final wild and scenic river study

october 1982

MELOZITNA RIVER

ALASKA

P99/D-2221

U.S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FINAL WILD AND SCENIC RIVER REPORT FOR THE MELOZITNA RIVER, ALASKA

Pursuant to Section 5(a) of the Wild and Scenic Rivers Act, Public Law 90-542, as amended, the National Park Service, U.S. Department of the Interior, has prepared a report for the Melozitna Wild and Scenic River Study. This report presents an evaluation and analysis of the Melozitna River and the finding that the river does not meet the criteria of eligibility for inclusion into the National Wild and Scenic Rivers System.

A limited number of copies are available upon request to:

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Abbreviations

ADF&G - Alaska Department of Fish and Game
ANILCA - Alaska National Interest Lands Conservation Act
BLM - Bureau of Land Management
FWS - Fish and Wildlife Service
NPS - National Park Service
WSR - Wild and Scenic River
F. - Farenheit

SUMMARY OF FINDINGS AND CONCLUSIONS

Findings

The Melozitna River was examined in its entirety from its headwaters to the confluence with the Yukon River. The study team considered the river and its immediate land areas as a unit and proceeded to focus on whether the unit contained outstandingly remarkable attributes. While the team found many scenic, recreational, fish and wildlife resources, and other interesting features along the Melozitna River, none were considered to be outstandingly remarkable either individually or collectively.

The State of Alaska has selected most of the land in the area and has or could develop the means to protect and preserve important resources as it implements its plans for land and resource uses.

Conclusions

Because the river meets only one of the two criteria for eligibility set forth in the Wild and Scenic Rivers Act--it is free flowing but it does not possess one or more outstandingly remarkable values--it is concluded that the Melozitna River is not eligible for inclusion in the National Wild and Scenic Rivers System.

The Melozitna River, although not eligible, should receive consideration for the continued protection of the recreational and fish and wildlife resources identified in the drainage. This could be accomplished through any one or a combination of the following:

1) cooperative agreements between the Bureau of Land Management, State of Alaska, and/or Dineega Corporation and Doyon Limited, and

2) special land use classifications within the existing land managers' authorizations, and

3) inclusion of the area in the State system of natural rivers or other similar land use classification (this would require passage of new State legislation).

The above possible actions are described in greater detail on page 16 of this report.

INTRODUCTION

Purpose of Study

On October 2, 1968, Congress enacted the Wild and Scenic Rivers Act (Public Law 90-542) to establish the National Wild and Scenic Rivers System and to protect certain rivers or segments thereof for the benefit and enjoyment of present and future generations. The Alaska National Interest Lands Conservation Act (December, 1980) added 26 Alaskan rivers to the system. It also provided that 12 others be studied as possible additions. The main stem of the Melozitna River was among these.

The purpose of the congressionally authorized study of the Melozitna River is to determine if the river is eligible for inclusion in the National Wild and Scenic Rivers System and, if eligible, a determination as to whether it is suitable for addition to the system.

This report contains basic data pertaining to the Melozitna River region and study area (defined as the river and its associated land environment extending two miles from the bank of the river channel on both sides of the river from the headwaters downstream approximately 270 river miles to the Yukon River) and the study findings.

Conduct of Study

The Department of the Interior's responsibility for studying rivers named in the Wild and Scenic Rivers Act was delegated to the National Park Service in 1978.

A study team composed of Federal, State, and private interests was organized in June, 1981. These included the National Park Service, Bureau of Land Management, Alaska Department of Fish and Game, Doyon Limited, Alaska Division of Forest Land and Water Management, Alaska Division of Parks and Dineega Corporation. At the same time letters and news releases were mailed out announcing the study and soliciting public comments and opinions to identify problems, issues, and opportunities associated with the study area.

In July the study team made a float trip of the study segment to evaluate the river against eligibility criteria developed by the Secretaries of Agriculture and the Interior. Last minute cancellation by the State and Bureau of Land Management left only the NPS and Doyon representatives on the field reconnaissance.

In November the study team met, reviewed the eligibility criteria, discussed the resource values in the drainage and determined that while there were many scenic, recreational, and fish and wildlife resources along the Melozitna River, none were individually or collectively outstandingly remarkable.

Following review of this draft report by the public, government agencies, and other interests, comments received were considered in the preparation of the final report which will be transmitted to Congress for its consideration.

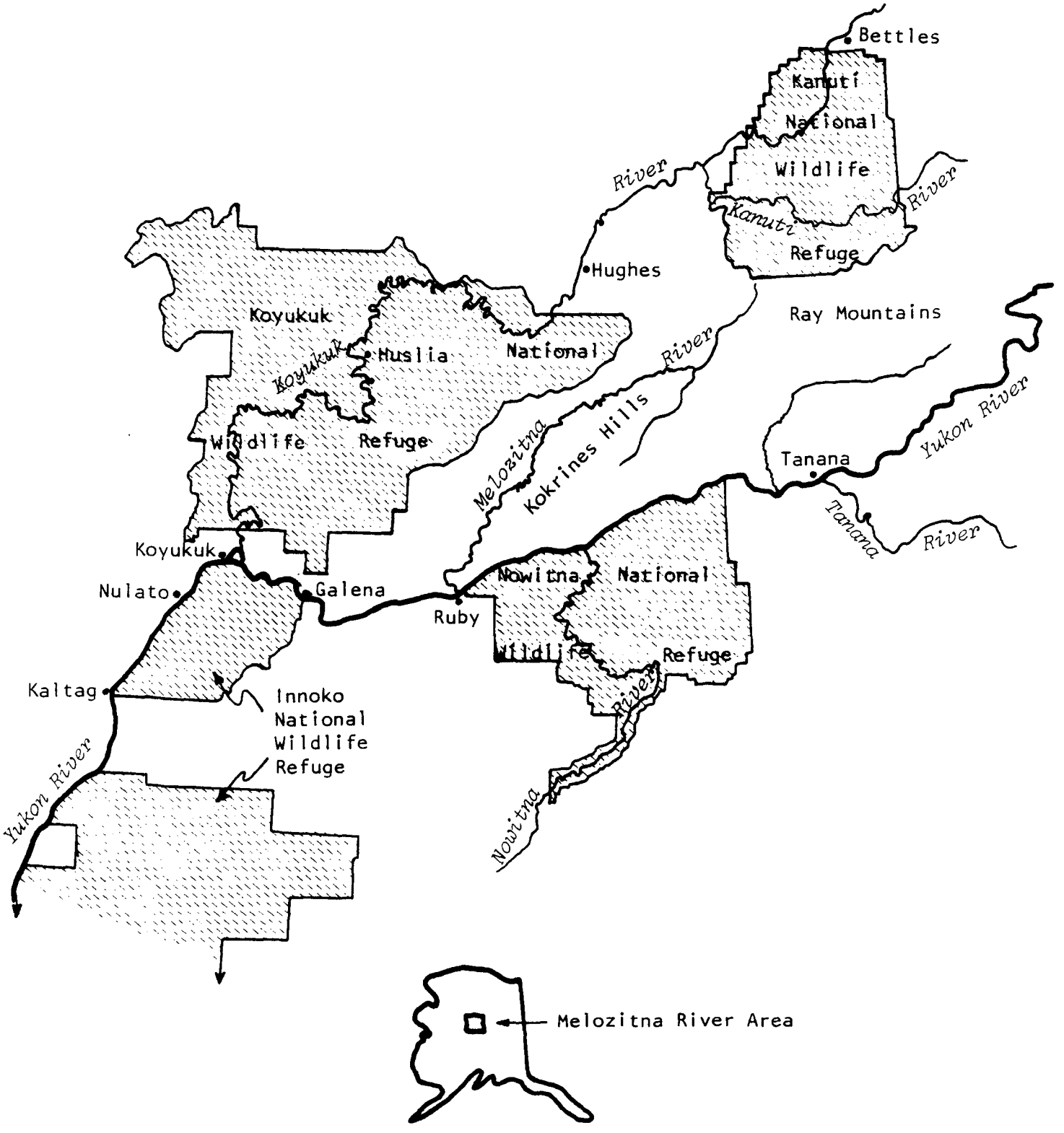
THE MELOZITNA RIVER REGION

Location and Topography

The Melozitna River originates in central interior Alaska and has a drainage area of about 2,700 square miles (see area map). The headwaters are 60 air miles north of Tanana and 160 air miles northwest of Fairbanks. Flowing in a south-southwest direction, the river winds and meanders its way about 270 river miles before reaching the Yukon River just upstream and across from Ruby. Ruby is about 240 air miles west of Fairbanks.

