

LEGISLATIVE FINANCE - HOUSE / SENATE FINANCE COMM. FILES 8879

HB 331 cont. 504

95

work order is of no further effect if it is not sustained by the hearing officer within the five-workday period. A stop work order may be sustained only upon the same grounds on which it was originally issued.

\* Sec. 19. AS 41.17.139 is amended to read:

Sec. 41.17.139. HEARING PROCEDURES. (a) Unless otherwise specified, proceedings under AS 41.17.131 - 41.17.139 are not subject to the Administrative Procedure Act (AS 44.62). A hearing under AS 41.17.136 or 41.17.138 [AS 41.17.131 - 41.17.139] shall be held before the state forester, a regional forester, or another employee of the division with similar qualifications acting as a hearing officer. A hearing on an appeal under AS 41.17.087 and a hearing under AS 41.17.082(b) shall be held before the commissioner or the commissioner's designee [ APPOINTED BY THE ATTORNEY GENERAL FROM AMONG MEMBERS OF THE ALASKA BAR ASSOCIATION WHO HAVE BEEN NOMINATED BY THE BOARD OF FORESTRY AND WHO ARE KNOWLEDGEABLE AND EXPERIENCED IN THE SUBJECT MATTER]. A person who has assisted in the preparation of the division's [STATE'S] case [OR WHO IS A STATE EMPLOYEE] is ineligible. Hearings are not limited by common law, statutory, or judicial rules of evidence; however, the hearing officer may admit only that evidence that [WHICH] appears to be reliable and trustworthy. All hearings shall be open to the public. Written or oral testimony may be submitted. A party to a hearing may make written or oral argument, secure the issuance of a subpoena under AS 44.62.430, offer testimony or other evidence, and cross-examine witnesses. The hearing officer shall endeavor, in conducting any hearing, to ensure that the respondent understands the proceedings and that the facts supporting the position of each party have been adequately presented. [HEARINGS SHALL BE HELD AS CLOSE AS PRACTICABLE TO THE LOCATION OF THE ALLEGED

1 VIOLATION. TESTIMONY GIVEN AT THE HEARING SHALL BE RECORDED.]

2 (b) If the respondent notifies the commissioner within five days  
3 before the hearing provided for in (a) of this section, the following  
4 rules and procedures apply to the hearing:

5 (1) the hearing shall be a nonadversary proceeding, with  
6 the hearing officer fully and impartially representing the interests  
7 of the state and the respondent;

8 (2) the hearing officer shall thoroughly investigate the  
9 facts and circumstances relating to the alleged violation, including  
10 taking testimony from appropriate persons, collecting and examining  
11 documents and other evidence, and performing other actions consistent  
12 with due process of law; and

13 (3) the hearing officer shall issue a decision in accor-  
14 dance with the applicable procedures of (a) of this section.

15 \* Sec. 20. AS 41.17.139 is amended by adding a new subsection to read:

16 (c) The hearing officer shall select the location of the hear-  
17 ing, giving consideration to the convenience of the parties and wit-  
18 nesses. The hearing officer may permit witnesses to testify through  
19 teleconferencing.

20 \* Sec. 21. AS 41.17.143 is repealed and reenacted to read:

21 Sec. 41.17.143. APPEALS AND JUDICIAL REVIEW. (a) A decision by  
22 a hearing officer under AS 41.17.136 or 41.17.138 or by the commis-  
23 sioner under AS 41.17.082(b), 41.17.087, or 41.17.131(a) constitutes  
24 final agency action that may be appealed to the superior court within  
25 30 days after it is issued. Judicial review shall be as provided in  
26 AS 44.62.560 and 44.62.570.

27 (b) An operator, forest landowner, or timber owner may request  
28 the commissioner to reconsider the decision of a hearing officer  
29 within 30 days after it is issued. Reconsideration is not a precondi-

1 cion of judicial review under (a) of this section. If reconsideration  
2 is requested, the final agency action for purposes of judicial review  
3 is a decision by the commissioner to affirm, modify, or reverse the  
4 hearing officer or to deny the request for reconsideration.

5 (c) The commissioner may stay or modify a directive or order  
6 pending administrative or judicial review. A stay or modification may  
7 not be appealed separately from an appeal of the substantive decision.

8 (d) A person, except the aggrieved forest landowner, timber  
9 owner, or operator, may not maintain an administrative or judicial ap-  
10 peal, or other action or proceeding of any kind, challenging a deci-  
11 sion or failure to act by the department with respect to the compli-  
12 ance of a timber operation on private forest land with this chapter or  
13 a regulation, standard, directive, or order issued under this chapter.  
14 This subsection does not prohibit the maintenance of an action

15 (1) for an alleged violation of a constitutional right; or

16 (2) against the department regarding a regulation, stan-  
17 dard, or systematic course of conduct that does not involve a chal-  
18 lenge to, or attempt to enjoin, stay, modify, or otherwise affect a  
19 timber operation on private forest land subject to this chapter.

20 \* Sec. 22. AS 41.17.210(a) is amended to read:

21 (a) The governor may propose to the legislature the establish-  
22 ment of state forests consisting primarily of commercially valuable  
23 forest land determined by the governor to be necessary for retention  
24 in state ownership for management under the principles of multiple use  
25 and sustained yield and consistent with AS 38.04.005. The proposal of  
26 the governor shall include a report and recommendations of the commis-  
27 sioner including

28 (1) a preliminary forest inventory;

29 (2) a summary of the testimony offered at public hearings

1 held on the management of the proposed state forest in communities  
2 proximately located to a proposed state forest;

3 (3) the findings of the commissioner on anticipated incom-  
4 patibilities of uses described in AS 38.05.112(c) [AS 41.17.230(e)]  
5 under AS 38.05.112(d) [AS 41.17.230(f)];

6 (4) written comments from appropriate state agencies on the  
7 compatibility of the uses described in AS 38.05.112(c) [AS 41.17.-  
8 230(e)] within the proposed state forest;

9 (5) an estimate of the cost of a full implementation of an  
10 operational level forest inventory and the management plan.

11 \* Sec. 23. AS 41.17.400(c) is amended to read:

12 (c) In addition to the uses described in AS 38.05.112(c)  
13 [AS 41.17.230(e)], the commissioner may establish transportation  
14 corridors within the Tanana Valley State Forest.

15 \* Sec. 24. AS 41.17.900(b) is repealed and reenacted to read:

16 (b) For federal land,

17 (1) the degree of resource protection may not be less than  
18 that established by this chapter for state land except that AS 41.17.-  
19 119 establishes the minimum riparian standard;

20 (2) a timber harvest activity subject to this chapter shall  
21 satisfy the requirement to be consistent to the maximum extent practi-  
22 cable with the Alaska coastal zone management program if the federal  
23 land management plans, guidelines, and standards applicable to that  
24 timber harvest activity provide no less resource protection than the  
25 standards that are established in this chapter provide for state land  
26 except that

27 (A) AS 41.17.119 establishes the minimum riparian  
28 standards; and

29 (B) this paragraph does not apply to a timber harvest

1 activity that requires a state or federal authorization under a  
2 provision of law other than this chapter.

3 \* Sec. 25. AS 41.17.900 is amended by adding new subsections to read:

4 (e) Subject to 16 U.S.C. 1456(f) (Sec. 307(f) of the Coastal  
5 Zone Management Act of 1972, P.L. 92-583) as to private land, this  
6 chapter and the regulations adopted under this chapter establish the  
7 forest management standards, policies, and review processes under  
8 AS 46.40 (Alaska Coastal Management Act). This subsection does not  
9 apply to timber harvest activity that requires a state or federal  
10 authorization under a provision of law other than this chapter.

11 (f) This chapter does not diminish the rights, privileges, or  
12 immunities of Alaska Natives or Alaska Native corporations with re-  
13 spect to land conveyed under 43 U.S.C. 1601 - 1628 (Alaska Native  
14 Claims Settlement Act), and does not alter or diminish the authority  
15 of the Department of Fish and Game under AS 16, of the Department of  
16 Environmental Conservation under AS 46, or of a state agency under  
17 other law.

18 \* Sec. 26. AS 41.17 is amended by adding a new section to read:

19 Sec. 41.17.910. WILDLIFE HABITAT ON PRIVATE LAND. (a) The  
20 Department of Fish and Game and the commissioner shall work coopera-  
21 tively with private forest landowners and timber owners to protect,  
22 maintain, and enhance wildlife habitat to the maximum extent practica-  
23 ble, consistent with the interests of the owners in the use of their  
24 timber resources.

25 (b) The Department of Fish and Game shall provide educational  
26 and technical assistance and extension services to owners of private  
27 forest land or timber to assist in identifying important wildlife  
28 habitat and to assist in designing voluntary management techniques  
29 that minimize adverse effects on wildlife habitat.

1 of a forest, and the theory and practice of controlling and managing  
2 forest establishment, composition, and growth;

3 (16) "state forest" means an area designated by the legis-  
4 lature and retained in state ownership in order to

5 (A) provide a base for sustained yield management of  
6 renewable resources; and

7 (B) permit a variety of beneficial uses;

8 (17) "sustained yield" means the achievement and maintenance  
9 in perpetuity of a high level annual or regular periodic output of the  
10 various renewable resources of forest land and water without signifi-  
11 cant impairment of the productivity of the land and water, but does  
12 not require that timber be harvested in a non-declining yield basis  
13 over a rotation period;

14 (18) "timber owner" means a person who owns timber on forest  
15 land or who has the rights to timber, but does not own the land it-  
16 self;

17 (19) "Type A water body" means an anadromous water body that  
18 is

19 (A) a stream or river of any size having an average  
20 gradient of eight percent or less, with banks held in place by  
21 vegetation, channels that are not incised, and a substrate com-  
22 posed of rubble, gravel, sand or silt;

23 (B) wetlands and lakes, including their outlets; and

24 (C) an estuarine area delimited by the presence of  
25 salt-tolerant vegetation;

26 (20) "Type B water body" means an anadromous water body that  
27 is a fish stream or river of any size having an average gradient of  
28 eight percent or less, a channel that is incised and contained by the  
29 geomorphology and not by vegetation, and a substrate that ranges from

1 rubble to bedrock; and

2 (21) "Type C water body" means a stream that is tributary to  
3 anadromous waters and that is incised greater than 23 degrees, has an  
4 average gradient of greater than eight percent, is narrower than 20  
5 feet between ordinary high water marks, has a substrate of rubble and  
6 bedrock, and is a mountain slope stream at the upper end of the water-  
7 shed.

8 \* Sec. 28. LEGISLATIVE REVIEW. The legislature acknowledges and recog-  
9 nizes that this Act is adopted on an interim basis because it involves a  
10 significant increase in agency responsibility, is based on many untested  
11 assumptions, and depends for its efficacy on many factors beyond the con-  
12 trol of the state. Therefore, it is the intent of the legislature that the  
13 operation of this Act and regulations adopted under this Act be fully  
14 reviewed and the Act amended as necessary after the second full field  
15 season ends in 1992. This period is intended to allow for further research  
16 and to gain experience implementing the Act and its regulations. It is the  
17 intent of the legislature that a representative group be convened for the  
18 review or that it be conducted by the Board of Forestry. It is the intent  
19 of the legislature that the review occur with full public input and parti-  
20 cipation. No later than January 1, 1993, the Board of Forestry, the De-  
21 partment of Natural Resources, the Department of Environmental Conserva-  
22 tion, and the Department of Fish and Game shall submit, along with the  
23 reports required by AS 41.17.047(d), any proposed amendments to this chap-  
24 ter. The legislature may hold hearings to consider these or other amend-  
25 ments and may take whatever action is required to accomplish the intent and  
26 purposes of this Act.

27 \* Sec. 29. INITIAL TERMS OF MEMBERS OF BOARD OF FORESTRY. The initial  
28 terms of the members of the Board of Forestry appointed under AS 41.17.041,  
29 as enacted by sec. 3 of this Act, are for two members, one year; for three

# **CORRECTION**

**THIS DOCUMENT  
HAS BEEN REPHOTOGRAPHED  
TO ASSURE LEGIBILITY**

1 rubble to bedrock; and

2 (21) "Type C water body" means a stream that is tributary to  
3 anadromous waters and that is incised greater than 28 degrees, has an  
4 average gradient of greater than eight percent, is narrower than 20  
5 feet between ordinary high water marks, has a substrate of rubble and  
6 bedrock, and is a mountain slope stream at the upper end of the water-  
7 shed.

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10 significant increase in agency responsibility, is based on many untested  
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26 purposes of this Act.

27 \* Sec. 29. INITIAL TERMS OF MEMBERS OF BOARD OF FORESTRY. The initial  
28 terms of the members of the Board of Forestry appointed under AS 41.17.041,  
29 as enacted by sec. 3 of this Act, are for two members, one year; for three

1 members, two years; and for three members, three years.

2 \* Sec. 30. INTERIM RIPARIAN PROTECTION FOR THE COASTAL FOREST. A  
3 notification for timber harvest activities within the coastal forest of  
4 spruce or hemlock filed under AS 41.17.090 before the effective date of  
5 this section shall be reviewed by the commissioner of natural resources to  
6 determine if the proposed operations provide protection that is substan-  
7 tially equivalent to the fish habitat protection that is provided by  
8 AS 41.17.116, as enacted by sec. 14 of this Act. If the commissioner  
9 determines that protection that is substantially equivalent to that provid-  
10 ed by AS 41.17.116 has been offered or if the forest landowner, timber  
11 owner, or operator complies with an alternate protection plan proposed by  
12 the commissioner, operations covered by the notification are not subject to  
13 AS 41.17.116. If the commissioner determines that the notification does  
14 not provide protection that is substantially equivalent to that provided by  
15 AS 41.17.116, the operator must either resubmit the notification in confor-  
16 mance with this standard or comply with AS 41.17.116. The failure by the  
17 commissioner to make a determination on a notification within 30 days from  
18 the effective date of this section constitutes a determination that the  
19 notification provides protection that is substantially equivalent to the  
20 fish habitat protection that is provided by AS 41.17.116.

21 \* Sec. 31. INTERIM RIPARIAN PROTECTION OUTSIDE THE COASTAL FOREST.  
22 Until regulations are adopted by the commissioner of natural resources  
23 under AS 41.17.116(b), as enacted by sec. 14 of this Act, timber harvest  
24 operations on forest land within 100 feet from the shore or bank of an  
25 anadromous or high value resident fish water body must be sited and de-  
26 signed primarily to protect fish habitat and water quality.

27 \* Sec. 32. AS 41.17.118, as enacted by sec. 14 of this Act, does not  
28 alter the terms of an existing contract or the outcome of litigation pend-  
29 ing on the effective date of this Act. An amendment to or renewal of an

1 existing state timber contract must be consistent with AS 38.05 and  
2 AS 41.17.

3 \* Sec. 33. AS 41.17.133, 41.17.135, 41.17.137, and 41.17.141 are re-  
4 pealed.

5 \* Sec. 34. AS 41.17.230(e) and 41.17.230(f) are repealed.

6 \* Sec. 35. AS 41.17.010(5), as amended in sec. 2 of this Act, takes  
7 effect immediately under AS 01.10.070(c).

8 \* Sec. 36. Sections 1, 3 - 4, 6 - 8, 10 - 11, 13 - 14, 22 - 23, 27,  
9 29 - 32, and 34 of this Act take effect immediately under AS 01.10.070(c).

10 \* Sec. 37. Except as provided in secs. 35 and 36 of this Act, this Act  
11 takes effect October 1, 1990.

# MEMORANDUM

No. 3  
CSHB 331(Res)  
HOUSE 3/30/90

DEPARTMENT OF FISH AND GAME

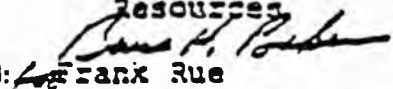
TO: Bob Loeffler  
Resource Allocation  
Section  
Division of Land and  
Water Management  
Department of Natural  
Resources

DATE: February 22, 1989

FILE NO.:

TELEPHONE NO.: 465-4105

SUBJECT: Forest Practices  
Funding

FROM:  Frank Rue  
Director  
Habitat Division  
Department of Fish and Game

At last week's Forest Practices Steering Committee meeting, we understood Jim Waldo to request that agencies estimate their additional funding needs for minimum effective implementation of a revised Forest Resources and Practices Act (FPA).

