

Appendix A

Wild and Scenic River (WSR) and Areas of Critical Environmental Concern (ACEC) Justification

A. Wild and Scenic River Eligibility Matrix Ranking

1. Introduction

The National Wild and Scenic River Act of 1968 was enacted to preserve the free flowing condition, water quality, and outstandingly remarkable values of select rivers. A four-step process is required before a river can be included in the NWSRS. The criteria used for ranking water bodies are eligibility, classification, suitability, and a further study analysis by Congress for authorized rivers.

The first step is an evaluation of a water body's eligibility. In order for a river to be eligible, it must be both free-flowing and possess one or more outstandingly remarkable values (ORV). An ORV is defined as a unique, rare or exemplary feature that is significant at a comparative regional or national scale. If a river is found eligible it is then analyzed to its current level of development. Next, a recommendation is made for assigning one or more of three classifications such as: wild, scenic, or recreational. The final step is the suitability analysis, which provides the basis for determining whether to recommend a river as part of the National System.

The procedures used to determine the eligibility status of rivers/streams within the Bay RMP planning area follow.

2. Method

To determine the eligibility of a river within the Bay planning area, a matrix system was used to rank comparative river resources. Rivers that received a value of 1 or 2 in any one category are considered to have an ORV. The criteria used for ranking these rivers, creeks, and tributaries are based on a numerical value of 1 to 5. The following general rating system used for the Wild and Scenic River Matrix is listed below:

- 1-Exemplary, one of the better examples of that type of resource at a national level.
- 2- Unique, a resource or combination of resources that is one of a kind at a regional level.
- 3- High quality at a regional and/ or local level.
- 4-Common resource at a regional and/ or local level.
- 5-Unknown.

An interdisciplinary team at the Anchorage Field Office (AFO) was convened to inventory and assess rivers/streams that had been recommended by members of the public or staff during scoping to determine the eligibility status for the Bay RMP/EIS. The general rating system was tailored to represent the specific factors of each resource and described below.

a) Fisheries

The Kvichak River is known for having the largest sockeye salmon run in the world (Minard 1998). This particular river received a value of 1 considering its high salmon population. However, it is no longer in BLM jurisdiction. The Alaganak, Goodnews, and Goodnews Middle Fork Rivers were given a value of 2 because of the quality of anadromous and resident fish including fish habitat. A value of 2 was assigned to rivers with existing high recreation and subsistence fishing for anadromous and resident fish species. A value of 3 was assigned to rivers with moderate recreation and subsistence fishing for anadromous and resident fish species. Rivers and creeks with no subsistence or recreational fishing were assigned a value of 4. The majority of the subsistence and recreational fishing activity occurs within the rivers that received a value of 2 or 3.

b) Recreation

The ratings provided were based on recreational and scenic qualities within the following rivers, creeks, and tributaries. Rivers that are free-flowing with unique recreational features, established patterns of high recreational use, and accessible to large numbers were assigned a value of 2. For example, the Kvichak River is a unique watershed with trophy rainbow trout and silver salmon sport fisheries that supports heavy lodge, fly-in, and local sport fishing traffic. However, it is no longer in BLM jurisdiction. The Alagnak Wild River, also received a value of 2. It is described by the National Park Service as one of the most popular fly-in fisheries in southwest Alaska. The river supported 2,133 visitor days of fishing and floating in the NPS managed upper 56 miles of river alone. Scenic values were assigned for all waterways by comparing them across the region. Most rivers rated values of between 3 (high quality) and 4 (common) at a regional and local level. None were rated at a value of 2 for scenic value due to the similar nature of their scenic characteristics throughout the planning area.

c) Wildlife/Subsistence

Both Subsistence and Wildlife were grouped together for the purpose of this evaluation since chapter 3 discussion was referenced in the same manner. The Kvichak River which drains into Bristol Bay received a rating of 2 as it had crucial salmon fisheries for supporting an entire watershed, and for subsistence uses for the entire region. It has the world's largest sockeye run which supports subsistence lifestyle of all communities in the watershed including some subsistence uses from elsewhere in the planning area and state. This river also provides subsistence uses for rural residents in all land ownerships including two National Parks and Preserves. Subsistence is unique to Alaska and cannot be considered a National level exemplary of resource management Nationwide as it is unique to Alaska. However, the Kvichak River is no longer in BLM jurisdiction. The Goodnews River received a value of 2 because it has similarities to the Kvichak River, although it has a smaller watershed and fewer dependent communities. It is the major regional resource in extreme Southwest Alaska and also includes a portion of Togiak National Wildlife Refuge and is a part of the Federal Subsistence Program. The Goodnews River is a crucial Bering Sea fishery resource. Both rivers have large anadromous fish populations, sport and commercial fishing, and subsistence dependence of international, national, and in-state importance. The fish provide a large part of sustaining the terrestrial wildlife ecosystem as well.

