Thank you for your interest in Alaska's water quality program.

Sincerely,

Leonard D. Verrelli

Leonard D. Verrelli
Director

ED/SB/jal

Enclosures
1. Mailing List Correction Notice
2. Draft 1996 Section 305(b) Report & Appendices

2/12/96

Mr. Leonard D. Verrelli
Director
Division of Air and Water Quality

Dear Mr. Verrelli,

Enclosed I am submitting four candidate water bodies for consideration for inclusion in the 1996 303(b) list Report for impaired Alaska water bodies.

These are: Nakwasina River, Sound and Bay, Kathlian River and Bay, Granite Creek (Currently listed AK E.P. 10203-005 and Bradfield River. Scientific reports accompany Nakwasina and Kathlian and you have on file from last year citations issued by Sitka DEC concerning the abuse in the past at Granite Creek, Bradfield River is extremly remote area on the Mainland 30 miles South of Wrangell however it should not remain out of sight and out of mind.

I am also sending an identical packett to EPA -R10 office in Seattle as your office in past administrations (John Sandor) has frequently "lost" such material

Ironmain

Ben Mitchell
co-director
Tongass Huntin and Fishing Coalition
103 Darwin
Sitka, AK 99835

4 of 4
Candidates for 303(d)(1)(A) and (B) lists

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

1996 STATEWIDE WATER QUALITY ASSESSMENT DATA COLLECTION FORM

NAME OF WATERBODY: Bradfield River

Location or Lat/Long: Lat 56°12' Long 131°53
South of Wrangle Alaska on the Mainland

Is the waterbody in a national or state park, monument, refuge, preserve, or similar area?:
[x] Yes / [ ] No / Name: Tongass National Forest

Waterbody Type:	Waterbody Size:	Segment of Waterbody Addressed:
[x] River/Stream	10 Miles	From: mouth of river
[ ] Lake	____ Acres/Hectares	To: to approx 10 miles up stream
[x] Fresh Wetland	____ Acres/Hectares	Other Description:
[x] Tidal Wetland	____ Acres/Hectares	
[ ] Estuary	____ Square Miles	Size of Segment: 8-10 square miles ±
[ ] Coastal Shoreline	____ Miles	at mainly valley floor
[ ] Groundwater		

Period of Assessment, From: 1978 To: worked in area for 30 days Summer of 1978

Type of Documentation (attach if possible):

- [ ] Water quality data
- [ ] Documented oil spill
- [ ] NOV / Enforcement action
- [ ] Photos with documentation
- [ ] Photos without documentation
- [ ] Written report
- [ ] Field notes
- [x] Overflight
- [x] Observation
- [ ] Other

Describe Source and Nature of Pollution, Documentation Provided and Other Comments:
Bradfield River valley clear cut logged in 1960's and early 1970's. Logging roads constructed of gravel dredged from Bradfield River and adjacent riparian areas. Resulted in major disruption of stream channel dynamics throughout the length of the Stream. Includes yearly channel changes, braiding, heavy bed load in addition to glacial run off from its source.
I have not inspected the area since 1978 however it is a similar case to Katlian and Nakwasina Rivers and timber was removed under the same management philosophy of the times.
This is being re-submitted again in 1996 even though it was submitted in 1994 but was rejected as an impaired water body at that time due to lack of scientific evidence.
This stream should be considered as a candidate impaired water body due further investigation by field biologists not employed by the State of Alaska nor the U.S. Forest Service and not left "out of mind - out of sight - forgotten"

RESPONDENT INFORMATION: Submitted on behalf of Tongass Hunting and Fishing Coalition
Name: Ben Mitchell - Co-director Phone: _____ Date: 2/10/96
Employer: USFS - Retired Dept: Engineering / Timber Title: Civil Engineer / Logging Engineer
Mailing Address: 103 Darrin
City: Sitka State: AK ZipCode: 99835
Education/Experience: BS in Civil Engineering - Post Grad Logging Engineering
26 years career USFS 20 years assigned to Tongass National Forest

TYPE AND SEVERITY OF POLLUTANTS AND SOURCES: (Severity; H=High, M=Medium, S=Slight)

POLLUTANTS:

__ O Cause unknown
__ 1 Unknown toxicity
__ 4 Nonpriority organics:
__ 5 Metals:
__ 2 Pesticides:
__ 3 Priority organics:
__ 6 Ammonia
__ 7 Chlorine
__ 8 Other inorganics
__ 9 Nutrients
__ 10 pH
H ✓ 11 Siltation/sedimentation
__ 12 Low dissolved oxygen
__ 13 TDS/Salinity/Chlorides
__ 30 Other: _____

H ✓ 14 Temperature Modifications
H ✓ 15 Flow alterations
H ✓ 16 Other habitat alterations
__ 17 Pathogens
__ 18 Radiation
__ 19 Oil and Grease
__ 20 Taste and odor
__ 21 Suspended solids

__ 22 Noxious aquatic plants
H ✓ 23 Filling and draining
__ 24 Total toxics
H ✓ 25 Turbidity
__ 26 Exotic species
__ 27 Debris, foam, scum, etc.
H ✓ 28 Insufficient stream structure
__ 29 Arsenic

