristol Bay study area):

The majority of these lands have a medium locatable mineral potential, with very few scattered high potential areas. Essentially none of these lands have a known potential for coal, oil or gas. Most lands with high locatable mineral potential, or lands with known leaseable potential in Area 10, were previously selected by the State of Alaska or a Native corporation.

Finally, the report recommended that, if the withdrawal was lifted for lands segregated for possible state or ANCSA corporation selection, such lands should remain segregated for selection.

The report and its recommendations are before Congress at the time of this writing. The report does not alter the land management status on d-1 withdrawals until Congress takes action.

18.6.1.3 Borough and City Governments

Some local governments were entitled to acquire land under the provisions of Alaska’s Municipal Entitlement Act (AS 29.65) or Section 14(c)(3) of ANCSA and may have acquired other sites for local public uses. As authorized by state law, these local governments may exercise land use planning and regulatory powers within their jurisdictions. As authorized under the ACMP, they may participate in the management of coastal resources.

Lake and Peninsula Borough

The Alaska Municipal Entitlement Act entitles the L&PB to select and obtain 125,000 acres of “vacant, unappropriated, unreserved” state land within its jurisdiction. For state land covered by the BBAP, eligible municipalities generally are limited to selections from tracts designated for general use, settlement, or settlement-commercial.

As of February 2009, ADNR had approved 83,786 acres of municipal selections for conveyance to L&PB, which now has management authority over those approved selections. L&PB’s only approved selections in the central study area consist of several remote tracts totaling 6,675 acres in upper Chekok Creek valley about 12+ miles northwest of Pedro Bay and near the southern boundary of Lake Clark National Preserve. The balance of L&PB’s pending selection applications are under review (see ADNR, 2009b, for status of selections and 2009c for related maps).

L&PB is a home-rule municipality, governed by its charter. By state law, home-rule municipalities may exercise all legislative powers not prohibited by state law or charter. Under its charter, L&PB is required to adopt and implement a comprehensive plan for the borough's future development. It may regulate the subdivision of land as provided by borough ordinance. It has not adopted zoning authority.

The borough administers subdivision regulations (L&PB Municipal Code Chapter 9.06) and development permits (L&PB Municipal Code Chapter 9.07). By ordinance (L&PB Municipal Code 09.07.030), the borough requires a development permit for archeological surveys, commercial uses, industrial uses, and resource extraction, as those activities are defined in the code. It also requires a development permit for any "excavation, placement of fill, grading, removal or disturbance of the topsoil of more than 10,000 square feet or 1/4 acre on land within 100 feet of anadromous streams, tidelands, or submerged lands."

L&PB has developed and adopted a *Comprehensive Economic Development Strategy* (L&PB, 2002). That document addresses primarily economic and community development throughout the borough, rather than land planning and management.

The borough does not have an official land use plan. Its chief land and resource planning document is the *Lake and Peninsula Borough Coastal Management Program* (LaRoche + Associates, 2007). The L&PB amended its coastal management program to comply with new state regulations. For coastal management purposes, the borough's coastal-area boundary includes all lands and waters in the borough, exclusive of federal lands and waters and perennially snow-capped mountains, glaciers, and volcanoes. In effect, the entire borough within the study area is within its coastal-area boundary.

The revised coastal management plan incorporates an assessment of L&PB's capabilities under the coastal management plan to address an initiative in the early 1990s to develop the Pebble Prospect (RA and JIA, 1993). Some elements of that analysis are outdated, but it broadly identifies potential impact issues and local management responses related to a major mineral-development project in the region.

In that regard, the borough recently adopted an ordinance governing large project permits (L&PB Municipal Code Chapter 9.08). The ordinance applies to projects that would require a permit under the borough's development permit or coastal management program and would meet two of the following three conditions:

- Project causes or may cause more than 100 acres of unreclaimed surface disturbance.
- Project employs or may employ 100 or more people in the borough.
- Project is a resource-extraction activity that requires preparation of an environmental impact statement under the National Environmental Policy Act.

The purpose of the ordinance is to mitigate possible socioeconomic and fiscal effects from large-scale development projects on the borough. The ordinance does not specifically address land use issues.

Under its home-rule charter and by code, the borough levies a severance tax on the extraction of metal ores and coal at the rate of 1.5 percent times the gross production value per ton, on timber at the rate of one quarter of one percent of sales price, and on gravel at the rate of ten cents per cubic yard (L&PB Municipal Code Chapter 6.9.1). As it stands, the severance tax would apply to Pebble mineral production and to gravel extraction for project facilities.

Cities and Villages in the Lake and Peninsula Borough

ANCSA Section 14(c)(3) is the chief means by which the lakes-region communities (cities and unincorporated settlements) may acquire land for future community purposes. ANCSA Section 14(c)(3) requires ANCSA village corporations to reconvey up to 1,280 acres for community purposes to the city with which the village is associated or, if the associated settlement is unincorporated, to the State of Alaska in trust for a possible future city.

ANCSA village corporations own land in and around seven communities in the lakes region: Newhalen and Nondalton are incorporated cities, and Igiugig, Iliamna, Kokhanok, Levelock, and Pedro Bay are unincorporated settlements. All these communities are in the Bristol Bay Native Corporation's (BBNC's) region. The Alaska Native village corporations associated with Newhalen and Nondalton (Alaska Peninsula Corporation² and Kijik Corporation, respectively) were obliged under ANCSA to reconvey land to the municipal governments of Newhalen and Nondalton, respectively. The village corporations associated with the unincorporated communities (Igiugig Native Corporation, Iliamna Natives Limited, Alaska Peninsula Corporation, Levelock Natives Limited, and Pedro Bay Native Corporation, respectively) were obliged to reconvey land to the State of Alaska's Municipal Land Trustee Program for the benefit of any future city that might incorporate in those communities.

Table 18-3 summarizes the status of ANCSA Section 14(c)(3) conveyances for the lakes-region communities. The ANCSA 14(c)(3) reconveyance selection process has been completed for Igiugig (122 acres), Iliamna (107 acres), Kokhanok (1,280 acres), Levelock (28 acres), Newhalen (1,280 acres), and Pedro Bay (405 acres). Final agreement on reconveyance lands for Nondalton is pending. Consistent with ANCSA Section 14(c)(3)'s intent—i.e., to provide land for future community purposes—the lands conveyed to cities or to the Municipal Land Trustee Program under this provision are situated in or near the existing developed community. Thus, the reconveyance properties may provide sites for future residential development or community facilities. (Survey plats showing each community's Section 14(c)(3) reconveyances can be accessed at <http://www.commerce.state.ak.us/dca/14c-Plats.htm>.)

Port Alsworth, in Cook Inlet Region, Inc.'s region, did not qualify as a “traditional Native village” under ANCSA. The Alaska Native residents of Port Alsworth, however, did qualify to obtain lands as a “Native group,” but those lands were not subject to ANCSA Section 14(c)(3). Consequently, there is no ANCSA village corporation for Port Alsworth, and the city government is not entitled to receive lands under ANCSA Section 14(c)(3).

The L&PB has published updated community profile maps for all its communities, including the eight lakes-region communities: Igiugig, Iliamna, Kokhanok, Levelock, Newhalen, Nondalton, Pedro Bay, and Port Alsworth (L&PB, 2005). The maps for the lakes-region communities show surveys plats, land ownership status; major land ownership, existing land uses, buildings, roads, community improvements, and utilities (for example, see Figures 18-7A through 18-7G). The maps also identify sites proposed for future community uses and improvements. (The community profile map series also includes maps for the small settlements at Pile Bay at the eastern end of Iliamna Lake and Pope Vannoy on Intricate Bay east of Kokhanok [L&PB, 2005, under *Community Development*].)

². The Alaska Peninsula Corp. is a merger of five ANCSA village corporations originally formed separately for Kokhanok, Newhalen, Port Heiden, South Naknek, and Ugashik.

ANCSA Regional and Village Corporations

BBNC and local ANCSA village corporations are the largest private landowners in the regional study area. Native regional corporation boundaries define the territory within which regional corporations were entitled to select lands under ANCSA. (Regional corporation boundaries do not represent government jurisdictional boundaries, and the ANCSA corporations do not own all the land within their boundaries.) Two ANCSA regional corporations, BBNC and CIRI, were entitled to land selections in the study area. BBNC's regional boundaries encompass about 34 million acres, but most of BBNC's landholdings are outside the study area. CIRI's regional boundaries within the study area overlap part of Lake Clark NP&P, including Port Alsworth, and some remote tracts west of the divide between the Bristol Bay and Cook Inlet drainages; however, for practical purposes, CIRI does not have any landholdings in the study area.

Eligible village corporations also were entitled to land selections under ANCSA, in accordance with Sections 12(a) and 12(b). Of the 29 ANCSA village corporations within BBNC's boundaries, seven are in the regional study area. The entitlements for the seven study-area communities are shown in Table 18-4. (Under amendments to ANCSA, Tanalian Inc. was certified as a "Native group" and was entitled to select up to 2,240 acres in the vicinity of Port Alsworth; however, Tanalian Inc. is not an ANCSA village corporation and is not obliged to convey lands to the community of Port Alsworth under ANCSA Section 14(c)(3).)

BBNC's ANCSA land entitlement includes surface and subsurface rights to 101,500 acres within its region. BBNC owns the surface and subsurface rights to their patented and interim-conveyed ANCSA lands. As discussed in Section 18.6.1.4., BBNC has granted options to explore and develop potential mineral resources on several of its properties in the study area.

Additionally, pursuant to ANCSA Section 14(f), BBNC owns or will own subsurface rights to about 2,716,000 acres in its region that were selected by the village corporations pursuant to ANCSA Section 12. Of note for this chapter are the landholdings of Iliamna Natives Limited near Iliamna, the Alaska Peninsula Corp. near Newhalen, and the Kijik Corp. near Nondalton, and the Pedro Bay Corp. in the transportation corridor study area, and the Kijik Corp.'s inholdings in Lake Clark NP&P.

Native Allotments

The 1906 Native Allotment Act (which was revoked by ANCSA Section 18(a)) entitled Alaska Natives to obtain allotments of up to 160 acres that were traditionally used and occupied by the applicant. Under federal law, allotment applications usually supersede other nonfederal claims for federal lands that arose before the allotment application was filed but after the original use and occupancy by the allotment applicant had become established.

Generally, allotments are situated on streams, waterbodies, or uplands that are accessible and are useful for subsistence production or that have high resource or recreational value. Some allotments are located in or near traditional settlements (their locations may be shown on the community profile maps [L&PB, 2005]). (See BLM, 2008, for the location and status of individual allotment applications).

Bristol Bay Coastal Resource Service Area

The Bristol Bay Coastal Resource Service Area (BBCRSA) is in the unorganized borough. It was established under state law to administer a district coastal management program. Its boundaries encompass the entire Dillingham Census Area, a small part of which is within the regional study area (Figure 18-1). The BBCRSA coastal management plan has been revised to comply with ACMP regulations and has been approved for implementation (Glenn Gray and Associates, 2008). Because the BBCRSA is in the unorganized borough and lacks an incorporated regional government, its coastal management program is regarded as an especially important avenue for local participation in state and federal decisions that affect coastal resources.

The BBCRSA's eastern boundary abuts the L&PB. The BBCRSA includes some uplands, stream corridors, and waterbodies west and downstream of the central study area but in the regional study area. Most notably, these include the Kaktuli, Mulchatna, and Nushagak river corridors and adjacent uplands, almost all of which are state-owned and are also covered by the NMRRMP.

The BBCRSA coastal management plan notes the potential for Pebble Project to affect uplands and waterways that are used by BBCRSA residents for subsistence and recreation:

While the (Pebble) project is located outside of the CRSA, residents of the district may be affected by the development if it occurs. Residents of Ekwok, New Stuyahok, and Koliganek, along with the community of Nondalton, are concerned about the potential affects (sic) to lands and waterways they use for hunting, fishing and trapping. Since the CRSA is located in the same watershed as the proposed mine, downstream effects could occur in the CRSA. As described in Section 6.4, many residents of CRSA communities use lands in the L&PB for subsistence harvests, including the area where the mine would be located and along the northern and western shores of Lake Iliamna.

