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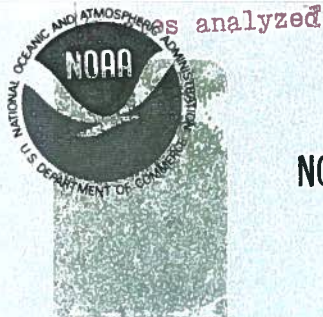
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# Report on the Alaska Region Section 10/404 Permit Coordination 1981 through 1985

## Supplement

U.S. DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration  
National Marine Fisheries Service



## NOAA TECHNICAL MEMORANDUM NMFS F/AKR-6

Report on the Alaska Region Section 10/404 Permit Coordination  
1981 through 1985

March 1987

Habitat Conservation Division  
National Marine Fisheries Service, Alaska Region

### **Supplement #1 1986 and 1987 Data**

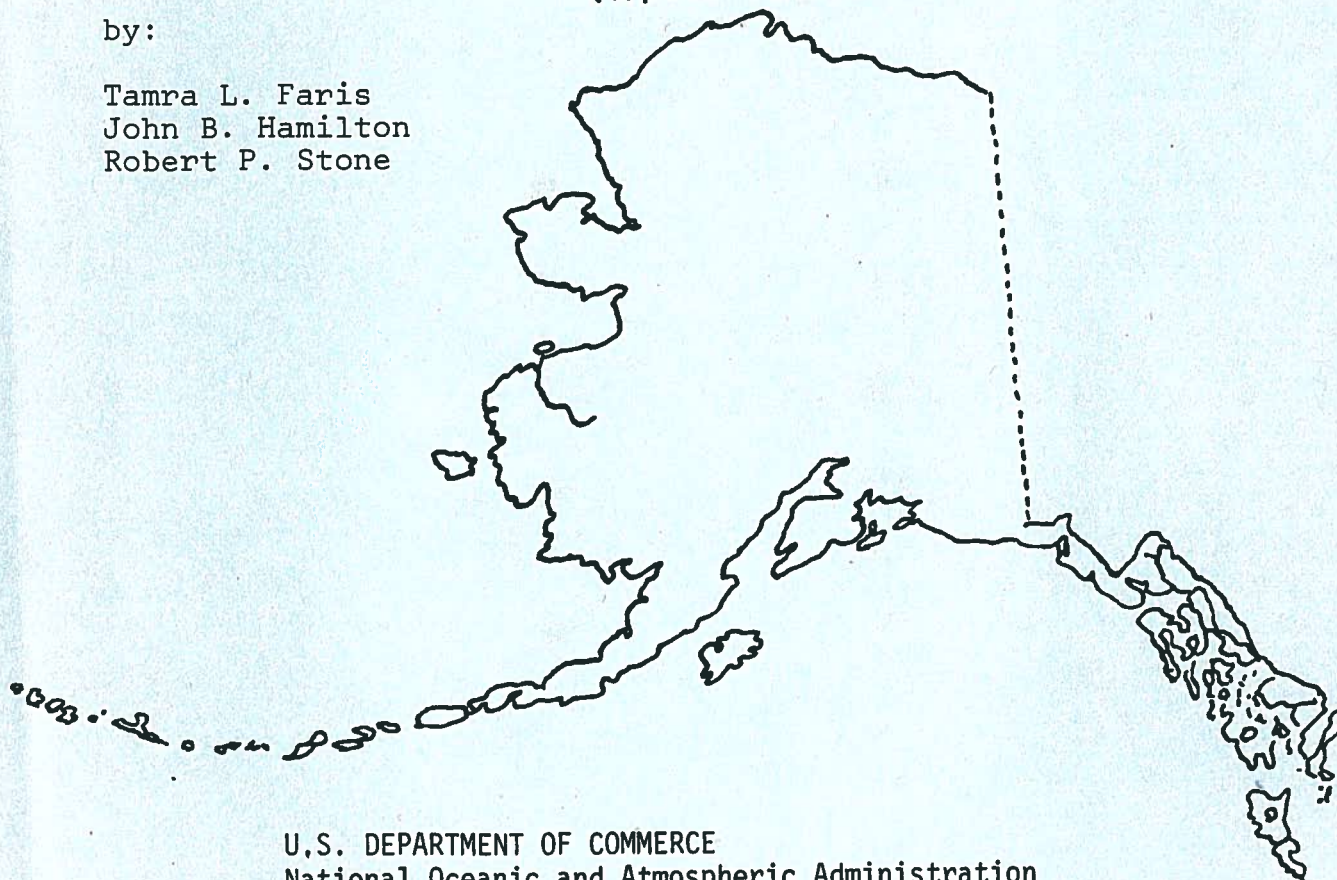
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### **Supplement #2 1988 Data**

(April 1990)

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U.S. DEPARTMENT OF COMMERCE  
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National Marine Fisheries Service

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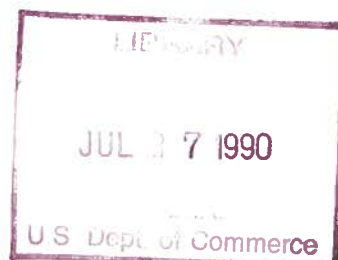
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Data Summaries to supplement the 1981-1985 information with 1986 and 1987 have been inserted in appropriate places. These are data only supplements, no attempt has been made to interpret or summarize the information with respect to the rest of the original data. Definition of terms is the same as original work. (Supplement prepared by Faris and Hamilton)

1988 supplement as above, prepared by Hamilton and Faris

U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service



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Habitat Conservation Division

National Marine Fisheries Service, Alaska Region

EXECUTIVE SUMMARY

The mission of the National Marine Fisheries Service (NMFS) is to:

Achieve a continued optimum utilization of living marine resources for the benefit of the Nation.

The Fish and Wildlife Coordination Act (16 USC 661-667) requires that action on licenses, permits, and construction projects regulated or undertaken by other Federal agencies in waters of the United States must include consultation with resource agencies (NMFS) and equal consideration of fish and wildlife resources. The NMFS Alaska Region dedicates a major effort to coordination with the U.S. Army Corps of Engineers (COE) on Section 10 and 404 permit applications. It is, therefore, important that NMFS periodically assess its involvement and institute changes to improve our effectiveness. This report, the first such evaluation conducted by the Alaska Region, also provides an accounting of our Habitat Conservation Division program, resource values and concerns, and development pressures in Alaska.

The report is structured around a summary of NMFS involvement with the COE Section 10/404 public notice review process for the period January 1, 1981, through December 31, 1985. During this period NMFS reviewed 2,315 proposed Section 10/404 actions. Most of these proposals (85 percent) were permitted by the COE. The most frequently requested authorization (40 percent of the total) involved the placement of fill into wetland areas and a Section 404 permit. Another 25 percent of the applications involved the construction of a structure in navigable waterways and required a Section 10 permit. Finally 35 percent of all applications required authorization under both Section 404 and Section 10.

Each permit application has been classified according to the primary need or purpose of the proposed project. Based upon our classification scheme, the most common purposes associated with

permit applications in Alaska, in decreasing frequency of occurrence, were the Town/Homesite, Boating, Oil and Gas, Mining, Timber, Aquaculture, and Power generation categories.

Because of limited staff and funds, the NMFS Alaska Region uses a screening and priority setting system that provides four levels of review depending on the potential magnitude of resource/development concerns. A lack of identifiable concerns allowed 35 percent of the applications to move through the COE permit process without a detailed NMFS review. Almost half (49 percent) of the applications received a specific review by NMFS that culminated in a letter of no objection to the COE. Twelve percent of the total applications were not objected to as long as special resource protection stipulations identified by NMFS were included in the COE permit. In those instances where NMFS requested special permit conditions, 67 percent of those stipulations were included in the resulting permits. Stipulations which limited the timing of project construction or operation were most frequently recommended. Finally, 4 percent of the total applications received were opposed by NMFS because of unresolved resource concerns.

Not all of NMFS denial recommendations resulted in a denial by the COE. Nearly half (47 percent) of those applications receiving a denial recommendation by NMFS were withdrawn by the applicant prior to a permit decision by the COE. Approximately one fourth (24 percent) of our denial recommendations were upheld by the COE. Similarly, one quarter of the applications receiving a denial recommendation from NMFS were granted permits by the COE. In most cases where a permit was issued following a denial recommendation by NMFS, the amount of affected habitat was significantly reduced from that proposed to that authorized by the COE. This amounted to a reduction in affected acreage of 83 percent for dredging projects and 44 percent for fill related projects. During the five-year reporting period, one COE decision was elevated to higher authority for additional review. A final compromise was reached between the Administrator of NOAA and the Department of Army.

Acres of affected habitat is also discussed in detail. 58,902 acres of habitat were proposed for alteration in Alaska during the study period. Through the involvement of NMFS and other resource agencies, the amount of habitat alteration actually authorized by the COE was 28,522 acres (48 percent of that originally requested). Discharging fill into coastal and wetland areas accounted for 7,660 acres of the total authorized alteration. Dredging accounted for 11,910 acres. Fill placed on tundra makes up about half (7,130 acres) of the habitat altered by filling in western Alaska.

The ability of NMFS to carry out its resource responsibilities in consultation with the COE is hampered by activities undertaken

without prior knowledge or authorization by the COE. Once confirmed under existing procedures, the responsible party is required to initiate actions regulated by the COE. The action usually involves an after-the-fact permit application. Throughout Alaska, applications for after-the-fact permits increased from one percent to as high as 36 percent per year over the five-year period. Complete restoration of the affected site is rarely achieved.

The NMFS Alaska Region responded during the review period specified by the COE 87 percent of the time. Response time continues to improve under formal review procedures.

Based on our analysis and experience in working with the COE program, we identified several ways communications and the administrative process could be improved and permits expedited: (1) the COE rationale for both issuance of permits over NMFS denial recommendations and not including recommended stipulations in permits were routinely distributed, (2) documentation of the area of habitat affected were included in all permits, (3) permitting after-the-fact activities were examined in greater depth and closely monitored, (4) permits were monitored to determine those projects completed and those not for purposes of better estimating habitat affected through the Section 10/404 permit process, and (5) comparisons were made between area of habitat modification authorized and area impacted by construction of the project. If we are going to improve our effectiveness and evaluate the unknowns contained in this report, then we need the assistance of the COE in implementing the above recommendations.

## INTRODUCTION

The commercial fisheries catch in Alaska waters for the years 1981-1985 equalled 10,960,800 metric tons, an exvessel value of \$3,948.5 million (NMFS, 1986). Much of this catch was made up of salmon, herring, crab, and shrimp which are estuarine dependent during at least one stage of their life history. Alaska provides this estuarine habitat, with over 6,600 miles of coastline (more than half the 11,323 miles of total U.S. coastline), and 33,900 miles of tidally influenced shoreline which lies adjacent to 550,000 square miles of Continental Shelf. The river systems in Alaska carry one-third of the nation's total surface supply of freshwater (Alaska Department of Education, 1985).

As mandated by the Fish and Wildlife Coordination Act, the Department of Army, Corps of Engineers (COE) is required to consult with the National Marine Fisheries Service (NMFS) for advice on potential impacts their actions could have on marine, estuarine, and anadromous fishery resources. Most consultations are related to the permit program regulated by the COE and authorized under Section 10 of the River and Harbor Act and Section 404 of the Clean Water Act. This report is a summary of the NMFS Alaska Region, Habitat Conservation Division (HCD), involvement with the COE Section 10/404 permit program for the period January 1, 1981, through December 31, 1985.



Alaska comprises a large one-state COE District. The District Engineer administers the COE Section 10/404 permit program from Anchorage and reports to the Division Office in Portland, Oregon. Individuals, corporations, and government agencies planning to discharge fill or dredged materials into wetlands or navigable waters must either meet established criteria for a general or nationwide permit or receive individual permit authorization from the COE. A Section 10 permit authorizes placement of structures in navigable waterways. Both authorizations are required if both types of activities are proposed. A Section 404 permit authorizes discharge of dredge or fill material into wetlands or waterways.

Permit applications receive wide circulation, review, and comments. The review process is controlled by the COE Regulatory Functions staff who circulate Public Notices containing pertinent information and requesting public comments. By way of this Public Notice, NMFS is solicited for comments regarding marine, estuarine, and anadromous fishery resources, or certain marine mammal or endangered species that could be affected by the proposed project. In Alaska, other resource agencies such as the U.S. Fish and Wildlife Service, Environmental Protection Agency, and the State of Alaska Departments of Environmental Conservation, Fish & Game, and Natural Resources also review COE Public Notices.

Upon receipt of the COE Public Notice, NMFS/HCD biologists in Juneau and Anchorage interact directly with the COE, applicants,

and other involved parties to identify concerns, resolve conflicts, and develop resource recommendations. Program oversight, guidance, and formal responses for controversial projects are provided through the NMFS Regional Office in Juneau. Resolution of significant conflicts between NMFS and the COE might involve related higher level offices outside Alaska.

Coordination procedures between the COE and NMFS regarding Section 10 and 404 reviews have been formalized through Memoranda of Agreements (MOAs), signed July 2, 1982, (USDC 1982) and March 25, 1986, (USDC 1986). The 1982 MOA emphasis on expedited permit reviews resulted in changes in the NMFS review processes. Special efforts were undertaken to ensure the NMFS permit review responses were forwarded to the COE within the specific comment period. It was also agreed that requests for additional review time would occur in writing from the NMFS Regional Director to the COE District Engineer. In those instances where significant and apparently intractable resource concerns remained following our review, we agreed to notify the COE that we would seek a higher level review should the COE District Engineer decide against our recommendations.

The effort dedicated by NMFS to coordination with the COE on Section 10 and 404 permit applications is a major function of the Habitat Conservation Division. It is, therefore, important to periodically assess our involvement and make changes necessary to improve effectiveness in discharging resource responsibilities.

This report is the first such evaluation conducted by the Alaska Region. Because this report also serves as the base for future evaluations, a large amount of detail is included. These details include data and summaries of projects reviewed, resource concerns identified, and the performance or effectiveness by which NMFS obtains resource considerations through the COE Section 10/404 decision process.

## METHODS AND SCOPE OF REPORT

### Methods

NMFS biologists reviewing COE Public Notices are required to develop project files that include estimates of affected wetland acreage they make from on-site visits, maps, or scale drawings. These estimates plus other related descriptive information are stored in a data base management program linked through a nationally contracted mainframe computer service. Data are used to produce both fixed format reports, such as the NMFS quarterly report of Section 10/404 activities, as well as other variable format summaries needed by NMFS administrators or reviewing biologists. For example, the program can be used to examine the history of projects by geographic area and type of project, or to compare comments and positions expressed on similar projects.

