

MEMORANDUM

TO: Senate Finance Committee Members

FROM: Rick Halford

DATE: April 5, 2013

I want to point out to the Committee that the applications for water reservations by the local native organizations of western Alaska, Trout Unlimited and The Nature Conservancy are on the same anadromous streams previously closed to mineral entry by the Department of Natural Resources. The Department's justification includes these statements:

- *"The Bristol Bay salmon fishery is, and historically has been, the most valuable economic resource in the Bristol Bay region; providing a major portion of all the salmon harvested in the State of Alaska and the world annually..."*
- *Effects of Instream Mining: The development of mining claims within the active stream channel of an anadromous stream creates a serious use conflict and could jeopardize the commercial, sport, and subsistence harvest of salmon and the overall economic and sociocultural structural structure of the Bristol Bay region."*
- *Existing state and federal water quality regulations and standard were considered inadequate to guarantee the continued propagation and production of the salmon and other fish resources in the stream waters in the Bristol Bay area."*
- *Within the 64 streams designated for closure in the order, sufficient protection of fish and game resources (as required in AS 16.05.87(d)) would likely preclude mining in these areas after a mining claim has already been filed. Actual stream closings more effectively and efficiently achieves the level of fisheries protection required on these 64 streams. The result of these analyses was to close to new mineral those streams where highest conflict between the salmon and mining would occur."*

Source: DNR, Justification for Stream Closures, MCO 393

Mineral Closing Order 393 precedes the Pebble and related mining claims or leases, was restated Bristol Bay Area Plan revisions of 2005 and remain in effect. The suggestion that the water reservations are a threat to mining operation fails to acknowledge that the mineral claimant does not have rights to the waters or minerals underneath these streams because the Department closed these streams and a 100-foot buffer on either side to mineral entry many years ago.

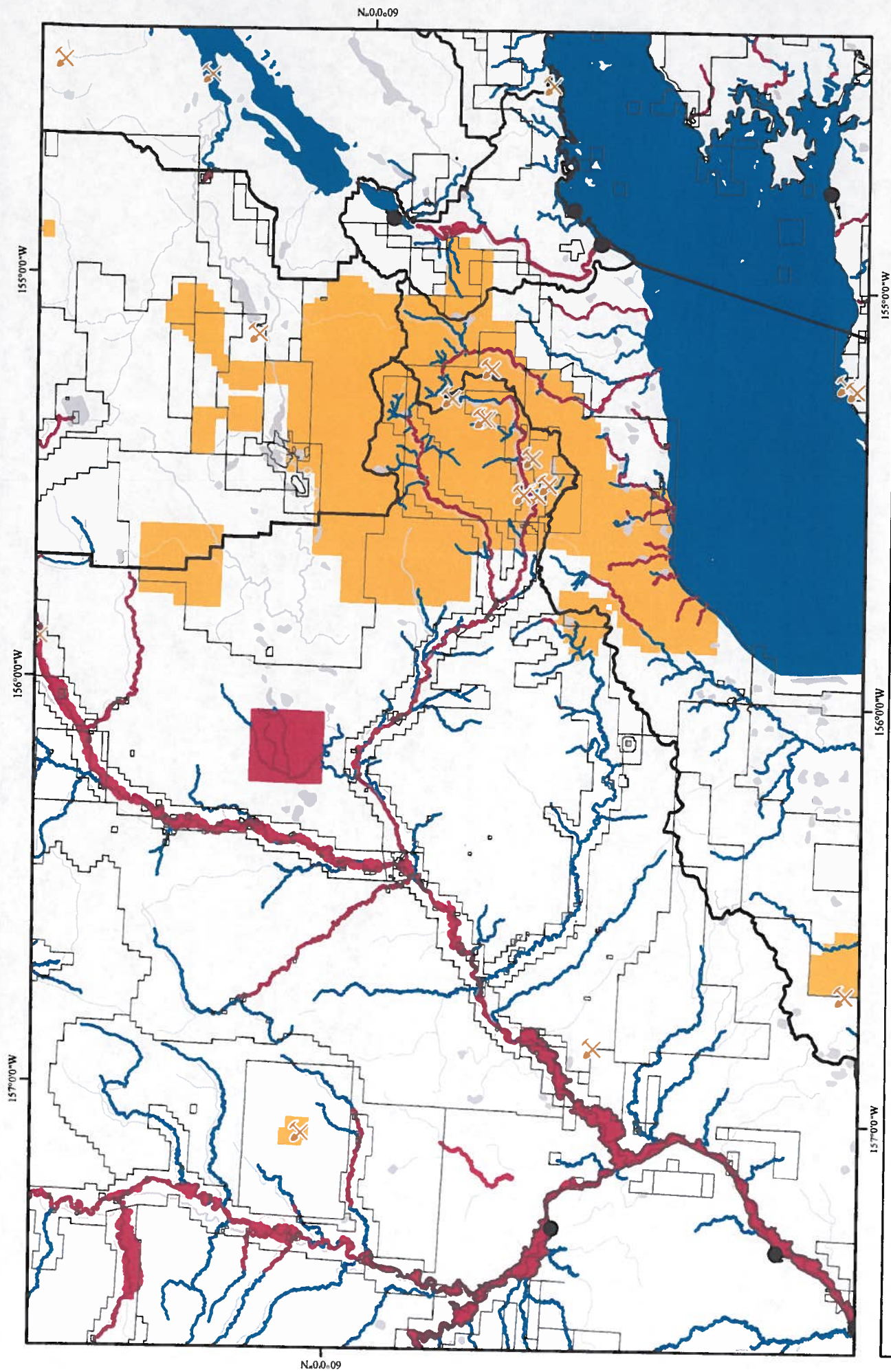
The last application filed in western Alaska was about 4 years ago and since then only a total of 4 or 5 applications have been filed in the rest of the state. None of the applications have stopped anything or been adjudicated and the Pebble related ones are on streams closed to mining for almost 30 years.

original (1984) Bristol Bay Area Plan closed a large number of streams to mineral entry; Mineral Closing Order 393 closed a large number of streams in the Nushagak-Mulchatna river drainage as well as some on the Alaska Peninsula. A number of other mineral closing and opening orders affect settlement lands in the Dillingham, Aleknagik, and the Nunavaugluk Lake area. Mineral Leasehold Location Order 1 affects large acreages of state land in the upper Mulchatna drainage as well as state lands around the eastern portion of Lake Iliamna. As of the date of this plan, the following mineral orders are in effect:

Table 2.1: Mineral Closing, Opening, and Leasehold Location Orders

| <i>Mineral Order</i> | <i>General Vicinity</i> | <i>Acreage</i> |
|----------------------------|---|----------------|
| Mineral Closing Order 393 | Nushagak-Mulchatna R. and AK Peninsula | 213,697 |
| Mineral Closing Order 562 | Aniak River portion of this plan | ----- |
| Mineral Closing Order 304 | Nunavaugluk Lake | 2,360 |
| Mineral Closing Order 305 | Weary R.-Snake River Settlement Area | 13,393 |
| Mineral Closing Order 196 | Warehouse Mountain Area | 10,386 |
| Mineral Closing Order 443 | East Side of Aleknagik Road | 2,368 |
| Mineral Closing Order 570 | Nelson Lagoon Reconveyance | 3,840 |
| Mineral Closing Order 249 | Jack Rabbit Hills | 22,831 |
| Mineral Closing Order 552 | Various University Lands in Alaska | N/A |
| Mineral Closing Order 754 | Ekuk | 5 |
| Mineral Closing Order 650 | King Cove | 185 |
| Mineral Closing Order 598 | Balboa Bay (north of Sand Point) | 52 |
| Mineral Closing Order 644 | Sand Point | 59 |
| Mineral Closing Order 622 | Sand Point | 2 |
| Mineral Closing Order 521 | Morzhovoi Bay | 4 |
| Mineral Closing Order 642 | False Pass | 27 |
| Mineral Closing Order 239 | North end of Upper Ugashik Lake (Univ.) | N/A |
| Mineral Closing Order 733 | Egegik | 3 |
| Mineral Opening Order 702 | Warehouse Mountain Area | 1,112 |
| Leasehold Location Order 1 | Upper Mulchatna R.-East Iliamna Lake | 1,920,327 |
| Leasehold Location Order 6 | Aniak River portion of this plan | ----- |

Leasehold Location Order 1 (1984) restricted mining over large areas of Regions 7, 8, and 9 to leasing. Rights to locatable minerals on lands owned by the State of Alaska are obtained by making a mineral discovery, staking the boundaries of the location, and recording the certificate of location in the designated time period. In most areas, such a location is a “mining claim”, which gives the owner an immediate property right to mine the deposits. However, in areas of the state that have been restricted to leasing, the location is a “leasehold location”, not a mining claim. The leasehold location must be converted to an upland mining lease before mining begins. No mining of minerals on leasehold locations may take place, except for limited amounts necessary for sampling or testing until a mining lease has been obtained. The leasing process includes the exclusive right to convert the leasehold location to a noncompetitive lease. There is no lease sale or open bidding.



Mineral Closure Orders

- State Mining Claims
- Mining Prospect
- Areas Closed to Mineral Entry by Mineral Closure Order
- 2012 Anadromous Waters Catalog
- Plan Boundary
- Region Boundaries
- Unit Boundaries

The data presenting state mining claims and areas closed to mineral entry by mineral closure order is provided by ADNRR. The 2012 anadromous waters catalog is provided by ADFG.

