

this order shall notify each shipper at and shall furnish to such shipper the new routing provided under this order.

(d) Inasmuch as the diversion or rerouting of traffic is deemed to be due to carrier disability, the rates applicable to traffic diverted or rerouted by said Agent shall be the rates which were applicable at the time of shipment on the shipments as originally routed.

(e) In executing the directions of the Commission and of such Agent provided for in this order, the common carriers involved shall proceed even though no contracts, agreements, or arrangements now exist between them with reference to the divisions of the rates of transporta-

tion applicable to said traffic. Divisions shall be, during the time this order remains in force, those voluntarily agreed upon by and between said carriers; or upon failure of the carriers to so agree, said division shall be those hereafter fixed by the Commission in accordance with pertinent authority conferred upon it by the Interstate Commerce Act.

(f) *Effective date.* This order shall become effective at 8:35 p.m., November 1, 1975.

(g) *Expiration date.* This order shall expire at 11:59 p.m., November 8, 1975, unless otherwise modified, changed, or suspended.

It is further ordered, That this order shall be served upon the Association of

American Railroads, Car Service Division, as agent of all railroads subscribing to the car service and car hire agreement under the terms of that agreement, and upon the American Short Line Railroad Association; and that it be filed with the Director, Office of the Federal Register.

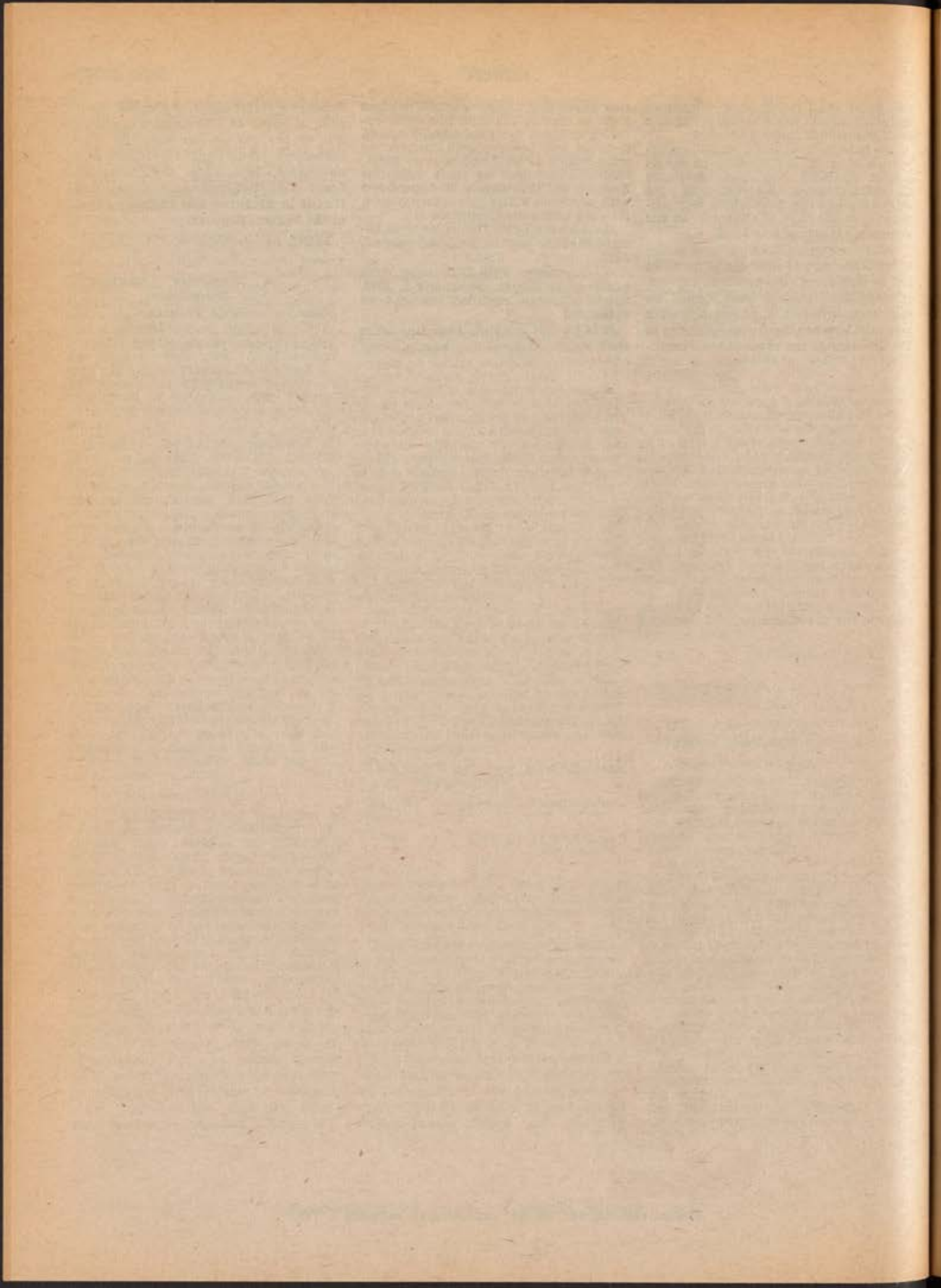
Issued at Washington, D.C., November 1, 1975.

INTERSTATE COMMERCE
COMMISSION,

[SEAL]

R. D. PFAHLER,
Agent.

[FR Doc.75-32311 Filed 11-28-75;8:45 am]



federal register

MONDAY, DECEMBER 1, 1975



PART II:

ENVIRONMENTAL PROTECTION AGENCY



SEAFOOD PROCESSING POINT SOURCE CATEGORY

Effluent Guidelines and Standards

Title 40—Protection of the Environment
CHAPTER I—ENVIRONMENTAL
PROTECTION AGENCY

SUBCHAPTER N—EFFLUENT GUIDELINES
AND STANDARDS

[FRL 460-5]

PART 408—CANNED AND PRESERVED
SEAFOOD PROCESSING POINT SOURCE
CATEGORY

On January 30, 1975, notice was published in the FEDERAL REGISTER (40 FR 4582), that the Environmental Protection Agency (EPA or Agency) set forth interim final effluent limitations guidelines for existing sources, proposed pretreatment standards for existing sources amending 40 CFR Part 408, and proposed standards of performance and pretreatment standards for new sources within the fish meal, Alaskan hand-butchered salmon, Alaskan mechanized salmon, West Coast hand-butchered salmon, West Coast mechanized salmon, Alaskan bottom fish, non-Alaskan conventional bottom fish, non-Alaskan mechanized bottom fish, hand-shucked clam, mechanized clam, Pacific Coast hand-shucked oyster, Atlantic and Gulf Coast hand-shucked oyster, steamed and canned oyster, sardine, Alaskan scallop, non-Alaskan scallop, Alaskan herring fillet, non-Alaskan herring fillet, and abalone processing subcategories of the canned and preserved seafood processing category of point sources. Concomitantly the Agency set forth interim final and proposed amendments to the regulations which were promulgated in the June 26, 1974, FEDERAL REGISTER (39 FR 23134) for the catfish, crab, shrimp, and tuna processing segment of the canned and preserved seafood processing category of point sources.

The purpose of this notice is to establish final effluent limitations and guidelines for existing sources and standards of performance and pretreatment standards for new sources in the canned and preserved seafood processing category of point sources by amending 40 CFR Chapter I, Subchapter N, Part 408 by revising § 408.10 of the farm-raised catfish processing subcategory (Subpart A), § 408.20 of the conventional blue crab processing subcategory (Subpart B), § 408.30 of the mechanized blue crab processing subcategory (Subpart C), § 408.40 of the non-remote Alaskan crab meat processing subcategory (Subpart D), § 408.50 of the remote Alaskan crab meat processing subcategory (Subpart E), § 408.60 of the non-remote Alaskan whole crab and crab section processing subcategory (Subpart F), § 408.70 of the remote Alaskan whole crab and crab section processing subcategory (Subpart G), § 408.80 of the dungeness and tanner crab processing in the contiguous States subcategory (Subpart H), § 408.90 of the non-remote Alaskan shrimp processing subcategory (Subpart I), § 408.100 of the remote Alaskan shrimp processing subcategory (Subpart J), § 408.110 of the northern shrimp processing in the contiguous States subcategory (Subpart K), § 408.120 of the southern non-breaded shrimp processing in the contiguous

States subcategory (Subpart L), § 408.130 of the breaded shrimp processing subcategory (Subpart M), and § 408.140 of the tuna processing subcategory (Subpart N) to expand the applicability thereof; by revising § 408.55 of the remote Alaskan crab meat processing subcategory (Subpart E), § 408.75 of the remote Alaskan whole crab and crab section processing subcategory (Subpart G), and § 408.105 of the remote Alaskan shrimp processing subcategory (Subpart J) to change the standards of performance for new sources based on screening to standards based on comminutors or grinders; and by adding thereto the fish meal processing subcategory (Subpart O), Alaskan hand-butchered salmon processing subcategory (Subpart P), Alaskan mechanized salmon processing subcategory (Subpart Q), West Coast hand-butchered salmon processing subcategory (Subpart R), West Coast mechanized salmon processing subcategory (Subpart S), Alaskan bottom fish processing subcategory (Subpart T), non-Alaskan conventional bottom fish processing subcategory (Subpart U), non-Alaskan mechanized bottom fish processing subcategory (Subpart V), hand-shucked clam processing subcategory (Subpart W), mechanized clam processing subcategory (Subpart X), Pacific Coast hand-shucked oyster processing subcategory (Subpart Y), Atlantic and Gulf Coast hand-shucked oyster processing subcategory (Subpart Z), steamed and canned oyster processing subcategory (Subpart AA), sardine processing subcategory (Subpart AB), Alaskan scallop processing subcategory (Subpart AC), non-Alaskan scallop processing subcategory (Subpart AD), Alaskan herring fillet processing subcategory (Subpart AE), non-Alaskan herring fillet processing subcategory (Subpart AF), and abalone processing subcategory (Subpart AG). This final rulemaking is promulgated pursuant to sections 301, 304 (b) and (c), 306 (b) and (c), and 307 (c) of the Federal Water Pollution Control Act, as amended, (the Act); 33 U.S.C. 1251, 1311, 1314 (b) and (c), 1316 (b) and (c) and 1317 (c); 86 Stat. 816 et seq.; Pub. L. 92-500. A regulation regarding cooling water intake structures for all categories of point sources under section 316 (b) of the Act will be promulgated in 40 CFR Part 402.

The legal basis, methodology and factual conclusions which support promulgation of this regulation were set forth in substantial detail in the notice of public review procedures published August 6, 1973 (38 FR 21202) and in the notice of interim final and proposed rulemaking for the fish meal, salmon, bottom fish, sardine, herring, clam, oyster, scallop, and abalone segment of the canned and preserved seafood processing point source category. In addition, the regulation as set forth was supported by two other documents: (1) The document entitled "Development Document for Interim Final Effluent Limitations Guidelines and Proposed New Source Performance Standards for the Fish Meal, Salmon, Bottom Fish, Sar-

dine, Herring, Clam, Oyster, Scallop, and Abalone Segment of the Canned and Preserved Seafood Processing Point Source Category" (January 1975) and (2) the document entitled "Economic Analysis of Interim Final Effluent Guidelines, Seafood Processing Industry—Fish Meal, Salmon, Bottom Fish, Clams, Oysters, Sardines, Scallops, Herring, Abalone (February 1975). Both of these documents were made available to the public and circulated to interested persons at approximately the time of publication of the notice of proposed rulemaking.

Interested persons were invited to participate in the rulemaking by submitting written comments within 30 days from the date of the notice of availability (40 FR 15096). Prior public participation in the form of solicited comments and responses from the States, Federal agencies, and other interested parties were described in the preamble to the interim final regulation. The EPA has considered carefully all of the comments received and a discussion of these comments with the Agency's response thereto follows.

(a) *Summary of comments.* The following responded to the request for written comments contained in the preamble to the interim final and proposed regulation: National Cannery Association; New England Fish Company; Peter Pan Seafoods, Inc.; East Point Seafood Company; Maine Sardine Packers Association, Inc.; Virginia Seafoods Inc.; Shellfish Institute of North America; American Shrimp Cannery Association; U.S. Department of Commerce, National Marine Fisheries Service; Department of Health, Education, and Welfare; and U.S. Department of Interior.

Each of the comments received was carefully reviewed and analyzed. The following is a summary of the significant comments and the Agency's response to them.

(1) Several commenters cited section 102(d) of the Marine Protection, Research, and Sanctuaries Act of 1972 (Pub. L. 92-532) which exempts from the ocean dumping permit requirements "the transportation for dumping or the dumping of fish wastes, except when deposited in harbors or other protected or enclosed coastal waters, or where the Administrator finds that such deposits could endanger health, the environment, or ecological systems in a specific location." The commenters then suggest that, contrary to section 306(b)(1)(A) of the Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92-500), the canned and preserved seafood processing point source discharges should be exempt from effluent limitations except in protected areas where tidal flushing action or stream flow is inadequate for assimilation or dispersal of the organic fish wastes.

The majority of the existing seafood processing facilities are located near bays, inlets, estuaries, rivers, harbors, or other areas which provide some refuge from the vagaries of adverse weather or sea conditions. The waste quantities from these plants can range from 30 to

80 percent or more of the weight of raw material which, in many cases, are discharged directly to adjacent receiving waters with little or no treatment.

The Agency has documented cases where water quality degradation resulted from the discharge of seafood processing effluents. For example, the effluents from 15 seafood processors in Kodiak, Alaska resulted in the formation of a sludge deposit covering nearly 51 acres. About 25 percent of the area was polluted to the extent that it was devoid of any macroscopic life. The presence of floating solids, floating sludge mats, and the evolution of hydrogen sulfide gas were noted during the survey. A subsequent study of 32 other Alaskan processors states that waste discharges from many seafood processors were causing environmental damage in receiving waters and violating Alaskan Water Quality Standards. The environmental damage was evidenced by: a) accumulations of seafood wastes resulting in sludge beds and, b) aesthetically degrading conditions such as bloody water, accumulations of seafood wastes on the beaches, and foam and floating seafood wastes on the water surface.

Canadian Environmental Protection Service study presented at the April 1974 Fish Processing Plant Effluent Treatment and Guidelines Seminar in St. Johns, Nfld. indicated that fish processing facilities can affect the biological ecosystem up to a distance of one mile. By evaluating several sediment and diversity indexes, the study found that seafood processing effluents have a definite effect upon the relative abundance of species in the receiving waters. One conclusion of the report suggests that the presence of large schools of fish feeding in the effluent from seafood processing facilities is not indicative of its non-toxic characteristics, because these pelagic or migratory fish do not reproduce, live or carry out normal life functions in the effluent stream. The report also states that "the fish processing industry may not be classed as an emitter of highly toxic waste, although there have been documented cases of fish kills in the Atlantic Provinces. The effluent is more sublethal in action tending to reduce the diversity and thereby affecting the stability of the community structure."

In sec. 101 of the Act, Congress declared its objective "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" and declared "the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985."

To achieve these ends, the Act adopts a coordinated state-federal program to initiate clean-up efforts. Water quality standards are no longer the primary control mechanism. Instead, Congress has directed federal officials to establish effluent limitations for categories and classes of individual point sources. Each polluter within a category or class of industrial sources must, at a minimum, thereafter meet these uniform effluent limitations. (Congressional Research

Service, Library of Congress, *A Legal History of the Water Pollution Control Act Amendments of 1972*, Vol. 1, p. 162 (Comm. Print, 1973) hereinafter referred to as Leg. Hist.). This shift from water quality standards to effluent limitations as the basic control mechanism was because of the great difficulty associated with establishing reliable and enforceable precise effluent limitations on the basis of a given stream quality (see Leg. Hist., Vol. 2, p. 1426). Water quality standards, in addition to their deficiencies in relying on the assimilative capacity of receiving waters, often cannot be translated into effluent limitations because of the imprecision of models for water quality and the effects of effluents in most waters.

Nevertheless, the water quality standards are not totally disregarded. The old water quality standards program of the Water Quality Act of 1965 is retained, substantially strengthened, and dovetailed with the new effluent limitations program of the new Act. Under section 303 of the Act water quality standards for interstate waters remain effective. States are to submit new water quality standards for intrastate waters to the Administrator for approval or necessary modifications, and all water quality standards are to be brought up to the requirements of the new Act over a period of time.

Both the States and the Administrator may go beyond the national effluent limitations of section 301 to require a greater reduction in discharge into specific receiving waters where the national effluent limitations are not stringent enough to meet applicable water quality standards for those particular waters (sections 303(d) and 302). Therefore, the technology-based section 301 national effluent limitations are a minimum which all plants must meet and local conditions may result in the imposition of more stringent (but not less stringent) effluent limitations.

(2) Several commenters stated that the selection of plants for sampling and the selection of data for subcategory averages resulted in inequitable and unattainable limitations. They also requested further explanation of the procedures used to decide whether plants in a subcategory were either typical or nontypical and the criteria used for inclusion or exclusion of data.

The time constraints imposed by the statutory deadlines precluded the Agency from conducting an exhaustive sampling program. Nevertheless in the time available, the contractor (a recognized authority on waste management in the seafood processing industry) carried out the first national scale empirical study of the industry's waste characteristics and treatment. Project consultants, industrial trade associations, individual companies, Universities, and State and Federal government contacts assisted in identifying representative seafood processing facilities. The following individuals were among those that provided information and advice: Mr. Russell Norris, Mr. Frank Riley, and Mr. Robert

Hall of the Northeast Regional Office, National Marine Fisheries Service (NMFS); Mr. Hugh O'Rourke of the Massachusetts Seafood Council; Mr. Richard Reed of the Maine Sardine Council; Mr. Clarence Carlson of the Atlantic Fishery Products Technology Center; Mr. Roy Martin of the National Fisheries Institute; Mr. Steele Culbertson of the National Fish Meal and Oil Association; Mr. James Douglas, Jr. of the Virginia Marine Resources Commission; Mr. Jack Wright of the Virginia Seafood Council; Mr. Everett Tolley of the Shellfish Institute of North America; Mr. Jack Gehring of the Southeast Regional Office, NMFS; Mr. Bobby J. Wood and Mr. Melvin Waters of the NMFS Pascagoula Laboratory; Mr. James Bybee of the Southwest Regional Office, NMFS; Mr. Richard Moore and Mr. Jerry Sprat of the State of California, Department of Fish and Game; Mr. Robert Patta, NMFS; Mr. Maynard Steinberg, Mr. John Dassow, Mr. Harold Barnett, and Mr. Richard Nelson of the NMFS Pacific Fishery Technology Laboratory; Mr. Walter Yonker and Mr. Roger DeCamp of the National Cannery Association; Dr. Dave Crawford of the Oregon State University Seafood Laboratory; Mr. Jeffrey Collins and Mr. Richard Tenney of the NMFS Kodiak Fishery Products Technology Laboratory; Mr. Charles Perkins of the New England Fish Company and the Pacific Fisheries Technologists; and Mr. Charles Jensen of the Kodiak Seafood Processors Association.

After identifying representative processing facilities, one of the criteria for selecting a plant for detailed study was physical ease of collecting unit operation and end-of-pipe full shift flow proportioned composite samples. Some facilities would have required plumbing changes to facilitate a detailed sampling effort. Other considerations included individual plant cooperation, labor strikes, and seasonality. Because of the need to obtain the data as rapidly as possible, the sampling effort concentrated on plants which had indicated a willingness and ability to provide the requested data promptly. Even though many companies were very cooperative, labor strikes restricted sampling in some locations. Seasonality or availability of raw material also restricted the sampling effort in some parts of the country during the time frame of the study.

The available historical data which was compatible with the Agency's sampling and analytical procedures were included in the data base. The Agency's samples were screened prior to compositing to remove the larger solid particles which reduced the resultant "scatter" of the data points. This method is especially valuable in developing a precise base-line value for each parameter from a limited number of samples.

Several examples extracted from the "Subcategorization Rationale" portions of the Development Document illustrate the method of selecting typical plants for determining subcategory summary data. For salmon processing, 18 sets of summary data covering several process-

ing techniques were obtained from 12 processing facilities. Nine sets of summary data represented mechanized salmon processing; however, only the 4 plants which utilized butchering machines exclusively were included in the subdivision average. The other 5 plants, which were excluded, practiced a mixture of hand and mechanized butchering which resulted in lower raw waste loads. Partial or hybrid processes are not used in the subcategory summaries because the subcategory effluent limitations are intended to serve as "building blocks" for establishing total effluent limitations for multi-product plants. In the case of hand-butchered salmon 6 of the 9 available sets of plant summary data were used for calculating the subdivision average. The excluded summary data represented facilities with lower raw waste loads because the salmon were "troll dressed" or eviscerated at sea. For conventional bottom fish, 14 sets of data were available for use, however, one plant was omitted from the subcategory average because only a small number of fish were being handled in the round, whole, on the day the sample was taken. This situation was considered to be atypical and resulted in relatively low raw waste loads. In the case of mechanized bottom fish, 2 of the 5 sets of data were excluded from the subcategory summary data because the machinery was unique and resulted in much lower raw waste loads than the other mechanized processing facilities. However, the excluded plants are still considered a part of the mechanized bottom fish subcategory.

In general, the plant selection procedures resulted in higher, not lower, subcategory waste load summaries. With one exception, all BOD₅, suspended solids, and grease and oil data points of the facilities selected were included in the calculation of subcategory summaries. (As discussed in item 18 below, the only exception involved the grease and oil parameter summary for herring fillet processing subcategories.) The outliers for these regulated parameters were not deleted from the subcategory data base. However, the flow ratios (not a regulated parameter) were eliminated from the summary data of 8 of the 60 plants utilized in subcategory summaries for the following reasons: (a) the poor water conservation practice of letting water run through butchering machines in between periods of operation, (b) allowing hoses to run even when not in use, (c) allowing water to flow through filleting stations even when not in use, (d) excessive overflow rates in oyster blow tanks, and (e) poor control of water flowing through spray washers.

(3) Several commenters stated that the use of an average subcategory raw waste load is inequitable because effluent limitations calculated from a mean value result in half of the plants having to do more to meet the limitations. They suggest that the Agency utilize a case-by-case basis to establish effluent limitations for each plant or utilize the highest waste load observed within a subcategory as the basis for the effluent limitations.

It is inherent in developing subcategory raw waste loads that some plants presently will fall above the average waste loads. However, by employing "good housekeeping" practices and developing an effective waste management program to optimize plant operation, many of these facilities may reduce their raw waste loads before 1977.

In developing effluent limitations, the Agency must be responsive to the requirements of the Act. The legal standards for 1977, like those for 1983 and for new sources, are delineated in Sections 304 and 306 of the Act as "best practicable control technology currently available" (1977), "best available technology economically achievable" (1983), and "best available demonstrated technology" (new sources). As stated in the Senate Report (Leg. Hist., Vol. 2, p. 1468):

"The Administrator should establish the range of best practicable levels based upon the average of the best existing performance by plants of various sizes, ages, and unit processes within each industrial category."

