



Mapping Eligible Wilderness in Alaska National Park Units

Natural Resource Report NPS/AKRO/NRR—2016/1318



ON THE COVER

Photograph of Gates of the Arctic Wilderness
Photograph courtesy of the Carl Johnson

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Abstract

The basis for much of Alaska's wilderness eligibility comes from regulations and definitions from the 1980s. The eligibility determinations made in Alaska at that time create challenges for managers today because many things have changed over the last 30 years, including:

- Wilderness eligibility review content included in General Management Plans (GMPs) from the 1980s was non-digital. These maps provide insufficient detail due to both scale and technical accuracy. Improvements in geospatial software for mapping and spatial analysis have significantly improved the accuracy of locating features and extent on the ground.
- In some locations, the wilderness eligibility determinations are no longer representative of current boundary or land status conditions. Since the 1980s, park and wilderness boundaries have changed due to changes in land ownership or use.

In response, the Wilderness Eligibility Mapping project was initiated to increase the accuracy of wilderness information by developing digital representations of NPS Alaska wilderness areas. Through this effort, the spatial extent of Congressionally designated wilderness and eligible wilderness areas are accurately mapped in a manner that reflects the original intent of the GMP wilderness review, but within current land status and management conditions. Likewise, some areas are now ineligible for wilderness based on previous inaccuracies in the data or changes in land status. These changes are reflected in the updated maps.

One of the tools to update the acreages is the Wilderness Model, an automated GIS model that uses a controlled set of inputs, structured data queries, and geoprocessing tools executed in a set order to accomplish specific tasks for NPS Alaska wilderness mapping. This process does not constitute as a wilderness reassessment. The updated wilderness data facilitates wilderness preservation and management, and creates a more accurate accounting of Alaska's wilderness areas.

The final eligibility map for each park addresses land status considerations (including navigable waters, federal 17b easements, and land selections made under the Alaska Native Claims Settlement Act) and park management considerations (such as direction in a park's GMP for areas that were not of adequate size to be represented in the original maps).

Acronyms

ANILCA – Alaska National Interest Lands Conservation Act of 1980

ANSCA –Alaska Native Claims Settlement Act of 1971

ANIA – Aniakchak National Monument

BELA – Bering Land Bridge National Preserve

BLM – Bureau of Land Management

CAKR – Cape Krusenstern National Monument

DENA – Denali National Park and Preserve

EIS – Environmental Impact Statement

FEIS – Final Environmental Impact Statement

GAAR – Gates of the Arctic National Park and Preserve

GIS – Geographic Information System

GLBA – Glacier Bay National Park and Preserve

GMP – General Management Plan

KATM – Katmai National Park and Preserve

KEFJ – Kenai Fjords National Park

LACL – Lake Clark National Park and Preserve

NOAT – Noatak National Preserve

NPS – National Park Service

ORV – Off-Road Vehicle

ROD – Record of Decision

USGS – U.S. Geological Survey

WRST – Wrangell-St. Elias National Park and Preserve

YUCH – Yukon-Charley National Preserve

Introduction

Recognizing wilderness as a valued national resource for protection and preservation the 1964 Wilderness Act established the national wilderness preservation system, requiring areas of Congressionally-designated wilderness to be administered for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness (Public Law 88-577; NPS 2006). The 1980 Alaska National Interest Conservation Act (ANILCA) contributed to the implementation of the national wilderness preservation system for NPS Alaska by congressionally designating wilderness areas in eight NPS Alaska parks units: Denali National Park and Preserve, Gates Of The Arctic National Park and Preserve, Glacier Bay National Park and Preserve, Katmai National Park and Preserve, Kobuk Valley National Park, Lake Clark National Park and Preserve, Noatak National Preserve, and Wrangell-St. Elias National Park and Preserve (Public Law 96-487). In addition to designating these wilderness areas, ANILCA directed wilderness eligibility reviews for lands in NPS Alaska not so designated by the act.

Wilderness eligibility reviews for NPS Alaska were completed in the 1980s as part of General Management Plans (GMPs). These wilderness reviews assessed lands for preservation as wilderness, defining areas of eligible wilderness for NPS Alaska. Eligible wilderness is land that possesses wilderness character and value but requires further study to determine if it is to be recommended for inclusion in the national wilderness preservation system. Per NPS management policy eligible wilderness areas are to be managed for the preservation of physical wilderness resources as well as wilderness character. The NPS will take no action that would diminish the wilderness eligibility of such land until the legislative process of wilderness designation has been completed (NPS 2006).

It should be noted that ANILCA and previous NPS policy uses the term “suitability” in regards to the initial NPS screening assessment as to whether lands meet the criteria for inclusion in the National Wilderness Preservation System. The Wilderness Act however, uses “suitability” to refer to the Secretary’s determinations in forwarding recommendations to the President. For purposes of clarity, the NPS initial screening assessment has been renamed an “eligibility” assessment (NPS 2006).

GMP wilderness eligibility review determinations from the 1980s remain the basis for wilderness eligibility in NPS Alaska, with only a select few units having GMP amendments that supersede the wilderness review determinations made in the GMPs from the 1980s. However, the manner in which the wilderness eligibility determinations were reported in the 1980s pose challenges to the Alaska NPS today for the following reasons:

- GMP wilderness eligibility review content from the 1980s was non-digital and does not conform to modern digital workflows that utilize geospatial software for mapping or spatial analysis.
- The production scale of hardcopy GMP maps from the 1980s, including those depicting wilderness eligibility, often provide insufficient detail as a result of feature generalization.

- In some locations, the wilderness eligibility determinations are no longer representative of contemporary boundary or land status conditions due to subsequent boundary and/or land status changes.

To alleviate these issues, NPS Alaska initiated the Wilderness Eligibility Mapping project, which focuses on developing digital representations of NPS Alaska wilderness areas in ESRI® ArcGIS. Through this effort, the spatial extent of Congressionally-designated wilderness area and eligible wilderness area are accurately mapped in a manner that translates the intent of original GMP wilderness eligibility review determinations to modern NPS administrative boundary and land status conditions. This process does not constitute as a wilderness reassessment. The resulting spatial wilderness data is expected to facilitate NPS Alaska wilderness preservation and management workflows, as well as enable refined measurements of wilderness area. This document outlines the general methodology of the Wilderness Eligibility Mapping process and uses Wrangell-St. Elias National Park and Preserve as an example (Figure 1). Land designations, land management strategy, and NPS policy remain unchanged.

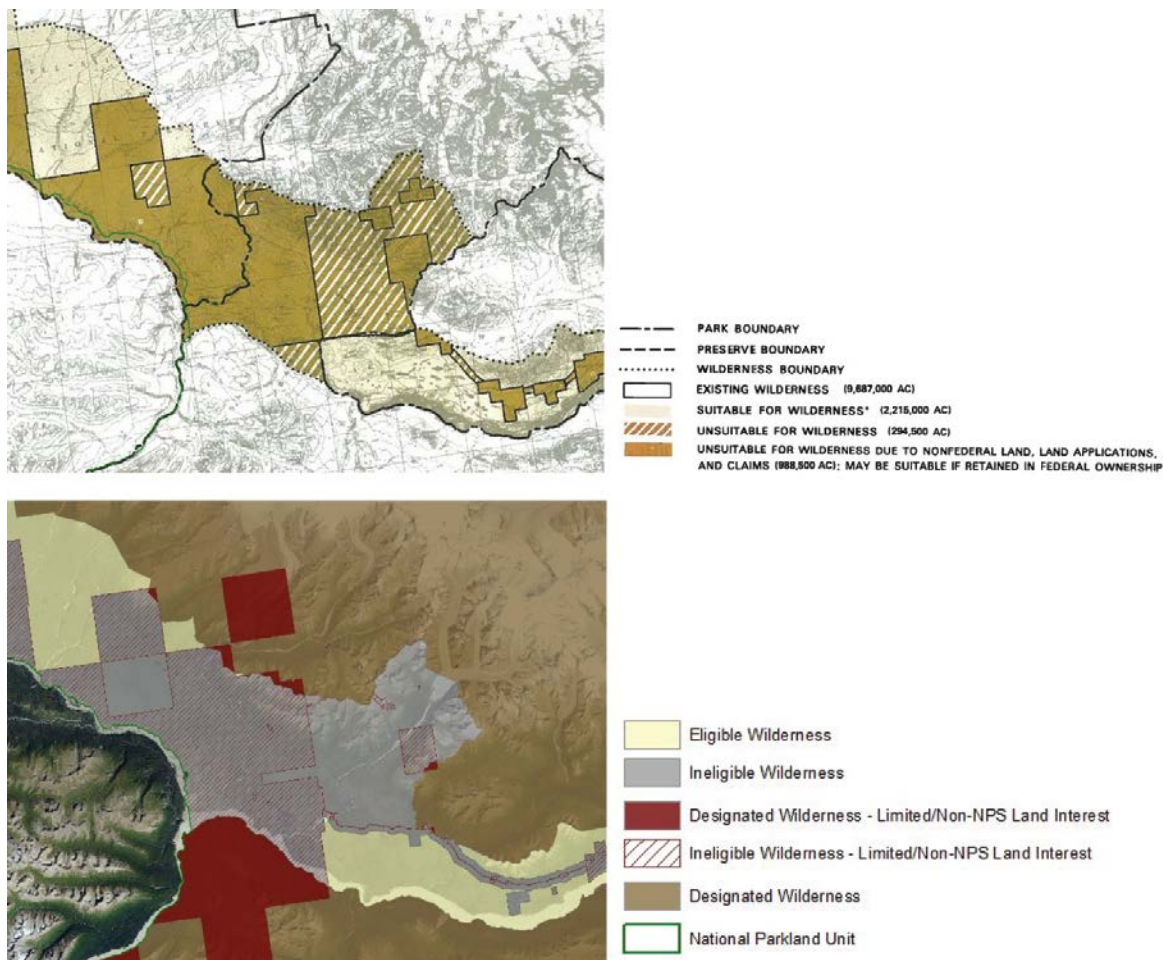


Figure 1. Comparison of wilderness eligibility in Wrangell-St. Elias National Park & Preserve. The top image depicts wilderness eligibility per the 1986 WRST GMP, while the bottom image depicts current wilderness eligibility mapping.

Methods

The NPS Alaska Wilderness Areas Model

The NPS Alaska Wilderness Areas Model (Wilderness Model) is a structured routine developed by NPS Alaska GIS to support the Wilderness Eligibility Mapping project. The Wilderness Model is an automated GIS routine, designed in ESRI® ArcGIS 10.x Model Builder, that uses a controlled set of source inputs, structured data queries, and geoprocessing tools executed in a set order to accomplish specific tasks for NPS Alaska wilderness mapping (Figure 2). Model routines such as this are advantageous for lengthy or complicated GIS workflows as they:

- Allow source inputs to remain dynamic. This means data revisions that occur in source inputs are automatically reflected in the model's results once the routine is re-run or refreshed.
- Reduce the potential for human error in the workflow.
- Produce results using a repeatable, well-documented methodology.

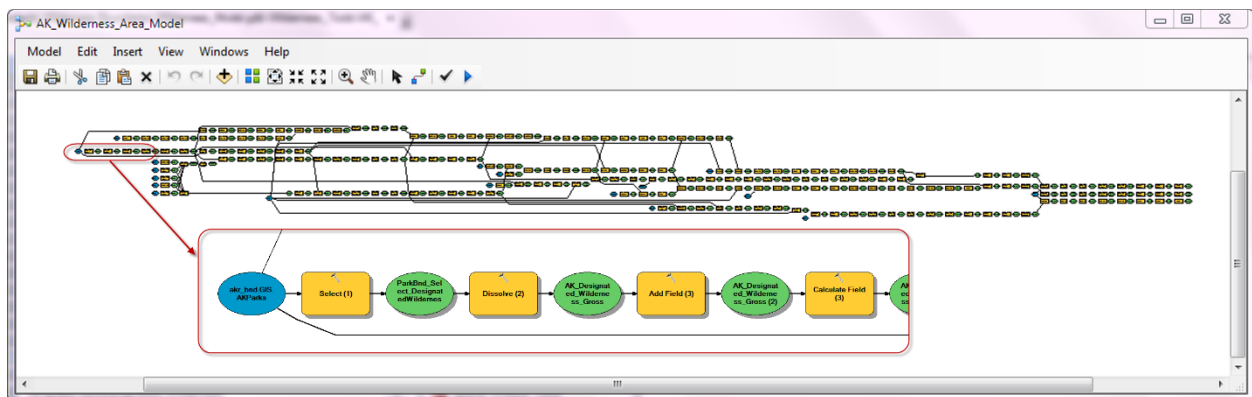


Figure 2. The Wilderness Model (top) is a programmatic sequence of geospatial-related commands that automates an otherwise onerous manual process.

The following sections describe how the Wilderness Model is used to support NPS Alaska wilderness eligibility mapping.

Obtain Congressionally-Designated Wilderness Boundaries

GMP wilderness eligibility maps from the 1980s often depict aged NPS administrative boundaries. To modernize GMP wilderness eligibility maps, the use of contemporary NPS administrative boundary data is desired. The Alaska Region Boundary geodatabase, maintained by NPS Alaska GIS, digitally portrays modern NPS Alaska administrative boundaries, and contains the source inputs to the Wilderness Model. Through data query on NPS unit code values and basic geoprocessing tasks, the Wilderness Model extracts the gross extent of Congressionally-designated wilderness from the AKParks feature class of the Alaska Region Boundary geodatabase (Figure 3, next page). The Wilderness Model temporarily classifies all area outside the gross extent of Congressionally-designated wilderness as non-designated land. Gross acreage for Congressionally-designated wilderness is then calculated as described in a later section.



Figure 3. The Alaska Region Boundary geodatabase consists of a series of boundary related GIS feature classes. The Wilderness Model extracts data from this source to obtain a modern view of NPS Alaska administrative boundaries including the gross extent of Congressionally-designated wilderness (i.e. brown) and the external NPS unit boundary (i.e. green).