The 2003 revisions to the ACMP revoked the authority of CRSAs to directly address air, land, and water-quality issues or hard-rock mining activities. CRSAs may still address mining-related activities by adopting enforceable policies for subsistence, recreation, utility and transportation routes and facilities, and sand and gravel extraction. Project applications that are subject to a state consistency review and are found noncompliant with CRSA enforceable policies must meet additional review conditions. To that end, the BBCRSA plan adopted enforceable policies that designate "all non-federal lands and waters within the coastal zone of the Nushagak and Mulchatna watershed" as subsistence and recreational use areas (Glenn Gray and Associates, 2008).

Bristol Bay Borough

The Bristol Bay Borough is situated some 90 miles southwest of the Pebble Deposit. The borough straddles the Naknek River, and is a regional transportation and commercial fish-processing center and gateway to Katmai NP&P. Bristol Bay Borough is Alaska's second smallest borough in area. Its jurisdiction encompasses 850 square miles, of which nearly half are covered by surface waters. Under the Municipal Entitlement Act, the Bristol Bay Borough was entitled to and received 2,898 acres.

Under state law, land use planning is mandatory for boroughs. The borough's current comprehensive community plan was adopted in 2006 (BBB, 2006b). The plan stresses economic development,

maintenance of the borough's role as a regional center for commercial fishing and transportation, and subsistence protection, with recommendations for appropriate infrastructure improvements. The plan does not address land use issues in detail. The borough does administer zoning and subdivision ordinances which apply to all private lands (except Native allotments), most of which are owned by the ANCSA village corporations for Naknek and South Naknek. The borough, all of which is located in the coastal zone, has updated its coastal management program to comply with the new ACMP requirements, and its program has been approved for implementation (BBB, 2006a). The program designates areas for priority use for commercial fishing and seafood processing, recreation, and tourism.

The tribal or village councils for each of the settlements in the Bristol Bay Borough have recently completed community plans (King Salmon Tribal Council, 2006; Naknek Native Village Council, 2005; South Naknek Village Council, 2006). None of the settlements are incorporated as cities. They do not have authority under state law to exercise land use planning or regulatory powers, and the community plans address land use only cursorily. The Bristol Bay Borough is the only local government with land use planning powers for these communities.

18.6.1.4 Mining Claims and Exploration Activity

In the decade from 1998 through 2007, many mining claims were filed on state lands in the regional study area (Table 18-6). The most claims, 2,562 in all, were filed in the U.S. Geological Survey (USGS) Lake Clark quadrangle; many of those were clustered in the Chilikat West/Chilikat East/Koksetna area west of Lake Clark (Figure 18-8). The USGS Iliamna quadrangle had the second-highest number of new state mining claims (2,353) during that period, most of them during 2003 through 2005 near the Pebble Deposit in the Iliamna quadrangle. In its peak year of 2004, 944 new claims were filed in the Iliamna quadrangle. This burst of new mining claims followed positive news about Northern Dynasty Mines Inc.'s exploration results at Pebble. Northern Dynasty filed a few of these claims, but most were filed by other hopeful claimants (e.g., Full Metals Minerals Corporation and Liberty Star Gold). Many of the latter claims were subsequently relinquished. Figure 18-9, which presents annual snapshots of active claims in the vicinity of the Pebble Deposit, shows a drop in active non-Pebble claims after 2005.

This pattern of a burst of claim activity in a newly promising exploration area is not uncommon. For comparison, during the same period, several other areas were the target of even very intense mining-claim activity:

- 1997—Ambler River, 1,437 new claims.
- 1998—Big Delta, 4,290 new claims.
- 1999—Big Delta, 2,775 new claims; DeLong Mountains, 4,685 new claims; and Noatak Mountains, 1,411 new claims.
- 2000—Big Delta, 1,547 new claims.
- 2006—Big Delta, 2,218 new claims.

Under state mining law, the cost of filing and maintaining claims is relatively modest and invites filing of speculative claims in the early sages of a newly promising prospect. Many of such claims are soon relinquished.

The mining claims described below have seen active exportation activity in the regional study area in recent years (Figure 18-8). Only Pebble Partnership's Pebble East and Pebble West have progressed beyond the exploratory phase.

- Pebble East and Pebble West. These properties constitute Pebble Partnership's (formerly Northern Dynasty Mines Inc.) state mining claims at the Pebble ore deposit. They are located on lands designated for minerals use under the BBAP. Northern Dynasty acquired some claims in 2001 from Teck Cominco American Inc. (which had explored but not developed them in the early 1990s) and staked additional claims in later years. A major multi-year exploration project (Alaska's largest in 2004, 2005, 2006, and 2007) confirmed substantial copper, gold, and molybdenum finds. Prefeasibility studies are now in progress. (ADNR, 2002, 2003, 2004, 2005d, 2006, 2007, 2008, and 2009a)
- Pebble South. Full Metal Minerals Corporation's Pebble South property consists of two separate blocks of contiguous claims: one block adjoins Pebble East and Pebble West on the east and south and the other adjoins on the north and west. Full Metals Minerals' exploration program, begun in 2004, has identified a promising prospect in each block (the Boo Prospect and the TYP Prospect) and has conducted some exploration drilling. Freeport-McMoRan Copper and Gold Inc. purchased an option for a part interest in 2007, and exploration continues. (ADNR, 2005d, 2006, 2008, and 2009a; Full Metal Minerals, 2006)
- Big Chunk Super. The Big Chunk Super property consists of hundreds of state mining claims north and west of Pebble East and Pebble West. Liberty Star Uranium and Metals Corp. (formerly Liberty Star Gold Corp.) acquired the Big Chunk Super claims in 2004. The preceding claimant staked 981 state mining claims on 237 square miles in 2003. Liberty Star filed another 476 claims in 2005. Liberty Star has conducted some initial exploration work. It relinquished about half its claims in 2006. (ADNR, 2004, 2005d, 2006, and 2007; Liberty Star Uranium and Metals Corp., 2007)
- Chilikat West/Chilikat East/Koksetna. Andover Ventures has an option agreement with BBNC to explore and develop this group of three properties some ten to fifteen miles south of the Chilikadrotna River. Chilikat West (5,760 acres), Chilikat East (5,760 acres), and Koksetna (2,560 acres) are located on BBNC-owned mining claims on state land. Andover conducted sampling and examination of the Chilikat West and Chilikat East properties in 2007. Limited exploration was done on the Koksetna prospect in 2008 (ADNR, 2008 and 2009a; Andover Ventures, 2006a)
- Iliamna Project Block D and Block H. TNR Gold Corporation, in partnership with others, has conducted several seasons of exploratory drilling on these two separate prospects located on state lands in the western part of the regional study area (ADNR, 2003, 2004, 2005d, 2006, 2007, and 2008; Chapman, 2004)
- Fog Lake. Andover Ventures' Fog Lake copper-gold prospect (5,760 acres, originally discovered in 1967) is located in a remote area about 15 miles northeast of Kokhanok. Andover has an agreement with BBNC, owner of the subsurface rights, to explore and develop the property. The (Alaska Peninsula Corporation has succeeded Kokhanok Village Corporation as owner of the surface rights.) Andover conducted limited exploration activity in 2008 (ADNR, 2008 and 2009a; Andover Ventures, 2006b)

- KUY. Andover Ventures' KUY Prospect is located on BBNC-owned lands about 15 miles south-southeast of Kokhanok. Several exploratory cores were taken in 2007. (ADNR, 2008 and 2009a; Andover Ventures, 2006c)

18.6.2 Central Study Area

18.6.2.1 Land Ownership, Use, and Management

The Bristol Bay drainages central study area encompasses the Pebble Deposit and the portion of transportation corridor study area that is in the Bristol Bay drainages (Figure 18-1).

The State of Alaska is the largest single landowner in the central study area for the Bristol Bay drainages (Figures 18-3 and 18-4). The other public landowners are the municipal governments of Newhalen, Nondalton, and L&PB, and the state's Municipal Land Trustee Program. The federal lands are encumbered by state or ANCSA corporation selections and are managed by the BLM. The ANCSA village corporations for Iliamna, Newhalen, Nondalton, and Pedro Bay are the largest private landowners. The ultimate ownership of many large tracts that are encumbered by state or village corporation selections, or both, is not yet resolved. Native allottees and miscellaneous private landowners own the balance of land in the central study area.

The central study area in the Bristol Bay drainages is within the BBAP's boundaries. The Pebble Deposit is located on patented state land designated for minerals. Segments of the transportation corridor study area traverse state lands. Infrastructure on state lands is subject to the BBAP's management requirements.

Twenty-six management units, totaling 2.2 million acres of state-owned or state-selected land, are all or partly in the central study area. Appendix 18A lists those 26 BBAP management units and the BBAP's management intent and resource inventory data for each. Table 18-5 shows the primary land use designation and acreage for each of the management units, which are depicted on Figure 18-3. (The primary designation does not necessarily exclude other uses compatible with the primary designation. Note that some management units consist of two or more non-contiguous tracts.) As noted in the table, four units, including the two largest units (with more than 1.5 million acres), are largely outside the central study area. An estimated 600,000 acres of state land are located in the central study area.

The highlights of the information in Appendix 18A are summarized below:

- **Minerals (Mi).** The Pebble Deposit straddles parts of three management units, totaling 110,080 acres, which are designated for minerals use. The management intent for units R06-23 (Pebble) and R06-24 (Pebble Streams) is "to accommodate mineral exploration and development and to allow [A]DNR the discretion to make specific decisions as to how development may occur, through the authorization process." The management intent for unit R10-02 (Pebble 2) is similar. The management intent for all three units also stresses the need to protect the anadromous fish streams in the Upper Kaktuli River corridor and to minimize or avoid effects from mining on habitat and recreational activities near the headwaters of Upper Talarik Creek.
- **Recreation and Tourism—Public Use Site (Rp).** Four sites (R06-28, R06-29, R06-31, and R06-32), totaling 975 acres along the Upper Kaktuli River, are designated for public recreation and tourism and are subject to the NMRRMP.

- **Public Facilities—Retain (Pr).** Several units, totaling 1,350 acres, now used for local public facilities at Iliamna (R08-07, airport), Nondalton (R08-03 and R08-04, airport), and Pedro Bay (R09-04 and R09-05, airport and school) are designated to remain in state ownership and continue in those uses.
- **Settlement (Se).** The following state-owned or -selected units, totaling 65,464 acres, are designated for future settlement use: R08-08 near Iliamna (326 acres), R08-02 immediately west of Nondalton (2,552 acres), R08-05 along the Newhalen River between Iliamna and Nondalton and including a possible bridge crossing and road segment (16,806 acres), R09-03 along the Pile River valley (20,758 acres), and R09-02 along Upper Chekok Creek (25,022 acres), part of which is to be conveyed to L&PB. Units designated for settlement are deemed appropriate for future disposal.
- **Public Recreation and Tourism—Dispersed (Rd).** This designation is placed on Unit R06-30, the 20,636-acre Upper Koktuli River corridor, which is covered by the NMRRMP. Two other units designated for this use (R09-06, Iliamna Lake Islands, and R10-03, Iliamna Lake NW) are largely located outside the central study area; they are in the Kvichak River drainage and outside the NMRRMP.
- **General Use (Gu).** Roughly half of the state land in the central study area, an estimated 300,000 acres, is in units designated for general use, most notably 41,962 acres in R10-01 Upper Talarik Creek. The management intent for that unit states that it “is to be managed for a variety of uses including mineral exploration and development, public recreation and tourism, protection of anadromous fish and wildlife resources and habitat.” Its resource inventory notes this unit’s value for fish habitat, sportfishing, and big game habitat.

General use is the most flexible designation. It allows a variety of uses consistent with the specific management intent for each unit, and land with this designation may be available for private or nonstate public acquisition.

In summary, the Pebble Deposit is situated on state lands designated for minerals use. The transportation study area includes units on state lands designated variously for minerals, settlement, or general use as well as units located on Native corporation lands. None of the study area would be situated on lands primarily designated for recreation-related uses or existing public facilities.

The four lake-region communities in the central study area are Iliamna, Nondalton, Newhalen, and Pedro Bay. Iliamna and its airport are already serving as a staging area for Pebble exploration and are positioned to play a key role if development occurs. (The community profile maps for Iliamna are provided as Figures 18-7A through 18-7D. These map figures exemplify the sort of information that the community profile maps present. The community maps for Nondalton, Newhalen, and Pedro Bay are provided as Figures 18-7E through 18-7G.)