The Agency is mandated to rely upon the most effective pollution control achieved in a particular industry subcategory in setting effluent limitations, and must require all point sources in the subcategory, by 1977, to meet this level of currently achieved control.

In enacting the Federal Water Pollution Control Act Amendments of 1972, Congress meant to do more than leave industry at status quo for another decade and reward environmentally laggard businesses by utilizing worst case waste loads as the basis for effluent limitations. Therefore, the sampling program covered plants identified by trade associations and industry experts as representative of the subcategories regulated.

(4) A number of commenters expressed concern about the use of the log normal distribution and suggested that its use was simply a device utilized to mask the variability of the collected data.

An analysis of the natural distribution of the major waste water parameters indicated that the standard normal distribution model was inadequate for most cases because the range of data was large and the data tended to be skewed with some relatively large values. Also, the normal distribution allowed for negative values which do not occur in actuality for the pollution parameters being examined. The log normal distribution was investigated and found to adequately describe the data collected from this industry segment. The log normal distribution is the distribution commonly used for only positive values which are skewed right to allow for some large values. The set of the logarithm of values in the distribution conforms to the normal distribution and standard statistical techniques can be employed. Because the log normal distribution model described the data distribution better than the normal distribution, the log normal distribution was used to establish subcategory summary waste loads.

If the standard normal distribution had been used, the extreme outliers could have been statistically eliminated from the calculated averages. Therefore, the subcategory raw waste load summaries might have been lower than those calculated from the log normal distribution.

(5) Many commenters suggest that the true causes of variability in raw waste loads were not adequately taken into consideration in the establishment of effluent guidelines.

As discussed in the Development Document, the contributing causes of raw waste variability include factors such as variety of the species being processed, variability in raw product supply, harvesting methods, condition of raw product on delivery to the processing plant, and in plant materials management practices. In general, the first four factors are beyond the immediate control of individual processing facilities.

The variety of species utilized in each commodity group is usually limited to those which are quite similar. In general, the processes which have the largest capacities and produce the most waste utilize the fewest species. Those which handle a large variety of species, such as conventional bottom fish processes, are typically smaller and utilize manual unit operations, which produce lower waste loads. The subcategorization rationale reflects a consideration for the variety of species when they are processed in a similar manner.

In the case of salmon processing the practical aspects of the problem precluded subcategorization by salmon species. For example, in Alaska production volumes for red and pink salmon are much greater than those for chum, king, and coho. Since all five species are many times processed during the same shift, sometimes intermingled with one another, obtaining full-shift flow proportioned composite samples for each species could not be practically accomplished.

The variability in raw product supply and production is strongly correlated with the type of product being processed and occasionally with geographic location and production capacity. The subcategorization scheme and sampling program inherently includes the variability in raw material supply, because this factor influences all food processing facilities dependent on the vagaries of nature for raw material.

The harvesting methods are generally similar within a commodity group. However, it is recognized that different harvesting methods can affect the condition of the raw material or the degree of pre-processing. For example, salmon are harvested primarily by three different methods: trolling, purse seining, and gill netting. Larger vessels, called tenders, usually bring the salmon from the fishing grounds to the processing plants. Fishing boats coming into the port because of breakdowns and supply shortages also deliver fish to the plants. It is more common for trollers to deliver directly to plants than seiners and gill netters. Tenders using chilled brine can store fish up to four days without freezing, whereas

dry tenders, which are rapidly becoming obsolete, must return to the processing plants daily. A few tenders ice their fish. A plant may process on the same day, or from day to day, fish harvested by any permutation of the above methods.

The condition of the raw material on delivery to the processing facility is, perhaps, the major uncontrollable factor affecting plant raw waste loads. The raw material can be very fresh, only a few hours old, or it can be quite old and on the verge of spoilage. It is not uncommon for a processing facility to refuse raw material which has decomposed beyond the point of safe processing for human consumption. The data collected reflects a wide range in the condition of the raw material. In several cases the sampling program at some plants reflects high raw waste loads because the raw material was "older and softer than usual." In another case, due to a shortage of fish, a plant purchased a load of fish which would normally be rejected. The fish were reportedly caught just after feeding which caused the bellies to bloat and soften the adjacent meat, thereby increasing the raw waste load.

In an attempt to account for the temporal variations in raw waste loads due to some of these factors, whenever possible a given plant was sampled over several weeks rather than for several consecutive days. In the case of salmon processing in Alaska, the major portion of the season falls from mid-June to mid-September. The Agency's sampling effort and the historical data covers the calendar months from mid-July to the early part of November. In the case of bottom fish processing, the Agency's sampling program generally covers the calendar months from July through October with historical data at one plant covering an 8 month period and at two other plants covering 5 month periods. In general the oyster processing data covers the calendar months of October and November.

As stated previously variations in raw material quality are normal and should be expected. Therefore, the waste management program should be designed with sufficient flexibility to handle the problems inherent in the industry due to expected raw material quality variations. It is also suggested that a processing plant attempt to work out an emergency plan to handle a situation where uncontrollable, significant deterioration in its raw material quality causes significantly high waste loads.

The fifth item listed above, plant materials management practices, directly affects the variability in raw waste loads. Many plants hose solids, which accumulate on the floor near the various unit operations, into drains or troughs. These solids could be removed by shovel and placed into dry bins for disposal or solids recovery. Many plants allow solids to accumulate in sumps which results in leaching of the soluble fractions. In general, any unnecessary water-solids contact increases the waste load of the effluent stream. Water use practices which

affect raw waste loads are discussed separately in Items 6, 7, and 8 below.

(6) According to many commenters, the Agency should not emphasize water use practices because the wide fluctuations in water use ratios are beyond the control of individual processors due to FDA and public health mandates.

The waste characterization studies indicate that water usage in the seafood processing industry varies widely and is not always a direct function of the needs of the various unit operations or of sanitation requirements. The large variations in water usage for the same process configuration among different plants and among different stations of the same unit operation in a single plant indicates that there is ample opportunity for the reduction of water usage without adversely affecting the quality of the product. Many plants keep the floors flooded at all times of processing. There is a general lack of controls to adjust water use with the volume of seafood processed. In many cases several valves control the entire plant water flow and these are adjusted at the start and turned off at the end of processing operations.

The following specific practices were observed during the Agency's sampling program. (a) In some plants hoses were used continuously during some shifts to wash down an area of waste build up, but were not used on every shift or day of operation; (b) Water was observed to run through many machines or stations even though they were not processing fish; (c) In many cases pumps were not flow regulated, therefore requiring large amounts of water to prevent the loss of vacuum; (d) Some plants did not shut off or reduce water flow during rest breaks; and (e) At one plant sampled the flows among 13 filleting stations ranged from 0.08 gpm to 2.70 gpm at the same point in time, a difference of over 3000 percent; and at another plant, the flows among 7 butchering stations ranged from 0.8 gpm to 3.5 gpm, a difference of over 300 percent.

The Agency believes it to be evident that a significant proportion of the observed water use variability does not result from public health mandates but rather from inefficient housekeeping and water management practices.

Again, it should be emphasized that water use is not a regulated parameter. However, in developing cost estimates of the end of pipe technology utilized as the basis of the 1977 effluent limitations, it was assumed that the flow ratios should be based on "good housekeeping" practices which are considered normal practice within the seafood processing industry. This includes turning off faucets and hoses when not in use or using spring-loaded hose nozzles.

The extensive discussions of water use in the Development Document is intended to illustrate the fact that hydraulic load is an important engineering design and cost factor. It would behoove a processor to evaluate the water flow in all unit operations to reduce unnecessary water-solid contact and indiscriminate water use because prolonged water-

solid contact tends to increase raw waste load and unnecessary water use tends to increase the cost of end of pipe treatment.

(7) Several commenters suggest that there is no relationship between water use and waste load by referring to several plants with similar BOD₅ ratios and considerably different flow ratios.

The study revealed two major facets of water use within the seafood industry. First, unnecessary flows through hoses and machinery or stations not in use increase water consumption without a noticeable effect on waste load ratios based on production volume. However, the concentration of the total plant effluent decreases due to the dilution effect of unnecessary water consumption. Second, any water-solids contact such as rinses or spray washes removes undesirable material from the surface of the product. Public health or product quality criteria determines some optimum water consumption level for the wash. Beyond this point unnecessary water-solids contact can affect the product surface which may increase suspended solids and induce additional leaching of soluble material. In this case, the additional water-solids contact may increase the waste load per unit of production while the total plant effluent concentration may actually decrease depending on the amount of excess water.

Some plans sweep or wash solids into drains while others utilize dry-capture techniques before cleaning equipment. This has a definite effect on waste load which is not directly related to water use. To be more precise, there is, in fact, a definite relationship between water-solids contact and waste load as illustrated by data presented in Section VII of the Development Document. When unnecessary and indiscriminate water use is eliminated, the water use to waste load relationship will be easier to detect in the processing plant situation.

In general, no comparison can be made of the water use and waste load ratios between different processing plants, unless the facilities have identical raw material, unit operations, and end products. For example, if one plant has a flume which is twice as wide as one in another plant, then with everything else being equal, the first plant will use twice the water volume to maintain the same velocity in the flume.

(8) The comment was made that the premise of water recycling and its part to play in setting guidelines is at present unattainable and consequently upsetting to the food processors treatment program planning.

The effluent limitations are not predicated upon water recycling or water reuse. The discussion presented in the Development Document includes water recycling or water reuse as one of many alternatives in a plant water management program.

(9) Several commenters considered the discussion of by-product recovery in the preamble and Development Document to be overly optimistic by stipulating that fish waste can be converted into mar-

ketable by-products. They state that "wherever, and more realistically whenever, the economics of such marketing are favorable, the industry has and will continue to produce and market such products."

It should be noted that neither the technical justification for the 1977, 1983, and new source effluent limitations nor the economic impact analysis utilize by-product recovery as the basis for the regulations. The purpose of the by-product recovery discussion is to outline several of the major developments that are currently in use, ready for use, or will be available within the next few years.

If the intent and objectives of the Act are to be met, the industry has a choice of treating the waste load at the end of the pipe or making in-plant modifications which may include recovery of secondary products. Because a company expects to sell a by-product, it may make a profit, break even, or recover only a fraction of the cost of production. However, it may be less expensive to sell a secondary product at a loss, than incur the cost of end-of-pipe disposal or treatment for that portion diverted to by-product recovery.

One example cited in the Development Document was the conversion of waste crustacean shells into protein and chitin and chitosan fractions. To quote the October 1974 Proceedings of the Sea Grant Association the following goals and objectives of the Chitin/Chitosan Shellfish Waste Utilization Program were met successfully: "beneficial utilization of a waste product, elimination of a major source of pollution, demonstration of methodology for technical assessment and thence utilization of the by-products of a primary objective, attract additional research in chitin and chitosan utilization, and develop commercial interest in establishment of shellfish waste conversion plants."

In addition to the Japanese production of chitin and chitosan, a U.S. commercial processing facility in Brownsville, Texas is presently producing chitin and is scheduled to commence full-scale production of chitosan in the near future. If a few of the myriad uses of chitin and chitosan attain commercial application, the demand for crustacean shell will increase in the foreseeable future. This may result in the construction of other processing plants and preprocessing or stabilization facilities, which could have a positive economic impact on the existing crustacean and fish meal plants in Alaska and other sources of raw or stabilized shell throughout the country. Notwithstanding the concern of several commenters who indicated that meal plants in Alaska are operating presently at a loss, an increase in demand for stabilized shell could improve the economic condition of the entire by-product operation of these plants. At present, the selling price for crustacean and fish meal is determined by the vacillating world wide supply and demand for protein. An increasing demand for chitin and chitosan in the chemical markets may tend to stabilize the fluctuating selling price of

crustacean meal due to competitive markets for the same raw material.

(10) Several commenters state that they prefer to work with some other types of treatment systems than those utilized as the basis of effluent limitations and request that their options be left open accordingly.

The technologies which form the bases for the effluent limitations are used as a point of reference for evaluating the economic impact. The industry may select alternative methods such as those discussed in the Development Document or other sources to meet the published effluent limitations.

(11) Several commenters state that the Development Document indicates that the error in the BOD₅ analysis can be as great as 30 percent. Therefore, they request that COD be substituted for the BOD₅ parameter.

The discussion of the analytical quality control methods referred to in the Development Document states: "Five-day BOD was determined according to 'Standard Methods'. For samples with BOD₅ of higher than 20 mg/l, at least three different dilutions were made for each sample. The results among the different dilutions were generally less than plus or minus 6 percent. The data reported were the average values of the different dilutions. For samples with BOD₅ of less than 20 mg/l, one or two dilutions with two duplicate bottles were incubated. Most of replicate BOD₅ in this low range were within plus or minus 5 percent, but some had as much as plus or minus 30 percent difference. Seed for the dilution water was a specially cultivated mixed culture in the laboratory using various fish wastes as the seed."

It should be noted that the lowest BOD₅ concentration assumed for 1983 effluent limitations was 60 mg/l. Therefore, the relative error of the BOD₅ test will not fall within the plus or minus 30 percent range as suggested by the commenter.

The BOD₅ test is widely used to determine the pollutional strength of domestic and industrial wastes in terms of the oxygen these wastes will require if discharged into natural watercourses in which aerobic conditions exist. Furthermore, current engineering practice utilizes BOD₅ as a principal design parameter, especially for biological waste treatment systems.

The possibility of substituting the COD parameter for the BOD₅ parameter was investigated during this study. The BOD₅ and corresponding COD data from industrial fish, finfish, and shellfish waste waters were analyzed to determine if COD is an adequate predictor of BOD₅ for any or all of these groups of seafood. The analysis presented in Section VI of the Development Document indicates that the COD parameter is not a reliable predictor of BOD₅.

The relationship between COD and BOD₅ before treatment is not necessarily the same after treatment. Therefore, the effluent limitations guidelines will include the BOD₅ parameter, since insufficient information is available on the COD ef-

fluent levels after treatment. However, with adequate data EPA and most States could probably allow the substitution of COD for BOD₅ in the routine monitoring program.

(12) One commenter listed the anti-logarithms of the log-normal mean and standard deviation of the summary data for conventional bottom fish processing and then suggested that contrary to the statements in the Development Document the waste loadings for bottom fish plants were not relatively low and uniform.

The commenters use of the log-normal data is mathematically incorrect. The log-normal distribution is a normal distribution of the logarithms of the numbers in the data set. Any comparisons between the log-normal mean and log-normal standard deviation should be as logarithms. A comparison of the real number antilog of the log-normal mean and real number antilog of the log-normal standard deviation results in mathematically invalid conclusions. The statement in the Development Document is correct when comparing the log-normal mean and log-normal standard deviation.

(13) One commenter stated that the dissolved air flotation removal efficiencies for salmon are too restrictive because the only DAF plant operational for salmon has shown actual BOD removal to be only in the range of 11 to 35 percent instead of the 75 percent that must be achieved for an average salmon cannery to avoid exceeding the guidelines. For total suspended solids the commercial plant was represented as removing only 18 to 48 percent instead of the assumed 90 percent.

The Fisheries Research Board of Canada and the Fisheries Association of British Columbia designed and erected a full-scale demonstration dissolved air flotation waste water treatment plant which accommodates salmon canning, herring roe recovery, and ground fish filleting effluents. The information available to the Agency indicates that this is the only full-scale DAF system treating salmon cannery effluents. The 1972 Canadian operating data using alum and an anionic polyelectrolyte on salmon canning effluent indicated that suspended solids removal averaged 86 percent and that COD reduction averaged 84 percent. The 1971 operating data using alum on salmon canning effluent indicated that suspended solids removal averaged 92 percent and that COD removal averaged 84 percent.

In view of the published operating data for a full scale salmon processing waste water treatment system, the Agency believes that dissolved air flotation without chemical optimization can achieve the assumed 40 percent reduction of BOD₅ and 70 percent reduction of total suspended solids; and with chemical optimization, can achieve by 1983 the assumed 75 percent reduction of BOD₅ and 90 percent reduction of total suspended solids.

(14) One commenter indicated that sardine plants with wet fluming systems could not meet the 1977 limitations with-

out in-plant changes because the summary data was based on dry conveying systems. Additional sardine processing waste characterization data was submitted for use in reevaluating the derivation of the effluent limitations.

The information indicated that several of the larger processing facilities employed dry conveying systems from the storage to the processing areas, but the other plants still relied on wet fluming. Therefore, the 1977 effluent limitations were revised by including two additional plants in the subcategory data summary for plants with dry conveying systems and establishing an allowance by use of historical data for plants without this in-process modification. However, the 1983 and new source effluent limitations are based on dry conveying systems.

(15) One commenter stated that the scallop subcategories have not been adequately discussed because there are significant differences between the two plants monitored (with one plant being sampled only once).

As discussed in the Development Document, the bay, sea, and Alaskan scallops are shucked and eviscerated at sea to avoid deterioration. The unit operations at land-based processing plants are essentially washing and freezing. This results in a yield of nearly 100 percent of the raw material entering the plant since the only wastes produced are small scallop pieces not suitable for freezing, solid waste removed during inspection, and small amounts of dissolved organic matter. The observed washing methods were different at each plant sampled. One plant used a two stage continuous flow washing system, whereas, the other employed a non-flowing brine tank which was dumped approximately every eight hours. With the exception of flow ratios, the other waste parameters were considered similar. The available information did not warrant further subcategorization on the basis of the washing operation.

Although the two Alaskan plants were the only ones sampled, other facilities were observed in the middle Atlantic region using essentially the same process; therefore, it was assumed that the waste loads would be similar for similar "wash and freeze" operations.

It should be noted that, as stated in § 408.300, the calico scallop process which employs land-based machinery for shucking and eviscerating the scallops is not covered by the regulations set forth herein.

(16) Several commenters expressed concern about the accuracy of the development of the steamed and canned oyster effluent limitations and discussed the effects of the oyster beds and harvesting techniques on the processing waste loads. One Gulf Coast processor submitted data to support his statements.

A review of the data for steamed and canned oysters indicated that plant C01 data should not have been included in the subcategory average. Unlike the other plants, the raw material was pre-

washed before entering the processing facility, thus reducing the raw waste load due to partial processing. The revised subcategory average excludes plant C01 data, and includes the Gulf Coast data.

(17) Several commenters objected to the establishment of two hand-shucked oyster subcategories with revised effluent limitations because the contractor's draft report originally recommended one hand-shucked oyster subcategory with higher effluent limitations.

One result of the review of the contractor's draft report and evaluation of the public comments, prompted further subcategorization of the original Hand-Shucked Oyster Subcategory into the Pacific Coast Hand-Shucked Oyster Subcategory and the East and Gulf Coast Hand-Shucked Oyster Subcategory with data based on the specific species processed in the two geographic areas. The contractor's draft report presents hand-shucked oyster data for ten processing plants—four located on the West Coast and six, on the East Coast. Utilizing Total Suspended Solids (TSS) as an example, it can be seen that the TSS arithmetic average for the West Coast plants processing the Japanese or Pacific oyster is 25.7 kg/kg of shucked oyster produced; the TSS arithmetic average for the East Coast plants processing the American, Eastern, or Virginia oyster is 10.8 kg/kg. However, as noted in the contractor's draft report, the Hand-Shucked Oysters Process Summary was based on the four West Coast plants alone.

Another result of the review, as explained in the preamble to the FEDERAL REGISTER notice (40 CFR 4582) and the Interim Final Development Document, prompted the use of the logarithmic-normal frequency distribution to determine subcategory summary data. Again using TSS as an example, the log-normal transform increases the Pacific Coast Hand-Shucked Oyster Subcategory TSS average from 25.7 to 34.2 kg/kg of product, and the East and Gulf Coast Hand-Shucked Oyster Subcategory TSS average from 10.8 to 13.6 kg/kg of product.

The Agency believes that effluent limitations based on these revisions are equitable because they present a more accurate reflection of the characteristics of the hand-shucked oyster industry.

(18) One commenter suggests that the herring fillet subcategories have not been adequately characterized because no remote Alaskan herring fillet plant was sampled and only one day of production was monitored at a non-remote Alaskan plant.

As stated in the Development Document, two herring filleting plants were sampled during August, 1973, one in New England and one in Alaska. In addition, historical data were obtained from a plant operating in Canada. The sampling interval was during a period of peak production for New England, however, due to a poor harvest in 1973, the plants were operating on an intermittent basis. The sampling interval in Alaska was during a slack season, therefore, only one day of operation was observed.

In general, the waste characteristics for all three plants were similar. One difference was the relatively high flow ratio observed at the Alaskan plant. This high ratio is not considered to be typical because only a few fish were being processed and the flow through the filleting machines at the plant monitored tends to be independent of the production rate.

One relatively high grease and oil data point at the Alaskan processing facility, resulted in a distorted log normal projection for the grease and oil daily maximum of 86.6 kg per kkg of raw material, i.e., over 8 percent of the weight of raw material. Since the typical fat composition of herring ranges from 2 up to 11 percent of body weight, it would be unlikely for 78 percent or more of this fat to reach the waste water effluent stream because a major proportion of the fat is contained in the food product and waste solids. A comparison of the mechanically butchered salmon processing raw waste load to the mechanized herring filleting raw waste load indicates that TSS averages are virtually identical, 20.3 kg/kg for salmon and 20.9 kg/kg for herring filleting; the salmon GOD5 waste load is higher, 50.8 kg/kg for salmon versus 32.2 kg/kg for herring filleting; the salmon grease and oil average is also virtually identical to the average for the New England herring filleting plant, 6.49 kg/kg for salmon versus 6.11 kg/kg for New England herring filleting. Because the one data point at the Alaskan herring filleting plant appeared to be abnormally high in comparison to the other available information, it was not used to determine a subcategory average. Instead, the mechanized salmon process grease and oil data was utilized to derive conclusions regarding effluent limitations for the herring fillet processing plants.

Since the herring filleting process is essentially the same from plant to plant, geographic location was considered to be the only factor requiring further attention in the subcategorization process. As explained in the Development Document and preamble to the Interim final effluent limitations, subcategorization based on geographic regions (Alaska versus non-Alaska, and remote Alaska versus non-remote Alaska), was developed to account for the differences in the relative costs of business and treatment technologies, not for differences in raw waste loads, treatability of wastes or other technical factors.

(19) Several commenters criticized the fact that the log-normal transform was used in most cases to determine parameter averages while in some cases an arithmetic average was used.

In reviewing the data base, it was decided to use the log-normal distribution exclusively instead of the standard normal distribution for the reasons previously cited in item 4. However, the weighing factors were deleted from the log-normal transform, even though this results generally in higher subcategory averages, in order to supplement the data base with historical data or available plant data which does not include temporal variability for the regulated parameters.

(20) Questions have been raised concerning the availability of standards or guidelines applicable to the disposal of solid wastes resulting from the operation of pollution control systems.

The principles set forth in "Land Disposal of Solid Wastes Guidelines" (40 CFR Part 241) may be used as guidance for acceptable land disposal techniques. Potentially hazardous wastes may require special considerations to ensure their proper disposal. Additionally, state and local guidelines and regulations should be considered wherever applicable.