c) Cultural/Historic

The criteria for evaluation of cultural resources on proposed wild & scenic rivers within the Bay RMP are listed below.

1 - represents there is an observable settlement pattern of cultural sites (either eligible for listing on National Register of Historic Places individually or as a group), and/or sites exhibiting evidence of two or more cultures using the area, and/or an area of religious or cultural significance for local population (TCP eligible).

2 - represents there is at least one site eligible for listing and high potential for more.

3 - no cultural resources are known for this segment, but there is high potential for cultural resources. High potential for cultural resources in this area includes: well drained areas adjacent to salmon streams/rivers, inlets/outlets to lakes that do not freeze to bottom in the winter; overlooks where game herds would funnel through a natural constriction such as a valley.

4 - no cultural resources are known within such segments, but there is medium potential for cultural resources.

5 - indicates that no cultural resources are known within such segments, and there is low potential for cultural resources. Low potential for cultural resources in this area includes: poorly drained areas, areas not adjacent to trout or salmon streams, streams draining from lakes that freeze to the bottom in winter, steep slopes of over 30 degrees.

After comparative ranking of the river resources, the miles of stream on unencumbered BLM land were determined. This determination was added to the matrix in order to prevent bias toward BLM managed

rivers during the ranking process. Rivers that did not receive a ranking of 1 or 2 were immediately removed from the eligibility determination process due to their possessing no ORV. Rivers that are free flowing, determined to have an ORV(s), and flowed through BLM managed lands were determined to be eligible as per the Wild and Scenic River Act of 1968.

3. Results

Forty rivers within the Bay planning area were evaluated for eligibility. Of the 40 rivers evaluated. Three river segments were determined to be eligible for inclusion to the NWSRS.

Eligible rivers within the Bristol Bay region include: Alaganak River.

Eligible rivers within the Goodnews Bay region include: Goodnews River and Goodnews Middle Fork.

This resource evaluation was conducted by the following specialists:

Mike Scott/ Tim Sundlov- Fisheries
Bruce Seppi/Jeff Denton -Wildlife and Subsistence
Doug Ballou/Jeff Kowalczyk /Jake Schlapfer- Recreation
Donna Redding - Cultural and Historic

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B. Draft Special Management Area Nominations

Evaluation of Carter Spit and Bristol Bay Areas of Critical Environmental Concern (ACEC)

1. Introduction

The Code of Federal Regulations at 43 CFR §1610.7-2 provides for the designation of areas of critical environmental concern (ACECs). Areas having potential for ACEC designation and protection management are identified and considered within the context of the resource management planning process. Inventory data were analyzed to identify areas containing resources, values, systems and processes or hazards that would make them eligible for further consideration for designation as an ACEC. This report will identify Areas of Critical Environmental Concern and provide rationale for designating these areas. An evaluation will be conducted of all existing ACECs, newly proposed ACECs, changes to any existing ACECs and proposed areas with a high environmental concern.

This report provides the evaluation of two areas proposed for designation as Areas of Critical Environmental Concern (ACECs), Bristol Bay and Carter Spit, which were evaluated as part of the Bay Resource Management Plan/Environmental Impact Statement.

What are the Criteria for Designation of an Area of Critical Environmental Concern (ACEC)?

The following criteria of **relevance** and **importance** must be met for designation of a potential ACEC -

- **Relevance** This criterion requires that a significant historic, cultural, or scenic value; a fish or wildlife resource or other natural system or process; or a natural hazard be present. By significant is meant that, when compared with others of its kind, it has relatively greater weight or meaning than others of its kind.
- **Importance** This criterion requires that the value, resource, system, process, or hazard being considered will have substantial significance and values. This generally requires qualities of more than local significance and special worth, consequence, meaning, distinctiveness, or cause for concern.