The Melozitna River originates in the Indian River Uplands and the Kokrine-Hodzena Highlands, an area ranging in elevation from 800 feet on the valley

MELOZITNA RIVER AREA



floor to 3,000+ feet on the surrounding ridge tops. The drainage is bounded on the south by the Kokrine Hills, to the east by Moran Dome and Ray Mountains, and the ridgeline between numerous secondary streams emptying into the Koyukuk River to the north. These latter ridges and the Kokrine Hills are oriented in a northeasterly direction and range from 1,500 to 2,500 feet in altitude. Local relief varies from under 100 feet in the headwaters area to 1,200 feet in the canyon of the lower river area. Slopes vary from the gentle rolling hills in the headwaters to steep rock-walled canyons in the lower river before the Melozitna River breaks out onto the Yukon River floodplain.

Several tributaries add to the flow of the Melozitna River. From the headwaters and proceeding downstream these include: Slokhenjikh Creek, Little Melozitna River (which almost doubles the mainstream flow), Wolf Creek, Big Creek, Hot Springs Creek (another major tributary), Black Sand Creek, Fox Creek, and Grayling Creek.

Climate

Although there are no permanent climatological recording stations in the Melozitna basin, the Bureau of Land Management conducted fire research studies in the drainage during the summer of 1980. They recorded daily temperatures, precipitation, and winds. The study is not completed at this time but will be completed and published by the Institute of Northern Forestry. Nearby climatological stations at Indian Mountain (about 20 miles west of the headwaters at 1,220 foot elevation) indicates summer temperatures ranging from 38^{o} to 65^{o}F., annual precipitation of 30 inches including 99 inches of snow, and an average east-northwest wind about two thirds of the year at 8.1 knots. Ruby, directly across the Yukon River from the mouth of the Melozitna River has summer temperatures of 35^{o} to 70^{o}F., annual precipitation of 17 inches including 66 inches of snow (Alaska Regional Profiles, Yukon Region, page 21) and an average wind of about 7 knots from the north.

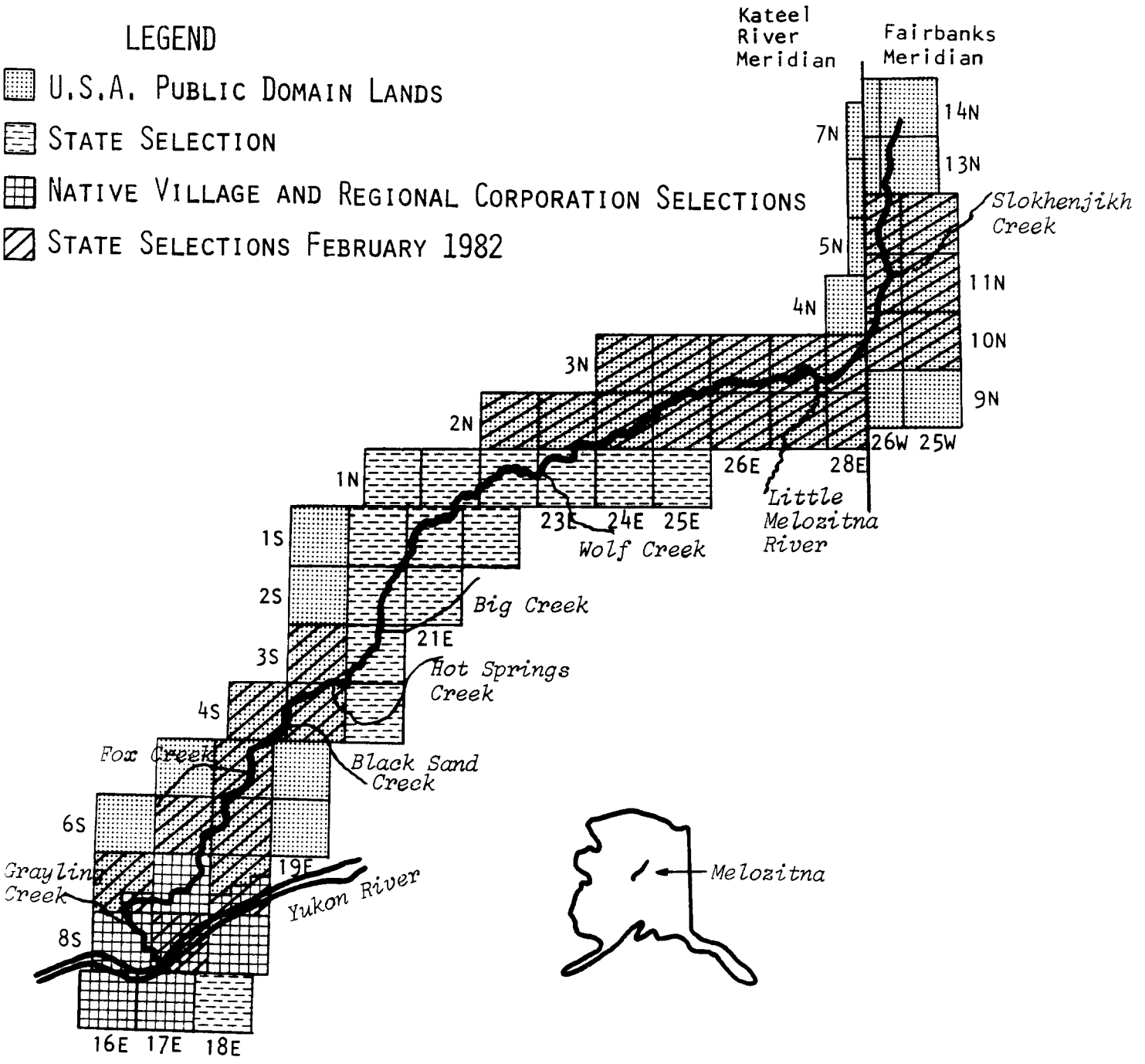
Freeze-up of the Yukon and adjoining rivers and lakes occurs in mid October. Breakup usually occurs in early to mid May.