(21) One commenter observed that EPA did not take into account the economic impact from regulations imposed by other regulatory agencies.

The Agency realizes that there will be an economic impact from regulations set by other regulatory agencies. In its economic impact analysis, EPA included costs incurred as a result of pre-1972 regulations.

It is difficult to estimate what other costs will be incurred in the years ahead as there is no way to determine what other agencies will propose. However, it is valid to assume that these agencies, when considering the economic impact of their proposed regulations, will consider the costs incurred as a result of previously imposed EPA regulations.

(22) Several comments stated that the new source and 1983 effluent limitations based on extended aeration for the hand shucked oyster industry will have a severe economic impact.

As part of the Agency's overall reassessment of the economic impact, the above comment was carefully evaluated. In this analysis, the impact was investigated over a range for several variables (e.g. cost of capital, operating and maintenance cost). Because the review indicated that the comment was generally valid, the Agency rejected extended aeration as the basis of the 1983 effluent limitations. The Agency believes that extended aeration still represents a technically feasible alternative for hand-shucked oyster processing. Nevertheless, the 1983 limitations and new source performance standards have been revised so that the best available technology economically achievable and the best available demonstrated control technology consists of "good housekeeping" practices which are considered normal practice within the seafood processing industry such as turning off faucets and hoses when not in use or using spring-loaded hose nozzles, by-product recovery or ultimate disposal of solids, and treatment of the waste water effluent by screening.

The provisions of section 301(d) of the Act require that the effluent limitations based on the best available technology economically achievable shall be reviewed at least every five years and, if appropriate, revised pursuant to the procedure established under section 301(b)(2). The Agency has initiated a study to identify alternative economically viable technology applicable to hand-shucked oyster processing. Therefore, the 1983

limitations may be revised in the future pursuant to section 301(d) of the Act to reflect a higher level of technology than screening.

(23) Several commenters were concerned that monitoring costs were excluded from the Agency's cost calculations.

The Agency did not include monitoring costs in its calculations because in many cases they prove to be an insignificant amount of the cost of compliance with the effluent limitations.

Laboratory analyses were estimated to cost about \$25 per sample. Some permits are written which require only one sample per season. For example, using the cost figures for a medium-size East Coast hand shucked oyster plant, that amounts to approximately 0.8 percent of the total annual costs of \$3,000. Even if once per month sampling was required during the operating season (7 months), monitoring cost would amount to approximately 6 percent of the total annual cost.

Most processors are currently required to (and do) monitor their discharges; the effluent limitations may not require any additional monitoring. Therefore, no additional monitoring costs are incurred as a result of these effluent limitations.

(24) Comments were received which said that dissolved air flotation (DAF) was not economically feasible for the West Coast canned salmon industry.

The Agency reevaluated the cost of DAF technology, and the potential economic impact on the West Coast canned salmon industry. Based on this evaluation, EPA is revising the effluent limitations so that (1) DAF is no longer the basis for the 1977 limitations; however (2) DAF will be retained as the basis for the 1983 and new source standards.

The Agency considered the cost of the technology, the economic history and status of the industry, and its future prospects. The West Coast canned salmon industry has been in a depressed state during 1973 and 1974. However, the industry has a cycle of about four years; usually the first two years are profitable, while the last two years are not. Historically, the profits have covered the losses. However, in the last cycle, 1971-1974, losses exceeded profits.

The economic outlook for the immediate future is uncertain. Landings for June 1975 were several times greater than landings in June 1974. There are indications that a new cycle is starting, but whether the cycle will be profitable (net positive cash flow) still remains to be seen. The DAF basis for the 1983 and new source standards is retained because the industry may, in fact, prove profitable. However, section 301(c) of the Act provides for modification of the effluent limitations with respect to any point source which is based on the best available technology economically achievable, upon a showing by the owner or operator of such point source satisfactory to the Administrator that such modified requirements (1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reason-

able further progress toward the elimination of the discharge of pollutants. Furthermore, section 301(d) of the Act states that the effluent limitations based on the best available technology economically achievable shall be reviewed at least every five years and, if appropriate, revised pursuant to the procedure established under section 301(b)(2). If adverse economic conditions are found to exist at a later time, there is ample opportunity to revise the regulations.

(25) Several commenters stated that dissolved air flotation was not economically feasible for the Alaskan non-remote fresh and frozen salmon processors and the Alaskan canned salmon processors.

The Agency reevaluated the cost of DAF technology, and the potential economic impact on the Alaskan fresh and frozen and canned salmon industries. Based on this evaluation DAF was shown to be economically feasible and, therefore, will be retained as the basis for the 1983 effluent limitations.

EPA considered the cost of the technology, the economic history and status of the industry, and its future prospects. The salmon industry in Alaska has been hampered by a steady and continuous decline in landings (due in large part to foreign fishing offshore) and, concomitantly, rising exvessel prices for the raw product. The industry has not been profitable in the last few years.

If the future profitability is the same as over the most recent cycle, EPA realizes that there could be a great impact on this industry if DAF is retained as the basis for the 1983 effluent limitations. However, the outlook for this industry is subject to great uncertainty. The DAF basis for 1983 regulations is retained because this industry may, in fact, prove profitable. However, section 301(c) of the Act provides for modification of the effluent limitations guidelines with respect to any point source which is based on the best available technology economically achievable, upon a showing by the owner or operator of such point source satisfactory to the Administrator that such modified requirements (1) will represent the maximum use of technology within the economic capability of the owner or operator; and (2) will result in reasonable further progress toward the elimination of the discharge of pollutants. Furthermore, section 301(d) of the Act states that the effluent limitations guidelines based on the best available technology economically achievable shall be reviewed at least every five years and, if appropriate, revised pursuant to the procedure established under section 301(b)(2). If adverse economic conditions are found to exist at a later time, there is ample opportunity to revise the regulations.

(b) *Revision of the interim final and proposed regulations prior to promulgation.* As a result of public comments and continuing review and evaluation of the proposed regulation by the EPA, the following changes have been made in the regulation:

(1) The use of the unweighted log normal distribution resulted in the following changes:

(i) generally higher effluent limitations for the Alaskan bottom fish (Subpart T), scallop (Subparts AC and AD), and hand-shucked clam (Subpart W) processing subcategories; and

(ii) higher effluent limitations within the herring fillet (Subparts AE and AF), sardine (Subpart AB), and abalone (Subpart AG) processing subcategories because of expansion of the respective subcategory data bases to include plant data without the temporal variability weighing factor.

(2) The revised technology basis for the sardine processing 1977 effluent limitations (Subpart AB) accounts for separation of those plants with dry conveying systems to the processing area from those plants with wet fluming transportation systems. The 1983 and new source effluent limitations are based on dry conveying systems alone.

(3) The mechanized clam processing subcategory effluent limitations increased because one plant which utilized a "partial process" was deleted from the subcategory summary.

(4) The steamed and canned oyster processing subcategory effluent limitations increased because of the addition of historical data received during the comment period and the deletion of one plant which utilized a "partial process."

(5) A reassessment of the economic impact of the interim final effluent limitations for the West Coast Mechanized Salmon Processing Subcategory indicates that dissolved air flotation is not an economically feasible technology basis for the 1977 limitations. The promulgated effluent limitations have been revised to eliminate this impact. The best practicable control technology currently available involves "good housekeeping" practices which are considered normal practice within the seafood processing industry such as turning off faucets and hoses when not in use or using spring-loaded hose nozzles, by-product recovery or ultimate disposal of solids, and treatment of the waste water effluent by screening. The best available technology economically achievable and the best available demonstrated control technology, processes, operating methods or other alternatives for new sources consist, of, in addition to the aforementioned treatment, dissolved air flotation and appropriate processed design to provide more efficient in-plant water use which reduces leaching of solids and entrainment of solids in the contact process water.

(6) A reassessment of the economic impact of the effluent limitation for the Pacific Coast Hand Shucked Oyster and East and Gulf Coast Hand Shucked Oyster Processing Subcategories indicates that extended aeration is not an economically feasible technology basis for the new source and the 1983 limitations. The promulgated effluent limitations have been revised to eliminate this impact. The best available technology economically achievable and the best available demonstrated control technology, processes, operating methods or other alternatives for new sources consist of "good housekeeping" practices which are considered nor-

mal practice within the seafood processing industry such as turning off faucets and hoses when not in use or using spring-loaded hose nozzles, by-product recovery or ultimate disposal of solids, and treatment of the waste water effluent by screening.

(c) *Economic and inflationary impact.* The Agency considered the economic impact of the internal and external costs of the effluent limitations. Internal costs are defined as investment and annual cost (operating costs plus the cost of capital and depreciation) for a typical plant. External cost deals basically with the assessment of the economic impact of the internal costs in terms of price increases, production curtailments or plant closures, resultant unemployment, community and regional impacts, international trade, and future industry growth.

In its reassessment of the economic impact, the Agency made a concerted and serious effort to contact new sources and obtain new data. Inquiries were made to government agencies, private companies, and trade associations. The Agency re-evaluated previous data and evaluated new data furnished to the Agency.

There were certain, mostly minor, changes due to this reassessment. These include the following:

(1) The total internal cost of the 1977 effluent limitations is \$6.2 million investment (previous figure: \$6.1 million) with \$1.3 million annual cost (same as the previously published figure).

(2) An additional \$5.9 million investment is required for the 1983 standards (previous figure: \$8.2 million) plus \$1.4 million annually (previous figure: \$1.7 million).

(3) As discussed in the Comments (item (b) 24, above) there was concern that the economic impact of the 1977 effluent limitations would be too severe for the West Coast canned salmon industry. Based on the review of the economic history and status of the industry, the Agency concluded that a revision of the previously published effluent limitation was warranted. As such, the basis for the 1977 limitation was changed from air flotation systems to screening systems.

(4) The economic impact statement for the interim final regulation expressed concern about a potentially severe economic impact on the Alaskan fresh and frozen salmon industry. It was also stated that the severity could have been overestimated due to several factors. Based on a review of permit registrations, it was found that a number of the "affected" plants were not processors, but packers and wholesalers that are entirely unaffected by the effluent limitations. Based on this review, the Agency concluded that the previously stated impact is overstated and no revisions of the effluent limitations are necessary.

(5) As discussed in the comments (item (b) 22, above) there was concern that the economic impact of the 1983 and new source performance standards would be too severe for the hand-shucked oyster processors. Based on a review of the economic history and status of the

industry, the Agency concluded that a revision of the previously published effluent limitations was warranted. As such, the bases for the 1983 and new source performance standards for the hand-shucked oyster processing subcategories were changed from extended aeration systems to screening systems.

The effluent limitations for 1977 will have a minor effect on prices as price increases generally in the range of 0.3 to 0.5 percent are projected. Although price increases in this industry will, of course, be affected by foreign competition, the generally small magnitude of the projected price increases is not expected to cause any important international trade effects. A number of small plants are projected to be adversely affected by the effluent limitations, but the domestic industry capacity is not expected to be affected by the potential closure of these particular small plants.

The 1983 standards are projected to result in price increases typically in the range 0.5 to 1.5 percent (including the 1977 increase). An additional number of generally small plants are projected to be adversely affected by these 1983 guidelines, but again, the domestic industry capacity is not anticipated to be affected by the potential closure of these small plants. No significant international trade effects of the 1983 guidelines are projected.

Executive Order 11821 (November 27, 1974) requires that major proposals for legislation and promulgation of regulations and rules by Agencies of the executive branch be accompanied by a statement certifying that the inflationary impact of the proposal has been evaluated.

OBM Circular A-107 (January 28, 1975) prescribes guidelines for the identification and evaluation of major proposals requiring preparation of inflationary impact certifications. The circular provides that during the interim period prior to final approval by OMB of criteria developed by each Agency, the Administrator is responsible for identifying those regulations which require evaluation and certification. The Administrator has directed that all regulatory actions which are likely to result in capital investment exceeding \$100 million or annualized costs in excess of \$50 million will require certification. Since the estimated total capital investment and annualized cost are below the designated limits, certification of the inflationary impact statement is not necessary.

(d) *Cost-benefit analysis.* The detrimental effects of the constituents of waste waters now discharged by point sources within the fish meal, salmon, bottom fish, sardine, herring, clam, oyster, scallop, and abalone segment of the canned and preserved seafood processing point source category are discussed in Section VI of the report entitled "Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Fish Meal, Salmon, Bottom Fish, Sardine, Herring, Clam, Oyster, Scallop, and Abalone Segment of the Canned and Preserved Seafood Processing Point Source

Category" (August 1975). It is not feasible to quantify in economic terms, particularly on a national basis, the costs resulting from the discharge of these pollutants to our Nation's waterways. Nevertheless, as indicated in Section VI, the pollutants discharged have substantial and damaging impacts on the quality of water and therefore on its capacity to support healthy populations of wildlife, fish and other aquatic wildlife and on its suitability for industrial, recreational and drinking water supply uses.

The total cost of implementing the effluent limitations includes the direct capital and operating costs of the pollution control technology employed to achieve compliance and the indirect economic and environmental costs identified in Section VIII and in the supplementary report entitled "Economic Analysis of Effluent Guidelines—Seafood Processing Industry" (August 1975). Implementing the limitations will substantially reduce the environmental harm which would otherwise be attributable to the continued discharge of polluted waste waters from existing and newly constructed plants in the canned and preserved seafood processing industry. The Agency believes that the benefits of thus reducing the pollutants discharged justify the associated costs.

(e) Publication of information on processes, procedures, or operating methods which result in the elimination or reduction of the discharge of pollutants.

In conformance with the requirements of section 304(c) of the Act, a manual entitled, "Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Fish Meal, Salmon, Bottom Fish, Sardine, Herring, Clam, Oyster, Scallop, and Abalone Segment of the Canned and Preserved Seafood Processing Point Source Category," will be published as soon as practicable and will be available for purchase from the Government Printing Office, Washington, D.C. 20402 for a nominal fee.

Copies of the economic analysis document previously cited will be available from the National Technical Information Service, Springfield, VA 22151.

A copy of all public comments is available for inspection and copying at the EPA Public Information Reference Unit, Room 2404, Waterside Mall, 401 M St. SW., Washington, D.C. 20460. A copy of the preliminary draft contractors reports, the Development Document (cite the appropriate reports) and economic study referred above, and certain supplementary materials supporting the study of the industry concerned, is also at this location for public review and copying, etc.

(f) *Final rulemaking.* In consideration of the foregoing, 40 CFR Chapter I, Subchapter N, Part 408, Canned and Preserved Seafood Processing Point Source Category, is hereby amended by revising Subparts A, B, C, D, E, F, G, H, I, J, K, L, M, and N; and by adding additional subparts O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, and AG to read as set forth below.

This regulation is being promulgated pursuant to an order of the Federal District Court for the District of Columbia entered in Natural Resources Defense Council, Inc. v. Train (Cy. No. 1609-73). That order requires that effluent limitations requiring the application of the best practicable control technology currently available for this industry be effective upon publication. Accordingly, good cause is found for the final regulation promulgated below establishing best practicable control technology currently available for each subpart to be effective on December 1, 1975.

The final regulation promulgated below which establishes effluent limitations based on the best available technology economically achievable; new source standards based on the best available demonstrated control technology; and new source and existing source pretreatment standards shall become effective December 31, 1975.

Dated: November 13, 1975.

JOHN QUARLES,
Acting Administrator.

Subpart O—Fish Meal Processing Subcategory

- Sec. 408.150 Applicability; description of the fish meal processing subcategory.
- 408.151 Specialized definitions.
- 408.152 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 408.153 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 408.154 Pretreatment standards for existing sources.
- 408.155 Standards of performance for new sources.
- 408.156 Pretreatment standards for new sources.

Subpart P—Alaskan Hand-Butchered Salmon Processing Subcategory

- 408.160 Applicability; description of the Alaskan hand-butchered salmon processing subcategory.
- 408.161 Specialized definitions.
- 408.162 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 408.163 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 408.164 Pretreatment standards for existing sources.
- 408.165 Standards of performance for new sources.
- 408.166 Pretreatment standards for new sources.

Subpart Q—Alaskan Mechanized Salmon Processing Subcategory

- 408.170 Applicability; description of the Alaskan mechanized salmon processing subcategory.
- 408.171 Specialized definitions.

Sec. 408.172 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

408.173 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

408.174 Pretreatment standards for existing sources.

408.175 Standards of performance for new sources.

408.176 Pretreatment standards for new sources.

Subpart R—West Coast Hand-Butchered Salmon Processing Subcategory

408.180 Applicability; description of the West Coast hand-butchered salmon processing subcategory.

408.181 Specialized definitions.

408.182 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

408.183 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

408.184 Pretreatment standards for existing sources.

408.185 Standards of performance for new sources.

408.186 Pretreatment standards for new sources.

Subpart S—West Coast Mechanized Salmon Processing Subcategory

408.190 Applicability; description of the West Coast mechanized salmon processing subcategory.

408.191 Specialized definitions.

408.192 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

408.193 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

408.194 Pretreatment standards for existing sources.

408.195 Standards of performance for new sources.

408.196 Pretreatment standards for new sources.

Subpart T—Alaskan Bottom Fish Processing Subcategory

408.200 Applicability; description of the Alaskan bottom fish processing subcategory.

408.201 Specialized definitions.

408.202 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

408.203 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

- Sec.
408.204 Pretreatment standards for existing sources.
408.205 Standards of performance for new sources.
408.206 Pretreatment standards for new sources.
- Subpart U—Non Alaskan Conventional Bottom Fish Processing Subcategory**
408.210 Applicability; description of the non-Alaskan conventional bottom fish processing subcategory.
408.211 Specialized definitions.
408.212 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.213 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.214 Pretreatment standards for existing sources.
408.215 Standards of performance for new sources.
408.216 Pretreatment standards for new sources.
- Subpart V—Non Alaskan Mechanized Bottom Fish Processing Subcategory**
408.220 Applicability; description of the non-Alaskan mechanized bottom fish processing subcategory.
408.221 Specialized definitions.
408.222 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.223 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.224 Pretreatment standards for existing sources.
408.225 Standards of performance for new sources.
408.226 Pretreatment standards for new sources.
- Subpart W—Hand Shucked Clam Processing Subcategory**
408.230 Applicability; description of the hand-shucked clam processing subcategory.
408.231 Specialized definitions.
408.232 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.233 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.234 Pretreatment standards for existing sources.
408.235 Standards of performance for new sources.
408.236 Pretreatment standards for new sources.
- Subpart X—Mechanized Clam Processing Subcategory**
408.240 Applicability; description of the mechanized clam processing subcategory.
408.241 Specialized definitions.
408.242 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- Sec.
408.243 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.244 Pretreatment standards for existing sources.
408.245 Standards of performance for new sources.
408.246 Pretreatment standards for new sources.
- Subpart Y—Pacific Coast Hand-Shucked Oyster Processing Subcategory**
408.250 Applicability; description of the Pacific Coast hand-shucked oyster processing subcategory.
408.251 Specialized definitions.
408.252 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.253 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.254 Pretreatment standards for existing sources.
408.255 Standards of performance for new sources.
408.256 Pretreatment standards for new sources.
- Subpart Z—Atlantic and Gulf Coast Hand-Shucked Oyster Processing Subcategory**
408.260 Applicability; description of the Atlantic and Gulf Coast hand-shucked oyster processing subcategory.
408.261 Specialized definitions.
408.262 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.263 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.264 Pretreatment standards for existing sources.
408.265 Standards of performance for new sources.
408.266 Pretreatment standards for new sources.
- Subpart AA—Steamed and Canned Oyster Processing Subcategory**
408.270 Applicability; description of the steamed and canned oyster processing subcategory.
408.271 Specialized definitions.
408.272 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.273 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.274 Pretreatment standards for existing sources.
408.275 Standards of performance for new sources.
408.276 Pretreatment standards for new sources.
- Subpart AB—Sardine Processing Subcategory**
408.280 Applicability; description of the sardine processing subcategory.
408.281 Specialized definitions.
- Sec.
408.282 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.283 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.284 Pretreatment standards for existing sources.
408.285 Standards of performance for new sources.
408.286 Pretreatment standards for new sources.
- Subpart AC—Alaskan Scallop Processing Subcategory**
408.290 Applicability; description of the Alaskan scallop processing subcategory.
408.291 Specialized definitions.
408.292 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.293 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.294 Pretreatment standards for existing sources.
408.295 Standards of performance for new sources.
408.296 Pretreatment standards for new sources.
- Subpart AD—Non-Alaskan Scallop Processing Subcategory**
408.300 Applicability; description of the non-Alaskan scallop processing subcategory.
408.301 Specialized definitions.
408.302 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.303 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.304 Pretreatment standards for existing sources.
408.305 Standards of performance for new sources.
408.306 Pretreatment standards for new sources.
- Subpart AE—Alaskan Herring Fillet Processing Subcategory**
408.310 Applicability; description of the Alaskan herring fillet processing subcategory.
408.311 Specialized definitions.
408.312 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.313 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.314 Pretreatment standards for existing sources.

- Sec.
408.915 Standards of performance for new sources.
408.916 Pretreatment standards for new sources.

Subpart AF—Non-Alaskan Herring Fillet Processing Subcategory

- 408.920 Applicability; description of the non-Alaskan herring fillet processing subcategory.
408.921 Specialized definitions.
408.922 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.923 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.924 Pretreatment standards for existing sources.
408.925 Standards of performance for new sources.
408.926 Pretreatment standards for new sources.

Subpart AG—Abalone Processing Subcategory

- 408.930 Applicability; description of the abalone processing subcategory.
408.931 Specialized definitions.
408.932 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
408.933 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
408.934 Pretreatment standards for existing sources.
408.935 Standards of performance for new sources.
408.936 Pretreatment standards for new sources.

AUTHORITY: Secs. 301, 304 (b) and (c), 306 (b) and (c), Federal Water Pollution Control Act, as amended, (the Act); (33 U.S.C. 1251, 1311, 1314 (b) and (c), 1316 (b) and (c), 1317(c)); 86 Stat. 816 et seq.; Pub. L. 92-500.

Subpart A—Farm Raised Catfish Processing Subcategory

Subpart A—The farm raised catfish processing subcategory is amended by revising § 408.10 to read as follows:

§ 408.10 Applicability; description of the farm raised catfish processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of farm-raised catfish by existing facilities which process more than 1362 kg (3000 lbs) of raw material per day on any day during a calendar year and all new sources.

Subpart B—Conventional Blue Crab Processing Subcategory

Subpart B—The conventional blue crab processing subcategory is amended by revising § 408.20 to read as follows:

§ 408.20 Applicability; description of the conventional blue crab processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the

processing of blue crab in which manual picking or separation of crab meat from the shell is utilized. The effluent limitations contained in this Subpart B are applicable to existing facilities processing more than 1362 kg (3000 lbs) of raw material per day on any day during a calendar year and all new sources.

Subpart C—Mechanized Blue Crab Processing Subcategory

Subpart C—The mechanized blue crab processing subcategory is amended by revising § 408.30 to read as follows:

§ 408.30 Applicability; description of the mechanized blue crab processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of blue crab in which mechanical picking or separation of crab meat from the shell is utilized.