Newhalen and Nondalton, as second-class cities, have authority under state law to exercise land use planning and regulatory powers, but have not chosen to exercise those powers. The unincorporated communities do not have such authority; however, several village councils in the unincorporated communities have prepared strategic or environmental plans to guide their development, as described below:

- The *Igiugig Village Community Comprehensive Strategic Plan* (Igiugig Village Council, 2001) focuses on community values and goals, rather than land use issues.
- *A Well-Made Basket: The Kokhanok Community Plan* (Kokhanok Tribal Council, 2004) mainly treats community values, infrastructure priorities, and economic and human resource development.
- The Levelock Watershed Community Planning Project (Levelock Village Council and Agnew Beck Consulting, 2005) identifies management issues for the Levelock watershed, a 2,000-square-mile area that extends from western Iliamna Bay to Kvichak Bay and includes the Kvichak River and much of the Alagnak River drainage. The major issues identified are water quality, trespass, overuse by nonlocal recreationists, and river-bank erosion. The plan's goals stress protection of traditional and subsistence uses, watershed pollution control, and reduction in trespasses and overuse.
- The *Nondalton Long-range Environmental Plan* (Nondalton Tribal Council, 2006) focuses primarily on environmental issues (such as waste management, and water and environmental quality), rather than land use issues.

The private landholdings in the central study area are under the planning jurisdiction of L&PB and are subject to its land planning and regulatory ordinances, as previously described.

18.6.2.2 Transportation Corridor Study Area

Chapter 19, Transportation, describes the existing and planned overland, air, and water transportation facilities in the Bristol Bay drainages study area. The relevant points are summarized below.

The *Revised Southwest Alaska Transportation Plan* (SWATP; PB Consult Inc., 2004) is a long-term multi-modal transportation plan for an extensive region that includes the Lake and Peninsula, Bristol Bay, Kodiak Island, and Aleutians East boroughs, plus the Dillingham Census Area, the Pribilof Islands, and the rest of the Aleutian Islands. The SWATP identifies two overland transportation corridors for potential development in the central study area. These transportation corridors have been incorporated into the BBAP, and a portion of the Cook Inlet to Bristol Bay corridor is shown on Figure 18-3. The two corridors, as envisioned in the SWATP, are described below:

- **Cook Inlet to Bristol Bay Corridor.** This corridor would involve improvements to the existing Williamsport-Pile Bay Road and its eventual extension, in stages, to Iliamna, to Igiugig, and to Naknek, with a spur road to Nondalton and a road and bridge to connect Naknek and South Naknek (Figure 19-9 in Chapter 19). The SWATP anticipates that the Williamsport-Pile Bay Road and the Iliamna-Nondalton segments might be built within the next twenty years even without development of the Pebble Project. Construction of the Pile Bay to Iliamna segment is regarded as unlikely in the next twenty years in the absence of any new resource development or other changed circumstances in the Iliamna area, such as development of the Pebble Project.
- **Dillingham/Bristol Bay Area Corridor.** The SWATP identifies this corridor for eventual development of a road from Dillingham through Aleknagik to Levelock, where it would link with the Cook Inlet to Bristol Bay and the Alaska Peninsula corridors (Figure 19-8 in Chapter 19). This corridor is conceptual. The SWATP does not expect that an overland connection between

any study area communities and Bristol Bay communities will be built within the next twenty years.

A separate study, the *Iliamna Regional Transportation Corridor Analysis* (IRTCA; PND Engineers, Inc., 2007), examined corridor options for a possible industrial road from Williamsport to the Pebble Deposit area. The study's preferred corridor generally follows the SWATP's Cook Inlet to Bristol Bay corridor. For the most part, the preferred corridor in the central study area traverses surface land owned or selected by Iliamna Natives Ltd. or by Pedro Bay Native Corp., with smaller portions crossing other private lands or state-owned or -selected lands.

18.7 Summary

This chapter describes the existing ownership, use, and management status of lands and surface waters in the Bristol Bay drainages regional study area. The regional study area encompasses approximately 22,526 square miles and is very lightly populated, with an average of about one person per 9 square miles. The major landowners are the state and federal governments, and ANCSA village and regional corporations. Other landowners include borough and city governments, the state Municipal Land Trustee Program, Alaska Native allotment owners, and various other private landowners.

All the state-owned and state-selected lands in the study area are covered by the BBAP and are subject to its land use designations and management regimes, except some management units designated for recreational uses that are also subject to the NMRRMP.

Most federal lands in the regional study area are part of three national park units and are here regarded as recreational lands subject to NPS plans and management requirements. The BLM owns the balance of unencumbered federal lands in the regional study area, all of which are located outside and west and southwest of the central study area. In accordance with its recently completed resource management plan for this region, BLM manages these federal lands for multiple uses consistent with applicable protection measures. BLM-managed lands in the Kvichak, Iliamna West, and Alagnak planning blocks are open to exploration for and development of leasable and locatable mineral resources. BLM also manages several state and/or Native corporation selections in the central study area, pending the outcome of the selection process.

Most private landholdings, including Native village corporation holdings and ANCSA Section 14(c)(3) conveyances, are located in or around settlements. The L&PB's limited holdings include some public-use sites at settlements and an approved municipal-entitlement selection in a remote location on upper Chekok Creek.

Non-federal and non-state lands in the study area may be subject to local governmental planning jurisdiction. The L&PB administers subdivision regulations and development permits for land development. It also has an ordinance governing large project permits which requires a socioeconomic and fiscal assessment of major project impacts on the borough and appropriate mitigation measures. The L&PB does not have a land use plan, nor does it exercise zoning powers. The borough does have an approved coastal management program which provides it an avenue for participation in federal and state decisions that affect coastal resources. Finally, the borough levies a severance tax on extraction of metal ores and gravel. None of the lakes-region communities exercise planning powers under state law.

The Dillingham Census Area does not have a borough government, but it does have an approved coastal management program through the BBCRSA. The western part of the regional study area in the Koktuli, Mulchatna, and Nushagak drainages, downstream of the Pebble Deposit, is within the BBCRSA. The BBCRSA coastal management program has adopted enforceable policies that designate “all non-federal lands and waters within the coastal zone of the Nushagak and Mulchatna watershed” as subsistence and recreational use areas.

The state and the Alaska Native village corporations are the main landowners in the central study area. The BBAP designates the management units on which the Pebble Deposit and other nearby state mining claims are located as appropriate for minerals use.

In the years immediately after the positive results of Northern Dynasty Mines Inc.’s initial exploration activities, the vicinity of Pebble Project became the target of a spate of new mining claims. Some of these claims were filed by Northern Dynasty, but most were by other mining-exploration firms, which have also undertaken some exploration. Some of the latter claims have since been relinquished, although many remain active.

18.8 References

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18.9 Glossary

The following are the definitions of land use designations as stated in the Bristol Bay Area Plan (excerpted from ADNDR, 2005a):

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 [A]DNDR 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 varied size 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. This land will remain in state ownership.

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.

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.

TABLES

TABLE 18-1
Bristol Bay Area Plan Subject Acreage in the Regional Study Area, by Planning Region

Planning Region	Acres
Region 6, Nushagak, Mulchatna (partial)	1,634,257 ^a
Region 7, Upper Mulchatna and Upper Hoholtna	1,606,959
Region 8, Lake Clark, Newhalen	71,779
Region 9, Eastern Iliamna Lake	690,646
Region 10, Western Iliamna Lake, Kvichak	823,566
Region 11, Bristol Bay Borough Area	395,824
Total	5,223,031

Notes:

a. Includes only the part of Region 6 that is within the regional study area.

Source: ADNR, 2005a.

TABLE 18-2

Numbers of Acres for Each Land Use Designation for the Regional Study Area, by BBAP Planning Region

LUD	Region 6 Nushagak, Mulchatna (partial) ^a	Region 7 Upper Mulchatna & Upper Hoholitna	Region 8 Lake Clark, Newhalen	Region 9 Eastern Iliamna Lake	Region 10 Western Iliamna Lake, Kvichak River	Region 11 Bristol Bay Borough Area	Total
Gu	1,304,182	1,293,899	43,102	552,573	432,587	379,344	4,005,687
Ha	199,246 ^b			921			200,167
Ma						293	293
Mi	85,034			4,480	25,046		114,560
Pr			1,313	163	251	1,988	3,715
Rd	241,937	157,126	7,680	22,101	360,946		789,790
Rp	3,104	2,062			3,281		8,447
Se		153,872	19,684	110,408	1,455	13,894	299,313
Wd						305	305
Total	1,634,257	1,606,959	71,779	690,646	823,566	395,824	5,223,031

Notes:

a. Includes only the management units in Region 6 that are within the regional study area.

b. These 199,246 acres (located in Management Unit R06-09, Corridor of the Lower Mulchatna River) are co-designated as both Ha and Rd; they are included in the acres designated Rd, but they are not double-counted in the totals for the columns.

Gu = general use

Ha = habitat

LUD = land use designation

Ma = materials site

Mi = minerals

Pr = public facilities—retain

Rd = recreation and tourism—dispersed

Rp = public recreation and tourism—public use site

Se = settlement

Wd = waterfront development

Source: ADNR, 2005a.

TABLE 18-3
Status of ANCSA Section 14(c)(3) Conveyances, Lakes-region Communities

Community	Village Corporation	Acres Conveyed
Igiugig	Igiugig Native Corp.	122
Iliamna	Iliamna Natives Limited	107 ^a
Kokhanok	Alaska Peninsula Corp. ^b	1,280
Levelock	Levelock Natives Limited	28
City of Newhalen	Alaska Peninsula Corp. ^b	1,280
City of Nondalton	Kijik Corp.	pending
Pedro Bay	Pedro Bay Native Corp.	405

Notes:

a. Additional acreage may be conveyed.

b. The Alaska Peninsula Corp. is a merger of the Native village corporations for the five villages of Kokhanok, Newhalen, Port Heiden, South Naknek, and Ugashik.

Source: ADCCED, 2008a and 2008b.

TABLE 18-4
Village Corporation Land Entitlements under ANCSA, Lakes-region Communities

Community	Village Corporation	ANCSA Section 12(a) Entitlement (acres)	ANCSA Section 12(b) Entitlement (acres)
Igiugig	Igiugig Native Corp.	69,120	503
Iliamna	Iliamna Natives Limited	69,120	3,939
Kokhanok	Alaska Peninsula Corp. ^a	92,160	9,667
Levelock	Levelock Natives Limited	92,160	4,611
Newhalen	Alaska Peninsula Corp. ^a	69,120	2,406
Nondalton	Kijik Corp.	115,200	11,210
Pedro Bay	Pedro Bay Native Corp.	92,160	4,842

Notes:

a. The Alaska Peninsula Corp. is a merger of the Native village corporations for the five villages of Kokhanok, Newhalen, Port Heiden, South Naknek, and Ugashik.

Source: ADCCED, 2008a.

TABLE 18-5
Land Use Designations, Acreage by BBAP Management Units That Are Wholly or Partly in the Central Study Area

Unit # and Name	Land Use Designation					
	Gu	Mi	Pr	Rd	Rp	Se
R06-05 (partial) ^a RRMP 19	1,196,780					
R06-23 Pebble		48,526				
R06-24 Pebble Streams		36,508				
R06-28 PU28/Koktuli River					161	
R06-29 PU29/Koktuli River					82	
R06-30 Corridor Upper Koktuli River				20,636		
R06-31 PU30/Koktuli River					491	
R06-32 PU31/Upper Koktuli River					241	
R08-01 Groundhog Mt.	23,284					
R08-02 Nondalton						2,552
R08-03 Nondalton Airstrip			82			
R08-04 Nondalton			18.08			
R08-05 Newhalen River						16,806
R08-06 Roadhouse Mt.	11,622					
R08-07 Iliamna Airport			1,203			
R08-08 Iliamna						326
R09-01 Knutson Creek- Three Sisters Mt.	183,905					

Unit # and Name	Land Use Designation					
	Gu	Mi	Pr	Rd	Rp	Se
R09-02 Upper Chekok Creek						25,022
R09-03 Pile River						20,758
R09-04 Pedro Bay Airport			46			
R09-05 Pedro Bay School			0.92			
R09-06 (partial) ^a Iliamna Lake Islands				19,833		
R09-07 (partial) ^a Tommy Creek/ Chigmit	352,970					
R10-01 Upper Talarik Creek	41,962					
R10-02 Pebble 2		25,046				
R10-03 (partial) ^a Iliamna Lake NW				171,321		
Total	1,810,523	110,080	1,350	211,790	975	65,464

Notes:

- a. Most of units R06-05, R09-06, R09-07, and R10-03 are outside the central study area. It is estimated that the total state-owned acreage within the central study area is roughly 600,000 acres. This is not reflected in this table.