Land Ownership

Of the 270 river miles of the Melozitna River the Bureau of Land Management currently manages about 167 river miles (62 percent) primarily in the upper and middle reaches of the river. The State of Alaska selected (tentatively approved) about 77 river miles (28 percent) along the lower middle river area. In February 1982, the State selected most of the remaining townships in the Melozitna River study area from the mouth upstream to the Slokhenjikh Hills, including land already selected by Doyon Regional and Dineega (Ruby) Corporations and public land managed by the Bureau of Land Management. These recent and previous selections could increase State interests in the study area to 232 river miles (86 percent) exclusive of the regional and village corporation selections in the lower river. Federal management would then drop to about 12 river miles (4 percent) in the headwaters. Doyon Limited Regional Corporation and Dineega Corporation (Ruby) have selected land along the river upstream from the river's mouth for about 26 river miles (10 percent).

LAND STATUS (MARCH 1982)

MELOZITNA RIVER



There are 73 contiguous lode claims located along Big Creek (state selected area) within the study area. In addition there is one special use permit within 2 miles of the river in the state selected area.

Surrounding the Melozitna River drainage are recently established National Wildlife Refuges. These include the Koyukuk Refuge to the west, the Innoko Refuge to the southwest, the Nowitna Refuge to the south across the Yukon River, and the Kanuti Refuge to the north. (See the Melozitna River area map.)

Land Use

Currently the Melozitna River area is being used for hunting, trapping, and fishing (both for sport and subsistence) by residents from Ruby, Hughes, Galena, and Tanana. Most fishing occurs downstream from the canyon area with incidental sport fishing associated with fall big game hunting in the upper and middle portions of the river. There is a considerable number of mining claims in the vicinity of Big Creek. The validity of the claims is unknown. There are also numerous prospective sites and/or mining claims outside of the river area on the Little Melozitna River drainage, along Wolf Creek, Big Creek, and in the Hot Springs Creek drainage.

Socioeconomic Conditions

Population Centers: There are no settlements within the Melozitna River drainage, although there are several cabins used on a seasonal basis for hunting and trapping. There are, however, four population centers within 50 miles of the river: Galena on the Yukon River, 40 air miles downstream of the Melozitna/Yukon confluence; Hughes on the Koyukuk River, about 40 air miles north of the Melozitna on the Koyukuk River; Ruby on the Yukon River, about a mile downstream of the Melozitna/Yukon confluence; and Tanana on the Yukon River, about 115 miles upstream of the Melozitna/Yukon confluence. There are also numerous small settlements of several cabins and individuals up and downstream from the Yukon/Melozitna confluence.

The 1980 census shows population changes for these communites:

POPULATION CHANGES

	1970	1980	% Change
Galena	581	765	+ 32
Hughes	85	73	- 14
Ruby	147	197	+ 34
Tanana	406	388	- 4
	1,219	1,423	+ 17
Yukon-Koyukuk Census Region	7,045	7,873	+ 12
State Totals	302,583	401,851	+ 33

Source: U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population Volume 1, Alaska, PC 30-1-A3, page 3-11.

Economy: The rural economy of the communities in this area have not been examined in any detail from either the subsistence or the cash/wage aspects. Also, the subsistence uses of the natural resources and the areas of use are undocumented, except in the most general terms.

The Yukon/Koyukuk region economy is characterized by resource utilization either by extraction such as mining or timber for house logs and firewood and/or subsistence/cash by fishing, trapping, and hunting. Seasonal employment in the region is generally limited to mining, firefighting, construction, and commerical fishing. Some residents migrate to larger population centers for employment in the construction season and to Bristol Bay for cannery work and commercial fishing. Year-round jobs are quite limited except in the larger communities such as Galena and Tanana where the Federal and State governments are usually the largest employers and contribute most to the cash economy. The Federal Aviation Administration and Public Health Service at Tanana, and the Bureau of Land Management and U.S. Air Force at Galena are cases in point. In the smaller communities, however, state operated school systems, local airlines, local governments, and village stores afford employment opportunities and thereby contribute to a cash base and sustained economy. These opportunities, however, are limited and provide employment to few community residents.

Employment statistics for 1980 show a civilian labor force of 2,088 people for the Yukon/Koyukuk Census Division. There is an annual unemployment rate of 16.4 percent with a March high of 20.4 percent and a low of 11.9 percent in September (Alaska Department of Labor, Research and Analysis Section, February 1981). Statewide statistics for 1980 show an annual unemployment rate of 9.6 percent (Alaska Department of Labor, Research and Analysis Section, 1982). These figures may be somewhat misleading for the rural areas since unemployment figures exclude anyone not actively seeking work. Some individuals may be self-employed in subsistence or wage employment depending on the season of the year. Throughout 1980, the last full year figures are available, the Federal, State, and local governments provided the major employment and payroll to the Yukon/Koyukuk area. This was followed by retail trade and service industries with important seasonal influxes from construction and mining.

The following table also reflects the better employment opportunity in the larger communities of the region.

	1978 Average Wages ($)	# of Tax Returns 1978
Galena	$15,167	219
Hughes	3,894	19
Ruby	7,275	62
Tanana	12,957	164

Source: Federal Income Taxpayer Profile - 1978, Alaska Department of Revenue, December 1981.

Transportation and Access

Access to and within the interior region is principally via aircraft or riverboat. Bulk freight arrives mostly via barge on the Yukon River during the

summer. There are numerous bush strips throughout the region including community airstrips at Hughes, Tanana, and Ruby. Galena has air facilities for commercial jet service. Numerous rivers and lakes provide landing for ski or float-equipped aircraft. Winter travel is mostly by snowmachine or aircraft although some residents use dog teams for winter travel.

The present road system in the region is limited to the State maintained road from Ruby south to Poorman and local access roads within Galena and Tanana. The Alaska Department of Transportation and Public Facilities has identified a transportation and utility corridor just north of the Yukon River connecting Galena and Tanana. The Galena portion would continue both north and west to the Seward Peninsula and southwest downstream along the Yukon River. The Tanana portion would connect with the Anchorage/Fairbanks corridor at Nenana. The Western and Arctic Alaska Transportation System also identifies a railroad corridor from Nenana to Kobuk that crosses the Melozitna headwater area. Although these corridors are identified, construction will not necessarily result. Improvement of land access would create major changes in this region.

Access within the Melozitna River area is via floatplane in adjoining oxbow lakes and/or by small wheel planes along gravel bars at lower water levels. Although motorized boat access is usually stopped at about river mile 12 in the canyon, certain water conditions do permit, with portage, the opportunity for motorized boat travel upstream from the canyon area. Once upstream from the canyon area there are no impediments to motorized boat use except during low water flows.

THE MELOZITNA RIVER STUDY AREA

Cultural Resources

Very little is known about the cultural resources of the Melozitna River area, but it is presumed the Melozitna drainage was used by the Athapascan Koyukon residents in the region. There was a village or seasonal camp (Melozikakat) at the mouth of the Melozitna River with an 1880 census of 30, but it has been abandoned (Alaska Natives and the Land, Federal Field Committee for Development Planning in Alaska, 1968, p. 198). This location was also listed as Tahnohkalony by Father Jenrette in the early 1900's (Hart, Betsy, The History of Ruby, Alaska, "Gem of the Yukon," 1981, p. 8). North of the Melozitna River drainage is the Batza Tena site, an important source of obsidian along Indian Creek. Artifacts made from this obsidian have been found at many locations throughout the state. It is assumed the Melozitna drainage was one of the access or travel routes to this important source of obsidian. (Reger, Douglas and R.D. Reger, An Archeological Survey of the Utopia Area, Alaska, Anthropological Paper of the University of Alaska, 15(2), pp. 23-37).