Subpart D—Non-Remote Alaskan Crab Meat Processing Subcategory

Subpart D—The non-remote Alaskan crab meat processing subcategory is amended by revising § 408.40 to read as follows:

§ 408.40 Applicability; description of the non-remote Alaskan crab meat processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing, in non-remote Alaska, of dungeness, tanner, and king crab meat. The effluent limitations contained in this Subpart D are applicable to facilities located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg.

Subpart E—Remote Alaskan Crab Meat Processing Subcategory

Subpart E—The remote Alaskan crab meat processing subcategory is amended by revising §§ 408.50 and 408.55 to read as follows:

§ 408.50 Applicability; description of the remote Alaskan crab meat processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing, in remote Alaska, of dungeness, tanner, and king crab meat. The effluent limitations contained in Subpart E are applicable to facilities not covered under Subpart D.

§ 408.55 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

Subpart F—Non-Remote Alaskan Whole Crab and Crab Section Processing Subcategory

Subpart F—The non-remote Alaskan whole crab and crab section processing subcategory is amended by revising § 408.60 to read as follows:

§ 408.60 Applicability; description of the non-remote Alaskan whole crab and crab section processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing, in non-remote Alaska, of dungeness, tanner and king whole crab and crab sections. The effluent limitations contained in this Subpart F are applicable to facilities located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg.

Subpart G—Remote Alaskan Whole Crab and Crab Section Processing Subcategory

Subpart G—The remote Alaskan whole crab and crab section processing subcategory is amended by revising §§ 408.70 and 408.75 to read as follows:

§ 408.70 Applicability; description of the remote Alaskan whole crab and crab section processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing, in remote Alaska, of dungeness, tanner, and king whole crab and crab sections. The effluent limitations contained in this Subpart G are applicable to facilities not covered under Subpart F of this part.

§ 408.75 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

Subpart H—Dungeness and Tanner Crab Processing in the Contiguous States Subcategory

Subpart H—The dungeness and tanner crab processing in the contiguous States subcategory is amended by revising section 408.80 to read as follows:

§ 408.80 Applicability; description of the dungeness and tanner crab processing in the contiguous States subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of dungeness and tanner crab in the contiguous States.

Subpart I—Non-Remote Alaskan Shrimp Processing Subcategory

Subpart I—The non-remote Alaskan shrimp processing subcategory is amended by revising § 408.90 to read as follows:

§ 408.90 Applicability; description of the non-remote Alaskan shrimp processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of shrimp in non-remote Alaska. The effluent limitations contained in this Subpart I are applicable to facilities located in population or processing centers including but not limited

to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg.

Subpart J—Remote Alaskan Shrimp Processing Subcategory

Subpart J—The remote Alaskan shrimp processing subcategory is amended by revising §§ 408.100 and 408.105 to read as follows:

§ 408.100 Applicability; description of the remote Alaskan shrimp processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of shrimp in remote Alaska. The effluent limitations contained in this Subpart J are applicable to facilities not covered under Subpart I of this part.

§ 408.105 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

Subpart K—Northern Shrimp Processing in the Contiguous States Subcategory

Subpart K—The northern shrimp processing in the contiguous States subcategory is amended by revising § 408.110 to read as follows:

§ 408.110 Applicability; description of the Northern shrimp processing in the contiguous States subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of shrimp in the Northern contiguous States, including Washington, Oregon, California, Maine, New Hampshire, and Massachusetts. The effluent limitations contained in this Subpart K are applicable to existing facilities processing more than 908 kg (2000 lbs) of raw material per day on any day during a calendar year and all new sources.

Subpart L—Southern Non-Breaded Shrimp Processing in the Contiguous States Subcategory

Subpart L—The Southern non-breaded shrimp processing in the contiguous States subcategory is amended by revising § 408.120 to read as follows:

§ 408.120 Applicability; description of the Southern non-breaded shrimp processing in the contiguous States subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of non-breaded shrimp in the Southern contiguous States, including North and South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas. The effluent limitations contained in this Subpart L are applicable to existing facilities processing more

than 908 kg (2000 lbs) of raw material per day on any day during a calendar year and all new sources.

Subpart M—Breaded Shrimp Processing in the Contiguous States Subcategory

Subpart M—The breaded shrimp processing in the contiguous States subcategory is amended by revising § 408.130 to read as follows:

§ 408.130 Applicability; description of the breaded shrimp processing in the contiguous States subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of breaded shrimp in the contiguous States by existing facilities processing more than 908 kg (2000 lbs) of raw material per day on any day during a calendar year and all new sources.

Subpart N—Tuna Processing Subcategory

Subpart N—The tuna processing subcategory is amended by revising § 408.140 to read as follows:

§ 408.140 Applicability; description of the tuna processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of tuna.

Subpart O—Fish Meal Processing Subcategory

§ 408.150 Applicability; description of the fish meal processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of menhaden on the Gulf and Atlantic Coasts and the processing of anchovy on the West Coast into fish meal, oil and solubles.

§ 408.151 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.152 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these

limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(1) Any menhaden or anchovy fish meal reduction facility which utilizes a solubles plant to process stick water or ball water shall meet the following limitations.

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	4.7.....	2.5
TSS.....	2.3.....	1.3
Oil and grease.....	0.80.....	0.63
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
BOD ₅	4.7.....	2.5
TSS.....	2.3.....	1.3
Oil and grease.....	0.80.....	0.63
pH.....	Within the range 6.0 to 9.0.	

(2) Any menhaden or anchovy fish meal reduction facility not covered under § 408.152(b) (1) shall meet the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	3.5.....	2.8
TSS.....	2.6.....	1.7
Oil and grease.....	3.2.....	1.4
pH.....	Within the range 6.0 to 9.0.....	
(English units) lb/1,000 lb of seafood		
BOD ₅	2.5.....	2.8
TSS.....	2.6.....	1.7
Oil and grease.....	3.2.....	1.4
pH.....	Within the range 6.0 to 9.0.....	

§ 408.153 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	4.0.....	2.9
TSS.....	2.3.....	1.3
Oil and Grease.....	0.80.....	0.63
pH.....	Within the range 6.0 to 9.0.....	
(English units) lb/1,000 lb of seafood		
BOD ₅	4.0.....	2.9
TSS.....	2.3.....	1.3
Oil and grease.....	0.80.....	0.63
pH.....	Within the range 6.0 to 9.0.....	

§ 408.154 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the fish meal processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard

establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

§ 408.155 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	4.0.....	2.9
TSS.....	2.3.....	1.3
Oil and grease.....	0.80.....	0.63
pH.....	Within the range 6.0 to 9.0.....	
(English units) lb/1,000 lb of seafood		
BOD ₅	4.0.....	2.9
TSS.....	2.3.....	1.3
Oil and grease.....	0.80.....	0.63
pH.....	Within the range 6.0 to 9.0.....	

§ 408.156 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the fish meal processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Subpart P—Alaskan Hand-Butchered Salmon Processing Subcategory

§ 408.160 Applicability; description of the Alaskan hand-butchered salmon processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the hand-butchered of salmon in Alaska.

§ 408.161 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shell fish, to be processed, in the form in which it is received at the processing plant.

§ 408.162 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties controlled by this section, which may be discharged by a

point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(1) Any hand-butchered salmon processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS	1.7	1.4
Oil and grease	0.20	0.17
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
TSS	1.7	1.4
Oil and grease	0.20	0.17
pH	Within the range 6.0 to 9.0	

(2) Any hand-butchered salmon processing facility not covered under § 408.162(b)(1) shall meet the following limitations: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

§ 408.163 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS	1.5	1.2
Oil and grease	0.18	0.15
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
TSS	1.5	1.2
Oil and grease	0.18	0.15
pH	Within the range 6.0 to 9.0	

§ 408.164 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the Alaskan hand-butchered salmon

processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

§ 408.165 Standards of performance for new sources.

(a) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

(1) Any hand-butchered salmon processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS	1.5	1.2
Oil and grease	0.18	0.15
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
TSS	1.5	1.2
Oil and grease	0.18	0.15
pH	Within the range 6.0 to 9.0	

(2) Any hand-butchered salmon processing facility not covered under § 408.165(a)(1) shall meet the following limitations: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

§ 408.166 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the Alaskan hand-butchered salmon processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to dis-

charge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

Subpart Q—Alaskan Mechanized Salmon Processing Subcategory

§ 408.170 Applicability: description of the Alaskan mechanized salmon processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the mechanized butchering of salmon in Alaska.

§ 408.171 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.172 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such funda-

mentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(1) Any mechanized salmon processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	16.....	13
TSS.....	2.6.....	2.2
Oil and grease.....	2.6.....	1.0
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
BOD ₅	16.....	13
TSS.....	2.6.....	2.2
Oil and grease.....	2.6.....	1.0
pH.....	Within the range 6.0 to 9.0.	

(2) Any mechanized salmon processing facility not covered under § 408.172 (b) (1) shall meet the following limitations: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

§ 408.173 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

(1) Any mechanized salmon processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	16.....	13
TSS.....	2.6.....	2.2
Oil and grease.....	2.6.....	1.0
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
BOD ₅	16.....	13
TSS.....	2.6.....	2.2
Oil and grease.....	2.6.....	1.0
pH.....	Within the range 6.0 to 9.0.	

(2) Any mechanized salmon processing facility not covered under § 408.173 (a) (1) shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	26.....	21
Oil and grease.....	26.....	10
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	26.....	21
Oil and grease.....	26.....	10
pH.....	Within the range 6.0 to 9.0.	

§ 408.174 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the Alaskan mechanized salmon processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

§ 408.175 Standards of performance for new sources.

(a) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

(1) Any mechanized salmon processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	26.....	21
Oil and grease.....	26.....	10
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	26.....	21
Oil and grease.....	26.....	10
pH.....	Within the range 6.0 to 9.0.	

(2) Any mechanized salmon processing facility not covered under § 408.175 (a) (1) shall meet the following limitations: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

§ 408.176 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the Alaskan mechanized salmon processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standards as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Subpart R—West Coast Hand-Butchered Salmon Processing Subcategory

§ 408.180 Applicability; description of the West Coast hand-butchered salmon processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the

hand-butchered of salmon on the West Coast.

§ 408.181 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.182 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS	1.7	1.4
Oil and grease	0.20	0.17
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
TSS	1.7	1.4
Oil and grease	0.20	0.17
pH	Within the range 6.0 to 9.0	

§ 408.183 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	1.2	1.0
TSS	0.15	0.12
Oil and grease	0.045	0.018
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
BOD ₅	1.2	1.0
TSS	0.15	0.12
Oil and grease	0.045	0.018
pH	Within the range 6.0 to 9.0	

§ 408.184 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the West Coast hand-butchered salmon processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pre-

treatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

§ 408.185 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	1.7	1.4
TSS	0.46	0.37
Oil and grease	0.068	0.023
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
BOD ₅	1.7	1.4
TSS	0.46	0.37
Oil and grease	0.068	0.023
pH	Within the range 6.0 to 9.0	

§ 408.186 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the West Coast hand-butchered salmon processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

Subpart S—West Coast Mechanized Salmon Processing Subcategory

§ 408.190 Applicability; description of the West Coast mechanized salmon processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the mechanized butchering of salmon on the West Coast.

§ 408.191 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.192 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point

source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	27	22
Oil and grease.....	27	10
pH.....	Within the range 6.0 to 9.0	
(English units) lb/1000 lb of seafood		
TSS.....	27	22
Oil and grease.....	27	10
pH.....	Within the range 6.0 to 9.0	

§ 408.193 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	16	13
TSS.....	2.6	2.2
Oil and grease.....	2.6	1.0
pH.....	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
BOD ₅	16	13
TSS.....	2.6	2.2
Oil and grease.....	2.6	1.0
pH.....	Within the range 6.0 to 9.0	

§ 408.194 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the West Coast mechanized salmon processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this Chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this Chapter, except that, for the purpose of this section, §§ 128.121,

128.122, 128.132 and 128.133 of this Chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

§ 408.195 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	30	22
TSS.....	7.9	4.3
Oil and grease.....	3.8	1.3
pH.....	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
BOD ₅	30	22
TSS.....	7.9	4.3
Oil and grease.....	3.8	1.3
pH.....	Within the range 6.0 to 9.0	

§ 408.196 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the West Coast mechanized salmon processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this Chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this Chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this Chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Subpart T—Alaskan Bottom Fish Processing Subcategory

§ 408.200 Applicability; description of the Alaskan bottom fish processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of bottom fish such as halibut in Alaska.

§ 408.201 Specialized definitions.

For the purpose of this subpart: (a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this Chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.202 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by

this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(1) Any Alaskan bottom fish processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg shall meet the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS	3.1	1.9
Oil and grease	4.3	0.56
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
TSS	3.1	1.9
Oil and grease	4.3	0.56
pH	Within the range 6.0 to 9.0	

(2) Any Alaskan bottom-fish processing facility not covered under § 408.202 (b) (1) shall meet the following limitations: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

§ 408.203 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS	1.9	1.1
Oil and grease	2.6	0.34
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
TSS	1.9	1.1
Oil and grease	2.6	0.34
pH	Within the range 6.0 to 9.0	

§ 408.204 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source with-

in the Alaskan bottom fish processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

§ 408.205 Standards of performance for new sources.

(a) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

(1) Any Alaskan bottom fish processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg shall meet the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS	1.9	1.1
Oil and grease	2.6	0.34
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
TSS	1.9	1.1
Oil and grease	2.6	0.34
pH	Within the range 6.0 to 9.0	

(2) Any Alaskan bottom-fish processing facility not covered under § 408.205 (a) (1) shall meet the following limitations: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

§ 408.206 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the Alaskan bottom fish processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which

would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Subpart U—Non-Alaskan Conventional Bottom Fish Processing Subcategory

§ 408.210 Applicability; description of the non-Alaskan conventional bottom fish processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of bottom fish outside of Alaska in which the unit operations are carried out predominantly through manual methods. However, the use of scaling machines and/or skinning machines are considered to be normal practice within this subcategory. The provisions of this subpart apply to the processing of currently, commercially processed species of bottom fish such as flounder, ocean perch, haddock, cod, sea catfish, sole, halibut, and rockfish. These provisions apply to existing facilities processing more than 1816 kg (4000 lbs) of raw material per day on any day during a calendar year and all new sources.

§ 408.211 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.212 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes,

products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	2.1.....	1.6
Oil and grease.....	0.55.....	0.40
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	2.1.....	1.6
Oil and grease.....	0.55.....	0.40
pH.....	Within the range 6.0 to 9.0.	

§ 408.213 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	0.73.....	0.58
TSS.....	1.5.....	0.73
Oil and grease.....	0.04.....	0.03
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
BOD ₅	0.73.....	0.58
TSS.....	1.5.....	0.73
Oil and grease.....	0.04.....	0.03
pH.....	Within the range 6.0 to 9.0.	

§ 408.214 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the non-Alaskan conventional bottom fish processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

§ 408.215 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of

pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	0.73.....	0.58
TSS.....	1.5.....	0.73
Oil and grease.....	0.04.....	0.03
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
BOD ₅	0.73.....	0.58
TSS.....	1.5.....	0.73
Oil and grease.....	0.04.....	0.03
pH.....	Within the range 6.0 to 9.0.	

§ 403.216 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the non-Alaskan conventional bottom fish processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this Chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this Chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Subpart V—Non-Alaskan Mechanized Bottom Fish Processing Subcategory

§ 403.220 Applicability; Description of the non-Alaskan mechanized bottom fish processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of bottom fish outside of Alaska in which the unit operations (particularly the butchering and/or filleting operations) are carried out predominately through mechanized methods. The provisions of this subpart apply to the processing of bottom fish such as whiting and croaker.

§ 403.221 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this Chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 403.222 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	14.....	10
Oil and grease.....	5.7.....	3.3
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	14.....	10
Oil and grease.....	5.7.....	3.3
pH.....	Within the range 6.0 to 9.0.	

§ 403.223 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	6.5.....	5.3
TSS.....	1.1.....	0.82
Oil and grease.....	0.46.....	0.26
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
BOD ₅	6.5.....	5.3
TSS.....	1.1.....	0.82
Oil and grease.....	0.46.....	0.26
pH.....	Within the range 6.0 to 9.0.	

§ 403.224 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the non-Alaskan mechanized bottom fish processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The fol-

lowing pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

§ 408.225 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	9.1	7.4
TSS.....	3.3	2.5
Oil and grease.....	0.68	0.39
pH.....	Within the range 6.0 to 9.0.	

(English units) lb/1,000 lb of seafood		
BOD ₅	9.1	7.4
TSS.....	3.3	2.5
Oil and grease.....	0.68	0.39
pH.....	Within the range 6.0 to 9.0.	

§ 408.226 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the non-Alaskan mechanized bottom fish processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Subpart W—Hand-Shucked Clam Processing Subcategory

§ 408.230 Applicability; description of the hand-shucked clam processing subcategory.

The provisions of this subpart are applicable to discharges resulting from existing hand-shucked clam processing facilities which process more than 1816 kg (4000 lbs) of raw material per day on any day during a calendar year and all new sources.

§ 408.231 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.232 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different from that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pol-

lutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	59	18
Oil and grease.....	0.60	0.23
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	59	18
Oil and grease.....	0.60	0.23
pH.....	Within the range 6.0 to 9.0.	

§ 408.233 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	55	17
Oil and grease.....	0.56	0.21
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	55	17
Oil and grease.....	0.56	0.21
pH.....	Within the range 6.0 to 9.0.	

§ 408.234 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the hand-shucked clam processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this

chapter, shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

§ 408.235 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	55.....	17.....
Oil and grease.....	0.56.....	0.21.....
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	55.....	17.....
Oil and grease.....	0.56.....	0.21.....
pH.....	Within the range 6.0 to 9.0.	

§ 408.236 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the hand-shucked clam processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Subpart X—Mechanized Clam Processing Subcategory

§ 408.240 Applicability; description of the mechanized clam processing subcategory.

The provisions of this subpart are applicable to discharges resulting from mechanized clam processing.

§ 408.241 Specialized definitions.

For the purpose of this subpart:
(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.242 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point

source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	90.....	15.....
Oil and grease.....	4.2.....	0.97.....
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	90.....	15.....
Oil and grease.....	4.2.....	0.97.....
pH.....	Within the range 6.0 to 9.0.	

§ 408.243 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	15.....	5.7.....
TSS.....	36.....	4.4.....
Oil and grease.....	0.40.....	0.092.....
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
BOD ₅	15.....	5.7.....
TSS.....	36.....	4.4.....
Oil and grease.....	0.40.....	0.092.....
pH.....	Within the range 6.0 to 9.0.	

§ 408.244 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the mechanized clam processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the

purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

§ 408.245 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	15.....	5.7
TSS.....	20.....	4.4
Oil and grease.....	0.40.....	0.002
pH.....	Within the range 6.0 to 9.0.	

(English units) lb/1,000 lb of seafood		
BOD ₅	15.....	5.7
TSS.....	20.....	4.4
Oil and grease.....	0.40.....	0.002
pH.....	Within the range 6.0 to 9.0.	

§ 408.246 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the mechanized clam processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Subpart Y—Pacific Coast Hand Shucked Oyster Processing Subcategory

§ 408.250 Applicability; description of the Pacific Coast hand-shucked oyster processing subcategory.

The provisions of this subpart are applicable to discharges resulting from existing Pacific Coast handshucked oyster processing facilities which process more than 454 kg (1000 lbs) of product per day on any day during a calendar year and all new sources.

§ 408.251 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "product" shall mean the weight of the oyster meat after shucking.

§ 408.252 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors related to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pol-

lutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS.....	37.....	35
Oil and grease.....	1.7.....	1.6
pH.....	Within the range 6.0 to 9.0.	

(English units) lb/1,000 lb of product		
TSS.....	37.....	35
Oil and grease.....	1.7.....	1.6
pH.....	Within the range 6.0 to 9.0.	

§ 408.253 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants, or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS.....	37.....	35
Oil and grease.....	1.7.....	1.6
pH.....	Within the range 6.0 to 9.0.	

(English units) lb/1,000 lb of product		
TSS.....	37.....	35
Oil and grease.....	1.7.....	1.6
pH.....	Within the range 6.0 to 9.0.	

§ 408.254 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the Pacific Coast hand-shucked oyster processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121,

128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

§ 408.255 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS	37	35
Oil and grease	1.7	1.6
pH	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
TSS	37	35
Oil and grease	1.7	1.6
pH	Within the range 6.0 to 9.0.	

§ 408.256 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the Pacific Coast hand-shucked oyster processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

Subpart Z—Atlantic and Gulf Coast Hand-Shucked Oyster Processing Subcategory

§ 408.260 Applicability; description of the Atlantic and Gulf Coast hand-shucked oyster processing subcategory.

The provisions of this subpart are applicable to discharge resulting from existing hand-shucked oyster processing facilities on the Atlantic and Gulf Coasts which process more than 454 kg (1000 lbs) of product per day on any day during a calendar year and all new sources.

§ 408.261 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "product" shall mean the weight of the oyster meat after shucking.

§ 408.262 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pol-

lutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS	19	15
Oil and grease	0.77	0.70
pH	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
TSS	19	15
Oil and grease	0.77	0.70
pH	Within the range 6.0 to 9.0.	

§ 408.263 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS	19	15
Oil and grease	0.77	0.70
pH	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
TSS	19	15
Oil and grease	0.77	0.70
pH	Within the range 6.0 to 9.0.	

§ 408.264 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the Atlantic and Gulf Coast hand-shucked oyster processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose

of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

§ 408.265 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS.....	10	15
Oil and grease.....	0.77	0.70
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
TSS.....	10	15
Oil and grease.....	0.77	0.70
pH.....	Within the range 6.0 to 9.0.	

§ 408.266 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the Atlantic and Gulf Coast hand-shucked oyster processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128, of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Subpart AA—Steamed and Canned Oyster Processing Subcategory

§ 408.270 Applicability; description of the steamed and canned oyster processing subcategory.

The provisions of this subpart are applicable to discharges resulting from oysters which are mechanically shucked.

§ 408.271 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "product" shall mean the weight of the oyster meat after shucking.

§ 408.272 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS.....	270	190
Oil and grease.....	2.3	1.7
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
TSS.....	270	190
Oil and grease.....	2.3	1.7
pH.....	Within the range 6.0 to 9.0.	

§ 408.273 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
BOD ₅	67	17
TSS.....	56	39
Oil and grease.....	0.84	0.42
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
BOD ₅	67	17
TSS.....	56	39
Oil and grease.....	0.84	0.42
pH.....	Within the range 6.0 to 9.0.	

§ 408.274 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the steamed and canned oyster processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment

works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

§ 408.275 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
BOD ₅	67	17
TSS.....	56	39
Oil and grease.....	0.84	0.42
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
BOD ₅	67	17
TSS.....	56	39
Oil and grease.....	0.84	0.42
pH.....	Within the range 6.0 to 9.0.	