Exclude Non-Federal and Non-Public Federal Lands from Congressionally-Designated Wilderness

Per Section 701 of ANILCA only those lands that are public lands within external wilderness unit boundaries are Congressionally-designated wilderness. Section 102(3) of ANILCA defines “public lands” as “land situated in Alaska in which, after the date of enactment of this Act, are Federal lands except –

- land selections of the State of Alaska which have been tentatively approved or validly selected under the Alaska Statehood Act and lands which have been confirmed to be validly selected by, or granted to the Territory of Alaska or the State under any other provision of Federal law;
- land selections of a Native Corporation made under the Alaska Native Claims Settlement Act of 1971 (ANCSA; Public Law 92-203) which have not been conveyed to a Native Corporation, unless such selection is determined to be invalid or is relinquished; and
- lands referred to in Section 19(b) of the Alaska Native Claims Settlement Act.”

Therefore, an accurate measurement of Congressionally-designated wilderness area would exclude both non-federal land acreage and non-public federal land acreage. The Wilderness Model achieves this by integrating data from land status feature classes, also contained within the Alaska Region Boundary geodatabase. These feature classes, referred to collectively as Land Status, are maintained jointly with the NPS Alaska Lands Division and digitally portray modern land ownership information based on U.S. Bureau of Land Management (BLM) land status records and plats, along with subdivision plats, deeds and records from state recording offices. Figure 4 outlines the land status feature classes, while Table 1 describes the feature class content relevant to the Wilderness Model.

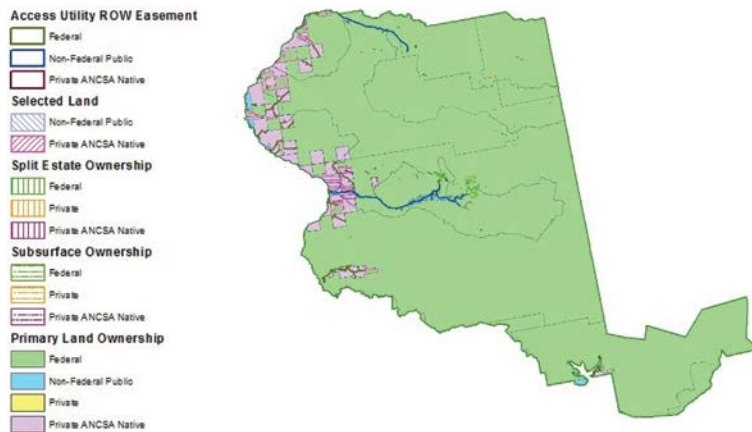


Figure 4. The Alaska Region Boundary geodatabase consists of a series of land status related GIS feature classes. When viewed in ESRI® ArcGIS these feature classes provide a modern display of land ownership interest in NPS Alaska park units.

Table 1. Land status data in the Alaska Region Boundary geodatabase relevant to the Wilderness Model.

Land Status Feature Class	Description
Access, Utility, ROW, Easement	Portrays ownership of easements and right-of-ways.
Selected Land	Portrays lands currently under selection by a non-federal entity.
Split Estate Ownership	Portrays lands where joint rights indicate that landowners have less than majority property rights.
Subsurface Ownership	Portrays information for the current owner of subsurface rights.
Primary Land Ownership	Portrays tracts that represent the owner with the majority of surface rights.

Through data query on land ownership values and basic geoprocessing tasks, the Wilderness Model extracts non-federal and non-public federal land records from the land status feature classes. Table 2 presents the land ownership values relevant to this process. The Wilderness Model then removes the spatial area associated with these land records from the gross extent of Congressionally-designated wilderness to produce a net area representation (Figure 5). Due to scale limitations, GMP wilderness eligibility maps from the 1980s tend to generalize property boundary features (Figure 6). Current wilderness eligibility mapping per the Wilderness Model process integrates property boundary data as depicted in Land Status. This process is assumed to offer a more precise representation of area related to land ownership.

Table 2. Land ownership values in the land status feature classes of Alaska Region Boundary geodatabase that identify non-federal or non-public federal land in Congressionally-designated wilderness.

Land Status Feature Class	Land Ownership Value
Access, Utility, ROW, Easement	Non-Federal Public; Private ANCSA Native
Selected Land	Non-Federal Public; Private ANCSA Native
Split Estate Ownership	Private; Private ANCSA Native
Subsurface Ownership	Private; Private ANCSA Native
Primary Land Ownership	Non-Federal Public ¹ ; Private; Private ANCSA Native

¹ Non-federal public primary land ownership accounts for submerged lands associated with navigable water bodies owned by the State of Alaska (Table 3).



Figure 5. The gross extent of Congressionally-designated wilderness (i.e. brown) prior to the identification of non-federal and non-public federal lands (left). Overlay of non-federal and non-public federal lands (i.e. red) identified per Land Status (middle). The net area representation of Congressionally-designated wilderness (right).



Figure 6. These images provide an example of GMP feature generalization. In the left-hand image large blocks of land are shown as ineligible for wilderness due to non-federal land, land applications, and claims (i.e. dark tan). These areas have been specified by the GMP as eligible for wilderness if acquired into federal ownership. The right-hand image provides an overlay of modern land status information, in which private primary land ownership is depicted in bright yellow. Comparison of modern land status information to GMP content reveals a smaller land area affected by land status considerations.

Navigable Water Bodies

In general, the State of Alaska owns the beds of navigable water bodies in Alaska. However, there have been very few final determinations of navigability of water bodies in Alaska. Table 3 lists the water bodies in NPS Alaska that have been determined navigable in final, binding, federal decisions. Submerged lands associated with these water bodies are owned by the State of Alaska. In addition, affirmative administrative determinations of navigability by the U.S. BLM, performed as part of fulfilling its responsibilities for land conveyances to the State of Alaska, ANCSA native corporations and others, result in showing the associated submerged lands as state owned in land status mapping for NPS Alaska. Also the submerged lands of Lake Clark (in Lake Clark National Park and Preserve) and the Yukon River (in Yukon-Charley Rivers National Preserve) are shown in NPS land status mapping as state owned. Although no final, binding navigability determinations have been made for Lake Clark or the Yukon River, it is assumed these water bodies are navigable due to their large size and history of use for navigation. All other submerged lands within NPS units in Alaska are currently shown on NPS land status mapping as federally or privately owned.

Table 3. Navigable water bodies in NPS Alaska with final, binding, federal decisions.

Water Body	Affected NPS Alaska Unit(s)	Final Navigability Determination
Alagnak River	Alagnak Wild River, Katmai National Park and Preserve	AK v USA, No. A82-201 [1985]
Kandik River	Yukon Charley Rivers National Preserve	AK v USA, No. 96-36041 [2000]
Kukaklek Lake	Katmai National Park and Preserve	AK v USA, No. A82-201 [1985]
Nation River	Yukon Charley Rivers National Preserve	AK v USA, No. 96-36041 [2000]
Nonvianuk River	Katmai National Park and Preserve	AK v USA, No. A82-201 [1985]
Nonvianuk Lake	Katmai National Park and Preserve	AK v USA, No. A82-201 [1985]

All the above-described submerged lands that are shown on NPS land status mapping as state or privately owned are excluded from NPS area calculations of Congressionally-designated or eligible wilderness.

Exclude Federal Lands with Limited NPS Land Ownership Interests from Congressionally-Designated Wilderness

In addition to navigable water bodies as acknowledged in the previous section, the Wilderness Model further removes federal lands identified in Land Status as ANCSA 17b easements, ANCSA Chugach Natives Incorporated (CNI) easements, and U.S. Department of State international boundary easements from the net area representation of Congressionally-designated wilderness. Although these federal lands satisfy the ANILCA public lands definition, NPS Alaska possesses limited land ownership interests on these lands and does not manage them as designated wilderness. Consequently, the acreage associated with these federal lands is excluded from final net area measurements generated by the Wilderness Model for Congressionally-designated wilderness. This

process assumes a more precise representation of land area compared to GMP wilderness eligibility maps from the 1980s.

Classify Non-Designated Land for Wilderness Eligibility

Land status considerations were a standard component of assessment during GMP wilderness eligibility reviews completed in the 1980s. Table 4 outlines the correlation between land status criteria and wilderness eligibility determinations from original GMP reviews. The Wilderness Model, which aims to rectify original GMP wilderness eligibility determinations with modern land status conditions, employs a comparable approach. Table 5 presents the land status criteria used by the Wilderness Model to denote ineligible wilderness on non-designated land. Land status criteria not appearing in Table 5 denotes eligible wilderness on non-designated land.

Table 4. Correlation between land status and wilderness eligibility in original GMP wilderness eligibility reviews.

Land Status Criteria	Eligible for Wilderness	Not Eligible for Wilderness	Eligibility Pending
Federal	X		
Federal: under application or selection			X
State and private land, patented or tentatively approved		X	
Private ownership of subsurface estate		X	

Table 5. Land status criteria used by the Wilderness Model to denote ineligible wilderness on non-designated land. All land ownership information for this process is derived from the land status feature classes of Alaska Region Boundary geodatabase.

Land Status Feature Class	Land Ownership Criteria	Wilderness Eligibility Status
Access, Utility, ROW, Easement	Non-NPS Federal ¹ ; Non-Federal Public; Private ANCSA Native	Ineligible
Split Estate Ownership	Non-NPS Federal ¹ ; Private; Private ANCSA Native	Ineligible
Subsurface Ownership	Private; Private ANCSA Native	Ineligible
Primary Land Ownership	Non-NPS Federal ¹ ; Non-Federal Public ² ; Private; Private ANCSA Native	Ineligible

¹ The term "Non-NPS Federal" includes those federal land types defined in Table 2.

² Non-Federal Public primary land ownership accounts for submerged lands associated with navigable water bodies owned by the State of Alaska (Table 3).

GMP wilderness eligibility reviews from the 1980s assign a pending eligibility to federal lands under selection by ANCSA corporations and the State of Alaska. The Wilderness Model deviates from this approach by classifying these land selection types as eligible wilderness where they exist on non-

designated land. On non-designated land, land selections by ANCSA corporations and the State of Alaska are considered eligible for wilderness because it is expected that all or most of these lands will remain in federal ownership. If any of these lands are conveyed into non-federal ownership, they are no longer eligible for wilderness based on land ownership and will be reclassified as ineligible wilderness. This process assumes a more precise representation of land area compared to GMP wilderness eligibility maps from the 1980s.

Classify Park Management Considerations from GMP Wilderness Eligibility Review

GMP wilderness eligibility reviews completed in the 1980s integrated more than administrative boundary and land status considerations into the assessment of non-designated lands. Original GMP wilderness eligibility reviews also accounted for criteria associated with mining development, roads and off-road vehicle (ORV) trails, air or landing strips, cabins, and land unit size. Areas specified in GMP wilderness eligibility reviews as eligible or ineligible for reasons outside of land status considerations are closely examined during modern mapping efforts. These types of features tend to have small or irregularly shaped boundaries that are often generalized on original GMP wilderness eligibility maps due to production scale constraints. These feature types present more of a mapping challenge as original GMP report text does not always clearly define their boundary extents. In such scenarios, NPS Alaska GIS and regional and park staff work collaboratively in review of original GMP content to best understand the report's intent and to define a modern boundary rationale that honors that intent. During this process amendment documents that supersede the original GMP for purposes of wilderness eligibility are taken into account. All wilderness eligibility boundaries developed from this effort are considered specific park management boundaries and are ingested as a third and final source dataset for the Wilderness Model.

Please refer to the following park-specific reporting sections for more information regarding these park-specific wilderness eligibility boundaries. The reclassification of non-designated land for wilderness eligibility is complete when all the source inputs to the Wilderness Model are applied. Acreage for eligible and ineligible wilderness is then calculated as detailed in the following section.

Calculate Wilderness Acreage Values

Following the steps outline above, the Wilderness Model defines the GIS spatial extents for gross Congressionally-designated wilderness, net Congressionally-designated wilderness, eligible wilderness, and ineligible wilderness areas in NPS Alaska parks. These GIS spatial extents are represented in ERSI® ArcGIS as polygon vector data. By default ERSI® ArcGIS performs geometry calculations on all vector data developed. For polygon vector data, spatial area information is captured in the ERSI® ArcGIS default attribute field Shape Area. The coordinate system applied to the polygon vector data controls the unit values presented in the Shape Area attribute field. Polygon vector data developed by the Wilderness Model is assigned the Alaska Albers Equal Area Conic projected coordinate system using the North American Datum of 1983. The Alaska Albers Equal Area Conic projection uses two standard parallels for projection instead of one, making it a well-suited projection for area preservation across the State of Alaska. For this reason, record values presented in the Shape Area attribute field represent an area in square meters (m²).

To derive wilderness acreage for gross Congressionally-designated wilderness, net Congressionally-designated wilderness, eligible wilderness, and ineligible wilderness areas in NPS Alaska parks the Wilderness Model applies the following expression to the Shape Area attribute field: [Shape_Area] * 0.00024710439304662800. This expression converts the Shape Area value given in m² to U.S. survey acres using the exact conversion factor: 1 U.S. survey acre = (4046^{13,525,426}/15,499,969 m²). Full precision wilderness acreage values yielded from this conversion are then rounded in the Wilderness Model using geoprocessing tools to generate wilderness acreage approximations suitable for NPS Alaska reporting. Per this strategy wilderness acreages greater than or equal to 1,000 acres are rounded to the nearest thousand acres, and wilderness acreages less than 1,000 acres are rounded to the nearest hundred acres. While the Wilderness Model maintains both full precision and approximate wilderness acreages, acreage approximations are assumed more appropriate for NPS Alaska wilderness reporting as the applied rounding strategy is designed to absorb minor changes that may result from evolving land status or boundary line variability.

Throughout the Wilderness Model, the methodologies involved in wilderness measurement are appropriately documented and repeatable. Furthermore, the Wilderness Model is a dynamic automated system capable of reliably generating accurate wilderness acreage following a consistent strategy on a desired NPS reporting cycle. Advancing wilderness measurement into the digital realm facilitates computer-assisted calculation, which yields precise results more rapidly compared to indirect manual methods of area measurement such as the dot-planimeter method (Figure 7). Acreages previously derived prior to computer-assisted mapping are known or assumed to be derived primarily from BLM surveys and Master Title Plats (townships and sections). However, where NPS administrative unit boundaries bisected townships and sections, such as along hydrographic divides, indirect methods of measurement were employed to calculate area. GIS based wilderness measurements eliminate the need for this.