### Scope of Analysis

For this analysis the data are reported as either a five-year summary or in one-year segments beginning with all written NMFS responses dated January 1, 1981, and ending December 31, 1985. Summaries in this report do not include projects authorized under general or nationwide permits or those Section 404 permit applications for activities on the North Slope filed under the COE "Abbreviated Processing Procedures". These data are not regularly supplied to us. Also, timeliness of replies, comment period extension requests, or notification of significant concerns were not recorded prior to the 1982 MOA, and are not included in our data base. Decisions by the COE to issue or deny a particular

application or decisions by the applicant to withdraw a proposal are current through September 1986. Of the 2,315 actions summarized in this report, 4 were pending a decision by the COE, and 20 were dropped from the COE permitting process with no issuance, denial, or withdrawal notice.

The analyses and results reported herein are frequently separated into two geographic areas: (1) western Alaska, representing the majority of the state (the area from Yakutat Bay north and west) with its distinctly different biomes defined by major mountain ranges, large interior river systems, the polar ice pack, and expansive coastal area, and (2) southeast Alaska, including the area south and east of Yakutat Bay dominated by coastal rivers, estuaries, inland waterways, and multiple islands complex.

#### Limitations

Throughout this report the acreage shown in the "issued" columns of tables has been assumed to be the same as the acreage of habitat altered. This assumption is limiting, in that not all permitted projects are constructed. On-site visits needed to differentiate between incomplete and completed projects have not been routinely made by our agency or the COE. This report, therefore, does not discount acreage associated with permitted projects that are not initiated or completed according to plan. Also, increases or decreases in habitat acreage are not recorded or considered in these analyses for those permit modifications that have been authorized by the COE without NMFS review.



It is also important to note that many NMFS/HCD activities are not reflected in these data. For example, major efforts are devoted to (1) pre-application consultations (especially for complex projects involving potentially extensive habitat alterations), (2) on-site investigations and meetings with applicants and/or government agencies, (3) coordination through various planning groups, and (4) federal NEPA project reviews. In some situations, pre-application consultations result in agreements to incorporate special project modifications. Consequently, applications to the COE may already reflect modifications to accommodate our significant resource concerns. Although our pre-application work may have been instrumental in obtaining special resource consideration, official COE correspondence might not reflect the pre-application effort and only indicate that NMFS had no objection to issuance of a related COE permit.

Application withdrawal is another factor confounding an analysis of NMFS effectiveness. When confronted with financial problems and significant objections to the proposed projects, applicants often withdraw their requests before COE processing is complete. A withdrawn application can be modified and resubmitted at the convenience of the applicant. We normally are not told why an application has been withdrawn, but subsequent applications frequently reflect modifications responsive to our initial resource concerns. For this reason as well as that described in the previous paragraph, the analyses provided here underestimates our effectiveness in minimizing habitat loss.

## RESULTS AND DISCUSSION

### SUBPART A. Analysis by Number of Reviews

#### Section 10 and Section 404 Permit Reviews - General

The Alaska Region reviewed 2,315 Section 10/404 actions during the study period and of those 85 percent were permitted by the COE (Table 1 and Figure 1). In western Alaska a high percentage of Section 404 applications related to the construction of gravel pads for oil and gas development on the North Slope. In southeast Alaska 46 percent of proposed actions required both Section 10 and 404 permits because the projects affected navigable waters and included discharge of fill or dredge material into waters and wetlands of the United States. This high percentage of Section 10/404 permits reflects the scarcity of readily developable uplands in southeast Alaska and the preferred development option of filling intertidal areas. Section 10 permits alone were required for nearly half of the projects in southeast Alaska where facilities (anchored structures, buoys, and pilings) support the extensive transport of goods, commercial fishing, recreational fishing, and boating through the inland waterways.

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number by Permit Types						
Section 404	896	777	768	678	128	99
Section 10	548	487	196	171	352	316
Both 10/404	871	697	467	379	404	318
Total Reviewed	2,315	1,961	1,431	1,228	884	733

Table 1. Applications for permits under the guidelines of either Section 10 of the River and Harbor Act of 1899, Section 404 of the Clean Water Act, or both, for the Alaska Region, 1981-1985.

Data for TABLE 1 and Figure 1. Applications for permits under the guidelines of either Section 404 of the Clean Water Act, Section 10 of the River and Harbor Act of 1899, or both, for southeast Alaska, western Alaska, and combined for the Alaska Region for the years 1986 and 1987.

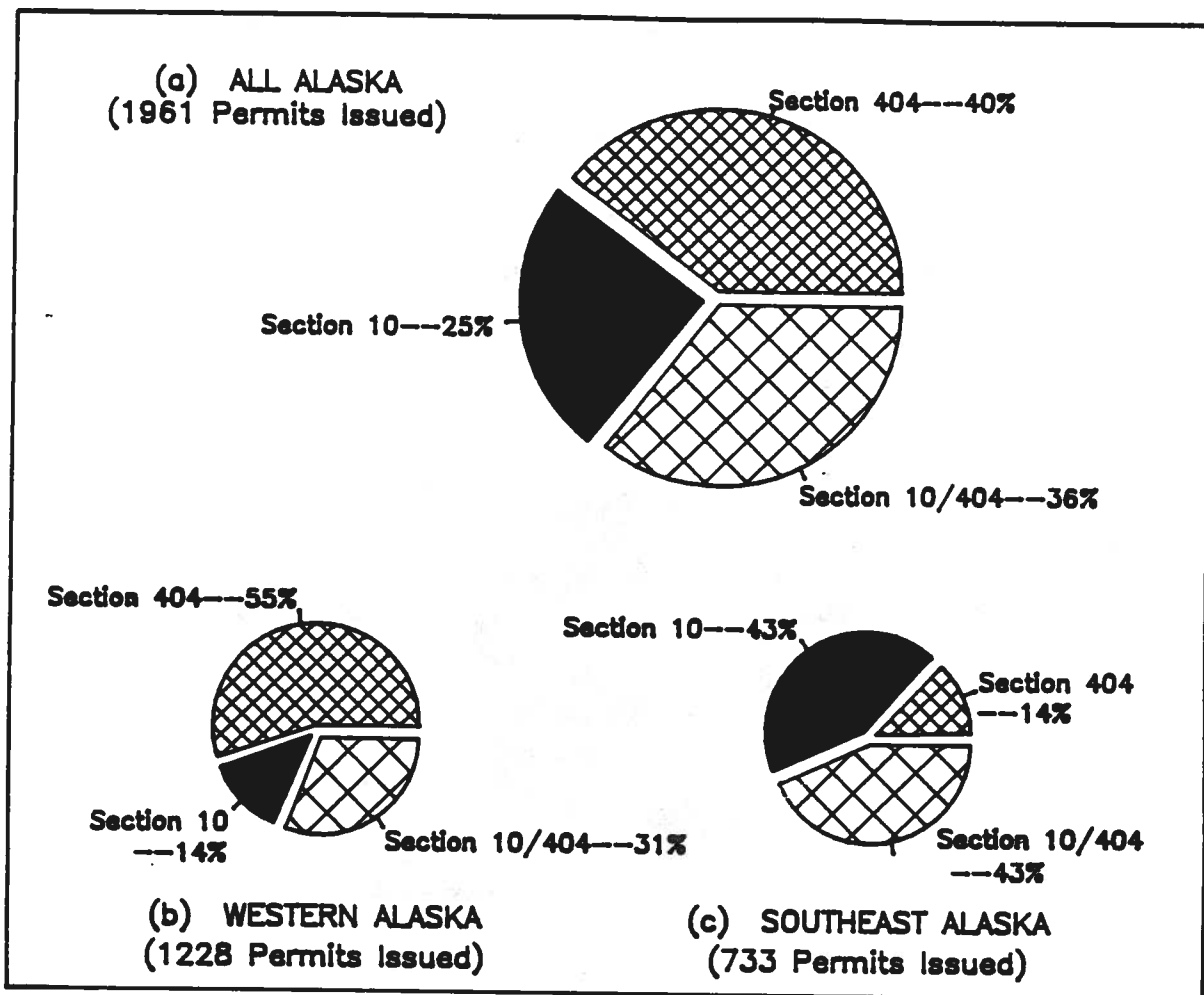
	1986		1987	
	Proposed	Issued	Proposed	Issued
<b>Western</b>				
Section 404	157	133	130	111
Section 10	50	43	72	63
Section 10/404	93	86	81	70
<u>Subtotal</u>	300	262	283	244
 <b>Southeast</b>				
Section 404	18	12	6	5
Section 10	84	69	77	65
Section 10/404	54	46	49	45
<u>Subtotal</u>	156	127	132	115
 <b>All Alaska</b>				
Section 404	175	145	136	116
Section 10	134	112	149	128
Both 10/404	147	132	130	115
<u>Total Reviewed</u>	456	389	415	359

Data for TABLE 1 and FIGURE 1. Applications for permits under the guidelines of either Section 404 of the Clean Water Act, Section 10 of the River and Harbor Act of 1899, or both, for Southeast Alaska, western Alaska, and combined for the Alaska Region, 1988.

	Proposed	Issued
<b>Western</b>		
Section 404	61	54
Section 10	65	52
Section 10/404	154	127
<u>Subtotal</u>	280	233

	Proposed	Issued
<b>Southeast</b>		
Section 404	58	49
Section 10	46	38
Section 10/404	15	11
<u>Subtotal</u>	119	98

	Proposed	Issued
<b>All Alaska</b>		
Section 404	119	103
Section 10	111	90
Section 10/404	169	138
<u>Total Reviewed</u>	399	331



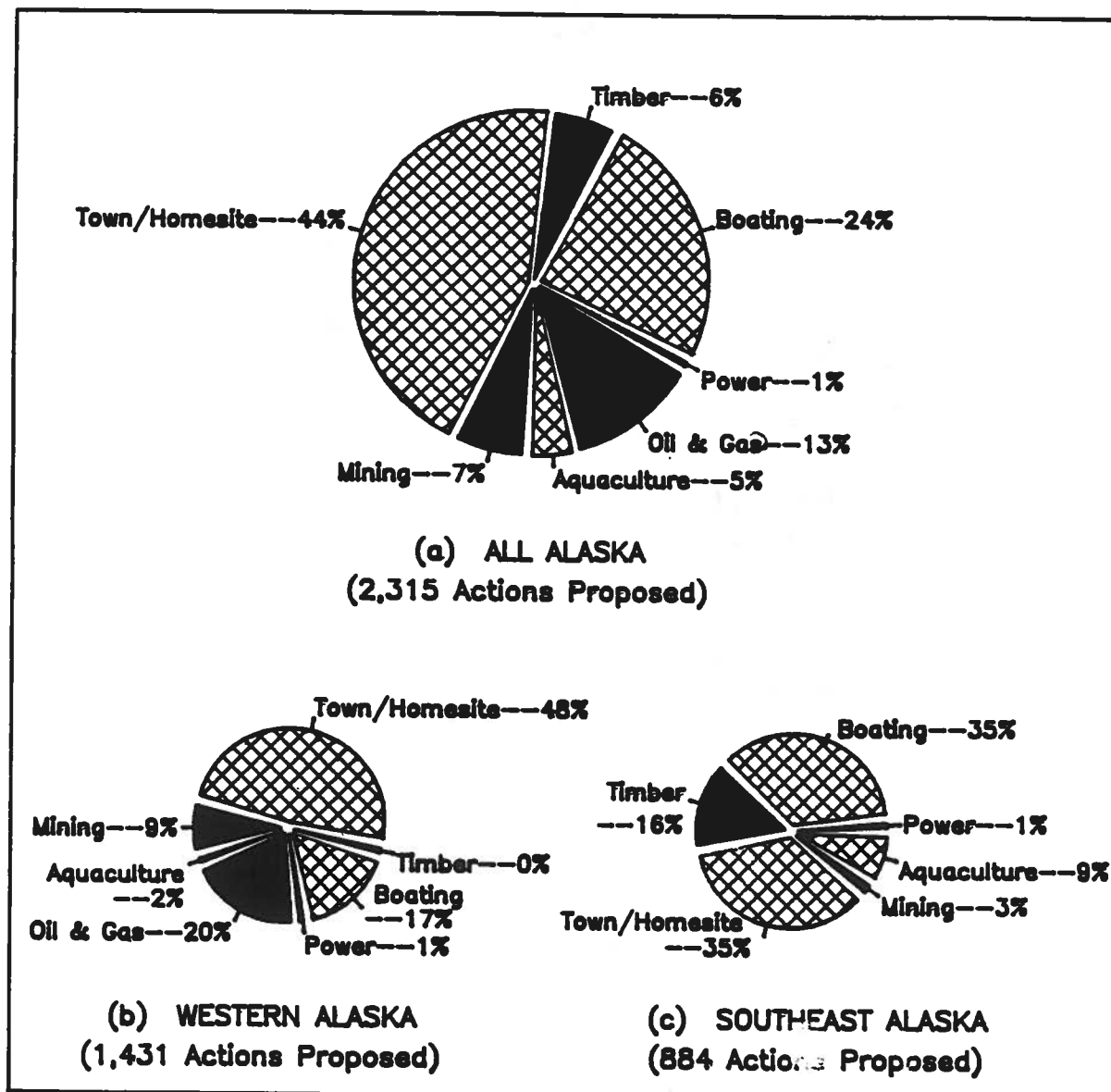
**Figure 1.** (a) Number of permits issued under Section 404 of the Clean Water Act, Section 10 of the River and Harbor Act, or both, during the years 1981-1985 in the Alaska Region. Data for the same period for projects located in western and (b) southeast Alaska (c).

### Permit Review According to Primary Purpose

All COE permit proposals have been assigned to one of seven primary purpose categories which describe the dominant feature or intended use of the site. These categories are: Power, Boating, Timber, Town/Homesite, Mining, Aquaculture, and Oil and Gas. As an example, a proposal to place fill in a waterway to create an upland pad where logs can be sorted and transferred to water was assigned to the primary purpose of Timber. Analysis of these



categories on a frequency of occurrence basis shows Town/Homesite the most common, followed in descending order by projects related to Boating, Oil and Gas, Mining, Timber, Aquaculture, and Power (Figure 2). More details on area of habitat affected in each primary purpose category are presented in subsequent sections and Tables 4-10.



**Figure 2.** (a) Proposed Section 10/404 actions for Alaska Region projects during the years 1981 through 1985, grouped according to categories of primary purpose. The data are also illustrated separately according to projects located in western Alaska (b) and southeast Alaska (c).

Data for FIGURE 2. Proposed Section 10/404 actions for southeast Alaska, western Alaska, and the Alaska total, in the years 1986 and 1987, grouped according to categories of primary purpose.