The following estimates are based on the assumptions that 1) an amended FPA or associated regulations will provide performance standards for activities in riparian management zones, 2) we will need to maintain a significantly greater field presence than we are now in order to effectively implement the standards, 3) we will need to spend significantly more time participating in your department's preparation of forest management plans for state lands, and 4) the level of timber harvest north of the Alaska Range does not increase in the immediate future.

## Additional Funding Requirement

### Sitka Office:

Habitat Biologist II (12 months)	48.4
Line 200	4.5
Line 300	4.3
Line 400	0.5

### Petersburg Office:

Habitat Biologist II (12 months)	48.4
Line 200	4.0
Line 300	4.3
Line 400	0.5

### Ketchikan Office:

Habitat Biologist II (12 months)	48.4
Line 200	4.5
Line 300	4.3
Line 400	0.5

### Douglas Regional Office:

Line 200	2.5
Line 300	2.0
Line 400	0.5

Subtotal 177.6

Bob Loeffler

<u>Anchorage Regional Office:</u>	
Habitat Biologist III (12 months)	55.0
Habitat Biologist II (24 months)	96.3
Line 200 (travel to Afognak, Cordova, Valdez, McGrath, Kodiak, Denai, and Mat-Su Valley)	16.0
Line 300 (Contractual for vessel and aircraft charters to reach logging areas for stream surveys and enforcement work)	30.0
Subtotal	<u>197.3</u>
TOTAL	<u>375.4</u>

Once again, these estimates reflect additional funding required for minimum effective implementation of an FPA. We assume that you will distribute this memorandum to steering committee members. If there are questions, please call either me or Bruce Baker (465-4105).

cc: Norman Cohen

STATE OF ALASKA  
1990 LEGISLATIVE SESSION

BILL VERSION: Corrected  
CS HB 331  
PUBLISH DATE: \_\_\_\_\_

FISCAL NOTE

REQUEST:

Revision Date: 4/17/90 Agency Affected: DEC  
Title: Forest Resources and Practices BRU: Environmental Quality  
Act \_\_\_\_\_  
Sponsor: Rules Committee Components: Environmental Quality  
Requestor: House Resources Committee

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96
PERSONAL SERVICES	164.4	164.4	164.4	164.4	164.4	164.4
TRAVEL	22.0	22.0	22.0	22.0	22.0	22.0
CONTRACTUAL	38.0	38.0	38.0	38.0	38.0	38.0
SUPPLIES	3.5	3.5	3.5	3.5	3.5	3.5
EQUIPMENT	15.1	15.1	15.1	15.1	15.1	15.1
LAND&STRUCTURES	0.0	0.0	0.0	0.0	0.0	0.0
GRANTS,CLAIMS	0.0	0.0	0.0	0.0	0.0	0.0
MISCELLANEOUS	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	243.0	243.0	243.0	243.0	243.0	243.0

CAPITAL						
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REVENUE						
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FUNDING: (Thousands of Dollars)

GENERAL FUND	243.0	243.0	243.0	243.0	243.0	243.0
FEDERAL FUNDS	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	243.0	243.0	243.0	243.0	243.0	243.0

POSITIONS:

FULL-TIME	3.5	3.5	3.5	3.5	3.5	3.5
PART-TIME	0.0	0.0	0.0	0.0	0.0	0.0
TEMPORARY	0.0	0.0	0.0	0.0	0.0	0.0

ANALYSIS: (Attach a separate page if necessary)

ANALYSIS ATTACHED

Prepared by: Dave Sturdevant  
Division: Environmental Quality

Phone: 465-2653  
Date: \_\_\_\_\_

Approved by Commissioner: A. D. Kyle  
Agency: Environmental Conservation

Date: 4/17/90

Distribution (by preparer) :  
Legislative Finance  
Legislative Sponsor  
Requestor  
Office of Management and Budget  
Impacted Agency(ies)

Adopted

The Department is responsible for water quality under State law and the federal Clean Water Act. The revised Forest Resources and Practices Act establishes the Department of Environmental Conservation as the lead agency for water quality and control of nonpoint source pollution in forest practices. The Forest Resources and Practices Act will establish the nonpoint source pollution control requirements under both State law and the Clean Water Act within the forest practices regulations. Major areas of involvement for the Department include:

- participation in development of Forest Practices regulations and best management practices, and approval of the regulations;
- development of a cooperative agreement among the Departments of Natural Resources, Fish and Game, and Environmental Conservation covering regulations, best management practices, permits, inspections, enforcement and training;
- development of an interagency "uniform enforcement policy;"
- review of forest plans and timber harvest contracts on State lands, and review of all plans of operation for timber harvest on private lands;
- inspection of timber harvest operations, provision of technical assistance, and enforcement activities; and
- development of cooperative efforts in water quality monitoring.

The Department presently has one FTE in Forest Practices for all of southeast Alaska, and .5 FTE for all of southcentral Alaska, both newly established in FY 90. To reasonably carry out its responsibilities under the act, the Department will require a minimum of 3.5 additional FTEs. Of these positions, .5 FTE would be added to the existing .5 FTE in southcentral Alaska. Two new positions would be established as field officers in southeast Alaska in addition to the one existing position. These three positions would be located in Ketchikan, Sitka and Juneau. One additional position would be established as the Forest Practices coordinator in the central office, Juneau. Additional contractual money (\$10.0) will be necessary with the Juneau position for support of field monitoring for water quality compliance.

<u>Position</u>	<u>100</u>	<u>200</u>	<u>300</u>	<u>400</u>	<u>500</u>	<u>Total</u>
Ecologist II	50.4	4.0	18.0	1.0	4.3	77.7
Env. Field Officer II	44.4	7.0	8.0	1.0	4.3	64.7
Env. Field Officer II	44.4	7.0	8.0	1.0	4.3	64.7
Ecologist II	25.2	4.0	4.0	0.5	2.2	35.9
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TOTALS	164.4	22.0	38.0	3.5	15.1	243.0

Position Title <b>Ecologist II</b>		No. of Positions <b>1</b>	Range/Step <b>18A</b>	Barg. Unit <b>GGU</b>
Time Status <b>Permanent FT</b>	Staff Months <b>12</b>	Location <b>Juneau</b>		Election District
Type of Expenditure		Justification:		
1	2	3		
Salary	<b>\$37,356</b>	<p><b>Timber harvest, roading and log transfer activities have increased dramatically in recent years on private lands, and are continuing on State and federal lands. Increased timber harvest activities bring with them increased potential for water quality impacts. The department has limited capacity to review timber harvest plans, to inspect field operations, to provide technical assistance, or to monitor water quality to ensure water quality standards are met. With passage of the revised Forest Resources and Practices Act, the Department will have an increased role in water quality protection under the Forest Practices program, including approval of the corresponding new Forest Practices regulations. This position is the central coordinator and interagency liaison for the Department's activities: revised regulations; Best Management Practices; water quality monitoring activities; application of water quality standards; uniform enforcement policy; technical training programs; cooperative agreements; and procedural matters. The position will participate in ongoing harvest activities, reviewing private plans of operation and State forest plans. The position also will serve as liaison with the U.S. Forest Service and other federal agencies, participating in similar activities to those described.</b></p>		
Benefits	<b>13,037</b>			
Premium Pay				
Other				
<b>Total Personal Services</b>		<b>\$50,393</b>		
Travel		<b>4,000</b>		
Contractual		<b>18,000</b>		
Commodities		<b>1,000</b>		
Equipment		<b>4,300</b>		
Other				
<b>Total Cost</b>		<b>\$77,693</b>		
Funding Source for Total Cost				
Federal Receipts	1002			
G. F. Match	1003			
General Fund	1004	<b>\$77,693</b>		
GF Program Receipts	1005			
Other				

**Request For  
New Position**

Agency Environmental Conservation  
 BRU Environmental Quality  
 Component EQ Projects

Page 1 of 1  
 Revised Date 2/6/90

**FY 91**

Position Title <b>Environmental Field Officer II</b>			No. of Positions <b>1</b>	Range/Step <b>16A</b>	Barg. Unit <b>GGU</b>
Time Status <b>Permanent FT</b>	Staff Months <b>12</b>		Location <b>Ketchikan</b>		Election District
Type of Expenditure			Amount		
1	2	3			
Salary	<b>\$32,424</b>				
Benefits	<b>11,929</b>				
Premium Pay					
Other					
Total Personal Services		<b>\$44,353</b>			
Travel		<b>7,000</b>			
Contractual		<b>8,000</b>			
Commodities		<b>1,000</b>			
Equipment		<b>4,300</b>			
Other					
Total Cost		<b>\$64,653</b>			
Funding Source for Total Cost					
Federal Receipts	1002				
G. F. Match	1003				
General Fund	1004	<b>\$64,653</b>			
GF Program Receipts	1005				
Other					
Justification					
<p>Timber harvest, roading and log transfer activities have increased dramatically in recent years on private lands, and are continuing on State and federal lands. Increased timber harvest activities bring increased potential for water quality impacts. The Department currently has limited capacity to review timber harvest plans, to inspect field operations, to provide technical assistance, or to monitor water quality to ensure water quality standards are met. With passage of the revised Forest Resources and Practices Act, the Department will have an increased role in monitoring and enforcement of Forest Practices. This position will be based in the Ketchikan District Office and will serve that area in Forest Practices matters. This field position, plus a similar new field position in Sitka will increase the field staff in the Southeast Region to 3.0 FTEs. The position will review and comment on plans of operation, State forest plans, and federal EISs and harvest plans; review permit applications for log transfer facilities and logging camp facilities; conduct field inspections and enforcement; and conduct water quality monitoring activities.</p>					

**Request For  
New Position**

Agency Environmental Conservation  
 BRU Environmental Quality  
 Component EQ Projects

Page 1 of 1  
 Revised Date 2/8/90

**FY 91**

Position Title <b>Environmental Field Officer II</b>		No. of Positions <b>1</b>	Range/Step <b>16A</b>	Barg. Unit <b>GGU</b>	
Time Status <b>Permanent FT</b>	Staff Months <b>12</b>	Location <b>Sitka</b>		Election District	
Type of Expenditure		Justification			
Amount		<p>Timber harvest, roading and log transfer activities have increased dramatically in recent years on private lands, and are continuing on State and federal lands. Increased timber harvest activities bring increased potential for water quality impacts. The Department currently has limited capacity to review timber harvest plans, to inspect field operations, to provide technical assistance, or to monitor water quality to ensure water quality standards are met. With passage of the revised Forest Resources and Practices Act, the Department will have an increased role in monitoring and enforcement of Forest Practices. This position will be based in the Sitka District Office and will serve that area in Forest Practices matters. This field position, plus a similar new field position in Ketchikan, will increase the field staff in the Southeast Region to 3.0 FTEs. The position will review and comment on plans of operation, State forest plans, and federal EISs and harvest plans; review permit applications for log transfer facilities and logging camp facilities; conduct field inspections and enforcement; and conduct water quality monitoring activities.</p>			
1	2				3
Salary	\$32,424				
Benefits	11,929				
Premium Pay					
Other					
Total Personal Services					\$44,353
Travel					7,000
Contractual					8,000
Commodities					1,000
Equipment					4,300
Other					
Total Cost					\$64,653
Funding Source for Total Cost					
Federal Receipts	1002				
G. F. Match	1003				
General Fund	1004	\$64,653			
GF Program Receipts	1005				
Other					

**Request For  
New Position**

Agency Environmental Conservation  
 BRU Environmental Quality  
 Component EQ Projects

Page 1 of 1  
 Revised Date 2/8/89

**FY 91**

Position Title <b>Ecologist II</b>		No. of Positions <b>1</b>	Range/Step <b>18A</b>	Barg. Unit <b>GGU</b>
Time Status <b>Permanent PT</b>	Staff Months <b>6</b>	Location <b>Anchorage</b>		Election District
Type of Expenditure		Amount		
1	2	3		
Salary	<b>\$18,678</b>			
Benefits	<b>6,519</b>			
Premium Pay				
Other				
Total Personal Services		<b>\$25,197</b>		
Travel		<b>4,000</b>		
Contractual		<b>4,000</b>		
Commodities		<b>500</b>		
Equipment		<b>2,200</b>		
Other				
Total Cost		<b>\$35,897</b>		
Funding Source for Total Cost				
Federal Receipts	1002			
G. F. Match	1003			
General Fund	1004	<b>\$35,897</b>		
GF Program Receipts	1005			
Other				
Justification				
<p><b>Timber harvest, roading and log transfer activities have increased dramatically in recent years on private lands, and are continuing on State and federal lands. Increased timber harvest activities bring increased potential for water quality impacts. The Department currently has limited capacity to review timber harvest plans, to inspect field operations, to provide technical assistance, or to monitor water quality to ensure water quality standards are met. With passage of the revised Forest Resources and Practices Act, the Department will have an increased role in monitoring and enforcement of Forest Practices. This field position, 0.5 FTE, will increase the existing 0.5 FTE in the Anchorage office to 1.0 FTE. This position will serve the entire southcentral region in Forest Practices matters. The position will review and comment on plans of operation, State forest plans, and federal EISs and harvest plans; review permit applications for log transfer facilities and logging camp facilities; conduct field inspections and enforcement; and conduct water quality monitoring activities.</b></p>				

**Request For  
New Position**

Agency Environmental Conservation  
 BRU Environmental Quality  
 Component EQ Projects

Page 1 of 1  
 Revised Date 2/8/90

**FY 91**

STATE OF ALASKA  
1990 LEGISLATIVE SESSION

BILL VERSION: CSHB 331(Res) No.5  
PUBLISH DATE: HOUSE 3/30/90

FISCAL NOTE

REQUEST:

Revision Date: 5/16/90  
Title: Forest Practices Act Revision

Agency Affected: Natural Resources  
BRU: Forest Management

Sponsor: \_\_\_\_\_  
Requestor: Governor

Components: Forest Management

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96
PERSONAL SERVICES	285.9	294.5	344.5	354.8	365.4	376.3
TRAVEL	45.0	45.0	53.7	57.7	57.7	59.0
CONTRACTUAL	32.0	32.0	47.1	47.1	47.1	49.0
SUPPLIES	21.1	21.1	22.3	22.3	22.3	24.0
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	437.7	392.6	467.6	481.9	492.5	508.3
CAPITAL						
REVENUE						

Adopted

FUNDING: (Thousands of Dollars)

GENERAL FUND	437.7	392.6	467.6	481.9	492.5	508.3
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME	6	6	7	7	7	7
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

See attached

Prepared by: George K. Hollett  
Division: Forestry

Phone: 762-2503  
Date: 5/16/90

Approved by Commissioner: [Signature]  
Agency: DNR

Date: 3/14/90

Distribution (by preparer):  
Legislative Finance  
Legislative Sponsor  
Requestor  
Office of Management and Budget  
Impacted Agency(ies)

Assumptions: The following list of assumptions have a direct effect on the required funding the first five years after passage of the bill:

1. Much public involvement will be needed in the development of regulations. Travel to areas around the state and public meetings will be necessary.
2. Increased field inspections will be necessary to see that standards are being met and riparian areas are left.
3. Training of state personnel in insect and disease activities will take place.
4. Notifications will continue to increase for the next two years while the markets are high.
5. Appeals of stop-work orders and directives will take place during the first few years as all parties learn the new requirements calling for more enforcement work.
6. Board of Forestry will become more active in their operations by having more meetings and requiring more time and effort by staff.
7. Higher demand by the public for review of notifications.
8. Higher coordination of inspections, review and enforcement activities will be required of state agencies.

DEPARTMENT OF NATURAL RESOURCES  
FOREST PRACTICESProgram Summary:

Due to low markets in 1986, the number of notifications received for operations on private lands declined and the division reduced the budget accordingly. Increased timber markets in 1988 has increase notifications by 173%. With no new funding available, the forest practice personnel staff months could not be increased to a level necessary to handle inspection requirements. In FY 1988 a 13% increase in inspections over FY 1987 was accomplished with the present division staff. However, in FY 1989 field inspection accomplishment decreased by 11% below FY 1988 because other duties and increased notifications demanded more office time.

The lack of travel dollars has seriously limited field inspection opportunities. A high level of inspection activity is important to not only ensure compliance with the Forest Practice Act, but to also allow identification of potential problems early enough to prevent violations. Due to the lack of adequate inspections, the character of forest practices administration has been forced away from land owner assistance and targeted toward enforcement.