Map 3 ###

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
BRISTOL BAY AREA PLAN
MINERAL ORDER NO. 393

 - - Opening Lands to Mineral Entry
XX - - Closing Lands to Mineral Entry

Pursuant to authority granted to the Director, Division of Lands, State of Alaska, by AS 38.05.185 thru AS 38.05.280, and in accordance with applicable regulations, the Director does hereby XX close open the following described lands to entry under the locatable mineral leasing and mining laws of the State of Alaska:

SEE ATTACHMENT #1

Subject to valid existing rights.

This mineral order is based on written justification contained in Land Planning Report C-SC-84-008 and the BBAP.

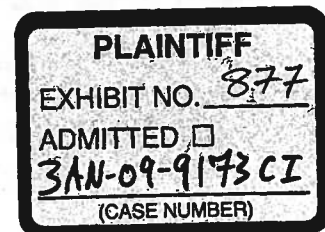
Submitted: Rick Austin for
District Classification Officer

Concur: Margaret J. Hayes
District Manager

Mineral Order
Recommended: PVG 9/12/84
Division Classification Officer

Concur: Tom Hawkins 9-12-84
Director,
Division of Land and Water Management

Approved by: Esther C. Wunnicker
Commissioner
Department of Natural Resources



9-13-84
Effective
Date

SOA 015320

ATTACHMENT 1

BRISTOL BAY AREA PLAN TOWNSHIP
INDEX OF STREAM MINERAL CLOSURES

| TOWNSHIP/RANGE | RIVER(S) | ANADROMOUS STREAM IDENTIFICATION NUMBER | CLOSED ACREAGE** |
|----------------------|---|--|---------------------|
| * T.1N., R.32W. S.M. | Chulitna River | 324-10-10150-2207-3173 | 100 |
| T.1N., R.41W. S.M. | Mulchatna River | 325-30-10100-2202 | 2,462 |
| T.1N., R.43W. S.M. | Old Man Creek | 325-30-10100-2202-3075 | 288 |
| T.1N., R.46W. S.M. | Nushagak River | 325-30-10100 | 1,981 |
| T.2N., R.37W. S.M. | Keefer Creek | 325-30-10100-2202-3338 | 69 |
| T.2N., R.38W. S.M. | Keefer Creek | 325-30-10100-2202-3338 | 288 |
| T.2N., R.39W. S.M. | Keefer Creek | 325-30-10100-2202-3338 | 251 |
| T.2N., R.40W. S.M. | Mulchatna River | 325-30-10100-2202 | 1,221 |
| T.2N., R.41W. S.M. | Mulchatna River | 325-30-10100-2202 | 1,012 |
| T.2N., R.46W. S.M. | King Salmon River Nushagak River | 325-30-10100-2435 325-30-10100 | 1,733 |
| T.2N., R.47W. S.M. | Nushagak River King Salmon River | 325-30-10100 325-30-10100-2435 | 4,389 |
| T.2N., R.48W. S.M. | King Salmon River Tributary to King Salmon | 325-30-10100-2435 325-30-10100-2435-3100 | 2,683 |
| T.2N., R.49W. S.M. | King Salmon River Tributary to King Salmon | 325-30-10100-2435 325-30-10100-2435-3100 | 76 |
| T.2N., R.50W. S.M. | King Salmon River | 325-30-10100-2435 | 380 |
| T.3N., R.35W. S.M. | Nikadavna Creek | 325-30-10100-2202-3446-4052 | 153 |
| T.3N., R.37W. S.M. | Tributary to Mulchatna | 325-30-10100-2202-3420 | 248 |
| T.3N., R.39W. S.M. | Mulchatna River Keefer Creek | 325-30-10100-2202 325-30-10100-2202-3338 | 3,197 |
| T.3N., R.40W. S.M. | Mulchatna River | 325-30-10100-2202 | 1,714 |
| T.3N., R.46W. S.M. | Nushagak River | 325-30-10100 | 630 |
| T.3N., R.48W. S.M. | Tributary to King Salmon | 325-30-10100-2435-3100 | 127 |
| T.3N., R.49W. S.M. | King Salmon River Tributary to King Salmon Tributary to King Salmon Tributary to King Salmon Tributary to King Salmon | 325-30-10100-2435 325-30-10100-2435-3100 325-30-10100-2435-3116 325-30-10100-2435-3116-4011 325-30-10100-2435-3130 | 1,589 |
| T.3N., R.50W. S.M. | King Salmon River Tributary to King Salmon Tributary to King Salmon | 325-30-10100-2435 325-30-10100-2435-3116-4011 325-30-10100-2435-3130 | 566 |
| T.3N., R.51W. S.M. | King Salmon River | 325-30-10100-2435 | 338 |
| T.3N., R.52W. S.M. | King Salmon River | 325-30-10100-2435 | 314 |
| T.4N., R.33W. S.M. | Chilchitna River | 325-30-10100-2202-3446 | 94 |

SOA 015321

| TOWNSHIP/RANGE | RIVER(S) | ANADROMOUS STREAMS IDENTIFICATION NUMBER | CLOSED ACREAGE** |
|--------------------|---|---|---------------------|
| T.4N., R.34W. S.M. | Chilchitna River | 325-30-10100-2202-3446 | 418 |
| T.4N., R.35W. S.M. | Nikadavna Creek Chilchitna River | 325-30-10100-2202-3446-4052 325-30-10100-2202-3446 | 386 |
| T.4N., R.36W. S.M. | Chilchitna River Nikadavna Creek | 325-30-10100-2202-3446 325-30-10100-2202-3446-4052 | 324 |
| T.4N., R.37W. S.M. | Mulchatna River Tributary to Mulchatna | 325-30-10100-2202 325-30-10100-2202-3420 | 1,110 |
| T.4N., R.38W. S.M. | Mulchatna River | 325-30-10100-2202 | 1,372 |
| T.4N., R.39W. S.M. | Mulchatna River | 325-30-10100-2202 | 34 |
| T.4N., R.42W. S.M. | Nushagak River | 325-30-10100 | 51 |
| T.4N., R.43W. S.M. | Nushagak River | 325-30-10100 | 919 |
| T.4N., R.45W. S.M. | Nushagak River | 325-30-10100 | 1,061 |
| T.4N., R.46W. S.M. | Nushagak River | 325-30-10100 | 193 |
| T.4N., R.48W. S.M. | Tributary to King Salmon | 325-30-10100-2435-3100 | 94 |
| T.4N., R.49W. S.M. | Tributary to King Salmon | 325-30-10100-2435-3116 | 193 |
| T.5N., R.30W. S.M. | Chilikadrotna River | 325-30-10100-2202-3510 | 129 |
| T.5N., R.31W. S.M. | Chilikadrotna River | 325-30-10100-2202-3510 | 207 |
| T.5N., R.32W. S.M. | Chilchitna River | 325-30-10100-2202-3446 | 178 |
| T.5N., R.33W. S.M. | Chilchitna River | 325-30-10100-2202-3446 | 105 |
| T.5N., R.35W. S.M. | Chilchitna River Mulchatna River | 325-30-10100-2202-3446 325-30-10100-2202 | 308 |
| T.5N., R.36W. S.M. | Mulchatna River Chilchitna River | 325-30-10100-2202 325-30-10100-2202-3446 | 1,806 |
| T.5N., R.37W. S.M. | Mulchatna River | 325-30-10100-2202 | 19 |
| T.5N., R.42W. S.M. | Nushagak River | 325-30-10100 | 401 |
| T.5N., R.43W. S.M. | Nushagak River | 325-30-10100 | 466 |
| T.5N., R.44W. S.M. | Nushagak River | 325-30-10100 | 673 |
| T.6N., R.30W. S.M. | Chilikadrotna River | 325-30-10100-2202-3510 | 233 |
| T.6N., R.31W. S.M. | Chilikadrotna River | 325-30-10100-2202-3510 | 173 |
| T.6N., R.32W. S.M. | Chilikadrotna River | 325-30-10100-2202-3510 | 668 |
| T.6N., R.33W. S.M. | Chilikadrotna River | 325-30-10100-2202-3510 | 298 |
| T.6N., R.34W. S.M. | Mulchatna River Chilikadrotna River | 325-30-10100-2202 325-30-10100-2202-3510 | 594 |
| T.6N., R.35W. S.M. | Mulchatna River Chilikadrotna River | 325-30-10100-2202 325-30-10100-2202-3510 | 1,273 |
| T.6N., R.39W. S.M. | Nushagak River | 325-30-10100 | 244 |
| T.6N., R.40W. S.M. | Nushagak River | 325-30-10100 | 379 |