§ 408.276 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the steamed and canned oyster processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132, and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Subpart AB—Sardine Processing Subcategory

§ 408.280 Applicability; description of the sardine processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the canning of sardines or sea herring for sardines. These provisions, however, do

not cover the relatively new steaking operation in which cutting machines are used for preparing fish steaks.

§ 408.281 Specialized definitions.

For the purpose of this subpart: (a) Except as provided below, the general definitions, abbreviations and methods of analyses set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.282 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(1) Any sardine processing facility which utilizes dry transportation systems from the fish storage area to the fish processing area shall meet the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	36	10
Oil and grease.....	3.5	1.4
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	36	10
Oil and grease.....	3.5	1.4
pH.....	Within the range 6.0 to 9.0.	

(2) Any sardine processing facility not covered under § 408.282(b) (1) shall meet the following limitations:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	48	16
Oil and grease.....	6.3	2.8
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	48	16
Oil and grease.....	6.3	2.8
pH.....	Within the range 6.0 to 9.0.	

§ 408.283 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	36	10
Oil and grease.....	1.3	0.52
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	36	10
Oil and grease.....	1.3	0.52
pH.....	Within the range 6.0 to 9.0.	

§ 408.284 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the sardine processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

§ 408.285 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	36.....	10
Oil and grease.....	1.4.....	0.57
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	36.....	10
Oil and grease.....	1.4.....	0.57
pH.....	Within the range 6.0 to 9.0.	

§ 408.286 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the sardine processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pol-

lutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Subpart AC—Alaskan Scallop Processing Subcategory

§ 408.290 Applicability; description of the Alaskan scallop processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of scallops in Alaska.

§ 408.291 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "product" shall mean the weight of the scallop meat after processing.

§ 408.292 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may

approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(1) Any Alaskan scallop processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS.....	6.0.....	1.4
Oil and grease.....	7.7.....	0.24
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
TSS.....	6.0.....	1.4
Oil and grease.....	7.7.....	0.24
pH.....	Within the range 6.0 to 9.0.	

(2) any Alaskan scallop processing facility not covered under § 408.292(b) (1) shall meet the following limitations: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

§ 408.293 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS.....	5.7.....	1.4
Oil and grease.....	7.3.....	0.23
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
TSS.....	5.7.....	1.4
Oil and grease.....	7.3.....	0.23
pH.....	Within the range 6.0 to 9.0.	

§ 408.294 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the Alaskan scallop processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD5	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

§ 408.295 Standards of performance for new sources.

(a) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

(1) Any Alaskan scallop processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak, and Petersburg shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS	5.7	1.4
Oil and grease	7.3	0.23
pH	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
TSS	5.7	1.4
Oil and grease	7.3	0.23
pH	Within the range 6.0 to 9.0.	

(2) Any Alaskan scallop processing facility not covered under § 408.295(a) (1) shall meet the following limitations: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

§ 408.296 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the Alaskan scallop processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD5	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

Subpart AD—Non-Alaskan Scallop Processing Subcategory

§ 408.300 Applicability; description of the non-Alaskan scallop processing subcategory.

With the exception of land-based processing of calico scallops, the provisions of this subpart are applicable to discharges resulting from the processing of scallops outside of Alaska.

§ 408.301 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "product" shall mean the weight of the scallop meat after processing.

§ 408.302 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Re-

gional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS	6.0	1.4
Oil and grease	7.7	0.24
pH	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
TSS	6.0	1.4
Oil and grease	7.7	0.24
pH	Within the range 6.0 to 9.0.	

§ 408.303 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

§ 408.306 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the non-Alaskan scallop processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

Subpart AE—Alaskan Herring Fillet Processing Subcategory

§ 408.310 Applicability; description of the Alaskan herring fillet processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of herring fillets in Alaska.

§ 408.311 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.
(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.312 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such

factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

(b) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(1) any herring fillet processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak and Petersburg shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS	32	24
Oil and grease	27	10
pH	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS	32	24
Oil and grease	27	10
pH	Within the range 6.0 to 9.0.	

(2) any Alaskan herring fillet processing facility not covered under § 408.312 (b) (1) shall meet the following limitations: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

§ 408.313 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS	5.7	1.4
Oil and grease	7.3	0.23
pH	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
TSS	5.7	1.4
Oil and grease	7.3	0.23
pH	Within the range 6.0 to 9.0.	

§ 408.304 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the non-Alaskan scallop processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

§ 408.305 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of product		
TSS	5.7	1.4
Oil and grease	7.3	0.23
pH	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of product		
TSS	5.7	1.4
Oil and grease	7.3	0.23
pH	Within the range 6.0 to 9.0.	

(1) any herring fillet processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak and Petersburg shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	6.8	6.2
TSS	2.3	1.8
Oil and grease	2.0	0.73
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
BOD ₅	6.8	6.2
TSS	2.3	1.8
Oil and grease	2.0	0.73
pH	Within the range 6.0 to 9.0	

(2) Any Alaskan herring fillet processing facility not covered under Sec. 408.313(a) (1) shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS	23	18
Oil and grease	20	7.3
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
TSS	23	18
Oil and grease	20	7.3
pH	Within the range 6.0 to 9.0	

§ 408.314 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the Alaskan herring fillet processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment

works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

§ 408.315 Standards of performance for new sources.

(a) The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

(1) any herring fillet processing facility located in population or processing centers including but not limited to Anchorage, Cordova, Juneau, Ketchikan, Kodiak and Petersburg shall meet the following limitations:

Effluent limitations		
Effluent characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS	23	18
Oil and grease	20	7.3
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
TSS	23	18
Oil and grease	20	7.3
pH	Within the range 6.0 to 9.0	

(2) Any Alaskan herring fillet processing facility not covered under § 408.315 (a) (1) shall meet the following limitations: No pollutants may be discharged which exceed 1.27 cm (0.5 inch) in any dimension.

§ 408.316 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the Alaskan herring fillet processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

Subpart AF—Non-Alaskan Herring Fillet Processing Subcategory

§ 408.320 Applicability; description of the non-Alaskan herring fillet processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of herring fillets outside of Alaska.

§ 408.321 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.322 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The

Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS	32	24
Oil and grease	27	10
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
TSS	32	24
Oil and grease	27	10
pH	Within the range 6.0 to 9.0	

§ 408.323 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	6.8	6.2
TSS	2.3	1.8
Oil and grease	2.0	0.73
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
BOD ₅	6.8	6.2
TSS	2.3	1.8
Oil and grease	2.0	0.73
pH	Within the range 6.0 to 9.0	

§ 408.324 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the non-Alaskan herring fillet processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this Chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this Chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this Chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

§ 408.325 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
BOD ₅	16	15
TSS	7.0	5.2
Oil and grease	2.9	1.1
pH	Within the range 6.0 to 9.0	
(English units) lb/1,000 lb of seafood		
BOD ₅	16	15
TSS	7.0	5.2
Oil and grease	2.9	1.1
pH	Within the range 6.0 to 9.0	

§ 408.326 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the non-Alaskan herring fillet processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which

would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD ₅	No limitation.
TSS	Do.
pH	Do.
Oil and grease	Do.

Subpart AG—Abalone Processing Subcategory

§ 408.330 Applicability; descriptions of the abalone processing subcategory.

The provisions of this subpart are applicable to discharges resulting from the processing of abalone in the contiguous states.

§ 408.331 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "seafood" shall mean the raw material, including freshwater and saltwater fish and shellfish, to be processed, in the form in which it is received at the processing plant.

§ 408.332 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to

such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	27.....	15
Oil and grease.....	2.2.....	1.4
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	27.....	15
Oil and grease.....	2.2.....	1.4
pH.....	Within the range 6.0 to 9.0.	

§ 408.333 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section,

which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	26.....	14
Oil and grease.....	2.1.....	1.3
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	26.....	14
Oil and grease.....	2.1.....	1.3
pH.....	Within the range 6.0 to 9.0.	

§ 408.334 Pretreatment standards for existing sources.

The pretreatment standard under section 307(b) of the Act for a source within the abalone processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be an existing point source subject to section 301 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a point source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD5.....	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

§ 408.335 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart:

trolled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Pollutant or pollutant property	Pretreatment standard
BOD5.....	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

Effluent characteristic	Effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
(Metric units) kg/kg of seafood		
TSS.....	26.....	14
Oil and grease.....	2.1.....	1.3
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of seafood		
TSS.....	26.....	14
Oil and grease.....	2.1.....	1.3
pH.....	Within the range 6.0 to 9.0.	

§ 408.336 Pretreatment standards for new sources.

The pretreatment standard under section 307(c) of the Act for a new source within the abalone processing subcategory which is a user of a publicly owned treatment works and a major contributing industry as defined in Part 128 of this chapter (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the same standard as set forth in Part 128 of this chapter, for existing sources, except that, for the purpose of this section, §§ 128.121, 128.122, 128.132 and 128.133 of this chapter shall not apply. The following pretreatment standard establishes the quantity or quality of pollutants or pollutant properties controlled by this section which may be discharged to a publicly owned treatment works by a new source subject to the provisions of this subpart.

Pollutant or pollutant property	Pretreatment standard
BOD5.....	No limitation.
TSS.....	Do.
pH.....	Do.
Oil and grease.....	Do.

[FR Doc.75-31837 Filed 11-28-75;8:45 am]

The following is a list of the names of the persons who have been elected to the office of the President of the Association for the Advancement of the Science of the Mind, for the year 1900. The names are arranged in alphabetical order of their surnames.

1. Dr. Wm. D. Howells
2. Dr. J. M. Aldrich
3. Dr. C. D. Walcott
4. Dr. J. H. Brown
5. Dr. J. H. Brown
6. Dr. J. H. Brown
7. Dr. J. H. Brown
8. Dr. J. H. Brown
9. Dr. J. H. Brown
10. Dr. J. H. Brown
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24. Dr. J. H. Brown
25. Dr. J. H. Brown
26. Dr. J. H. Brown
27. Dr. J. H. Brown
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31. Dr. J. H. Brown
32. Dr. J. H. Brown
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98. Dr. J. H. Brown
99. Dr. J. H. Brown
100. Dr. J. H. Brown

federal register

MONDAY, DECEMBER 1, 1975



PART III:

DEPARTMENT OF INTERIOR

Fish and Wildlife Service

■

OIL AND GAS EXPLORATION AND DEVELOPMENT ACTIVITIES IN TERRITORIAL AND INLAND NAVIGABLE WATERS AND WETLANDS

Adoption of Guidelines

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

OIL AND GAS EXPLORATION AND DEVELOPMENT ACTIVITIES IN TERRITORIAL AND INLAND NAVIGABLE WATERS AND WETLANDS

Adoption of Guidelines

On July 16, 1975, the Department of the Interior, acting through the Director, Fish and Wildlife Service, published proposed guidelines for interim use by Service employees. These proposed guidelines prescribed the objectives, policies, and procedures to be followed in the review of Federal and federally permitted or assisted work and activities for oil and gas exploration and development activities to be conducted in territorial and inland navigable waters and wetlands.

These review functions delegated to the Service by the Secretary of the Interior are prescribed by the Fish and Wildlife Coordination Act (16 U.S.C. 661-667e; 48 Stat. 401, as amended), the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347; 83 Stat. 852), the Estuary Protection Act (16 U.S.C. 1224; 82 Stat. 627), the Department of Transportation Act (49 U.S.C. 1653(f); 82 Stat. 825), and the Endangered Species Act of 1973 (16 U.S.C. 1536; 87 Stat. 892). The Service also has advisory and consulting roles under the Coastal Zone Management Act of 1972 (16 U.S.C. 1451) and the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1401), as well as basic and other authorities.

The Department of the Interior, acting through the Fish and Wildlife Service, is publishing herewith the final guidelines which prescribe the objectives, policies, and procedures to be followed in the review of proposals for oil and gas exploration and development activities in or affecting navigable waters that are sanctioned, permitted, assisted, or conducted by the Federal Government.

The public comment period for these guidelines expired on August 15, 1975. These guidelines have been revised, based on comments received from the general public, State agencies, and other Federal agencies as well as interpretative guidance received from recent judicial decisions. We wish to take this opportunity to express appreciation for these comments and suggestions.

The following analysis summarizes comments of particular significance which were received on the cited sections of the proposed guidelines and discusses the basis for the decisions which were made.

These guidelines are effective on December 1, 1975.

Section 4.2B.(2). Several comments were received concerning the necessity for this section since the guidelines are applicable to all activities, works, or structures for which Federal permits are required. We agree that any expansion of contraction in the area of Federal regulatory authority will automatically be subject to any consideration stipulated in the guidelines. Therefore, this

section, which appeared in the July 16, 1975, FEDERAL REGISTER, has been deleted.

Section 5.1A. A number of comments pointed out that the guidelines provide for the Service to solicit directly from each permit applicant rather than the regulatory agency, certain information which, if not furnished, may result in the recommendation that a permit be denied. It was further pointed out that in conformity with other time frames for energy related items, the Service should notify the regulatory agency and the applicant of informational needs within 15 days following receipt of an application.

It is agreed that the proper method to seek items of relevant project information is through the regulatory agency. It also is agreed that the regulatory agency and the applicant should be notified of project related informational needs within 15 days of receipt of an application. Accordingly, this section of the guidelines has been modified to conform with established Federal permitting procedures.

Section 6.1A.(2). Concerns were raised that this section, as presented in the July 16, 1975, FEDERAL REGISTER, required the applicant to develop detailed information concerning threatened and/or endangered species which is properly the function of the Fish and Wildlife Service. In response, this was not the intent of this provision of the guidelines. The intent was to have an applicant, at the time of application, provide any known information concerning threatened and/or endangered species in the area of project influence. This is consistent with provisions of the Endangered Species Act of 1973.

Section 6.1A.(4) (b). Several comments raised concerns that the provisions of this section of the July 16, 1975, FEDERAL REGISTER publication are clearly outside the purview of the guidelines. We agree that these provisions are adequately covered in regulations that have been promulgated by Federal Regulatory agencies. Accordingly, this section has been deleted.

Dated: November 21, 1975.

LYNN A. GREENWALT,
Director,
U.S. Fish and Wildlife Service.

1. Introduction. 1.1 The U.S. Fish and Wildlife Service recognizes that an adequate and dependable supply of petroleum products is essential to meet the economic and standard of living needs of this Nation. The Service also recognizes the need for a strong, uniform policy for planning, evaluating, and reporting on oil and gas exploration and production activities affecting navigable waters and related natural resources. This pamphlet is directed toward meeting and satisfying the Nation's environmental and energy needs by presenting the Service's guidelines for geophysical, drilling and completion operations, pipeline construction, onshore facilities, and other associated exploration and development activities. These guidelines discourage the exploitation of one resource at the expense of another and encourage the use

of environmentally sound planning criteria. Basically, these guidelines focus on the conservation, development, and improvement of fish and wildlife, their habitats, naturally functioning ecosystems, other environmental values, and related human uses of the Nation's waters and wetlands.

2. Basis. 2.1A. Federal permits are required for works proposed in the Nation's navigable waters and associated wetlands. Placing of any structure in or over such waters and wetland areas or excavating from or depositing material in such areas is unlawful unless a permit has been issued by the Department of the Army, Corps of Engineers, under authority of Section 10 of the River and Harbor Act of March 3, 1899 (33 U.S.C. 403). The U.S. Coast Guard, Department of Transportation, has special authority to regulate the location and clearances of bridges and causeways over navigable waters of the United States under Section 9 of the 1899 Act (33 U.S.C. 401) and the Department of Transportation Act (49 U.S.C. 1653).

B. Permits issued by the Environmental Protection Agency (EPA) or by a State agency under EPA overview also are required under Section 402 of the Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. 1251) for pollutant discharges into navigable waters. This Act also provides for certification by EPA or the State, that activities otherwise federally permitted will not abridge water quality requirements (Section 401), for permitting by the Corps of Engineers (Corps) of the placement of dredged and fill materials in defined disposal areas (Section 404), and for regulation by EPA of the disposal of sewage sludge which would result in pollutants entering navigable waters (Section 405).

C. Applications for permits described in the preceding paragraphs are made, as appropriate, to the District Engineer, Corps of Engineers; the District Commander, U.S. Coast Guard; or the Regional Administrator, Environmental Protection Agency (or the State water quality agency) for the District or Region in which the work or activity is proposed. All persons or other entities, including Federal and other government agencies, are required to obtain the appropriate permits prior to commencing any construction or other activity in navigable waters.

D. All of the above described Federal regulatory programs are subject to the provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661) and the National Environmental Policy Act of 1969 (42 U.S.C. 4321) which mandate, respectively, full consideration of fish and wildlife and environmental values in weighing the balance of the public interest in deciding whether a permit should be issued for a proposed activity.

3. Authorities and responsibilities of the Department of the Interior. 3.1A. The Secretary of the Interior, acting through the Bureau of Land Management, the U.S. Geological Survey, the Bureau of Indian Affairs, the U.S. Fish and Wildlife Service, the National Park Service,

and the Bureau of Outdoor Recreation, has broad authority in the administration of public lands, reservations, and the mineral resources of such lands held in trust, and in providing consultation and advice on the protection of the Nation's fish, wildlife, scenic, natural, historic, recreational, and other environmental resources.

B. One such law administered for the Department of the Interior by the U.S. Fish and Wildlife Service is the Fish and Wildlife Coordination Act. This Act specifically requires (16 U.S.C. 662):
 " * * * whenever the waters of any stream or body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the United States, or by any public or private agency under Federal permit or license, such department or agency first shall consult with the United States Fish and Wildlife Service, Department of the Interior, and with the head of the agency exercising administration over the wildlife resources of the particular State * * * with a view to the conservation of wildlife resources by preventing loss of and damage to such resources as well as providing for the development and improvement thereof * * * " (Similar responsibilities under the Fish and Wildlife Coordination Act are administered by the National Marine Fisheries Service for the Department of Commerce.)

C. Additional authorities mandating the concern of the Department of the Interior for environmental values include the Migratory Bird Conservation Act (16 U.S.C. 701), the National Historic Preservation Act of 1966 (16 U.S.C. 470), the Fish and Wildlife Act of 1956 (16 U.S.C. 742a), the Wilderness Act (16 U.S.C. 1131), the Anadromous Fish Conservation Act (16 U.S.C. 757a), the Estuary Protection Act (16 U.S.C. 1221), the Wild and Scenic Rivers Act (16 U.S.C. 1271), the Endangered Species Act of 1973 (16 U.S.C. 1361), and the National Environmental Policy Act of 1969 (42 U.S.C. 4321).

The U.S. Fish and Wildlife Service also has advisory and consultative roles under the Coastal Zone Management Act of 1972 (16 U.S.C. 1451) and the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1401), and shares the mandates of the Fish and Wildlife Coordination Act with the States.

4. *Objectives and policies of the Fish and Wildlife Service concerning the usage and development of the Nation's waters and wetlands.* 4.1 The following outline presents the overall objectives and policies of the Fish and Wildlife Service in its advisory, consultative, and review role regarding works and activities

in the Nation's waters and associated wetlands.

4.2 *Objectives.* 4.2A. The objectives of the U.S. Fish and Wildlife Service in relation to oil and gas exploration, development, and production activities are to prevent or minimize damages to fish and wildlife resources, their associated habitat, and other environmental resources, and to preserve public trust rights of use and enjoyment of such resources in and associated with navigable and other waters of the United States. The Service strives to meet these objectives by encouraging the industry to use every practical means, method, and alternative to prevent harmful environmental impacts and degradations.

B. More specifically the Service has the following long-range objectives respecting navigable waters, their tributaries, and related wetlands:

(1) Providing assistance to other Federal agencies in their enforcement of regulatory programs to prevent unauthorized activities from occurring, damaging, or posing a threat of damage to the naturally functioning aquatic and wetland ecosystems and other environmental resources, values, and uses.

(2) Ensuring that all authorized works, structures, and activities are (a) judged to be the least ecologically damaging alternative or combination of alternatives (e.g., all appropriate means have been adopted to minimize environmental losses and degradations) and (b) in the public's interest in safeguarding the environment from loss and degradation. Water dependency of a work, structure, or activity will be considered when criterion (a) above has not been met.

In determining whether criteria (a) and (b) have been met, the Service will always consider: (1) The long-term effects of the proposed work, structure, or activity; (2) its cumulative effects, when viewed in the context of other already existing or foreseeable works, structures, or activities of the same kind; and/or (3) its cumulative effect, when viewed in the context of other already existing or foreseeable works, structures, or activities of different kinds.

4.3A. *Policies.* (1) The U.S. Fish and Wildlife Service exercises and encourages all efforts to preserve, restore, and improve fish and wildlife resources and associated aquatic and wetland ecosystems, and supports State actions designed to protect areas of special biological significance.

(2) The Service opposes activities and developments in or affecting the Nation's waters and wetlands which would individually, or cumulatively with other developments on a waterway or group of related waterways, needlessly destroy, damage, or degrade fish and wildlife resources, associated aquatic and wetland ecosystems, and the human satisfactions dependent thereon.

(3) The Service places special emphasis on the protection of vegetated and other productive shallow waters and wetlands and on fish and wildlife species for which the Secretary of the Interior

has delegated and specifically mandated responsibilities. These include:

(a) Wetlands as described in Wetlands of the United States, Circular 39 of the U.S. Fish and Wildlife Service, published in 1956, republished in 1971.

(b) Estuarine and Great Lakes area as defined in the Estuary Protection Act, the Coastal Zone Management Act of 1972, and Sec. 104(n) of the Federal Water Pollution Control Act.

(c) Migratory birds, anadromous and Great Lakes fishes, and endangered species as defined respectively in the Migratory Bird Treaty Act, Anadromous Fish Conservation Act, and the Endangered Species Act of 1973, respectively.

5. *Procedures for review of permit applications.* 5.1A. The U.S. Fish and Wildlife Service considers that each notice of application should demonstrate that the proposed works are water-oriented or water-dependent, served a recognized public need, and minimize environmental damages as set forth in item 4.2B. (2). In instances where this is not demonstrated and/or additional items of information are needed to determine project impacts on fish and wildlife resources (ref. Sections 6.1A. (1)-(4)), the Service will immediately advise the applicant of informational needs or at least within 15 days following receipt of a notice of application (public notice or letter of permission). Such requests will be promptly confirmed by letter to the regulatory agency with a copy being provided the applicant.

However, if Service investigations and reviews indicate avoidable fish and wildlife losses, the Service will recommend to the Corps of Engineers, the Environmental Protection Agency, or the U.S. Coast Guard, as appropriate, that the permit be denied. In cases where denial is recommended to the Corps of Engineers, the July 13, 1967, Memorandum of Understanding between the Secretaries of the Departments of the Army and the Interior provides that the applicant will be notified, and an effort will be made to reach a solution at the District and Regional levels, respectively. If resolution at that level fails, the case will be forwarded for the consideration of the Chief of Engineers, Department of the Army, and Under Secretary, Department of the Interior. The final administrative decision in such cases rests with the Secretary of the Army. It must be emphasized that the Service does not have the responsibility, as do the regulatory agencies, of making the final determination of the overall acceptability of a proposal, all factors considered. These guidelines are not intended nor should they be interpreted to be addressed to such a final decision. They are intended to reflect the Service's responsibility to contend for the special public interest in fish and wildlife resources, their related and associated habitats and ecosystems, and the environmental values dependent thereon; and to be compatible and reasonably consistent with relevant provisions of Federal laws, decisions of Federal courts, and the rules, regulations, and administrative practices of Federal regulatory agencies.