Russian explorers first reached the region in the 1830's and established Nulato in 1838. Several other trading posts were established during the mid to late 1800's at Kaltag, Koyukuk, Galena, and Tanana. These locations and others by the late 1800's had become settlement areas due to their trading posts, missionary services, and seasonal employment, especially during the steamboat era with the need for cordwood (Alaska Natives and the Land, 1968, p. 197 and Hart 1981, p. 14).

In 1884, "Mr. Mayo and an engineer of the steamboat Yukon made an overland trip via the Melozitna portage to the Kanuti River..." which was followed in 1885 by Lieutenant Henry T. Allen of the U.S. Army (Dissler, Kathleen, An Ethnohistory of the Koyukuk Drainage Region with Emphasis on River Usage, Alaska Department of Natural Resources, 1979, p. 21). This route left Tanana and went up the Tozitna River and crossed the Melozitna headwaters into the Kanuti River drainage to the Koyukuk River.

With discovery of gold in the late 1800's and early 1900's additional emphasis was placed on the Yukon and Koyukuk River settlements as mining supply centers. The population of some communities swelled to several thousand until most of the gold and other precious metals were extracted and the miners moved on. Since then these communities have remained predominantly Native.

In the mid 1920's efforts were made to establish a reindeer herding operation along Hot Springs Creek but it was unsuccessful (Hart, 1981, p. 47).

There are winter trails between the canyon area and the Yukon and one between the headwaters of the Little Melozitna and Yukon Rivers.

In summary, the Melozitna River and its immediate environment do not possess outstandingly remarkable archeological, historical, or cultural resources.

Fish and Wildlife

Fisheries: The Melozitna in the upper reaches is slow-moving, stained, and has a mud and gravel bottom. The main river is generally poor habitat for fish except near the mouth where the river becomes faster and provides better fish habitat. Round whitefish have been observed above the canyons, but are not abundant. Broad whitefish have been collected in the upstream river area and humpback whitefish are present only near the mouth. Sheefish are present only in the lower 7 miles, are most abundant near the lower quarter-mile in June and July, and probably do not spawn in the river. Suckers, king salmon, sculpins, and burbot inhabit the river in small numbers. Pike are the dominant carnivorous species in the upper section of the river and occur along the Melozitna in backwater sloughs, oxbow lakes, and slower weedy areas away from the main channel. They become less abundant as one travels downstream.

Other fish are found in the small, swift, clear water tributaries that enter the Melozitna from Hot Springs Creek on to the mouth. This is especially true of grayling, char, and chum salmon although chums also spawn in the main river. Hot Springs Creek is a swift, clear water tributary with large rocks providing excellent habitat for chum and king salmon, grayling, and a few arctic char.

Regionally, the Melozitna is an important chum salmon spawning stream, an important holding (not feeding or spawning) area for sheefish and an important subsistence and sport fishing stream for sheefish by local, Fairbanks, and Galena residents.

Since the river is swift and shallow, it is generally difficult to ascend by conventional riverboat; thus, most fishing is confined to the lower mile. Sheefish is the main sport species. No information on catch or fishing effort is available. Fish are usually available to the angler only from July 1-July 21. A few pike and grayling and chum salmon are caught on hook and line

in the lower mile of the river. If anglers can reach Grayling Creek (9 miles up), char and grayling can also be caught. There is very little fishing in the Melozitna above the canyons, but a few grayling are taken near Melozitna Hot Springs, and moose hunters probably take a few pike in the fall in the upper river.

In general, the Melozitna River is characterized by remoteness and very seasonal abundance of subsistence and sport fish species. The Melozitna River and its tributary, Hot Springs Creek, have good potential for salmon enhancement. Because little is known about the salmon in the Melozitna system, investigations need to be conducted on life history and other related topics. Life history studies on feeding and rearing areas may include, but not be limited to, chum and king salmon smolt collection at the mouth of the Melozitna. Depending on the result of these future studies, a site about 12 miles upstream on Hot Springs Creek may be suitable for installing stream incubation boxes or a hatchery.

Until additional salmonid research data is available, specific opportunities for fisheries enhancement projects cannot be identified.

The subsistence fishery for salmon and sheefish is presently undocumented but estimated to be small, primarily occurring during the summer and is conducted between the lower stretch of the Melozitna and its confluence with the Yukon; but it is important to residents of Ruby, according to the ADF&G Subsistence Division.

Wildlife: The following game species are known to occur in the Melozitna drainage at some part of their life cycle: grizzly bear, black bear, moose, and caribou. Small numbers of caribou winter throughout the Melozitna River drainage, and moose winter along the Melozitna River but mainly in the upland areas.

Although the habitat of the Melozitna drainage is not as extensive as that of the neighboring wildlife refuges and the wildlife populations not as abundant, the area supports a variety of wildlife. Relatively recent fires in the upper river area have created good habitat for moose. Furbearers occur in average numbers. The upper two-thirds of the drainage is good grizzly bear habitat. The basin, particularly in the middle and upper portions of the river, supports a considerable waterfowl population, especially white-fronted and Canada geese along the river itself. As evidenced from goslings observed, they are using the area for nesting and possibly staging.

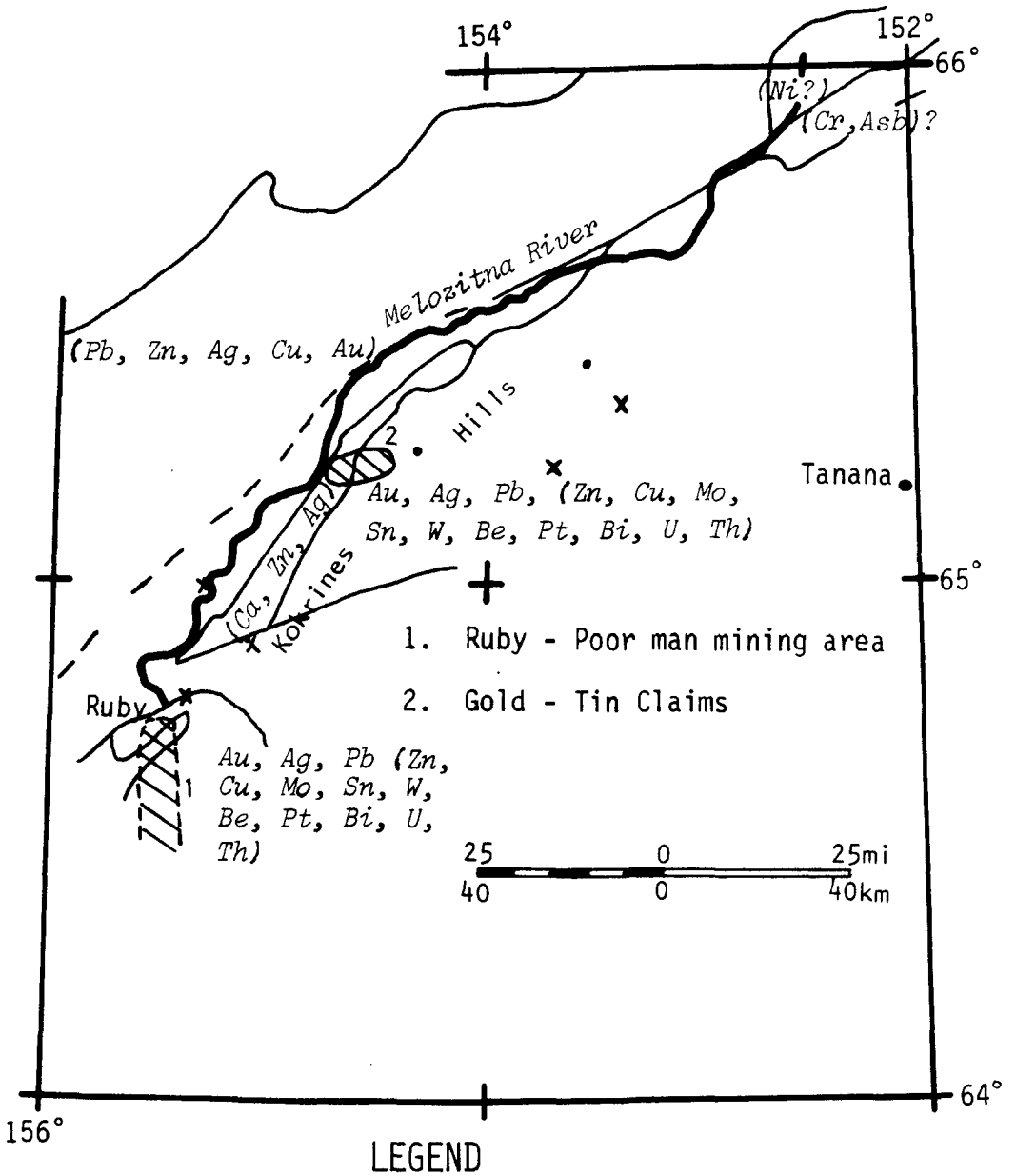
Endangered Species: There are two known peregrine falcon nesting areas along the lower river area. However, identified peregrine nesting sites are much more numerous along the Yukon River just upstream and especially downstream from the study area.