Shading indicates management units in which Pebble mining claims are located or which are traversed by the possible transportation corridor.

Gu = General Use

Mi = Minerals

Pr = Public Facilities – Retain

Rd = Public Recreation and Tourism – Dispersed

Rp = Public Recreation and Tourism – Public Use Site

Se = Settlement

Source: ADNR, 2005a.

TABLE 18-6

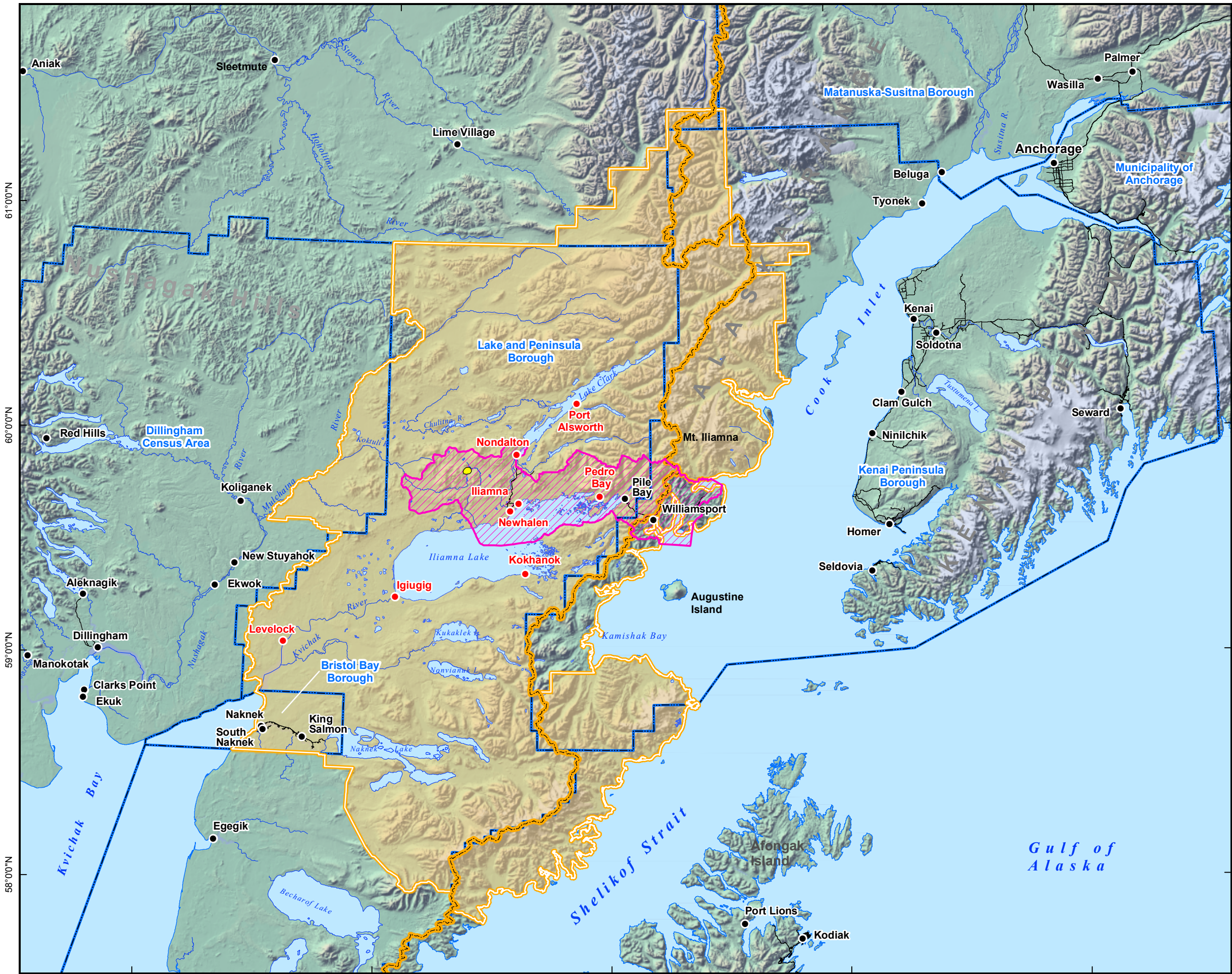
Numbers of New Mining Claims on State Lands, 1998-2007, in USGS Quadrangles Which Overlap the Regional Study Area

Year	Lake Clark	Iliamna	Dillingham	Reg. Study Area Total	Statewide Total
1998	0	2	0	2	9,785
1999	0	0	0	0	11,977
2000	0	2	121	123	5,086
2001	8	134	87	229	1,766
2002	2	36	0	38	1,571
2003	501	720	34	1,255	3,459
2004	267	944	5	1,216	4,603
2005	866	318	147	1,331	5,308
2006	87	26	0	113	6,858
2007	831	171	99	1,101	6,607
Total	2,562	2,353	493	5,408	57,020

Source: ADNR, 2003, 2006, 2008.

FIGURES

158°0'0"W 156°0'0"W 154°0'0"W 152°0'0"W 150°0'0"W



61°0'0"N
60°0'0"N
59°0'0"N
58°0'0"N

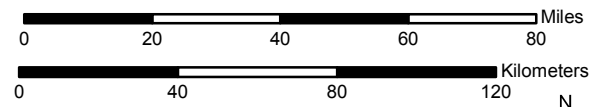
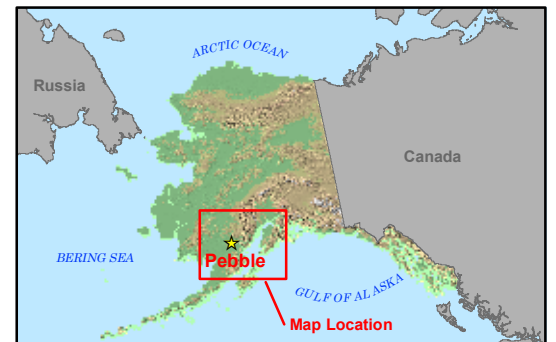
158°0'0"W 156°0'0"W 154°0'0"W 152°0'0"W 150°0'0"W



Figure 18-1
Bristol Bay Drainages
Land Use Study Area

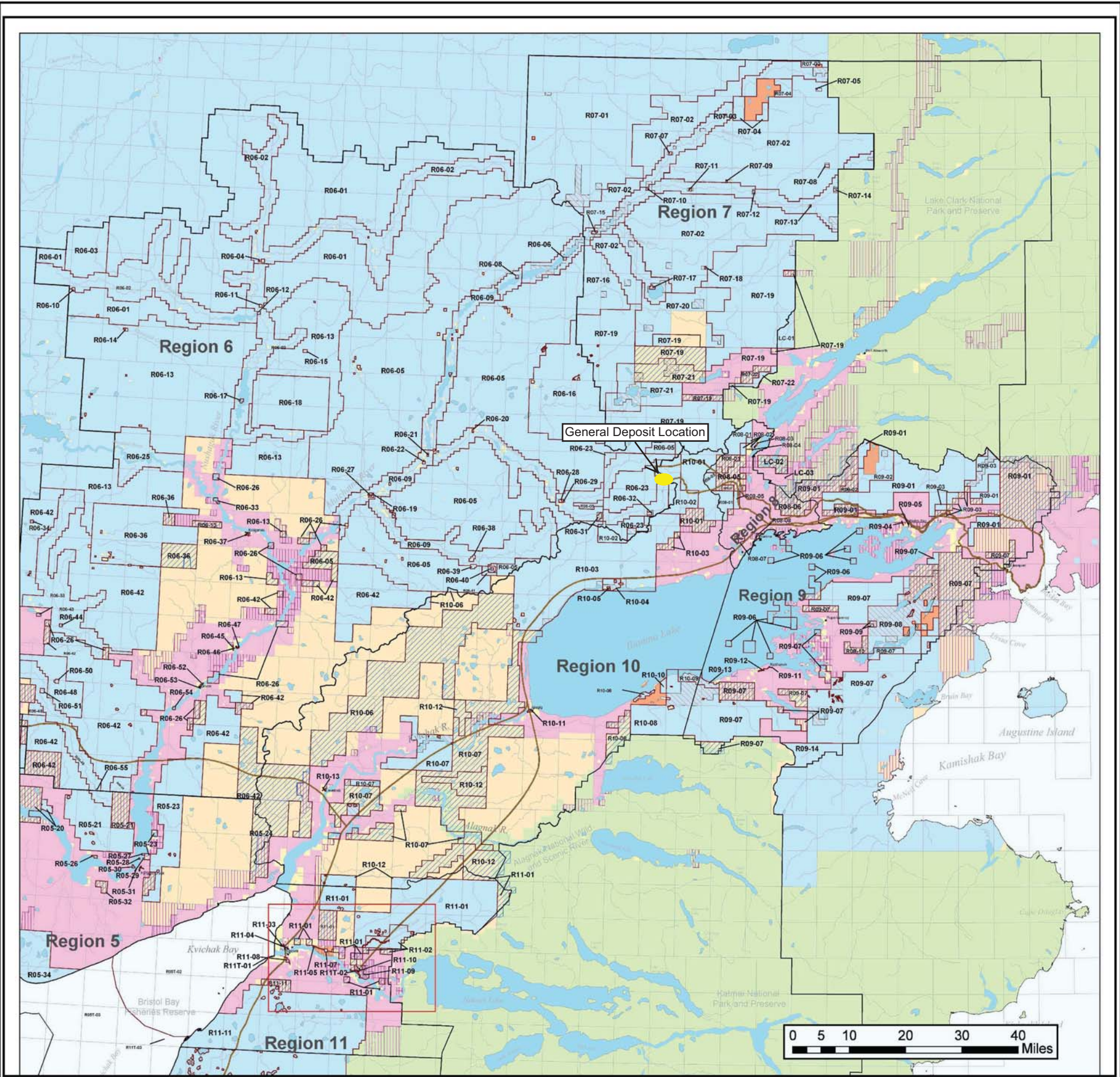
Legend

- Lakes-region Communities
- Communities
- Bristol Bay Drainages Regional Study Area
- Cook Inlet Drainages Regional Study Area
- Bristol Bay/Cook Inlet Drainages Boundary
- Central Study Area
- General Deposit Location
- Political Boundary
- Existing Roads



Scale 1:1,900,000
Alaska State Plane Zone 5 (units feet)
1983 North American Datum

File: RDI_KW_BB_Fig18-1_11X17L_1of1_D03.mxd	Date: September 8, 2010
Version: 3	Author: RDI-LS