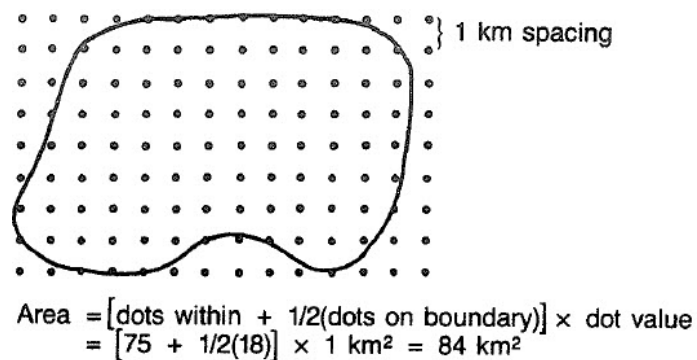


Figure 7. Example of area calculation using the dot-planimeter method of measurement.

Wilderness Model Maintenance

The Wilderness Model incorporates external data sources from the Alaska Region Boundary geodatabase. To ensure data yielded by the Wilderness Model remains current, the Wilderness Model routine will be re-run or refreshed as new versions of the boundary or land status data are published.

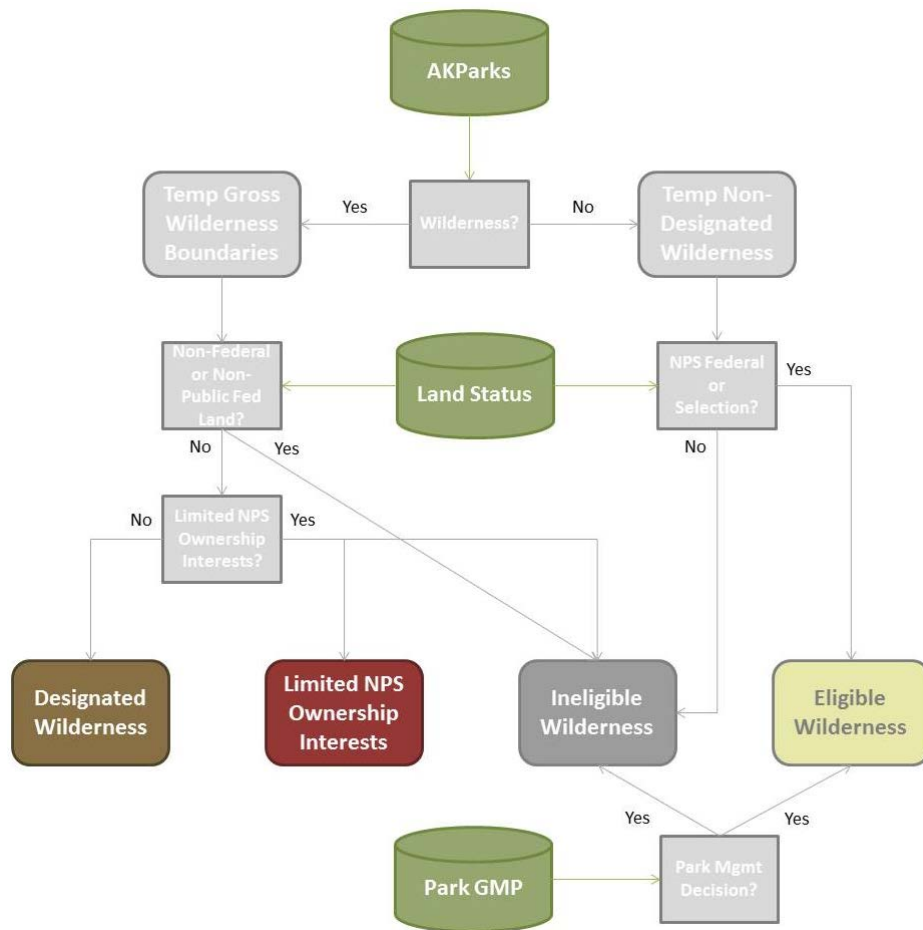


Figure 8. The overall workflow of the Wilderness Model.

Results

The results of this mapping effort are twofold. First, maps of each NPS unit in Alaska depicting their designated and eligible wilderness using GIS technology. Second, updated acreage calculations of designated and eligible wilderness are available as part of a database that reflects land status changes and other ongoing changes in wilderness status. A summary of the acreages for all NPS Alaska Wilderness parks as of July 25, 2016 is available in Table 6.

The remainder of this section describes the final map for each park, including the assumptions made to create the map and a brief description of the relevant context of the wilderness and the history of its eligible and designated wilderness.

Table 6. NPS Alaska Wilderness Acreage Report ¹ (As of 07/25/2016)

Unit	<i>Rounded² Congressionally Designated Wilderness (i.e. NET acreage approximation)</i>	<i>Rounded Eligible Wilderness (i.e. acreage approximation)</i>	<i>Rounded Ineligible Wilderness (i.e. acreage approximation)</i>
ALAG	0	0	31,000
ANIA	0	436,000	167,000
BELA	0	2,651,000	134,000
CAKR	0	597,000	53,000
DENA	2,146,000	3,786,000	95,000
GAAR	7,154,000	914,000	309,000
GLBA	2,656,000	46,000	577,000
KATM	3,323,000	626,000	149,000
KEFJ	0	570,000	98,000
KLGO	0	0	13,000
KOVA	176,000	1,541,000	28,000
LACL	2,592,000	1,120,000	303,000
NOAT	5,814,000	728,000	31,000
SITK	0	0	100
WRST	9,432,000	2,534,000	959,000
YUCH	0	2,116,000	406,000

¹ Reflects NPS wilderness acreage values derived from an established GIS-based wilderness model.

² Rounded wilderness acreage values represent acreage approximations for certain NPS reporting. Acreage values over 1,000 acres are rounded to the nearest 1,000 acre. Acreage values under 1,000 acres are rounded to the nearest 100 acres.

³ TBD notates a value to be determined. TBD is assigned to NPS units that have not yet completed wilderness eligibility mapping.

Wilderness Background

Section 701 of ANILCA designated 8 wilderness areas across the Alaskan National Park Service units, as excerpted below.

“(1) Denali Wilderness of approximately one million nine hundred thousand acres; (2) Gates of the Arctic Wilderness of approximately seven million and fifty-two thousand acres; (3) Glacier Bay Wilderness of approximately two million seven hundred and seventy thousand acres; (4) Katmai Wilderness of approximately three million four hundred and seventy-three thousand acres; (5) Kobuk Valley Wilderness of approximately one hundred and ninety thousand acres; (6) Lake Clark Wilderness of approximately two million four hundred and seventy thousand acres; (7) Noatak Wilderness of approximately five million eight hundred thousand acres; and (8) Wrangell-Saint Elias Wilderness of approximately eight million seven hundred thousand acres.” (PL 96-487)

ANILCA also directed a wilderness eligibility review be completed for lands not designated by the act. This wilderness eligibility review was completed for all Alaskan NPS units as part of their respective General Management Plans which were released between 1984 and 1986. Following the eligibility assessments, each park unit released a Final Environmental Impact Statement Wilderness Recommendation (FEIS) in 1988, which outlined recommendations for additional wilderness designation for Congressional decision. However, the acreage presented for wilderness recommendation often differed from acreages put forward in the initial 1984-6 GMPs as “subsequent to the GMP, application of uniform criteria [applied to all Alaska parks] (1988 NPS).

While the Records of Decision (ROD) for the 1988 wilderness recommendations were signed by the Regional Director of the NPS Alaska Region, the 1988 FEISs were never signed by the Assistant Secretary’s Office or published in the Federal Register. The FEIS is not considered the authority for wilderness eligibility in NPS Alaska. As a result, all of the lands identified in the 1988 FEISs will continue to be managed as eligible wilderness per NPS policy pending further action.

Current wilderness eligibility mapping integrates more recent NPS administrative boundary changes. As described in Section 3.2 through 3.3, current wilderness mapping efforts are designed to generate a net area approximation for Congressionally-designated wilderness through the removal of non-qualifying land area. This process accounts for non-federal public, private, and private ANCSA native primary ownership land tracts; private ANCSA native subsurface land tracts; and, ANCSA 17b easements. Land selections and navigable water bodies were also considered.

The sections that follow describe the updated eligible wilderness boundaries for all Alaskan NPS units with designated and eligible wilderness. For each park unit, land status considerations, including the presence of navigable waters, 17b easements, and selections by Native Corporations, villages, or the State of Alaska under ANCSA are identified. Any “custom” considerations made during the recent mapping process are described.

Aniakchak National Monument

Current wilderness status shown in Figure 9.

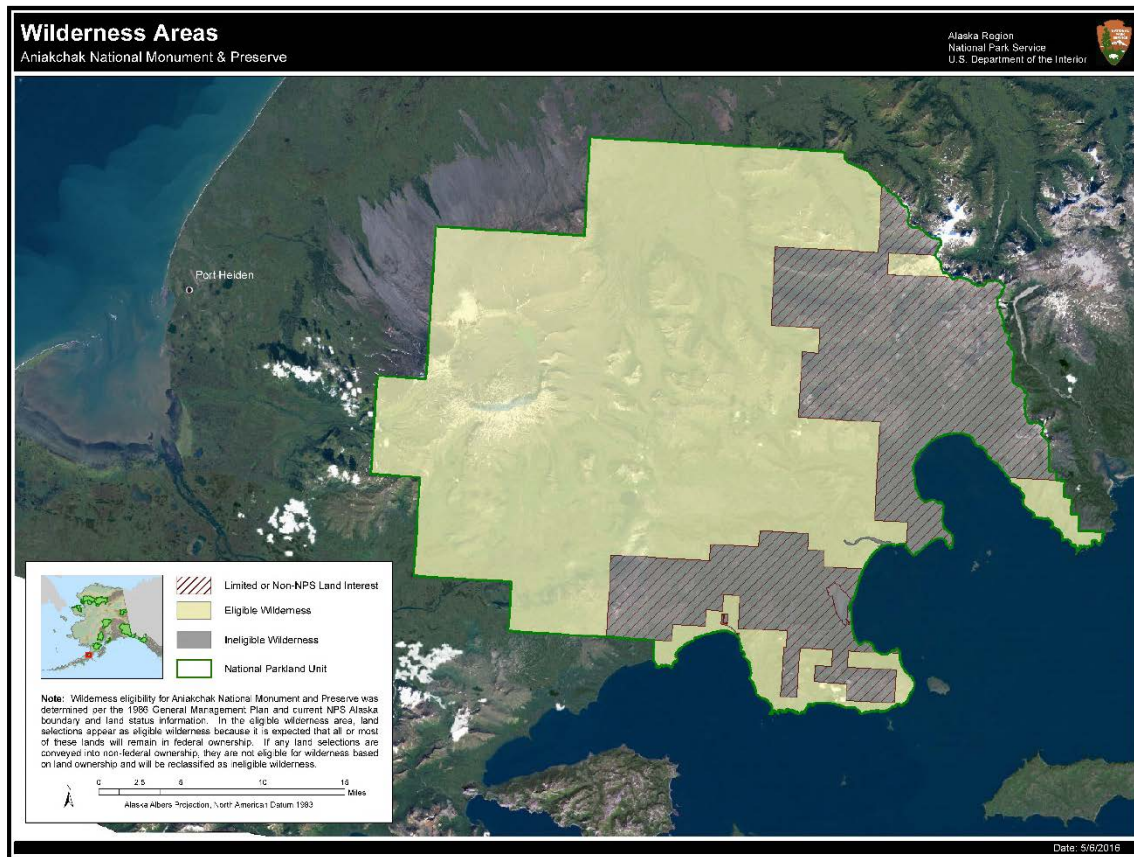


Figure 9. Map of wilderness status in Aniakchak National Monument as of 5/5/2016.

Land status considerations:

Navigable waters: None.

Federal 17b Easements: None.

Selections: Yes, there are 13 (thirteen) ANCSA selections within eligible wilderness (all are private native selections by Koniag, Inc. Regional Corporation).

Park management considerations:

- ❖ No additional assumptions were made beyond the basic model and/or the only ineligible land was a result of land status.

Bering Land Bridge National Preserve

Current wilderness status shown in Figure 10.

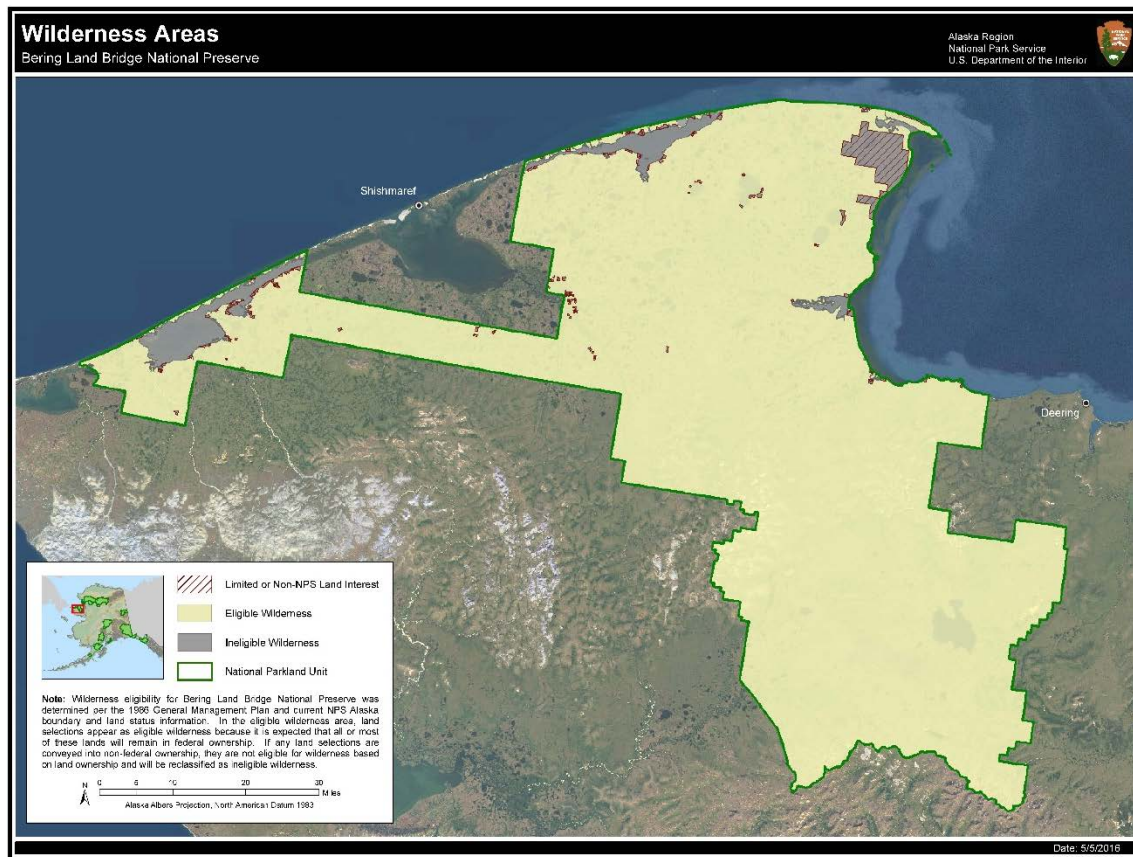


Figure 10. Map of wilderness status in Bering Land Bridge National Preserve as of 5/5/2016.