| TOWNSHIP/RANGE | RIVER(S) | ANADROMOUS STREAMS IDENTIFICATION NUMBER | CLOSED ACREAGE** |
|----------------------|--|--|---------------------|
| T.6N., R.41W. S.M. | Nushagak River | 325-30-10100 | 424 |
| T.6N., R.42W. S.M. | Nushagak River | 325-30-10100 | 229 |
| T.7N., R.33W. S.M. | Mulchatna River | 325-30-10100-2202 | 238 |
| T.7N., R.34W. S.M. | Mulchatna River | 325-30-10100-2202 | 609 |
| T.7N., R.39W. S.M. | Nushagak River | 325-30-10100 | 29 |
| T.8N., R.32W. S.M. | Mulchatna River | 325-30-10100-2202 | 215 |
| T.8N., R.33W. S.M. | Mulchatna River | 325-30-10100-2202 | 313 |
| T.9N., R.30W. S.M. | Mulchatna River | 325-30-10100-2202 | 897 |
| T.9N., R.31W. S.M. | Mulchatna River | 325-30-10100-2202 | 538 |
| T.9N., R.32W. S.M. | Mulchatna River | 325-30-10100-2202 | 263 |
| T.1S., R.41W. S.M. | Mulchatna River | 325-30-10100-2202 | 2,544 |
| T.1S., R.43W. S.M. | Old Man Creek | 325-30-10100-2202-3075 | 342 |
| T.1S., R.44W. S.M. | Old Man Creek | 325-30-10100-2202-3075 | 98 |
| T.1S., R.47W. S.M. | Nushagak River | 325-30-10100 | 2,627 |
| * T.2S., R.29W. S.M. | Chekok Creek | 324-10-10150-2267 | 25 |
| T.2S., R.40W. S.M. | Koktuli River | 325-30-10100-2202-3080 | 600 |
| T.2S., R.41W. S.M. | Koktuli River Mulchatna River | 325-30-10100-2202-3080 325-30-10100-2202 | 527 |
| T.2S., R.42W. S.M. | Mulchatna River Old Man Creek | 325-30-10100-2202 325-30-10100-2202-3075 | 3,269 |
| T.2S., R.43W. S.M. | Old Man Creek | 325-30-10100-2202-3075 | 198 |
| T.2S., R.45W. S.M. | Harris Creek | 325-30-10100-2280 | 182 |
| T.2S., R.46W. S.M. | Harris Creek | 325-30-10100-2280 | 324 |
| T.2S., R.47W. S.M. | Harris Creek Nushagak River | 325-30-10100-2280 325-30-10100 | 3,931 |
| * T.3S., R.26W. S.M. | Pile River Tributary to Iliamna River | 324-10-10150-2341 324-10-10150-2402-3025 | 123 |
| T.3S., R.29W. S.M. | Chekok Creek | 324-10-10150-2267 | 211 |
| * T.3S., R.30W. S.M. | Chekok Creek | 324-10-10150-2267 | 58 |
| * T.3S., R.32W. S.M. | Newhalen River | 324-10-10150-2207 | 107 |
| * T.3S., R.33W. S.M. | Newhalen River | 324-10-10150-2207 | 1,120 |
| T.3S., R.34W. S.M. | Upper Talarik Creek | 324-10-10150-2183 | 153 |
| T.3S., R.35W. S.M. | Upper Talarik Creek Tributary to Koktuli R. | 324-10-10150-2183 325-30-10100-2202-3080-4083 | 116 |
| T.3S., R.36W. S.M. | Tributary to Koktuli R. | 325-30-10100-2202-3080-4083 | 379 |
| T.3S., R.37W. S.M. | Tributary to Koktuli R. | 325-30-10100-2202-3080-4083 | 72 |

| TOWNSHIP/RANGE | RIVER(S) | ANADROMOUS STREAMS IDENTIFICATION NUMBER | CLOSED ACREAGE** |
|----------------------|---|---|---------------------|
| T.3S., R.38W. S.M. | Koktuli River | 325-30-10100-2202-3080 | 344 |
| T.3S., R.39W. S.M. | Koktuli River Tributary to Koktuli R. | 325-30-10100-2202-3080 325-30-10100-2202-3080-4058 | 961 |
| T.3S., R.40W. S.M. | Koktuli River | 325-30-10100-2202-3080 | 21 |
| T.3S., R.41W. S.M. | Koktuli River | 325-30-10100-2202-3080 | 168 |
| T.3S., R.42W. S.M. | Mulchatna River Koktuli River Old Man Creek | 325-30-10100-2202 325-30-10100-2202-3080 325-30-10100-2202-3075 | 2,384 |
| T.3S., R.43W. S.M. | Mulchatna River | 325-30-10100-2202 | 342 |
| T.3S., R.45W. S.M. | Cranberry Creek | 325-30-10100-2214 | 280 |
| T.3S., R.46W. S.M. | Cranberry Creek | 325-30-10100-2214 | 10 |
| * T.3S., R.47W. S.M. | Nushagak River Harris Creek | 325-30-10100 325-30-10100-2280 | 1,473 |
| * T.3S., R.48W. S.M. | Nuyakuk River | 325-30-10100-2249 | 1,047 |
| T.3S., R.49W. S.M. | Nuyakuk River | 325-30-10100-2249 | 1,117 |
| T.3S., R.50W. S.M. | Nuyakuk River | 325-30-10100-2249 | 764 |
| * T.4S., R.25W. S.M. | Tributary to Iliamna River Iliamna River | 324-10-10150-2402-3025 324-10-10150-2402 | 421 |
| * T.4S., R.26W. S.M. | Pile River Iliamna River Tributary to Iliamna River | 324-10-10150-2341 324-10-10150-2402 324-10-10150-2402-3025 | 1,448 |
| * T.4S., R.27W. S.M. | Pile River | 324-10-10150-2341 | 340 |
| * T.4S., R.29W. S.M. | Canyon Creek | 324-10-10150-2273 | 238 |
| * T.4S., R.30W. S.M. | Chekok Creek | 324-10-10150-2267 | 278 |
| * T.4S., R.33W. S.M. | Newhalen River | 324-10-10150-2207 | 725 |
| * T.4S., R.34W. S.M. | Pete Andrews Creek Upper Talarik Creek | 324-10-10150-2195 324-10-10150-2183 | 236 |
| T.4S., R.35W. S.M. | Koktuli River Upper Talarik Creek | 325-30-10100-2202-3080 324-10-10150-2183 | 386 |
| T.4S., R.36W. S.M. | Koktuli River | 325-30-10100-2202-3080 | 413 |
| T.4S., R.37W. S.M. | Koktuli River Tributary to Koktuli R. | 325-30-10100-2202-3080 325-30-10100-2202-3080-4083 | 595 |
| T.4S., R.38W. S.M. | Koktuli River Tributary to Koktuli R. | 325-30-10100-2202-3080 325-30-10100-2202-3080-4083 | 496 |
| T.4S., R.39W. S.M. | Tributary to Koktuli R. | 325-30-10100-2202-3080-4058 | 10 |
| T.4S., R.42W. S.M. | Mulchatna River | 325-30-10100-2202 | 91 |
| T.4S., R.43W. S.M. | Mulchatna River | 325-30-10100-2202 | 1,052 |
| T.4S., R.44W. S.M. | Mulchatna River | 325-30-10100-2202 | 2,432 |
| T.4S., R.46W. S.M. | Cranberry Creek | 325-30-10100-2214 | 374 |

| TOWNSHIP/RANGE | RIVER(S) | ANADROMOUS STREAMS IDENTIFICATION NUMBER | CLOSED ACREAGE** |
|----------------------|---|---|---------------------|
| * T.4S., R.47W. S.M. | Nushagak River | 325-30-10100 | 740 |
| * T.4S., R.48W. S.M. | Nushagak River Nuyakuk River | 325-30-10100 325-30-10100-2249 | 3,278 |
| * T.5S., R.27W. S.M. | Iliamna River Chinkelyes Creek | 324-10-10150-2402 324-10-10150-2402-3014 | 599 |
| * T.5S., R.28W. S.M. | Iliamna River | 324-10-10150-2402 | 301 |
| * T.5S., R.33W. S.M. | Newhalen River | 324-10-10150-2207 | 678 |
| * T.5S., R.34W. S.M. | Newhalen River Pete Andrews Creek | 324-10-10150-2207 324-10-10150-2195 | 512 |
| * T.5S., R.35W. S.M. | Upper Talarik Creek | 324-10-10150-2183 | 349 |
| T.5S., R.36W. S.M. | Lower Talarik Creek | 324-10-10150-2167 | 87 |
| T.5S., R.38W. S.M. | Tributary to Iliamna Lake | 324-10-10150-2159 | 25 |
| T.5S., R.44W. S.M. | Mulchatna River | 325-30-10100-2202 | 1,467 |
| * T.5S., R.45W. S.M. | Mulchatna River | 325-30-10100-2202 | 4,386 |
| * T.5S., R.46W. S.M. | Mulchatna River Cranberry Creek Nushagak River | 325-30-10100-2202 325-30-10100-2214 325-30-10100 | 1,079 |
| * T.5S., R.47W. S.M. | Nushagak River | 325-30-10100 | 3,638 |
| * T.5S., R.48W. S.M. | Nushagak River | 325-30-10100 | 2,438 |
| * T.6S., R.31W. S.M. | Tommy Creek | 324-10-10150-2320 | 32 |
| * T.6S., R.34W. S.M. | Pete Andrews Creek | 324-10-10150-2195 | 116 |
| * T.6S., R.35W. S.M. | Upper Talarik River Tributary to Iliamna Lake | 324-10-10150-2183 324-10-10150-2175 | 280 |
| T.6S., R.36W. S.M. | Tributary to Iliamna Lake Lower Talarik Creek | 324-10-10150-2175 324-10-10150-2167 | 335 |
| T.6S., R.37W. S.M. | Lower Talarik Creek Tributary to Lower Talarik Tributary to Iliamna Lake Tributary to Iliamna Lake | 324-10-10150-2167 324-10-10150-2167-3003 324-10-10150-2163 324-10-10150-2159 | 461 |
| T.6S., R.38W. S.M. | Tributary to Iliamna Lake Tributary to Iliamna Lake Tributary to Iliamna Lake | 324-10-10150-2159 324-10-10150-2155 324-10-10150-2149 | 306 |
| * T.6S., R.45W. S.M. | Mulchatna River | 325-30-10100-2202 | 1,219 |
| * T.6S., R.46W. S.M. | Mulchatna River Nushagak River | 325-30-10100-2202 325-30-10100 | 6,693 |
| T.6S., R.49W. S.M. | Klutuk Creek | 325-30-10100-2141 | 50 |
| T.6S., R.50W. S.M. | Klutuk Creek | 325-30-10100-2141 | 120 |
| T.6S., R.52W. S.M. | Tributary to Kukwuk | 325-30-10100-2129-3046-4110 | 127 |
| T.6S., R.53W. S.M. | Kukwuk River | 325-30-10100-2129-3046 | 438 |
| * T.7S., R.29W. S.M. | Copper River | 324-10-10150-2280 | 65 |