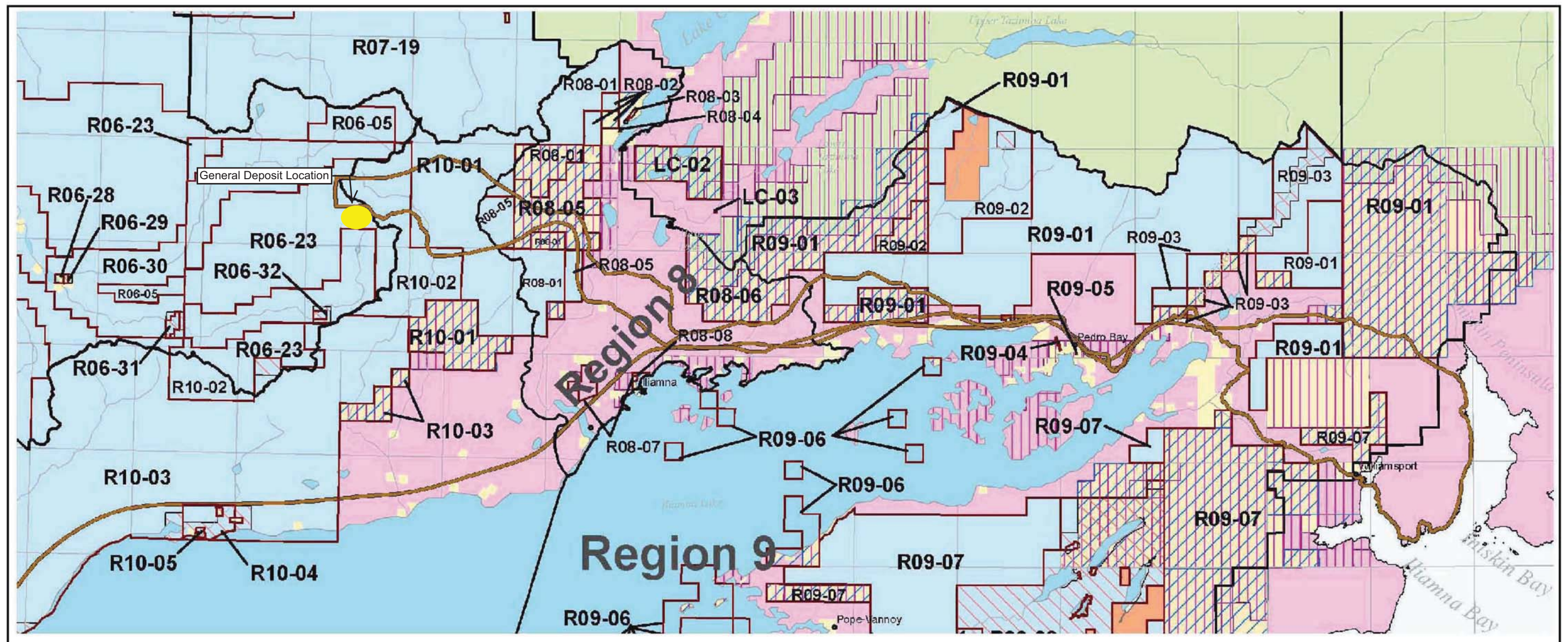
Legend

- Transportation Corridors
- Plan & Upland Region Boundary
- Management Unit Boundary
- Land Ownership
 - State
 - State-Owned Tidelands
 - State-Selected
 - National Wildlife Refuge, Park, Preserve
 - BLM
 - Military
 - Native
 - Native Selected
 - Private
 - Municipal Conveyed or Approved
 - Municipal Selected

Management Units and Designations

LC-01	Gu	R06-13	Gu	R06-41	Rd	R07-14	Rp	R09-12	Pr	R12-02	Se
LC-02	Rd	R06-14	Rp	R06-42	Gu	R07-15	Rp	R09-13	Rd	R12-03	Gu
LC-03	Pr	R06-15	Rp	R06-43	Rp	R07-16	Gu	R09-14	Gu	R12-04	Se
R05-20	Gu	R06-16	Gu	R06-44	Rp	R07-17	Rp	R10-01	Gu		
R05-21	Se	R06-17	Rp	R06-45	Pr	R07-18	Rp	R10-02	Mi	R05T-02	Ha,Hv
R05-22	Rd,Ha	R06-18	Mi	R06-46	Pr	R07-19	Gu	R10-03	Rd	R05T-03	Gu
R05-23	Gu	R06-19	Hr	R06-47	Ma	R07-20	Se	R10-04	Rp	R11T-01	Wd
R05-24	Gu	R06-20	Rp	R06-48	Ha	R07-21	Se	R10-05	Rp	R11T-02	Wd
R05-26	Rp	R06-21	Rp	R06-49	Rd,Ha	R07-22	Se	R10-06	Gu	R11T-03	Gu
R05-27	Rp	R06-22	Rp	R06-50	Rp	R08-01	Gu	R10-07	Rd	R12T-01	Ha
R05-28	Rp	R06-23	Mi	R06-51	Rp	R08-02	Se	R10-08	Gu	R12T-02	Ha,Hv
R05-29	Rp	R06-24	Mi	R06-52	Pr	R08-03	Pr	R10-09	Rd	R12T-03	Wd
R05-30	Rp	R06-25	Rd,Ha	R06-53	Pr	R08-04	Pr	R10-10	Se	R12T-04	Gu
R05-31	Pr	R06-26	Rd,Ha	R06-54	Rp	R08-05	Se	R10-11	Pr		
R05-32	Gu	R06-27	Rp	R06-55	Rp	R08-06	Gu	R10-12	Gu		
R05-34	Se	R06-28	Rp	R07-01	Gu	R08-07	Pr	R10-13	Pr		
R06-01	Gu	R06-29	Rp	R07-02	Gu	R08-08	Se	R11-01	Gu		
R06-02	Rd,Ha	R06-30	Rd	R07-03	Rp	R09-01	Gu	R11-02	Se		
R06-03	Mi	R06-31	Rp	R07-04	Se	R09-02	Se	R11-03	Pr		
R06-04	Rp	R06-32	Rp	R07-05	Rp	R09-03	Se	R11-04	Pr		
R06-05	Gu	R06-33	Rp	R07-06	Rd	R09-04	Pr	R11-05	Ma		
R06-06	Rp	R06-34	Rp	R07-07	Rp	R09-05	Pr	R11-06	Pr		
R06-07	Rd	R06-35	Rd,Ha	R07-08	Rp	R09-06	Rd	R11-07	Ma		
R06-08	Rp	R06-36	Mi	R07-09	Rp	R09-07	Gu	R11-08	Pr		
R06-09	Rd,Ha	R06-37	Pr	R07-10	Rp	R09-08	Se	R11-09	Pr		
R06-10	Rp	R06-38	Rp	R07-11	Rp	R09-09	Ha	R11-10	Pr		
R06-11	Rp	R06-39	Rp	R07-12	Rp	R09-10	Mi	R11-11	Gu		
R06-12	Rp	R06-40	Rp	R07-13	Rp	R09-11	Pr	R12-01	Gu		

Figure 18-2, Regional Study Area, Land Ownership, and Management Units and Designations under the Bristol Bay Area Plan (adapted from ADNR, 2005a)
Notes: Figure altered to show "General Deposit Location". The transportation corridors shown on figure are from the Southwest Alaska Transportation Plan.



Legend	
	Transportation Corridors
	Plan & Upland Region Boundary
	Management Unit Boundary
Land Ownership	
	State
	State-Owned Tidelands
	State-Selected
	National Wildlife Refuge, Park, Preserve
	BLM
	Military
	Native
	Native Selected
	Private
	Municipal Conveyed or Approved
	Municipal Selected

Management Unit # / Name	Designation	Acres	Management Unit # / Name	Designation	Acres
R06-05 RRMP 19	Gu	1,196,780	R08-06 Roadhouse Mountain	Gu	11,622
R06-23 Pebble	Mi	48,526	R08-07 Iliamna Airport	Pr	1,203
R06-24 Pebble Streams	Mi	36,508	R08-08 Iliamna	Se	326
R06-28 PU28/Koktuli River	Rp	161	R09-01 Knutson Cr.-Three Sisters Mt.	Gu	183,905
R06-29 PU29/Koktuli River	Rp	82	R09-02 Upper Chekok Creek	Se	25,022
R06-30 Corridor Upper Koktuli River	Rd	20,636	R09-03 Pile River	Se	20,758
R06-31 PU30/Koktuli River	Rp	491	R09-04 Pedro Bay Airport	Pr	46
R06-32 PU31/Upper Koktuli River	Rp	241	R09-05 Pedro Bay School	Pr	0.92
R08-01 Groundhog Mountain	Gu	23,284	R09-06 Iliamna Lake Islands	Rd	19,833
R08-02 Nondalton	Se	2,552	R09-07 Tommy Creek/Chigmit	Gu	352,970
R08-03 Nondalton Airstrip	Pr	82	R10-01 Upper Talarik Creek	Gu	41,962
R08-04 Nondalton	Pr	18.08	R10-02 Pebble 2	Mi	25,046
R08-05 Newhalen River	Se	16,806	R10-03 Iliamna Lake NW	Rd	171,321

Note: Gu = General use; Mi = Minerals; Pr= Public facilities- retain; Rd = Public recreation and tourism – Dispersed; Rp = Public recreation and tourism – public use site; Se = Settlement.

Figure 18-3, Central Study Area, Land Ownership, and Management Units and Designations under the Bristol Bay Area Plan (adapted from ADNR, 2005a).
Notes: Figure altered to show "General Deposit Location". The transportation corridors shown on figure are from the Southwest Alaska Transportation Plan.

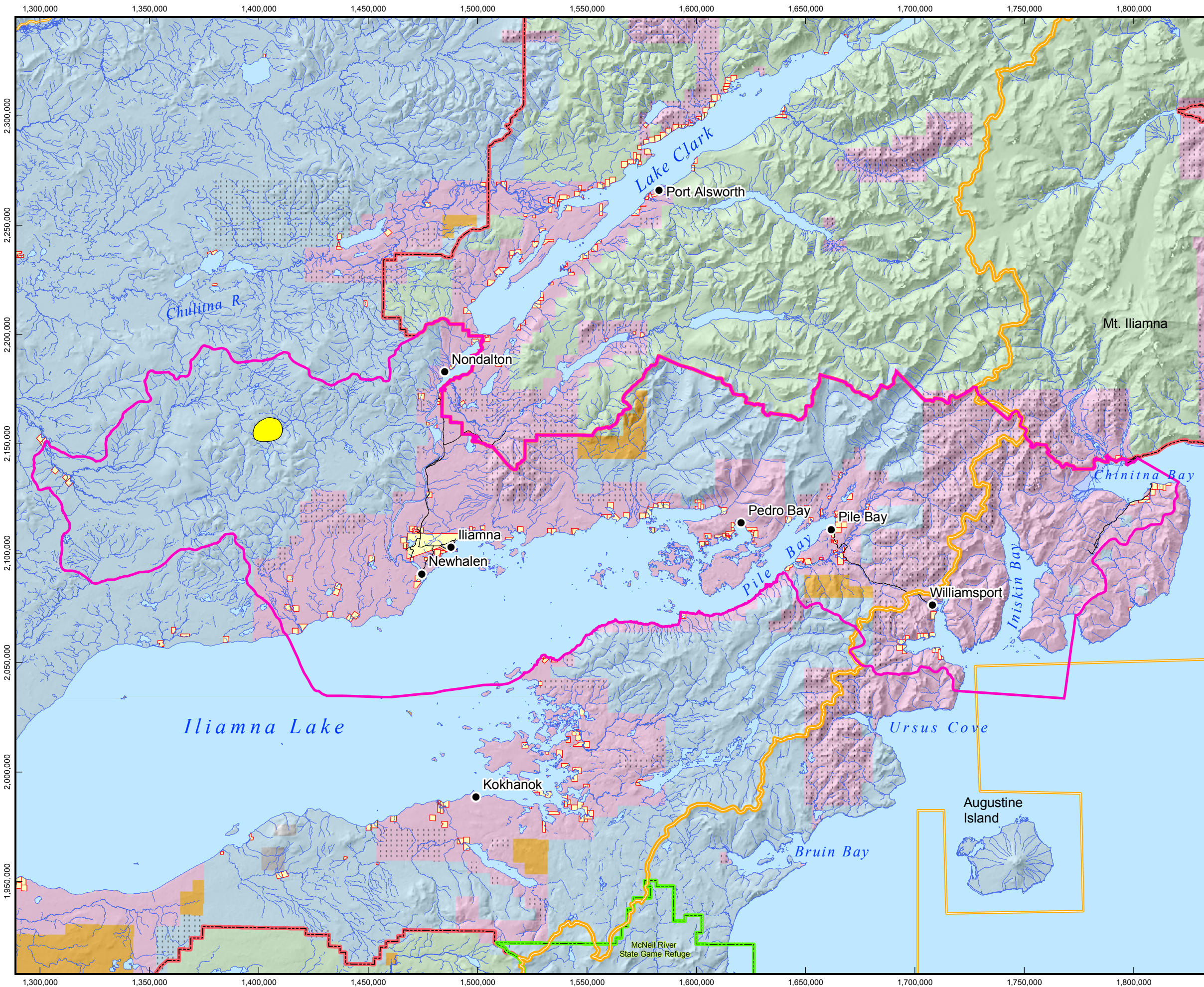


Figure 18-4
Central Study Area
General Land Ownership

Legend

- General Deposit Location
- Regional Study Area Boundary
- Central Study Area
- Bristol Bay/Cook Inlet Drainages Boundary
- Existing Roads
- National Park or Preserve
- McNeil River State Game Refuge/Sanctuary
- General Land Status (BLM, 2006b)
 - Native Patent or Interim Conveyance
 - Native Selected
 - State Patent or Tentative Approval
 - State Selected
 - National Park Service
 - Bureau of Land Management
 - Native Allotments/Private Lands (based on BLM, various)