Total funding needs of \$437,700 is detailed as follows:

Southeast Region - \$123,000

Add one full time Clerk Typist III at Ketchikan. This support staff will free up time now spent in the office by the Forest Practices Foresters doing administrative work and should allow for 30% more field time for necessary inspections. This will also allow the Ketchikan office to be open full time for five days per week.

Add one Natural Resource Manager I to be the Southeast Region Forest Practice Coordinator. This position will also be support forest practice work region-wide on an as needed basis and serve as the liaison between the field staff and other agency personnel.

Added travel funding will meet the necessary inspection schedule for the increased notifications.

Southcentral Region - \$149,600

Add one Forester II to the Kenai-Kodiak Area to work on the additional forest practice work that is occurring on the Kenai Peninsula. Notifications have increased from 4 in 1987 to 10 in 1989 with acres increasing from 3,287 to 41,935 during the period. Presently the only position available for the forest practice work is also responsible for all the timber sales on state land in the area. Because of this dual role neither area of responsibility has been accomplished. The new saw mill at Seward, heavy spruce bark beetle kill and large native ownerships on the Kenai Peninsula all point to increasing forest practice work for the next five years. We estimate notification acres will increase by some 58,000 acres in the next five years

Add one Natural Resource Manager I to regional staff. The senior Forest Practices Forester will handle notifications and inspections on the remainder of the Gulf of Alaska, Valdez-Copper River, Anchorage Mat-Su and Southwest areas. Duties will also include being the coordinator between regional field personnel and other agency employees working in forest practices. The regions forest practice work has increased from 9 notifications in 1987 to 20 in 1989 and acres have increased from 6,287 to 50,286 during the same period. We estimate that at least seven (7) new operations with some 91,000 acres will begin operations in the next five years.

Additional travel and contractual funds are also required to provide the support needed to do the field inspections.

Central Office - \$165,100

Add one Forest Engineer and one Natural Resource Manager II to the Staff. The engineer is badly needed to provide expertise in soil stability, logging systems and transportation evaluations. This position would also serve as an expert witness on technical matters. Further responsibilities include research proposal evaluation, support for divisional timber sales, and audit function for Forest Practice compliance on state timber sales.

The Natural Resource Manager II position would serve as a Section Chief to assure consistent direction in state-wide forest practices inspection and enforcement is achieved. This position would also handle data-base management including reforestation verification, forest practices statistics and public notice provisions as well as be available for temporary assignment around the state to assist in field evaluations during peak periods.

## FOREST PRACTICES

This position will also act as the Board of Forestry-Division of Forestry Coordinator. Meeting preparation, and gathering of research information are some of the duties that will be performed.

Development of training materials and classes for bringing operators and other agency personnel up to speed on the requirements of the FPA.

Additional travel and contractual funds are required to provide the support needed.

### Northern Region

Current markets and market projections indicate a continued increase of interest in both white spruce and hardwoods in the Interior of Alaska. With Native Corporate ownerships well along on completing inventories of timber resource developments will be forthcoming in the next few years. At least one Regional corporation is involved in negotiations for development as well as contracting for feasibility studies. Two village Corporations have active sales under contract.

The increasing thoughts of development of resources along with the increase in spruce bark beetle activity indicate that the Northern Region will become involved in forest practices in the next few years. One Forester II position would need to be added within three years to be in place to handle this increase. Total increased cost in year three would be \$95,000.

Position Title <b>Natural Resource Manager I</b>			No. of Positions <b>1</b>	Range/Step	Org. Unit <b>00</b>
Time Status <b>PTF</b>		Staff Months <b>12</b>	Location <b>Juneau</b>		Election District <b>4</b>
Justification					
<p>The new Forest Practice Act calls for more and better coordination between the State agencies. Field activities are handled by each agency's local personnel but region-wide coordination must take place at a higher level. The addition of one full time Natural Resource Manager I to the division's southeast region office will provide the needed forest practice coordinator. This position will also be able to fill in on forest practice work within the region on an as-needed basis, develop agency and operator training opportunities, meet with the Board of Forestry and act as a hearing officer. This position will be responsible for working on development of the new regulations and handling all of the public process of review within the Southeast Region.</p>					
Type of Expenditure			Amount		
1	2	3			
Salary* 3113 x 12	37.356	//////			
Benefits* 1099 x 12	13.108	//////			
Premium Pay (Included in Above)	//////	//////			
Other	//////	//////			
Total Personal Services	//////	50.5			
Travel		5.0			
Contractual		7.5			
Commodities		2.0			
Equipment		10.3			
Other					
Total Cost		75.3			
Funding Source for Total Cost					
Federal Receipts	1002				
G.F. Match	1003				
General Fund	1004	75.3			
Program Receipts/GF	1005				
I-A Receipts	1007				
CIP Receipts	1061				
Other					
* Personal Services Salary and Benefits Costs are from PACS.					

REQUEST FOR  
NEW POSITION

AGENCY Natural Resources  
 ORG Forest Management  
 COMPONENT Forest Management

Page \_\_\_\_\_  
 Revised Date \_\_\_\_\_

FY 91

Position Title <b>Natural Resource Manager II</b>		No. of Positions <b>I</b>	Range/Step <b>20/A</b>	Barg. Unit <b>GGU</b>
Time Status <b>PFT</b>	Staff Months <b>12</b>	Location <b>Anchorage</b>		Election District <b>7</b>
Type of Expenditure		Justification		
1	2	Amount		
Salary <sup>m</sup> 3590 x 12	43,080	//////////		
Benefits <sup>m</sup> 1217 x 12	14,604	//////////		
Premium Pay (Included in Above)	//////////	//////////		
Other	//////////	//////////		
Total Personal Services	//////////	57.7		
Travel		10.0		
Contractual		6.5		
Commodities		4.1		
Equipment		9.4		
Other				
Total Cost		87.7		
Funding Source for Total Cost				
Federal Receipts	1002			
G.F. Match	1003			
General Fund	1004	87.7		
Program Receipts/GF	1005			
I-A Receipts	1007			
CIP Receipts	1061			
Other				
* Personal Services Salary and Benefits Costs are from PACS.				

**Justification**  
An additional full time Natural Resource Manager II position would serve as a Section Chief to assure consistent direction in state-wide Forest Practices inspections and enforcement is achieved. The position would also handle data base management including reforestation verification, forest practices statistics and public notice provisions as well as be available for temporary assignment around the state to assist in field inspections during peak periods.

This position will also serve as staff to the Board of Forestry. Meeting preparation, taking of minutes and research information gathering are some of the duties that will be performed.

Coordination of training opportunities and materials will assure that the same subjects are handled in a similar manner. Working with the Insect and Disease Forester and the U.S. Forest Service training classes both in the office and field will be developed to bring the divisions field staff to a knowledgeable level to handle that portion of the Forest Practice Act.

REQUEST FOR  
NEW POSITION

AGENCY Natural Resources  
ORU Forest Management  
COMPONENT Forest Management

Page \_\_\_\_\_  
Revised Date \_\_\_\_\_

FY 91

Position Title <b>Natural Resource Manager I</b>			No. of Positions <b>1</b>	Range/Step <b>18/A</b>	Barg. Unit <b>CC</b>
Time Status <b>PFT</b>	Staff Months <b>12</b>		Location <b>Anchorage</b>		Election District <b>7</b>
Type of Expenditure			Justification		
1	2	3	<p>The new Forest Practice Act calls for more and better coordination between the State agencies. Field activities are handled by each agency's local personnel but region-wide coordination must take place at a higher level. The addition of one full time Natural Resource Manager I to the divisions southcentral region office will provide the needed forest practice coordinator. This position will also handle notifications and inspections in the Valdez-Copper River, Hat-Su and Southwest areas. The position will develop training opportunities for agency and operator personnel, meet with the Board of Forestry and act as a hearing officer.</p> <p>This position will be responsible for working on development of the new regulations and handling all of the public process of review within the Southcentral Region.</p>		
Salary* 3113 x 12	37,356	//////			
Benefits* 1099 x 12	13,188	//////			
Premium Pay (Included in Above)	//////	//////			
Other	//////	//////			
<b>Total Personal Services</b>	//////	<b>50.5</b>			
Travel		10.0			
Contractual		5.5			
Commodities		2.0			
Equipment		9.4			
Other					
<b>Total Cost</b>		<b>77.4</b>			
Funding Source for Total Cost					
Federal Receipts	1872				
G.F. Patch	1873				
General Fund	1034		77.4		
Program Receipts/GF	1005				
I-A Receipts	1007				
CIP Receipts	1061				
Other					
* Personal Services Salary and Benefits Costs are from P/CS.					

REQUEST FOR  
 NEW POSITION

AGENCY Natural Resources  
 DRU Forest Management  
 COMPONENT Forest Management

Page \_\_\_\_\_  
 Revised Date \_\_\_\_\_

FY 91

Position Title <b>Forester II</b>		Us. of Positions <b>1</b>	Range/Step <b>16/A</b>	Barq. Unit <b>GG</b>
Time Status <b>part</b>	Staff Months <b>12</b>	Location <b>Soldotna</b>		Election District <b>5</b>
Justification				
Type of Expenditure		Amount		
1		3		
Salary* 2895 x 12		34,740		
Benefits* 1049 x 12		12,568		
Premium Pay (Included in Above)		//////////		
Other		//////////		
Total Personal Services		47.3		
Travel		10.0		
Contractual		3.5		
Commodities		2.0		
Equipment		9.4		
Other				
Total Cost		72.2		
Funding Source for Total Cost				
Federal Receipts 1002				
G.I. Match 1003				
General Fund 1004		72.2		
Program Receipts/GF 1005				
I-A Receipts 1007				
CIP Receipts 1061				
Other				
* Personal Services Salary and Benefits Costs are from PACS.				

The Kenai Peninsula has seen a large increase in Native Land timber operations which have resulted in forest practice notifications. The opening of the Chugach Native Cooperation sawmill at Seward in 1990 will provide the needed log outlet that has been missing to see a major increase of logging activity.

The addition of a full time Forester II in the Kenai-Kodiak Area office will provide the necessary position to meet the increase and not take the only personnel available for conducting state timber sales away from their job. The spruce beetle kill facing the Kenai Peninsula is demanding all the present forester's time.

With the support staff in place this position will be able to spend full time on forest practice work.

REQUEST FOR  
NEW POSITION

AGENCY Natural Resources  
 BRW Forest Management  
 COMMISSION Forest Management

Page \_\_\_\_\_  
 Revised Date \_\_\_\_\_

FY 91

Position Title Logging Engineer		No. of Positions 1	Range/Step 18/A	Barg. Unit GG
Time Status FTI	Staff Months 12	Location Anchorage		Election District 7
Type of Expenditure		Justification		
1	2	3		
Salary* 3113 x 12	37,356	The addition of one full time engineer position will provide expertise in soil stability, logging systems and transportation evaluations. Serve as an expert witness on technical matters. Further responsibilities include research proposal evaluation, and audit function for Forest Practice compliance on state timber sales. New regulations are required to be developed covering areas of road construction, location, maintenance and removal; landing location and construction; drainage construction; material sources and spoil disposal sites; log transfer, sort yards and storage facilities. All of these require the knowledge of an engineer to see that the public is being protected. The division presently does not have an engineer position and this addition will provide the needed expertise to adequately review the above actions as they come in on notifications. This position will be available for statewide work.		
Benefits* 1099 x 12	13,188			
Premium Pay (Included in Above)				
Other				
Total Personal Services	50.5			
Travel	10.0			
Contractual	4.5			
Commodities	3.0			
Equipment	9.4			
Other				
Total Cost	77.4			
Funding Source for Total Cost				
Federal Receipts	F002			
G.F. Match	F003			
General Fund	1004	77.4		
Program Receipts/GF	1005			
I-A Receipts	1007			
CIP Receipts	1061			
Other				
* Personal Services Salary and Benefits Costs are from PACS.				

REQUEST FOR  
NEW POSITION

AGENCY Natural Resources  
 BRU Forest Management  
 COM/WRE/III Forest Management

Page \_\_\_\_\_  
 Revised Date \_\_\_\_\_

FY 91

Position Title <b>Clerk Typist III</b>			No. of Positions <b>1</b>	Range/Step <b>B/A</b>	Barg. Unit <b>G6</b>
Time Status <b>PFT</b>	Staff Months <b>12</b>	Location <b>Ketchikan</b>		Election District <b>1</b>	
Justification					
<p>The Ketchikan Area Office had an increase of 27% in forest practice notifications between 1987 and 1988. During 1989 some decrease was noted but the acreage size increased as a result around notification. Without support help in the office the Forest Practice Forester has been required to spend more and more time in doing administrative work. Total number of inspections during 1989 dropped. The addition of a full time Clerk Typist III will allow for about 30% more field time for the forester. With increased notifications and required inspections more field time is needed. More time in the field will help prevent damage from taking place and better cooperation between the operator and the State. Additional office help will also allow for the office to be open full time for the five days per week.</p>					
Type of Expenditure			Amount		
1			2		3
Salary* 1678 x 12			20,136		////////////////
Benefits* 771 x 12			9,252		////////////////
Premium Pay (included in Above)			////////////////		////////////////
Other			////////////////		////////////////
Initial Personal Services			////////////////		29.4
Travel			////////////////		////////////////
Contractual			////////////////		4.5
Commodities			////////////////		8.0
Equipment			////////////////		5.8
Other			////////////////		////////////////
Total Cost			////////////////		47.7
Funding Source for Total Cost					
Federal Receipts 1002			////////////////		////////////////
G.F. Match 1003			////////////////		47.7
General Fund 1004			////////////////		////////////////
Program Receipts/GF 1005			////////////////		////////////////
I-A Receipts 1007			////////////////		////////////////
CIP Receipts 1061			////////////////		////////////////
Other			////////////////		////////////////
* Personal Services Salary and Benefits Costs are from PACS.					

REQUEST FOR  
NEW POSITION

AGENCY Natural Resources  
 DIV Forest Management  
 COMPONENT Forest Management

Page \_\_\_\_\_  
 Revised Date \_\_\_\_\_

FY 91

STEVE COWPER  
GOVERNOR



STATE OF ALASKA  
OFFICE OF THE GOVERNOR  
JUNEAU

cc  
HB 331

May 3, 1989

The Honorable Sam Cotten  
Speaker of the House  
Alaska State Legislature  
P.O. Box V  
Juneau, AK 99811

Dear Mr. Speaker:

Under the authority of art. III, sec. 18, of the Alaska Constitution, I am transmitting a bill relating to forest resources and practices and to the management of forest land. This bill would make substantial changes in the Alaska Forest Practices Act to meet the needs of a growing and viable timber industry in Alaska while ensuring the protection of public forest resources, including fish habitat and water quality.

Last year, I directed the state resource agencies to conduct a public review of the Forest Practices Act and to make recommendations for improvement in the Act, its regulations, and implementation. In order to facilitate an objective and balanced review, a steering committee was formed including representatives of timber land owners and operators, state agencies, and users of public resources that are affected by forest practices. Because I felt that it would be possible to review the state's forest practices program and meet both the needs of the state's growing timber industry while achieving appropriate protection for public forest resources, the committee attempted to operate by unanimous consent. This approach ensured that the committee's decisions respected all interests.

The bill provides for a streamside management program that strikes a fair balance between the needs of the timber industry and those of fish habitat and water quality protection. It provides for significant timber harvest while providing appropriate protection for public resources. Riparian standards for timber harvest differ depending upon land ownership, stream type, and region. For example, on private land in southeast Alaska, streamside areas of up to 30 meters will be managed for the protection of water quality and fish habitat, although timber operators will not be required to leave more than five percent of their timber volume for this purpose. In this way, strong resource protection exists without requiring any one private owner to

shoulder an undue portion of the resource protection costs.

The bill provides an improved process for efficient and detailed review of timber harvest plans. This efficient review allows the timber industry to quickly respond to changing timber markets, but ensures that harvest operations conform to forest practice standards and regulations. To coordinate overlapping agency jurisdiction, the provisions of the bill and the regulations will serve, with the approval of the commissioner of environmental conservation, as the forest practice standards for the Department of Environmental Conservation's program to control nonpoint source pollution. Except for activities subject to AS 16.05.840 or AS 16.05.870, the regulations will also serve as the upland fish habitat protection for timber harvest activities.

A system of coordination between state agencies with enforcement authority over timber operations is established to ensure consistent and non-duplicative action. The Department of Natural Resources would have additional enforcement authority, including the authority to issue stop-work orders, to impose civil and criminal penalties, and to issue remedial orders to correct damage resulting from the violation of forest practices standards. The administrative enforcement process is simplified by providing for hearings to be conducted by an employee of the Department of Natural Resources with appeals to the commissioner.