¹ Wildlife and wildlife resources are defined by the Act to include: "birds, fishes, mammals, and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent."

B. The Department of the Interior has no similar agreements with the Environmental Protection Agency or the Department of Transportation (U.S. Coast Guard), but envisions that referral of unresolved issues from those agencies will be handled under procedures similar to those set forth in the agreement with the Department of the Army, with the final decision resting with the Secretary or the Administrator of the regulatory agency.

6. *Information necessary to assess fish and wildlife effects of proposed works and activities requiring Federal permit.* 6.1A. The U.S. Fish and Wildlife Service assists and promotes an orderly and expeditious review of Federal permit applications. Toward this goal, the following items of information may be requested, if applicable, in conjunction with an application.

(1) Overall map (based on a U.S. Coast and Geodetic navigation chart or Geological Survey quadrangle map) showing project location in relation to:

(a) Water depths at and in the vicinity of the proposed project.

(b) Direction of sheetflow in wetland areas and of water currents in river and coastline areas, and duration and amplitude of ebb and flood tides in estuarine and bay areas.

(c) Location of freshwater outflows, including surface drainageways, streams, aquifers, and springs where known or identified within the area of project influence.

(d) Location of shellfish lease areas within the area of project influence.

(2) Aerial photograph of project area, if available.

(3) Scale drawings and project area maps showing proposed works in relation to ordinary high water, mean high or mean of the higher high water, and ordinary low water, mean low or mean of the lower low water elevations and lines (as locally proper and where technologically possible), and the following detailed information:

(a) A description of methods and kinds of equipment to be used, means of access to activity sites, proposed geophysical operations, and duration and season of activities.

(b) Types, locations, and dimensions, including vertical cross sections of shallow water and wetland areas to be excavated and/or filled (e.g., canals, channels, roadways, fill and spoil areas, and dikes).

(c) Details of all planned facilities where construction or operation could alter or disturb shallow waters and wetlands.

(4) For purposes of environmental protection:

(a) Information known by an applicant concerning known threatened and/or endangered species, including their associated habitats in the area of project influence, should be provided.

(b) Plans for maintenance of natural drainage patterns and freshwater-saltwater exchanges in waters and wetlands (prevention of unnatural saltwater or freshwater intrusion and dewatering of wetlands).

(c) Plans for minimization of erosion, sedimentation, and turbidity, including stabilization of construction sites.

(d) Other plans or measures to prevent or minimize losses of fish and wildlife and public utilization, and other environmental values, including special construction and operation procedures.

(5) Names, addresses, and telephone numbers of the applicant's liaison.

7. *General guidelines.* 7.1A. Permits issued for oil and gas exploration and development operations in territorial waters and wetlands should be limited to a reasonable time period essential to the work proposed. These permits also should provide such explicit conditions as will minimize damages to fish and wildlife resources.

B. Proposals for other associated activities and works involved in mineral exploration and developments should meet the applicable general provisions to minimize environmental degradation particularly from: The spillage of oil; release of refuse including polluting substances and solid wastes; spoiling on productive wetlands; dredging of productive shallows; alteration of current patterns, tidal exchanges, and freshwater outflow, and erosion and sedimentation.

C. The U.S. Fish and Wildlife Service will consider the following criteria to ascertain if works requiring a Federal permit in shallow waters and wetlands can be implemented without significant damages to fish, wildlife, and the environment:

(1) In instances where proposed structures, facilities, or activities will utilize land fill procedures which involve the adverse alteration or destruction of estuarine or wetland areas, the applicant should demonstrate that practicable alternate upland sites are not available for proposed works.

(2) Permit applications for an unauthorized existing excavation, fill, structure, facility, or building will be examined on an individual basis. The condition, present use, and future potential of a particular work, and alternatives to its continued existence will be considered in determining whether or not to recommend denial of the permit, removal of the unauthorized work, and possible restoration.

D. This Service will recommend denial of Federal permits for proposed projects as follows:

(1) Projects which needlessly degrade or destroy wetland types identified in the Fish and Wildlife Service's Circular 39, Wetlands of the United States, published 1956, republished 1971. The decision whether a project needlessly degrades or destroys wetland types will be made with reference to the three criteria set forth in item 4.2B.(2).

(2) Projects not designed to prevent or minimize significant fish, wildlife and environmental damages.

(3) Projects which do not utilize practicable, suitable, and available upland sites as alternatives to wetland areas.

(4) Projects located on upland which do not assure the protection of adjacent wetland areas.

8. *Specific project guidelines.* 8.1A. The Service will utilize the following specific project guidelines when reviewing permit applications:

(1) *Geophysical operations.* (a) Gas or airguns, sparkers, vibrators, and other electromechanical and mechanical transducers should be used where practicable.

(b) When explosive charges must be used, the smallest charge consistent with acceptable recording should be used.

(c) Use of explosives should be avoided in important fish and wildlife spawning, nesting, nursery, and rearing areas during periods of high concentration or intense activity by the fish and/or wildlife of concern.

(d) All explosive charges should be fired in compliance with applicable State and Federal regulations.

(2) *Docks and piers.* (a) The size and extension of a dock or pier should be limited to that required for the intended use.

(b) Project proposals should include transfer facilities for the proper handling of litter, wastes, refuse, spoil drilling mud, and petroleum products.

(c) Piers and catwalks will be encouraged in preference to solid fills to provide needed access across biologically productive shallows and marshes to navigable water.

(3) *Bulkheads or seawalls.* Construction of bulkheads, seawalls, or the use of riprapping generally will be acceptable in areas having unstable shorelines. Except in special circumstances such as eroding shorelines, structures should be located no further waterward than the mean or normal high water line, and designated so that reflected wave energy does not destroy stable marine bottoms or constitute a safety hazard. In areas which have undergone extensive development, applications for bulkheads will be acceptable that esthetically and/or ecologically enhance the aquatic environment.

However, denial of permits for the construction of bulkheads on barrier and sand islands, where such will adversely affect the natural transport and deposition of sand materials, will normally be recommended.

(4) *Cables and transmission lines.* Installation of aerial or submerged cables and transmission lines located and designed to provide maximum compatibility with the environment will be acceptable. Particular emphasis will be placed on measures to protect fish and wildlife resources, esthetics, and unique natural areas. In operational areas, routes should make maximum use of existing rights-of-ways.

(5) *Access roads.* (a) Existing roadways should be utilized.

(b) Timber, other matting, or special low impact vehicles should be utilized where possible when temporary access is required in shallows and wetlands.

(c) When access roads to a drilling site must be constructed, the roads should be minimal in size and number.

(d) Selection of location and design of proposed roadways should be based on wet-season conditions to minimize dis-

ruption of normal sheetflow, waterflow, and drainage patterns or systems.

(e) Adequate culverts must be placed in all roadways to minimize disruption of natural sheetflow, waterflow, and drainage patterns or systems.

(f) Shoulder and slope surfaces should be stabilized with natural vegetation plantings or by seeding of native species, where possible, or by riprapping.

(g) Upon abandonment of a project site, temporary access roads will be evaluated for their wildlife potential and will be recommended for their retention or removal.

(6) *Bridges.* (a) Designs and alignments should minimize disruption of sheetflow, waterflow, and drainage patterns or systems.

(b) Approaches to permanent structures in wetland areas should be located, to the maximum extent possible, on pilings rather than solid fill causeways.

(7) *Jetties, groins, and breakwaters.* Jetties, groins, and breakwaters that do not create adverse sand transportation patterns or unduly disturb the aquatic ecosystem will be acceptable.

(8) *Levees and dikes.* (a) Designs and alignments should minimize disruption of natural sheetflow, waterflow, and drainage patterns or systems.

(b) Shoulder and slope surface should be stabilized following construction with natural vegetation plantings or by seeding of native species, where possible, or by riprapping.

(c) Upon abandonment of a project site, levees and dikes will be evaluated for their wildlife potential and will be recommended for their retention or removal.

(9) *Lagoons, impoundments, waste pits, and emergency pits.* (a) Construction should minimize disruption of natural sheetflow, waterflow, and drainage patterns or systems.

(b) Areas should be excavated to an impermeable soil formation at the time of construction, or lined or sealed.

(c) Operation and use must be in strict compliance with applicable local, State, and Federal regulations.

(10) *Navigation channels and access canals.* (a) Designs and alignments should minimize disruption of natural sheetflow, waterflow, and drainage patterns or systems.

(b) Designs should meet demonstrated navigational needs.

(c) Designs should prevent the creation of pockets or other hydraulic conditions which would cause stagnant water problems.

(d) Designs should minimize shoreline or other erosion problems and interference with natural sand and sediment transport processes.

(e) Designs, where recommended, should use temporary dams or plugs in the seaward ends of canals or waterways until excavation has been completed.

(f) Designs should minimize changes in tidal circulation patterns, salinity

regimes, or related nutrient and aquatic life distribution patterns.

(g) Alignments will be recommended by the Service that avoid or minimize damages to shellfish grounds, beds of productive aquatic vegetation, coral reefs, and other shallow water and wetland areas of value to fish and wildlife resources.

(h) Alignments should make maximum use of existing natural channels.

(i) Construction should be conducted in a manner that minimizes turbidity and dispersal of dredged material.

(j) Construction should follow schedules, which may be recommended by the Service. These schedules will aim at minimizing interference with fish and wildlife migrations, spawning, and nesting or the public's enjoyment and utilization of these resources.

(11) *Excavation of fill material.* Excavation and dredging in shallow waters and wetlands will be discouraged and the Service will recommend that any permit issued contains conditions to minimize adverse effects and activities in important fish and wildlife spawning, nesting, nursery, and rearing areas, and prohibit construction during critical periods of migration, spawning, and nesting activity.

(12) *Disposal of spoil and refuse material.* In-bay, open-water, and deep-water disposal generally will be considered acceptable by the Service only after all upland and other alternative disposal sites have been explored and rejected for good cause. Deep-water disposal will be acceptable only at sites specifically selected, including those selected for deposit of suitable material for habitat improvement, where agreed upon by all concerned agencies.

(13) *Drilling and injection wells, and production facilities.* (a) Directional drilling techniques should be used where practicable.

(b) Drilling and production facilities should utilize equipment that prevents or controls, to the maximum extent practicable, the discharge of pollutants.

(c) All drilling muds should be stored in tanks or diked non-wetland areas.

(d) Upon abandonment of a project site, pertinent facilities will be evaluated for their wildlife potential and will be recommended for retention or removal.

(14) *Pipelines.* (a) Pipeline routes that avoid or minimize damages to im-

portant spawning, nesting, nursery, or rearing areas will be encouraged by the Service.

(b) In established operational areas, pipeline routes should make maximum use of existing rights-of-way.

(c) In all areas, pipelines should be confined to areas which will minimize environmental impact; special care should be taken in unaltered areas.

(d) Where recommended, pipeline access canals should be immediately plugged at the seaward end and subsequently maintained to prevent freshwater or saltwater intrusion.

(e) Where recommended, bulkheads, plugs, or dams should be installed and maintained at all stream, bay, lake, or other waterway or water body crossings.

(f) Pipeline placement should be designed with a wide margin of safety against breakage from mud slides, currents, earthquakes, or other causes. In areas of high natural seismic activity, pipelines should be designed and situated, to the maximum extent possible, to be "earthquake proof."

(g) Pipeline placement by the push method in marshlands will be encouraged.

9. *Assistance to applicants and prospective applicants.* 9.1A. All applications for works or activities subject to Federal jurisdiction over navigable waters will be considered within the framework of foregoing policies and guidelines. It is the position of the Service that these guidelines, if followed, will facilitate the orderly review of permit applications for oil and gas exploration and development activities. Protection is a national responsibility that cannot be shirked or comprised if future generations are to enjoy a satisfying and healthy environment. The Service considers that adherence to these guidelines is requisite to this national responsibility and the Nation's goal of environmental quality.

B. The Service stands ready at all times to assist permit applicants in formulating environmentally sound proposals and in avoiding unnecessary delays in developing environmentally compatible plans. Contacts should be made through the appropriate Regional Office of the Fish and Wildlife Service. The addresses and telephone numbers of the Service's Regional Offices and a map of the States each Region covers are contained, respectively, in Appendices 1 and 2 below.

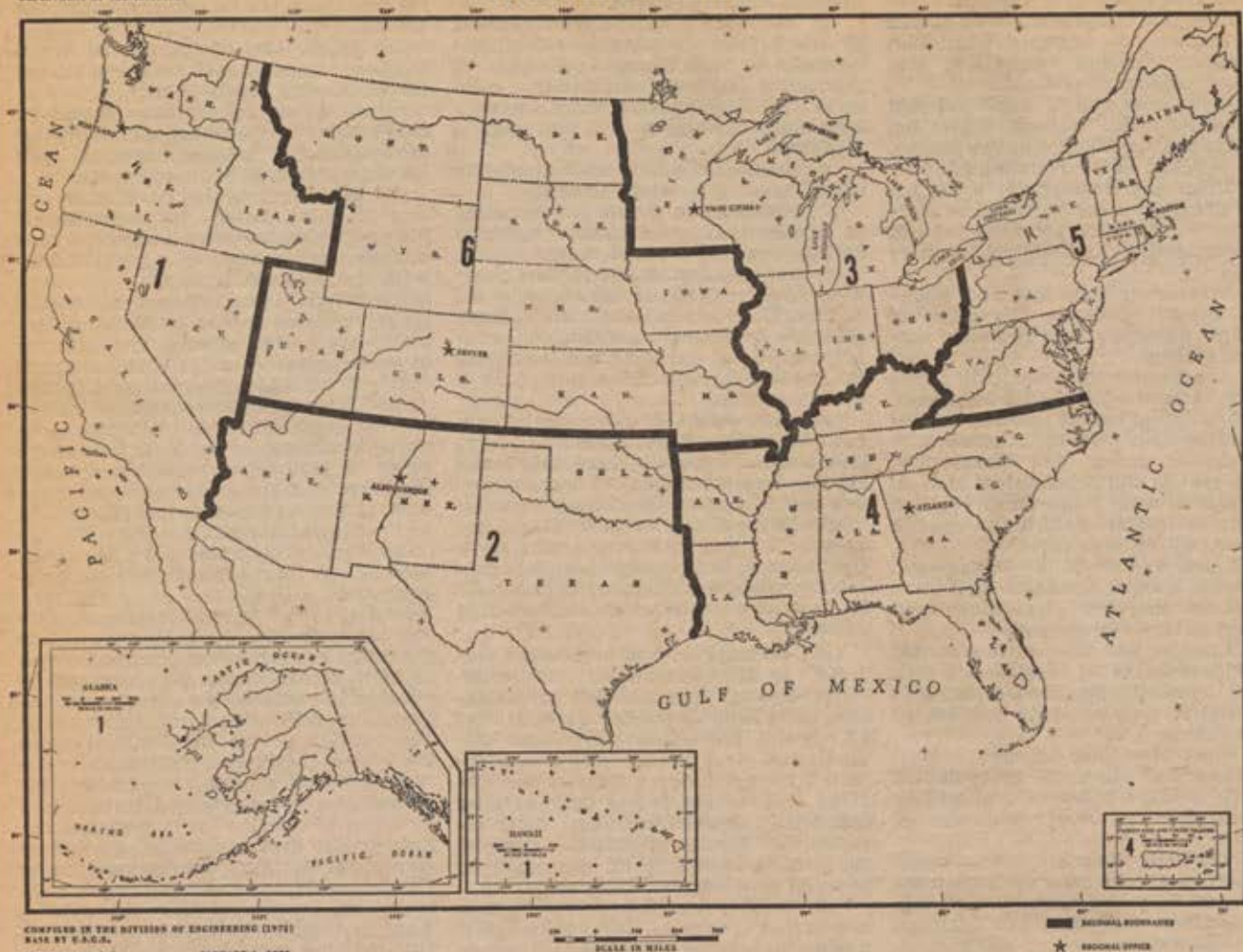
Regional directors' addresses and phone numbers

Region	Address	Phone No.
1.....	Fish and Wildlife Service, Department of the Interior, P.O. Box 3737, Portland, Oreg. 97208.	503-234-4050
2.....	Fish and Wildlife Service, Department of the Interior, P.O. Box 1306, Albuquerque, N. Mex. 87103.	505-766-2321
3.....	Fish and Wildlife Service, Department of the Interior, Federal Bldg., Fort Snelling, Twin Cities, Minn. 55111.	612-725-2500
4.....	Fish and Wildlife Service, Department of the Interior, Executive Park Dr. NE., Atlanta, Ga. 30329.	404-526-4671
5.....	Fish and Wildlife Service, Department of the Interior, John W. McCormack Post Office and Courthouse, Boston, Mass. 02109.	617-223-2961
6.....	Fish and Wildlife Service, Department of the Interior, P.O. Box 25486, Denver Federal Center, Denver, Colo. 80225.	303-234-2300
Alaska.....	Fish and Wildlife Service, Department of the Interior, 813 D St., Anchorage, Alaska 99501.	907-265-4864

REGIONAL BOUNDARIES

UNITED STATES
DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE



[FR Doc.75-31975 Filed 11-28-75;8:45 am]

MONDAY, DECEMBER 1, 1975



PART IV:

DEPARTMENT OF INTERIOR

Fish and Wildlife Service



REVIEW OF FISH AND WILDLIFE ASPECTS OF PROPOSALS IN OR AFFECTING NAVIGABLE WATERS

Adoption of Guidelines

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

REVIEW OF FISH AND WILDLIFE ASPECTS
OF PROPOSALS IN OR AFFECTING
NAVIGABLE WATERS

Adoption of Guidelines

On August 15, 1974, the Department of the Interior, acting through the Director, Fish and Wildlife Service, published proposed guidelines for interim use by Service employees. These proposed guidelines prescribed the objectives, policies, and procedures to be followed in the review of proposals for work and activities in or affecting navigable waters that are sanctioned, permitted, assisted, or conducted by the Federal Government. These review functions delegated to the Service by the Secretary of the Interior are prescribed by the Fish and Wildlife Coordination Act (16 U.S.C. 661-667e; 48 Stat. 401, as amended), the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4347; 83 Stat. 852), the Estuary Protection Act (16 U.S.C. 1224; 82 Stat. 627), the Department of Transportation Act (49 U.S.C. 1653(f); 82 Stat. 825), the Federal Aid Highway Act (23 U.S.C. 138; 82 Stat. 823), the Airport and Airway Development Act of 1970 (49 U.S.C. 1712 (c) and (f), 1716(c)(4); 84

Stat. 222, 227), the Watershed Protection and Flood Prevention Act (16 U.S.C. 1008; 72 Stat. 567), and the Endangered Species Act of 1973 (16 U.S.C. 1536; 87 Stat. 892). The Service also has advisory and consulting roles under the Coastal Zone Management Act of 1972 (16 U.S.C. 1451) and the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1401), as well as basic and other authorities.

The Department of the Interior, acting through the Fish and Wildlife Service, is publishing herewith the final guidelines which prescribe the objectives, policies, and procedures to be followed in the review of proposals for work and activities in or affecting navigable waters that are sanctioned, permitted, assisted, or conducted by the Federal Government.

Notice also is made of the availability for public inspection of the Service's complete Navigable Waters Handbook, including the main text, published herein, and the Appendices A through I which are not published but are referenced in the main text. The complete handbook may be inspected at any of the following listed offices of the Service during the hours indicated Monday through Friday of each week excepting Federal holidays:

Office location	Street address	Room No.	Business hours
Portland, Oreg. 97206	1500 Northeast Irving St.	264	7:30-4:15
Albuquerque, N. Mex. 87103	500 Gold Ave. SW.	10102	8-4:30
Twin Cities, Minn. 55111	Federal Bldg., Fort Snelling	658	7:30-4
Atlanta, Ga. 30333	17 Executive Park Dr., NE.	342	7:15-3:45
Boston, Mass. 02109	U.S. Post Office and Courthouse, Devonshire and Water Sts.	809	8-4:30
Denver, Colo. 80215	10697 West 6th Ave.	None	7:30-4
Anchorage, Alaska 99501	813 D St.	None	7:45-4:30
Washington, D.C. 20240	Interior Bldg., 18th and C Sts. NW	2543	7:45-4:15

The public comment period for these guidelines expired on September 23, 1974. These guidelines have been revised, based on comments received from the general public, State agencies, and other Federal agencies as well as interpretative guidance received from recent judicial decisions. We wish to take this opportunity to express appreciation for these comments and suggestions.

The following analysis summarizes comments of particular significance which were received on the cited sections of the proposed guidelines and discusses the basis for the decisions which were made.

Section 2.2B(1). Several comments were received concerning the Service's policy with regard to the proper scope of Federal jurisdiction in navigable waters. Accordingly, this paragraph has been rewritten to more accurately reflect current Federal jurisdictional limits.

Sections 2.2B(1)(a), 2.2B(1)(b), and 2.2B(4). A number of comments pointed out that the use of the term "public interest" needed clarification since the term denotes an intricate complex of interests that are often difficult to perceive or evaluate accurately. To clarify this matter, the term "public interest" as used in these guidelines refers to factors related to fish and wildlife resources as

outlined in the Fish and Wildlife Coordination Act, unless otherwise specified. The purpose of this Act as stated in section 661 is "Recognizing the vital contributions of our wildlife resources to the Nation, the increasing public interest and significance thereof due to expansion of our national economy and other factors, and to provide that wildlife conservation shall receive equal consideration and be coordinated with other features of water-resource development programs through the effectual and harmonious planning, development, maintenance, and coordination of wildlife conservation and rehabilitation * * * in the United States, its Territories and possessions * * * by providing assistance to, and cooperating with * * * Federal, State, and public or private agencies and organizations in the development, protection, rearing, and stocking of all species of wildlife resources thereof, and their habitat * * *"

In Section 662, this Act specifically requires that "whenever the waters of any stream or body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the United

States, or by any public or private agency under Federal permit or license, such department or agency shall first consult with the United States Fish and Wildlife Service, Department of the Interior, and with the head of the agency exercising administration over the wildlife resources of the particular State * * * with a view to the conservation of wildlife resources by preventing loss of and damage to such resources as well as providing for the development and improvement thereof * * * (underlining added.) For the purposes of this Act, wildlife and wildlife resources are defined as "birds, fishes, mammals, and all other classes of wild animals and all types of aquatic and land vegetation upon which wildlife is dependent."

Sections 5.3I, (1) and (2). Concerns were raised that these sections preclude the consideration and balancing of project costs and benefits, and thus do not comply with provisions of the National Environmental Policy Act. To clarify this matter, the Service's role in the permit review process is to evaluate and comment on the effects of a proposal on fish and wildlife resources. It is the function of the regulatory agency rather than the Fish and Wildlife Service to balance all factors, including anticipated costs and benefits, and decide which type of activity will be permitted.