	1986		1987	
	Number	Percent	Number	Percent
<b>Western</b>				
Boating	62	21	77	27
Timber	3	1	2	1
Town/Homesite	164	55	129	46
Mining	25	8	25	9
Aquaculture	16	5	19	7
Oil & Gas	25	8	24	8
Power	5	2	7	2
<u>Subtotal</u>	300	100 %	283	100 %
<b>Southeast</b>				
Boating	63	39	48	36
Timber	20	13	26	20
Town/Homesite	37	24	34	26
Mining	6	5	3	2
Aquaculture	27	17	19	15
Oil & Gas	0	0	0	0
Power	3	2	2	1
<u>Subtotal</u>	156	100 %	132	100 %
<b>All Alaska</b>				
Boating	125	27	125	30
Timber	23	5	28	7
Town/Homesite	201	44	163	39
Mining	31	7	28	7
Aquaculture	43	9	38	9
Oil & Gas	25	6	24	6
Power	8	2	9	2
<u>Total</u>	456	100 %	415	100 %

Data for FIGURE 2. Proposed Section 10/404 actions for southeast Alaska, western Alaska, and the Alaska total in the year 1988, grouped according to categories of primary purpose.

	Number	Percent
Western		
Boating	59	21.07
Timber	5	1.79
Town/Homesite	87	31.07
Mining	79	28.21 *
Aquaculture	22	7.86
Oil & Gas	19	6.79
Power	9	3.21
Subtotal	280	100.00
Southeast		
Boating	41	34.45
Timber	25	21.01
Town/Homesite	32	26.89
Mining	7	5.88
Aquaculture	13	10.92
Oil & Gas	0	0
Power	1	0.84
Subtotal	119	100.00
All Alaska		
Boating	100	25.06
Timber	30	7.52
Town/Homesite	119	29.82
Mining	86	21.55
Aquaculture	35	8.77
Oil & Gas	19	4.76
Power	10	2.51
Total	399	100.00

\* higher than in past due to decision by COE to include placer mining in individual 404 permit category

### Types of NMFS Reviews

A full review during the allotted comment period of each permit application given Public Notice by the COE is not possible with available staff and funds. A NMFS procedure has, therefore, evolved that places effort where resource concerns are greatest. Based upon our experience with the COE permit program and our technical expertise, the initial screening occurs soon after receipt of the Public Notice. Those proposed actions likely to impose either no effect or a significant resource impact are identified as requiring either no review or an in-depth review. Most proposed actions are identified as falling between these levels of concern and requiring further review before issues and potential solutions can be identified. All NMFS Section 10/404 permit reviews can be ascribed to four categories according to the extent of our review effort. These review categories are described below.

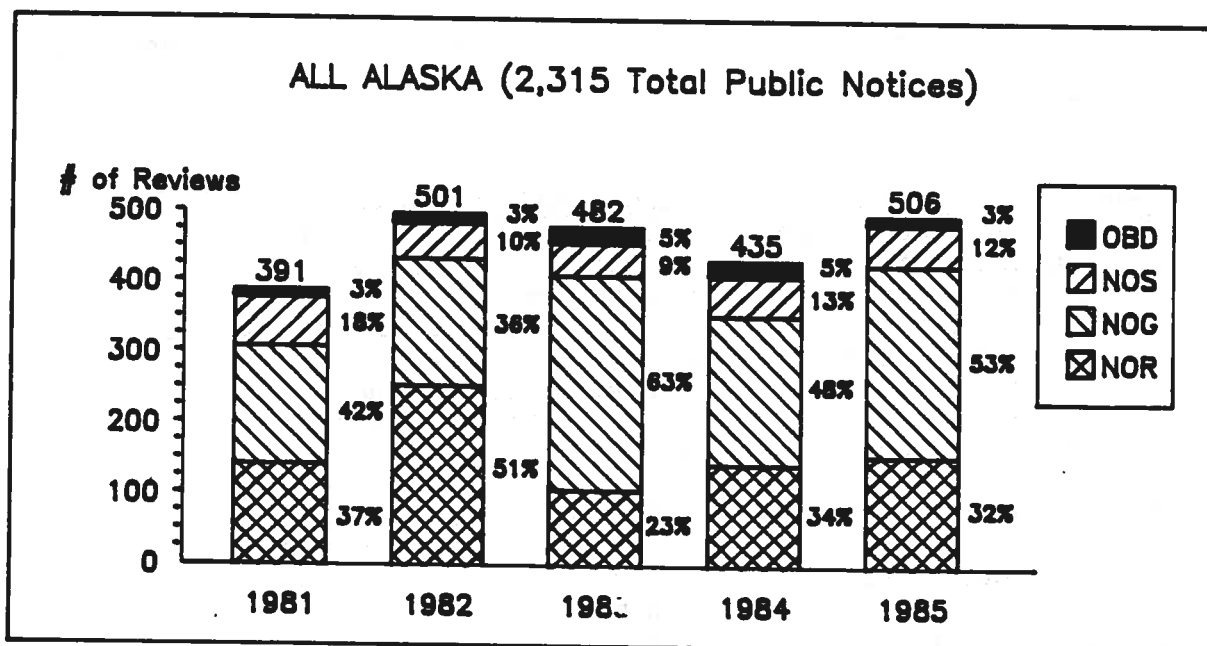
No Review or Minimum Handling (NOR): Screening of the Public Notice indicates impacts to living marine resources are not likely should the project be completed as described. We do not, however, have the required site-specific information to make a conclusive statement about this particular proposal. If staff and travel limitations preclude further review, our letter to the COE says NMFS will not submit specific comments unless additional information becomes available. This response is coded NOR, meaning "No objection no Review".

Moderate Handling (NOG): These projects are judged to pose either a minor or no threat to anadromous, estuarine, and/or marine fishery resources in the immediate area. Our review may involve a site visit, an examination of available data, conference calls, and meetings with other involved parties. If it is concluded that significant impact will not likely result to fisheries resources, we advise the COE that NMFS concerns can be met by the standard conditions of the COE permit. This response is coded as NOG, meaning "No objection, general conditions of the COE permit, if adhered to, will adequately protect fisheries resources."

In-depth Analysis - Recommended Stipulations (NOS): This category applies if our review results in recommendations for project modifications or permit stipulations intended to reduce or eliminate concerns to anadromous, estuarine, and marine fishery resources. Recommendations include timing restrictions on facility construction or project operations that avoid interaction with critical life stages of living marine resources, modification of construction activities, and/or relocation to another site where resource values are not as high. Our response is coded as NOS, meaning "No objection if special conditions are incorporated in the permit."

Recommend Denial (OBD): If significant adverse impacts on an area of high resource value have been identified and no reasonable solution can be reached that could minimize impacts, we recommend against the issuance of a permit. The response is coded as OBD, meaning "Denial of the permit is recommended."

Based upon these four review levels, our responses included 35 percent with no review or comment (NOR), 49 percent with no objection (NOG), 12 percent with special permit conditions (NOS), and 4 percent with denial (OBD) recommendations. These data grouped by category and year are presented in Figure 3.



**Figure 3.** NMFS review letters grouped by year and type of review actions according to four categories (described in text) for all Section 10/404 actions reviewed during the years 1981 - 1985, in the Alaska Region. Figures over the bars are yearly totals. Percentage of review types (per year) are beside the bars.



Data for FIGURES 3 and 4. NMFS review letters grouped by year and type of review actions according to four categories (as described in the original paper) for all Section 10/404 actions reviewed during the years 1986 and 1987.

	1986		1987	
	Number	Percent	Number	Percent
<b>Western</b>				
OBD	5	2	7	2
NOS	11	4	20	7
NOG	196	65	231	82
NOR	88	29	25	9
<u>Total</u>	300	100 %	283	100 %
<b>Southeast</b>				
OBD	12	7	3	2
NOS	38	25	40	31
NOG	98	63	87	66
NOR	8	5	2	1
<u>Total</u>	156	100 %	132	100 %
<b>All Alaska</b>				
OBD	17	4	10	2
NOS	49	11	60	15
NOG	294	64	318	77
NOR	96	21	27	6
<u>Total</u>	456	100 %	415	100 %

Data for FIGURE 3 and 4. NMFS review and letters grouped by year and type of review actions according to four categories (as described in the original paper) for all Section 10/404 actions reviewed during 1988.

	Number	Percent
<b>Western</b>		
OBD	4	1.43
NOS	28	10.00
NOG	242	86.43
NOR	6	2.14
Total	280	100.00
<b>Southeast</b>		
OBD	18	15.13
NOS	35	29.41
NOG	66	55.46
NOR	0	0
Total	119	100.00
<b>All Alaska</b>		
OBD	22	5.51
NOS	63	15.79
NOG	308	77.19
NOR	6	1.50
Total	399	100.00

Although the number of projects in southeast Alaska is only 38 percent of the total, the number of denial (OBD) and special stipulation (NOS) reviews is consistently higher than that for western Alaska (Figure 4). A partial explanation for this difference relates to the perception that because steep mountainous uplands begin at the coast in southeast Alaska, viable development can only occur through the filling of coastal wetlands and shorelines. This development pressure coupled to the wide distribution of salmon and other fish and shellfish resources that depend on the same coastal aquatic habitat increases the potential for conflicts. A higher frequency of conflicts between project proponents and habitat protection is reflected in a greater percentage of in-depth reviews in southeast Alaska.

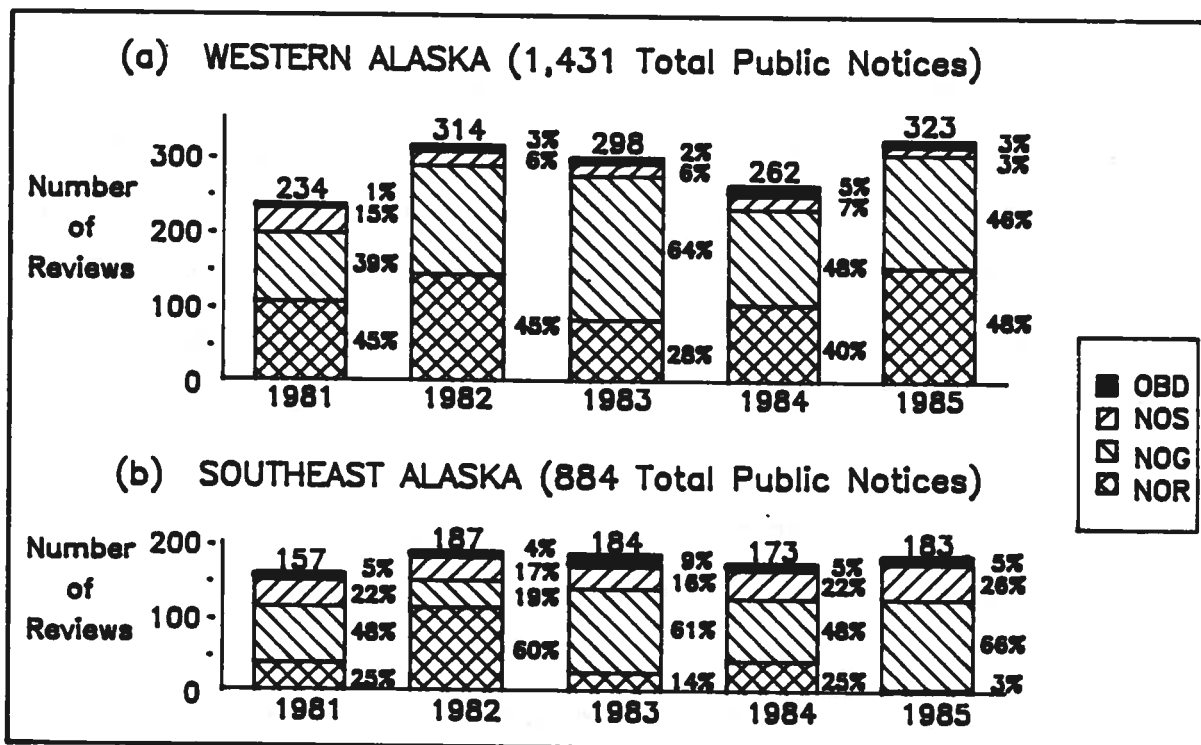


Figure 4. NMFS review letters for (a) projects located in western Alaska, and (b) southeast Alaska, grouped by year and type of review actions according to four categories (described in text) for all Section 10/404 actions reviewed during the years 1981-1985. Figures over the bars are yearly totals. Percentage of review types (per year) are beside the bars.

### Resource Protection Through Special Conditions

Twelve percent (279 out of 2,315) of the proposed actions from 1981 through 1985 were in the NOS (no objection with special permit stipulations) category described above. The number of special permit conditions recommended by NMFS was usually one, but had been as great as twelve when the project was more complex and the dependence of living marine resources upon local habitats higher. During the study period there was a decrease in the number of special conditions recommended annually in western Alaska. The ratio between recommended and permitted conditions ranged from 93 percent in 1982 to 45 percent in 1983 for western Alaska, and 88 percent in 1981 to 53 percent in 1983 for south-east Alaska.

Once our recommendations had been incorporated by the COE into permits, two major questions remained. Did the permittee adhere to the special conditions and did the special conditions provide the intended level of resource protection? Data on permit compliance or the adequacy of NMFS habitat protection recommendations are not available.

For the analysis of whether special conditions were incorporated into permits our special conditions are grouped into the following six general categories; qualitative limitations, requirements for fish passage or access, quantitative limitations, timing restrictions on construction, monitoring of biological concerns, and other unclassified conditions (Figure 5).