| TOWNSHIP/RANGE | RIVER(S) | ANADROMOUS STREAMS IDENTIFICATION NUMBER | CLOSED ACREAGE** |
|----------------------|---|---|---------------------|
| * T.7S., R.30W. S.M. | Copper River Tommy Creek | 324-10-10150-2280 324-10-10150-2320 | 276 |
| * T.7S., R.31W. S.M. | Tommy Creek Copper River | 324-10-10150-2320 324-10-10150-2280 | 228 |
| T.7S., R.38W. S.M. | Tributary to Iliamna Lake Tributary to Iliamna Lake | 324-10-10150-2149 324-10-10150-2145 | 123 |
| * T.7S., R.46W. S.M. | Nushagak River | 325-30-10100 | 2,229 |
| * T.7S., R.48W. S.M. | Klutuk Creek | 325-30-10100-2141 | 174 |
| T.7S., R.49W. S.M. | Klutuk Creek | 325-30-10100-2141 | 404 |
| T.7S., R.50W. S.M. | Klutuk Creek | 325-30-10100-2141 | 25 |
| T.7S., R.51W. S.M. | Kenakuchuk Creek | 325-30-10100-2129-3040 | 127 |
| T.7S., R.52W. S.M. | Kenakuchuk Creek Kukwuk River Tributary to Kukwuk | 325-30-10100-2129-3040 325-30-10100-2129-3046 325-30-10100-2129-3046-4110 | 535 |
| T.7S., R.53W. S.M. | Kukwuk River Kokwok River | 325-30-10100-2129-3046 325-30-10100-2129 | 389 |
| * T.8S., R.30W. S.M. | Kokhanok River Copper River | 324-10-10150-2240 324-10-10150-2280 | 178 |
| * T.8S., R.31W. S.M. | Kokhanok River Copper River | 324-10-10150-2240 324-10-10150-2280 | 119 |
| * T.8S., R.33W. S.M. | Tributary to Iliamna Lake | 324-10-10150-2196 | 14 |
| * T.8S., R.46W. S.M. | Nushagak River | 325-30-10100 | 1,247 |
| * T.8S., R.47W. S.M. | Nushagak River | 325-30-10100 | 3,585 |
| T.8S., R.51W. S.M. | Kokwok River | 325-30-10100-2129 | 160 |
| T.8S., R.52W. S.M. | Kokwok River Kenakuchuk Creek Kukwuk River | 325-30-10100-2129 325-30-10100-2129-3040 325-30-10100-2129-3046 | 833 |
| * T.8S., R.53W. S.M. | Kokwok River | 325-30-10100-2129 | 119 |
| T.8S., R.54W. S.M. | Pike Creek | 325-30-10100-2031-3118-4062 | 36 |
| * T.8S., R.55W. S.M. | Pike Creek | 325-30-10100-2031-3118-4062 | 91 |
| * T.9S., R.33W. S.M. | Tributary to Iliamna Lake | 324-10-10150-2196 | 14 |
| T.9S., R.34W. S.M. | Dennis Creek | 324-10-10150-2182 | 171 |
| T.9S., R.35W. S.M. | Tributary to Iliamna Lake Tributary to Belinda Creek | 324-10-10150-2162 324-10-10150-2156-3005-4007 | 101 |
| T.9S., R.36W. S.M. | Tributary to Iliamna Lake Belinda Creek | 324-10-10150-2162 324-10-10150-2156 | 204 |
| * T.9S., R.48W. S.M. | Nushagak River | 325-30-10100 | 1,979 |
| * T.9S., R.49W. S.M. | Nushagak River | 325-30-10100 | 461 |
| * T.9S., R.50W. S.M. | Kokwok River | 325-30-10100-2129 | 530 |
| * T.9S., R.51W. S.M. | Kokwok River | 325-30-10100-2129 | 468 |

| TOWNSHIP/RANGE | RIVER(S) | ANADROMOUS STREAMS IDENTIFICATION NUMBER | CLOSED ACREAGE* |
|-----------------------|---|--|--------------------|
| T.9S., R.52W. S.M. | Kokwok River | 325-30-10100-2129 | 120 |
| T.9S., R.53W. S.M. | Iowithla River ✓ | 325-30-10100-2101 | 109 ✓ |
| * T.9S., R.54W. S.M. | Iowithla River Muklung River | 325-30-10100-2101 325-30-10100-2031-3028 | 221 |
| T.9S., R.55W. S.M. | Muklung River | 325-30-10100-2031-3028 | 178 |
| * T.9S., R.57W. S.M. | Agulowak River | 325-30-10100-2031-3118 | 138 |
| T.10S., R.31W. S.M. | Dream Creek | 324-10-10150-2196-3033 | 113 |
| * T.10S., R.32W. S.M. | Tributary to Iliamna Lake | 324-10-10150-2196 | 94 |
| T.10S., R.35W. S.M. | Tributary to Belinda Creek Tributary to Belinda Creek Belinda Creek | 324-10-10150-2156-3005-4007 324-10-10150-2156-3005 324-10-10150-2156 | 371 |
| T.10S., R.36W. S.M. | Belinda Creek Tributary to Belinda Creek | 324-10-10150-2156 324-10-10150-2156-3005 | 247 |
| * T.10S., R.37W. S.M. | Pecks Creek | 324-10-10150-2136 | 193 |
| * T.10S., R.38W. S.M. | Pecks Creek | 324-10-10150-2136 | 262 |
| * T.10S., R.39W. S.M. | Pecks Creek Kvichak River | 324-10-10150-2136 324-10-10150 | 490 |
| * T.10S., R.40W. S.M. | Kvichak River Pecks Creek Kvichak River | 324-10-10150 324-10-10150-2136 324-10-10150 | 1,250 |
| * T.10S., R.41W. S.M. | Kvichak River | 324-10-10150 | 727 |
| * T.10S., R.49W. S.M. | Nushagak River Kokwok River | 325-30-10100 325-30-10100-2129 | 4,236 |
| * T.10S., R.50W. S.M. | Nushagak River Kokwok River | 325-30-10100 325-30-10100-2129 | 1,636 |
| T.10S., R.53W. S.M. | Iowithla River ✓ | 325-30-10100-2101 | 295 |
| * T.10S., R.54W. S.M. | Muklung River | 325-30-10100-2031-3028 | 171 |
| * T.10S., R.55W. S.M. | Muklung River Wood River | 325-30-10100-2031-3028 325-30-10100-2031 | 163 |
| * T.11S., R.41W. S.M. | Kvichak River | 324-10-10150 | 394 |
| T.11S., R.42W. S.M. | Kvichak River | 324-10-10150 | 816 |
| * T.11S., R.43W. S.M. | Kvichak River | 324-10-10150 | 494 |
| * T.11S., R.44W. S.M. | Kvichak River | 324-10-10150 | 987 |
| * T.11S., R.49W. S.M. | Nushagak River | 325-30-10100 | 28 |
| * T.11S., R.50W. S.M. | Nushagak River | 325-30-10100 | 2,504 |
| * T.11S., R.55W. S.M. | Wood River | 325-30-10100-2031 | 1,046 |
| * T.12S., R.44W. S.M. | Kvichak River | 324-10-10150 | 1,421 |
| * T.12S., R.45W. S.M. | Kvichak River | 324-10-10150 | 2,220 |