Although the basin does sustain fish and wildlife in varying numbers, it is not considered to be an outstandingly remarkable value in the Melozitna River area.

Geology and Mineral Resources

The Melozitna River flows across a Quaternary alluvium that forms a floodplain about one mile wide. The floodplain is characterized by abundant oxbow lakes,

Melozitna River area showing mining claims, mineral occurrences, and areas geologically favorable for the occurrence of mineral deposits.



LEGEND

X MINING CLAIM OR GROUP OF CLAIMS

AREA OF MANY CLOSELY SPACED MINING CLAIMS

• MINERAL DEPOSIT AND/OR OCCURRENCE

Source: U.S. Bureau of Mines, 1973; U.S. Bureau of Mines mineral property files.

meander scrolls, abandoned channels, and other features of recent floodplain building.

The upper one-third of the river is bordered by bedrock of several types and ages. Tertiary to Cretaceous age volcanic rocks are present in most of the area on the north side. They are mainly rhyolite tuff, flows, and breccia with subordinate pumice and obsidian. Lower Paleozoic and pre-Cambrian age schist and quartzite form most of the outcrops on the southern side of the upper third of the river. Mesozoic sedimentary strata and ultramafic rocks are present in a few places.

The lower two-thirds of the river is bordered chiefly by Cretaceous volcanic graywacke and mudstone. Conglomerate makes up the bedrock in some places, composed of clasts of mafic intrusive and extrusive igneous rocks and chert (Patton and others, 1977). The Kokrines Hills, to the south, are in part underlain by Mesozoic granite.

A metallic mineral resource appraisal of the Central Alaska region (Eberlein and Menzie, 1978) combining geological, geochemical, and geophysical data available through December 1977, was completed by the U.S. Geological Survey under its Alaska Mineral Resource Assessment Program (AMRAP) (Johnson, 1978, p. A14). The study shows the following for the Melozitna River area (see minerals map):

1. The river flows across, or lies adjacent to, geologic terranes which are favorable for lode nickel, chrome, and asbestos deposits as well as possible nickeliferous residual deposits.

2. Southwestward, the next approximately 15-km-long segment crosses terrane geologically favorable for lead, zinc, silver, copper, and gold; the same terrane occurs north of the river along the remainder of the river.

3. Further southwestward, the next approximately 30-km-long segment flows across terrane with potential for gold placers with minor or possible byproduct tin, platinum-group metals, and bismuth, and for lodes containing silver, lead, and minor or byproduct zinc, copper, gold, molybdenum, tin, tungsten, beryllium, uranium, and thorium. The same terrane occurs south of the middle segment of the river.

4. The southwestern third of the river is bordered on the south by the northwestern margin of a geologic terrane with potential for lodes containing copper, zinc, and silver. The remainder crosses or adjoins terranes with potential for gold and minor tin, platinum, and bismuth placers, and for several types of lodes containing lead, zinc, silver, copper, gold, molybdenum, tin, tungsten, beryllium, platinum-group metals, uranium, and thorium.

Mining claims are recorded at two localities along the river; and others exist further from the river. At locality 2, over 300 claims are reported, with gold and tin of principle interest.

Geologic values of the study segment are determined not to be outstandingly remarkable.

Recreation

The Melozitna River drainage is accessible by floatplane in the upper reaches on adjoining lakes and oxbows. The river itself offers an easy flat water float for over 240 miles with the exception of about 3½ miles in the canyon which can be lined or portaged at higher water levels. There is no access to the upper-most 30 miles of the river. The lower one-third (downstream portion) of the river may have more floating appeal because of the faster moving water, some rapids, more scenic diversity and sport fishing opportunities. However, in the upper river area opportunities for waterfowl observation are better, especially for white-fronted and Canada geese.

Off river travel such as hiking is generally limited to occasional ridges. The majority of the surrounding terrain in the middle and upper river is wet tundra and brush. The lower river is surrounded by thick brush, muskeg, and a birch/spruce forest. There are numerous sand/gravel bars along the river for camping except in the canyon area on the lower river and upstream of the Little Melozitna River confluence. Powerboat access is generally limited to the lower downstream end of the canyon area approximately at river mile 12, although the middle and upper river areas would be navigable by small outboard motorboats.

Sport fishing, mostly for grayling, is generally limited to the downstream third of the river, especially at the confluence of the major salmon spawning tributaries. The upper and middle river area along backwater sloughs and slower weedy areas away from the main channel produce some northern pike. Chum salmon were observed downstream of the Little Melozitna River, but none were caught. Sheefish were observed and caught at the mouth of the river. Overall, sport fishing for the Melozitna River is considered relatively poor.

Sport hunting, mostly for moose and brown bear, is done in the fall and chiefly in the middle and upper parts of the drainage. Access is gained chiefly by aircraft landing on gravel bars. In winter, trapping takes place throughout the drainage.

The Melozitna River is not a river the public has sought out for its recreational attributes nor were these values considered to be outstandingly remarkable.

Scenic Resources

Scenic attributes of the Melozitna River and its immediate environment lack diversity and are limited to the lower one-third of the river.

The downstream third of the river is relatively straight and flows through a mountainous area with few oxbows or meanders. This area offers the most unusual diversity with rock outcrops, forested hillsides of white spruce and birch, multicolored cliffs and both long and short range vistas of the surrounding ridges and bluffs. There is no evidence of recent fires in this section of river.

The upper one-third of the river meanders extensively, with numerous oxbow lakes, side sloughs and thaw lakes through an area of generally open-rolling, tundra-covered hills. A thin band (100-300 feet) of riparian vegetation

(consisting of willow, and on the well-drained sites a combination of white pine and balsam poplar and the entrenched character of the river limit off river views. Much of the area has undergone recent forest fires.

The middle third of the river represents a cross between the upper and lower sections. There are areas of meanders and areas of faster water, areas of flats and of hills and cliffs. White spruce and birch stands increase in density toward the lower river. There are also some distant vistas of the rocky, tundra flanked Kokrines Hills to the south from some of the meandering channels.