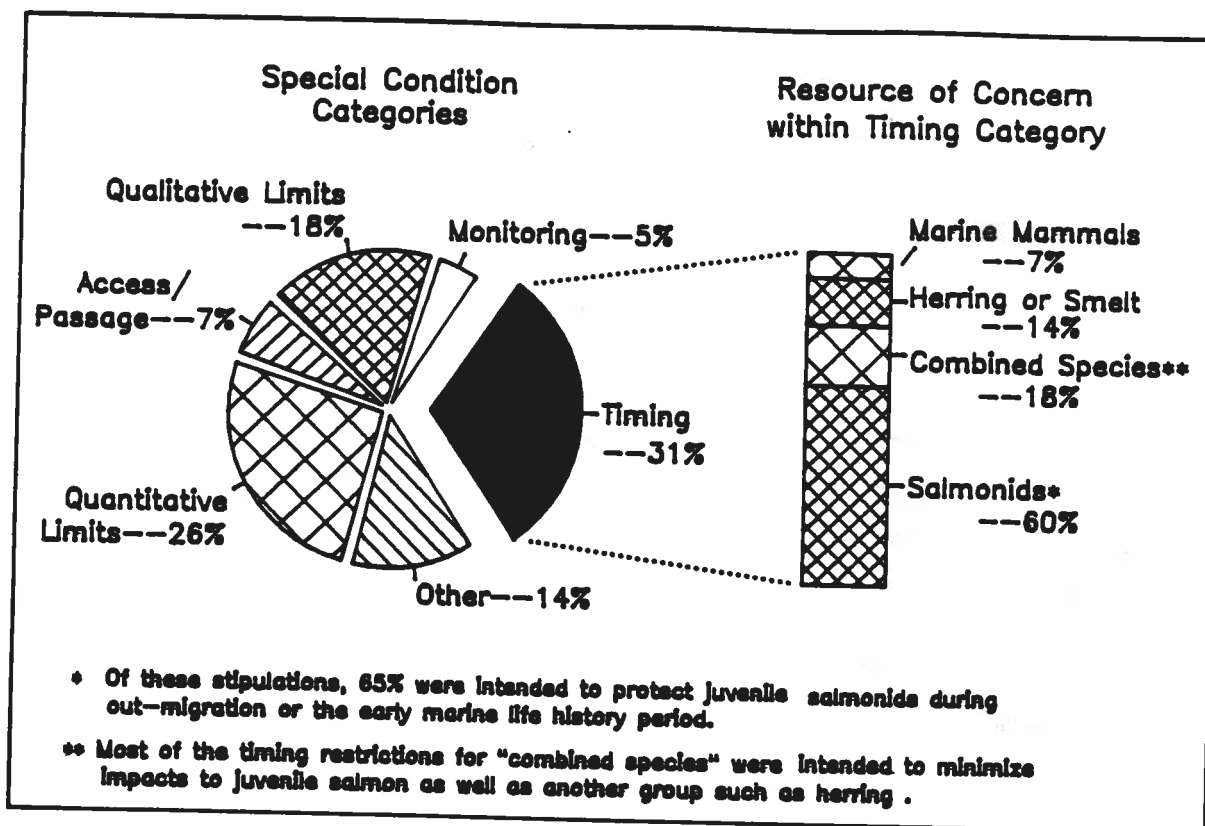


Figure 5. (a) Special conditions recommended by NMFS Alaska Region to the COE for incorporation into permits for actions reviewed during the years 1981-1985. Only proposals which were permitted are included in this analysis. (b) Type of fish or marine mammals the timing restrictions were directed to protect.

As previously mentioned, not all permit applications result in a Department of Army permit. Some requests are withdrawn by the applicant and others are denied by the COE. Even though NMFS may have expressed major concerns for these projects, we could not determine if our comments affected the disposition of proposals not permitted. Without this information our effectiveness is underestimated. A distinction, therefore, is needed between NMFS comments on proposed projects and projects that received COE authorization. A discussion of our input into only projects which were permitted (as presented in Table 2) follows.



General Category	(a) Total NMFS Recommended*	(b) Recommended Where Permit Issued	(c) Permitted Conditions	(d) Percent Inclusion
<u>Timing:</u> Special conditions limiting project construction or operations in relation to timing of tide cycle or in respect with important phases of a life history.	157	131	100	76%
<u>Monitoring:</u> Special conditions requiring project monitoring or coordination with agencies.	26	24	19	79%
<u>Qualitative Limits:</u> Special conditions to protect habitat types such as spawning gravels, water column, substrate, and rearing habitat.	90	79	61	77%
<u>Access/Passage:</u> Special conditions requiring provisions for fish or marine mammal passage or access.	35	29	25	86%
<u>Quantitative Limits:</u> Special conditions to address site-specific habitat features.	133	110	80	73%
<u>Other:</u> Unclassified conditions.	69	52	35	67%
<u>TOTAL</u>	510	425	320	75%

\* Includes recommendations for actions which were denied, withdrawn, or are pending a COE decision.

Table 2. Categories of permit conditions recommended by the Alaska Region NMFS and those included in Department of Army permits for Section 10/404 public notices for the years 1981 through 1985.

For those projects receiving COE authorization, we used the total number of NMFS recommendations included in the permit expressed as a percentage of the total stipulations requested as a measure of our effectiveness in obtaining resource protection and consideration. When all six special condition categories are combined, a minimum of 67 percent of our recommendations were included in the related permit by the COE. Some frequently recommended

Data for FIGURE 5 and TABLE 2. Categories of permit conditions recommended by the Alaska Region NMFS and those included in Department of the Army permits for Section 10/404 public notices for 1986.

General Category	(a) Total NMFS Recommended*	(b) Recommended Where Permit Issued	(c) Permitted Conditions	(d) Percent Inclusion
<u>Timing:</u> Special conditions limiting project construction or operations in relation to timing of tide cycle or in respect with important phases of a life history.	19	15	15	100%
<u>Monitoring:</u> Special conditions requiring project monitoring or coordination with agencies.	2	2	2	100%
<u>Qualitative Limits:</u> Special conditions to protect habitat types such as spawning gravels, water column, substrate, and rearing habitat.	9	8	7**	87%
<u>Access/Passage:</u> Special conditions requiring provisions for fish or marine mammal passage or access.	3	3	3	100%
<u>Quantitative Limits:</u> Special conditions to address site-specific habitat features.	35	33	32	97%
<u>Other:</u> Unclassified conditions.	14	12	12	100%
<u>TOTAL</u>	82	73	71	97%

\* Includes recommendations for actions which were denied, withdrawn, or are pending a COE decision.

\*\* The difference between recommended and permitted was due to Auke Bay 118. NMFS recommendations to the Corps of Engineers included (among other things) special conditions to the permit "storage or transfer of petroleum products in the project area is prohibited." and "fill, except for the launching ramp, shall be limited to the area above the mean high water line". The Department of Army did not reflect these recommendations in the permit they issued.

Data for FIGURE 5 and TABLE 2. Categories of permit conditions recommended by the Alaska Region NMFS and those included in Department of the Army permits for Section 10/404 public notices for 1987.

General Category	(a) Total NMFS Recommended*	(b) Recommended Where Permit Issued	(c) Permitted Conditions	(d) Percent Inclusion
<u>Timing:</u> Special conditions limiting project construction or operations in relation to timing of tide cycle or in respect with important phases of a life history.	19	18	18	100%
<u>Monitoring:</u> Special conditions requiring project monitoring or coordination with agencies.	0	0	0	-
<u>Qualitative Limits:</u> Special conditions to protect habitat types such as spawning gravels, water column, substrate, and rearing habitat.	12	10	10	100%
<u>Access/Passage:</u> Special conditions requiring provisions for fish or marine mammal passage or access.	4	4	4	100%
<u>Quantitative Limits:</u> Special conditions to address site-specific habitat features.	31	25	25	100%
<u>Other:</u> Unclassified conditions.	14	9	9	100%
<u>TOTAL</u>	80	66	66	100%

\* Includes recommendations for actions which were denied, withdrawn, or are pending a COE decision.

Data for FIGURE 5 and TABLE 2. Categories of permit conditions recommended by the Alaska Region NMFS and those included in Department of the Army permits for Section 10/404 Public Notices for 1988.

General Category	(a) Total NMFS Recommended*	(b) Recommended Where Permit Issued	(c) Permitted Conditions	(d) Percent Inclusion
Timing: Special conditions limiting project construction or operations in relation to timing of tide cycle or in respect with important phases of a life history.	19	18	18	100.00%
Monitoring: Special conditions requiring project monitoring or coordination with agencies.	3	2	2	100.00%
Qualitative Limits: Special conditions to protect habitat types such as spawning gravels, water column, substrate, and rearing habitat.	16	15	15	100.00%
Access/Passage: Special conditions requiring provisions for fish or marine mammal passage or access.	14	11	10**	90.91%
Quantative limits: Special conditions to address site-specific habitat features.	29	19	18***	94.74%
Other: Unclassified conditions.	9	7	7	100.00%
TOTAL	90	72	70	97.22%

\* Includes recommendations for actions which were denied, withdrawn, or are pending on a COE decision.

\*\* NMFS condition recommending public access around floathome not included - Thorne Bay 45.

\*\*\* NMFS condition recommending floathome moorage in water deep enough to preclude grounding not included - Thorne Bay 45.

conditions listed in the quantitative category of Table 2. (previous page), were seldom included in the COE permit. This is not interpreted as a resource protection loss. The omitted recommendations were standard conditions of the related Clean Water Act 401 Certification issued by the State of Alaska. The COE, therefore, chose not to repeat conditions that are binding and administered through another regulatory process.

Construction or operation timing windows was the most frequently (31 percent) recommended special condition followed by quantitative and qualitative conditions to protect fish and/or marine mammal habitat. Because timing restrictions accounted for the majority of recommended conditions, they are presented separately by species (Figure 5, page 15). Salmonids, particularly juveniles, were the target species most often afforded protection by timing restrictions because they occur near shore during predictable months.

Because NMFS is one of several agencies commenting to the COE, it is difficult to be certain which agency's effort or combination of involved parties resulted in resource conservation. This difficulty relates to the lack of a provision under either MOA for NMFS to be informed of the COE rationale for rejecting our recommendations. A measure of NMFS effectiveness in obtaining special consideration for living marine resources was, therefore, made by comparing conditions included in COE permits with those recommended in our official response (Figure 6).

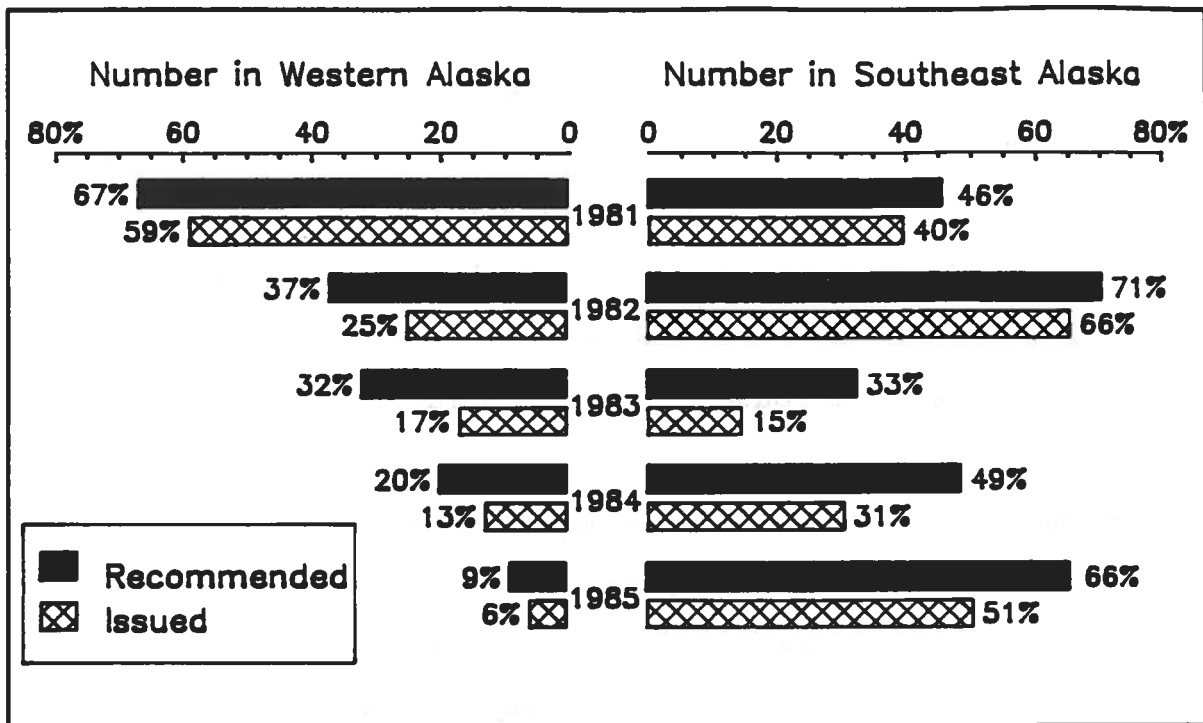


Figure 6. Number of special conditions NMFS recommended to the COE compared to the number included in the permits for the years 1981-1985 (permitted projects only).

### Resource Protection Through Permit Denial

Denial recommendations convey our most serious resource concerns, those which cannot be resolved during the allotted comment period. Some denial recommendations are a product of efforts to respond within the existing time restrictions. In these instances, potentially significant resources have been identified, yet the applicant may not be able or willing to temporarily stop the comment period clock and conduct additional analyses of alternatives. In a few instances, the resource concern is so great and the project alternatives so limited that project/resource divergence does not permit acceptable resolution. When these conditions persist, recommending denial of the proposed project

Data for FIGURE 6

Number of special conditions NMFS recommended to the COE compared to the number included in the permits (permitted projects only, those which were withdrawn or denied are not counted).

Western Alaska			Southeast Alaska	
15	recommended	1986	recommended	60
15	issued		issued	58
23	recommended	1987	recommended	43
23	issued		issued	42

Data for FIGURE 6.

Number of Special conditions NMFS recommended to the COE in 1988 compared to the number included in the permits (permitted projects only, those which were withdrawn or denied are not counted).

number in Western Alaska

28 recommended  
28 issued

number in Southeast Alaska

44 recommended  
42 issued\*

\* Thorne Bay 45 issued without two NMFS stipulations; Dennis Carlson of COE says they plan to add those conditions at some point in the future.



becomes the only action available to NMFS. At this time the applicant and COE are advised of our reasons.

The NMFS Alaska Region recommended denial of 89 actions (3.8 percent of the total reviewed) over the five-year study period. Fifty of these projects were located in southeast Alaska and 39 in western Alaska. The applicants withdrew 42 of these proposals (47 percent) prior to a COE decision. Our denial requests were upheld for 21 proposed projects (24 percent). Two COE permit decisions were pending as of September 1986, and permits were issued for the remaining 22 proposals (25 percent). The number of permits issued over NMFS objection is reduced from 22 to 16 when adjusted by the 8 proposals where negotiations with the applicants resulted in project modifications sufficient to significantly reduce our original objections.

We examined the 16 permit files involving apparent COE rejection of the NMFS denial recommendation in order to further assess our effectiveness in reducing habitat loss. We concluded that denial recommendations were not overruled entirely in most situations; rather, the authorized affected area was reduced by 83 percent for dredging and 45 percent for placement of fill. Although these reductions in project scope did not always remove our concerns, they reduced the level of concern.

#### Administrative Review of Permit Denial Conflicts

In the 1982 MOA NMFS agreed to formally convey the seriousness

of our concerns to the COE for those projects we felt deserving of a District Engineer decision incorporating the NMFS recommendations. This was done by NMFS stating in our initial response that if our recommendations were not included or the permit was not denied, we would seek resolution of the District Engineer's decision at higher authority. The COE was forewarned in this way a total of 9 times in the years since the 1982 MOA. The Alaska Region resolved differences with the COE at the District level without elevating to higher authority in all but one case, Beaufort Sea 340. In this instance resolution was accomplished at the highest review level referenced in the MOA.

#### SUBPART B. Analysis by Area (Acres)

##### Affected Habitat

The type and amount of habitat affected depend on the activities needed to complete the primary purpose of the project. Several activities or site alterations, such as dredging and filling, might be required to accomplish any given project. Some activities are common to most projects, affect a common habitat type, and are largely responsible for most resource/development conflicts. The majority of site alterations involves placing fill in wet tundra, intertidal, or subtidal habitat to convert it to uplands; dredging intertidal or subtidal habitat to make it deeper; and constructing docks, piers, or floats over marine or freshwater habitat to facilitate access to a waterway. The acreage of habitat potentially impacted by projects proposed for Section 10/404 permits and the acreage impacted if all projects

receiving permits were also constructed are presented in Table 3.