| TOWNSHIP/RANGE | RIVER(S) | ANADROMOUS STREAMS IDENTIFICATION NUMBER | CLOSED ACREAGE** |
|-----------------------|--|---|---------------------|
| * T.12S., R.50W. S.M. | Nushagak River | 325-30-10100 | 10,441 |
| T.12S., R.55W. S.M. | Wood River | 325-30-10100-2031 | 2,876 |
| * T.13S., R.45W. S.M. | Kvichak River | 324-10-10150 | 1,329 |
| * T.13S., R.46W. S.M. | Kvichak River | 324-10-10150 | 2,672 |
| * T.13S., R.50W. S.M. | Nushagak River | 325-30-10100 | 980 |
| * T.13S., R.51W. S.M. | Nushagak River | 325-30-10100 | 1,250 |
| * T.13S., R.53W. S.M. | Nushagak River | 325-30-10100 | 2,935 |
| * T.13S., R.54W. S.M. | Nushagak River | 325-30-10100 | 5,850 |
| * T.13S., R.55W. S.M. | Nushagak River Wood River | 325-30-10100 325-30-10100-2031 | 9,700 |
| * T.13S., R.56W. S.M. | Nushagak River | 325-30-10100 | 112 |
| * T.14S., R.46W. S.M. | Kvichak River | 324-10-10150 | 4,603 |
| * T.14S., R.50W. S.M. | Nushagak River | 325-30-10100 | 809 |
| * T.14S., R.51W. S.M. | Nushagak River | 325-30-10100 | 1,600 |
| * T.14S., R.52W. S.M. | Nushagak River | 325-30-10100 | 1,337 |
| * T.14S., R.53W. S.M. | Nushagak River | 325-30-10100 | 5,151 |
| * T.15S., R.51W. S.M. | Nushagak River | 325-30-10100 | 1,425 |
| * T.15S., R.52W. S.M. | Nushagak River | 325-30-10100 | 2,364 |
| * T.15S., R.53W. S.M. | Nushagak River | 325-30-10100 | 1,002 |
| T.45S., R.69W. S.M. | Sandy River | 315-12-10100 | 193 |
| T.45S., R.70W. S.M. | Sandy River | 315-12-10100 | 562 |
| T.45S., R.71W. S.M. | Sandy River | 315-12-10100 | 468 |
| T.46S., R.68W. S.M. | Sandy River | 315-12-10100 | 588 |
| T.46S., R.69W. S.M. | Sandy River | 315-12-10100 | 254 |
| T.46S., R.70W. S.M. | Sandy River | 315-12-10100 | 135 |
| T.46S., R.71W. S.M. | Sandy River Tributary to Bear River Bear River | 315-12-10100 315-11-10200-2009 315-11-10200 | 419 |
| T.46S., R.72W. S.M. | Bear River | 315-11-10200 | 54 |
| T.47S., R.70W. S.M. | Tributary to Bear River | 315-11-10200-2009 | 87 |
| T.47S., R.71W. S.M. | Tributary to Bear River Bear River | 315-11-10200-2009 315-11-10200 | 381 |
| T.47S., R.72W. S.M. | Bear River | 315-11-10200 | 36 |
| T.48S., R.70W. S.M. | Bear River | 315-11-10200 | 3 |
| T.48S., R.71W. S.M. | Bear River | 315-11-10200 | 102 |
| T.49S., R.70W. S.M. | Bear River | 315-11-10200 | 156 |

| TOWNSHIP/RANGE | RIVER(S) | ANADROMOUS STREAMS IDENTIFICATION NUMBER | CLOSED ACREAGE** |
|-----------------------|---|---|---------------------|
| T.49S., R.71W. S.M. | Bear River | 315-11-10200 | 3 |
| * T.49S., R.78W. S.M. | Sapsuk River Caribou River | 313-30-10140-2013 313-30-10140 | 467 |
| * T.49S., R.79W. S.M. | Caribou River | 313-30-10140 | 43 |
| T.50S., R.76W. S.M. | Lefthead River | 313-30-10140-2013-3007 | 94 |
| T.50S., R.77W. S.M. | Sapsuk River Lefthead River | 313-30-10140-2013 313-30-10140-2013-3007 | 345 |
| * T.50S., R.78W. S.M. | Sapsuk River Peterson Creek Caribou River | 313-30-10140-2013 313-30-10140-2013-3006 313-30-10140 | 796 |
| * T.50S., R.79W. S.M. | Caribou River | 313-30-10140 | 171 |
| T.51S., R.76W. S.M. | Lefthead River | 313-30-10140-2013-3007 | 247 |
| T.51S., R.77W. S.M. | Sapsuk River | 313-30-10140-2013 | 338 |
| T.51S., R.78W. S.M. | Peterson Creek Caribou River | 313-30-10140-2013-3006 313-30-10140 | 309 |
| T.51S., R.79W. S.M. | Caribou River | 313-30-10140 | 276 |
| T.51S., R.80W. S.M. | Caribou River | 313-30-10140 | 3 |
| T.52S., R.76W. S.M. | Sapsuk River | 313-30-10140-2013 | 14 |
| T.52S., R.80W. S.M. | Caribou River | 315-30-10140 | 368 |
| T.52S., R.81W. S.M. | Caribou River | 315-30-10140 | 76 |

TOTAL ACREAGE ENCOMPASSED BY STREAM MINERAL CLOSURE

213,697*

* Acreage totals for townships include some acreage of Native selected or conveyed lands.

** Acreage figures are estimates only, though care was taken to make them as accurate as possible. See Attachment B for the methodology of this acreage estimation.

ATTACHMENT 1.1

BRISTOL BAY AREA PLAN STREAM CLOSURE ACREAGE ESTIMATION

The Bristol Bay Area Plan (BBAP) calls for selected stream closures to new mineral entry. The total acreage encompassed by these stream closures is estimated at 213,697 acres. This acreage estimation was arrived at through the following methods.

The active stream channels (as defined by the BBAP) of designated anadromous streams identified for closure by the BBAP were mapped at 1:63,360.

Acreage estimations for large and braided streams (i.e. Nushagak, Mulchatna, Nuyakuk and Kvichak rivers, etc.) were calculated on a CALCOMP 9000 digitizer. Area was calculated in square miles and converted to acres.

Acreage estimations for smaller streams were determined by calculating stream length on a CALCOMP 9000 digitizer and multiplying length by an average stream width of 100' plus a 100' buffer on either side of the stream for a total 300' stream corridor. Area was calculated in square miles and converted to acres.

Acreage was compiled by individual township/range and also totaled by USGS quad map.

Native selected and conveyed lands within the active stream channel and upland buffer areas were separated out from the total acreage figure compiled for each township by manual calculation of the affected acreage at a 1:63,360 scale. An asterisk (*) is placed next to those townships that contain native selected and conveyed lands.

ATTACHMENT 2

JUSTIFICATION FOR STREAM CLOSURES

BACKGROUND:

FISH AND WILDLIFE USE

The Bristol Bay salmon fishery is, and historically has been, the most valuable economic resource in the Bristol Bay region; providing a major portion of all the salmon harvested in the State of Alaska and the world annually. Bristol Bay area residents rely heavily on this salmon resource to support their livelihood and economy through commercial, sport, and subsistence fishing activities. The existence and future success of the Bristol Bay salmon fishery depends on the maintenance of anadromous stream habitat for salmon spawning and rearing. Essential conditions for successful salmonid spawning, egg, and fry development are clear, cool, well-oxygenated water, and gravel that is free of sediment, highly permeable, and stable. Salmon are a renewable resource and the continued propagation and production of Bristol Bay salmon for commercial, sport, and subsistence harvest constitutes a significant surface use of stream waters and stream bed gravel in the Bristol Bay area. Through maintenance of water quality, stream habitat, and fishery management practices, the Bristol Bay salmon fishery should continue to prosper in the future and contribute to the regional and state economy. Other fish, primarily rainbow trout, arctic char, and grayling, are of major importance to the region's sport fishery.

COMMERCIAL SALMON HARVEST

The Bristol Bay commercial salmon fishery dates back to 1884, and remains today as the basic factor in the culture and economy of the area. The Bristol Bay Area Plan study area includes all of the Bristol Bay, Alaska Peninsula, and Chignik fishery management units (ADF&G).

Five species of Pacific salmon are indigenous to the Bristol Bay study area with sockeye salmon being most important commercially. The average ex-vessel value for salmon catches (all species) in the entire Bristol Bay study area (1977-1982) have exceeded \$150 million annually with the first wholesale value surpassing \$250 million in 1982. In 1983, a record commercial catch of more than 39 million sockeye salmon from the Bristol Bay fisheries management unit and the north side of the Alaska Peninsula was recorded with an ex-vessel value in excess of \$145 million for that species alone.

An estimated 3,000 limited entry fishing permits were issued for the Bristol Bay and Alaska Peninsula purse seine, drift gill net, and set gill net salmon fisheries in 1982. Approximately 67% of these licensed gear holders are Alaska residents, and 70% of these are Bristol Bay residents. More than 7,700 commercial fishermen are employed in the fishery during the season. In addition, twelve shore-based canneries in Bristol Bay employ more than 2,000 cannery workers each season with floating processors employing an additional 700 workers. In addition, air freighting of fresh salmon, for

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processing elsewhere, is also a substantial enterprise, particularly during high production years. On the average, more than 10,000 people are seasonally employed by the Bristol Bay salmon fishery.