Sections 5.3N(1) and 5.3N(3)(c)(i). Several comments were received expressing concern with regard to the Service's possible rigid position against "once-through" cooling systems. However, as the first sentence in this section implies and as it is clearly stated in section 5.1D, an evaluation of each cooling system will be made on a case-by-case basis and each proposal will be weighed on its individual merits. Furthermore, sections 5.3N(3)(a) through 5.3N(3)(c)(iv) provide the criteria under which "once-through" cooling systems will be considered environmentally acceptable. It was further suggested that the Service consider and balance all the costs and benefits of the various cooling and power generating technologies during our permit review process. As explained in our previous response to sections 5.3(I)(1) and (2), such an evaluation is not the role of the Service.

These guidelines are effective on December 1, 1975.

LYNN A. GREENWALT,
Director,
Fish and Wildlife Service.

NOVEMBER 21, 1975.

NAVIGABLE WATERS HANDBOOK

1. Introduction.

1.1 Purpose and arrangement of material. A. This brings together the policy and procedural guidelines and pertinent reference materials applicable to the program of the Division of Ecological Services, Fish and Wildlife Service, regarding dredge, fill, materials discharge and disposal and related Federal and federally permitted work and activities conducted in and adjoining the Nation's waters.

B. The guidelines are presented in this 10-section main part of the handbook, and the reference materials are organized in 9 appendices: A through I. Appendixes A, B, and C include, respectively, form letters and reports, recording forms and other procedural aids, and standard recommendations. Appendix D contains legal and related references; Appendix E, official policy statements of Interior; Appendix F, official policy statements of other entities; Appendix G, technical references; Appendix H, general educational material; and Appendix I, procedural references, including definitions of terms.

1.2 *Developments and activities covered—A. Summary of coverage.* These guidelines are applicable to all works and dredge, fill and other activities affecting navigable waters that are sanctioned, permitted, assisted, or conducted by the Federal Government. The central focus of the handbook is on the navigation permit program of the Corps (Corps of Engineers, U.S. Department of the Army) conducted under the Act of March 3, 1899, and related Acts (App. D-2a), but the coverage includes:

(1) Works and activities in navigable waters, federally permitted by the Corps under Sec. 10 of the Act of March 3, 1899, App. D-2a. These include various works and activities secondarily permitted by the Corps such as: Mineral exploration and development on outer continental shelf and other public lands for which leasing and certain basic permitting authority rests with the Secretary of the Interior; rights of way on public lands for which authority rests in a number of Federal land administering agencies including several bureaus of Interior, the Forest Service and others; and use, occupancy, and filling of and removal of sand, gravel, and coral from tidelands, submerged lands, and filled lands in or adjacent to Guam, the Virgin Islands, and American Samoa which is permitted by the Secretary of the Interior under Sec. 2 of the Act of November 20, 1963, App. D-2w.

(2) Discharges of pollutants and the disposal of materials in navigable waters and the transportation for and dumping of materials in ocean waters will be the subject of a separate handbook, but they are covered in summary here because of their relation to the fully covered activities:

(a) Discharge of pollutants into navigable waters, federally permitted by the EPA (Environmental Protection Agency) or by the State with oversight by the EPA under Sec. 402 of the FWPCA (Federal Water Pollution Control Act, as amended by Pub. L. 92-500)—the NPDES Permits (National Pollutant Discharge Elimination System Permits), App. D-2s.

(b) Disposal of dredged and fill material in navigable waters and transportation of dredged material for ocean dumping, federally permitted by the Corps with oversight (and veto power) by the EPA under Sec. 404 of the FWPCA, App. D-2s and under Sec. 103 of the Marine Protection, Research, and

Sanctuaries Act of 1972 (MPRSA), App. D-2x.

(c) Transportation of materials other than dredged material for dumping in ocean waters and dumping of such materials in the territorial sea federally permitted by EPA under Sec. 102 of the MPRSA, App. D-2x.

(d) Disposal of sewage sludge which would result in any pollutant entering navigable waters, federally permitted by the EPA or by a State with oversight by the EPA under Sec. 405 of the FWPCA, App. D-2s.

(3) Bridges and causeways over navigable waters federally permitted by the U.S. Coast Guard (Coast Guard) under Pub. L. 89-670, App. D-2m, and basically under Sec. 9 of the 1899 Act, App. D-2a.

(7) Other federally conducted or sanctioned work such as channels, highways, airports, transmission lines, etc.

(8) Steam electric plants and other facilities using natural waters for cooling will be the subject of a separate handbook. They are covered here in summary fashion because they frequently require a permit from the Corps under Sec. 10 of the 1899 Act and a NPDES permit under Sec. 402 of the FWPCA as well as a construction permit and operating license from the NRC (Nuclear Regulatory Commission) if nuclear fueled.

B. *Corps, EPA, and Coast Guard permits.* (1) The Secretary of the Army is authorized by the Act of March 3, 1899, to issue permits to construct piers, jetties, or similar structures, or to dredge and fill in the navigable waters of the United States. This authority is assigned to the Corps, except that the Coast Guard, Department of Transportation, issues permits for construction of bridges and causeways over navigable waters as provided in Pub. L. 89-670, the Department of Transportation Act.

(2) The 1899 Act makes it unlawful for anyone to conduct any work or activity in navigable waters of the U.S. without a Federal permit. Government agencies, Federal, State, and local, as well as persons, corporations, and other entities must apply for a permit when they propose works or an activity in such waters, and they must obtain a permit prior to commencing the construction or other activity.

(3) Dikes, dams, and similar obstructions to navigation require the consent of the Congress as well as approval of plans by the Chief of Engineers and the Secretary of the Army (see App. D-4a, Sec. 9) unless the navigable portions of the involved water body lie wholly in one State. In the latter case the structure may be built under authority of the State legislature but the plans and any modification thereof must still be approved by the Chief and the Secretary.

(4) When the District Engineer (CE) or District Commander (CG) receives an application for a permit, he routinely issues a public notice given the details of the work to be performed under the permit. These notices are distributed to the appropriate Service regional and area offices and to other bureaus of Interior, the EPA, the National Oceanic and At-

mospheric Administration (NOAA), and other Federal or State agencies and interested individuals, usually with a 30-day deadline for receipt of any comments and recommendations.

(5) The authority of the Corps to issue permits for the discharge of refuse into or affecting navigable waters under section 13 of the Act of March 3, 1899, was greatly modified by the Federal Water Pollution Control Act Amendments of 1972 (Sec. 2 of Pub. L. 92-500, October 18, 1972).

No Section 13 permits may be issued henceforth by the Corps for the discharge of pollutants into navigable waters from point sources. Section 13 permits in existence and pending applications for such permits for point sources were made one with the NPDES permit system administered by EPA or the State with EPA oversight under Section 402 of the FWPCA. Section 13 remains a viable prohibition against any type of unauthorized discharge or deposit covered by this section for which application for permit has not been made and against certain other violations. Permits for disposal or deposit of dredged or fill material in navigable waters, issued by the Corps under Section 10 of the 1899 Act, now require approval of EPA under provisions of the FWPCA relating to these permits and those for disposal of sewage sludge. Note also that under Section 403 of the FWPCA, special provision is made for control of ocean discharges, through NPDES permits. Transportation for and dumping of materials in ocean waters are controlled by EPA and the Corps under provisions of the Marine Protection, Research, and Sanctuaries Act of 1972 (Pub. L. 92-532, October 23, 1972; App. D-2x).

(6) The Coast Guard processes applications for bridges and causeways much the same as the Corps does applications for other work (see flow chart App. B-4a). Service review and reporting on CG applications is similar to those for the Corps, with the substitution of proper agency references.

(7) The processing of NPDES permit applications by the EPA or the States and of ocean dumping permits by EPA will provide for review and comment by the Service at the Regional Office level much the same as with applications handled by the Corps. Each Regional Office must assure itself that it is properly notified of permit applications and apprised of actions related to the Service interest in these new programs approved in 1972 (see App. D-2s and D-2x).

(8) The Department has no inter-agency agreement with the Department of Transportation (Coast Guard) or with the EPA on procedures for Secretarial review as it has with the Department of the Army (Memorandum of Understanding of July 13, 1967, see App. E-3) so that any issues that cannot be resolved at the Regional Office must be submitted to the Central Office for resolution on a case-by-case basis.

C. *Permits involving both Federal public lands or other Federal responsibility and navigable waters.* (1) Various private works and activities are permitted

on Federal public lands, e.g., mineral exploration and development, canal and transmission line crossings, hydroelectric power development, etc. Other works involve federally assigned responsibility, e.g., nuclear steam-electric powerplants. These works and activities when they impinge on navigable waters also require a permit under Section 10 of the 1899 Act. They also may require other permits for discharges or materials dumping and water quality certifications and marine sanctuary certifications under the FWPCA or the MPRSA.

(2) Construction, operation, and maintenance of physical structures of hydroelectric projects licensed under the Federal Power Act do not require such separate permits because all public interest aspects including navigation are provided for under the Act. However, plans for any dam or other structure of the FPC project that affects navigation must have the approval of the Chief of Engineers and the Secretary of the Army. Also, any dredging, filling, discharge, or disposal related to an FPC project but not constituting construction, operation, or maintenance of the project's physical structures does require Federal permits of the Army. Some FPC licensed works and related activities also may require an NPDES permit and water quality certification.

(3) Outer continental shelf and other public land leases for oil and minerals exploration and development are executed by the Secretary of the Interior through the Bureau of Land Management and permits for drilling and other mineral developments are issued by the Geological Survey with the advice of other Interior bureaus.

Also Interior bureaus, the Forest Service, and other Federal land management agencies issue rights-of-way and other permits which, in particular cases, involve navigable waters. It is apparent, therefore, that related navigation permits issued by the Corps and Coast Guard and NPDES permits issued by EPA or a State to cover these may involve two separate Service reviews.

(a) Any Service review of inhouse Interior leasing and permitting actions, excepting rights-of-way, usually has taken place at the Washington level. Procedures for interbureau coordination within Interior on the selection of areas to be offered for lease sales and as to conditions to be included in drilling and other exploration and development permits to be issued by GS are the subject of an interbureau memorandum of understanding (App. E-2) and detailed procedural guidelines are being developed.

(b) Rights-of-way applications made to Interior bureaus and the Forest Service are normally reviewed by the Service at Regional Office level on a case-by-case basis under somewhat loosely defined procedures similar to those for Federal projects.

(c) Dr. King's September 23, 1971, instructional memorandum and enclosures on outer continental shelf lands (App. E-9) explain the procedures with respect to applications for Section 10 permits of the Corps on these Interior approved

activities. Essentially, District Engineers of the Corps review applications for permit on outer continental shelf activities only from the standpoint of navigation and national security.

The Secretary of the Army desires and has asked Interior to provide the District Engineer with assurance in writing for each application related to outer continental shelf lands "that fish and wildlife and other environmental matters were reviewed and that there is no objection * * * to the issuance of a permit. Interior has agreed to this procedure based on the fact that the Secretary has adequate authority to protect the environment through leasing and regulatory authorities on the outer continental shelf lands. No doubt the Corps will want similar assurance on other applications where the primary approval is given by Interior. Likewise, the Coast Guard will want such assurance in similar situations.

(4) No definite arrangements have been made for interbureau review in Interior of the permits for use, occupancy, filling, and excavation of tidelands and submerged lands of Guam, the Virgin Islands, and American Samoa issued by the Secretary although those related to the Virgin Islands have been informally conducted at regional level. Efforts are underway to develop suitable comprehensive procedures.

(5) As noted above, activities primarily approved by Interior may also require a Corps permit, processed at regional level. In these cases the Corps permit is issued subsequent to the Interior permit and, as noted, is only addressed to navigation and national security with Interior having full responsibility for environmental matters. Other permits and certifications under the FWPCA and the MPRSA also may be involved.

In all of these cases where two or more Federal permits are required for a particular work or activity, great care must be observed that the Service position is consistent. If it is found impossible to be consistent due to change of circumstances as between separate reviews, the change of position should be reviewed within the Department and clearly explained to the Corps of Engineers. Similar care should be taken with review of environmental impact statements which may be handled at a different time or by a different reviewer than the related permit or license.

D. Federal and other dredge and fill activities. (1) The Corps itself conducts dredge and fill activities both by contract and with its own equipment largely in relation to its responsibilities for flood control and maintaining navigation channels, harbors, and beaches and other civil and military works. These activities and works are subject to provisions of the FWPCA and MPRSA as well as NEPA and the Coordination Act. Public notices of intention to conduct such work usually are distributed in the same way as notices of permit application and deadlines for response are similarly short.

Dredge and fill work conducted in relation to original construction or major modification of Federal or federally as-

sisted navigation and flood control projects normally is known to the Service long in advance, and reviews of proposals for such work are programmed, budgeted, and scheduled in consonance with the lead agency reporting schedules.

(2) As to dredge and fill activities conducted on non-navigable waters in relation to transmission and pipeline crossings and other riparian installations, the Service may not receive adequate early notice. Belated notice may be received through circulation and review of environmental impact statements prepared under NEPA. Notice on highway and airport projects should be received from the Department of Transportation under provision of Sec. 4(f) of the Department of Transportation Act (App. D-2m) and Sec. 16(c)(4) of the Airport and Airway Development Act (App. D-2t). Notice may also come in certain cases from applications to the Bureau of Land Management or other land management bureaus of the Department, including the Service, or the Forest Service for rights-of-way across Federal lands.

(3) Dredge, fill, and other activities conducted in or so as to affect navigable waters by Federal agencies in relation to their land management and other functions also are subject to provisions of Sec. 10 of the 1899 Act and to those of the Federal Water Pollution Control Act. Thus, for example, the Service's activities in improving tidal marshlands on its coastal refuges require a Federal permit if they involve navigable waters and wetlands. Similarly, the Service's facilities on navigable waters require a NPDES permit from EPA. The Service, as well as other Interior bureaus and other Federal agencies, must be especially vigilant to avoid real or apparent violations of the law lest their sincerity and dedication to environmental preservation and restoration become suspect.

E. Detection of violations of the Interstate Land Sales Full Disclosure Act. (1) The Department of Housing and Urban Development (HUD), Office of Interstate Land Sales Registration (OILSR) has requested and the Service has agreed to cooperate through its permit review activities in the detection of violations of the Interstate Land Sales Full Disclosure Act (App. D-2u). Essentially the Service has agreed to provide all practicable cooperation and specifically to provide to the Administrator of OILSR copies of all reports to the Corps on suspected unauthorized activities and of all comments on major permit applications.

(2) Detailed procedural guidelines on this coordination are provided in Instructional Memorandum RB-46 (App. E-23).

1.3 Ecological services activities involved. Sec. 2 of this handbook presents an overview of the objectives and policies of the Service applicable to the activities covered in the handbook. Detailed policy guidelines are presented in Sec. 5 and detailed procedural guidelines are presented in other sections as follows:

- Sec. 3, preliminary screening of proposals.
- Sec. 4, field investigations.
- Sec. 7, reporting, including reviews of environmental impact statements and reporting apparently illegal activities.
- Sec. 8, surveillance of illegal work and monitoring of ongoing and completed work.
- Sec. 9, education of the public.
- Sec. 10, hearings and court testimony.

2. Objectives and policies.

2.1 *Objectives* of the Department and Service in relation to dredge and fill and other water-related activities are to protect and preserve fish and wildlife habitat, conserve fish and wildlife resources, and protect public trust rights of use and enjoyment in and associated with navigable and other waters of the United States.

A. The Service strives to meet these objectives by encouraging developers to use every possible means, method, and alternative (including non-development) to prevent harmful environmental impacts and degradations, to restore habitat, and increase opportunities for public use through proper development and land use control.

B. The Service also assists, within the limits of its resources, the programs of other agencies, and especially those of other Interior bureaus dedicated to the public interest in man's environment.

C. More specifically the Service, through taking of every appropriate, useful action, has the following long-range objectives or goals:

(1) Respecting navigable waters, their tributaries and related wetlands of the United States:

(a) Stopping and remedying all illegal activities which are damaging or posing a threat of damage to the naturally functioning aquatic and wetland ecosystems or the dependent human uses and satisfaction, and assisting the actions of other bureaus in protection of environmental resources, values, and uses for which they and the Department of the Interior have responsibilities, including natural, cultural, and general recreational resources, values, and uses, and the water quality aspects of such values and uses.

(b) Ensuring that all authorized works, structures, and activities are (1) judged to be the least ecologically damaging alternative or combination of alternatives (e.g., all appropriate means have been adopted to minimize environmental losses and degradations) and (2) in the public's interest in safeguarding the environment from loss and degradation. Water dependency of a work, structure, or activity will be considered when criterion (1) above has not been met.

In determining whether criteria (1) and (2) have been met, the Service will always consider: (a) The long-term effects of the proposed work, structure, or activity; (b) Its cumulative effects when viewed in the context of other already existing or foreseeable works, structures, or activities of the same kind; and/or (c) Its cumulative effects, when viewed in the context of other already existing or foreseeable works, structures, or activities of different kinds.

(2) Respecting all other waters and wetlands of the Nation not determined to be navigable waters in the context of Federal law, particularly with respect to proposals, activities, and sanctioning actions of the Federal Government and where the concerned resources involve a national interest: long-range objectives or goals are identical to those above-stated for navigable waters, insofar as legally possible.

2.2 *Policies*. A. The Service exercises and encourages all efforts to preserve, restore, and improve the fish, wildlife, and naturally functioning aquatic and wetland ecosystems and assists in the preservation of other environmental resources of the Nation, for the benefit of man.

(1) The Service reviews, investigates, and cooperates fully in providing ecological advice on formulation of Federal and federally permitted, assisted, and sanctioned plans for activities and developments in the Nation's waters and wetlands under provisions of the Fish and Wildlife Coordination Act, App. D-2e.

(2) The Service prepares comments and recommendations on proposals for Federal and federally permitted, assisted, and sanctioned activities and developments in the Nation's waters and wetlands.

(3) The Service provides technical guidance and assistance to government agencies and concerned citizens on environmental aspects of management of waters and wetlands. It encourages development and adoption of comprehensive regional and statewide plans for the management of such waters and lands as anticipated by the Water Resources Planning Act, the Estuary Protection Act, the Coastal Zone Management Act of 1972, as provided by certain State and local zoning actions, and as may be provided by any comprehensive national land-use act.

(4) The Service encourages and provides technical guidance and assistance to local and State programs, symposia, and other organized efforts designed to further public education and awareness of environmental values and actions to abate threats to waters and wetlands of the Nation.

(5) The Service assists all Federal agencies involved in planning construction or permitting and licensing activities in the Nation's waters and wetlands to meet their responsibilities under Section 7 of the Endangered Species Act of 1973. This includes helping to ensure that the continued existence of an endangered or threatened species is not further jeopardized nor will the actions to be taken result in the destruction or modification of such species habitat that is determined critical. Such assistance should enable these agencies to avoid initiation of proposals which could place such species or their critical habitat in jeopardy.

(6) The Service assists particularly other bureaus of the Department of the Interior in meeting their special responsibilities for the Nation's environmental values, including cultural and natural

values, general recreation values, and water quality, among others.

B. The Service actively discourages activities and developments in or affecting the Nation's waters and wetlands which would individually or cumulatively with other developments on a waterway or group of related waterways unnecessarily destroy, damage, or degrade fish, wildlife, naturally functioning aquatic and wetland ecosystems, and/or the dependent human satisfactions. In this, the Service assists other Interior bureaus and seeks their aid in protecting all environmental resources under the purview of the Department of the Interior.

(1) The Service considers navigable waters to include all waters, water bodies, and wetlands subject to Federal jurisdiction under provisions of the River and Harbor Act of 1899 and the Federal Water Pollution Control Act Amendments of 1972, as clarified by Federal regulations and court decisions or as modified by Federal law.

(a) For nonwater-dependent works, particularly where biologically productive wetlands are involved and alternative upland sites are available (as may be suggested from field appraisal—see Sec. 4.1A—by a Service biologist), the Service usually recommends denial of a permit unless the public interest requires further consideration. Further consideration may be indicated by an approved land use plan (see Sec. 5.2A(2)) or in the absence of such a master plan, from the determination made by the responsible Federal regulatory agency after carefully weighing all factors relevant to the public interest and reflecting the national concerns for both protection and utilization of important resources (see paragraphs (f) and (g) (3) of 33 CFR 209.120, App. D-4a(2)).

(b) For water-dependent works, the Service discourages the occupation and destruction of biologically productive wetlands and shallows. The Service usually recommends that the site occupied involve the least loss of area on the least valuable of the alternative sites; that avoidable loss or damage to such productive wetlands and shallows, their fish and wildlife, and their human uses be prevented; and that any damages or losses of such resources, proved unavoidable, be reasonably mitigated or compensated.

(2) The Service places special emphasis on vegetated and other productive shallow waters and wetlands and on fish and wildlife species for which the Secretary of the Interior has delegated and specifically mandated responsibilities:

(a) Wetlands as described in "Wetlands of the United States," Circular 39 of the U.S. Fish and Wildlife Service, published in 1956, republished in 1971.

(b) Estuarine and Great Lakes areas as defined in the Estuary Protection Act, the Coastal Zone Management Act of 1972, and Sec. 104(n) of the Federal Water Pollution Control Act, App. D-20, D-2v, and D-2s.

(c) Migratory birds, anadromous and Great Lakes fishes, and endangered species as defined respectively in the Migratory Bird Treaty Act, Anadromous Fish

Conservation Act and the Endangered Species Act of 1973, App. D-2b, D-2l, and D-2q.

(3) The Service alerts NMFS and State wildlife agencies and consults with them on all matters related to their interest and responsibilities in keeping with provisions of the Fish and Wildlife Coordination Act, App. D-2E. In like manner, the Service alerts and consults with the NPS on potential degradations of cultural and natural values, the BOR on recreational aspects, and other agencies, particularly Interior bureaus, on any special environmental or other involvements of the proposed work in their special interest such as BR and GS on water quality and BLM and BIA as well as NPS on involved lands and resources under their jurisdiction (Section 6—Coordination, Liaison, and negotiation).

(4) The Service discourages exclusionary occupation of navigable waters and their shorelines by riparian owners or by anchored boats (see Rec. XVIII of House Report 91-1433, App. D-6) and other cumulatively harmful uses of such waters and shorelines.

(5) The Service requests guarantees that the authorized work is actually carried out as promised and as required by conditions of the permit, provisions of law, or agreements formalized in writing. In appropriate cases, a performance bond may be requested of a private permittee as a condition of the permit. With a Federal project the Service will strive to have important fish and wildlife provisions specifically mentioned in the authorizing act.

(6) The Service conducts and urges surveillance of unauthorized activities and developments in navigable waters; identifies and investigates illegal dredging, filling, other work and installations in such waters; reports the illegal work to the Corps or Coast Guard; and otherwise supports Federal actions against violators of Federal law in cooperation with the Solicitor and U.S. Attorneys.