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	2,315	1,961	1,431	1,228	884	733
Acreage Alteration:						
Dredge	39,477	11,910	38,999	11,533	478	377
Coastal/Wetland Fill	8,632	7,660	7,897	7,274	735	386
Tundra Fill	8,453	7,130	8,453	7,130	0	-
Impoundment	1,058	897	752	592	306	305
Area Dock/Pier/Float	1,282	925	54	52	1,228	873
Total	58,902	28,522	56,155	26,581	2,747	1,941

Table 3. Acreage of habitat proposed and permitted for alteration during the years 1981 through 1985 in the Alaska Region.

Section 10/404 permit proposals to alter a total of 58,902 acres of fisheries habitat were reviewed in the years 1981 through 1985. The amount of habitat alteration actually authorized, however, was 28,522 acres (48 percent of that originally requested). Discharging fill into coastal and wetland areas accounted for 7,660 acres of the total authorized alterations. Dredging accounted for 11,910 acres. Proposals to impound waters are not common in Alaska with only 897 acres affected during the five years of record. Construction of docks, piers, or floats over wetlands or waterways accounted for 925 acres of alteration, 94 percent of these permitted actions were located in southeast Alaska.

Fill placed on tundra makes up about half (7,130 acres) of the habitat altered by filling in western Alaska. Tundra wetlands

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Data for Table 3. Acreage of habitat proposed and permitted for alteration during the years 1986 and 1987 in the Alaska Region.

1987

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	415	359	283	244	132	115
Acreage Alteration:						
Dredge	2,108.04	1,086.12	2,014.78	999.19	93.26	86.93
Coastal/Wetland Fill	1,399.96	1,129.62	1,370.59	1,115.65	29.37	13.97
Tundra Fill	397.47	333.53	397.47	333.53	0	0
Impoundment	44.18	44.18	44.18	44.18	0	0
Area Dock/Pier/Float	216.27	195.43	17.49	17.42	198.78	178.01
Total	4,165.92	2,788.88	3,844.51	2,509.97	321.41	278.91

1986

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	456	389	300	262	156	127
Acreage Alteration:						
Dredge	4,195.23	1,811.69	4,100.47	1,719.32	94.76	92.37
Coastal/Wetland Fill	835.81	731.92	721.76	627.86	114.05	104.06
Tundra Fill	313.17	303.27	313.17	303.27	0	0
Impoundment	3,820.00	3,820.00	3,820.00	3,820.00	0	0
Area Dock/Pier/Float	175.79	148.32	26.84	8.00	148.95	140.32
Total	9,340.00	6,815.20	8,982.24	6,478.45	357.76	336.75

Data for TABLE 3. Acreage of habitat proposed and permitted for alteration during the year 1988 in the Alaska Region.

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions	399	331	280	233	119	98
Acreage Alteration:						
Dredge	706.06	572.81	675.36	547.25	30.70	25.56
Coastal/Wetland Fill	2272.18	713.97	2168.86	648.39	103.32	65.58
Tundra Fill	897.07	828.75	897.07	828.75	0	0
Impoundment	1.40	1.40	1.40	1.40	0	0
Area Dock/Pier/Float	276.63	250.47	58.58	40.93	218.05	209.54
Total	4153.34	2367.40	3801.27	2066.72	352.07	300.68

are located primarily on the North Slope and along the coasts of the Bering and Chukchi Seas and are usually isolated from fishery habitats. Because anadromous, marine, or estuarine fishery resources are not directly or indirectly impacted, perched tundra wetlands are of minor concern to NMFS. For these reasons tundra wetlands values are tabulated separately in our data.

We also grouped the above total acreage (58,902) by primary purpose categories (Timber, Town/Homesite, Mining, Oil and Gas, Power, Aquaculture, and Boating). The narrative below describes the primary purposes and generalized threats to fisheries habitat, and is followed by a table showing amounts (acreage) requested and permitted for alteration within each primary purpose category.

Timber harvest occurs primarily in the Tongass National Forest in southeast Alaska where most of the State's commercial timber is located (Table 4). Section 10/404 permits requested by the timber industry are needed for roads, boat docks, off-loading ramps, and land-to-water timber transfer facilities. Over the five-year review period, the acreage affected by timber-related permits appears small (704 acres). However, the quality of habitat potentially affected by the original proposals is high. Shallow, protected bays and estuaries desirable for log transfer and storage operations are often productive and sensitive fisheries habitats. Because of these conflicting interests, associated permit actions require the greatest amount of review. NMFS





biologists must conduct on-site evaluations of both upland and submerged habitats in order to determine resource concerns, suitable alternative sites, and mitigative project features. Because of the complexities of planning and conducting a timber harvest, most of the NMFS involvement occurs as pre-application coordination. This early involvement reduces the number of sites, acres, and potential resource conflicts in subsequent applications for COE permits. Significant involvement during the Public Notice review period, therefore, usually occurs only when either a late change is made in a timber sale layout or there has been a failure to reach agreement during the pre-application planning phase.

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
<b>TIMBER</b>						
Number of Actions	145	113	4	3	141	110
<b>Acreage Alteration:</b>						
Dredge	4	4	0	-	4	4
Coastal Wetland Fill	82	53	5	5	77	48
Tundra Fill	0	0	0	-	0	-
Impoundment	0	0	0	-	0	-
Area Dock/Pier/Float	973	647	17	17	956	630
Total	1,059	704	22	22	1,037	682

Table 4. Timber Industry - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period (1981-1985) in the Alaska Region.

Town/Homesite includes a variety of activities associated with the development of housing, parking, retail, and related residential or commercial projects (Table 5). Proposals often involve the filling of tidelands and wetlands. Depending on

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**Table 4. Timber Industry - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during 1986 and 1987 in the Alaska Region.**

**1987**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	28	27	2	2	26	25
Acreage Alteration:						
Dredge	3.42	3.42	0	0	3.42	3.42
Coastal/Wetland Fill	5.25	1.46	0.07	0.07	5.18	1.39
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	165.25	165.25	9.30	9.30	155.95	155.95
Total	173.92	170.13	9.37	9.37	164.55	160.76

**1986**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	23	21	3	1	20	18
Acreage Alteration:						
Dredge	3.44	3.44	0	0	3.44	3.44
Coastal/Wetland Fill	3.06	2.51	0.65	0.36	2.41	2.15
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	126.9	106.43	19.13	4.13	107.77	102.30
Total	133.40	112.38	19.78	4.49	113.62	107.89

Data for TABLE 4. Timber industry - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period of 1988 in the Alaska Region.

Timber Number of Actions	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
	30	25	5	3	25	22
Acreage Alteration:						
Dredge	0.03	0.03	0	0	0.03	0.03
Coastal/Wetland Fill	26.13	5.80	0.50	0.17	25.63	5.63
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	232.83	210.51	27.31	13.00	205.52	197.51
Total	258.99	216.34	27.81	13.17	231.18	203.17

the location and sensitivity of the habitat, the NMFS review may be brief or involve in-depth analysis leading to a recommendation to the COE for special permit conditions or even denial of the permit.

Because of the clustered and variable distribution of important nearshore habitats, an on-site habitat evaluation is usually necessary before specific recommendations can be developed. Some concerns, such as projects located too close to anadromous streams, are easy to identify. Other considerations, such as whether shoreline modifications or wetland fills will significantly modify existing resource use of an area, are more difficult. The cumulative impact of several local projects is one of the most difficult assessments because of the piecemeal way coastal development occurs in most communities. Cumulative impacts assessments also require extensive and expensive area-wide reviews.

TOWN/HOMESITE	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions	1,024	855	713	619	311	236
Acreage Alteration:						
Dredge	1,599	1,362	1,494	1,314	105	48
Coastal Wetland Fill	3,783	3,111	3,305	2,882	478	229
Tundra Fill	468	452	468	452	0	-
Impoundment	8	8	7	7	1	1
Area Dock/Pier/Float	32	23	16	16	16	7
Total	5,890	4,956	5,290	4,671	600	285

Table 5. Town/Homesite - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period (1981-1985) in the Alaska Region.

**Table 5. Town/Homesite - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during 1986 and 1987 in the Alaska Region.**

**1987**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	163	134	129	106	34	28
Acreage Alteration:						
Dredge	799.83	139.20	797.58	136.98	2.25	2.22
Coastal/Wetland Fill	1,214.02	1,054.91	1,204.63	1,046.13	9.39	8.78
Tundra Fill	131.92	78.58	131.92	78.58	0	0
Impoundment	0.10	0.10	0.10	0.10	0	0
Area Dock/Pier/Float	1.46	1.27	0.54	0.52	0.92	0.75
Total	2,147.33	1,274.06	2,134.77	1,262.31	12.56	11.75

**1986**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	201	170	164	142	37	28
Acreage Alteration:						
Dredge	47.65	38.07	47.17	37.59	0.48	0.48
Coastal/Wetland Fill	470.72	382.72	423.18	342.77	47.54	39.95
Tundra Fill	166.00	156.60	166.00	156.60	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	1.70	1.58	0.37	0.35	1.33	1.23
Total	686.07	578.97	636.72	537.31	49.35	41.66

Data for TABLE 5. Town/Homesite - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period of 1988 in the Alaska Region.

Town/Homesite Number of Actions	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
	119	96	87	72	32	24
Acreage Alteration:						
Dredge	41.43	41.43	32.14	32.14	9.29	9.29
Coastal/Wetland Fill	210.43	118.54	151.79	73.10	58.64	45.44
Tundra Fill	328.61	328.61	328.61	328.61	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	4.18	3.95	0.32	0.31	3.86	3.64
Total	584.65	492.53	512.86	434.16	71.79	58.37

Mining Projects have numbered 159 during the years 1981 through 1985 (Table 6). As with timber harvest, these projects generally require extensive pre-application coordination, numerous visits to the site, and full disclosure under the National Environmental Policy Act (NEPA). Usually an interagency team is established to examine options and negotiate actions that minimize impacts on productive habitat, and to accommodate such needs as road crossings, outfalls, or wharfs as required by the mining proponents. Projects to mine gravel deposits, either freshwater or marine, for a fill source can be particularly harmful to maintenance of anadromous fish spawning habitat.

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
MINING						
Number of Actions	159	113	134	94	25	19
Acreage Alteration:						
Dredge	37,163	10,205	36,880	9,957	283	248
Coastal Wetland Fill	306	235	261	218	45	17
Tundra Fill	980	961	980	961	0	-
Impoundment	585	585	585	585	0	-
Area Dock/Pier/Float	2	2	1	1	1	1
Total	39,036	11,988	38,707	11,722	329	266

Table 6. Mining - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period (1981-1985) in the Alaska Region.

Oil and Gas industrial and related development actions are generally limited to western Alaska; i.e., Beaufort Sea, Bering Sea, and a small portion of the northern Gulf of Alaska (Table 7). As mentioned before, NMFS generally does not have major fisheries resource concerns with regard to fill placed on tundra



**Table 6. Mining - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during 1986 and 1987 in the Alaska Region.**

**1987**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	28	17	25	16	3	1
Acreage Alteration:						
Dredge	1,284.06	922.92	1,200.88	846.04	83.18	76.88
Coastal/Wetland Fill	27.30	2.30	17.30	2.30	10.00	0
Tundra Fill	251.59	240.99	251.59	240.99	0	0
Impoundment	44.08	44.08	44.08	44.08	0	0
Area Dock/Pier/Float	1.00	0	0	0	1.00	0
Total	1,608.03	1,210.29	1,513.85	1,133.41	94.18	76.88

**1986**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	31	26	25	21	6	5
Acreage Alteration:						
Dredge	3,994.25	1,623.47	3,905.26	1,536.49	88.99	86.98
Coastal/Wetland Fill	64.84	59.75	19.36	14.27	45.48	45.48
Tundra Fill	16.00	16.00	16.00	16.00	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	0	0	0	0	0	0
Total	4,075.09	1,699.22	3,940.62	1,566.76	134.47	132.46

Data for TABLE 6. Mining - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period of 1988 in the Alaska Region.

Mining Number of Actions	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
	86	73	79	68	7	5
Acreage Alteration:						
Dredge	638.14	507.94	624.04	495.94	14.10	12.00
Coastal/Wetland Fill	1923.29	551.07	1915.46	544.45	7.83	6.62
Tundra Fill	274.47	256.57	274.47	256.57	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	0.06	0.06	0	0	0.06	0.06
Total	2835.96	1315.64	2813.97	1296.96	21.99	18.68

habitat or perched, isolated wetlands. Other proposals which impact nearshore coastal habitat, non-perched tundra, or coastal streams generally require extensive review, site visits if possible, and negotiation with the applicants. Unresolvable conflicts can be highly visible with disclosure in the local and national press and involvement by special interest groups, and local, state, or nationally elected officials. The one situation where the NMFS Alaska Region sought resolution of the District Engineer's decision through elevation to higher authority involved an application by the oil and gas industry.

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
OIL/GAS						
Number of Actions	294	265	294	265	0	-
Acreage Alteration:						
Dredge	70	1	70	1	0	-
Coastal Wetland Fill	3,768	3,721	3,768	3,721	0	-
Tundra Fill	6,956	5,668	6,956	5,668	0	-
Impoundment	0	-	0	-	0	-
Area Dock/Pier/Float	5	5	5	5	0	-
Total	10,799	9,395	10,799	9,395	0	0

Table 7. Oil/Gas - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period (1981-1985) in the Alaska Region.

Power includes projects related to hydroelectric development, transmission line construction, and fossil fuel power generation (Table 8). The Section 10/404 permits are usually closely associated with environmental impact assessments conducted under NEPA and the Federal Energy Regulatory Commission (FERC) processes in which NMFS participates. During the initial review stages,

**Table 7. Oil/Gas - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during 1986 and 1987 in the Alaska Region.**

**1987**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	24	24	24	24	0	0
Acreage Alteration:						
Dredge	0.49	0.49	0.49	0.49	0	0
Coastal/Wetland Fill	5.11	5.11	5.11	5.11	0	0
Tundra Fill	13.56	13.56	13.56	13.56	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	2.98	2.98	2.98	2.98	0	0
Total	22.14	22.14	22.14	22.14	0.00	0.00

**1986**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	25	24	25	24	0	0
Acreage Alteration:						
Dredge	0	0	0	0	0	0
Coastal/Wetland Fill	14.41	14.41	14.41	14.41	0	0
Tundra Fill	131.17	130.67	131.17	130.67	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	0	0	0	0	0	0
Total	145.58	145.08	145.58	145.08	0.00	0.00

Data for TABLE 7. Oil/Gas - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period of 1988 in the Alaska region.