Land status considerations:

Navigable waters: None.

Federal 17b Easements: Yes, there is 1 (one) 17b trail easement record (a coastal beach trail that crosses private native lands in the coastal area of Ikpek Lagoon).

Selections: Yes, there are 4 ANCSA selections within eligible wilderness (3 are NANA Regional Corporation and 1 is the Kikiktagruk Inupiat Corporation). All of these selections are located northeast of Killeak Lakes.

Park management considerations:

- ❖ Navigable waters (GMP, page 169): There hasn't been official navigability determinations affecting BELA. However, in BELA (particularly along the coast) there are tidal/submerged areas. The 1986 BELA GMP map states that "beds of inland navigable rivers and lakes, tidelands, and submerged lands beneath marine waters are State owned" and therefore not suitable. The 1986 map correspondingly shows coastal areas as unsuitable. These areas are inferred in current land status, but are depicted in greater number and detail (Figure 11). This

improved view deviates from that depicted in the GMP, but is assumed to be more current and accurate.



Figure 11. Coastal area, including tidal and submerged lands in BELA.

- ❖ Serpentine Hot Springs (GMP, page 167): “Serpentine Hot Springs is the only historic site that currently has visitor use and developments. This site will remain in federal ownership because the application for the area by the Bering Straits Native Corporation under ANCSA has been denied. Currently, visitors arrive by either snowmachine or airplane for short visits for ritual healing or recreational hot springs bathing. Because both transportation modes would continue to be acceptable with or without wilderness designation, and structures may be allowed in wilderness, the Serpentine Hot Springs area is currently suitable for wilderness.”

Cape Krusenstern National Monument

Current wilderness status shown in Figure 12.

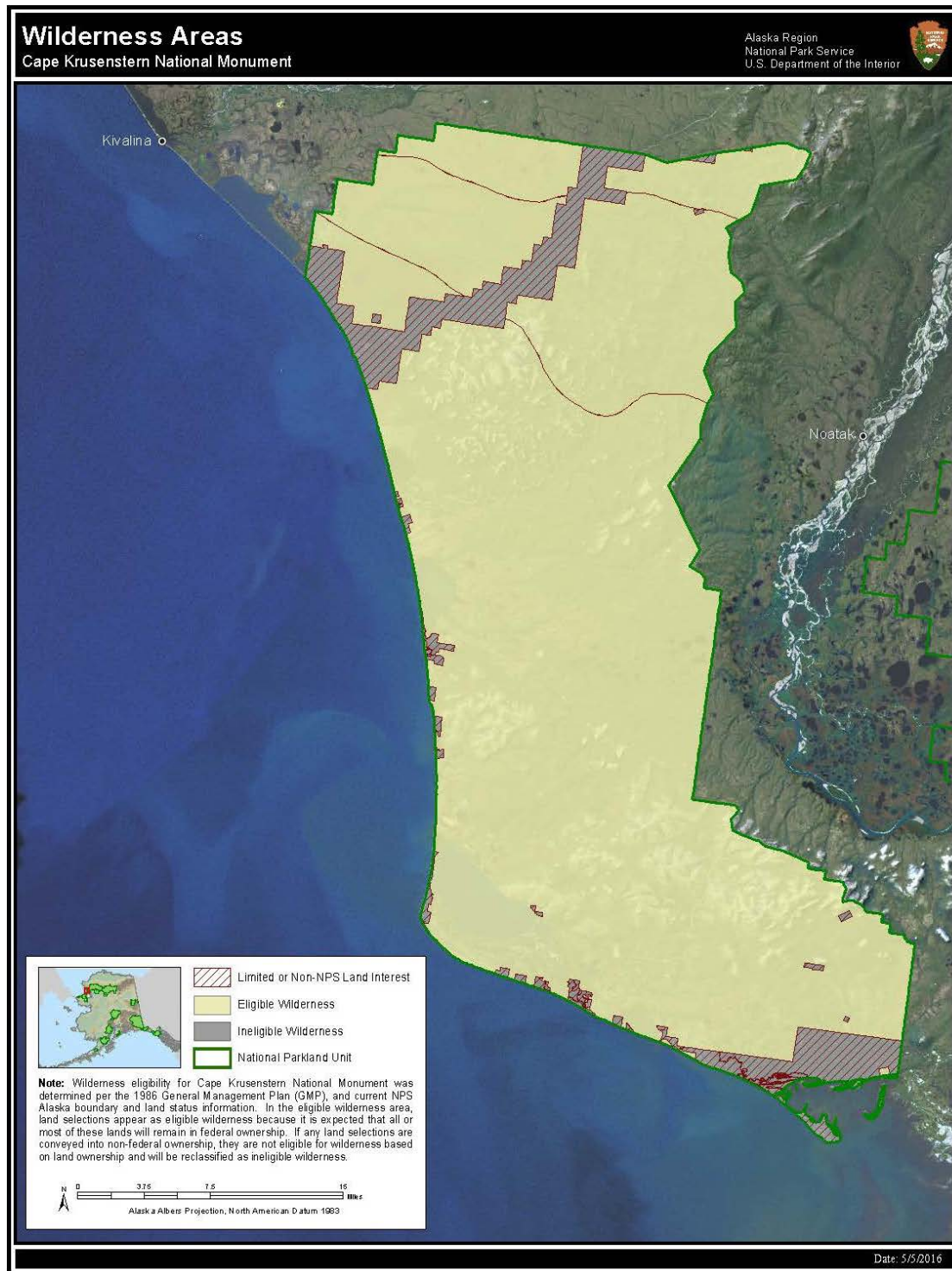


Figure 12. Map of wilderness status in Cape Krusenstern National Monument as of 5/5/2016.

Land status considerations:

Navigable waters: None.

Federal 17b Easements: Yes, there is 1 (one) 17b trail easement record (a coastal beach trail that crosses private native lands near the Ipiavik Lagoon).

Selections: None.

Park management considerations:

- ❖ No additional assumptions beyond the basic model and/or the only ineligible lands in both of these parks were a result of land status.

Denali National Park and Preserve

Current wilderness status shown in Figure 13.

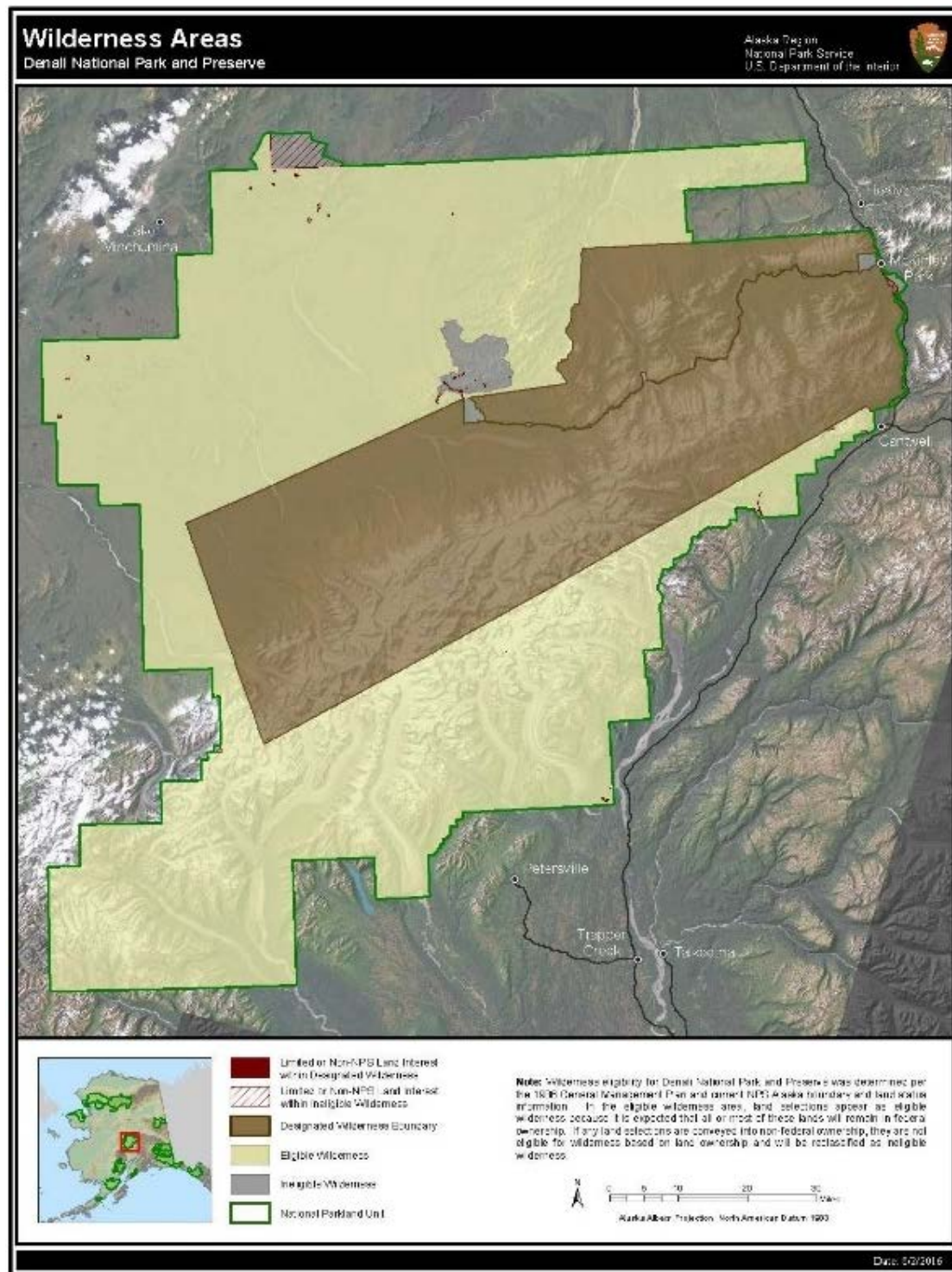


Figure 1. Map of wilderness status in Denali National Park and Preserve as of 7/25/2016.

Land status considerations:

Navigable waters: None.

Federal 17b Easements: Yes, there is currently 1 (one) 17b site easement record (located in the northernmost section of the park on private native land).

Selections: Yes, there are currently 4 selections within eligible wilderness (2 are Ahtna, Inc. Regional Corporation selections, and 2 are State of Alaska Department of Natural Resources selections). All of these selections are located east of Cantwell.

Park management considerations:

- ❖ Kantishna Historic Mining District (GMP, page iv and 113): This area is ineligible, “The Kantishna mining district was found to be unsuitable for wilderness designation.” The official district boundary, “DENA Historic Districts” dataset located in Theme Manager was used as a source for this area (Figure 14).



Figure 14. Kantishna Mining District in DENA.

- ❖ Park Road (GMP, page 112 & 113): This area is ineligible, “...a corridor extending 150 feet from either side of the centerline of the park road...” and “...the locations of improved and regularly used roads [are ineligible]”.
- ❖ Wonder Lake area (GMP, page 112 & 113): This area is ineligible.
- ❖ Frontcountry area around park headquarters (GMP, page 113): These areas are ineligible, “...lands needed for operation of the park and preserve...”
- ❖ Lands east of the railroad right-of-way (GMP, page 112): These areas are ineligible (Figure 15).

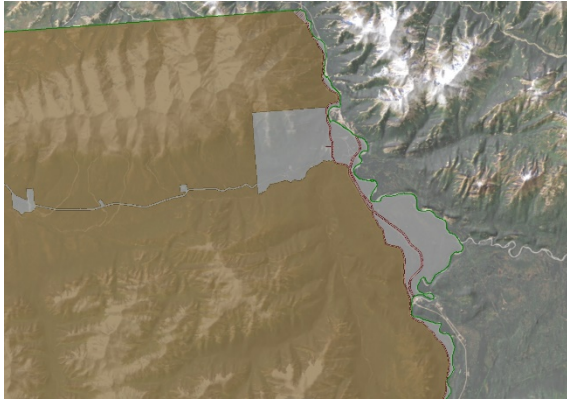


Figure 15. Area near Park Road and frontcountry in DENA.

Gates of the Arctic National Park and Preserve

Current wilderness status shown in Figure 16.