0 5 10 15 20 Miles

0 7.5 15 22.5 30 Kilometers

Scale 1:525,000

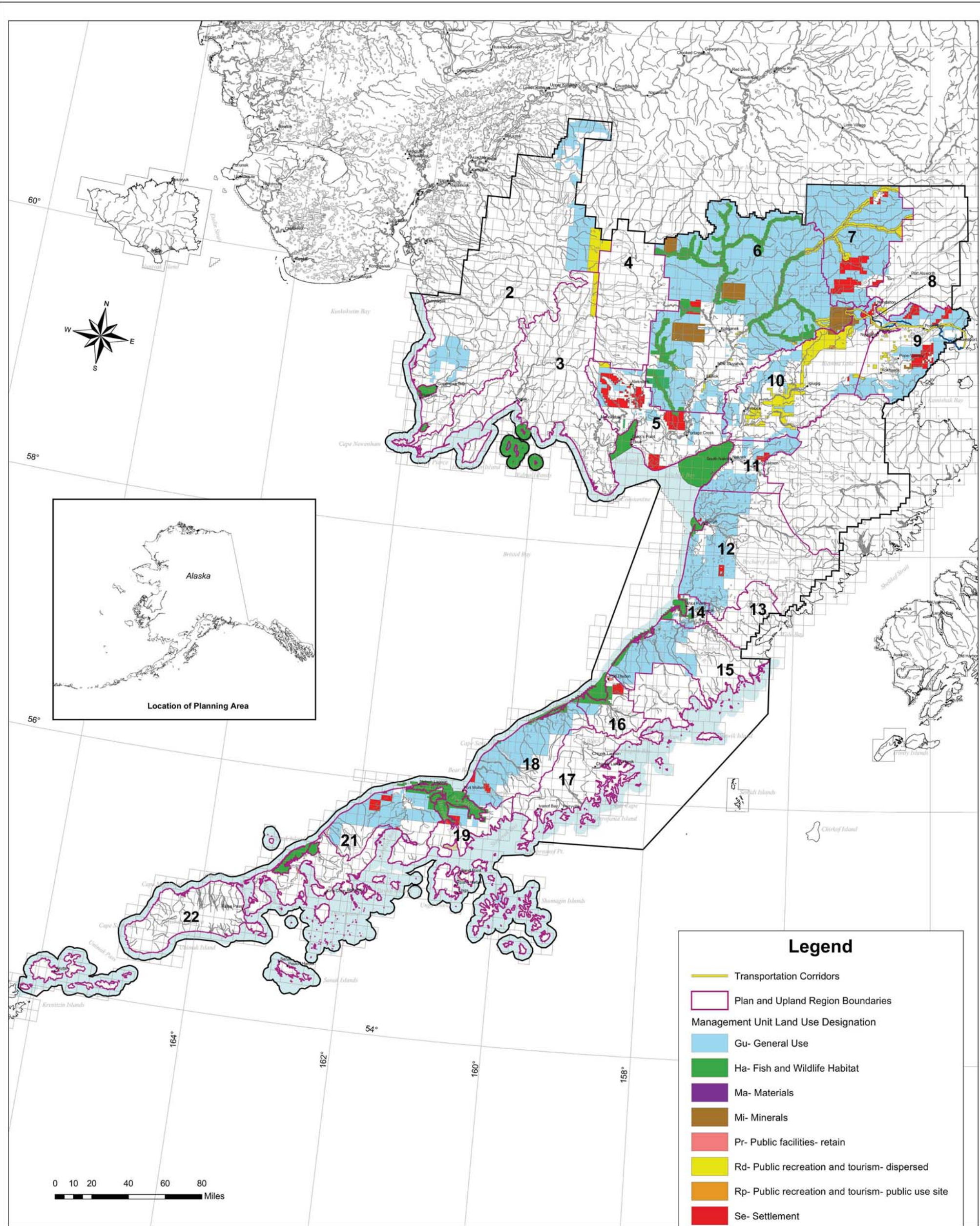
Alaska State Plane Zone 5 (units feet)
1983 North American Datum

File:RDI_KW_CI_Fig18-4_11x17L_1of1_D05.mxd

Date: September 8, 2010

Version: 5

Author: RDI-LS



Land Use Designations



Figure 18-5, Planning Area, Bristol Bay Area Plan (ADNR, 2005a)
Note: The transportation corridors shown on figure are from the Southwest Alaska Transportation Plan.

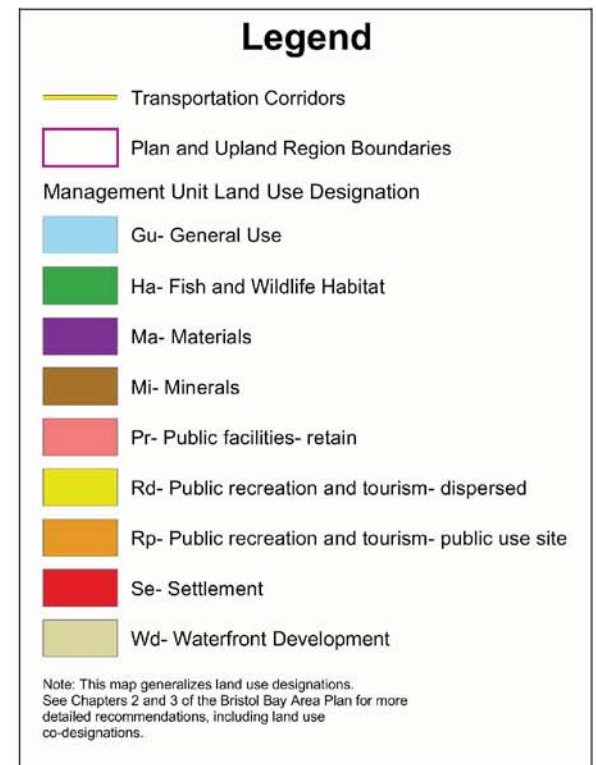
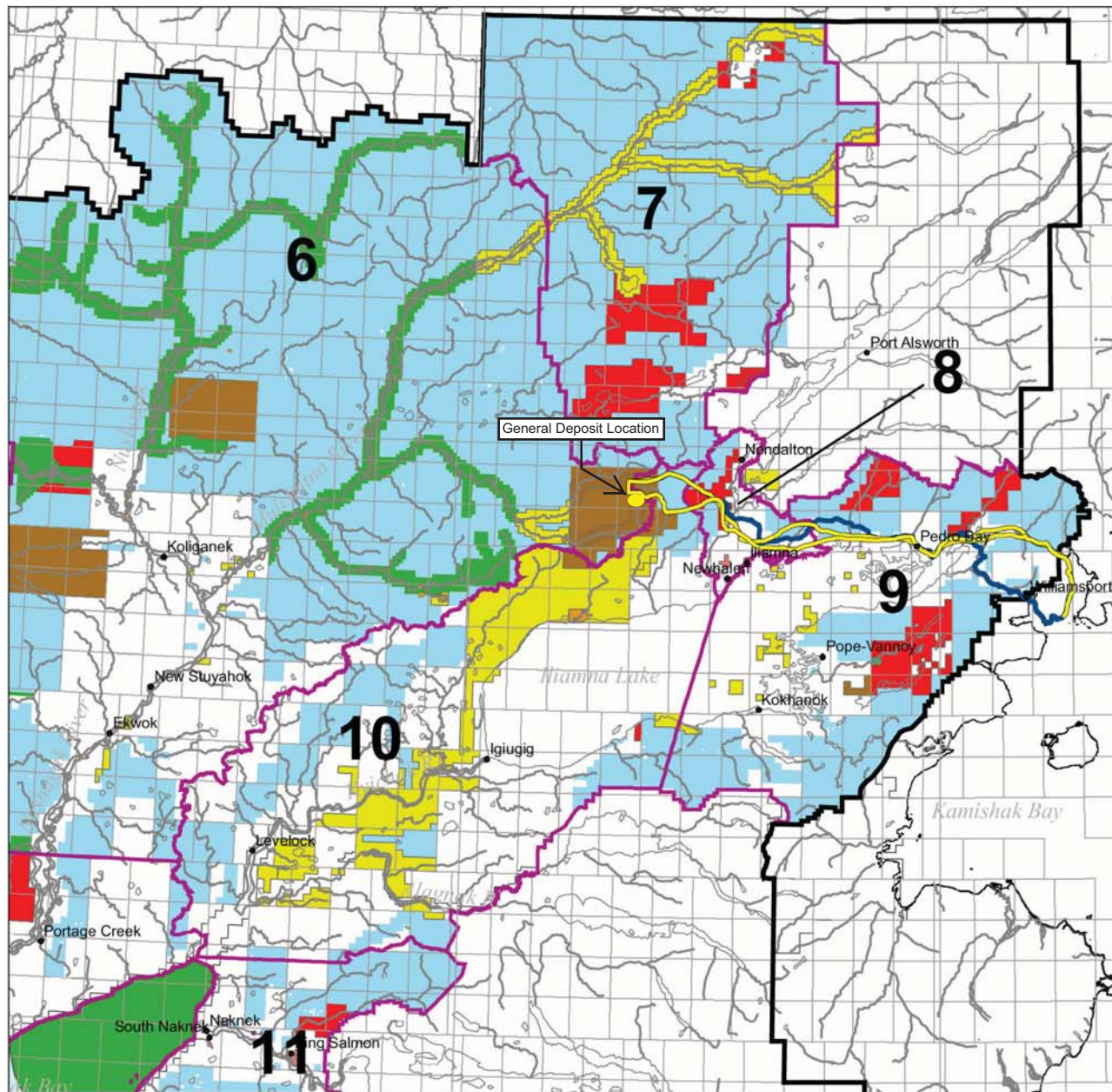


Figure 18-6, Generalized Land Use Designations for the Bristol Bay Drainages Regional Study Area (adapted from ADNR, 2005a)

Notes: Figure altered to show "General Deposit Location". The transportation corridors shown on figure are from the Southwest Alaska Transportation Plan.



Figure 18-7A, Iliamna Community Plan Map, Sheet 1 (L&PB, 2005).