An additional planning process would be required under the bill before state timber sales. The additional planning will improve public review and will require the state to plan timber harvests that fully integrate resource protection into the sale design. The department would also be required to annually prepare a five-year schedule of proposed timber sales for state land. Except for small sales and emergencies such as salvage, a proposed sale would have to appear on the two five-year schedules preceding the sale. The five-year schedule will inform the public and the timber industry of the state's long-term plans.

Finally, the Board of Forestry would be restructured to a smaller, more balanced membership. This balanced board would provide a forum for representatives of affected interests to discuss and resolve forestry issues before they become divisive. The board has the authority to provide advice concerning research and implementation of the Forest Practices Act and regulations. The board would include a member or representative of a fishing organization, a Native corporation, an environmental organization, and a forest industry trade association as well as a professional fish or wildlife biologist and a professional forester.

Drafts of this bill have been discussed extensively by the members of the Forest Practices Act Steering Committee and with other representatives of the timber industry, environ-

mental groups, and fishing organizations. The bill is the product of discussion and compromise to meet the major concerns of all those affected by its provisions.

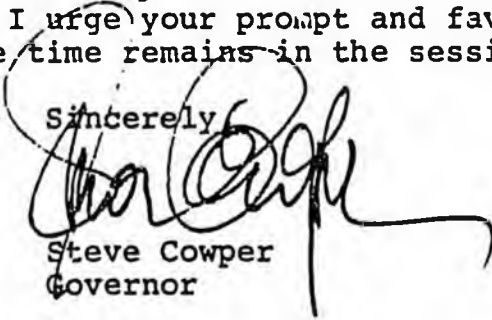
The bill I am transmitting achieves near consensus; it has the support of all but one of the steering committee members. It is supported by representatives of Native corporations, boroughs, fishing groups, and environmental groups but not by the Alaska Loggers Association (ALA).

The ALA objects to a provision of the bill that the association believes would affect harvest on federal land through the Alaska Coastal Management Program. AS 41.17.900(b), in the current law, requires federal harvest to be consistent with the Alaska Forest Practices Act. The bill proposes to amend the law to ensure that the general level of resource protection must be consistent, but that the federal harvest need not follow the specific provisions of that Act. The ALA still fears that this amendment might disrupt an orderly federal planning process that provides sufficient protection.

I realize that it is late in the session for introducing a bill, however, the committee's long and difficult work was not completed until early this week. I felt that it was important to allow the committee to conclude its work and was therefore unable to introduce this bill earlier in the session.

Because of the importance of the bill, and the extraordinary and fragile achievement of reaching near-total consensus on these controversial issues, I urge your prompt and favorable consideration in what little time remains in the session.

Sincerely



Steve Cowper  
Governor



# Alaska State Legislature

## HOUSE RESOURCES COMMITTEE

P.O. Box V  
State Capitol  
Juneau, Alaska 99811  
(907) 465-3715

To: House Resources Committee

From: Johanna Munson  
Staff, House Resources Committee

Date: March 29, 1990

Re: HB 331. Forest Practices Act Sectional Analysis

Sec. 1. 38.05.112, Forest Land Use Plans, 5 Year Schedule  
This section requires additional planning prior to state timber sales. The division of forestry must prepare a site-specific plan before all state timber sales that fully integrates appropriate resource protection measures into the sale design. This site-specific design would also improve public review of individual timber sales.

This section requires the department to annually prepare a five-year timber schedule of the proposed state timber sales. Except for small and emergency sales such as salvage, a proposed sale would be required to be on the five-year schedules for two years preceding the sale.

Sec. 2. 41.17.010, Declaration of Intent

This section coordinates overlapping agency jurisdiction regulating timber harvest activities. Regulations of the amended forest practices act will serve as timber harvest standards for non-point source pollution, with DEC as lead agency. Regulations of the amended forest practices act provide the fish and habitat protection standards except for those activities subject to AS 16.06.840 and 16.05.870.

Sec. 3 41.17.041, Board of Forestry

This section restructures and reduces the current board from a 14 member to a 9 member board. Drops U.S. Forest Service member, Society of American Foresters member, and adds a professional forester not employed by government, except the university. Drops the Alaska Logger Assn. member. The new board would consist of:

- 1) a representative of a statewide commercial fishermen's organization;
- 2) a representative of a Native corporation established under ANCSA;
- 3) a member of an environmental organization;
- 4) a representative of a forest industry trade association;
- 5) a professional fish or wildlife biologist not employed in that capacity, by government, except the university;
- 6) a professional forester not employed in that capacity by government, except the university;

- 7) a representative of a statewide mining organization;
- 8) a member of a statewide recreational organization; and
- 9) the state forester, who serves ex officio and without a vote.

Sec. 4 41.17.047, Duties of the Board

This section expands the existing duties to include providing a forum for resolving forestry issues; coordinating an annual survey of research needs; monitoring the implementation, taking public testimony statewide, reviewing and making recommendations for changes to the forest practices act. Current duties include commenting on regulations. It is intended to be a consensus decision making body.

Sec. 5 41.17.055 (d)

Establishes DEC as lead agency for water quality and control of nonpoint source pollution and the regulations adopted become the state program for control of nonpoint source pollution, subject to approval of the DEC commissioner.

Sec. 6 41.17.060 (b), State, municipal, and private forest land standards. Subsection (2) is a technical change to clarify existing law regarding environmentally sensitive areas in non-point pollution control measures. Subsection (5) Adds to the list of standards established for forest practices to include: significant adverse effects of soil erosion and mass wasting on water quality and fish habitat.

Sec. 7 41.17.060 (c) Additional standards for state and municipal forest land: Under (6) Changes the standard for scenic quality by requiring that allowance shall be made for scenic quality in or adjacent to areas of substantial importance to the tourism and recreation industry, and under (7) Adds new language that an allowance shall be made for important fish and wildlife habitat.

Sec. 8 41.17.070 (b) Changes the reporting requirement to the legislature from 2 years to annually. Requires the department to record decisions made under the act for use by the public and state agencies in assessing the effectiveness of implementation of the act.

Section 9 41.17.080

Expands the list of regulations the commissioner may adopt regarding forest practices to include all phases of timber harvest and to make appropriate distinctions between public and private land; and directs the commissioner to only adopt those regulations that yield significant benefits to public resources.

Section 10 41.17.082, Control of Infestations and Disease.

Adds a new section to require the commissioner to take action to control forest infestation and disease outbreaks that threaten forest resources. It establishes the procedures for remedy of creating such conditions to include requirements for removing the conditions at the owner's expense. It establishes authority, under non-compliance, for the commissioner to enter onto the land and

take necessary action. And authority to undertake surveys to obtain data on regional insect infestation.

Section 11 41.17.087, Variation from requirements.

Adds a new section that allows a landowner or operator variation from requirements or regulations under this chapter on a site-specific basis. The commissioner shall adopt regulations that specify the standards under which a variation will be granted for harvesting timber within the riparian area.

Sec. 12 41.17.090 Notification of Plans to Harvest Timber.

This section provides an improved process for efficient and detailed review of timber harvest plans which allows the timber industry to respond to changing timber markets but ensures that harvest operations conform to forest practices standards and regulations. It allows forest landowners and operators to file a voluntary plan of operations for long term plans for timber harvesting in order to give the public an opportunity to review plans and establishes that unless a stop work order is issued, the operations may begin under the plan after 30 days, or within the time period upon notice that the review is completed. It allows for a onetime 10 day extension for the agency review.

Subsection (f) establishes a field inspection when necessary to determine consistency of the detailed plan of operations upon notification to the operator and that the scope shall be limited to the minimum area necessary to determine compliance with this chapter. The operator shall inform the state forester when the site is available for inspection. If not conducted within 21 days, or unless otherwise agreed upon by the operator and state forester, operations may begin. Subsection (g) allows for modifications to accommodate comments without requiring the operator to resubmit the plan.

Sec. 13 41.17.098, Inter-agency Coordination.

Since there is an overlapping agency expertise for issues concerning timber harvest, this section provides coordination mechanisms for DNR, F&G, and DEC. It retains DNR as the lead agency but ensures that the appropriate agency expertise from F&G and DEC is included for issues that directly are within their expertise. Adds a new section which requires the DNR commissioner to coordinate with other agencies that have jurisdiction over activities subject to forest practices and affected coastal districts.

Sec. 14 41.17.115, Intent for Riparian Areas.

Private Lands:

Along Type A water body, 66 feet no cut zone

Along Type B water body, 100 foot conditional harvest zone, in compliance with slope stability standards

Along Type C water body, 50 foot conditional harvest in compliance with slope stability standards

State Land: North of the Alaska Range:

On anadromous or high value resident fish water body:

100 foot no cut zone, unless the division determines adequate protection for the fish habitat remains.

State Land: South of the Alaska Range:

On anadromous or high value resident fish water body:

100 foot no cut zone  
100 - 300 foot conditional harvest zone, consistent with the maintenance of important fish and wildlife habitat.

Other Public Land: North of the Alaska Range::

On anadromous or high value resident fish water body:

100 foot no cut zone, unless the commissioner determines that adequate protection remains for fish habitat.

Other Public Land: South of the Alaska Range:

100 foot no cut zone subject to variance procedures.

Sec. 16:, 41.17.131, Penalties

This section streamlines existing procedures for levying civil penalties of up to \$10,000 per violation and adds additional authority to allow the state to issue citations for a class A misdemeanor for violations of this act.

Sec. 17, Directives

This section provides that DNR may issue enforceable, written orders directing that timber operations that violate or would violate this act or its regulations be changed. These directives may be written as part of the DNR office or field review of private timber operations as provided under Section 12 of the act. Directives may be appealed and operations may continue pending the outcome of the appeal.

Sec. 18, Stop Work Orders

This section provides that DNR may issue Stop Work orders if the forester determines a violation of the act or its regulation is occurring, or is likely to occur, and that significant harm to public resources will result if work is not halted. A stop-work order may be written as part of the DNR office or field review of private timber operations as provided under Section 12 of this act. Stop-work orders may be appealed, but the operation must stop pending the outcome of the appeal.

Section 19, and 20 Hearing Procedures. This section amends the hearing process by deleting the requirement that hearings be held before a lawyer appointed by the attorney general. Under the new process hearing officers may be an employee of the department. The new process should be less costly for the department and more efficient for both the landowner and the department.

Sec. 21, Appeals and Judicial Review

This section provides appeal procedures from DNR department decisions. It also provides that parties other than an aggrieved forest landowner, timber owner, or operator may not receive judicial review of individual timber harvest decisions. Third parties may, however, seek judicial review of regulations or of a systematic error in DNR decisions.

Sec. 22, 41.17.210 (a), and Sec. 23, 41.17.400 (c):

Technical amendments which cite title 38. Sections 41.17.230 (e) and (f) were moved under AS 38.05.112 (c). These sections were more appropriate to public lands.

Sec. 24 41.17.900 (b) Federal lands standard.

This section would require that the degree of resource protection may not be less than that established for state lands, and be consistent with the Alaska Coastal Management Program, except that minimum riparian standards are established under 41.17.119 (other public lands). Activities that require state or federal authorization under other laws are subject to the routine Alaska Coastal Management Program (ACMP) standards and procedures.

Sec. 25 41.17.900 (e) Private lands standard.

This section establishes that the amended forest practices act will serve as the Alaska Coastal Management Program for harvest activities on private lands.

Sec. 26

This section provides that state agencies and private landowners will establish cooperative, voluntary processes for protection of wildlife habitat on private land.

Sec. 27

This section provides definitions.

Sec. 28

This section provides for legislative review.

Sec. 29

This section provides for the initial terms of members of the Board of Forestry.

Sec. 30

This section provides for interim riparian protection for the coastal forest. Notification filed prior to the effective date of this section shall be reviewed by the commissioner to determine if the proposed operations provide protection that is substantially equivalent to the fish habitat protection that is provided under 41.17.116 (private lands). If not, the operator shall comply. If the operator has not received notification within 30 days, the plan is considered substantially equivalent to the fish habitat protection under 41.17.116.

Sec. 31

Provides interim protection for riparian protection outside the coastal forest. Timber harvest within 100 feet from the shore or bank of an anadromous or high value resident fish water body must be sited and designed to protect fish habitat and water quality.

Sec. 32

Provides that existing contracts or pending litigation are not altered by the act.

Sec. 33

Repeals 41.17.133, 41.17.135, 41.17.137, and 41.17.141.

Sec. 34. Repeals 41.17.230 (e) and 41.17.230 (f) as those sections were moved to Title 38.

Sec. 35. 41.17.010 (5) becomes effective immediately.

Sec. 36. Provides an immediate effective date for those sections affected.

Sec. 37. Provides for an immediate effective date for all other sections.



# Alaska State Legislature

## HOUSE RESOURCES COMMITTEE

P.O. Box V  
State Capitol  
Juneau, Alaska 99811  
(907) 465-3715

To: House Resources Committee members  
From: Johanna Munson  
Staff, House Resources Committee  
Re: CS HB 331 (Res)  
Date: March 29, 1990

Changes to the bill:

Throughout the bill meters are converted to feet.

### Section 2

(6) technical change, replace [SET OUT] with establish.

### Section 3

Increased the board membership to add two members:

a representative of a statewide mining organization

a representative of a statewide recreational organization

The quorum changed from five to seven.

### Section 11

AS 41.17.087

(a) technical [CONSISTENT WITH AS 41.17.098]

(b) The commissioner shall adopt regulations that specify the standards under which a variation will be granted for harvesting timber within the riparian area of

(1) a low gradient Type A water body with a width of five feet or less; and

(2) other appropriate water body types.

(c) A determination by the state forester under (a) of this section and regulations by the commissioner under (b) of this section shall give due deference under AS 41.17.098.

### Section 13 Interagency Coordination.

(f) If a disagreement referenced in (e) exists an officer of an agency may require reevaluation of the disagreement at a higher level within the agencies, or by the Governor, if necessary, before a decision is rendered by the commissioner.

## Section 14

### Riparian Standards for Private Land

Previously buffers were designed on a formula which requires a 50 foot no cut zone, allowed 50 % of the next 50 foot zone to be harvested with a maximum buffer volume not exceeding 5% of the commercial timber in the watershed. The formula was dropped and a 66 foot buffer was established as follows:

1) along a Type A water body, harvest of timber may not be undertaken within 66 feet of the water body

### Riparian Standards for State Land:

(c) In the absence of a site-specific determination by the Department of Fish and Game, the commissioner shall presume for planning purposes that a stream is anadromous if it is connected to anadromous waters that are without Department of Fish and Game documentation of a physical blockage and has a stream gradient of 8 percent or less.

Riparian standards for other public land:

On other public land, harvest of timber may not occur

(1) within 100 feet from the shore or bank of an anadromous or high value resident fish water body that is located south of the Alaska Range;

(2) within 100 feet immediately adjacent to an anadromous or high value resident fish water body north of the Alaska Range unless the commissioner determines that adequate protection remains for the fish habitat.

## Section 16

Technical correction. New language reads:

(c) Each day that a violation described in this section occurs is a separate violation. The sentence is rewritten to be consistent with other penalty provisions in current law.

## Section 21

Technical change:

(d) [NO] A person, except the aggrieved forest landowner, timber owner, or operator, may [NOT] not maintain an administrative or judicial appeal, or other action or proceeding of any kind, challenging a decision or failure to act by the department with respect to the compliance of a timber operation on private forest land with this chapter or a regulation, standard, directive or order issued under this chapter.

Section 22 Technical change.

This section is added to cross reference language moved to Title 38.

a) The governor may propose to the legislature the establishment of state forests consisting primarily of commercially valuable forest land determined by the governor to be necessary for retention in state ownership for management under the principles of multiple use and sustained yield and consistent with AS 38.04.005. The proposal of the governor shall include a report and recommendations of the commissioner including

- (1) a preliminary forest inventory;
- (2) a summary of the testimony offered at public hearings held on the management of the proposed state forest in communities proximately located to a proposed state forest;
- (3) the findings of the commissioner on anticipated incompatibilities of uses described in AS 38.05.112 (c) [AS 41.17.230 (e)] under AS 38.05.112 (d) [AS 41.17.230 (f)];
- (4) written comments from appropriate state agencies on the compatibility of the uses described in AS 38.05.112 (d) [AS 41.17.230(e)] within the proposed state forest;
- (5) an estimate of the cost of a full implementation of an operational level forest inventory and the management plan.