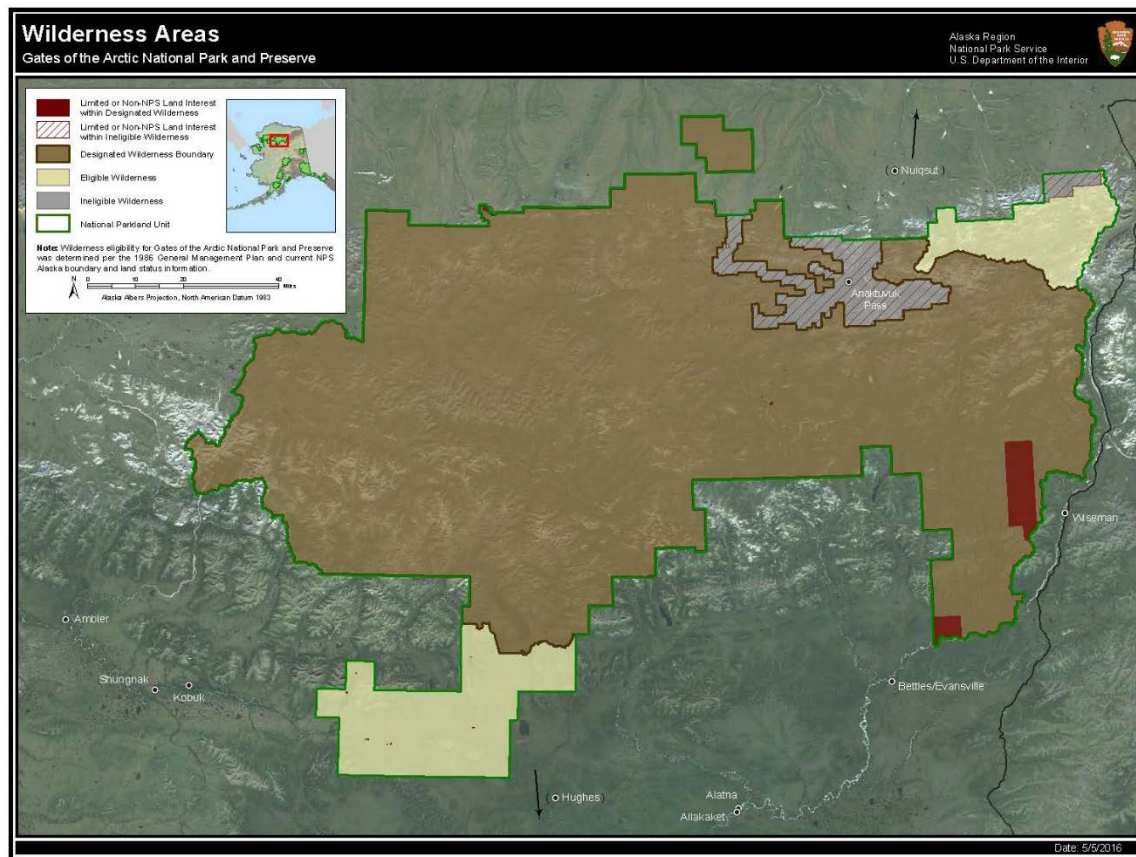


Figure 16. Map of wilderness status in Gates of the Arctic National Park and Preserve as of 5/5/2016.

Land status considerations:

Navigable waters: None.

Federal 17b Easements: Yes, there are 5 (five) 17b trail/site easement records within designated wilderness (site easement and all 17b trails cross the same private native land parcel west of Wiseman).

Selections: None.

Park management considerations:

- ❖ Anaktuvuk Pass (GMP, page 217): the Village of Anaktuvuk Pass is ineligible. However, the 1986 GAAR GMP did not define an explicit boundary for the village of Anaktuvuk Pass. For modern wilderness eligibility mapping purposes, the village of Anaktuvuk Pass is collectively represented by three primary land ownership tracts from the Alaska Region NPS Land Status geodatabase. Because these land ownership tracts represent the village of Anaktuvuk Pass, they are considered permanently ineligible for wilderness regardless of land status criteria (Figure 17).



Figure 17. Anaktuvuk Pass area in GAAR.

Glacier Bay National Park and Preserve

Current wilderness status shown in Figure 18.

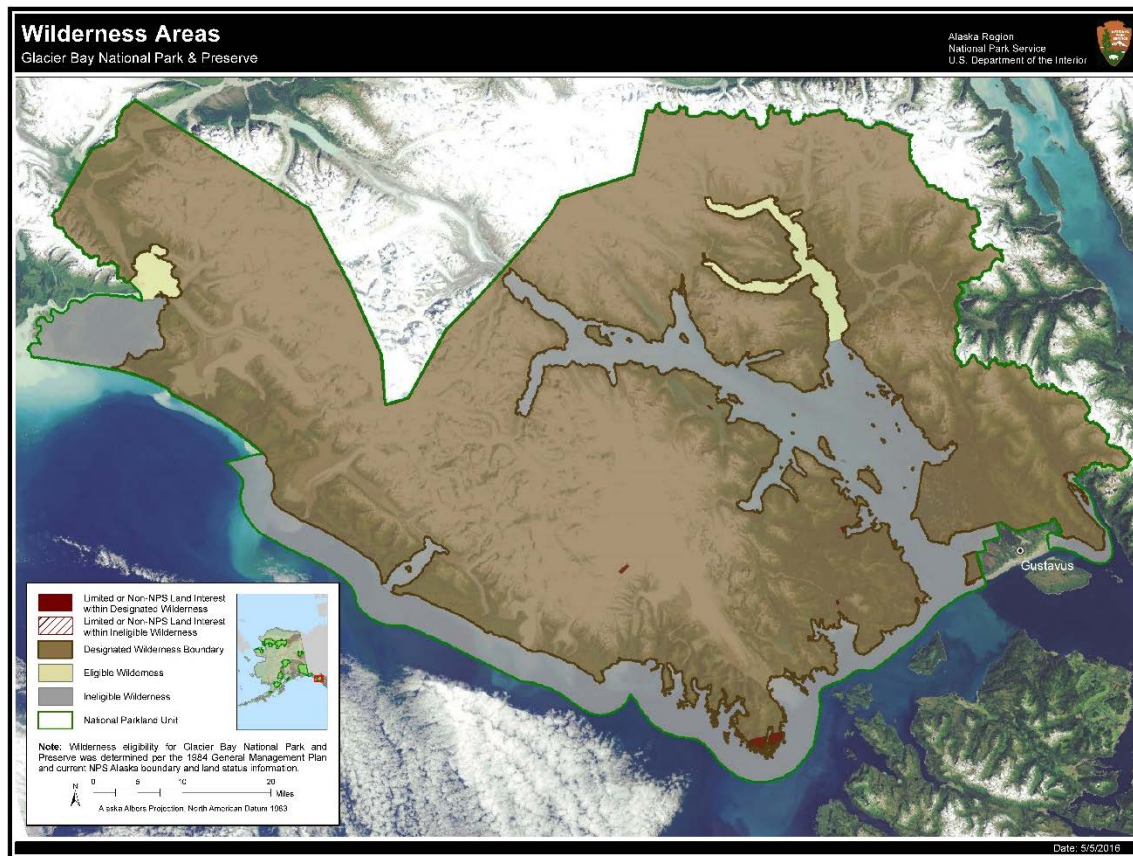


Figure 18. Map of wilderness status in Glacier Bay National Park and Preserve as of 5/5/2016.

Land status considerations:

Navigable Waters: None.

Federal 17b Easements: None.

Selections: None.

Park management considerations:

- ❖ Muir Inlet (GMP, page 58): “These two inlets [Muir Inlet and Wachusett Inlet] should be redesignated as park wilderness...” Defined the entrance to Muir Inlet based on the GMP map “Land Status and Wilderness Recommendations” (Figure 19). Linework was digitized across Muir Inlet from Muir Point in reference to the map specified above and is not related to other existing boundaries in area (i.e. commercial fishing boundaries, non-motorized boundaries).



Figure 19. Muir Inlet in GLBA.

- ❖ Alsek Lake (GMP, page 58): “Alsek Lake should be redesignated as park wilderness...” Eligible wilderness based on GMP language and “Proposed PARK/PRESERVE BOUNDARY CHANGES” map (pg. 60 GMP). However, the area for Alsek Lake now differs from the original GMP representation because of glacial changes along eastern edge of Alsek Glacier. The current area defined for Alsek Lake agrees with the intent of the GMP, but matches the current adjoining designated wilderness boundary (Figure 20).

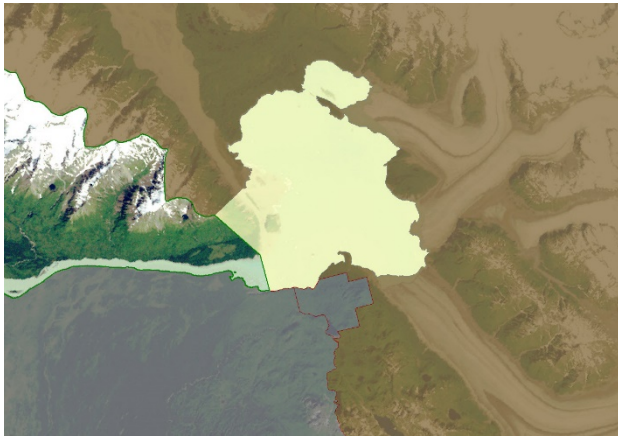


Figure 20. Alsek Lake in GLBA.

- ❖ Unnamed island in Blue Mouse Cove & Cenotaph Island (GMP, page 58): originally named as exceptions to wilderness in the GMP, but the areas were later designated as wilderness by the 2004 Falls Creek Hydroelectric Project & Land Exchange Final EIS (page 6-36) (Figure 21). “...Given the criteria of the Act, both the unnamed island near Blue Mouse Cove and Cenotaph Island, totaling 1,069 acres, would be designated as wilderness because this is approximately equal in sum to the wilderness deleted from Glacier Bay National Park & Preserve.”



Figure 21. Unnamed Island in Blue Mouse Cove & Centoaph Island in GLBA.

- ❖ Bartlett Cove developed area (GMP, page 58): This area is an exception to wilderness, therefore it is ineligible due to the nature and use of this area (Figure 22).



Figure 22. Bartlett Cove in GLBA.

- ❖ Those areas not clearly specified in GMP: This includes the preserve area and park waters around the Falls Creek Area. These lands are assumed to be ineligible.
- ❖ Other documents that have amended the current wilderness boundary from the original GMP include: the 1992 Updated GLBA boundary, 1997 Vessel Management Plan, and the 2004 Falls Creek EIS (as mentioned above).

Katmai National Park and Preserve and Alagnak Wild River

Current wilderness status shown in Figure 23.

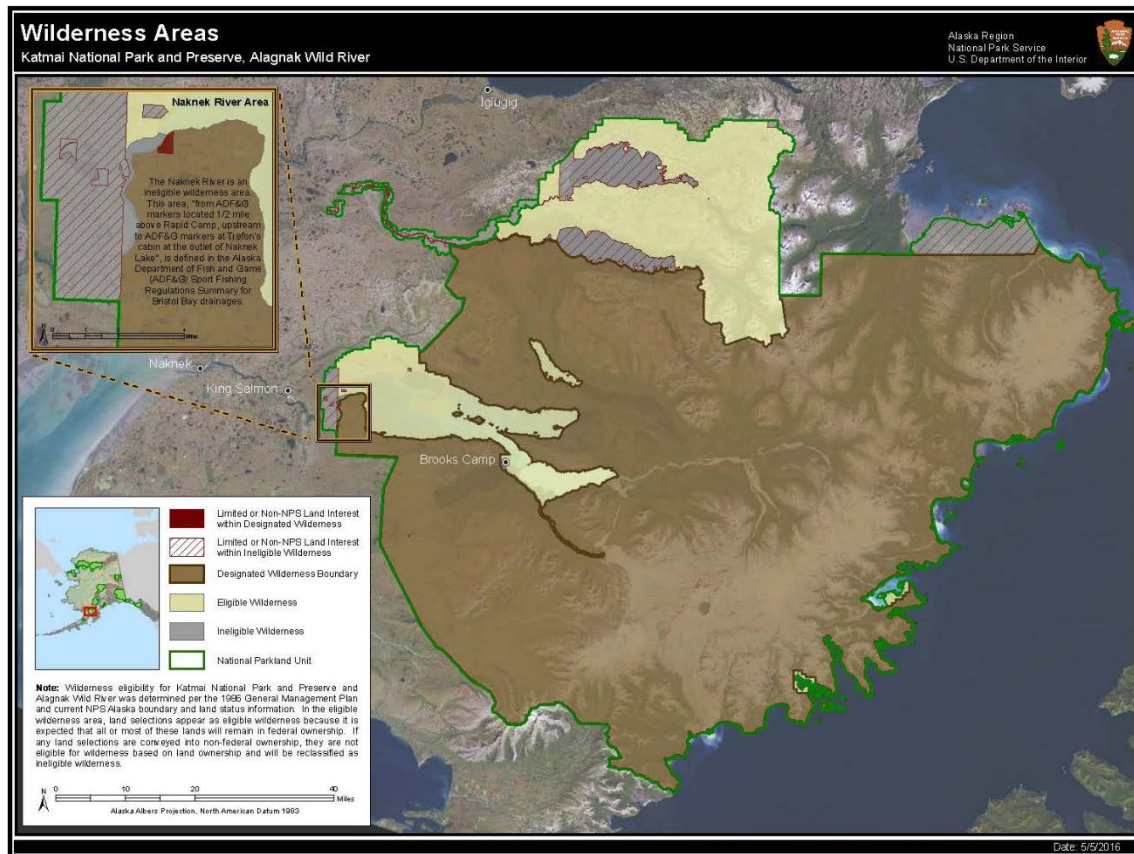


Figure 2. Map of wilderness status in Katmai National Park and Preserve and Alagnak Wild River as of 5/5/2016.

Land status considerations:

Navigable waters: Yes; Alagnak River, Kukaklek Lake, Nonvianuk Lake, & Nonvianuk River.

Federal 17b Easements: Yes, there are currently 3 (three) 17b trail/road/site easement records (one road easement crosses private native lands near King Salmon, one trail easement crosses private native land west of Kukaklek Lake, and one is a site easement on private native land).

Selections: Yes, there are currently 2 ANCSA selections (both are Paug-Vik Inc, LTD) and are located in the Lake Camp Area (the Lake Camp Area is already assumed ineligible based on GMP language on pg. 94, "the immediate Lake Camp Area is not suitable for wilderness because of the high level of activity and small size of the federal land that is surrounded by private lands").

Park management considerations:

- ❖ Valley of Ten Thousand Smokes Road (GMP, page 94): “The exception is the road from Brooks Camp to the Valley of Ten Thousand Smokes. This road corridor is not suitable for wilderness designation.” The buffer of 300 feet that was assigned to road corridor left a small hole between the road and the designated wilderness boundary in the vicinity of the Brooks Camp Developed Area (Figure 24). However, this “hole” fell within the buffer for Brooks Camp developed area. Therefore it is assumed ineligible. Former KATM Superintendent Ralph Moore provided approval.