RECREATION/SPORT FISHING

The Bristol Bay study area ranks among the finest sport fishing and hunting areas in the world. Recreation, including sport fishing, has been recognized as a component of the Bristol Bay economy for over 50 years. In recognition of the region's exceptional rainbow trout fishery, the Alaska Board of Fisheries has designated the Kvichak River (from the mouth of the Alagnak River) and the Iliamna Lake drainage as a Wild Rainbow Trout Area. Within this drainage, Lower Talarik Creek, Upper Talarik Creek, Pete Andrew Creek, Newhalen River, Copper River, Gibraltar River, Dream Creek, and Belinda Creek are world-renowned rainbow trout streams. At present, the recreational industry in the Bristol Bay area is comprised of three components: lodges, guides, and air taxi operators. Most air taxi operators draw their business from the lodges and guides. Approximately 50 to 60 lodges operated in Bristol Bay during 1983. Most of these lodges are geared for sport fishing activities. Approximately two-thirds of the lodge clients were foreign, with the majority of the remaining clients being non-Alaskans. The estimated cost for lodging and fishing at a typical Bristol Bay fishing lodge ranges from \$1,500 to \$3,500 per person, per week (Nebesky 1984). The 1982 State Guide Register recorded 189 sport fishing and hunting guides in the Bristol Bay area. About 50 registered fishing guides work for the lodges and another 25 operate fly-out float fishing trips on Bristol Bay rivers. Guided fishing trips in Bristol Bay are estimated to average \$1,400 per person, per trip (Nebesky 1984). Nonguided independent fishing trips are becoming increasingly popular in Bristol Bay. An estimated 750 to 1,000 persons (mostly Alaskans) take nonguided float-fishing trips in Bristol Bay each year. The majority of the float trips are taken on the Mulchatna, Nushagak, Nuyakuk, Koktuli, Chilikadrotna, Copper, Alagnak (Branch), and Gibraltar rivers, and the Wood River-Tikchik River System. The local economic affect of nonguided fishing tours accrues primarily to air taxi operators (Nebesky 1984). Overall, the Bristol Bay recreation industry, of which sport fishing is a major component, produces in excess of \$25 million annually. Of this amount, an estimated \$6.7 million is earned by Bristol Bay residents, \$16.3 million is earned by Alaskans outside of Bristol Bay, and \$2 million is tied to nonresident wages (Nebesky 1984).

SUBSISTENCE SALMON HARVEST

The subsistence harvest of fish and wildlife is essential to the way of life in Bristol Bay communities, regardless of the birthplace, ethnic origin, or economic status of the area residents. Salmon are the most important fish and wildlife resource harvested for subsistence by the region's residents. The subsistence harvest of salmon (all species) in the Bristol Bay study area averages about 176,000 salmon per year (1973-1982). In 1982, an estimated 1,000 subsistence permit holders harvested more than 169,000 salmon for personal consumption in the Bristol Bay study area. Taking into consideration the average weights of the different salmon species and the

percentage of usable food weight per salmon, the 1982 subsistence harvest figures translate into approximately 821 pounds of dressed out salmon per family or subsistence permit holder in the Bristol Bay study area.

The behavioral, social, and cultural values associated with the subsistence harvest cannot be measured in standard monetary terms. However, an estimation can be made of the local food replacement cost of the subsistence salmon harvest if the harvest had to be replaced with similar food or a protein equivalent purchased and shipped in from Anchorage or Dillingham. Methodology used in determining the local food replacement cost of the subsistence harvest is still being refined. Preliminary estimates for the local food replacement cost of the 1982 subsistence salmon harvest range from \$2 to \$4 million.

INSTREAM MINING

At present, instream placer mining, when compared with fishery resources, is a minor component of the Bristol Bay economy. Annual operating permits were granted for only eight placer operations within the entire Bristol Bay study area in 1983. Only one of these eight placer operations (Bonanza Creek) is located within the general area encompassed by the proposed stream closures. The Bonanza Creek drainage is not closed to new mineral entry. The estimated 1982 gold production of the eight placer operations within the Bristol Bay study area is 9,500 ounces, valued at approximately \$3.8 million (T. Bundtzen, DGGs, 1983, Pers. Comm.). Nebesky et al. (1983) estimates that placer mining operations in the Bristol Bay study area seasonally employed about 100 persons in 1982, a peak year for mining and gold prices. Most all of the mining activity occurred in the northwestern portion of the BBAP study area.

Historically, many areas in the Bristol Bay region have been subject to placer mining exploration and mineral discovery. The majority of this placer activity has occurred on the rivers and streams around the eastern half of Iliamna Lake, the upper Nushagak and Mulchatna river drainages, the south side of the Alaska Peninsula, and west of the Ahklun Mountains. Many deposits have been recorded. (Cobb, 1972 and Cobb et.al., 1972).

The likelihood of renewed interest in placer deposits in the Nushagak and Mulchatna river drainages and the streams around the eastern half of Iliamna Lake is good. As more of Alaska's mineral resources are explored and the readily road accessible mineralized areas are developed, these areas in Bristol Bay are likely to be re-explored. Re-newed interest would probably occur here due to knowledge of the historic deposits, favorable geology and mineral terranes. Recently, Anaconda Minerals Company announced a new precious metal hardrock mineral discovery at Johnson River, east of Iliamna Lake in the Cook Inlet drainage. Native corporations in the region, particularly Bristol Bay Native Corporation, have been assessing the mineral resources of their lands in these areas. This and other mineral activity in the area is likely to draw additional activity due to these favorable results.

EFFECTS OF INSTREAM MINING

The development of mining claims within the active stream channel of an anadromous stream creates a serious use conflict and could jeopardize the commercial, sport, and subsistence harvest of salmon and the overall economic and sociocultural structure of the Bristol Bay region. In general, instream placer mining can seriously degrade anadromous stream habitat by producing excessive sediment, increasing turbidity, changing pH, adding toxic heavy metals to stream water, and altering stream channels and stream flows. The effects of placer mining immediately adjacent to streams are similar to other land disturbance activities (i.e., logging, agriculture, vegetation removal, road construction) that can introduce unnaturally high levels of sediment into stream environments. Existing literature contains many studies, reports, and documents on the effects of increased sediment loads on salmonids, food chain components, and on aquatic ecosystems. Properly designed and maintained settling ponds and recycling systems when utilized, may minimize some impacts of sedimentation on aquatic life. The major conclusions reached by investigators studying the effects of placer mining and sedimentation on aquatic life and stream systems are summarized by Madison (1981) as follows:

1. Effects on Fish Life

- Temporary or permanent destruction or modification of spawning beds that can result in failure to spawn or complete or partial mortality of eggs, alevins, or fry. The primary causes are: Reduction of dissolved oxygen, increase in the percentage of silt and sand in the spawning gravel, reduction in intergravel flow rates, scouring of the spawning gravels subsequent to spawning, removal of stream gravels, or complete covering of the spawning beds with sediment;
- Loss of available food supply due to reductions in production at the lower trophic levels (plant life and benthic invertebrates);
- Interference with the sight-dependent feeding habits of salmonids;
- Obliteration of hiding or living areas in gravel by clogging of the interstices with fine sediment, or by reduction of pool areas;
- Short-term exposure to very large concentrations of suspended sediment that can cause fish mortality through damage to the gill structure; and
- Avoidance of normal spawning areas (even at relatively low turbidity) and displacement to cleaner tributaries or other sections of a stream.

2. Effects on Aquatic Plant Life

- Reduction in photosynthetic activity and consequent reduction in growth of algae and macrophytes which form the basis of the food chain for salmon and other freshwater fish;

- Smothering of plant life inhabiting the stream bottom; and
 - Increase in the mobility of the substrate.
3. Effects on Benthic Invertebrates
- Reduction in the abundance and diversity of benthos as a result of reduction in available food supply (plant life), increased drift and susceptibility to predation, clogging of the feeding apparatus by fine sediments, and loss of available or suitable substrate habitat; and
 - Changes in community composition from clean-water species to species more adaptable to higher sediment levels but possibly less suitable as fish-food organisms.
4. Physical Effects on the Hydrologic System
- Increased turbidity and resultant reduction in light penetration;
 - Alteration of channels, including changes in slope, stream velocity, discharge, depth and width, scouring characteristics, stream length, pool-riffle ratio, ground-water/surface-water relationships, ground-water recharge characteristics, and water temperature; and
 - Changes in the stream bottom material, including changes in the particle-size composition which may change the rate of intergravel water flow, deposition of fine material and gravel on riffle areas, and changes in bedload movement.

Recent studies completed by researchers at the University of Alaska, Fairbanks (LaPerriere et al., 1983 and Van Nieuwenhuyse, 1983) have substantiated many of these same effects on freshwater habitats in Alaska. In brief, Alaskan researchers have found that mining-induced sedimentation and turbidity results in reduced light penetration, reduced production of plant material, and ultimately a decrease in the production and abundance of fish. In Birch Creek, on anadromous stream heavily impacted by mining, all fish, insect life, and even most algae had been eliminated as a result of mining. Mining-induced turbidity also adversely effects the human use of clear-water habitat for sport fishing, river floating, canoeing, and other recreational activities.

JUSTIFICATION FOR MINERAL CLOSING ORDER:

Title 38 of the Alaska Statutes addresses the management of public lands of the State of Alaska. Section 38.05.185 states:

"State land may not be closed to mining or mineral location unless the commissioner makes a finding that mining would be incompatible with significant surface uses on the state land. State land may not be restricted to mining under lease unless the commissioner determines that the potential use conflicts on state land require

that mining be allowed only under written lease issued under AS 38.05.205 or the commissioner has determined that the land was mineral in character at the time of state selection."

Section 38.05.185 provides further:

"The determination required under this subsection shall be made in compliance with land classification orders and land use plans developed under AS 38.05.300."