Oil/Gas	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions	19	12	19	12	0	0
Acreage Alteration:						
Dredge	0	0	0	0	0	0
Coastal/Wetland Fill	62.90	15.76	62.90	15.76	0	0
Tundra Fill	289.98	239.56	289.98	239.56	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	0.01	0.01	0.01	0.01	0	0
Total	352.89	255.33	352.89	255.33	0	0

significant amounts of freshwater and anadromous fish habitat are identified as threatened, and the process begins to minimize the predicted damages. Often minimum-flow studies are required to insure adequate discharge to downstream anadromous habitat. The proposals to construct hydroelectric dams on the Susitna and Stikine Rivers are examples of projects with potentially large fishery impacts. Responding to these potential threats, NMFS has spent several years of effort disclosing impacts and negotiating settlements. None of this effort appears below because Section 10/404 permits were not yet involved.

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
POWER						
Number of Actions	24	22	14	13	10	9
Acreage Alteration:						
Dredge	1	1	1	1	0	-
Coastal Wetland Fill	49	39	42	32	7	7
Tundra Fill	0	-	0	-	0	-
Impoundment	302	142	160	0	142	142
Area Dock/Pier/Float	43	43	0	-	43	43
Total	395	225	203	33	192	192

Table 8. Power - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period (1981-1985) in the Alaska Region.

Aquaculture projects relate to artificial propagation facilities such as salmon hatcheries, oyster culture facilities, and projects to enhance natural habitat (Table 9). The availability of isolated sites with high water quality values has drawn aquaculture interests to Alaska. There have been 106 actions reviewed during the five-year study period, 75 percent were located in

**Table 8. Power - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the years 1986 and 1987 in the Alaska Region.**

**1987**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	9	9	7	7	2	2
Acreage Alteration:						
Dredge	0.51	0.51	0.51	0.51	0	0
Coastal/Wetland Fill	4.16	4.16	4.14	4.14	0.02	0.02
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	0	0	0	0	0	0
Total	4.67	4.67	4.65	4.65	0.02	0.02

**1986**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	8	6	5	4	3	2
Acreage Alteration:						
Dredge	0.10	0.10	0.10	0.10	0	0
Coastal/Wetland Fill	183.59	183.36	183.56	183.34	0.03	0.02
Tundra Fill	0	0	0	0	0	0
Impoundment	3,820.00	3,820.00	3,820.00	3,820.00	0	0
Area Dock/Pier/Float	0.15	0	0	0	0.15	0
Total	4,003.84	4,003.46	4,003.66	4,003.44	0.18	0.02

Data for TABLE 8. Power - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period of 1988 in the Alaska Region.

Power	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions	10	9	9	8	1	1
Acreage Alteration:						
Dredge	1.10	1.10	1.10	1.10	0	0
Coastal/Wetland Fill	5.77	0.37	5.77	0.37	0	0
Tundra Fill	0	0	0	0	0	0
Impoundment	1.40	1.40	1.40	1.40	0	0
Area Dock/Pier/Float	0.16	0.16	0.12	0.12	0.04	0.04
Total	8.43	3.03	8.39	2.99	0.04	0.04



southeast Alaska. In southeast Alaska, most of the 113 acres proposed to be impacted by dock/pier/float activities are for oyster culturing, a mariculture industry rapidly gaining popularity. Isolated oyster culture rafts in general do not pose a significant habitat deterioration threat.

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
AQUACULTURE						
Number of Actions:	106	96	26	23	80	73
Acreage Alteration:						
Dredge	133	44	117	29	16	15
Coastal Wetland Fill	78	75	71	68	7	7
Tundra Fill	0	-	0	-	0	-
Impoundment	163	163	0	-	163	163
Area Dock/Pier/Float	114	110	1	1	113	109
Total	488	392	189	98	299	294

Table 9. Aquaculture - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period (1981-1985) in the Alaska Region.

Boating related projects are those including construction or repair of docks, piers or floats, mooring buoys, launching ramps, boat storage, and boat harbor related parking (Table 10). Impacts result from dredging actions to deepen channels or harbors, filling of intertidal areas, and construction of docks, piers, and floats over subtidal and intertidal habitat. Potential threats to fisheries habitat from these types of projects are highest for marina developments. In these cases, benthic habitat under a marina is often degraded substantially from cumulative discharges and circulation changes.

**Table 9. Aquaculture - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during 1986 and 1987 in the Alaska Region.**

**1987**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	38	33	19	18	19	15
Acreage Alteration:						
Dredge	0.58	0.58	0.01	0.01	0.57	0.57
Coastal/Wetland Fill	1.68	1.68	0.12	0.12	1.56	1.56
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	11.39	5.68	1.18	1.17	10.21	4.51
Total	13.65	7.94	1.31	1.30	12.34	6.64

**1986**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	43	37	16	15	27	22
Acreage Alteration:						
Dredge	88.78	88.77	88.77	88.77	0.01	0
Coastal/Wetland Fill	12.61	12.45	12.24	12.24	0.37	0.21
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	32.40	29.48	2.89	0.39	29.51	29.09
Total	133.79	130.70	103.90	101.40	29.89	29.30

Data for TABLE 9. Aquaculture - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period of 1988 in the Alaska Region.

Aquaculture Number of Actions	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
	35	25	22	15	13	10
Acreage Alteration:						
Dredge	5.09	5.09	5.03	5.03	0.06	0.06
Coastal/Wetland Fill	8.28	7.24	7.83	7.12	0.45	0.12
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	31.15	28.84	24.80	22.66	6.35	6.18
Total	44.52	41.17	37.66	34.81	6.86	6.36

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
BOATING						
Number of Actions	563	497	246	211	317	286
Acreage Alteration:						
Dredge	506	293	437	232	69	62
Coastal Wetland Fill	565	421	444	343	121	78
Tundra Fill	49	49	49	49	0	-
Impoundment	0	0	0	-	0	-
Area Dock/Pier/Float	114	96	15	13	99	82
Total	1,234	859	945	637	289	222

Table 10. Boating - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period (1981-1985) in the Alaska Region.

Acreage Affected According to Type of NMFS Review -- The amount of habitat impacted by projects according to type of NMFS review is summarized (Table 11). Block I contains projects NMFS found to have minor or no impact on anadromous, estuarine, or marine fishery resources (either NOR or NOG reviews as defined earlier). NMFS had no objection to issuance of these permits. Block II contains projects NMFS felt could have a significant impact on anadromous, estuarine, or marine fishery resources, and recommended special conditions to the permit (NOS). Block III contains those projects NMFS felt could not be permitted without serious habitat impact and recommended for denial (OBD).

Regionwide, permits involving 56 percent of the total acreage proposed for alteration over the period 1981-1985 received a "no objection (NOG)/no review (NOR)" response from NMFS. Even with our lack of objection to these permits, a reduction of 32 percent occurred between the acreage proposed and authorized for

**Table 10. Boating - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during 1986 and 1987 in the Alaska Region.**

**1987**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	125	115	77	71	48	44
Acreage Alteration:						
Dredge	19.15	19.00	15.31	15.16	3.84	3.84
Coastal/Wetland Fill	142.44	60.00	139.22	57.78	3.22	2.22
Tundra Fill	0.40	0.40	0.40	0.40	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	34.19	20.25	3.49	3.45	30.70	16.80
Total	196.18	99.65	158.42	76.79	37.76	22.86

**1986**

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions:	125	107	62	55	63	52
Acreage Alteration:						
Dredge	61.01	57.84	59.17	56.37	1.84	1.47
Coastal/Wetland Fill	86.58	76.72	68.36	60.47	18.22	16.25
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	14.64	10.83	4.45	3.13	10.19	7.70
Total	162.23	145.39	131.98	119.97	30.25	25.42

Data for TABLE 10. Boating - Acreage of habitat proposed and issued permits for alteration by Section 10/404 actions during the study period 1988 in the Alaska Region.

Boating Number of Actions	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
	100	91	59	55	41	36
Acreage Alteration:						
Dredge	20.27	17.22	13.05	13.04	7.22	4.18
Coastal/Wetland Fill	35.38	15.19	24.61	7.42	10.77	7.77
Tundra Fill	4.01	4.01	4.01	4.01	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	8.24	6.94	6.02	4.83	2.22	2.11
Total	67.90	43.36	47.69	29.30	20.21	14.06

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
I. Reviews NMFS had no objection to (NOG and NOR) permit issuance:						
No. of Actions:						
Subtotal	1,947	1,701	1,293	1,129	654	572
Acreage alteration:						
Dredge	15,914	7,679	15,711	7,502	203	177
Coastal Wetland Fill	7,263	6,659	6,909	6,413	354	246
Tundra Fill	8,049	6,726	8,049	6,726	0	-
Impoundment	1,056	896	752	592	304	304
Area Dock/Pier/Float	702	539	31	28	671	511
Subtotal	32,984	22,499	31,452	21,261	1,532	1,238
II. Reviews NMFS recommended special conditions (WOS) to the permit:						
No. of Actions:						
Subtotal	279	236	99	84	180	152
Acreage of alterations:						
Dredge	2,878	2,759	2,628	2,563	250	196
Coastal Wetland Fill	665	546	446	430	219	116
Tundra Fill	36	36	36	36	0	-
Impoundment	1	1	0	-	1	1
Area Dock/Pier/Float	435	379	24	24	411	355
Subtotal	4,015	3,721	3,134	3,053	881	668
III. Reviews NMFS recommended denial (OBD) of the permit:						
No. of Actions:						
Subtotal:	89	24	39	15	50	9
Acreage of alterations:						
Dredge	20,684	1,471	20,659	1,467	25	4
Coastal Wetland Fill	703	455	542	431	161	24
Tundra Fill	368	368	368	368	0	-
Impoundment	0	-	0	-	0	-
Area Dock/Pier/Float	146	7	0	-	146	7
Subtotal	21,901	2,301	21,569	2,266	332	35
NO. OF ACTIONS - TOTAL	2,315	1,961	1,431	1,228	884	733
ACRES - TOTAL	58,900	28,521	56,155	26,580	2,745	1,941

Table 11. Amount of habitat affected by proposed and issued Section 10/404 actions during the study period (1981-1985) according to type of alteration and type of NMFS review.

**Table 11.** Amount of habitat affected by proposed and issued Section 10/404 actions during 1986 according to type of alteration and type of NMFS review.

I. Reviews NMFS had no objection to (NOG and NOR) permit issuance:

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
<b>1986</b>						
Number of Actions Subtotal	390	342	284	251	106	91
Acreage Alteration:						
Dredge	2125.77	1687.42	2078.38	1640.03	47.39	47.39
Coastal/Wetland Fill	681.25	616.23	627.14	568.61	54.11	47.62
Tundra Fill	313.17	303.27	313.17	303.27	0	0
Impoundment	3820.00	3820.00	3820.00	3820.00	0	0
Area Dock/Pier/Float	64.95	39.53	26.78	7.99	38.17	31.54
Subtotal	7,005.14	6,466.45	6,865.47	6,339.90	139.67	126.55

II. Reviews NMFS recommended special conditions (NOS) to the permit.

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions Subtotal	49	41	11	9	38	32
Acreage Alteration:						
Dredge	2068.21	124.17	2021.99	79.19	45.36	44.98
Coastal/Wetland Fill	117.31	115.30	60.96	59.13	56.25	56.17
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	82.15	81.87	0.04	0	82.11	81.87
Subtotal	2,267.67	321.34	2,082.99	138.32	183.72	183.02

III. Reviews NMFS recommended denial (OBD) of the permit:

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions Subtotal	17	6	5	2	12	4
Acreage Alteration:						
Dredge	2.11	0.10	0.10	0.10	2.01	0
Coastal/Wetland Fill	37.35	0.39	33.66	0.12	3.69	0.27
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	28.69	26.92	0.02	0.01	28.67	26.91
Subtotal	68.15	27.41	33.78	0.23	34.37	27.18
<b>NO. OF ACTIONS - TOTAL</b>	<b>456</b>	<b>389</b>	<b>300</b>	<b>262</b>	<b>156</b>	<b>127</b>
<b>ACRES - TOTAL</b>	<b>9,340.96</b>	<b>6,815.20</b>	<b>8,982.24</b>	<b>6,478.45</b>	<b>357.76</b>	<b>336.75</b>



**Table 11.** Amount of habitat affected by proposed and issued Section 10/404 actions during 1987 according to type of alteration and type of NMFS review.

I. Reviews NMFS had no objection to (NOG and NOR) permit issuance:

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
<b>1987</b>						
Number of Actions Subtotal	341	298	256	217	89	81
Acreage Alteration:						
Dredge	1,742.08	988.89	1,740.68	987.49	1.40	1.40
Coastal/Wetland Fill	1,335.96	1,094.96	1,325.16	1,085.56	10.80	9.40
Tundra Fill	397.47	333.53	397.47	333.53	0	0
Impoundment	44.18	44.18	44.18	44.18	0	0
Area Dock/Pier/Float	74.56	70.28	8.02	7.95	66.54	62.33
Subtotal	3,594.25	2,531.84	3,515.51	2,458.71	78.74	73.13

II. Reviews NMFS recommended special conditions (NOS) to the permit.

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions Subtotal	60	52	20	19	40	33
Acreage Alteration:						
Dredge	98.08	96.68	13.10	11.70	84.98	84.98
Coastal/Wetland Fill	47.32	33.32	29.61	29.61	17.71	3.71
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	141.65	125.09	9.47	9.47	132.18	115.62
Subtotal	287.05	255.09	52.18	50.78	234.87	204.31

III. Reviews NMFS recommended denial (OBD) of the permit:

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
Number of Actions Subtotal	12	3	7	2	3	1
Acreage Alteration:						
Dredge	267.88	0.55	261.00	0	6.88	0.55
Coastal/Wetland Fill	16.68	1.34	15.82	0.48	0.86	0.86
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	0.06	0.06	0	0	0.06	0.06
Subtotal	284.62	1.95	276.82	0.48	7.80	1.47
<b>NO. OF ACTIONS - TOTAL</b>	<b>415</b>	<b>353</b>	<b>283</b>	<b>244</b>	<b>132</b>	<b>115</b>
<b>ACRES - TOTAL</b>	<b>4,165.92</b>	<b>2,788.88</b>	<b>3,844.51</b>	<b>2,509.97</b>	<b>321.41</b>	<b>278.91</b>

Data for TABLE 11. Amount of habitat affected by proposed and issued Section 10/404 actions during the study period 1988 according to type of alteration and type of NMFS review.