2. The Process

1. Evaluate existing ACECs for modification due to the change of conditions affecting the relevance and importance criteria. No ACECs are currently designated in the Bay planning area.
2. Nominate new areas with relevance and importance.
3. Evaluate nominated areas to determine if they meet the relevance and importance requirements.
4. Consider the potential ACECs as Alternatives that are analyzed and addressed in the Draft RMP/EIS.

The Draft Bay RMP/EIS contains recommendations on which potential ACECs are proposed for designation, and public comments will be requested. Public comments will be reviewed, considered, and modifications will be made as necessary before the Final RMP/EIS is circulated. Designation of ACECs will occur in the Record of Decision (ROD) upon approval of the RMP.

The ACEC evaluation was conducted by the following specialists:

Mike Scott/Tim Sundlov-Fisheries
Jeff Denton/Bruce Seppi-Wildlife and Subsistence
Doug Ballou/Jeff Kowalczyk-Recreation
Donna Redding- Cultural and Historic

a) Cultural/Historic

Overall the proposed Areas of Critical Environmental Concern within the Bay Plan have few recorded historic or archaeological sites. This is not because these areas are not significant but rather that they are remote, undeveloped and have not been intensively surveyed. The proposed ACECs all appear to have potential for historic or prehistoric sites and except for the Carter Spit area will be designated priority 3 for unknown potential. The Carter Spit area will be designated priority 2 for cultural resources, not only for its known cultural resources but also because it has high potential for previously undiscovered resources given its geographic setting on the coast and location within prime hunting areas for marine and terrestrial game as well as fishing areas.

b) Fisheries

Four major tributaries are located on BLM unencumbered lands in the Bay planning area that should be considered for a Special Management Area. The South Fork of the Goodnews River is located in the Goodnews Bay watershed and the three other tributaries, Faro Creek and the South and East Fork of the Arolik River, contribute to the Kuskokwim Bay watershed. All four tributaries are within the Kuskokwim Bay ADF&G Management Area. An Aquatic Habitat Management Plan will be implemented for water bodies falling within the designated ACECs to promote quality fish habitat.

(1) South Fork of the Goodnews River

The South Fork of the Goodnews River provides spawning and rearing habitat for economically important subsistence, commercial and recreational fisheries in the main stem Goodnews River. The historic average salmon escapement to the main stem Goodnews River is 3,137 Chinook salmon, 36,925 sockeye salmon, 21,284 chum salmon, and 27,897 coho salmon (Linderman 2005a). Stewart (2004) estimates that less than 10 percent of returning salmon to the Goodnews watershed spawn in the South Fork. Residents of Quinhagak, Goodnews Bay, and Platinum, located along the south shore of Kuskokwim Bay (approximately 220 households), harvest subsistence salmon primarily from Kanektok,

Arolik, and Goodnews River drainages (ADF&G 2001). The rainbow trout stocks which inhabit the Kuskokwim Bay streams are considered “world class” with high catch rates and are capable of producing rainbow trout that exceed 25 inches (ADF&G 2004). The stem of the Goodnews River supports the second largest sport fishery in the Kuskokwim Bay Area and angler effort (angler days) has averaged 2,522 from 1983 - 2002 (Lafferty 2004).

(2) Faro Creek and the South and East Fork of the Arolik River

Faro Creek and the South and East Fork of the Arolik River provide spawning and rearing habitat for economically important subsistence, commercial and recreational fisheries in the main stem Arolik River. The headwaters of these tributaries are located within an area of medium to high mineral potential. The Arolik River is a significant salmon producing river that drains into Kuskokwim Bay (Linderman 2005b). Residents of Quinhagak, Goodnews Bay, and Platinum, located along the south shore of Kuskokwim Bay (approximately 220 households), harvest subsistence salmon primarily from Kanektok, Arolik, and Goodnews River drainages (ADF&G 2001). The rainbow trout stocks which inhabit the Kuskokwim Bay area are considered “world class” with high catch rates and are capable of producing rainbow trout that exceed 25 inches (ADF&G 2004). The Arolik River supports the third largest rainbow trout sport fishery in Kuskokwim Bay and angler catch has averaged 1,122 fish from 1997 - 2002 (Lafferty 2004).