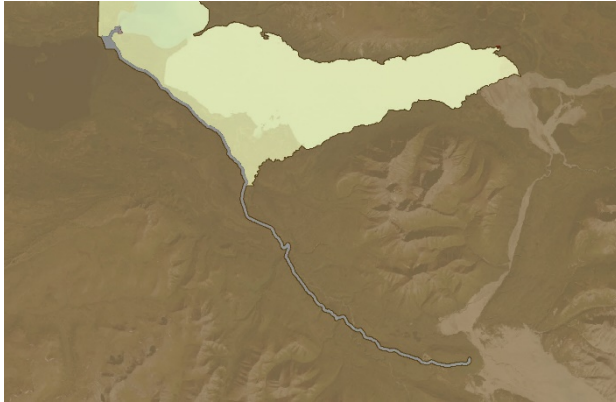


Figure 24. Road from Brooks camp to the Valley of Ten Thousand Smokes in KATM.

- ❖ Lake Camp Area (GMP, page 94): “The Kulik Lodge Trail from the lodge to the airstrip and the road from King Salmon to Lake Camp are not suitable for wilderness because of the existing motorized vehicle use levels. The immediate Lake Camp area is not suitable for wilderness because of the high level of activity and small size of the federal land that is surrounded by private lands.”
- ❖ Naknek River (GMP, Wilderness Suitability map): Per the note on the map, “The Naknek and Nonvianuk Rivers are unsuitable for wilderness.” The Naknek River/Naknek Lake boundary was not specifically defined by the GMP, so the boundary applied is from the April 2011 ADF&G sporting regulations. The regulations states Naknek River as, “from ADF&G markers ½ mile above Rapid Camp, upstream to ADF&G markers at Trefon’s cabin at the outlet of Naknek Lake” (Figure 25). The boundary was acceptable to the NPS Solicitor.

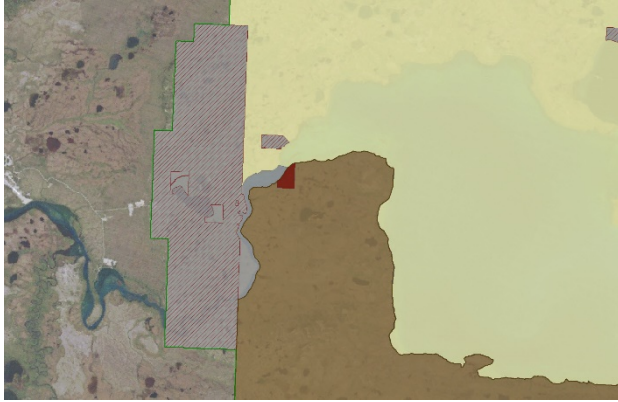


Figure 25. Kulik Lodge Trail and Kaknuk and Nonvianuk Rivers in KATM.

- ❖ GMP Wilderness Suitability map: Per the note on the map, “All shoreland, submerged land, and tideland are unsuitable for wilderness.”
- ❖ 2 small islands north of park in Kamishak Bay: These islands are north of the large State parcel in KATM. The wilderness status of these islands was not specified in GMP. The islands were assumed ineligible because they were not specified, very small, and adjacent to ineligible lands. Former KATM Superintendent Ralph Moore provided approval.
- ❖ Alagnak Wild River (GMP, page 94): “Alagnak Wild River corridor is not suitable for wilderness designation because there is not sufficient contiguous, federally owned land within the corridor to meet the 5,000-acre minimum suitability criterion and the area could not be managed as wilderness” (Figure 26).

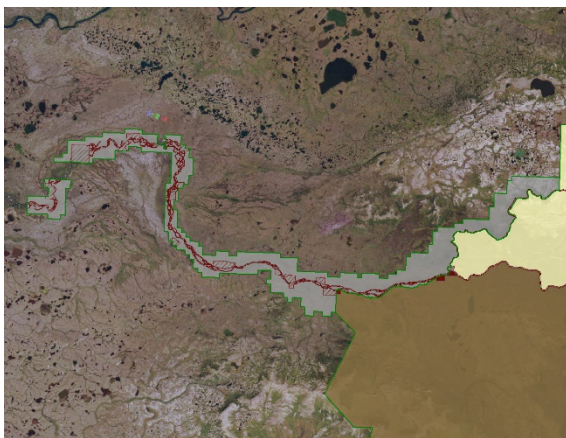


Figure 26. Alagnak Wild River in KATM.

Kenai Fjords National Park

Current wilderness status shown in Figure 27.

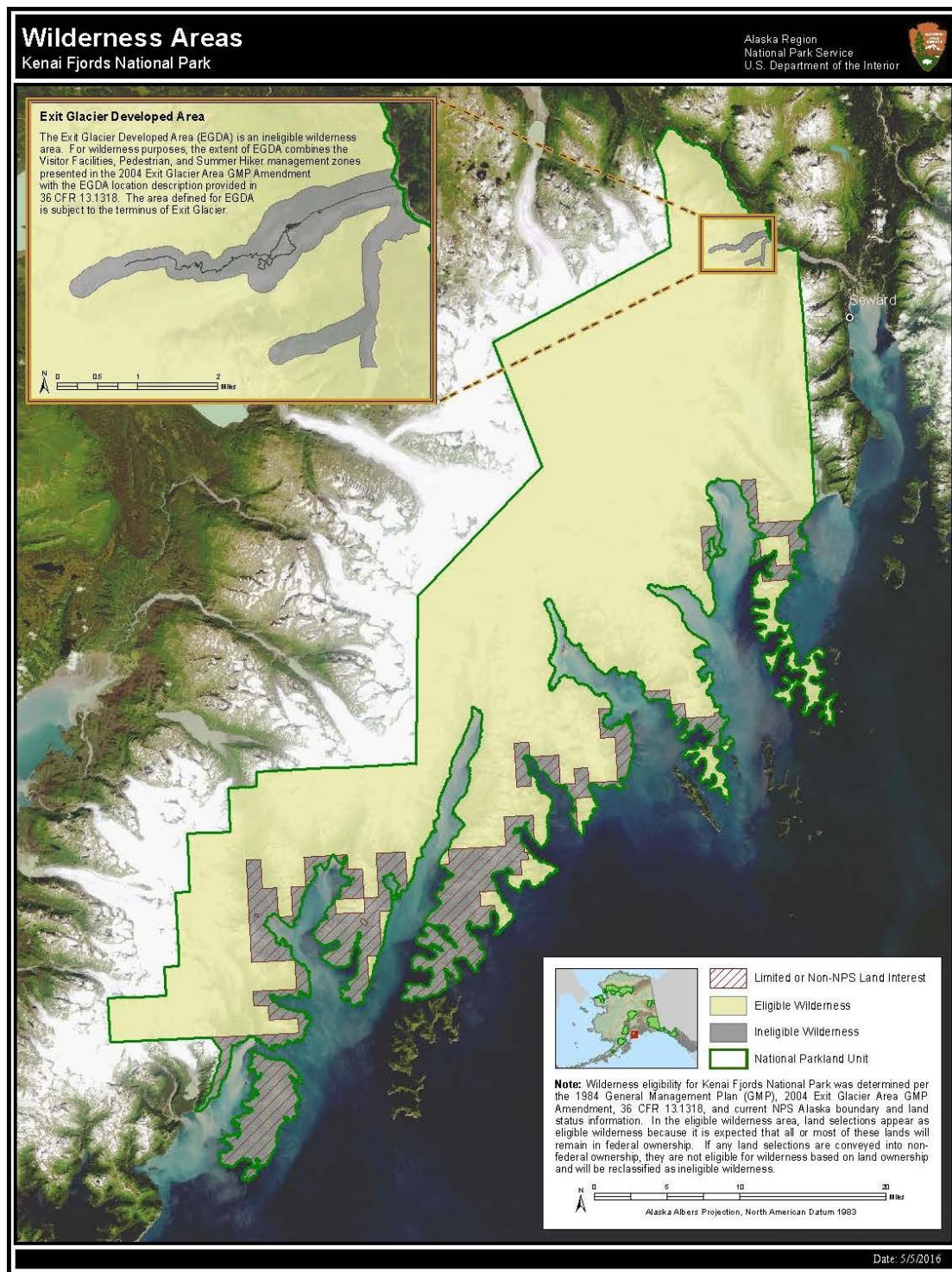


Figure 27. Map of wilderness status in Kenai Fjords National Park as of 5/5/2016.

Land status considerations:

Navigable waters: None.

Federal 17b Easements: Yes, there are currently 22 (twenty-two) 17b trail/site easement records (9 are easement trails that all cross private native lands, and 13 are easement sites located on private native lands).

Selections: Yes, there are currently 2 ANCSA selections within eligible wilderness (one is Port Graham Corporation and one is Chugach Alaska Corporation).

Park management considerations:

- ❖ Exit Glacier Developed Area (EGDA) (GMP, page 60): The developed lands in the Exit Glacier area are not suitable for wilderness designation. The original GMP does not clearly define the area for EGDA, and GMP map view insufficient. Based on direction from former KEFJ Superintendent Jeff Mow, the assumed area for the EGDA is based on a combination of the 2004 GMP Amendment & the current 36 CFR 13.1318. The extent of the EGDA combines the Visitor Facilities, Pedestrian, & Summer Hiker management zones presented in 2004 Exit Glacier Area GMP Amendment with the EGDA location description provided in 36 CFR 13.1318 (Figure 28). The area defined for EGDA is subject to the terminus of Exit Glacier.



Figure 28. Exit Glacier Developed area in KEFJ.

- ❖ Nuka Bay (GMP, page 60): Lands associated with mining in the Nuka Bay area are ineligible.

Kobuk Valley National Park

Current wilderness status shown in Figure 29.

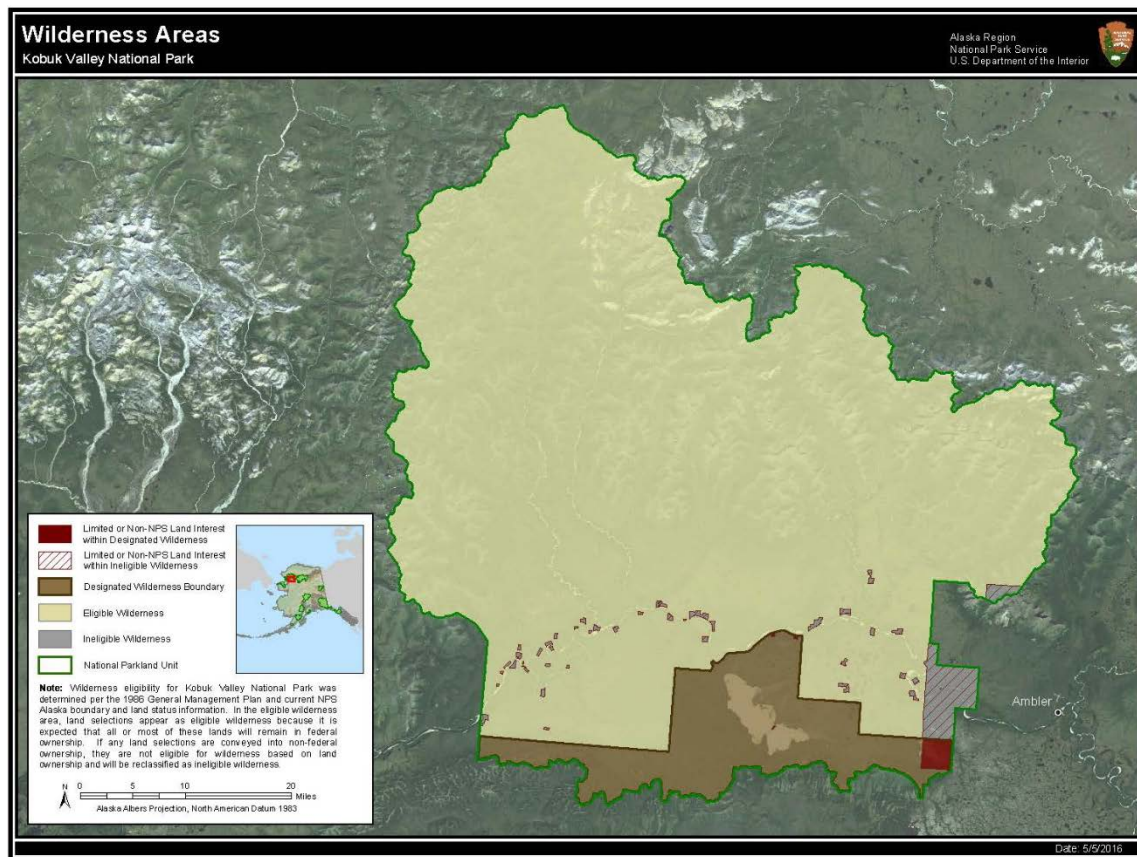


Figure 29. Map of wilderness status in Kobuk Valley National Park as of 5/5/2016.

Land status considerations:

Navigable waters: None.

Federal 17b Easements: Yes, there are currently 3 (three) 17b trail/site easement records (1 site easement and 2 trail easements are all located on the same private native land parcel in the Onion Portage area on the Kobuk River).

Selections: Yes, there is currently 1 (one) ANCSA selection within eligible wilderness (NANA Regional Corporation).

Park management considerations:

- ❖ Hunt's River Cabin (GMP, page 144): "There is one inhabited cabin on federal land near the mouth of the Hunt River and this location is unsuitable for wilderness designation." This location is not specified on GMP Wilderness Suitability or GMP Land Status Maps. Dan Stevenson (NPS) is familiar with this cabin and its history. There is one cabin, Alaskan style food cache, two wood sheds, and an outhouse all in line along a ridge. The total area of the development is 50 x 200 feet. The cabin & structure were built and occupied pre-ANILCA.

There's a long history with the Superintendents of WEAR and the primary occupants of this cabin. As of July 2016, the area is managed by a special use permit (SUP) renewed every 5 years. NOTE: Now that the general location is known to NPS GIS Team, the available imagery was reviewed and the cabin is visible on IKONOS Mosaic Dataset Near IR- KOVA NOAT.

Lake Clark National Park and Preserve Current wilderness status shown in Figure 30.