A land use plan such as the Bristol Bay Area Plan is an appropriate forum for classifying state lands and designating specific areas for mineral closures or leasehold locations when these areas meet the criteria set forth in Section 38.05.185. (See also 11 AAC 55, Land Planning and Classification Regulations)

The Bristol Bay Area Plan recognizes continued salmon propagation and production as a significant surface use of state lands in Bristol Bay. The plan also recognizes instream placer mining as conflicting with the continued propagation and production of Bristol Bay salmon and therefore requires closure of selected anadromous streams to new mineral entry. The plan specifically states the following:

The designated anadromous portion of the following streams (designated pursuant to AS 16.05.870) and any state uplands 100 feet from the ordinary high watermark (on both sides of the stream) including islands which are state selected, patented or tentatively approved and excluding islands of other ownership will be closed to new mineral entry in accordance with AS 38.05.185:

Nushagak River Drainage

- Nushagak River
- Wood River
- Muklung River (Upper 15 Miles)
- Iowithla River (Upper 15 Miles)
- Kokwok River
- Kenakuchuk Creek
- Kukwuk River
- 325-30-10100-2129-3046-4110 tributary to Kukwuk River
- Klutuk Creek
- Cranberry Creek
- Harris Creek
- Nuyakuk River
- King Salmon River
- 325-30-10100-2435-3100 tributary to King Salmon River
- 325-30-10100-2435-3116 tributary to King Salmon River
- 325-30-10100-2435-3116-4011 tributary to King Salmon River
- 325-30-10100-2435-3130 tributary to King Salmon River
- Mulchatna River
- Old Man Creek
- Koktuli River

SOA 015336

325-30-10100-2202-3080-4058 tributary to Kaktuli River
325-30-10100-2202-3080-4083 tributary to Kaktuli River
Keefer Creek
325-30-10100-2202-3420 tributary to Mulchatna River
Chilchitna River
Nikadavna Creek
Chilikadrotna River

Kvichak/Naknek Drainage

Kvichak River
Pecks Creek
324-10-10150-2145 tributary to Iliamna Lake
324-10-10150-2149 tributary to Iliamna Lake
324-10-10150-2155 tributary to Iliamna Lake
324-10-10150-2159 tributary to Iliamna Lake
324-10-10150-2163 tributary to Iliamna Lake
Lower Talarik Creek
324-10-10150-2167-3003 tributary to Lower Talarik Lake
324-10-10150-2175 tributary to Iliamna Lake
Upper Talarik Creek
Pete Andrews Creek
Newhalen River
Chulitna River
Chekok Creek
Canyon Creek
Pile River
Iliamna River
324-10-10150-2402-3025 tributary to Iliamna River
Chinkelyes Creek
Tommy Creek
Copper River
Kokhanok River
324-10-10150-2196 tributary to Iliamna Lake
Dream Creek
Dennis Creek
324-10-10150-2162 tributary to Iliamna Lake
Belinda Creek
324-10-10150-2156-3005 tributary to Belinda Creek
324-10-10150-2156-3005-4007 tributary to Belinda Creek

North Alaska Peninsula Drainages

Sandy River
Bear River
315-11-10200-2009 tributary to Bear River
Caribou River
Sapsuk River
Lefthead River
Peterson Creek

These streams are further depicted in Attachment 3, "An Atlas to the Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes, 64 Anadromous Streams Closed to New Mineral Entry."

Mining has been previously found to be incompatible with several different types of land uses determined to be significant surface uses of state land. State park and recreation areas, residential subdivisions, river corridors, agricultural areas, and disposal of state land for remote settlement are some examples where mining has been determined to be incompatible with a significant surface use of state land. The propagation and production of salmon is also a significant use of state lands in Bristol Bay. This surface use activity is the mainstay of the Bristol Bay economy and is also a substantial contributor to the state economy. Instream placer mining would create serious use conflicts in anadromous streams and jeopardize the overall productivity of anadromous streams in Bristol Bay, and ultimately, the economy of the Bristol Bay region and the livelihood of area residents.

The conflict between fisheries and mining was recognized by both the state legislature and the U.S. Congress when they established parks and refuges in the region. Mineral entry is incompatible with the fish, wildlife, subsistence, and recreation use of Wood-Tikchik State Park (see AS.41.21.161). All federal public lands in Togiak, Becharof, and Alaska Peninsula National Wildlife Refuges, Lake Clark National Park and Preserve, Katmai National Park and Preserve and Aniakchak National Monument and Preserve are closed to new mineral entry under the Alaska National Interest Lands Conservation Act (or earlier federal legislation) as it was viewed as incompatible with protection of fish and wildlife habitats and populations. Many of the streams to be closed by this order originate within these parks and refuges. Providing sufficient protection to these fishery resources on state lands outside the parks and refuges is critical to protection of these resources within them.

Only the anadromous streams and any islands contained therein, which would be in highest conflict with instream placer mining activities, are to be closed to new mineral entry. High conflict was determined by a streams' juxtaposition to known and verified mineral terranes within the Bristol Bay study area. Existing mining claims are not affected by the stream closures. The closure of the above mentioned anadromous streams encompass an estimated 213,697 acres of state lands. Native conveyed lands within the active stream channel of an anadromous stream designated by this order are not subject to the mineral closure, as these lands are privately owned.

The 1982 and 1983 commercial sockeye salmon harvest and escapement data for the Bristol Bay and North Alaska Peninsula Fishery Management District show that approximately 75% of the commercial sockeye salmon harvest and 72% of the sockeye salmon escapement originates or spawns in the Nushagak/Mulchatna, Kvichak/Iliamna, Sandy, Bear, or Caribou River drainages where mineral closures have been recommended by the Bristol Bay Area Plan. By closing that portion of the Bristol Bay study area to new mineral entry where the most conflict between fishery production and instream mining would occur, through other plan provisions requiring leasehold location mining,

and through enforcement of existing statutes and regulations, protection can be provided to a large portion of the Bristol Bay sockeye salmon run.

Existing state and federal water quality regulations and standards were considered inadequate to guarantee the continued propagation and production of the salmon and other fish resources in the stream waters in the Bristol Bay area. The past and present lack of compliance with and enforcement of these water quality standards in this area and other areas in the state were some of the factors considered during the development of the Bristol Bay Area Plan. The existing standard for turbidity, a measure of suspended sediment, allows for levels of sediment which some experts indicate is detrimental to salmon and their eggs and fry. Also, these levels create conditions which make adequate and effective fishery management extremely difficult due to the inability to visually determine escapement. Alaska Statute 16.05.870 gives the Commissioner of Fish and Game authority to regulate activities within designated anadromous streams. Within the 64 streams designated for closure in this order, sufficient protection of fish and game resources (as required in AS 16.05.870 (d)) would likely preclude mining in these areas after a mining claim has already been filed. Actual stream closings more effectively and efficiently achieves the level of fisheries protection required on these 64 streams. The result of these analyses was to close to new mineral entry those streams where highest conflict between the salmon fishery and mining would occur.

In closing, the best interest of the State of Alaska and its residents are served by the closure of the anadromous streams, as identified in the Bristol Bay Area Plan and further depicted in Attachment 3, titled "An Atlas to the Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes, 64 Anadromous Streams Closed to New Mineral Entry," to new mineral entry under the locatable mineral leasing and mining laws of the State of Alaska.

JUSTIFICATION FOR STREAM CLOSURES
REFERENCES

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- MF-374, Metallic Mineral Resources Map of the Chignik Quadrangle, Alaska.
- MF-375, Metallic Mineral Resources Map of the Dillingham Quadrangle, Alaska.
- MF-378, Metallic Mineral Resources Map of the Lake Clark Quadrangle, Alaska.
- MF-384, Metallic Mineral Resources Map of the Taylor Mountains Quadrangle, Alaska.
- MF-441, Metallic Mineral Resources Map of the Cold Bay Quadrangle, Alaska.
- MF-442, Metallic Mineral Resources Map of the Naknek Quadrangle, Alaska.

- MF-443, Metallic Mineral Resources Map of the Port Moller Quadrangle, Alaska.
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TOWNSHIP 55 RANGE 35W OF THE SEWARD MERIDIAN, ALASKA

LEGEND

BASE INFORMATION

- HYDROGRAPHY
- SURVEY LINE
- SURVEY LOT LINE
- TOWNSHIP/SECTION GRID
- 1/4 SECTION LINE
- ROAD
- RAILROAD
- TRAIL
- ELECTRICAL POWER LINE
- TELEPHONE LINE
- PIPELINE
- AIRPORT/LANDING STRIP
- HORIZONTAL CONTROL
- CONTROL MONUMENT

STATUS INFORMATION

- TITLE
- BOUNDARY
- CLASSIFICATION
- INDUSTRIAL
- MUNICIPAL
- RESTRICTION
- FEDERAL ACTION
- MENTAL HEALTH TRUST
- LIMITS OF ACTION
- NAVIGATIONAL AID
- CABIN PERMIT
- TRAPPING CABIN PERMIT
- TRAPSHOOT LOCATION

SURFACE WATER RIGHTS

- APPLICATION
- PERMIT
- CERTIFICATE
- SUB-SURFACE WATER RIGHTS
- APPLICATION
- PERMIT
- CERTIFICATE
- IN-STREAM FLOW RESERVATION
- APPLICATION
- CERTIFICATE

DAM, WEIR, BARRIER

- APPLICATION
- PERMIT
- CERTIFICATE

VICINITY MAP

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| 31 | 32 | 33 | 34 | 35 | 36 |



STATUS PLAT

THE STATE OWNS ALL LAND UNDER WATERS THAT ARE NAVIGABLE. THE STATE ALSO OWNS ALL LAND UNDER WATERS THAT ARE NOT NAVIGABLE BUT ARE REMAINS OF A LARGER NAVIGABLE WATERWAY.