c) Subsistence and Wildlife Resources

(1) Goodnews Bay Region: Carter Spit and coastal wetlands

There are several wildlife related resources that justify essential habitats for maintaining species diversity. Carter Bay and coastal areas provide molting and staging habitat for Steller’s Eiders, a threatened species under the Endangered Species Act. (Shaw et al. 2004). Many BLM sensitive species use the area for staging and migration in fall including black brant, black scoters, blackpoll warblers, bristle-thighed curlews, grey-cheeked thrush, harlequin ducks, king eiders, long-tailed ducks, red-knot, Hudsonian godwit, red-throated loon, surf scoter, white-fronted geese and occasional harbor seals (Seppe, 1997). Carter Bay and coastal areas provide molting habitat for white-winged scoters and lesser scaup (Shaw et al. 2004). Several species of rare plants have been documented in the Carter Spit/Goodnews Bay area (Lipkin 1996, Parker 2005). The coastal estuaries and watersheds have concentrations of breeding shorebirds and waterfowl, including several trans-oceanic shorebird species. Beluga whales, Steller sea lions, harbor seals and bearded seals are found in tidal bays and the coastal fringes of the area (NOAA 2003). Subsistence activities serve local communities, through egg and spring waterfowl hunting, and seal and Beluga whale hunting. The area is subject to the effects of global warming in the form of active shoreline modifications from rising sea levels, increased storminess, and reduction of pack ice. Brown bears concentrate in coastal areas in spring to forage on vegetation and marine mammal carcasses, and later concentrate on salmon runs on coastal streams.

The islands in Carter Bay and other associated coastal estuaries are Maritime National Wildlife Refuge managed but their ecosystems are dependent upon the mainland terrestrial watersheds for fresh water sources to maintain estuary tidal flat ecosystems adjacent to BLM lands (NOAA, 2003). The Jacksmith Creek watershed is the fresh water source for the Togiak National Wildlife Refuge Coastal Wetlands and Jacksmith Bay/Carter Spit estuary and mudflats.

Should portions of the Indian River watershed remain in long-term BLM jurisdiction it would be added to the Carter Spit ACEC.

(2) Bristol Bay Region

The Bristol Bay region holistically provides seasonal habitats for the Mulchatna Caribou Herd and the fisheries forage base for brown bears. The area has concentrations of nesting trumpeter (Gibson and Malry 2003) and tundra swans (Wilk 1988) and widespread wetland habitats, which have moderate

productivity. However, cumulatively the area ranks high in statewide waterfowl productivity. Waterfowl produced in Bristol Bay are harvested throughout the Pacific flyway. Sensitive species in the region include trumpeter swans, white-winged and black scoters, black-poll warblers, rusty blackbirds and bald eagles. BLM lands provide movement corridor continuity for caribou movement and crucial seasonal habitats including calving and crucial winter range. Five plant species have been listed as rare by the Alaska Natural Heritage Program (Batten and Parker 2003). Adjacent tidal mudflats in Kvichak Bay and Nushagak Bay are recognized as a shorebird migration stopover site of regional importance, under the Western Hemisphere Shorebird Reserve Network (WHSRN 2005).

BLM planning blocks do not individually rank as high for wildlife importance as the region due to the widespread occurrence and use of wildlife resources. Subsistence use of wildlife resources are mostly local and regional importance. Sport harvest is subject to statewide, non-resident and international demand for large game.

d) Recreation

Recreation planning tools, such as Visual Resource Management and the Recreation Opportunity Spectrum, were utilized to determine relevance and importance ratings for potential Special Management Area nominations. The management objectives analyzed as a result of these planning inventories determined area-specific prescriptions.

For example, the recreation objective for semi-primitive motorized areas within the Bay planning area shall be to partially retain the existing character of the visual landscape. Activities will not dominate the view of a casual observer. The objective for primitive non-motorized areas within the planning area will allow evidence of humans and management controls and maintain a natural-appearing environment through careful mitigation measures while allowing moderate to major modification to the landscape. Commercial recreation activities are very limited to non-existent. Dispersed recreation is also very low and is normally tied to established subsistence activities. Therefore, recreation and scenic values were not rated as highly relevant or important on a world national or regional scale.