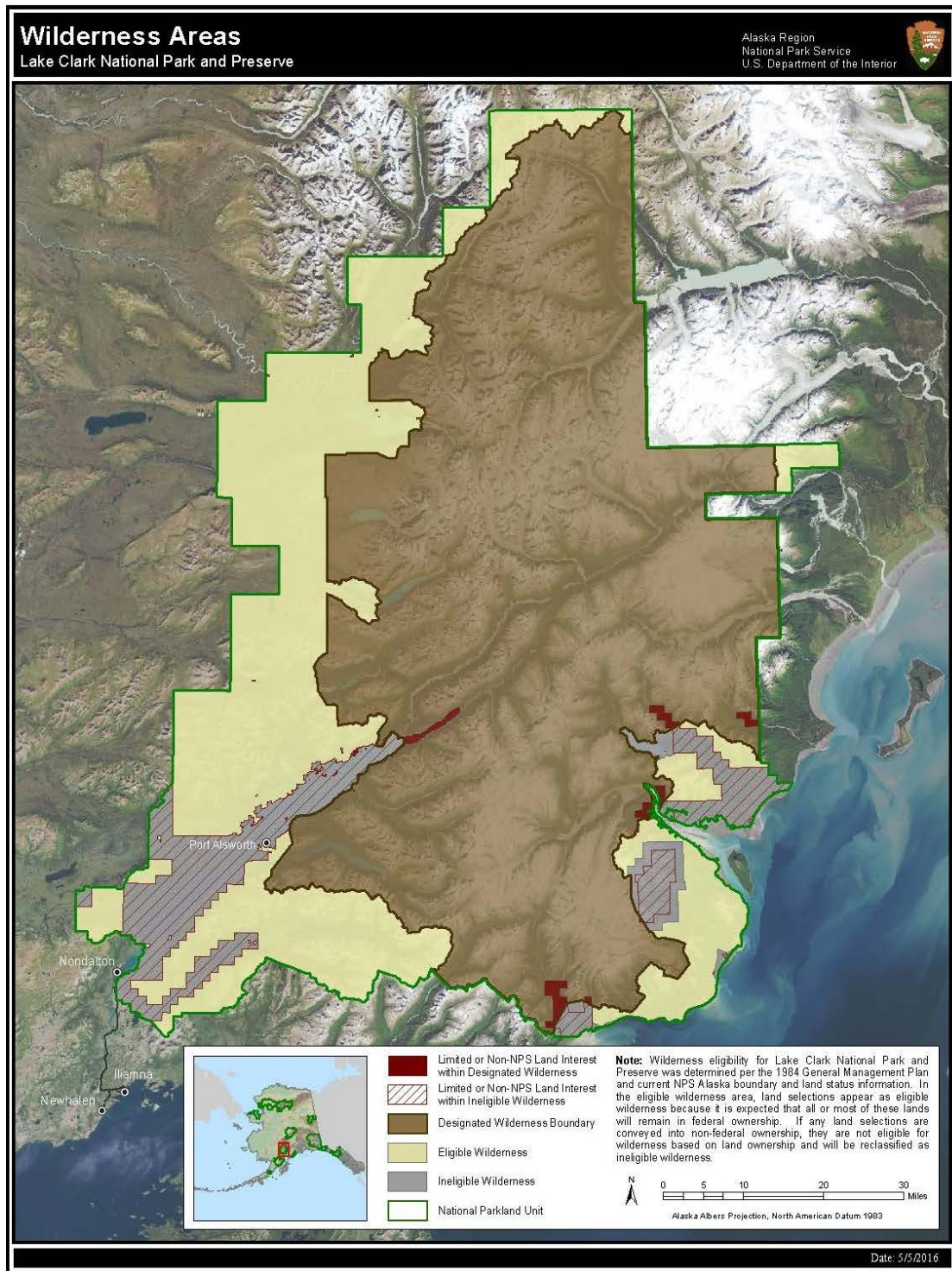


Figure 30. Map of wilderness status in Lake Clark National Park and Preserve as of 5/5/2016.

Land status considerations:

Navigable Waters: Yes, Lake Clark is being considered navigable per the request of former Alaska Region Regional Director Sue Masica, and is not an official legal determination. The NPS Lands Division supports this and has accommodated this request in the NPS Land Status database.

Federal 17b Easements: Yes, there are currently 33 (thirty-three) 17b trail/site/airstrip easement records (one 17b airstrip located near Turner Bay, 15 trail easements and 17 site easements are all located on private native lands throughout the park).

Selections: Yes, there are currently 8 ANCSA selections (7 are Cook Inlet Regional Corporation and 1 is Kijik Corporation). 5 ANCSA selections are in ineligible wilderness, 1 ANCSA selections is in eligible wilderness, and 2 ANCSA selections span both designated and ineligible wilderness.

Park management considerations:

- ❖ GMP Preliminary Wilderness Review map: shows a section of Lake Clark and all of Crescent Lake as designated wilderness. The official LACL wilderness boundary description was reviewed. This appears to be a mistake on the map. Former LACL Superintendent Joel Hard agreed to include Crescent Lake as part of Unit 3 and that section of Lake Clark as part of Unit 9 to avoid data gaps in mapping.
- ❖ Tuxedni Bay: the wilderness boundary in the Tuxedni Bay area was changed by the 1992 legal description for NPS units in Alaska (Federal Register, Vol. 57 No. 190, September 30, 1992) (Figure 31).

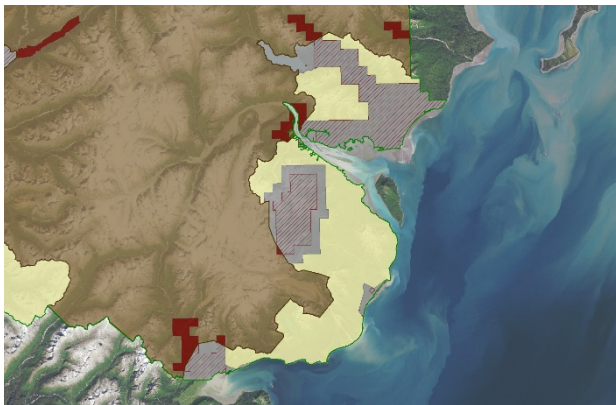


Figure 31. Tuxedni Bay in LACL.

- ❖ General Management Plan Re-Assessment: In 2014, LACL underwent some park management revisions from the original 1984 GMP and an updated document was created, the LACL General Management Plan Re-Assessment.

Noatak National Preserve

Current wilderness status shown in Figure 32.

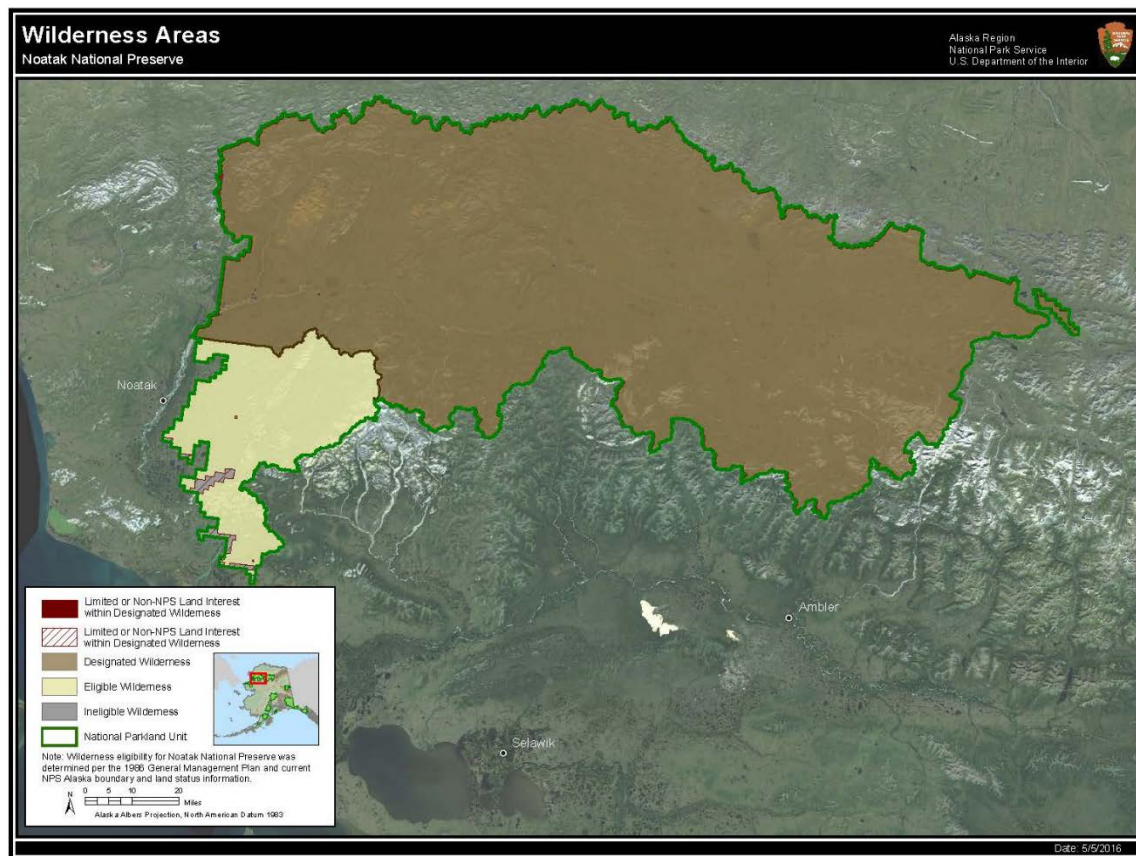


Figure 32. Map of wilderness status in Noatak National Preserve as of 5/5/2016.

Land status considerations:

Navigable waters: None.

Federal 17b Easements: Yes, there are currently 4 (four) 17b trail easement records (all are trail easements located on private native land parcels in the southern portion of the park).

Selections: Yes, there is currently 1 (one) ANCSA selections within designated wilderness (Arctic Slope Regional Corporation).

Park management considerations:

- ❖ No additional assumptions were made beyond the basic model and/or the only ineligible lands in both of these parks were a result of land status.

Wrangell-St. Elias National Park & Preserve

Current wilderness status shown in Figure 33.

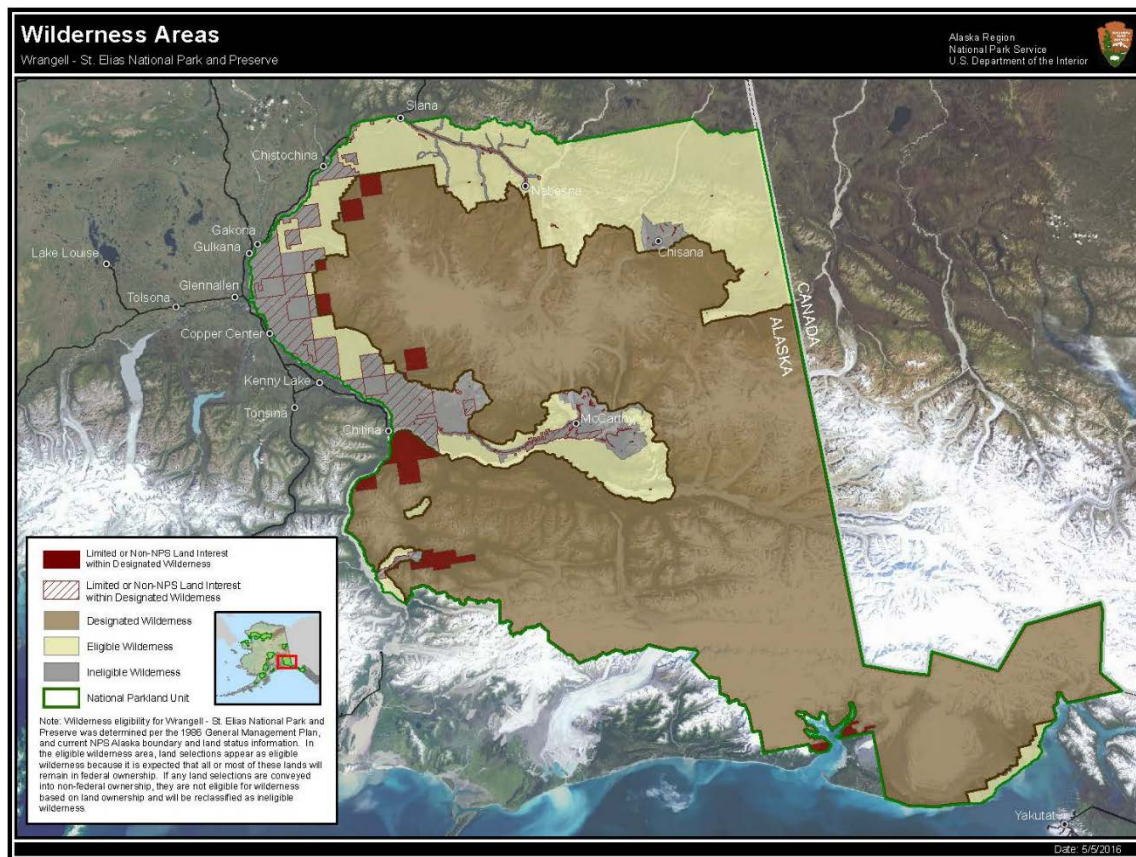


Figure 33. Map of wilderness status in Wrangell-St. Elias National Park and Preserve as of 5/5/2016.

Land status considerations:

Navigable waters: None.

Federal 17b Easements: Yes, there are currently 65 (sixty-five) 17b trail/road/site/airstrip easement records (48 are trail easements, 10 are site easements, 4 are road easements, 3 are airstrip easements; all are located on private native lands throughout the park). 17 of the easements are located in designated wilderness, 41 are located in ineligible wilderness, and 7 span designated and ineligible wilderness.

Selections: Yes, there are currently 24 ANCSA selections (20 are Ahtna, Inc. Regional Corporation, 3 are Chitina Native Corporation and 1 is Chugach Alaska Corporation). 2 ANCSA selections are within designated wilderness, 11 ANCSA selections are in ineligible wilderness, 8 ANCSA selections are in eligible wilderness, and 3 ANCSA selections span both eligible and ineligible wilderness.