The scenery was considered typical of interior rivers. No vistas or features were noted to be outstandingly remarkable.

Stream Flow Characteristics and Water Quality

The following water flow and water quality information is adapted from an unpublished BLM report, Fisheries Inventory of the Melozitna River by Joe Webb, Fairbanks District Office.

The Melozitna River drainage covers an area of about 2,700 square miles. The mainstream is approximately 270 river miles in length. The average discharge for a nine year period (1961-70) was 1,999 cubic feet per second (cfs). The flow gauge, once located near the river's mouth, is no longer being used. Several tributaries add to the mainstream flow. These include from the headwaters and proceeding downstream--Slokhenjikh Creek, Little Melozitna River (which doubles the mainstream flow), Wolf Creek, Big Creek, Hot Springs Creek (another large tributary), Black Sand Creek, Fox Creek, and Grayling Creek

Stream flow measurements at Melozimoran Creek on July 10 using a velocity head rod indicated a discharge of 182 cfs. Stream flow of Wolf Creek on July 15 was measured at 135 cfs. On July 20 the discharge of Big Creek was 42 cfs. Stream flow measurements were attempted on Melozi Hot Springs Creek, but attempts were abandoned due to the close approach and attention given by two large grizzly bears that were fishing in the stream.

From the point where the Melozitna and Little Melozitna join, the river drops an average of 3.3 feet per mile to the mouth. However, this does not accurately describe the river profile because, unlike most streams, the slow meandering area of the river is upstream, and the swift, relatively straight section is downstream near the mouth. The upper 150 miles drop only about 1.5 feet per mile. The lower 80 miles drop an average of 5.8 feet per mile, but within the stretch, there is a 28 mile segment which drops 11 feet per mile.

The water of the upper section of the river carries a "tea-colored" vegetative stain common to many interior Alaska streams. The main stem is noticeably darker than the Little Melozitna River. Farther downstream the river clears up significantly as it receives "crystal-clear" water from such streams as Wolf Creek, Big Creek, Melozi Hot Springs Creek, and others. Water temperatures of the river ranged from 49°F. to 65°F. during the survey period (July 1979). Stream bottom composition in the upper river area is sand and silt with a gradual transition to fist-sized gravel and boulders in the lower river.

TABLE 1: MELOZITNA RIVER WATER CHEMISTRY*

Location	Date & Time	Water Temp. (F.)	Total Acidity	pH	Dissolved Oxygen(2)	Carbon Dioxide(2)	Total Alkalinity(1)	Total Hardness(1)
Little Melozitna River	7/19/79--11:00 a.m.	49	0.3	7.3	10	5	2	3
Melozimoran Cr.	7/10/79--11:30 a.m.	47	0.5	7.1	10	5	3	3
Wolf Creek	7/15/79--5:30 a.m.	55	0.3	6.8	11	5	2	2
Big Creek	7/20/79	52	0.3	6.9	11	5	2	1
Melozitna River 200 yd. above Hot Spring Cr.	7/22/79--2:00 p.m.	65	0.3	6.9	10	10	3	2
Melozi Hot Spring Creek	7/22/79--12:30 p.m.	54	0.3	7.2	12	5	2	2
Black Sand Cr.	7/23/79--6:00 p.m.	50	0.3	7.0	11	5	3	3
Turnaround Creek	7/24/79--7:00 p.m.	48	0.3	7.2	11	5	4	4
Fox Creek	7/25/79--5:00 p.m.	46	0.7	7.3	10	10	5	5

(1) Expressed in grains per gallon.
(2) Expressed in parts per million.
(*) Made with a Hach Water Chemistry Kit, Model AL-36B.

Water chemistry measurements for the Melozitna River and selected tributaries are shown in Table 1. The water is fairly soft, as evidenced by total hardness readings of less than five grains per gallon. Soft water streams generally have a lower productivity than streams with high concentrations of dissolved calcium carbonate. Dissolved oxygen levels were at or near saturation at all stations sampled. The pH of the water ranged from weakly acidic (6.8) to mildly basic (7.3). Water chemistry measurements detected no unusual conditions for those parameters measured.

Water Resource Developments

Two sites along the river have been identified as potential hydroelectric power sites. One is at about river mile 12. The U.S. Army Corps of Engineers estimates it would have a capacity of 152.76 megawatts and a maximum storage of 65,000 acre feet. The second identified site at about river mile 75 would have a capacity of 795.43 megawatts (U.S. Army Corps of Engineers, National Hydroelectric Power Resources Study - Preliminary Inventory of Hydropower Resources, Volume 1, Pacific Northwest Region, July 1979).

The Alaska Power Authority is currently evaluating the feasibility of hydroelectric development for 18 interior Alaska communities, one of which is Galena. Part of the study will focus on the potential of utilizing the Melozitna River drainage to provide electrical energy to Galena. Preliminary results indicate that a dam does not appear to be economically feasible at this time for use by a single community. However, the river may be examined as a regional hydroelectric source in the future (Brownfield, Acres American, pers. comm.).

OTHER POSSIBLE ACTIONS

Although study of the Melozitna River resulted in the conclusion that it is not eligible for inclusion in the National Wild and Scenic Rivers System, its values are important and should be protected. The following possible actions are suggested for consideration for protection of the river's resources.

1. Cooperative Agreements - Through the development of cooperative agreements the identified resource values along the Melozitna River would be maintained in a similar manner regardless of ownership. Management of the river area may be delegated to one agency or remain with the individual landowner. Regional and village corporation selected lands could also be added to the Alaska Land Bank program whereby they would be managed (through agreement) in a similar manner as the surrounding land area. The land bank program also provides the private landowner with significant tax and legal benefits.

2. Land Use Classification - Both the State of Alaska and the Bureau of Land Management have administrative planning procedures for classifying land for specific or multiple uses. At this time, however, neither the State of Alaska nor BLM has prepared or is planning to prepare land management plans for the Melozitna River area. However, any management agency may apply to the Alaska Division of Land and Water Management for an instream flow reservation. This would preclude activities upstream and/or out of the river corridor from impairing the area's quality by stream flow rate reduction.

3. State Waterway System - The State of Alaska at the present time has the authorization (Chapter 181, Section 38.04.070) to include a river in a state river system only if the river is within or adjacent to a river area already managed as part of the National Wild and Scenic Rivers System. However, two bills (Senate Bill 189 and House Bill 205) currently in the Alaska Legislature may provide the necessary authority to establish a State Waterway System. The proposed legislation indicates the waterways shall:

   a. serve the recreational needs of a substantial number of people;

   b. provide access to areas of historical, natural, or recreational interest, including but not limited to other publicly owned land and resources;

   c. protect, provide for, or enhance the use and enjoyment of publicly owned land or resources by the public;

   d. provide linkage with other existing or potential units of the system, including those located on federal or municipal land;

   e. contribute to the development of tourism;

   f. be included in an existing state or local government capitol improvement plan; or

   g. be otherwise consistent with long-range planning for recreation, tourism, preservation of historical landmarks, protection of traditional uses, or economic development.

The system would be administered by the Division of Parks.

CONSULTATION AND COORDINATION OF THE DRAFT REPORT

Over 400 copies of the draft report were distributed in Alaska and throughout the Lower 48. Eleven responses were received including those from the Alaska Department of Fish and Game representing the Office of the Governor of Alaska. The majority agreed with the negative finding and had no comments. Some provided specific comments which are reflected in data changes and minor corrections made in the text. Two reviewers pointed out that the wilderness character of the Melozitna area had been overlooked. While it is agreed that the area does appear to possess wilderness character, this element in itself does not make a river eligible for inclusion into the National Wild and Scenic Rivers System.