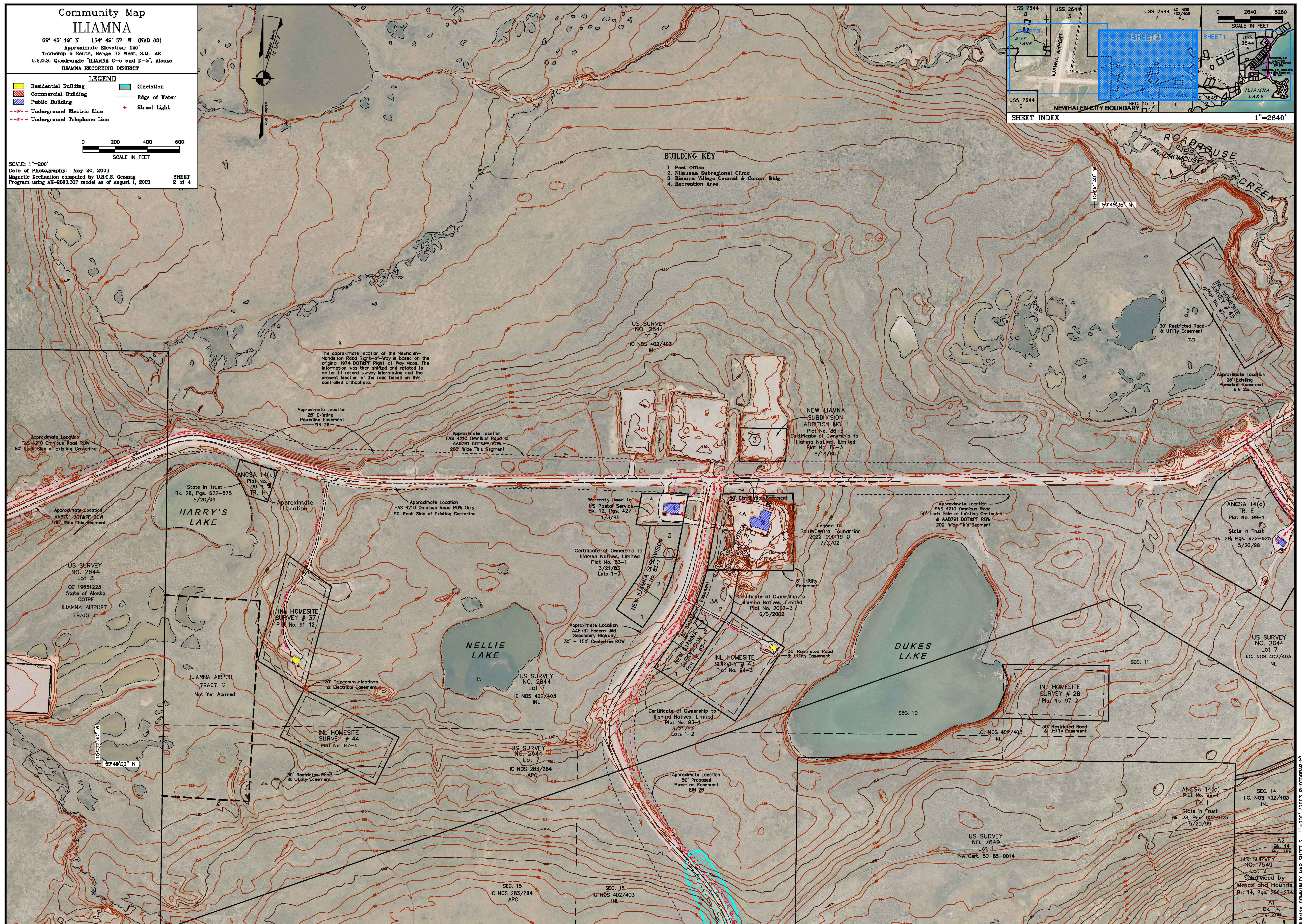
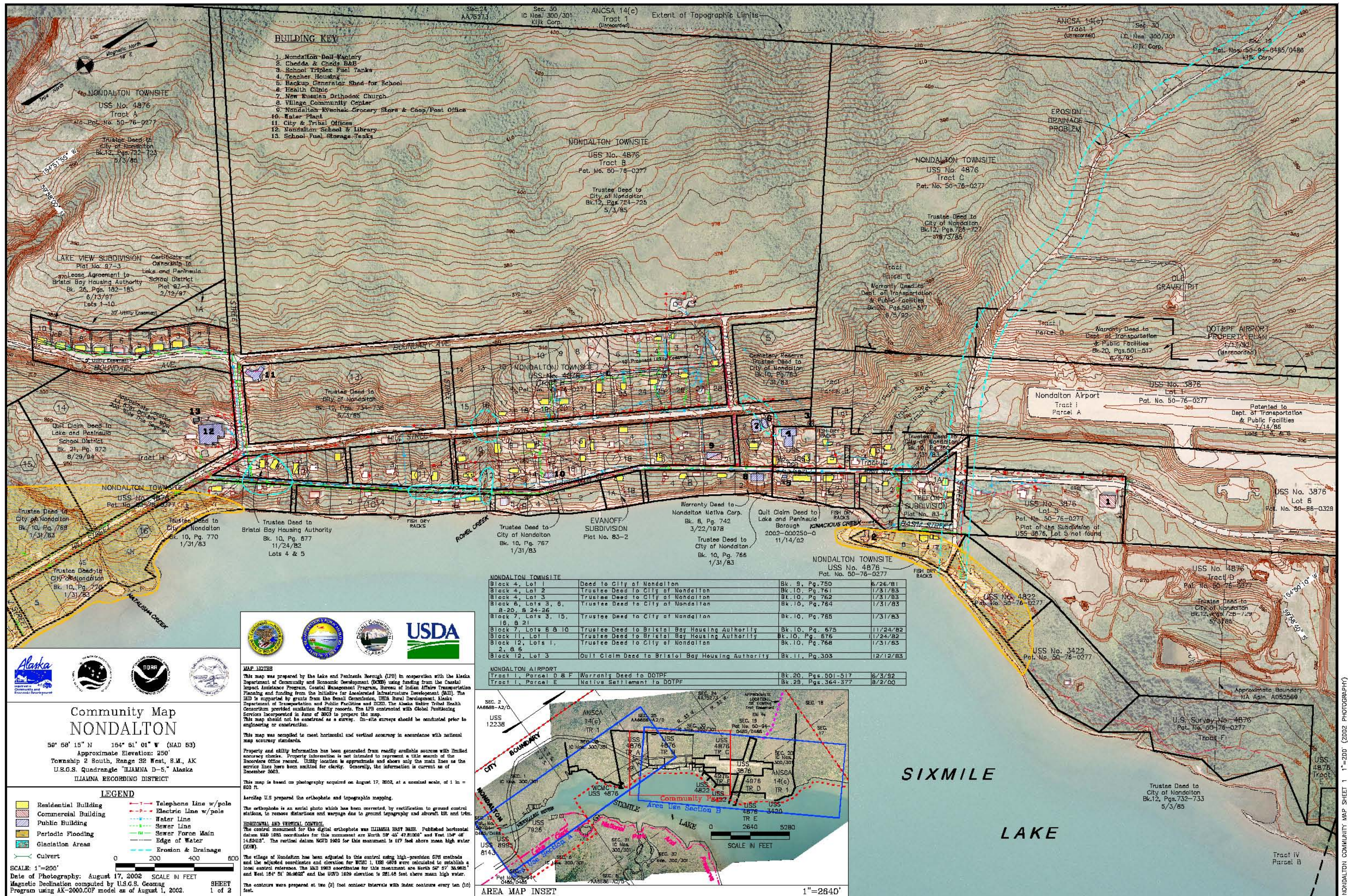




Figure 18-7C, Iliamna Community Plan Map, Sheet 3 (L&PB, 2005).



Figure 18-7D, Iliamna Area Use Map (L&PB, 2005).



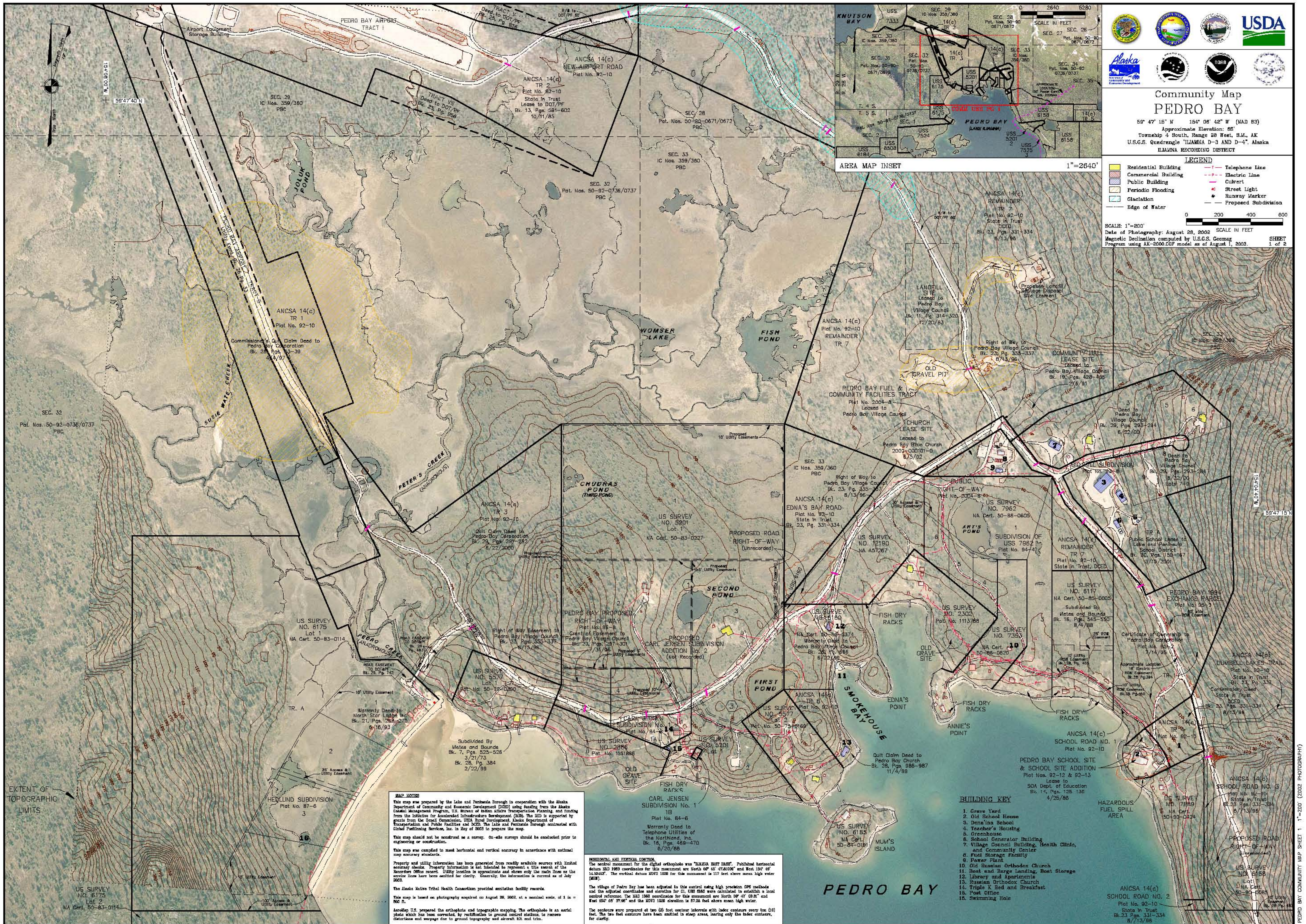


Figure 18-7G, Pedro Bay Community Map (L&PB, 2005).

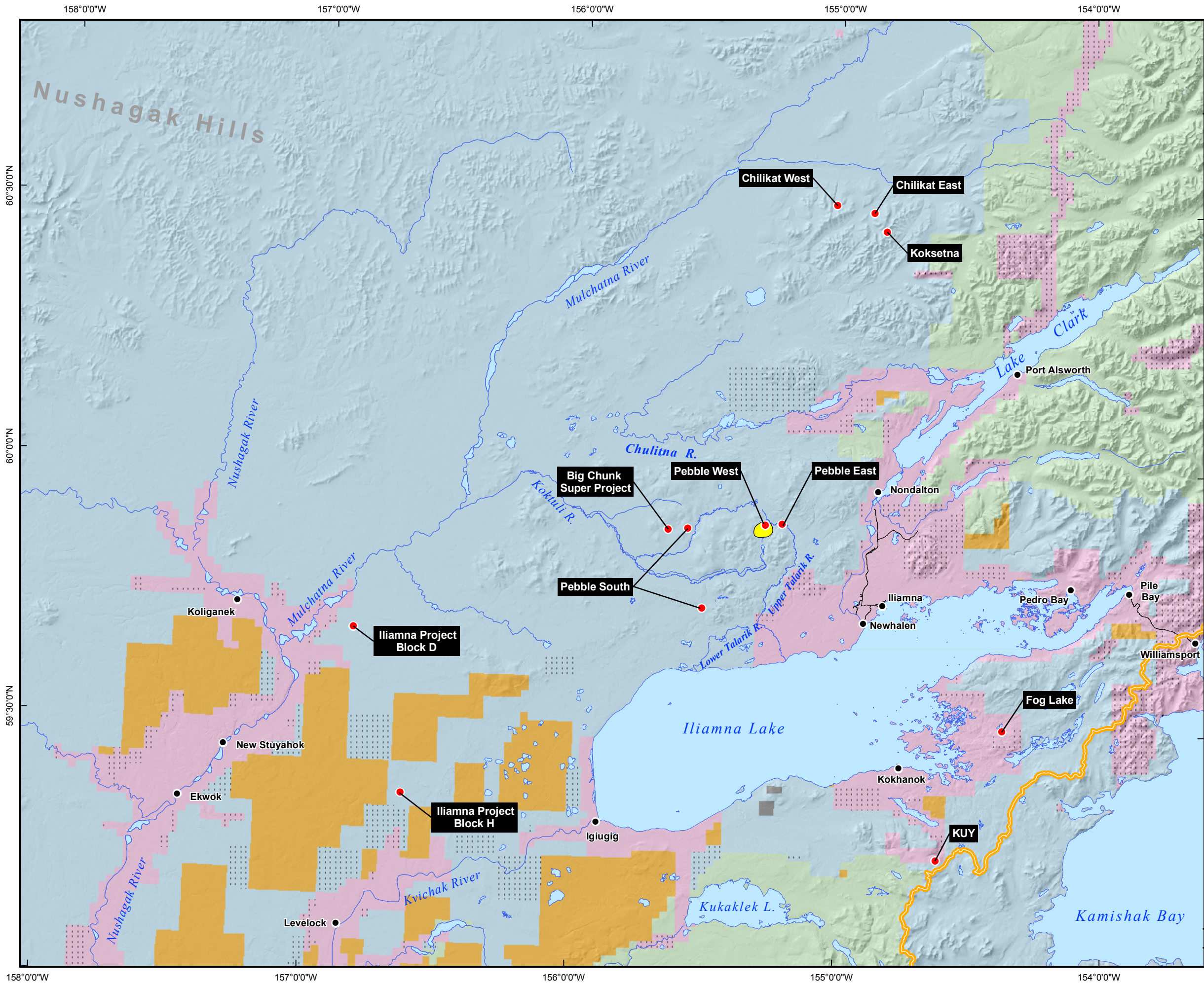
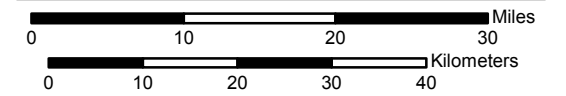
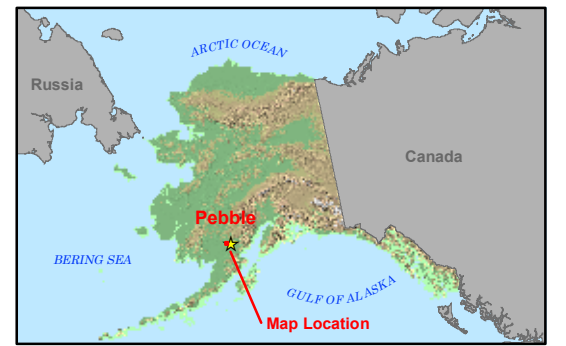