Park management considerations:

- ❖ GMP narrative #1 (GMP, page 36): “...a narrow strip of land paralleling the shore of Malaspina forelands (within 100 yards of mean high water) is unsuitable because of commercial fishing activities...” Area includes 2 small islands adjacent to strip.
- ❖ GMP narrative #2 (GMP, page 36): “...the area around Chisana is unsuitable because of extensive mining development and nonfederal interests...” (Figure 34).

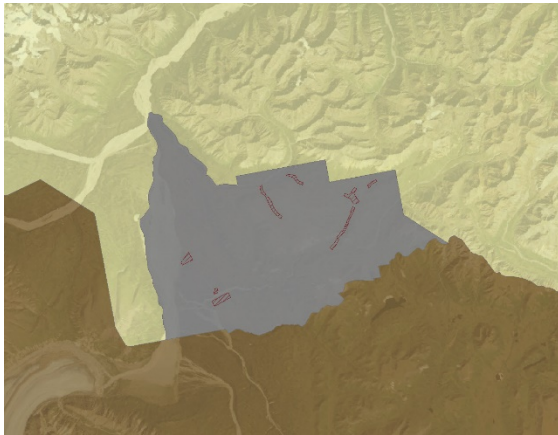


Figure 34. Chisana area in WRST.

- ❖ GMP narrative #3 (GMP, page 36): “...several scattered parcels of federal land between Copper River and Mt. Drum are unsuitable because they are surrounded by nonfederal lands...” and are mostly less than 5,000 acres in size (Figure 35).

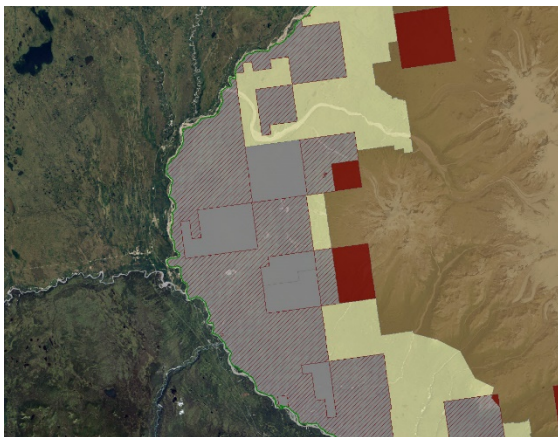


Figure 35. Scattered parcels of federal and nonfederal land in WRST.

- ❖ GMP narrative #4 (GMP, page 36): “...the Kuskulana River Valley is unsuitable because of mining development and well-defined routes to several non-federal interests within the valley...” (Figure 36).

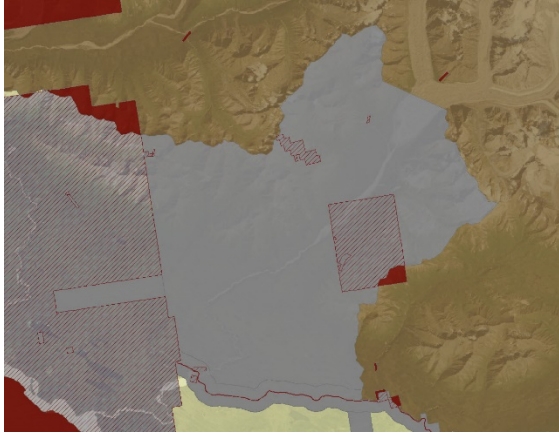


Figure 36. Kuskulana River Valley in WRST.

- ❖ GMP narrative #5 (GMP, page 36): “...an area east of McCarthy is unsuitable because of extensive mining claims, active mining operations, human habitation, and numerous buildings...” (Figure 37).

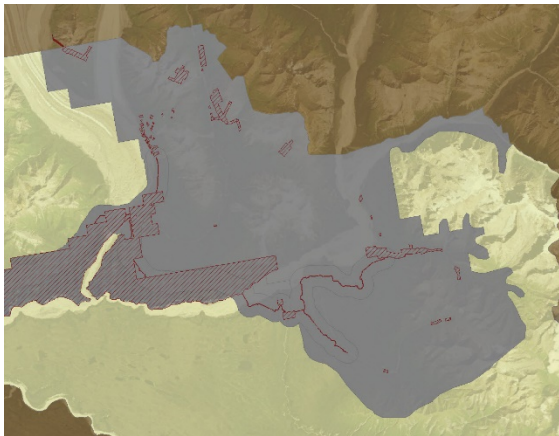


Figure 37. McCarthy area in WRST.

- ❖ GMP narrative #6 (GMP, page 36): “...an area between the Nabesna Road and Tanada Lake, and the Suslota Lake trail north of the Nabesna Road that allows access to BLM lands north of the preserve, are unsuitable because of the impacts from regularly used access routes for subsistence, recreation, and non-federal interests.” This statement in the GMP was reversed with the Wilderness Eligibility Reclassification Nabesna ORV Final Environmental Impact Statement (FEIS). This memo was signed on December 19, 2011 and printed in the Federal Register on April 17, 2012 (Vol.77, No. 74), which addressed inconsistencies between the eligibility criteria and mapping presented in the 1986 GMP. “The large ineligible area between the Tanada Lake and Copper Lake trails has not been impacted by trail use nor was it in 1986. This area should be reclassified as eligible” (Figure 38).

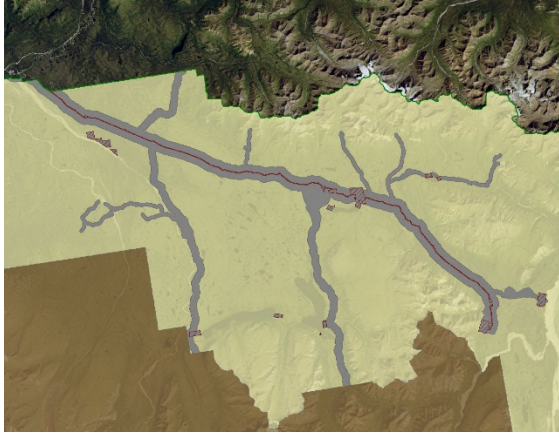


Figure 38. Nabesna area in WRST.

- ❖ GMP narrative #7 (GMP, page 36): “...the main road corridors of Chitina-McCarthy Road, Dan Creek Road, and Kennicott Road” are unsuitable.
- ❖ Nabesna Road and trails in the area are unsuitable due to Nabesna ORV EIS & GMP narrative #7, determining the main road corridor Nabesna Road as unsuitable.
- ❖ Gilahina Butte and Lakina Terrace Site lands are assumed ineligible due to the determination made in the McCarthy Communications Sites Environmental Assessment (EA) (Figure 39).



Figure 39. Gilahina and Lakina area in WRST.

- ❖ Various parcels across the park & preserve are assumed ineligible because they are smaller than 5,000 acres and in some instances, are also surrounded by non-NPS and non-wilderness lands. A 0.25 mile buffer was applied to all private and subsurface tracts per park’s request.

Yukon-Charley National Preserve

Current wilderness status shown in Figure 40.

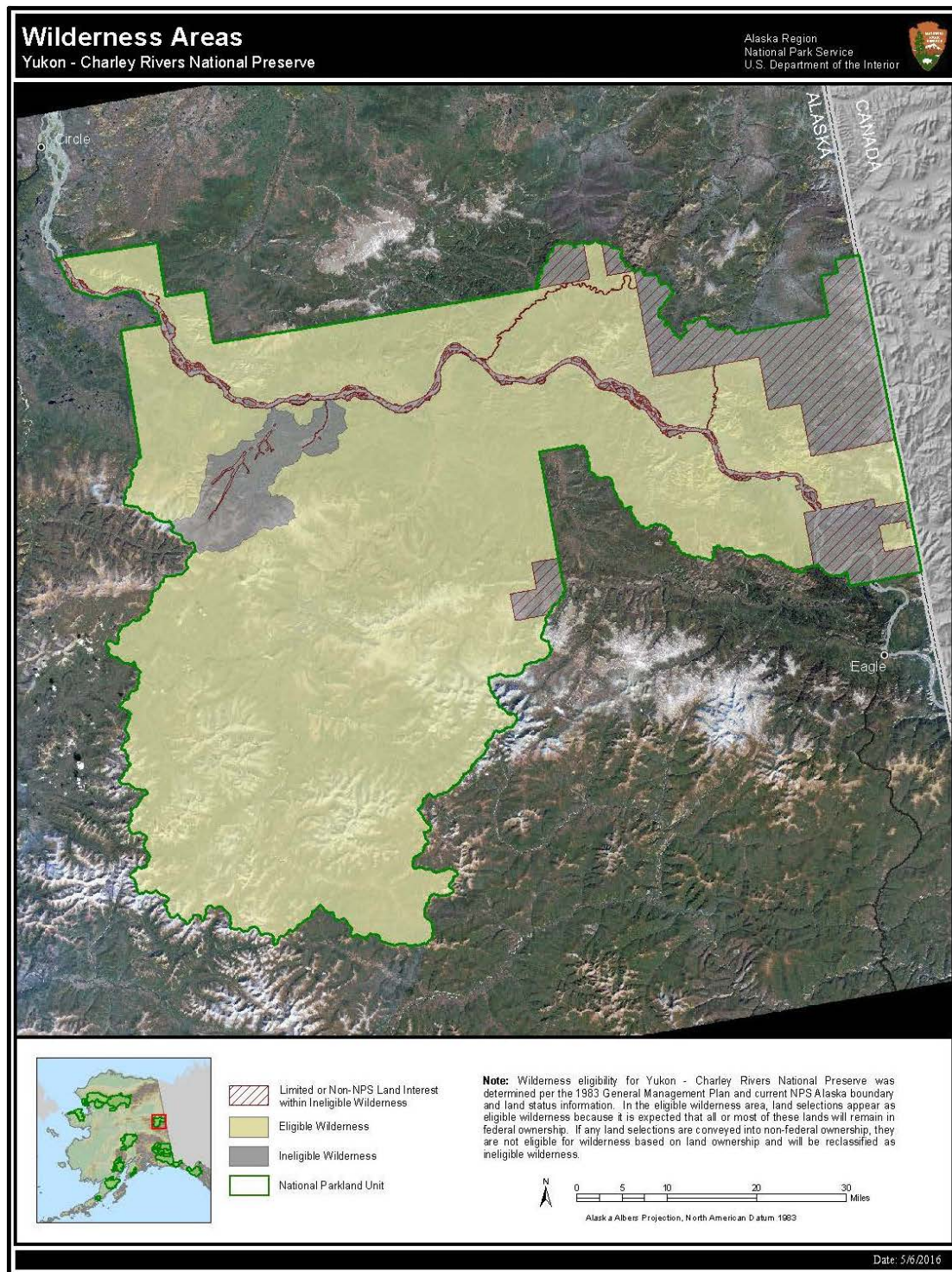


Figure 40. Map of wilderness status in Yukon Charley National Preserve as of 5/5/2016.

Land status considerations:

Navigable waters: Yes, Nation River & Kandik River. The Yukon River is being considered navigable per the request of former Alaska Region Regional Director Sue Masica, and is not an official legal determination. The NPS Lands Division supports this and has had this request accommodated for in NPS Land Status.

Federal 17b Easements: Yes, there are currently 14 (fourteen) 17b trail/site easement records (9 trail easements and 5 site easements; all are located on private native lands in the southeastern portion of the park).

Selections: Yes, there are currently 6 ANCSA selections (5 are Doyon Regional Corporation and 1 is Hungwitchin Corporation). 5 ANCSA selections are in eligible wilderness and 1 ANCSA selection spans both eligible and ineligible wilderness.

Park management considerations:

- ❖ GMP page 69, “The wilderness suitability review examined all lands in the preserve on an individual drainage basis except for the Nimrod Peak/Squaw Mountain/Windfall area. The criteria for suitability included factors of ownership, existing uses, environmental character, and size of area.”
- ❖ GMP Wilderness Suitability map on page 71, “Although these drainages contain unpatented mining claims, lands that are not claimed are suitable for wilderness. Should the unpatented mining claims not be worked and revert to the NPS, they would be suitable for wilderness.” There are many areas on the GMP wilderness suitability map shown as unsuitable, but this footnote helps to identify which areas may actually be suitable by today’s standards.
- ❖ GMP Table 5 (Wilderness Suitability Review) is a chart that specifies the suitability of specific areas within the park. The areas that are deemed unsuitable for wilderness based on the time of this GMP are: Yukon River, Tatonduk River, Woodchopper Creek, Coal Creek, Bear Creek, Sam Creek, and Fourth of July Creek (Figure 42). Current land status still categorizes the Yukon River and Tatonduk River drainages due to non-federal land ownership. Woodchopper and Coal Creeks are currently unsuitable due to previous and existing mining claims (Figure 41). Bear Creek, Sam Creek, and Fourth of July Creeks are all currently suitable for wilderness due to the footnote on the Wilderness Suitability map as stated above.



Figure 41. Woodchopper and Coal Creeks in YUCH.

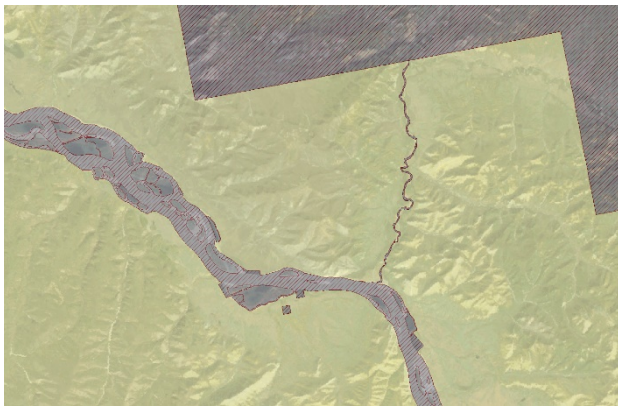


Figure 42. Yukon and Nation Rivers in YUCH.

- ❖ Utilized the USGS Watershed Boundary Dataset (WBD) HUC-12 level units to help categorize specific watershed drainages.

References

National Park Service (NPS). 2006. Management Policies 2006. U.S. Department of the Interior, Washington D.C.

Public Law 88-577. Wilderness Act of 1964.

Public Law 92-203. Alaska Native Land Settlement Act of 1971.

Public Law 96-487. Alaska National Interest Lands Conservation Act of 1980.

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NPS 953/6037, October 2016

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U.S. Department of the Interior



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