Section 23

This section is added to cross reference language moved to Title 38.

(c) In addition to the uses described in AS 38.05.112 (c) [AS 41.17.230(e)], the commissioner may establish transportation corridors within the Tanana Valley State Forest.

Section 24

(b) For federal land,

- (1) the degree of resource protection may not be less than that established by this chapter for state land except that AS 41.17.119 establishes the minimum riparian standard;
- (2) a timber harvest activity subject to this chapter shall satisfy the requirement to be consistent to the maximum extent practicable with the Alaska coastal zone management program if the federal land management plans, guidelines, and standards applicable to that timber harvest activity provide no less resource protection than the standards that are established in this chapter provide for state land except that
  - (A) AS 41.17.119 establishes the minimum riparian standards;
  - and
  - (B) this paragraph does not apply to a timber harvest activity that requires a state or federal authorization under a provision of law other than this chapter.

Section 25

(e) Subject to 16 U.S.C. 1456 (f) (Sec. 307 (f) of the Coastal Zone Management Act of 1972, P.L. 92-583) as to private land, this chapter and the regulations adopted under this chapter establish the forest management standards, policies, and review processes under AS 46.40 (Alaska Coastal Management Act). This subsection does not apply to timber harvest activity that requires a state or federal authorization under a provision of law other than this chapter.

Section 27 Definitions:

Definitions were added:

(1) "Anadromous" waterbody means that portion of any freshwater body, or estuarine area, that:

(A) is catalogued under AS 16.05.870 as important for anadromous fish; or

(b) is not catalogued under AS 16.05.870 as important for anadromous fish but has been determined by the Department of Fish and Game to contain or exhibit evidence of anadromous fish in which event the anadromous portion of the stream or waterway extends up to the first point of physical blockage;

(7) "high value resident fish" means resident fish populations that are used for recreational, personal use, commercial, or subsistence purposes;

Section 28 The dates were changed to add one year to reflect a two year review which was originally intended.

Section 30 Interim Riparian Protection for the Coastal Forest.

This is a new section to provide for interim riparian protection.

Section 35

Originally the bill had an effective date of January 1, 1990.

Under the CS, under section 2, AS 41.17.010 (5) has an immediate effective date.

Section 36

Sections 1, 3 -4, 6 -8, 10 -11, 13 -14, 22 -23, 27, 29 -32, and 34 take effect immediately .

Section 37

And the CS provides that except for those sections listed in Sec. 35 and Sec. 36, the bill takes effect October 1, 1990.

Testimony of Robert G. Loisel  
For The Forest Alliance  
House Resources Committee Hearing  
HB 331  
March 15, 1990  
Juneau, Alaska

The Forest Alliance is a broadly constituted organization of forest land owners, manufacturers, loggers and others having commercial and professional interests in the proper management and development of forest lands. The members of the Alliance include all of the major private timber owners in the state of Alaska. The Alliance was formed in late 1989, and has undertaken the special mission of bringing the broad support of the timber industry to the Forest Practices Act, Senate Bill 317 and House Bill 331.

At the beginning of the legislative session, the Forest Practices Act had the general support of the Forest Alliance and its members. We believed that there were only a few points of disagreement between the timber industry and the other interested groups, and that these differences were not insurmountable. As we testified on February 27, a proposal from the United Fishermen of Alaska had been made that very day, and we believed that the proposal could form the basis for agreement on the terms of the Forest Practices Act.

As a result of hard work on the part of the members of the Alliance, the other interested groups, the state agencies, and particularly our moderator, Diane Mayer, we believe that agreement

has been reached upon the terms of a bill that enjoys the support of the Forest Alliance, as well as all of the other interested parties.

This bill incorporates a number of carefully drawn provisions reflecting compromise on a number of issues of great importance to the interested parties. In our view, it can establish a new framework for environmentally sound development of Alaska's forested lands. We urge you to adopt this bill, and the amendments agreed by the interested parties, without significant change.

As a result of the management prescriptions embodied in the act, the members of the Alliance will contribute valuable resources, in the form of merchantable timber left standing and in the form of increased operating costs, to the protection of public resources. The Alliance has agreed to a provision of the act that makes the new riparian standards or their substantial equivalent, effective upon passage of the act, in order that these new protective measures be implemented as soon as possible. In fact, many Alliance members are already voluntarily providing buffer zones and a number of major land owners have put strict buffer provisions in their timber sale agreements.

Wise development and protection of forested lands will require the commitment of significant state resources to develop final regulations implementing the Forest Practices Act and to make available the expertise of the state's foresters, biologists, soil scientists and water quality specialists. In that regard, the members of the Forest Alliance believe that adequate funding of the act, as proposed by the state agencies, is essential. We ask that

you give special consideration to these fiscal requirements and that you provide the funding necessary to carry out the purposes of the act.

Having stated the support of the Alliance for the act, I want to turn to three of the provisions of the bill for special comment.

Proposed AS 41.17.116(1), as set out in the proposed amendment, would impose a 66-foot no-harvest zone along virtually all anadromous fish streams that flow through private lands. The members of the Alliance have accepted this requirement on the understanding that appropriate relief from this strict prescription will be afforded under the variations provision, proposed AS 41.17.087. The proposed new subsection (B), we believe, will require the commissioner to adopt regulations providing for the more or less routine agreement to variations in the riparian no-harvest requirement in certain cases. These cases are those where measures other than the full 66-foot no-harvest zone would provide for effective protection of fish habitat. We also expect that variances will be granted to permit such things as hanging logging rigging in the buffer zones or the cutting of a few trees for narrow yarding corridors to permit logs to be brought through the zone, as long as they are suspended and do no damage to the zone. This technique permits road building to be minimized, a result that all parties find desirable. And clearly, the road construction across the buffer zones will be permitted as long as the disruption to the zone is minimized, particularly by making the crossings as perpendicular to the zone as possible.

Proposed AS 41.17.119 changes the riparian standard for other public land from essentially a 100 foot conditional harvest zone to a 100 foot no-cut zone. This is the one issue that the working group was not able to reach agreement on. The representative of the Mat-Su Borough, an Alliance member, will be asking for support for more local control on this issue than is provided for in the bill. We are confident that you will be able to find an equitable solution to this one remaining issue.

We note that Section 27 of the bill continues in effect a provision that dictates the degree of resource protection on federal lands. We question the effectiveness under the federal constitution of any state law that attempts to regulate federal lands, except in a manner allowed by federal law, such as the Coastal Zone Management Act. The provisions of proposed AS 41.17.900(b) (1), as currently written, would not, we believe, pass constitutional scrutiny. Alliance members whose activities may be affected by this provision will likely challenge its constitutionality if it is ever applied to regulate directly timber harvest on federal lands.

In conclusion, let me again state that the Forest Alliance supports SB 317/HB 331 with the amendments being proposed. We ask that you adopt the bill without significant further amendment.

I would be happy at this time to respond to any questions you may have.



TESTIMONY OF ROBERT W. LOESCHER  
BEFORE THE HOUSE FINANCE COMMITTEE  
REGARDING CSHB 331

MY NAME IS ROBERT W. LOESCHER AND I AM SEALASKA CORPORATION'S EXECUTIVE VICE PRESIDENT OF RESOURCE MANAGEMENT. FOR THE PAST EIGHTEEN MONTHS, SEALASKA HAS BEEN EXTENSIVELY INVOLVED IN, AND A STRONG SUPPORTER OF, THE CONSENSUS PROCESS FOR REVISING OUR STATE'S FOREST PRACTICES ACT. AS A RESULT OF THE DEDICATED EFFORT OF EVERY PARTICIPANT IN THE FOREST PRACTICES STEERING COMMITTEE, YOU HAVE BEFORE YOU LEGISLATION THAT HAS BEEN AGREED TO BY A WIDE RANGE OF FOREST USERS.

THE LEGISLATION IS NOT ONLY CONSENSUS LEGISLATION, IT IS GOOD LEGISLATION. IT STRIKES A FAIR BALANCE BETWEEN THE COMPETING INTERESTS AFFECTED BY THE BILL. THE RIPARIAN PROTECTION MEASURES IN THE BILL, FOR EXAMPLE, PROVIDE ADEQUATE PROTECTION FOR FISHERIES RESOURCES. AT THE SAME TIME, THE PROVISIONS ARE SUFFICIENTLY FLEXIBLE SO AS TO ENSURE THAT THE BILL'S BUFFER ZONE REQUIREMENTS -- REQUIREMENTS THAT WILL RESULT IN SUBSTANTIAL COSTS TO INDUSTRY -- CAN BE TAILORED TO SITE SPECIFIC CONDITIONS. TO THIS END, THE

BILL PROVIDES THAT THE DEPARTMENT OF NATURAL RESOURCES, IN CONSULTATION WITH THE DEPARTMENT OF FISH AND GAME, WILL GRANT VARIANCES FROM THE LEGISLATION'S RIPARIAN REQUIREMENTS IN THOSE CASES WHERE THE COST OF LEAVING RIPARIAN TIMBER WILL NOT YIELD CORRESPONDING BENEFITS TO FISHERIES RESOURCES.

THE BALANCE STRUCK IN THE LEGISLATION, HOWEVER, CANNOT BE ACHIEVED UNLESS BOTH DNR AND ADF&G ARE GIVEN SUFFICIENT FIELD POSITIONS TO CONDUCT THE INSPECTIONS NECESSARY TO DETERMINE WHETHER THE RIPARIAN PROTECTION REQUIREMENTS SHOULD BE MODIFIED IN INDIVIDUAL CASES. THE PURPOSE OF THIS BILL IS TO TAKE FOREST PRACTICES' DECISION MAKING OUT OF THE OFFICE, AND INTO THE FIELD. THE FISCAL NOTE BEFORE YOU REPRESENTS THE MINIMUM COMMITMENT OF RESOURCES NECESSARY TO ALLOW DNR AND ADF&G TO PROPERLY TAILOR THE BILL'S RIPARIAN REQUIREMENTS TO ACTUAL FISHERIES NEEDS.

SEALASKA RECOGNIZES, OF COURSE, THE SERIOUSNESS OF ANY NEW PROGRAM EXPENDITURES IN THESE DAYS OF DWINDLING STATE REVENUES. HOWEVER, THE COST TO THE STATE OF INADEQUATELY FUNDING THIS LEGISLATION IS LIKELY TO BE SIGNIFICANTLY GREATER. IF, FOR BUDGETARY REASONS, DNR AND ADF&G ARE FORCED TO MAKE CRITICAL DECISIONS FROM A DISTANT BUREAUCRACY, THE TIMBER AND FISHING INDUSTRIES WILL BOTH SUFFER. LACKING THE ABILITY TO CONDUCT ADEQUATE FIELD INSPECTIONS WILL LIKELY RESULT IN BOTH:

1. LOST REVENUE, AND LOST JOBS IN THE TIMBER INDUSTRY AS A RESULT OF THE EXCESSIVE RETENTION OF HIGH VALUE TIMBER WITHOUT ANY CORRESPONDING ENVIRONMENTAL BENEFITS; AND

2. IMPAIRMENT OF FISHERIES RESOURCES BECAUSE OF THE AGENCY'S INABILITY TO ADDRESS THE PARTICULARIZED NEEDS OF SPECIFIC FISH HABITATS.

IN OTHER JURISDICTIONS, FOREST PRACTICES IN GENERAL, AND BUFFER ZONES IN PARTICULAR, HAVE BEEN THE SUBJECT OF HEATED CONTROVERSY. CONSIDERABLE PUBLIC RESOURCES HAVE BEEN SQUANDERED IN THE ARGUMENT ITSELF, AND A WIDE RANGE OF FOREST VALUES HAVE BEEN COMPROMISED WHILE THE DEBATE CONTINUES. IN ALASKA, WE HAVE THE OPPORTUNITY TO ACHIEVE PEACE IN THE WOODS, AND OPTIMIZE THE LONG TERM ECONOMIC VALUE OF ALL THE RESOURCES OF THE FOREST. FOR THOSE BENEFITS, THE FISCAL NOTE ATTACHED TO THIS LEGISLATION IS A RELATIVELY SMALL PRICE TO PAY.

ON BEHALF OF SEALASKA, THANK YOU FOR THE PROMPT CONSIDERATION THAT I KNOW THIS COMMITTEE WILL GIVE TO THE LEGISLATION.

**MATANUSKA-SUSITNA BOROUGH**

**Resolution Serial No. 90-027 AM**

**A RESOLUTION OF THE ASSEMBLY OF THE MATANUSKA-SUSITNA BOROUGH  
SUPPORTING THE DEREGULATION OF SOLID WASTE COLLECTION AND DISPOSAL.**

WHEREAS, the collection and disposal of municipal solid waste is a traditional police power function exercised to promote the public health, safety and welfare; and

WHEREAS, Alaska statutes currently require municipalities wishing to engage in solid waste collection and disposal to obtain a Certificate of Public Convenience and Necessity from the Alaska Public Utilities Commission (APUC); and

WHEREAS, the Alaska Public Utilities Commission has issued confusing orders regarding the regulatory scheme for solid waste collection and disposal; and

WHEREAS, the APUC statutes and its regulatory scheme for solid waste collection and disposal place an onerous burden on municipalities since it requires them to obtain special permission and to face legal challenges when attempting to implement the traditional police power function of solid waste collection and disposal; and

WHEREAS, SB 298 deregulates solid waste collection and disposal thereby eliminating the requirement that the Alaska Public Utilities Commission oversee municipal solid waste collection disposal; and

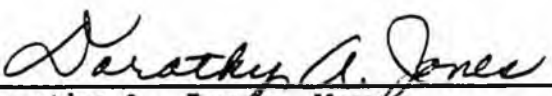
WHEREAS, SB 298 repeals a subsection of Title 29 which requires municipalities to purchase all or a portion of a Certificate of Public Convenience and Necessity of a utility

hauler if such certificate is affected by the municipality refuse collection and disposal services.

NOW, THEREFORE, BE IT RESOLVED that the Assembly of the Matanuska-Susitna Borough supports the passage of legislation deregulating solid waste collection and disposal and repealing the onerous provisions of Title 29.

BE IT FURTHER RESOLVED that copies of this resolution be forwarded to Senator Eliason, Chairman of the State Labor and Commerce Committee; Representative Larson, Co-chairman of the Finance Committee; Representative Donley, Chairman of the House Labor and Commerce Committee; Senators Binkley, Fischer, Kerttula and Szymanski; and Representatives Menard, Kubina, Navarre, Swackhammer, Wallis and Zawacki; and all other members of the Alaska Legislature, and the Governor of the state of Alaska.

PASSED AND APPROVED by the Assembly of the Matanuska-Susitna Borough this 6 day of March, 1990.

  
\_\_\_\_\_  
Dorothy A. Jones, Mayor

ATTEST:

  
\_\_\_\_\_  
Linda Dahl, Borough Clerk

(SEAL)

be attached 5/21/90 K RCH

MATANUSKA-SUSITNA BOROUGH

ASSEMBLY RESOLUTION SERIAL NUMBER 90-037

"A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY RECOMMENDING CHANGES TO THE PROPOSED BUFFER WIDTH STANDARDS WITHIN THE STATE FOREST PRACTICES ACT AS REVISED BY SENATE BILL 317 AND HOUSE BILL 331."

WHEREAS, Senate Bill 317 and House Bill 331 propose amendments to the State Forest Practices Act, and

WHEREAS, said amendments propose to establish a 300 foot buffer including a 100 foot no-cut zone along each side of streams around waterbodies on State land south of the Alaska Range, and

WHEREAS, said amendments will discriminate between municipalities north of the Alaska range and municipalities south of the Alaska range; and

WHEREAS, lands granted to the Matanuska-Susitna Borough under the Municipal Entitlement Program were granted for specific revenue-generating purposes and will be adversely affected by the proposed buffer width standards; and

WHEREAS, the Borough has planning and zoning powers which it has used to protect riparian zones; and

WHEREAS, the State and Borough planning processes can establish management zones larger than the minimum where local conditions require, and

WHEREAS, there is no biological justification for a 300 foot buffer zone and no ability for biologist to manage vegetation within a no-cut zone, and

NOW, THEREFORE, BE IT RESOLVED that the Assembly of the Matanuska-Susitna Borough recommends that the management standard adopted for "Other Public Lands" be a 100 foot conditional harvest zone; and

BE IT FURTHER RESOLVED that should a 100 foot conditional harvest zone not be adopted for "Other Public Lands" south of the Alaska Range that a 66 foot no timber harvest area along the shores or banks of any anadromous or high value resident fish waterbody be considered.