Doyon, Limited

Doyon Building
201 First Avenue
Fairbanks, Alaska 99701
Tel: (907) 452-4755 Telex 090-35340

June 30, 1982

Mr. Jack Mosby
United States Department of the Interior
National Park Service
Alaska Regional Office
540 W. 5th Avenue
Anchorage, Alaska 99501

Re: L 58 (ARO-P), Melozitna Wild and Scenic River Study Draft.

Dear Mr. Mosby:

This is to advise that I have reviewed the above cited draft both from the standpoint of a study team member who participated in the field study, and as a representative of the Doyon Ltd., Land Department.

As a team member, and also on behalf of Doyon Ltd., I concur with the finding that none of the features along the Melozitna River are individually or collectively outstandingly remarkable, and with the conclusion that the Molozitna River is not eligible for inclusion in the National Wild and Scenic River System.

Enclosed is a summary of my observations and conclusions, as drafted this past winter. They are in accord with the draft report and the conclusions drawn in it.

Please let me know should clarification or further comment be desired.

Sincerely,

Phil Berrian
Senior Land Planner

PB:pag

INTEROFFICE MEMORANDUM

TO: File 81-29

FROM: Phil Berrian, Team Member

RE: Melozitna Field Study, July, 1981 - Summary of Observations and Conclusions drawn.

OBSERVATIONS

The headwaters of the Melozitna are slow moving and deeply incised into the broad permafrost valley. Although a large number of pothole and oxbow lakes are found in this area, none are visible from the river, due to its "sunken" nature, perhaps 25-30 feet below the valley floor. Pull out places for camping, etc., are non-existent to rare, and scenic qualities were poor, with little variation in topography vegetation or wildlife. Wildlife observed was small birds, waterfowl, and beaver.

In overall appearance, the headwaters section of the Melozitna was not unlike Goldstream Creek in the Standard Station area northwest of Fairbanks. The characteristic which is most memorable is that of redundancy. The river meanders extensively, often requiring a number of river miles to progress one hundred feet or so down valley, and each bend appears a duplicate of the ones before and after it.

In its mid-section the river broadens, and is less incised. While extensive meandering persists, sandbars are more common and vistas of foothills in the distance are offered. The river is slightly faster, quite a bit wider, and much more shallow. Occasional riffles mark changes in elevation between large meanders. Oxbow lakes and abandoned channels are occasionally seen from the river. The vegetative regime consists of Black Spruce tundra on top of steep eroding banks on the outside of the river bends, and gravel bars succeeding to willow, cottonwood, and black spruce tundra on the inside. This pattern persists throughout the length of the River, until the approach to the Melozitna Canyon. Tributaries encountered throughout the mid-section are generally not passable by canoe for any distance above their confluence. A number of them are Salmon spawning streams, and Bear, both Black and Brown, are concentrated in these areas. It should be noted that the river was very high (due to three weeks of persistent rain) during the field study, running perhaps as much as 5 feet above normal height for the time of year. Passage by canoe would have been more difficult and time consuming at normal water levels, sand and gravel bars more extensive appearing, and water velocities between riffles even slower.

Changes in vista, etc. were still very slow, offering little in the way of unique or noteworthy experiences. In overall character the Mid-Melozitna was identical to the Mid-Chena, and very similar to Birch Creek in the section between the Steese Highway Bridge and Birch Creek Village.

Water velocity picked up in the final 25 miles. The Canyon area was generally canoe passable with the exception of two sets of rapids, which might have been passable in times of more normal flow. While the canyon area presented a change in vista, it did not strike me as outstandingly remarkable, although it was a pleasant change from the tiresome mid-river section.

The final 10 miles of river moved swiftly, often had multiple channels (almost braided), and showed considerable erosion along the banks. It should be noted that the only noteworthy fishing was experienced within one mile of the mouth, where shefish were found in some numbers. However, State Fish and Game personnel encountered there indicated that their presence was a seasonal occurance of relatively short duration.

CONCLUSIONS

Overall the Melozitna experience was pleasant, if somewhat slow-moving and redundant. Nothing was observed or experienced which could be judged unique or noteworthy. In my opinion, the values encountered were low key and similar to any number of other Interior Alaska streams, although somewhat less dramatic than many others I have traveled. Accordingly, after having studied the Federal criteria, and having travelled the river, it is my belief that the Melozitna does not qualify for designation under the Wild and Scenic Rivers Act.

PB/cn

JOHN R. SWANSON
P. O. Box 922
Berkeley, Calif. 94701

July 12, 1982.

National Park Service
540 W. 5th Ave.
Anchorage, Alaska 99501

Dear Sirs;

Please accept my comments as follows, concerning the Melozitna River - Alaska - Wild and Scenic River Study.

I wish to advise that I support affording this river - the Melozitna - Wild and Scenic River status as a Wild River, as it contains wilderness, wildlife, botanic and cultural resources of certain national importance and will be a worthy addition to our System of Wild and Scenic Rivers. Actually, the Melozitna River along with the Kaiyuh Hills and Ray Mountains would be a very worthy National Wildlife Refuge as this area does contain plant and animal life of national value.

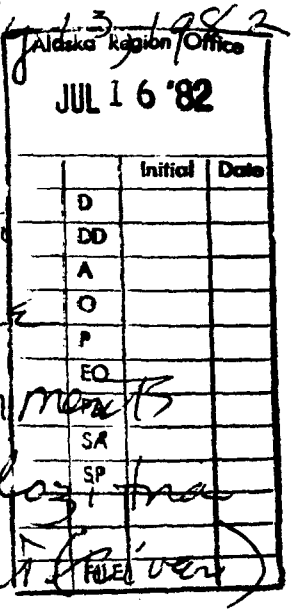
I urge that the Melozitna receive full National Wild River status and include a river and corridor complex of some 400,000 acres.

And to seriously consider a Melozitna National Wildlife Refuge of - say - 3,750,000 acres; to conserve wildlife and fish resources, and to connect the Koyukuk, Kanuti and Nowitna National Wildlife Refuges so as to fashion one single ecological complex to better protect the region's living resources. As these present refuges are biologically fragmented and must be all connected if their respective biological resources are to survive.

Sincerely,

John R. Swanson.

D18 July 13, 1982



Regional Director
Alaska Regional Office
National Park Service

The following are my comments concerning the draft Nelozitna Wild and Scenic Report (River)

I find myself in disagreement with some parts of the National Park Service's evaluation and analysis of the Nelozitna River, and the Service's conclusion that the river does not meet the criteria of eligibility for inclusion into the National Wild and Scenic Rivers System.

(1) The river meets the free flowing requirement.

(2) In the Hart, Betsy "The History of Ruby, Alaska", the area is referred to as the Gem of the Yukon (P. 8 of your

our analysis). The Athapascan Koyukon Indians and the Russian trading posts and settlements in the 1800's are important historical backgrounds, that later became mining supply centers.

(3) Your report states that the Nelozitna is an important chum salmon spawning stream, an important holding area for sheefish, and an important spot fishing stream. And since the river is swift and shallow (making riverboat travel difficult) — it (and the surrounding landscape) must be untrammeled and wild, thus enhancing the wilderness qualities of the river and contiguous area.

As far as I am concerned, the

presence of Wilderness alone qualifies the river for Wild and Scenic status. Your report states that it is remote — another necessity for wilderness.