SOURCES OF POLLUTANTS (Severity; H= High, M= Medium, S= Slight):

Point Sources:

H ✓ 1 Industrial
__ 2 Municipal
__ 3 Storm sewers
__ 4 Combined sewers

Agriculture:

__ 11 Non-irrigated crop production
__ 12 Irrigated crop production
__ 13 Specialty crop production
__ 14 Pasture land
__ 15 Range land
__ 16 Feedlots
__ 17 Aquaculture
__ 18 Animal waste/holding areas
__ 19 Manure lagoons

Silviculture:

H ✓ 21 Timber harvest
__ 21 Stream restoration projects
H ✓ 22 Forest management
H ✓ 23 Road construction/maintenance
H ✓ 24 Elimination of stream thermal cover

Construction:

H ✓ 31 Highway/road
H ✓ 31 Bridge construction/repair
__ 32 Land development

Resource Exploration/extraction:

__ 51 Surface mining
__ 52 Subsurface mining
__ 53 Placer mining
__ 54 Dredge mining
__ 55 Petroleum activities
__ 56 Mill tailings
__ 57 Mine tailings
H ✓ 58 Gravel mining
__ 58 Injection wells

Urban Runoff:

__ 40 Surface runoff
__ 40 Storm sewers

Waste Disposal:

__ 61 Sludge
__ 62 Wastewater
__ 63 Landfills
__ 64 Industrial land treatment
__ 65 Onsite wastewater systems
__ 66 Hazardous waste
__ 67 Sewage disposal

Hydrologic Modification:

H ✓ 71 Stream channelization
H ✓ 72 Dredging
__ 73 Dam construction
__ 74 Flow regulation/modification
H ✓ 75 Bridge construction
H ✓ 76 Removal of riparian vegetation
H ✓ 77 Streambank modification
H ✓ 78 Draining/filling of wetlands

Other:

__ 81 Atmospheric deposition
__ 82 Waste storage tank leaks
__ 83 Highway maintenance/runoff
__ 84 Petroleum/chemical spills, leaks
__ 85 In-place containments
__ 86 Natural sources
__ 87 Recreational activities
__ 88 Upstream impoundment
__ 89 Salt storage sites
__ 91 Fire damage/restoration
__ 92 Underground storage tanks
__ 93 Aboveground storage tanks
__ 94 Saltwater intrusion
__ 95 Road salting
__ 96 Fish, shellfish wastes
__ 90 UNKNOWN SOURCE

Water Quality and Fishery Habitat Condition Survey of Bradfield River
Prepared by Gail Johnejack, Stikine Area, Tongass National Forest
October 1990

The Bradfield River is a dynamic, glacial system with a very high natural sediment load. The river system is divided into the East Fork and the North Fork. Both forks are classified as D4 channels. The mainstem below the confluence of the forks is classified as an E5. The Bradfield basin is a typical U-shaped, glacier formed valley - the side slopes are rocky and steep, the valley bottom channels are braided with many overflow channels, backwater areas and gravel/sand bars.

Timber sales have occurred on both the East and North Forks of the Bradfield River. Logging in the drainage began in 1966 and ended by 1981. Harvested areas included the riparian areas, floodplains and some of the steep sideslopes and V-notches. Roads were constructed using rock from floodplain gravel bars. These logging practices triggered a report in 1976 by the forest hydrologist citing environmental impacts such as accelerated sedimentation and channel migration, and increased numbers of slope failures that were not addressed in the original environmental statement. This led to an environmental modification of the timber sale.

A field visit was made to the Bradfield watershed in 1987 by area soil scientists to update the Watershed Improvement Needs Inventory (WINI). They noted that much of the floodplain had revegetated with dense alder brush with spruce coming in below in most places. They also determined that a major shift in the channel was due to a natural landslide in a V-notch on a slope and was unrelated to past logging activities.

The result of this field trip was to leave several items on the WINI, but to consider them of minor importance. It was felt that restoration would be insignificant given the scale and power of the Bradfield River.

In our professional judgment, there were some water quality impacts during and shortly after logging (Mehrkens, 1976), but presently there appears to be no measurable changes in water quality due to logging within the Bradfield River watershed. However, anadromous fish habitat has been degraded by the depletion of present and future sources of large woody debris. This large woody debris has limited impact on the stability of the main channel, but plays a relatively important roll in side channel stability and in the creation of pools in both the main river and the side channels for juvenile salmon rearing habitat. Large wood will not be available for recruitment to the main channel for at least 200 years. A thinning program to encourage conifer establishment and growth rates could shorten this to about 150 years.

GAIL JOHNEJACK
Forest Hydrologist

DICK AHO
Forest Fisheries Biologist

Bibliography

Bradfield River

Mehrkens, J., "Resource Impacts - Bradfield Timber Sale," USFS, 1976.

USFS, Environmental Analysis Report - East Bradfield Timber Sale, Tongass NF, 1977.

USFS, IDT Report and Recommendations - East Bradfield Timber Sale, Tongass NF, 1977.