PASSED AND APPROVED by the Assembly of the Matanuska-Susitna Borough this 21 day of MARCH, 1990.

ATTEST:

Linda Dahl  
Linda Dahl  
Borough Clerk

Dorothy A. Jones  
Dorothy A. Jones  
Mayor  
Matanuska-Susitna Borough

(SEAL)

# STATE OF ALASKA

## DEPARTMENT OF FISH AND GAME

### DIVISION OF HABITAT

STEVE CLAWPER, GOVERNOR

BOX 3-2000  
JUNEAU, ALASKA 99802  
PHONE: (907) 465-4106

March 15, 1990

Mr. John L. Sturgeon, President  
Koncor Forest Products Co.  
3501 Denali, Suite 202  
Anchorage, AK 99503

Dear John,

You and others in the Timber Alliance have asked that I clarify this department's position on variations from the riparian standard on private lands for Type A, low-gradient streams with a width of five feet or less that also have low value for fish. At the working group meeting last week, I said that we have a lower level of concern for small, low-gradient streams with low fish values. However, many small, low-gradient streams provide important rearing habitat, especially for coho salmon.

Given the above understanding and the fact that the regulations on this subject are yet to be written, what I suggest here should be viewed as conceptual. It should, however, give you a better idea of the types of criteria I think will be important to capture in the regulations.

ADF&G will be most likely to agree to variations for Type A, low-gradient streams less than five feet wide with low fish values if the following criteria are met.

The proposed method of logging does not present a high risk of soil disturbance and stream sedimentation;

Bank and stream channel stability can be assured;

Sufficient trees within the 20 meter buffer are left standing and alive so there is a future source of large woody debris, and;

Trees proposed for harvest are either not likely to contribute wood to the stream or they are not important for maintaining natural stream flow or temperature.

As I said, we will need to develop these concepts further in the regulations and then see how they work in the field.

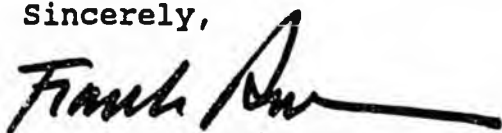
The timber industry has also asked for clarification on whether roads can cross buffers and rigging for cable logging systems can be hung from trees in buffers. There is no question that roads

March 15, 1990

will be allowed to cross buffers. Our main concern will be to have them cross as perpendicular to the buffer as is practical. Hanging rigging from trees in a buffer and any associated clearing is an issue that may come up if buffers create operational constraints. I see no problem hanging rigging in a buffer if no trees are cut or killed and damage is minimal. Where trees need to be cut, I think the intent of 41.17.115 is to address the issue in the regulations and the variation process.

I look forward to working with you and other members of the Alliance in getting the new act passed and the regulations implementing it adopted.

Sincerely,

A handwritten signature in cursive script, appearing to read "Frank Rue", with a long horizontal flourish extending to the right.

Frank Rue, Director  
Habitat Division

cc: Members of the FPA Working Group  
Representative Curt Menard, Co-chairman,  
House Resources Committee  
Senator Bettye Fahrenkamp, Chairman,  
Senate Resources Committee

City of Tenakee Springs

RESOLUTION 90-12

In the Council  
March 22, 1990

Introduced by  
Robert Pegues

A RESOLUTION FOR THE CITY OF TENAKEE SPRINGS, ALASKA  
SUPPORTING CHANGES IN ALASKA STATUTES TO PROVIDE  
MINIMUM 100 FT BUFFERS ALONG ANADROMOUS STREAMS

- WHEREAS, the fisheries resource of Southeast Alaska is dependent largely upon the quality of our streams and lakes; and
- WHEREAS, these waters constitute the habitat of the resource which is the life-blood of the commercial fisheries industry, and produce also the stock for the sports and subsistence fisheries; and
- WHEREAS, numerous studies have demonstrated that timber harvest and roading operations affect, often negatively, fisheries habitat; and
- WHEREAS, factors associated with logging practices which can affect the habitat of anadromous and resident fish populations include large organic debris, channel stability, stream temperature, nutrient content, stream flow and sediment; interrelated factors whose total accumulated effects often have the greatest impact; and
- WHEREAS, the 1979 Forest Practices Act does not provide minimum enforceable standards to safeguard the integrity of this critical environment during both planning for logging activities and operation of road building; then
- THEREFORE BE IT RESOLVED by the common council of the City of Tenakee Springs, Alaska to urge the Alaska State Legislature to adopt changes in the statute to provide minimum 100 foot buffer zones on each side of all anadromous streams and their tributaries, and that buffers should consist of the existing, natural undisturbed forest.

ADOPTED 4 YES, 3 ABSENT THIS 22ND DAY OF MARCH 1990

*Robert P. Wagner*

Robert P. Wagner  
City Council President  
ex officio MAYOR

ATTEST:

*Janice J. Eagle*  
Janice J. Eagle  
City Clerk

STATEMENT OF  
DR. JAMES BROOKS  
DEPUTY REGIONAL DIRECTOR, ALASKA REGION  
NATIONAL MARINE FISHERIES SERVICE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
U.S. DEPARTMENT OF COMMERCE

BEFORE THE  
SUBCOMMITTEE ON PUBLIC LANDS, NATIONAL PARKS AND FORESTS  
COMMITTEE ON ENERGY AND NATURAL RESOURCES

UNITED STATES SENATE

February 26, 1990

Mr. Chairman and Members of the Subcommittee:

I am Dr. James W. Brooks, Deputy Director of the Alaska Region of the National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA). I appreciate the opportunity to appear before this Subcommittee on behalf of the Department of Commerce to discuss the provisions of H.R. 987 relating to fisheries protection and buffer zones.

The Department of Commerce/NOAA has primary Federal responsibility for the conservation, management, and development of marine living resources and shares Federal responsibility for the conservation and management of anadromous fish and the protection of certain marine mammals and endangered species under numerous Federal laws. For this reason, the Department is vitally concerned about the habitats that support these resources since the well-being of these resources and the fishing industry depends upon healthy and productive habitats.

NOAA has been involved with research on the effects of timber harvest on the Tongass National Forest since the mid-1950's. Our research staff has studied the effects of timber harvest on anadromous fish streams in the Tongass National Forest and is recognized for their expertise on logging and riparian issues. They have published extensively and have authored over 20 scientific publications which apply directly to this issue. Our habitat management staff has worked closely with the issue through evaluation of numerous environmental studies, participation on interdisciplinary teams drafting guidance documents, and through planning processes such as the Tongass Land Management Plan.

Anadromous fish streams on the Tongass National Forest support all five species of Pacific salmon (pink, chum, coho, sockeye, and chinook). The commercial harvest of salmon in southeast Alaska was valued at \$128 million (ex-vessel value) for 1989. According to the U.S. Forest Service, ninety percent of those fish came from stream habitat within the Tongass National Forest. Recreational fishing also contributes a substantial amount to the economy of southeast Alaska. Recreational fisheries in Juneau alone amount to about \$15 million annually. Subsistence fisheries for salmon in southeast Alaska amount to an additional \$2.5 to \$6.0 million annually. Reasonable and prudent timber harvest practices are extremely important to sustaining these vital fisheries.

In 1976, the NMFS Alaska Region issued a policy statement calling for mandatory buffer zones of riparian vegetation along all salmon streams. Extensive research on buffer zones and salmonid habitat requirements resulted in a revision of the NMFS Policy in May 1988. This revision, which was based on a greater understanding of the importance of buffer zones, specifies a minimum no-harvest protective buffer zone along all streams in Alaska that are important to anadromous fish.

It states:

"In order to maintain optimum production of anadromous salmonids the NMFS policy is to advocate the protection of riparian habitat through the retention of buffer zones along all anadromous fish streams and their tributaries in Alaska. NMFS will seek to ensure that a minimum buffer zone width of 30 meters (100 feet) be maintained on each side of the stream, and should consist of the natural/existing undisturbed forest. This policy addresses only the minimum buffer zone width. In some cases a wider zone is necessary to protect fisheries resources. Additional research is needed from which more site-specific prescriptions can be developed."

The buffer width recommendation is based on scientific evidence compiled from research conducted in Alaska under the auspices of the Alaska Working Group on Cooperative Forestry/Fisheries Research which is comprised of State, Federal, and private entities and from the extensive research conducted in the last 10-15 years throughout the Pacific Northwest. Scientists and managers agree that the natural undisturbed riparian vegetation adjacent to streams is a critical and integral component of fish habitat. Salmonid habitat depends on riparian vegetation in the old-growth forest to provide large woody debris (LWD), shade and

cover, temperature moderation, streambank erosion protection, and to maintain water quality. LWD is the single most important component responsible for forming the majority of habitat (e.g., pools, undercut banks, instream cover, stable spawning beds, channel morphology, etc.) critical to the production of salmonids in the Pacific Northwest and Alaska. Research in Alaska has shown that nearly all (99%) of the LWD in streams comes from trees growing within 30 meters (100 feet) of the streambank. Nearly 1/2 of the LWD was from trees that had stood on the lower bank (less than 1 meter away), and 95% was from trees within 20 meters of the stream. The distance to LWD sources, however, differ between stream channel types. The quantity of LWD in these pristine streams is high and is directly correlated with the abundance of salmonid habitat. This stream habitat sustains optimum egg-to-fry survival, provides nursery areas for juveniles, serves as overwintering refuge, and yields smolts (outmigrating juvenile salmon) which ultimately generate the adult salmon returns from the ocean.

Because the natural depletion rate of LWD resulting from decay, fragmentation, stream export, and other events is relatively high (1-3 percent per year), a continuous supply of wood from the riparian zone is needed to offset the natural loss and maintain salmonid habitat. If these streams are logged down to the streambank without leaving any buffer to replenish the natural loss of LWD, then we predict that the level of LWD will be reduced by at least 70 percent in 90 years. The abundance of

rearing salmonids would likewise be reduced over a similar time. Recovery of LWD to the original pre-logging level from the regeneration of second-growth trees next to the stream would take about 250 years. Stream productivity would also be reduced during the period of regeneration and canopy closure. It is our opinion that, as a consequence, habitat and salmonid abundance would be significantly and irreparably damaged over this period of logging and recovery.

The riparian sources of LWD on tributary streams (streams used by only resident fish or those important for water quality) upstream of anadromous streams must also be protected because these streams contribute LWD and influence water quality in important downstream habitats. Buffer zones on these streams maintain the integrity of side slopes, streambanks, and stream channels and thus reduce the threat of landslides and debris torrents which can cause excessive downstream sedimentation. In essence, old growth riparian vegetation controls and maintains the natural integrity of a stream's characteristics critical to salmonid production.

Research has shown that clearcutting to the streambank without retaining an adequate zone of riparian vegetation adversely affects fish habitat, which in turn affects fish production on both a short- and long-term basis. Short-term (1-20 years) degradation of riparian habitat can result from increased sedimentation, altered temperature and streamflow regimes, and

reduced quantity of LWD. . Long-term degradation of habitat (20-200 years) can result from closure of the second-growth canopy, reduced input of LWD by the second-growth trees, changes in stream channel morphology, and chronic sedimentation from streambank erosion, landslides, and roads.

The NMFS policy advocates the use of a minimum 30-meter buffer on each side of all salmon streams and their tributaries as a recommended method of curtailing both short-term and long-term detrimental impacts on fish habitat from timber harvest. Land managers should recognize that the minimum 30-meter zone of riparian vegetation adjacent to salmon streams and tributaries represents the "out-of-stream" habitat required to protect and maintain "in-stream" habitat at optimum levels. NMFS established the 30-meter minimum because buffers less than 30 meters will not adequately maintain fish habitat. Buffers wider than 30 meters may be needed in some situations to protect the "minimum" from particular hazards such as blowdown, braided stream channels, or landslides.

The NMFS Policy of protecting the riparian habitat of all anadromous streams and their tributaries by retaining a minimum 30-meter no-harvest buffer zone applies to all Class I, most Class II, and a few Class III streams in southeast Alaska. These categories are defined as follows:

Class I streams include any natural freshwater body of water (including lakes and ponds) containing anadromous fish or eggs or high value resident sport fish or with habitat having reasonable enhancement opportunities for anadromous fish.

Class II includes streams, tributaries, and ponds with resident fish of limited sport value generally occurring in steep gradients or upstream of migration barriers.

Class III streams are tributaries which do not have fish populations but have potential water quality influence on downstream habitat.

Class II streams are of great importance because they maintain water quality and supply LWD for downstream habitat in Class I streams. Class III streams which can significantly influence water quality on downstream Class I and II streams because of their size, or have high risk for side-slope and/or streambank failure, may require the protection of a full buffer zone.

We do not intend the Policy to apply to Class III tributaries which are either ephemeral (seasonal) or intermittent or have a gradient generally greater than 8 percent. In other words, the Policy does not apply to high gradient tributaries or storm drainages which do not have salmonids or do not have continuous flow. Also, it is not necessary to require buffer zones on Class II and III streams which do not flow into a Class I stream because they do not provide habitat for anadromous fish. These streams only require harvest according to best management practices to maintain water quality standards. The high gradient and storm channels which comprise the majority of Class III streams account for the greatest amount of acreage in a watershed.

In summary, research has demonstrated the importance of the riparian zone as fish habitat and that timber harvest within 30 meters of the streambank in this zone can cause long-term damage to salmonid habitat and production. The NMFS therefore, advocates retention of a minimum 30-meter no-harvest buffer zone along both sides of all anadromous fish (Class I) streams, most resident fish (Class II) streams, and a few significant water quality influence (Class III) streams in the forest of southeast Alaska. We are prepared also to assist in defining those Class II and III streams where buffer zones would be appropriate.

The NOAA policy would provide reliable protection of fish habitat during and after timber harvest. It would also set a bottom line that will facilitate decision making. The policy is relatively simple to apply. Protection of important anadromous streams would be far less compromised by lack of expertise, inadequate data, personnel or budget limitations, or competing interests. The minimum buffer standard would provide planners with an advance knowledge of harvest limitations. It would also provide an enforceable standard that lends itself to monitoring. The ease with which this standard can be implemented, monitored, and enforced should encourage compliance by managers and industry.

We do not view the timber retained in a buffer as "lost" from timber production, but rather, as timber required for fish habitat in the true sense of multiple-use. Commercial, recreational, and subsistence fisheries share the forest as a

common base for their existence. Thus, we believe retaining a small but critical portion of the forest for production of fish is the basic precept of wise use and progressive stewardship of the land.

Mr. Chairman, this completes my prepared statement. I will be glad to answer any questions.



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
P.O. Box 21668  
Juneau, Alaska 99802-1668

NATIONAL MARINE FISHERIES SERVICE, ALASKA REGION  
POLICY  
FOR RIPARIAN HABITAT PROTECTION IN ALASKA  
1988

### INTRODUCTION

National Marine Fisheries Service (NMFS) issued a policy statement in 1976 on the "Protection of Fisheries Resources During Logging Operations in Alaska". This policy called for a mandatory buffer zone of riparian vegetation along both banks of all salmon streams; buffer width was to be based on resource values, topography, wind-firmness, and stream size. Some management activities (e.g., selective harvesting) could be allowed within the prescribed buffer zone. The policy was issued because of the importance of anadromous salmonids in Alaska's economy and because of continuous degradation of fisheries habitat by logging activities. New information and experience suggests that our policy be revised. What follows is our revised statement of policy and the supporting background information.

### THE POLICY

In order to maintain optimum production of anadromous salmonids the NMFS policy is to advocate the protection of riparian habitat through the retention of buffer zones along all anadromous fish streams and their tributaries in Alaska. NMFS will seek to ensure that a minimum buffer zone width of 30 meters (100 feet) be maintained on each side of the stream, and should consist of the natural/existing undisturbed forest. This policy addresses only the minimum buffer zone width. In some cases a wider zone is necessary to protect fisheries resources. Additional research is needed from which more site-specific prescriptions can be developed.