The presence of a variety of wildlife would be another Wilderness factor, which, to me, makes an area indeed outstanding.

(4) The oxbow lakes, meander scrolls of the flood plain, the volcanic rocks on the upper river and the schist and quartzite outcrops as well, do make of the area a scenic and wilderness experience of outstanding beauty. They are outstanding because of their beauty, and the fact that they are not found just anywhere in the United States.

(5) The scenic attributes of the

Melozitna are considered typical of interior rivers (p. 13) and thus not outstanding. But its diversity of rock outcrops, its forested hillsides of white spruce and birch, its multicolored cliffs are not only magnificent in their beauty, but also conducive to the wilderness experience. Thus it is that (typical of interior rivers or not typical) - this river is outstanding. Don't forget, our "typical interior rivers" are becoming few and far between these days.

(6) Under the heading "Other Possible actions" you note that "although the Melozitna is not eligible for inclusion in the National Wild and Scenic Rivers System, its values are important and should be

protected"!

If ever a sentence qualified this river for Wild and Scenic Rivers inclusion, it is this one!

In your analysis under Cooperative Agreements, Landuse Classification, State Waterway System, most (if not all) of the emphasis seems to be on the various agencies, private owners, the Alaska Land Bank program, planning procedures, State Waterway System, recreational needs of people, enhancement of publicly owned lands use for public enjoyment. Very little - (in fact I saw no provisions made) - is done for wilderness, which I consider to be the most important values of a region like Wrangell-Mt.

(6)

The river's wilderness qualities should be named, designated, and stressed rather than the "people use" of the area.

Sincerely yours,

Frances Dollar

6000 Coldwater Canyon #1

No. Hollywood, Calif. 91606

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, D.C. 20310

15 JUL 1982

Honorable G. Ray Arnett
Assistant Secretary for Fish and
Wildlife and Parks
Department of the Interior
Washington, D. C. 20240

Dear Mr. Arnett:

This is in response to your June 22, 1982, letter to Secretary Marsh requesting comments on a draft report on the proposed Melozitna Wild and Scenic River, Alaska.

Since the report concludes that the Melozitna River is not eligible for inclusion in the National Wild and Scenic Rivers System, we have no comments. The opportunity to review this report is appreciated.

Sincerely,

for William R. Gianelli
Assistant Secretary of the Army
(Civil Works)

UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98105

College of Architecture and Urban Planning
Department of Landscape Architecture

16 July 1982

John E. Cook, Regional Director
Alaska Regional Office
National Park Service
540 W. Fifth Avenue
Anchorage, Alaska 99501

Dear Mr. Cook:

Thank you for sending a copy of the Melozitna Wild and Scenic River Study Draft Report. It is difficult to comment on this report as it contains meager information of a general nature. For example, the scenic resource section can not be used to substantiate any decision. Because scenic resources are a basic criteria for analysis, one expects to find this section containing clear documentation. It does not. No criteria for scenic resources are stated and no evaluation procedures are explained. It would seem as though this analysis was a compilation of whimsical impressions gathered on one float trip by an unknown number of evaluators. This section is completely inadequate as to documenting the resource condition.

We have no way of knowing if the river in question should become a wild and scenic river as the report is not adequate. We hope budget cuts have not forced the Park Service into doing such shoddy analysis. We have always been a strong supporter of the Park Service because of the excellence it has demonstrated. The scenic resource portion of this document does not exhibit even the remotest resemblance to an adequate evaluation.

Sincerely,

Sally Schauman, Chair
Department of Landscape Architecture

SS:ew

348 Gould Hall / Telephone: (206) 543-9240

Department of Energy
Washington, D.C. 20585

JUL 16 1982

Regional Director
Alaska Regional Office
National Park Service
540 West 5th Avenue, Room 201
Archorage, Alaska 99501

Dear Sir:

This is in response to the letter of June 22, 1982, from the Assistant Secretary for Fish and Wildlife and Parks to the Secretary of Energy requesting comments on the draft report on the proposed Melozitna Wild and Scenic River.

We have reviewed the report and have determined that the proposal does not have significant implications on potential energy sources.

Sincerely,

R. J. Stern

Robert J. Stern, Director
Office of Environmental Compliance

DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

August

Honorable James G. Watt
Secretary of the Interior
Washington, DC 20240

Dear Mr. Secretary:

This is in response to Assistant Secretary Arnett's June 22 letter requesting our review and comment on your Department's proposed report on the Melozitna River.

We agree with the river study team's findings and conclusion that the Melozitna River does not qualify for the National Wild and Scenic Rivers System. Although the report notes that the river and its immediate environment possess significant resource values, none were found to be outstanding. Hopefully, those concerned with management of the river area will adopt a cooperative program that will provide protection to the existing river resources.

We appreciate the opportunity afforded us to offer our views on your proposed report.

Sincerely,

John R. Block
Secretary

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

JAY S. HAMMOND, GOVERNOR

333 RASPBERRY ROAD
ANCHORAGE, ALASKA 99502
Phone: 267-2199
File: CSU-NPS-Melozitna

August 27, 1982

Mr. Bill Welch
National Park Service
540 West Fifth Avenue
Anchorage, Alaska 99501

RE: Draft Report - Melozitna River Study

Dear Mr. Welch:

The State agencies appreciate the opportunity to review the Melozitna River Study Draft Report. The State agencies agree that the Melozitna River does not qualify as a Wild and Scenic River and support your decision of no designation. The following additional comments have been received from State CSU contacts.

The Alaska Department of Transportation and Public Facilities finds the revised section on transportation and access to be essentially correct.

The Alaska Department of Natural Resources advises that, if the Melozitna River is managed as a Wild and Scenic River area, the management agency apply to the Division of Land and Water Management for an instream flow reservation. This precludes activities upstream and out of a wild and scenic river management area from impairing the area's quality by stream flow rate reduction.

The Alaska Department of Fish and Game, Division of Fisheries Rehabilitation, Enhancement and Development, <u>again</u> advises that a sentence on Page 10, Paragraph 2, Line 2 is incorrect: "Currently...no...enhancement projects...River." They request the following correction: "The Melozitna River and its tributary, Hot Springs Creek, have good potential for salmon enhancement. Because little is known about the salmon in the Melozitna system, investigations need to be conducted on life history and other related topics. Life history studies on feeding and rearing areas may include, but not be limited to, chum and king salmon smolt collection at the mouth of the Melozitna. Depending on the result of these future studies, a site about 12 miles upstream on Hot Springs Creek may be suitable for installing stream incubation boxes or a hatchery.

Until additional salmonid research data is available, specific opportunities for fisheries enhancement projects cannot be identified."

Division of Subsistence of Alaska Department of Fish and Game suggests the following rewordings:

Page	Para	Line	
6	3		It would be more correct to state that the area is currently being used for subsistence and other hunting, trapping, and fishing.....
7	3	12	These employment opportunities are limited and provide employment to few community residents.
9	8	2	An important subsistence and sport fishing stream...
10	2	2	...very seasonal abundance of subsistence and sport fish species.
10	2	4	"The subsistence fishery for salmon and sheefish is" presently undocumented...
10	2	6	to residents of Ruby.

Please let us know if we can be of further assistance in working with you toward implementation of ANILCA in the public's interest.

Sincerely,

Tina Cunning
Acting State CSU Coordinator

cc: State CSU Contacts
Lisa Parker

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

Publication services were provided by the graphics and editorial staffs of the Denver Service Center. NPS 2221