Figure 18-8
Current Mining Exploration Activity
Regional Study Area

Legend

- General Deposit Location
- Mining Exploration Properties
- Bristol Bay/Cook Inlet Drainages Boundary
- Existing Roads
- General Land Status (BLM, 2006b)
 - Native Patent or Interim Conveyance
 - Native Selected
 - State Patent or Tentative Approval
 - State Selected
 - National Park Service
 - Bureau of Land Management
 - Military



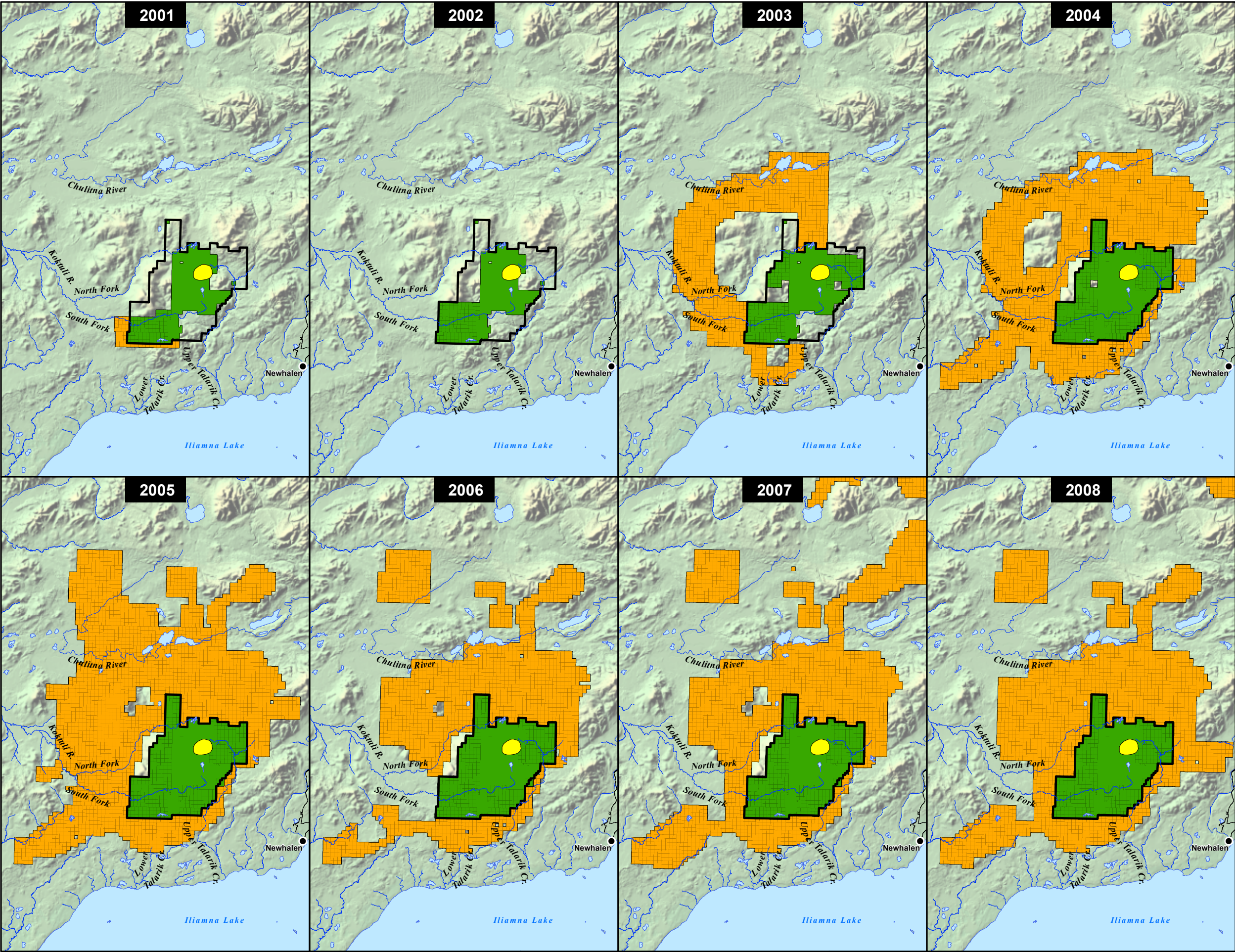
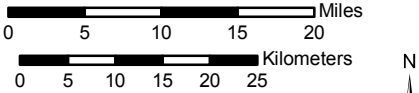
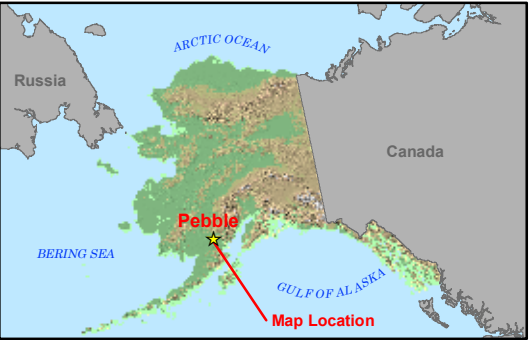


Figure 18-9
Active Mining Claims on State Land
Pebble Project Vicinity, 2001-2008

- Legend
- Boundary of Pebble Block Claims at End of 2008
 - Active Pebble Block Claims
 - Active Non-Pebble Claims
 - General Deposit Location

Note: Maps represent claims status as of December 31 of map year.



Scale 1:800,000
Alaska State Plane Zone 5 (units feet)
1983 North American Datum

APPENDIX 18A

Bristol Bay Area Plan Management Intent for Management Units That Are Wholly or Partly in the Central Study Area

Bristol Bay Area Plan, Management Intent for Management Units That Are Wholly or Partly in the Central Study Area

Unit # ^a Name LUD Acres	Management Intent	Resources, Uses, Additional Information
R06-05 (part) ^b RRMP 19 Gu 1,196,780	<p>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.</p> <p>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.</p> <p>Settlement is not considered an appropriate use.</p>	<p>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, [A]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.</p>

Unit # ^a Name LUD Acres	Management Intent	Resources, Uses, Additional Information
R06-23 Pebble Mi 48,526	<p>The general resource management intent for the Pebble Copper area is to accommodate mineral exploration and development and to allow [A]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.</p> <p>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.</p> <p>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.)</p>	<p>This land is located generally in the upper Kaktuli 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 Kaktuli River support anadromous fish. The area is also a calving area for caribou. Note to adjudicators: See units R06-24 and R10-02.</p>

Unit # ^a Name LUD Acres	Management Intent	Resources, Uses, Additional Information
R06-24 Pebble Streams Mi 36,508	<p>The general resource management intent for the Pebble Copper area is to accommodate mineral exploration and development and to allow [A]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.</p> <p>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.</p> <p>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 supersedes the management requirement of the Nushagak & Mulchatna Rivers Recreation Management Plan.</p>	<p>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 1990 Recreation Rivers Management Plan but has been incorporated into the revised Area Plan.</p>
R06-28 PU28/Koktuli River Rp 161	<p>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.</p>	<p>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.</p>
R06-29 PU29/Koktuli River Rp 82	<p>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.</p>	<p>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).</p>

Unit # ^a Name LUD Acres	Management Intent	Resources, Uses, Additional Information
R06-30 Corridor Upper Koktuli River Rd 20,636	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 [A]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. In general, authorizations should not be issued for nonrecreational 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 PU30/Koktuli River Rp 491	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.
R06-32 PU31/Upper Koktuli River Rp 241	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.

Unit # ^a	Name	LUD	Acres	Management Intent	Resources, Uses, Additional Information
R08-01	Groundhog Mountain	Gu	23,284	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. The unit is affected in part by MCO 393.
R08-02	Nondalton	Se	2,552	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 Telaquana-Nondalton trail extends through the unit.
R08-03	Nondalton	Airstrip	Pr 82	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.
R08-04	Nondalton	Pr	18.08	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.

Unit # ^a	Name	LUD	Acres	Management Intent	Resources, Uses, Additional Information
R08-05	Newhalen River Se		16,806	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 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	Roadhouse Mountain Gu		11,622	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 considered appropriate. The land selection is considerate 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.
R08-07	Iliamna Airport Pr		1,203	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	Iliamna Se		326	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.

Unit # ^a	Name	LUD	Acres	Management Intent	Resources, Uses, Additional Information
R09-01	Knutson Creek – Three Sisters Mountain	Gu	183,905	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 for occasional, isolated sites.	Unit largely consists of mountainous terrain 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	Upper Chekok Creek	Se	25,022	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	Pile River Se		20,758	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.
R09-04	Pedro Bay Airport	Pr	46	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).

Unit # ^a	Name	LUD	Acres	Management Intent	Resources, Uses, Additional Information
R09-05	Pedro Bay	School	Pr	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).
0.92				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.
R09-06 (part) ^b	Iliamna Lake	Islands	Rd		
19,833				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 for occasional, 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, and 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 Kokhanok River and Lake. Low or tall shrub predominates throughout the two latter areas except for a few sites in the far eastern part which is 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 unit are affected by Municipal selections of the Lake and Peninsula Borough.
R09-07 (part) ^b	Tommy	Creek/Chigmit	Gu		
352,970				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, 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 generally vicinity of Upper Talarik Creek. Upper Talarik Creek is cataloged as an anadromous fish stream and is noted for its good sportfishing. 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 transportation and road corridor extend through the middle of the unit. The unit is affected in part by MCO 393.
R10-01	Upper Talarik	Creek	Gu		
41,962					

Unit # ^a Name LUD Acres	Management Intent	Resources, Uses, Additional Information
R10-02 Pebble 2 Mi 25,046	The land is designated Minerals (Mi) and is to be managed for the exploration and development of mineral deposits. Impacts to anadromous and high value resident fish streams are to be avoided or reduced to levels deemed appropriate in the state/federal permitting processes related to mineral deposit development in the Pebble Copper block. Impacts to dispersed recreation along Talarik Creek should also be avoided. Mineral exploration and development within certain anadromous fish streams areas not allowed, pursuant to MCO 393. Consult with ADF&G and other appropriate agencies to determine appropriate best management practices. Permanent facilities related to commercial recreation are prohibited in this unit. The unit is to be retained in state ownership. See also unit R06-23 and unit R06-24.	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 calving area for caribou. The unit is partly affected by MCO 393.
R10-03 (part) ^b Iliamna Lake NW Rd 171,321	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. [A]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.

Source: Excerpted from ADNR, 2005a.

Notes:

- Shaded cells identify management units in which Pebble state mining claims are located or which are traversed by the possible transportation corridor.
- Most of units R06-05, R09-06, R09-07, and R10-03 are outside the central study area. It is estimated that the total state-owned acreage within the central study area is roughly 600,000 acres. The acreages given in the table are for the entire management unit, not just the portion within the study area.