## DISCUSSION

Research conducted under the auspices of the Alaska Working Group on Cooperative Forestry/Fisheries Research has confirmed that riparian vegetation is an important and essential component of anadromous salmonid habitat. This streamside zone is required to sustain optimum egg-to-fry survival, smolt yield, and adult returns. Riparian vegetation left along streams protects salmonid habitat from the effects of clearcutting by maintaining the natural temperature regime, maintaining channel stability, maintaining undercut banks and instream habitat, preventing erosion and sedimentation, providing cover for winter habitat, and permitting adequate sunlight for food production. In essence, riparian vegetation controls and maintains the natural integrity of a stream's characteristics which have evolved in harmony with the development of the old-growth forest for hundreds of years.

Clearcutting without retention of an adequate zone of riparian vegetation can affect habitat, which in turn affects fish production on both a short- and long-term basis. Short-term (1-20 years) impacts can result from increased sedimentation, altered temperature and flow regimes, and reduced quantity of large woody debris. Long-term impacts (20-100 years) can result from closure of the second-growth canopy, reduced input of large woody debris, changes in stream channel morphology, and continued sedimentation from bank erosion, landslides, and roads.

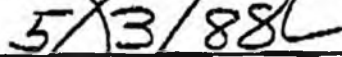
Properly designed buffer zones are an effective management tool for protecting riparian vegetation and can help prevent both short- and long-term adverse impacts on fish and wildlife habitat. Current research by NMFS shows that nearly all of the large woody debris in streams of southeastern Alaska originates from trees within 30 meters (100 feet) of the streambank. Other research shows that canopy shading necessary to maintain natural stream temperature regimes also comes from trees within 30 meters of the stream. These two factors, large woody debris and canopy cover, control stream characteristics essential to salmonid habitat. They also are directly related to the quantity and quality of trees within the riparian zone. There are indications that situations exist where a 30-meter buffer zone is not adequate. There are also special situations in which removal of riparian vegetation is considered a fishery habitat management option to open the forest canopy. In the absence of definitive research findings, buffer zone width in these areas should be set through an interdisciplinary team approach. Team members should take into account wind-firmness, topography, values of fisheries and wildlife habitat, and other resource uses.

Special techniques for selective harvesting of timber within the prescribed boundaries of the buffer zone may be beneficial in some cases for enhancing aquatic productivity; however, prescriptions for stream-side harvest of timber are premature pending research to determine whether there might be long-term impacts on fish habitat.

APPROVED BY:

  
ROBERT W. MCVEY, Director, Alaska Region

Date:

  
5/3/88

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## Sport Fishing Alaska

1401 Shore Drive, Anchorage, Alaska 99515 (907) 444-8674

January 29, 1990

Page 1 of 1

To: ~~Representative Curt Menard, FAX #907-463-6661~~  
Chairman, House Resources Committee

Note: Please distribute to Senator Fahrenkamp, Chairman, Senate Resources and the members of both the Senate and House Resource Committees

Attn: Senator Betty M. Fahrenkamp and Representative Curt Menard, Co-Chair  
1/31/90 Joint Meeting House/Senate Resource Committees

Re: Revision to State Forest Practices Act

From: Russ Redick, FAX #907-349-4330

A handwritten signature in dark ink, appearing to read "Russ", written over the typed name "Russ Redick".

I am writing to express my support for the substantial changes to the present Forest Practices Act which are being considered for your committee. I support including a requirement for substantial mandatory buffers of undisturbed forest along fish streams in SB 317 and HB 331 because the maintenance of stream vegetation is necessary to maintain stream productivity and ultimately the state's commercial, recreational, and subsistence fisheries. I have two concerns about the present bill. First, the 15 meter no cut and 15 meter selective cut buffers on state and borough lands in many cases will not be adequate to maintain stream productivity. As most Alaskans know, even our small streams meander across their flood plain and many will move more than 50 or 100 feet in the 80 to 100 years it takes to regenerate mature spruce, birch, and cottonwood trees after stream banks have been cut. Many of our larger streams move laterally more than 100 feet in one year! This means that the source of large woody debris and ultimately stream productivity will be lost very early in the rotation period unless larger buffers are provided. These small buffers will also not provide enough of a visual screen from clear cut areas to maintain a high quality sport fishery and sport fishing business in areas where extensive clear cutting occurs. Because of the visual impact of clear cuts, businessmen offering sport fishing trips will not be able to attract clients who demand a "wilderness" type experience.

A second problem is that as currently written, the maintenance of even these token buffers is at the discretion of the State Division of Forestry. I am very concerned that the Division of Forestry will be inclined to delete those buffers rather than maintain them. The present wording only appears to give the Department of Fish and Game, which has the responsibility and expertise to protect fisheries resources, an advisory role when the land owner or land manager requests a waiver under the statute. To maintain a proper balance between logging and state's fishing industries, I request that the wording be changed to require Department of Fish and Game concurrence on any waivers from these buffers.

I am also very concerned that the logging industry has apparently decided to renege on agreements made in the Forest Practices Act negotiation process and is requesting that the Legislature delete mandatory buffers on private lands and limit the buffer zones on public lands to the same 15 meters required on private lands for the reasons previously expressed. I am also very concerned that the logging industry is attempting to limit or remove the Department of Environmental Conservation and Department of Fish and Game current authority to regulate forest practices to protect fisheries habitat and water quality on private and public forest lands. I urge you not to make any of these changes in the draft legislation.

Thank you for your consideration.



UNITED STATES DEPARTMENT OF COMMERCE  
The Under Secretary for  
Oceans and Atmosphere  
Washington, D.C. 20230

DEC 13 1989

Mr. F. Dale Robertson  
Chief, Forest Service  
U.S. Department of Agriculture  
12th and Independence, S.W.  
Washington, D.C. 20090-6090

Dear Mr. Robertson:

Thank you for your letter explaining the Forest Service's (FS) approach to balancing timber harvest practices and riparian fish habitat protection in the Tongass National Forest. We recommend, however, that the FS adopt the National Marine Fisheries Service's (NMFS) riparian habitat protection policy, which requires minimum 30-meter no-harvest buffers on all anadromous fish streams and their tributaries. The advantages of the NMFS policy are that it provides reliable protection of fish habitat, sets a bottom line that should reduce conflict among in-field decisionmakers, and is easy to enforce.

Based on our knowledge of the old-growth forest ecosystem in Alaska, riparian vegetation is a critical component of fish habitat. Research has shown that salmonid habitat and stream channel stability depend on the old-growth trees within 30 meters of the streambank to provide large woody debris, shade, temperature control, and streambank protection. Timber harvest in this zone will decrease salmonid production.

Your letter states that the FS "requires a no harvest buffer zone along streams when needed to maintain or enhance fish habitat and maintain water quality; the width of the buffer to be dependent on the on-site conditions." The NMFS agrees that site-specific evaluations are theoretically the best way to manage streamside zones. In reality, however, the FS policy has failed because it is too complex and relies on too many people variously interpreting FS guidance to protect riparian vegetation.

The major drawback of the FS site-specific approach is that it relies on field staff to decide the need for, and size of, any buffer, and to defend that recommendation against other competing interests. On-site field determinations require a high level of expertise in fish habitat requirements and an extensive data base. Experience has shown that the influence of timber harvest goals often results in inadequate buffers from a fish habitat perspective. On-site evaluations should play an important role in determining those situations where the fish resource or on-site conditions (e.g., soil, windthrow hazards, braided channels) require a greater than 30-meter buffer.

A minimum buffer standard has the added advantage of providing advance knowledge of harvest limitations, and being an



JUN 51 20 10 24 P.M. D.M. L.M. H.F.

enforceable regulation that lends itself to monitoring. The ease with which a buffer standard can be enforced should also encourage compliance by industry.

Your letter also states that the FS "allows for harvesting of trees within the streamside zone when such action will improve fish habitat or when there is little risk of damage to stream conditions." The NMFS policy recognizes the potential to enhance some fish habitat by selective timber harvest; however, there has been no research in Alaska to validate that selective harvest practices will improve salmonid habitat. In fact, the scientific evidence indicates that altering the natural stream temperature regime or the quantity/size of large woody debris will negatively impact salmonid production. The NMFS recommends that the FS develop habitat restoration techniques for salmon streams already impacted by logging rather than attempt to "improve" existing habitat through streamside timber harvesting.

The FS should compile statistics on the locations and widths of buffers that have been required over the past five years to provide an indication of the effectiveness of the site-specific approach that may require riparian habitat restoration. Without these data, it is not possible to assess the effectiveness of past decisions or defend the efficacy of the current FS guidance. We heartily recommend such a review commence immediately and offer our assistance toward the project.

As you note, NMFS personnel have spent considerable time working with Alaska Region FS representatives on the Southeast Area Guide, Tongass Land Management Plans, Southeast Alaska Multiresource Model, Aquatic Habitat Management Handbook, and other planning/guidance materials. The NMFS assisted the FS in preparation of these documents, but has never endorsed the FS guidance as the preferred approach to protect salmon habitat.

In summary, the NMFS' research has demonstrated that timber harvest within 30 meters of the streambank can cause irreparable damage to salmon habitat and production. Consequently, we urge the FS to adopt a 30-meter minimum no-harvest requirement on all anadromous fish streams and tributaries in the Tongass National Forest. This guideline would help the FS achieve their goal to "preserve the biological productivity of every fish stream on the Tongass" (Tongass Land Management Plan page 92).

Sincerely,



John A. Knauss



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, Maryland 20910

JUL 28 1989

Honorable George Miller  
Chairman, Subcommittee on Water,  
Power and Offshore Energy Resources  
Committee on Interior and Insular Affairs  
House of Representatives  
Washington, DC 20515

Dear Mr. Chairman:

Thank you for your letter regarding the amount of commercial timber that would be typically included within a 100-foot or 30-meter streamside buffer zone within the Tongass National Forest.

We believe application of 100-foot or 30-meter buffers protect Alaska's salmon and trout habitat. The timber retained in a buffer for fish habitat should not be viewed as the amount "lost" to the timber industry, but viewed as what is required for fish habitat in the true sense of multiple-use. Salmonid fisheries and timber industries share the forest as a common base for their existence. Retaining a small but critical portion of the forest for the Nation's fisheries seems to us to be an example of wise use and management in its finest sense. We believe these buffers must be maintained for optimum production of fish. A detailed explanation is enclosed.

We look forward to working with the Subcommittee in the future on this or other issues relating to anadromous resources.

Sincerely,

/s/ James W. Brennan

James W. Brennan  
Assistant Administrator  
for Fisheries

Enclosure

cc: F; GCF; LA5-F(2); F/MB(Everett); F/CU(2); LA; F/AKR(Faris);  
F/PR; F/PR3(Risenhoover)  
CONTROL NMFS #11549  
F/PR3:ARisenhoover:427-2325:07/11/89:WPDISK2-MILLER



**NATIONAL MARINE FISHERIES SERVICE  
BUFFER STRIP USE AND ESTIMATED TIMBER SUPPLY IMPACTS**

The National Marine Fisheries Service (NMFS), Alaska Region issued a policy recommendation in 1988 for the protection of riparian vegetation stating that 30 m is the minimum width required to provide shade and future sources of large woody debris (LWD) necessary for instream habitat. NMFS' policy recommendation is based on extensive research which indicates that salmonid (trout and salmon) abundance is dependent on habitat derived from and influenced by the old-growth forest adjacent to streams, particularly the canopy for shade and temperature regulation and LWD. The quantity of LWD in these productive streams is high (60-80 pieces per 100 m length of channel) and is directly correlated with the abundance of salmonid habitat. Because the natural depletion rate of LWD resulting from decay, fragmentation, stream export, etc. is relatively high (1-3 percent per year), a continuous supply of wood from the riparian zone is needed to offset the natural loss and maintain salmonid habitat. If these streams are logged without leaving a buffer of at least 30 m to replenish the natural loss of LWD, it is estimated that the level of LWD will be reduced by 70 percent in 100 years. Recovery of LWD to the original pre-harvest amounts from the regeneration of second-growth trees next to the stream is estimated to take about 250 years. Riparian habitat, therefore, is the principal source of salmonid habitat and must be protected in order to maintain Alaska's salmon and trout at optimum production.

The amount of timber "retained for fish habitat protection" (i.e., loss of potential timber for industry) is dependent on the interpretation or definition of anadromous streams and tributaries. NMFS Alaska Region uses the U.S. Forest Service, Alaska Region (FS), Aquatic Habitat Management Unit (AHMU) definition of stream classes which are based on fish use. The FS Stream Classification System (Channel Typing) is also used by NMFS to identify and characterize stream channels from standard 1:1000 aerial photographs and to determine stream class designations. Under the AHMU system, streams are classed according to fish use:

- Class I- Streams with anadromous or high value resident sport fish or with habitat having reasonable enhancement opportunities for anadromous fish;
- Class II- Streams with resident fish populations of limited sport fish value generally occurring in steep gradients or upstream of migration barriers; and

**Class III-** Streams with no fish populations but have potential water quality influence on downstream habitat.

Most streams or reaches of a stream in a watershed are a mixture of Class I, II, and III, with Class I generally being the lower gradient valley bottom streams, Class II being the mid-slope streams, and Class III being the upper slope, high gradient tributaries.

The 30 m buffer policy of NMFS applies primarily to all Class I and II streams. The policy does not apply to Class III streams which are either ephemeral or intermittent or have a gradient generally greater than 8 percent; these can be very numerous and occur as drainage channels at higher elevations. Our policy does not require buffers alongside the numerous drainages which generally cannot be seen from aerial photographs or which are visible only following clear-cutting. These drainages constitute the most acreage of forest land and cause the greatest discrepancy of views on the "lost timber production" issue.

In this regard, an estimate of the amount of timber retained for fish habitat protection can be made by identifying stream channel types from aerial photographs, classifying them according to fish use, and then calculating the amount of timber by volume class in a 30 m buffer on both sides of the stream channel. The FS using its graphic information system has made some of these calculations and has presented its findings at several meetings involving NMFS personnel. For example, in a FS prepared document dated June 16, 1989, a quadrangle examined from north Kuiu Island on the Tongass (Port Alexander C-1) showed that only 9 percent of the productive forest volume would be contained within a 30 m buffer on all Class I and II streams. Anadromous streams most likely accounted for less than 4 (included in the 9) percent. The high gradient tributaries or intermittent drainages which do not need buffers, accounted for an additional 22 percent. Information presented by the FS on the 1989-94 Ketchikan Pulp Company Operating Area DEIS for Prince of Wales Island showed that the amount of timber retained by leaving 30 m buffer strips along Class I, Class II, and some Class III streams amounted to 10.7 percent. Both these estimates closely agree with a field survey conducted in 1978 by a Fisheries Task Force for the Tongass Land Management Plan. This survey found that 11 percent of the timber in the Tongass National Forest would be retained for salmonid habitat protection if 100-foot buffers were required.



National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
P.O. Box 21668  
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January 5, 1990

Michael A. Barton, Regional Forester  
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P.O. Box 21628  
Juneau, Alaska 99802

Dear Mr. Barton:

The National Marine Fisheries Service (NMFS) Regional Office and Auke Bay Laboratory, have completed our review of the Final Supplement to the Environmental Impact Statement (SEIS) for the 1981-1986 and 1986-1990 operating periods for Alaska Pulp Corporation Long-Term Timber Sale Contract, dated November, 1989. These comments supplement our December 27, 1989, comments regarding the Record of Decision (ROD). We did not have an opportunity to review the Phase II Draft SEIS within the timeframe specified by the Forest Service, therefore, we feel it is particularly important that we provide feedback on the Final.

#### Riparian Management:

As you are aware, based on substantial research conducted by NMFS (e.g. Murphy *et al.*, 1986, and Murphy and Koski, 1990), we have concluded a minimum of 100 foot no-harvest riparian zones should be left on each side of class I and II salmon streams. Such buffer strips provide large woody debris for critical habitat, promote channel stability, protect water temperature and dissolved oxygen levels, and reduce sedimentation of streams. Anything less than 100-foot no-harvest buffers pose a significant long-term threat to water quality and fish habitat. In some situations buffers wider than 100 feet are needed to protect fish resources, such as where there are particular hazards to blow-down, braided channels, landslides, heavily logged drainages, and temperature sensitive streams. Class III streams typically do not provide habitat for salmonids, but, inadequate protection of these streams can cause landslides and debris torrents with excessive sedimentation on downstream fish habitat in Class I and II streams. Consequently, the integrity of the stream banks and side slopes of these streams must be maintained by applying Best Management Practices or including a minimum of 100 foot no-harvest zones, when necessary.