Table A.2. Areas of Critical Environmental Concern Nomination Matrix

Scores for Relevance (A) and Importance (B)																
Name of BLM Land Block	BLM Land Status	Acres	Wildlife		Cultural		Historic		Fisheries		Scenic		Recreational		Subsistence	
			A	B	A	B	A	B	A	B	A	B	A	B		
Klutuk Creek	U*	129,173	3	3	3	3	3	3	3	3	4	4	4	4	3	2
Yellow Creek	U*	243,689	3	4	3	3	3	3	4	4	4	4	3	3	4	3
Koggiling Creek	U*	159,732	3	4	3	3	3	3	4	4	4	4	4	4	4	4
Kvichak	U*	99,158	3	3	3	3	3	3	3	3	4	4	3	3	4	3
Iliamna West	U*	182,993	3	2	3	3	3	3	3	3	3	4	3	3	3	2
Alagnak	U*	126,023	3	4	3	3	3	3	3	3	4	4	3	3	4	3
Carter Spit ACEC	U*	62,862	1	2	3	3	3	3	3	3	3	3	3	4	3	2
Faro Creek	U*	20,737	3	3	3	3	3	3	2	2	3	3	4	4	3	4
Arolik River	U*	17,022	3	3	3	3	3	3	2	2	3	3	4	4	3	4
Goodnews River South Fork	U*	32,294	3	3	3	3	3	3	2	2	3	3	4	4	3	4

U* indicates unencumbered BLM lands. Some lands may be topfiled by the State of Alaska.

References

Alaska Department of Fish and Game. 2001. Alaska Subsistence Fisheries 1999 Annual Report. Alaska Department of Fish and Game Division of Subsistence. Juneau.

2004. Staff comments on subsistence, personal use, sport, guided sport, and commercial finfish regulatory proposals for Artic-Yukon-Kuskokwim Area finfish Alaska Board of Fisheries meeting. Alaska Department of Fish and Game, Fairbanks, Alaska.

2005a. Goodnews River salmon monitoring and assessment, 2004. Series No. 05-41, Anchorage.

2005b. Kanektok River salmon monitoring and assessment, 2004. Series No. 05-37, Anchorage.

Batten, A., and C. Parker. 2003. Vascular plant collections from northwestern Alaska Peninsula - summer 2003. University of Alaska Museum Herbarium, Fairbanks, AK pp16.

Gibson, D. D. and J. M. Maley. 2003. University of Alaska Museum- Bureau of Land Management. Biodiversity survey. File report to the Bureau of Land Management, University of Alaska Museum, Fairbanks, AK. pp6.

Lafferty, Robert. 2004. Fishery Management Report for Sport Fisheries in the lower Yukon - lower Kuskokwim Management Area for 2002-2003. Alaska Department of Fish and Game, Fishery Management Report Series No. 40-03, Anchorage.

Lipkin, R. 1996. A botanical survey of the Goodnews Bay Region, Alaska. Report to Bureau of Land Management- Anchorage Field Office. Alaska Natural Heritage Program, University of Alaska, Anchorage pp35.

Office of the Federal Register. National Archives and Records Administration. October 1, 2005 Code of Federal Regulations 43 CFR 1610.7-2.

Parker, C. L. 2005. Vascular plant inventory of the Ahklun Mountain Goodnews Bay vicinity, southwestern Alaska. University of Alaska Museum of the North Herbarium, Cooperative agreement LAA-02-0001 with the Bureau of Land Management pp 42.

Seppi, B. E. 1997. Fall migration of shorebirds and waterfowl at Carter Spit, Alaska. BLM-Open File Report 65, BLM/AK/ST-97/018+6700+040 pp 36.

Shaw, D. W. J. M. Maley, and D. D. Gibson. 2004. UAM-BLM bird survey: Goodnews Bay, June and July 2004. File report to BLM-Anchorage field Office pp9.

Stewart, R. 2004. Middle Fork Goodnews River weir, (2003). Alaska Department of Fish and Game, Commercial Fisheries Division, Regional Information Report No. 3A04-20, Anchorage.

U. S. Dept of Commerce, National Oceanic and Atmospheric Administration. (2003). Sensitivity of Coastal Environments and Wildlife to Spilled Oil- Western Alaska Atlas.

Western Hemisphere Shorebird Reserve Network. 2005.

Wilk, R. J. 1988. Distribution, abundance, population structure and productivity of tundra swans in Bristol Bay, Alaska. Arctic vol. 41. No. 4., 288-292.