BASED ON

CORNER OF PLAT 707 5
SE CORNER OF TOWNSHIP
T 55 R 35W S 1/4
LONG 151 10 31 14 W

HYDROGRAPHY
100% BLANK (C, L, D, S, D) DESIGNED BY BLM FROM AERIAL
TRAIL ALTITUDE PHOTOGRAPH 1974-80

LAND NET
BLM PRODUCTION NUMBER 314-5, APPROVED 01/17/90

OTHER ACTIONS AFFECTING INDIVIDUAL OR USE OF STATE LANDS:
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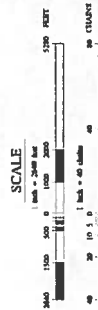
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A PROJECT OF THE
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
LAND RECORD INFORMATION SECTION

ATTENTION STATUS PLAT USERS: ON THIS PLAT, ALL STATUS
LINES CLOSE FOR ACTIONS THAT EXTEND INTO ADJACENT TOWNSHIPS.
CLASSIFICATION, ETC. PLEASE REFER TO ADJACENT TOWNSHIPS OR LAS
TO DETERMINE IF ACTIONS EXTEND BEYOND THE BOUNDARIES SHOWN ON
THIS PLAT. ALWAYS CLOSE ON ALL PLATS.

GRAPHIC ILLUSTRATION ONLY.
SOURCE DOCUMENTS REMAIN THE OFFICIAL RECORD.
CONSULT LAND ADMINISTRATION SYSTEM (LAS)
FOR AUTHORITY FOR ACTIONS.



VERSION: Alaska 01/2/97 - Feb 22 08:01 14 PPT 2000

USER: BRYNVALDO

DATE: Friday, October 24, 2008 at 1:50 PM

CHECKED BY: DAVE LUCK

ARC 11-00

Management Guidelines

A. Access. Access to and across public lands for mineral exploration and development is to be ensured. Land disposals and other authorizations are to be cognizant of access and road corridors proposed by the DNR and ADOT/PF and should not be allowed where such disposals or authorization would conflict with access considerations.

B. Mineral Exploration. By statute, exploration for locatable minerals is allowed on all state lands except those specifically closed to location. A land use permit is required under most circumstances. Hand prospecting and exploration activities which involve no significant surface disturbance generally do not require a permit. The DNR may determine that some forms of access will not be allowed in specific areas to avoid resource damage.

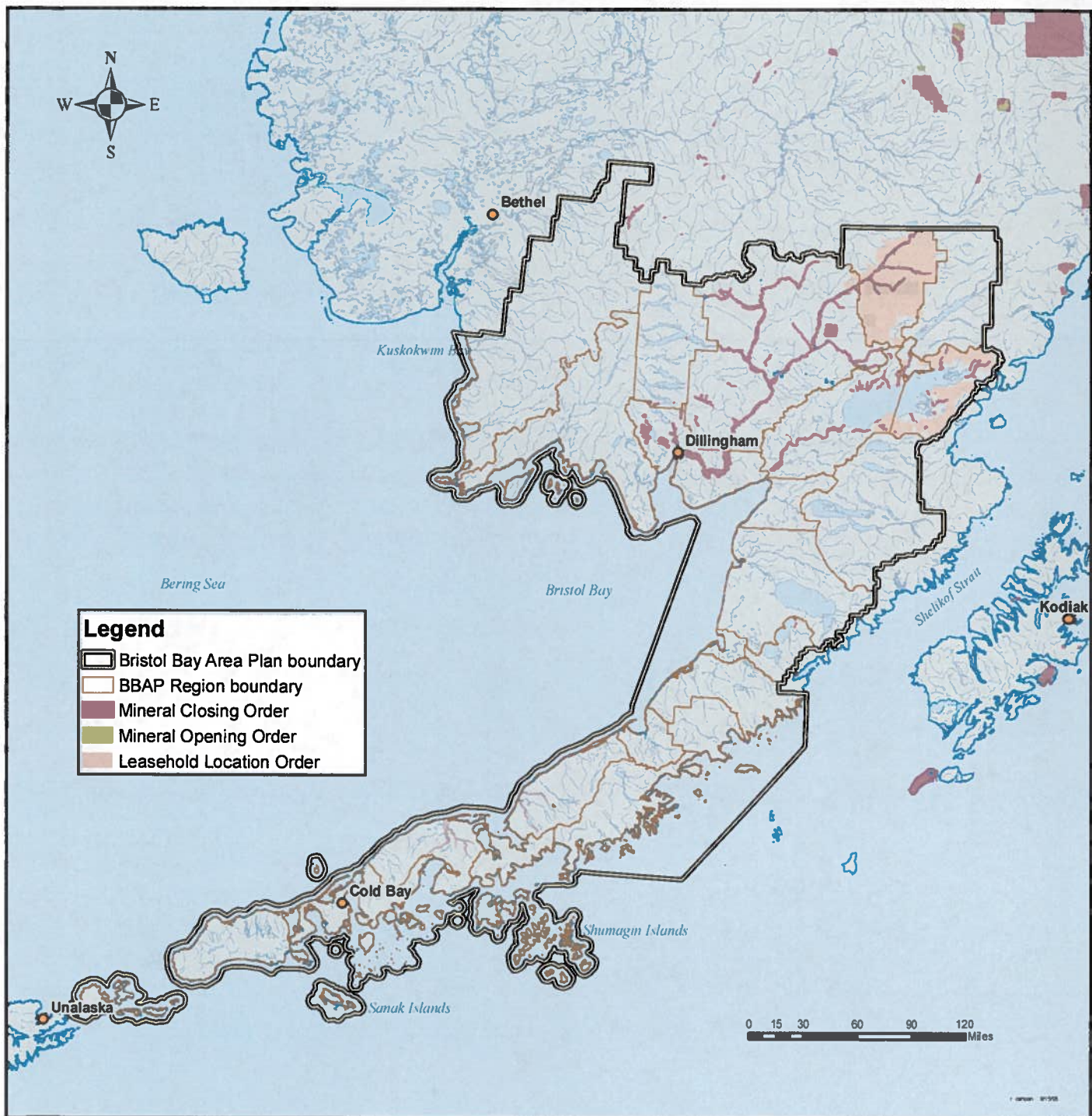
C. Open to Mineral Location. By statute, all state lands are open to mineral location unless specifically closed. Where an area is open to mineral location, a miner has the right to stake a mining location regardless of the surface use designation or classification. Any adverse effects of mining on surface resources or uses will be managed through compliance with state laws and regulations and borough ordinances and management intent and guidelines in this plan. Reclamation activities are regulated under the Mining Reclamation Act (AS 27.19) and state regulations (11 AAC 97).

D. Mining in Fish Habitat. When the DNR issues a permit for mining in or adjacent to a fish stream, conditions of the permit will require any necessary measures such as levees, berms, seasonal restriction, and settling ponds that will allow the operation to meet water quality standards, and statutes and regulations governing the protection of fish. Mining in fish streams requires permits from the ADEC and DNR's Office of Habitat Management and Permitting (OHMP). OHMP permits are not required in tide and submerged lands or estuarine areas outside of the intertidal channel exposed at mean low water. The intertidal channel is that portion of the bed and banks below the mean high water level. However, a Special Area Permit issued by ADF&G is required if the project is located within a legislatively designated area, including uplands, estuaries or tidelands.

E. Offshore Prospecting Permits (OPP). Under AS 38.05.250 an exclusive right to prospect for deposits of minerals offshore may be granted through authorizations issued by DNR. DNR determines what areas will be offered for offshore prospecting. No areas within the plan boundary are currently open for permits. If workable mineral deposits are found offshore, the permittee must apply for a lease in order to develop the mineral deposit. Units designated Habitat because of high fish or wildlife habitat values are areas of significant surface use by fish or wildlife. The ADF&G has stated that it has initially determined mining in estuarine areas designated Habitat to be a nonconforming use under the ACMP. The ACMP procedures will be used to determine whether mining can be made a conforming use and if mitigation is possible, impose the appropriate mitigating measures needed to protect fish and wildlife resources.

F. Mineral Closing and Leasehold Location Orders. No new mineral closing orders have been adopted as part of this plan. Users should check for any closure orders that may be in effect for areas in which they intend to work. One mineral closing order, adopted with the

**Figure 2.2 Bristol Bay Area Plan -
Mineral Closure Orders, Leasehold Location Orders, & Mineral Opening Orders**



ILIamna (D-7) QUADRANGLE
ALASKA
1:50,000 SERIES (TOPOGRAPHIC)



324-10-10150-2183 1-155
RFA ADV
RFA ADV
RFA ADV

11JAMNA (D-7), ALASKA
MS 100-4113-1-2-228
1496

PROJ. TITLE
ANADROMOUS STREAM CATALOG
ANADROMOUS WATERS ARE LISTED PURSUANT TO AS 16:05 670 (a)
MAP TITLE
ILLUMINA D-7



| BY | DATE |
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