	All Alaska		Western		Southeast	
	Proposed	Issued	Proposed	Issued	Proposed	Issued
I. Reviews NMFS had no objection to (NOG and NOR) permits issuance						
No. of Actions:						
Subtotal	314	274	248	212	66	62
Acreage alteration:						
Dredge	664.87	536.87	662.42	534.42	2.45	2.45
Coastal Wetland Fill	2089.29	638.01	2062.39	615.85	26.90	22.16
Tundra Fill	884.07	828.75	884.07	828.75	0	0
Impoundment	1.40	1.40	1.40	1.40	0	0
Area Dock/Pier/Float	120.07	108.20	12.38	8.63	107.69	99.57
Subtotal	3759.70	2113.23	3622.66	1989.05	137.04	124.18
II. Reviews NMFS recommend special conditions (NOS) to the permit						
No. of Actions:						
Subtotal	63	52	28	21	35	31
Acreage alteration:						
Dredge	38.70	35.94	12.84	12.83	25.86	23.11
Coastal Wetland Fill	81.95	72.53	41.43	32.54	40.52	39.99
Tundra Fill	0	0	0	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	156.56	142.27	46.20	32.30	110.36	109.97
Subtotal	277.21	250.74	100.47	77.67	176.74	173.07
III. Reviews NMFS recommended denial (OBD) of the permit:						
No. of Actions:						
Subtotal	22	5	4	0	18	5
Acreage alteration:						
Dredge	2.49	0	0.10	0	2.39	0
Coastal Wetland Fill	100.94	3.43	65.04	0	35.90	3.43
Tundra Fill	13.00	0	13.00	0	0	0
Impoundment	0	0	0	0	0	0
Area Dock/Pier/Float	0	0	0	0	0	0
Subtotal	116.43	3.43	78.14	0	38.29	3.43
No. of ACTIONS - TOTAL	399	331	280	233	119	98
ACRES - TOTAL	4153.34	2367.40	3801.27	2066.72	352.07	300.68

modification. This reduction likely resulted from the withdrawal of applications or objections pursued by other agencies. We recommended special conditions (NOS) for permits containing 7 percent of the total proposed acreage. Most of these permit requests involved the placement of fill material on coastal and wetland habitats. In this NOS category there was an 18 percent reduction between total acreage proposed and authorized for alteration. Permits representing 37 percent of the total proposed acreage received our denial recommendation (OBD). In this category a 93 percent reduction was recorded between total acreage proposed and authorized for alteration.

When habitat acreage associated with projects to which NMFS objected to was examined further, the focus and effectiveness of NMFS recommendations in reducing the amount of habitat altered can be described. Our effectiveness in sustaining a denial recommendation for fills in coastal and wetland areas was less than 50 percent. Permits in this category were issued for 456 acres or 65 percent of the total 704 acres we identified as deserving protection. In similar habitat (coastal and wetland areas) where dredging was the proposed action, our denial recommendation was more than 90 percent effective. In this situation those permits authorized contained only 1,471 acres (7.1 percent) of the total 20,684 acres originally requested and which received a NMFS denial recommendation. This major habitat savings is reflected in a 19,200 acre project for which permission to dredge was granted for only 200 acres. Applications in

the dock/pier/float category that received our denial recommendation had the potential to affect 146 acres. However, permits containing only 7 acres or 4.8 percent of the total acreage requested were authorized. All of those applications for filling 368 acres of tundra habitat which received our denial recommendation were authorized.

Acreage Affected According to Cowardin Classification -- In 1985 NMFS adopted the Cowardin Classification Scheme (Cowardin, et. al. 1978) as a base in an effort to standardize a national habitat reporting system. It is a hierarchical system allowing comparison of diverse habitats within general classifications, while at the same time providing information specific enough for within-region comparisons. We classified habitat to be impacted by Section 10/404 applications according to the Cowardin Classification Scheme to the system and subsystem levels and summarize it in Table 12. Differences in statistics presented in Table 12 and earlier in Table 4 are due to rounding and the exclusion of impounded or surface areas (areas of dock/pier/float) from the Cowardin Classification summary. The values, for marine, estuarine, riverine, lacustrine and palustrine habitats in Table 12, therefore, represent only dredge and/or fill amounts.

By the Cowardin definition, palustrine habitat includes low salinity (less than 5 parts/thousand) coastal marshes, non-tidal perched wetlands, and wet tundra. Wet tundra occurs in great abundance on the North Slope of Alaska where much of the oil and

Cowardin Classification		All Alaska		Western		Southeast	
System	Subsystem	Proposed	Issued	Proposed	Issued	Proposed	Issued
Marine	Intertidal	1,455	1,302	1,296	1,181	159	121
Marine	Subtidal	29,128	7,113	29,074	7,074	54	39
Estuarine	Intertidal	521	271	246	156	275	115
Estuarine	Subtidal	157	118	66	65	91	53
Riverine	Upper Perennial	6	3	5	2	1	1
Riverine	Lower Perennial	8,204	2,961	8,072	2,831	132	130
Riverine	Tidal	907	805	759	658	148	147
Lacustrine	Littoral	71	70	70	69	1	1
Lacustrine	Limnetic	720	720	720	720	0	-
Palustrine		15,414	13,341	15,042	13,172	372	169
	TOTAL	56,583	26,704	55,350	25,928	1,233	776

Table 12. Acreage of habitat (Cowardin Classification) proposed for alteration and acreage of habitat issued Section 10/404 permits in the Alaska Region for the years 1981 - 1985.

gas exploration and development occurs. No wet tundra habitat occurs in southeast Alaska.

During the study period, 55,350 acres of habitat were proposed for dredge or fill in western Alaska and 1,233 acres in southeast Alaska (Table 12, above). Since 98 percent of the total was located in western Alaska, no statewide diagrams of habitat impacts are presented, rather, regional impacts are contained in Figures 7 and 8. Permits were issued for 47 percent of that proposed in western Alaska and 63 percent in southeast Alaska. In comparison, 85 percent of the applicants were issued permits.

Proposals to impact (by dredge or fill only) marine habitat totaled 213 acres in southeast Alaska and permits were issued for

**Table 12 and Figures 7 and 8. Acreage of habitat (Cowardin Classification) proposed for alteration and acreage of habitat issued Section 10/40 permits in the Alaska Region for the years 1986 and 1987.**

**1987**

Cowardin Classification System	Subsystem	All Alaska		Western		Southeast	
		Proposed	Issued	Proposed	Issued	Proposed	Issued
Marine	Intertidal	68.93	44.11	61.62	38.20	7.31	5.91
Marine	Subtidal	55.36	51.37	46.01	46.01	9.35	5.36
Estuarine	Intertidal	369.21	19.58	349.31	14.01	19.90	5.57
Estuarine	Subtidal	2.08	0.08	0.08	0.08	2.00	0
Riverine	Intermittent	0	0	0	0	0	0
Riverine	Upper Perennial	48.59	48.49	47.49	47.39	1.10	1.10
Riverine	Lower Perennial	988.17	905.99	988.16	905.98	0.01	0.01
Riverine	Tidal	705.47	85.47	624.74	4.74	80.73	80.73
Lacustrine	Littoral	0.13	0.13	0.13	0.13	0	0
Lacustrine	Limnetic	0	0	0	0	0	0
Palustrine	-	1,711.71	1,438.23	1,709.48	1,436.01	2.23	2.22
Total		3,949.65	2,593.45	3,827.02	2,492.55	122.63	100

**1986**

Cowardin Classification System	Subsystem	All Alaska		Western		Southeast	
		Proposed	Issued	Proposed	Issued	Proposed	Issued
Marine	Intertidal	2,408.47	94.46	2,380.74	69.91	27.73	24.55
Marine	Subtidal	197.03	164.60	196.17	163.74	0.86	0.86
Estuarine	Intertidal	241.26	234.74	101.45	101.16	139.81	133.58
Estuarine	Subtidal	5.65	3.64	0.11	0.11	5.54	3.53
Riverine	Intermittent	0	0	0	0	0	0
Riverine	Upper Perennial	118.16	118.14	118.13	118.13	0.03	0.01
Riverine	Lower Perennial	5,337.91	5,269.66	5,335.24	5,267.49	2.67	2.17
Riverine	Tidal	6.85	6.85	6.83	6.83	0.02	0.02
Lacustrine	Littoral	6.25	3.89	6.25	3.89	0	0
Lacustrine	Limnetic	0	0	0	0	0	0
Palustrine	-	842.63	770.90	810.48	739.19	32.15	31.71
Total		9,164.21	6,666.88	8,955.40	6,470.45	208.81	196.43

Data for TABLE 12 and FIGURES 7 and 8. Acreage of habitat (Cowardin Classification) proposed for alteration and acreage of habitat issued Section 10/404 permits in the Alaska Region during 1988.

Cowardin Classification System	Subsystem	All Alaska		Western		Southeast	
		Proposed	Issued	Proposed	Issued	Proposed	Issued
Marine	Intertidal	246.96	41.28	231.54	29.35	15.42	11.93
Marine	Subtidal	70.33	21.88	63.97	18.72	6.36	3.16
Estuarine	Intertidal	99.04	56.98	33.75	17.12	65.29	39.86
Estuarine	Subtidal	3.43	2.88	0	0	3.43	2.88
Riverine	Upper Perennial	63.45	62.33	63.43	62.31	0.02	0.02
Riverine	Lower Perennial	819.61	676.50	819.30	676.48	0.31	0.02
Riverine	Tidal	289.71	289.71	277.65	277.65	12.06	12.06
Lacustrine	Littoral	8.26	7.56	0.76	0.06	7.50	7.50
Lacustrine	Limnetic	0.02	0.02	0.02	0.02	0	0.00
Palustrine	-	2275.90	957.79	2252.27	944.08	23.63	13.71
	Total	<u>3876.71</u>	<u>2116.93</u>	<u>3742.69</u>	<u>2025.79</u>	<u>134.02</u>	<u>91.14</u>

75 percent of that total (Figure 7). Proposals to impact estuarine habitat totaled 366 acres and permits were issued for 46 percent of that total. Proposals to impact palustrine habitat in southeast Alaska totaled 372 acres and permits were issued for 45 percent of that. Although the amount of palustrine habitat proposed for alteration by the applications ranged from .01 to 42.8 acres, the average fill project was 4.12 acres and the average dredge project was 3.04 acres. Proposals to impact one wetland complex, the Juneau wetlands, dominate this category.

Proposals within the riverine habitat category appear to have received the lowest concern in southeast Alaska since the acreage ascribed to issued permits equals 99 percent of that proposed.

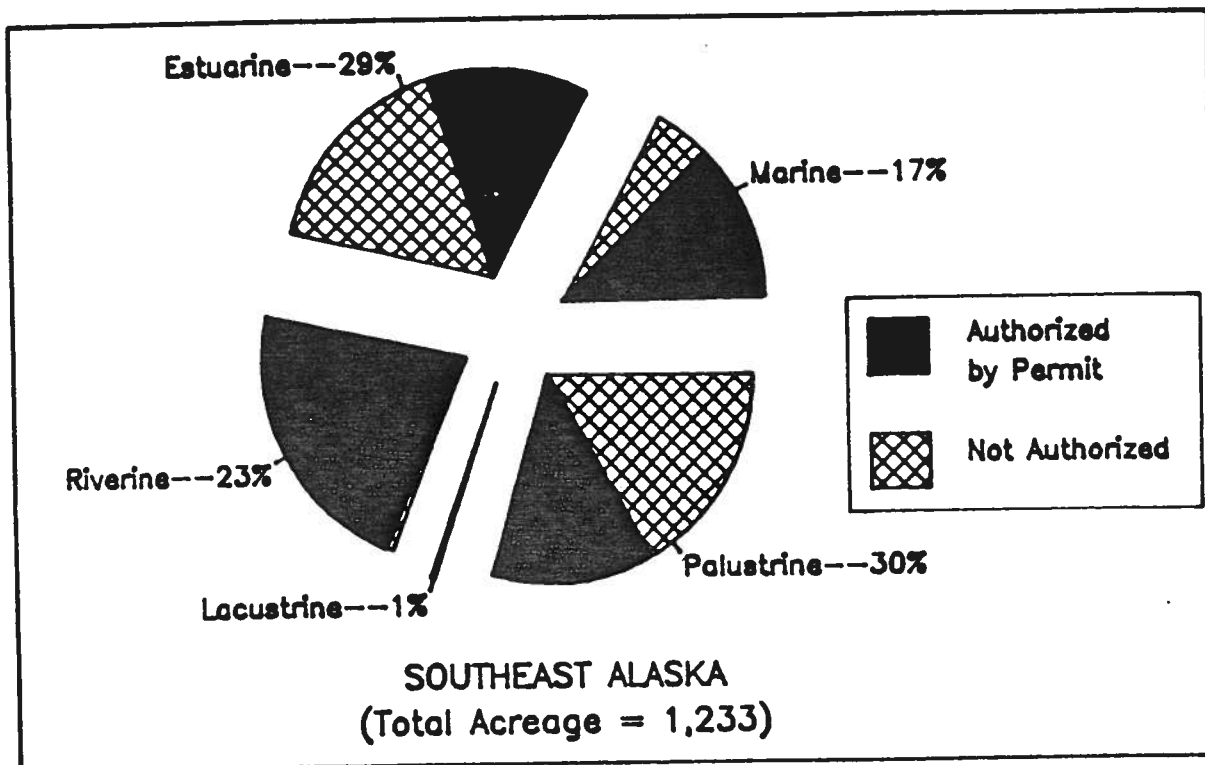


Figure 7. The amount of habitat proposed for alteration in southeast Alaska by Section 10/404 permit applicants during the years 1981 through 1985. The solid area within each piece represents the proportional amount of that habitat type which was authorized by permits, the hatched area remaining is the amount denied or withdrawn.



The acreage of subtidal habitat authorized for alteration in western Alaska was 27 percent of the amount proposed (Figure 8).

The factor primarily responsible for the low issuance ratio relates to an experimental dredging project of 19,100 acres which met with negative comments. All but 200 acres of the original proposal were denied by the COE. The difference between proposed and issued amounts of riverine habitat in western Alaska was primarily due to withdrawal requests totaling over 4,560 acres, which were associated with the proposed construction of the Alaska Natural Gas Pipeline. Lacustrine and estuarine acreage made up 1.4 and 0.6 percent of proposed acreage.