The streamside protection measures adopted in the SEIS and ROD, in our opinion, are inadequate, and will result in irreparable long-term harm to anadromous fish habitat and significant impacts to water quality. The Forest Service has treated buffer widths as negotiable, rather than establish a minimum protective width. The SEIS calls for buffers of less than 100 feet on numerous Class I and II streams. In Analysis Areas II and III, over 50



percent of salmon streams have buffers of significantly less than 100 feet. Moreover, the SEIS presents no buffers of over 100 feet, although these will be needed to adequately protect many streams. As far as we are aware, there is no evidence to support the conclusion that buffers of less than 100 feet will adequately protect fish habitat in Alaska, particularly over the long term, whereas there is substantial research demonstrating that buffer strips of at least 100 feet are effective.

The SEIS says little about what protective measures will be used on Class III streams, except to note that they will involve "usually leaving 10 percent of the adjacent stand." (SEIS, Vol. AA12 at 4-33). Such limited measures may not be adequate to protect many Class III Streams. Those Class III streams can significantly influence water quality on downstream Class I and II streams because of their size, or have the potential for side-slope and/or streambank failure, therefore, may require full buffer strip protection. Most Class III streams, however, will only require Best Management Practices to protect side-slope and streambank stability for maintenance of water quality standards.

Equally concerning as the inadequate width of proposed buffer strips, is the fact that the SEIS authorizes selective harvesting of 20 percent of the trees in buffer zones. Thus, even the streams with 100-foot buffers do not meet NMFS's minimum recommendations since selective harvest may be allowed within that zone. There has been no research done in Alaska which shows selective harvest in a buffer zone, even if done with extreme care, affords adequate long-term protection to salmon habitat. The scientific evidence indicates it will usually have negative effects on salmonid production. Moreover, selective harvesting is operationally difficult and can damage the remaining trees in the buffer strip. In our opinion, selective harvest within buffer zones of 100 feet or less will generally result in inadequate stream protection. Selective harvest outside 100-foot buffers, however, might be a sound management practice to insulate buffers and make them more wind firm.

If the Forest Service wishes to examine the effectiveness of narrower buffer widths or selective harvest within buffers, it should do so through a carefully controlled research study where valid scientific measurements can be made. The use of 50-foot buffers and selective harvest in buffers throughout the contract area, on the other hand, will likely result in inadequate protection of fish habitat and no scientific validation of their effectiveness.

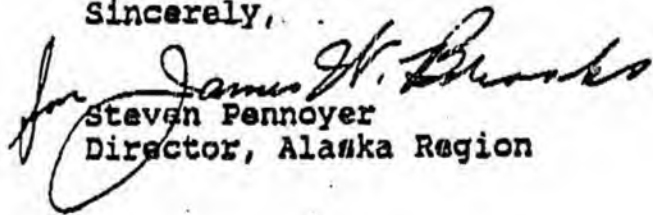
#### Monitoring:

Certain logging and roading practices can have significant impacts on fish habitat and water quality. For the past decade, the Forest Service has indicated their streamside management

practices in Alaska would insure minimal impacts to fish habitat and would protect water quality. We are not aware of any Forest Service research or monitoring in Alaska supporting this assertion. Contrary to this, the NMFS-Auke Bay Laboratory and others have shown through research, that certain Forest Service practices in Alaska have likely caused irreparable long-term damage, including reduced fish production, impaired water quality, and damaged fish habitat (See, Murphy et al., 1986).

The Forest Service has done very little monitoring to measure the impacts of timber activities in Alaska on fish habitat and water quality, or to measure the effectiveness of Forest Service streamside management practices in protecting fish habitat. There continues to be a need for such information. Without it, it is difficult to evaluate the true effectiveness of the Forest Service streamside management prescriptions for protecting fish habitat and water quality. In our opinion, these practices are often inadequate to protect fish habitat and insure compliance with water quality standards. The Forest Service has the primary responsibility for ensuring that fish habitat and water quality are not impacted by logging on National Forest lands, and that the effectiveness of Forest Service management practices are adequately researched and monitored. We would be glad to assist in developing such monitoring or research programs.

Sincerely,

  
Steven Pennoyer  
Director, Alaska Region

LITERATURE CITED

Murphy, M.L., J. Heifetz, S.W. Johnson, K V. Koski, and J.F. Thedinga. 1986. Effects of clear-cut logging with and without buffer strips on juvenile salmonids in Alaskan streams. *Can. J. Fish. Aquat. Sci.* 43:1521-1533.

Murphy, M.L., and K V. Koski. In press 1990. Input and depletion of large woody debris in Alaska streams and implications for streamside management. *North American Journal of Fisheries Management*, American Fisheries Society, Bethesda, MA.

SUMMARY OF NMFS AUKE BAY LABORATORY RESEARCH  
ON STREAMSIDE MANAGEMENT ISSUES

Prepared by K V. Koski and Michael Murphy, January 1989

Auke Bay Laboratory (ABL) has been involved in research on the effects of logging since the mid-1950s when it launched the first major study on the west coast at Hollis, Alaska, with the Fisheries Research Institute (University of Washington) and the Northern Forest Experiment Station. Since that time, ABL has done extensive research on the two major issues of concern: salmonid habitat in streams and bark deposition at log transfer facilities.

Research on streams in the last 10-12 years has focused on the habitat of salmonids that require extended rearing in streams for one or more years (e.g. coho salmon) because these fish may exhibit cumulative effects from logging activities.

The Alaska Working Group of Cooperative Forestry-Fisheries Research, which had its beginning in 1979, has been instrumental in bringing researchers, managers, and industry representatives together to identify, prioritize, and investigate issues of greatest concern. Accomplishments of this group have been recognized coast-wide and have led to the best cooperation and progress towards resolving conflicts between fisheries and logging ever seen in Alaska.

Guidelines were developed for log transfer facilities which were adopted by the Governor's Timber Task Force and now are currently used by EPA and the Corp of Engineers in the Permit Process. Streamside management also was identified as a major issue and has been the focus of research by ABL, ADF&G, and Forest Science Laboratory (FSL) since 1982. Results of much of this research have been published and either implemented or under consideration by USFS and Native Corporations. Unfortunately, some study results have been misinterpreted; consequently, a summary of the results of each pertinent report prepared by NMFS has been paraphrased and attached to this document (Attachment No. 1).

Basically, ABL's research has shown that (1) buffer zones are highly effective in protecting fish habitat in southeastern Alaska from potential damage by logging activities; (2) woody debris is an essential component of stream channel morphology and forms important habitat for salmonids; (3) winter habitat (e.g. pools with woody debris cover) are critical to overwinter survival of salmonids; (4) "channel-type" stream classification is a valuable tool for determining streamside management prescriptions; (5) most (i.e. 98%) of the woody debris in a stream comes from within 30 m of the stream; and (6) woody debris can form stable habitat (e.g. pools and riffles) for at least 200 years. Based on these findings and results from other research along the Pacific Coast, NMFS prepared a policy statement (Attachment No. 2) in May 1988 for "Riparian Habitat Protection in Alaska" to document the need for protecting salmon habitat and to clarify results of NMFS research.

# **CORRECTION**

**THIS DOCUMENT  
HAS BEEN REPHOTOGRAPHED  
TO ASSURE LEGIBILITY**

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ON STREAMSIDE MANAGEMENT ISSUES

Prepared by K V. Koski and Michael Murphy, January 1989

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Attachment No. 1

SUMMARY OF NMFS AUKE BAY LABORATORY RESEARCH REPORTS  
ON EFFECTS OF LOGGING AND STREAMSIDE MANAGEMENT

Buffer Zone Effectiveness

1. Effects of clear-cut logging with and without buffer strips on juvenile salmonids in Alaskan streams. Michael L. Murphy, Jonathan Heifetz, Scott W. Johnson, K V. Koski, and John F. Thedinga. 1986. Canadian Journal of Fisheries and Aquatic Sciences, 43:1521-1533.

Buffer strips used in Southeast Alaska are effective in protecting fish habitat. Buffer strips allow increased primary (periphyton) and secondary (invertebrate) production, and provide a source of additional new woody debris after logging. In the short term, buffers can increase the recruitment of fry (young-of-the-year), and sustain survival of both fry and parr (one or more years of age) through winter. In the long term, buffers provide a source for recruitment of new debris for the stream and thus maintain stream channel integrity and fish habitat indefinitely. Blowdown of trees in a buffer zone provides valuable rearing habitat; however, excessive number of trees could impair fish passage or damage spawning habitat.

Clear-cutting without buffers damages fish habitat by reducing the amount of undercut banks, canopy density, pool volume, and woody debris. Coho fry density was higher in summer in clear-cut streams than in either old-growth or buffered streams because of higher periphyton and invertebrate production; however, this higher density was not sustained through the winter because of the reduced habitat. There were significantly fewer coho parr in clear-cut streams because of damaged winter habitat resulting from a loss of woody debris and pools, collapsed undercut banks, and a destabilized or sedimented substrate.

Most pools were formed by woody debris, and pool volume and debris volume in streams were directly related.

2. Effects of logging on the abundance and seasonal distribution of juvenile steelhead in some southeastern Alaskan streams. Scott W. Johnson, Jonathan Heifetz, and K V. Koski. 1986. North American Journal of Fisheries Management, 6:532-537.

During summer, steelhead fry were largest and most abundant in clear-cut streams, which had more sunlight, higher temperatures, and higher periphyton and invertebrate production than did buffered and old-growth streams. In winter, fry density in clear-cut streams declined 79% because of unsuitable habitat. Densities of parr were also highest during summer in the clear-cut streams, probably because of the increased food; however, the reduction in parr density during

winter and the increase in parr density in buffered and old-growth streams in winter imply that parr migrated to areas of preferred habitat (i.e., areas with pools and abundant cover). Any benefits derived from canopy removal by clear-cutting were negated by a reduction in the amount of critical winter-rearing habitat.

3. Effects of logging on winter habitat of juvenile salmonids in Alaskan streams. 1986. Jonathan Heifetz, Michael L. Murphy, and K V. Koski. North American Journal of Fisheries Management, 6:52-58.

Most wintering coho salmon, Dolly Varden, and steelhead trout occupied deep pools with cover (i.e. upturned tree roots, accumulations of logs, and cobble substrate). Riffles, glides, and pools without cover were not used. Seventy-three percent of all pools were formed by woody debris. Streams in clear-cut areas without buffer strips had significantly less area of pool habitat than streams in old-growth areas. Buffer strips protected winter habitat of juvenile salmonids by maintaining pool area and cover within pools and provide future sources of woody debris. Concerns about effects of blowdown in first- to third-order streams may be unfounded because blowdown in these streams often bridges the channel creating additional habitat. On larger streams, buffer strips should be designed to minimize potential damage from blowdown yet ensure long-term sources of debris.

4. Evaluation of buffer strips for protection of salmonid rearing habitat and implications for enhancement. K V. Koski, Jonathan Heifetz, Scott Johnson, Michael Murphy, and John Thedinga. 1984. In: Thomas J. Hassler, Ed. Proceedings of Pacific Northwest Stream Habitat Management Workshop, Humboldt State University, Arcata, CA.

Buffer strips were effective in protecting rearing habitat of salmonids from the impacts of clear-cut logging in southeastern Alaska. The rearing capacity of a given stream is illustrated by the concept of limiting factors or "bottleneck". In this study, a bottleneck occurred in clear-cut streams in fall and winter: densities of fry, which were high in summer when food was abundant, decreased in winter because habitat was inadequate. In streams in old-growth forest, the bottleneck occurred during summer: abundance of food was too low to maintain high densities of juvenile salmonids and, consequently, excellent winter habitat was not used. High food production in summer produced high densities of juvenile salmonids in the buffered streams, and the densities remained high throughout the winter because the critical habitat was maintained. Manipulation of the canopy cover to increase fish production is a logical enhancement measure provided critical habitat is maintained or improved. Buffer strips could become a useful tool for stream management.

5. Effects of logging on size and age composition of juvenile coho salmon in Southeast Alaska. John F. Thedinga, Michael L. Murphy, Jonathan Heifetz, K V. Koski, and Scott W. Johnson. In Press.

Short-term effects of logging on age composition and size of juvenile coho salmon were studied in 18 streams in Southeast Alaska in 1982-3. The number of fry (age 0) in summer and winter was proportionately higher in buffered and clear-cut streams than in old-growth streams, whereas parr (age 1 and older) size did not differ among treatments. Fry and parr were larger in southern Southeast Alaska than in the northern region of Southeast. Size was directly related to periphyton biomass and benthos density in the streams. However, the larger fry in buffered and clear-cut streams compared to old-growth streams was probably due primarily to earlier fry emergence that resulted from increased stream temperatures. The advantages of earlier emergence and increased abundance of food in summer to fry in logged streams were negated in parr, possibly because their diet, growth rate, and habitat preferences change with age and size. The maintenance of critical overwintering habitat is essential to optimum smolt production.

#### Streamside Management Issues

1. Relationship between stream classification, fish, and habitat in Southeast Alaska. M. L. Murphy, J. M. Lorenz, J. Heifetz, J. F. Thedinga, K V. Koski, and S. W. Johnson. 1987. USDA Forest Service, Wildlife and Fisheries Habitat Management Note No. 12.

The Channel Type System (CTS) for classifying streams, based on geomorphic, hydrologic, and vegetative features on aerial photographs, was evaluated to test whether it could allow managers to control variability among streams by grouping reaches with similar habitat. Salmonid abundance and habitat characteristics differed significantly between channel types, indicating that the CTS can be used effectively to control variability among streams. Large woody debris (LWD) was most abundant in large floodplain channels, and least abundant in large bedrock-controlled channels. Nearly all (98%) LWD in the streams came from trees rooted within 30 m of the stream bank. Windthrow and undercutting by the stream accounted for 75% of the LWD in the streams. Differences in salmonid populations and habitat, however, were inconsistent between regions of Southeast Alaska. Regional inconsistency may have resulted because fish populations or habitat differed between regions or because personnel in each region classified stream channels differently. With further development, the CTS should be an excellent tool for more effective management of fish habitat.

2. Input and depletion of large woody debris in Alaska streams; and implications for streamside management. M. L. Murphy and K V. Koski. (in Press) North American Journal of Fisheries Management.

Natural rates of input and depletion of large woody debris (LWD; >10 cm diameter) in Southeast Alaska streams were studied to provide a basis for managing streamside zones to maintain LWD for fish habitat after timber harvest. In 32 stream reaches in old-growth forest, LWD was inventoried by size and state of decay, and its age was determined from the age of trees growing on it. Age of LWD ranged from 1 to 226 years, and persistence of LWD in the streams was directly related to LWD bole diameter. Assuming steady-state conditions in old-growth forest, LWD input and depletion were calculated from the abundance and age of LWD in decay classes. Annual depletion from biological decay and export by the stream ranged from 0.3% of large (>60 cm diameter) LWD in small muskeg channels to 2.7% of small (10-20 cm diameter) LWD in large bedrock-controlled streams. Based on the depletion rate of LWD, a model was developed to determine the number of trees needed in streamside zones to maintain natural quantities of LWD after timber harvest.

3. Large woody debris in forested streams in the Pacific Northwest: Past, Present, and Future. P. A. Bisson, R. E. Bilby, M. D. Bryant, C. A. Dolloff, G. B. Grette, R. A. House, M. L. Murphy, K V. Koski, and J. R. Sedell. 1987. Pages 143-190 In Streamside management: Forestry and fishery interactions. College of Forest Resources, University of Washington, Seattle.

This paper reviews the form, function, and management of large woody debris (LWD) in streams, and reaches three major conclusions: (1) LWD enhances the quality of fish habitat in all sizes of stream. (2) Removal of most trees from the streamside zone during logging, combined with thorough stream cleaning and short-rotation timber harvest, has altered the sources, delivery mechanisms, and distribution, size, and stability of LWD in streams, leading to reduced overwinter survival of salmonids and changes in salmonid abundance and species composition. (3) There is an urgent need for studies that focus on protection of existing LWD in stream channels and recruitment of new debris from the streamside forest.

4. Influences of forest practices on aquatic production. S. V. Gregory, G. A. Lamberti, D. C. Erman, K V. Koski, M. L. Murphy, and J. R. Sedell. 1987. Pages 143-190 In Streamside management: Forestry and fishery interactions. College of Forest Resources, University of Washington, Seattle.

Timber harvest potentially alters solar radiation, water temperature, sediment, nutrients, litter, woody debris, and channel structure--all of which influence the productivity of streams. Periphyton production generally is enhanced by canopy removal and increases in nutrients