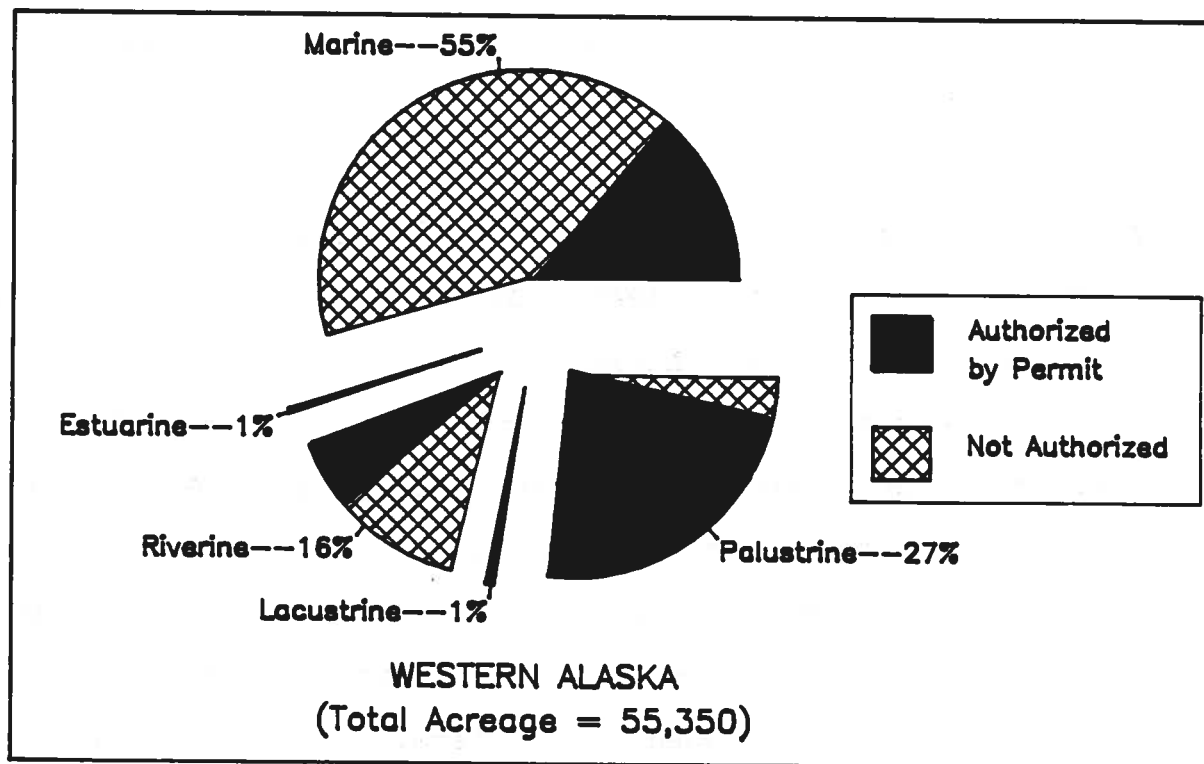


Figure 8. The amount of habitat proposed for alteration in western Alaska by Section 10/404 permit applicants during the years 1981 through 1985. The solid area within each piece represents the proportional amount of that habitat type which was authorized by permits, the hatched area remaining is the amount denied or withdrawn.

## SUBPART C. Special Topics and Comparisons

### Review of Unauthorized Activities

Public Notices with after-the-fact (ATF) notations are those for which the applicant has undertaken all or part of a regulated activity without prior authorization. Because work has already been completed or is in progress, it is usually not possible for NMFS to fully carry out its Fish and Wildlife Coordination Act responsibility of evaluating and recommending ways to minimize impacts to anadromous, estuarine, or marine resources. Habitat lost by ATF activities is usually not restored because: (1) it is often not possible to document the specific value or importance of habitat with no historical or pre-construction record, (2) the potential for additional habitat disturbance is great, and (3) the COE does not often prosecute primarily for enforcement precedence.

There has been an increase in the number of proposed and permitted ATF applications since 1983. Up to 36 percent of the proposed actions in western Alaska and 34 percent in southeast Alaska have been after-the-fact (Figure 9). It is possible this increase represents more of an improvement in COE regulatory compliance process than an increase in unauthorized activities. Flagging of ATF actions in public notices is a recent development in the Alaska COE District that contributes to the increased number of ATF actions logged in our data. It is also possible the increase reflects a heightened public awareness of the COE permit process and the desire to have historical alterations

authorized. However, this high percentage of unauthorized habitat alterations is of concern from a resource perspective and deserves additional consideration.

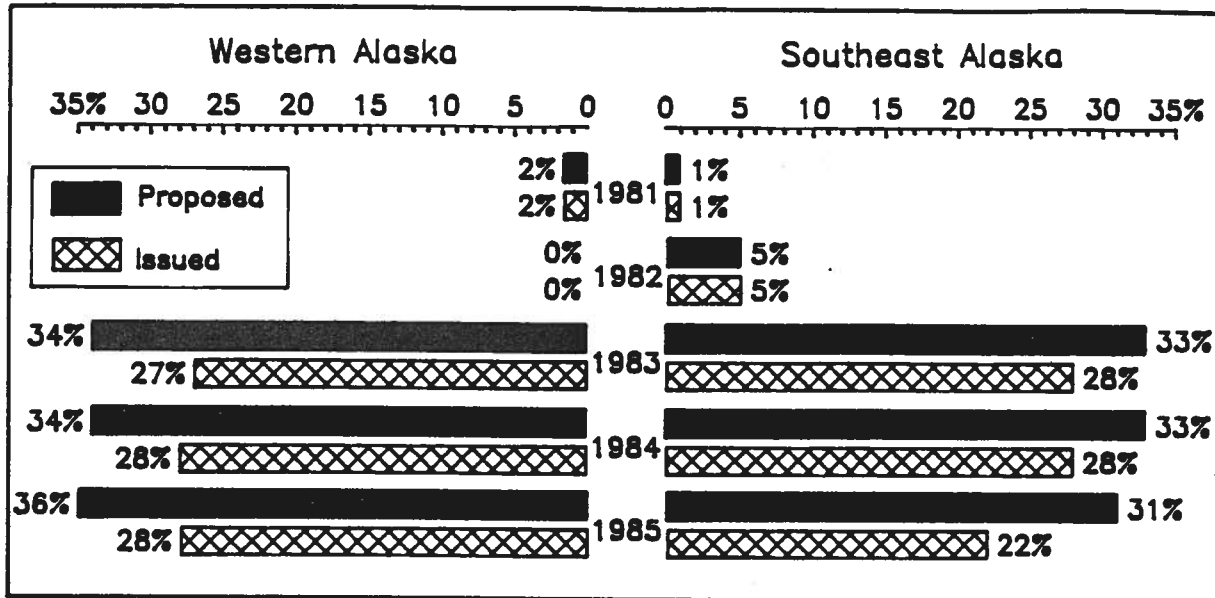


Figure 9. After-The-Fact Section 10/404 Public Notices reviewed by the Alaska Region during the years 1981-1985.

#### Time Required for NMFS Review

For purposes of tracking permit actions, we record review periods and response dates. Summaries of these data are presented in Table 13. Public Notices for Section 10/404 permits generally have 30-day review periods, although, 15-day reviews are allowed for applicants requesting modifications to permits that the COE determines have only minor impacts and actions proposed in response to emergencies. Comment periods with deadlines which fall on non-working days are extended to the next workday. The review periods, therefore, range from 15-34 days. Time extensions, if granted, occur in blocks of 15 days. The data used in Table 13 include the overall review period, with related time

**Data for Figure 9. After-the-Fact Section 10/404 Public Notices reviewed by the Alaska Region during 1986 and 1987.**

	All Alaska				Western				Southeast			
	Proposed		Issued		Proposed		Issued		Proposed		Issued	
	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)
1986	47	(10.3)	37	(9.5)	25	(8.3)	21	(8.0)	22	(14.1)	16	(12.6)
1987	34	( 8.2)	28	(7.8)	26	(9.2)	21	(8.6)	8	( 6.1)	7	( 6.1)
Total	81	( 9.3)	65	(8.7)	51	(8.7)	42	(8.3)	30	(10.4)	23	( 9.5)

Data for FIGURE 9. After-the-Fact Section 10/404 Public Notices reviewed by the Alaska Region during 1988.

All Alaska			
Proposed		Issued	
#	(%)	#	(%)
26	(6.5)	18	(5.4)

Western			
Proposed		Issued	
#	(%)	#	(%)
12	(4.3)	8	(3.4)

Southeast			
Proposed		Issued	
#	(%)	#	(%)
14	(11.8)	10	(10.2)

extensions. Time extensions requested by and granted to other agencies are available to NMFS without a specific request.

For activities proposed in coastal areas, programs administered by the State of Alaska regulate tideland leases, water quality certification, and coastal zone consistency determinations. To simplify and expedite the entire State/federal permitting process, notices for the water quality certification and coastal zone consistency determination are attached to the COE Section 10/404 Public Notices. The COE does not take final action until the State process is complete, usually at least 30 days beyond the COE deadline for submitting comments. In most cases, therefore, NMFS must provide comments before an official State position has been released. This can be a handicap since NMFS frequently relies upon State personnel in local outlying areas to provide us site-specific information. The staggered federal and state review requirements can result in data becoming available after the close of the federal comment period.

Time extensions, although infrequently requested, may be necessary in order for NMFS to complete an on-site visit or to allow time for the applicant to provide additional information. NMFS and the COE agreed in the July 1982 MOA to make all requests for time extensions of the normal 30-day review period in writing to the District Engineer. Since the July 1982 MOA we have requested additional time only in 13 cases and have no record of an extension request that was denied (Table 13). Also, in the years

since the 1982 MOA the Alaska Region has been on time with our response 87 percent of the time (Table 13).

	No. Actions Reviewed		No. Responses Sent Late		% Reviews Cmt. on Time		No. Time Ext. Requested		Avg. No. Days In Response Time	
	WA	SE	WA	SE	WA	SE	WA	SE	WA	SE
1981	234	157	44*	28*	81	82	2*	6*	26	31
1982	314	187	76*	15*	76	92	0*	0*	32	20
1983	298	184	57	5	81	97	1	4	23	19
1984	262	173	27	1	90	100	1	3	26	18
1985	323	183	40	4	88	98	0	4	24	23
Total	1,431	884	244	53	83	94	4	17	26	22

WA = Western Alaska SE = Southeast Alaska

\* Time extension requests were handled informally prior to the Memorandum of Agreement (July 1982), therefore, our data do not accurately reflect how often time extension requests were made or granted.

Table 13. Timeliness of NMFS comments in relation to comment due dates in the Alaska Region.

### General Comparison With Other Regions

Little information is available on Section 10/404 effectiveness and habitat area impacts in other NMFS Regions. Some general comparisons, however, with other NMFS Regions are possible through reference to both unpublished and published documents.

Review Letters with Significant Comment -- The NMFS Alaska Region recommended special conditions to permits for 12 percent of the actions reviewed during the period 1981 through 1985. That percentage is lower than the 25 and 21 percent rates reported for reviews which included significant recommendations by the NMFS

Northeast and Southwest Regions for similar time periods (Memos to Carmen Blondin from R.H. Schaefer, 10/11/85, and E.C. Fullerton, 9/30/85). We assume our category of recommending special conditions equates with what these regions term as reviews with significant comments.

Percent Inclusion -- The Southwest Region reported regional comments were incorporated into permits 93 percent of the time. For the Northeast Region letters containing significant comments, the number of recommendations incorporated into Department of Army permits was 75 percent. The rate of inclusion for individual Northeast districts ranged from 60-95 percent. A Northeast evaluation based on the 1981 fiscal year indicated NMFS recommendations were incorporated into permits in 98 percent of the cases (Lindall and Thayer, 1982). This rate and the 75 percent inclusion rate of the Alaska Region's recommended conditions are, therefore, comparable with estimates from the Northeast and Southwest regions.

Types of Recommendations Included -- In a review of 81 recommendations made to the COE by the Northeast Region, 58 were included in permits. As in the Alaska Region, the most frequently recommended conditions in the Northeast Region (22 of 58 total included) were time of year restrictions on projects. Ten of these 58 recommendations were for sediment and erosion control. Of the 23 conditions rejected, 12 involved conditions to avoid or reduce dredging or filling of aquatic habitat, and 8 involved



concerns over the significance of dredged material test results. In general, conditions included were those which reflected existing scientific literature and data, while those which were not included reflected areas where existing scientific knowledge does not adequately support NMFS conclusions. The Southwest region also indicated the COE in some instances did not accept NMFS recommendations due to insufficient information of the habitat requirements of coastal fishery resources. This information was necessary to support NMFS comments. This seldom appears to be the case in the Alaska Region. Recommended conditions in the Alaska Region may be excluded due to lack of legal authority to enforce a condition -- such as the conditions NMFS recommended requiring bark/organic debris clean up or prohibiting the storage of petroleum products on floats.

## RECOMMENDATIONS FOR IMPROVED COORDINATION

The fact that elevation has been pursued only once since the July 1982 MOA suggests the Alaska COE District has provided an effective forum for conflict resolution. NMFS response time to Public Notices has decreased subsequent to the 1982 MOA, however, with 8.7 percent of our replies sent late in 1985, response time could be improved further. The time extension process has worked well, with NMFS making a special effort to complete reviews within the allotted time and the COE granting NMFS extensions when requested.

Based on our analysis and experience in working with the COE program, we identified several ways communications and the administrative process could be improved and permits expedited. If we are going to improve our effectiveness and evaluate the unknowns contained in this report, then we need the assistance of the COE in implementing the following recommendations. We recognize staffing and budget constraints limit full incorporation of these potential improvements.

1. If the COE rationale for both issuance of permits over NMFS denial recommendations and not including recommended stipulations in permits were routinely distributed, it would: (a) assist NMFS in the identification of communication failures, (b) clarify additional documentation (possibly new research) necessary for COE to support NMFS positions, and (c) identify the need for additional legislation to protect critical habitat.

2. Efforts to document area of habitat affected could be improved by including information on acreage authorized for alteration in all permits (modified permits included). Because multiple permit modifications and advertisement of several applications in the same public notice can make assessment of habitat areas being impacted difficult to differentiate, we encourage the COE to replace these public notices with individual announcements summarizing the whole project.

3. The apparent increase in applications and area of habitat impacted due to after-the-fact activities needs to be examined in greater depth. The logical conclusion is unauthorized work has increased as a way to get around regulatory requirements. This should be examined more carefully.

The NMFS will make a special effort to provide resource information to assist enforcement actions. We feel the increase in unauthorized projects warrants a special reporting of after-the-fact activities on a regular basis. If this trend continues an interagency committee should address the question.

4. We know the construction authorized by a permit is not always undertaken before the expiration date, but are unsure how much habitat has been affected. Monitoring unused permits and highlighting those that expire without any habitat alteration would solve this problem. With these data we could make better

estimates of habitat affected through the Section 10/404 process.

5. There may be a significant discrepancy between the amount of habitat alteration authorized and the amount of habitat altered by a project. Comparison of permitted acreage to actual alteration based on on-site inspections is needed. In many cases, data on permittee adherence to special permit conditions could be gathered at the time post-construction inspections were made. Such information would help determine the actual effectiveness of the Alaska Corps of Engineers permitting program and NMFS recommendations.

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The USDC NMFS, Auke Bay Biological Laboratory (ABL) has continually provided technical data, field support, and consultation. ABL research is vital in determining the relationship between habitat and fishery production so that effects of habitat alteration on fish and shellfish production can be quantified. This information is critical when reviewing proposals for alteration and defending NMFS recommendations.

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