(7) The Service assists and promotes surveillance of navigable waters for unauthorized discharges of harmful pollutants, escape of harmful pollutants from non-point, fixed and deposited sources on upland, spills of oil and hazardous substances, dumping of materials in ocean waters and other water pollution sources endangering fish and wildlife or their uses in cooperation with the EPA, Corps, NMFS, and Coast Guard; reports water pollution situations harmful to environmental and human-use values to the responsible regulatory agency; and otherwise assists and supports Federal actions against violators of the Federal Water Pollution Control Act and the Marine Protection, Research, and Sanctuaries Act of 1972.

Authorities and references supporting the foregoing Objectives and Policies are included in App. D, E, F, and G.

3. Preliminary screening of proposals.

3.1 General outline of screening procedure. A. Upon receipt of notice of permit application or initiation of a study, the proposed work project or activity is first logged and scheduled for investi-

gations and reporting if appropriate. (The logging form presented in App. B-1 is to be used by all offices.)

It is absolutely essential to maintain complete, up-to-date records to assure timely actions and afford an accurate basis for summarizing accomplishments. A flow chart showing action sequence in review of permit applications is given in App. B-4a.

B. All public notices of applications for permits received from the Corps, EPA, or Coast Guard are then screened to exclude from further consideration those where the proposal obviously will have no impact or at most an inconsequential impact on fish and wildlife resources. Such "no-interest" notices are to be appropriately marked to show determination, initiated by the reviewer, its log entry completed, and the notice filed. A response usually is advisable on such notices (see below).

(1) On the basis of notice received, the Ecological Services biologist screens each proposal in his office preliminary to further action so as to determine:

(a) The adequacy of the information supplied and available for proper review.

(b) The apparent environmental significance—what resources would be affected and how seriously? Is the impact of the proposal significant in view of its anticipated direct and secondary effects and in light of existing or potential cumulative effects of similar or other developments affecting the same resources?

(c) The apparent social and economic significance—who would benefit and in what way?

(d) The degree of water dependency.

(e) The apparent need for the work in terms of public health, safety, and welfare.

(f) Whether an environmental statement has been prepared and whether one is necessary or advisable.

(g) The desirability of and apparent opportunities for modifying the design, construction methods, and operating procedures of the proposal and/or selecting an alternative site to minimize environmental damages or restore and improve environmental and social values.

(2) It is the Service position that it is proper to assess the total impact of the total development, including any part to be located on uplands and any secondary effects. The totality of existing and projected cumulative impact of all developments effecting a waterway or group of related waterways and the dependent resources thereof also must be considered.

(3) With Federal proposals for study or work, both new and maintenance, there normally is water dependency and a presumption of Service interest. Excepting periodic maintenance work, the Service activity normally will have been scheduled and budgeted in program documents.

(4) There may appear to be no necessity to respond to notices having no Service interest, but it is usually desirable for a number of reasons to record the lack of interest particularly if response is requested by the lead or regu-

latory agency. (See App. A-1 for suggested form letters for no action cases.)

(5) It is essential to respond within the set time especially where there is Service interest even if the response is only a request for more time. Such timely response will assure that the Corps, EPA, Coast Guard or planning agency will not have cause to act prior to receipt of the Service report.

C. If the applicant has failed to supply needed information this fact is promptly conveyed to the regulatory agency together with a request that the permit application be held in abeyance until the information (including an EIS if found necessary) has been received or otherwise obtained by the Service and adequate opportunity has been afforded for review, consultation, and presentation of recommendations. (See suggested form letter in App. A-2 and information required of applicants by Corps regulation in paragraph (h) of 33 CFR 209.120, App. D-4a(2).)

(1) The Service makes every effort to assist applicants and other project sponsors in a timely manner in formulating environmentally acceptable plans and resolving related problems, but it cannot cooperate or act in the absence of needed information nor without adequate time. The Service will request extensions of time as required to effect a proper investigation and to consummate necessary coordination and negotiations. (See App. A-3 for suggested form letter.)

(2) Where biologically productive wetlands or other ecologically important resources and values are involved, it is the Service position that the burden of proof is on the applicant to demonstrate that his proposal is environmentally sound and in the public interest (see paragraphs (g) (3) (iv) and (h) (3) of 33 CFR 209.120, App. D-4a(2)). Consequently, any delay occasioned by the Service's request for necessary information may derive from the applicant's failure to properly prepare his proposal for consideration of its acceptability. (See the reverse side of the information request form, App. A-2, and information checklist, App. B-3).

3.2 Suggested aids to screening. It is of great assistance to expeditious screening of applications for permits in navigable waters, as well as to reporting on them, to prepare and maintain in each field office habitat type maps, with related notes and data descriptive of each type, for all waters and wetlands under the purview of that office. The maps should be of sufficient scale and detail to permit ready and certain decisions as to the likelihood of damage and the kinds of habitat and associated species expected to be affected based on the information on, and keyed to, the map.

Useful source books and maps should be kept at hand organized for ready reference. Good general sources include:

A. "The National Atlas" (U.S.G.S. 1970) provides physical data on coastal areas of the United States, pp. 78-84, which although gross for our purposes provide useful checks on landforms, shoreline characteristics, bottom sediments, surface currents, tidal types and

ranges, surface sea temperatures and salinities, and wave heights. Similarly, publications on national and local distribution of plants and animals frequently include maps showing general distribution by species that can serve as gross checks. (See Sec. 9.2D for additional sources.)

B. Many States are now collecting detailed data on their wetlands and most of them have habitat type data published in their files, or in the knowledge of their field personnel and research people. These and other data should be collated and entered on the field office's habitat type maps. Intensive studies on especially critical areas can often be conducted in cooperation with NMFS, State, and university personnel. The latter may be encouraged to involve students in special cases to add to the data base.

4. *Field investigations.* The depth and detail of field investigations varies considerably, mainly in relation to the apparent severity of the anticipated environmental impact and the available Service resources, but also with whether the proposal is Federal or non-Federal.

Normally appropriate studies are programmed, budgeted, and scheduled in advance for Federal proposals while field studies for non-Federal proposals must be done on an ad hoc basis.

Service personnel will at all times act and promote actions by others to achieve an orderly processing of Federal permit applications and planning of federally assisted and Federal projects.

4.1 *Non-Federal proposals—permit applications.* The Service position of the burden of proof being on the applicant to demonstrate the environmental soundness and public interest merit of his proposal implies that the applicant must arrange for any needed detailed field investigations. (See paragraphs (h) (2) and (h) (3), particularly paragraph (h) (2) (vi), of 33 CFR 209.120, App. D-4a(2).) This position certainly must be maintained with respect to planning, design and monitoring studies, but certain investigations must nevertheless be conducted by the Service and others in support of the environmental interests.

A. A reconnaissance of the project area must be made by the responsible Service biologist to provide a first-hand viewpoint and appreciation of the site values and potentials. A field surveillance and appraisal report form (App. B-2) will be completed at the time of the reconnaissance investigation for each permit application which proves to have Service interest to assure that all significant factors are considered. The form should be reviewed prior to taking to the field and partly filled in with the required information that is only obtainable from the permit application and other off-site sources. This completed form is made a part of the permit file.

(1) The field investigator will accomplish the following items of work on-site:

(a) Assess the relative environmental significance of the selected site in contrast to apparent alternative sites.

(b) Assess any possibilities for modifying the proposal to lessen environmental impacts (see Sec. 5 for review guidelines).

(c) Obtain information from knowledgeable local persons on species distribution and diversity, resource uses and values, and public interest relative to private interest.

(d) Determine if work has been started and, if so, its apparent legality.

(e) Document the on-site observations through map notations, photographs, records of interviews, sampling data, physical measurements, and completion of the standard field surveillance and appraisal report form (App. B-2).

(f) Note any potential involvements of other Interior bureaus particularly NPS (cultural and natural values), BOR (wild and scenic rivers, scenic values, general recreation values), BIA and BLM (lands and resources), and BR and GS (water and water quality) and later alert and consult with these agencies.

(2) The appraisal form is designed as both a checklist and a record of the on-site investigation; it must be completed in the field in appropriate part to avoid errors of recall.

(a) Although the field appraisal form may appear to be tedious in detail, the worth of the conscientiously completed form is invaluable to preparation of Service comments and recommendations and to any negotiations that may ensue. Therefore, it is essential that the form be completed as fully as possible in every case selected for field investigation and substantive comment.

(b) Since the details required to be completed are a function of the environmental significance of the proposal, relatively less consequential proposals will involve completion of fewer details of the form.

(c) Where appropriate, the Ecological Services biologists may find it efficient to arrange a joint reconnaissance of the project site with the applicant and representatives of appropriate State agencies, NMFS, EPA, the Corps, or others.

B. *Need for detailed field studies.* (1) Where the reconnaissance appraisal indicates that highly productive habitat would be degraded or lost if the proposal were carried out as planned, it may be necessary for the Service to conduct or arrange for more detailed studies to support its position and to:

(a) Affirm conclusion of species diversity and resource value.

(b) Provide a firmer basis for negotiation with the applicant on project modifications.

(c) Justify recommendations of permit conditions or denial of permit.

(d) Provide data required for administrative or judicial review.

(2) It is the Service position that there exists a national recognition that wetland and shallow water habitats have such high ecological and social values as to admit of their destruction or degrada-

tion only where there is no question that the public interest demands it.¹

(3) Widespread national recognition is very helpful to the necessarily expedited review of permit applications since it is not reasonably possible for the Service to conduct field studies sufficient to provide unequivocal ecological answers. A useful discussion of study limitations and values as well as methods is included in App. G-1, taken from a publication of the Atomic Energy Commission.

(4) In view of the national recognition of wetlands values and the inherent limitations of time and resources, the Service will not normally attempt to prove its case in relation to permit applications by assembling detailed, on-site ecological or use data. On-site reconnaissance, as discussed above, will nevertheless be detailed enough to generally and accurately define the resource conditions and values. Proof normally will be supported by reference to indepth studies such as those of ecologist, Dr. Eugene Odum and others (App. G-4 and G-5), the logic of universal dependence of marine and estuarine ecosystems and related resource values on shallows and wetlands, and the great body of longstanding law recognizing the public trust rights in the lands involved (App. D-1b and D-3b).

(5) Permit applications involving steam-electric, steel, paper, petroleum, chemical, and other industrial plants having thermal and other pollutant effects on natural waters often require pre- and post-project studies, monitoring of environmental changes, and mathematical and hydraulic model studies. The predictive studies should be conducted on-site where possible, and control studies for the monitoring should be conducted at the site pre-project and at an appropriate nearby site post-project.

Certain dredge and fill projects and many Federal navigation, hurricane protection, and beach erosion-control projects also should be subjected to model and monitoring studies to predict and measure environmental impacts—all with a view to improving designs in the interest of the environment.

(6) Detailed studies are generally the responsibility of the project sponsor. The Service has neither the fiscal and manpower resources nor the responsibility to conduct model, monitoring or other detailed studies, but it does have the responsibility to insist not only that they be conducted but that they be done in a scientific, objective manner.

Nevertheless, detailed field investigations by the Service are required in support of testimony in judicial and quasi-

¹ As evidenced in Federal law, App. D-2f, o, and v; in Federal regulations, see paragraph (g) (3) of 33 CFR 209.120, App. D-4a(2); by the President's Environmental Message of February 8, 1972, App. D-4a; and otherwise in executive policy, particularly EPA's wetlands policy, App. F-2a, b, and c; as well as in wetlands laws of many States. See also App. G, especially G-4 and G-5, for the scientific basis of this recognition.

judicial hearings and occasionally for other purposes, as outlined above. Guidelines for such detailed investigations are outlined in Sec. 10.2 of this handbook.

4.2 Federal Surveys and Project Proposals—A. Programmed work. (1) The Service has the responsibility under the Fish and Wildlife Coordination Act, the Anadromous Fish Conservation Act, the Estuary Protection Act, the Fish and Wildlife Act of 1956, the Watershed Protection and Flood Prevention Act, and other authorities to conduct field investigations related to Federal and federally assisted water development surveys and project studies. These investigations are normally programmed, budgeted, and scheduled in harmony with the schedule of the lead Federal agency.

(2) The investigations conducted by the Service in relation to studies of Federal agencies are generally of greater depth and detail than those described above for non-Federal proposals. They should be of comparable detail to those conducted by the lead agency. Principles and guidelines for these investigations are presented in the Division Manual, Secs. 2.300 through 2.999.

B. Maintenance and emergency work. Certain types of Federal work such as the maintenance dredging of navigation channels conducted by the Corps and emergency flood disaster activities in streams conducted by the Corps, Bureau of Reclamation, and the Soil Conservation Service must be investigated and reported upon on an ad hoc basis and in a manner similar to that described above for non-Federal proposals, except that responsibility for needed fish and wildlife studies largely devolves on the Service, NMFS, and the State fish and game agency. Consequently, the Ecological Services field supervisor must maintain liaison with the Federal and State agencies and their personnel responsible for these kinds of activities to assure himself that proper notice is afforded and opportunity provided to make field investigations and timely recommendations.

4.3 Investigations of unauthorized work and activities. A. Service personnel must maintain continuous surveillance of navigable waters of their area of responsibility to detect any unauthorized work in a timely manner (see also Secs. 5.2B, 6.3, 7.3 and 8 and App. E-4b and B-5).

(1) Offices of the Division should make necessary arrangements to serve as clearinghouses for alerts from Service personnel and cooperating NMFS and State personnel who detect unauthorized work and Division personnel must investigate and report on each such alert.

(2) Service personnel should arrange for all possible assistance from and cooperation with NMFS and State personnel as well as others with like interests to increase their effectiveness.

(3) Service personnel should cooperate fully with the Corps, Coast Guard, and the EPA in such surveillance and with the Department of Justice in any subsequent enforcement actions.

B. Field surveillance investigations of an apparently unauthorized work or activity must be circumspect on site and confined to making as complete an assessment of the facts as possible. In no event should the investigating biologist voice any allegations of illegality, accuse a person of improper action, or take any other direct action to stop or alter the observed ongoing activity.

C. A field surveillance and appraisal report form (App. B-2) is completed on site as fully as possible keeping in mind the items outlined in Sec. 4.1A, above. Particular attention must be given to obtaining full coverage of the activity site and area of influence with good photographs and to obtaining other evidence (water and biological samples) demonstrating the kind, location, and effects of the observed activity. If possible, the investigating biologist should use a camera providing positive prints directly upon exposure (Polaroid) or take care that the photographic as well as other evidence submitted to other persons for processing is properly certified by use of a "transfer of evidence" form (see note on the back of the first page of App. B-2 form).

D. Following discovery and appraisal of an apparently illegal activity, the regulatory agency will be immediately contacted to determine if the work is being done lawfully. If it is not, the Regional Director will promptly request the regulatory agency to issue a cease and desist order. A flow chart of surveillance actions is given in App. B-4b, and related guidelines are presented in sections 5.2B, 6.3, 7.3, and 8.

5. Policy guidelines for Review of proposals.

5.1 Basis. A. In discussing a proposal with its sponsor and in developing written comments and recommendations to assure that the proposal can be implemented without significant damages to fish, wildlife, and related environmental resources under purview of the Service and the Department (being alert for potential adverse environmental effects in the province of other Interior bureaus so as to coordinate and exploit mutual concerns), Service personnel will observe the policy guidelines set out in this handbook. (App. D, E, and F provide legal references and official policy statements relevant to these guidelines.) In a like manner, the Service will maintain close cooperation and coordination with other State and Federal agencies (Section 6—Coordination, Liaison, and Negotiation).

B. To account for local or regional peculiarities of geography, resources, and social, political, institutional and economic constraints, special adaptations and modifications of these guidelines may be proposed for approval and may be subsequently adopted. Also, more detailed guidelines covering particular situations may be proposed in the future and adopted as required, such as for mineral exploration and development, powerplants, high marsh areas, etc.

C. The Service's policy and procedural guidelines expressed in this handbook are intended to be compatible and reason-

ably consistent with relevant provisions of law, decisions of the courts, and rules, regulations, and administrative practices of Federal regulatory agencies. But the Service does not have the responsibility, as do the regulatory agencies, of making the final determination of the overall acceptability of a proposal, all factors considered. These guidelines are not intended nor should they be interpreted to be addressed to such final decision. They are intended to reflect the Service responsibility to contend for the special public interests in fish and wildlife, their related habitats and ecosystems, and the human uses and environmental values dependent on such resources.

D. Service personnel must critically note that each guideline is qualified to admit of reasoned interpretation on the merits of a particular proposal in its particular ecosystem setting and must be so interpreted in each case. Blanket, absolute opposition to any specific type of development or site situation must not be construed from the language of any policy or policy guideline of this handbook. Each proposal must be weighed on its individual merits not only in the light of the main thrust of applicable guidelines but in light of the qualifications of these guidelines, the specific biological and environmental conditions of the proposal site, and the particular expected environmental impacts of the proposal.

5.2 General policy guidelines—A. New work proposals. (1) Encroachments into navigable waters and wetlands will be discouraged where such encroachments would significantly damage biologically productive shallows and wetlands or unreasonably infringe on public rights of access, use, and enjoyment.

(2) Sites and design will be encouraged to be in compliance with any applicable comprehensive regional or statewide plan for land use and/or shoreline development which properly balances public needs and properly accommodates site and upland drainage, waste discharges, and erosion forces (as indicated by plans developed by the State under the Coastal Zone Management Act of 1972 and by a State under any State land use act that may be applicable).

(3) A proposal which in combination with other developments would, due to cumulative effects, unreasonably degrade environmental resources or diminish the human satisfactions dependent on such resources on a waterway or group of related waterways will not be acceptable to the Service and will be strongly discouraged.

(4) Nonwater-dependent structures, facilities, or activities generally will be considered by the Service to be unacceptable uses of public waters unless it has been demonstrated that the proposed use is required in the public interest (see Sec. 2.2B(1)) and no alternative site mutually acceptable to the Service and the applicant is available.

Although in many cases a restaurant, motel, trailer park, golf course, or other service facility may be more attractive to its customers if it has water frontage, this attraction does not necessarily re-

quire encroachment into navigable waters and wetlands. A set-back location that preserves public access to the water usually can provide as good or better water view, assure greater safety from storm hazards, and otherwise accord more fully with both the private and public interest.

(5) Proposals to fill ecologically valuable wetlands or site sewage lagoons or other treatment works on them will be discouraged, and where no feasible upland site for such works is available, the Service will urge adoption of tertiary treatment processes which do not require lagoons or other extensive works with consequent destruction of wetlands (see EPA's wetlands policy, App. F-2a, b, and c).

(6) The Service will object to or request denial of Federal permit for any proposed project not properly designed or located to avoid preventable significant damages to fish, wildlife, and/or other environmental values.

B. Unauthorized work and activity in navigable waters and applications for after-the-fact permits therefor. Unauthorized excavation, fill, structure, facility, building, or ongoing activity in or affecting navigable waters will be considered to be in violation of the law as prescribed in the River and Harbor Act of 1899, App. D-2a; the Federal Water Pollution Control Act (Sec. 301), App. D-2s; and the Marine Protection, Research, and Sanctuaries Act (Sec. 101), App. D-2x. See also Secs. 4.3, 6.3, 7.3, and 8 of this handbook for other aspects of unauthorized work.

(1) Where necessary to achieve removal of unauthorized harmful works and/or obtain other appropriate remedy, the Service will request the responsible Federal regulatory agency to institute enforcement action, including judicial procedures through the Justice Department if required.

(2) The Service may, where immediate action is warranted to avert great loss of fish and wildlife or their habitat, request the Solicitor, Department of the Interior, to take any appropriate steps to speed legal action.

(3) Where after-the-fact application is made for existing work which resulted in significant environmental damage, the Service will confer with the responsible Federal regulatory agency to assist it in determining the need and the possibilities for restoration and compensation of damages to fish and wildlife, their habitat, and related human use values.

(4) If legal action is not taken or is taken and fails adequately to remedy the damage, the Service will continue to aid negotiations with the applicant, seek appropriate conditioning of any permit, and take such other remedial measures as are available.

(5) Where satisfactory means and measures for restoration and compensation have been imposed upon or negotiated with the applicant, Service personnel will urge that the permit include conditions to assure their implementation.

(6) The Service may ask that the applicant be required to furnish a performance bond when there appears to be substantial risk of non-performance.

(7) In case of judicial action, Service personnel must expect to testify with appropriate Departmental clearances required and to have developed substantial evidence in support of the environmental aspects of the case. In such event, expert opinion is only a feeble substitute for firsthand testimony based on in-depth investigation (see Sec. 10).

C. Proposals determined to be acceptable. (1) The Service will urge that the applicant be required to provide assurances, through acceptance of permit conditions, that the works will be built and operated in such a way as to minimize the impact on fish and wildlife and the detriments to the public interest in the lands and waters affected.

(2) In cases where compensational measures are developed with the applicant to protect the resources, the natural functioning ecosystem, and other environmental values, Service personnel may recommend that a performance bond be required of the applicant to guarantee implementation of the compensational measures.

(3) Assurances for Federal projects will be obtained by the Service through clear and specific inclusion of means and measures in project authorizing documents and diligent follow-up during construction and operation.

5.3 Detailed policy guidelines. Service personnel will observe additional detailed guidelines in screening and reviewing permit applications and Federal proposals as indicated below for particular types of projects (Note that where excavation of fill or deposition of spoil are involved in a proposal, the guidelines of items I or J are applicable in addition to the guidelines listed for the specific main proposed works or activity):

A. Docks, moorages, piers, and platform structures. (1) In crowded areas, individual single-purpose docks will be discouraged, and multiple-use facilities common to several property interests providing common pollution control works and minimizing occupation of public waters will be actively encouraged.

(2) Joint-use moorage facilities will be encouraged for subdivisions, motels, and multiple dwellings in preference to individual moorage.

(3) The size of docks and piers and their extension beyond the normal high water line will be recommended to be restricted to that required for the intended use.

(4) Anchor buoys will be encouraged in preference to docks.

(5) Piers or catwalks will be encouraged in preference to fills to provide needed access to navigable water.

(6) Dry storage on upland will be encouraged for small boats in preference to water moorage in crowded areas.

(7) Removal of docks, piers, or platform structures in existence without a Federal permit will be recommended where practicable and especially where the particular structure is found to in-

terfere with or preclude preservation, management, or utilization of fish and wildlife resources and other environmental values.

(8) Removal will also be recommended of all piers and similar structures receiving little use, in a state of disrepair, and/or serving no demonstrated public purpose.

(9) Overwater location of apartments, shops, restaurants, and other nonwater-dependent facilities on pile structures or fills will generally be viewed by the Service as destructive intrusions upon the aquatic environment. Denial of a permit for a structure intended solely for such uses will be recommended unless it is clearly shown that the particular structure is required in the public interest (see Sec. 2.2B(1)(a) and Sec. 5.2A) and no alternative site mutually acceptable to the Service and the applicant is available.

(10) Permits for docks, piers, and other overwater structures will be recommended to be conditioned to require removal once the structure no longer serves the purpose for which it was originally permitted.

(11) Houseboat anchorage and moorage in public waters outside of publicly established harbor areas for more than 30 days will be discouraged.

(12) Service review of applications for the repair or replacement of previously permitted docks, piers, and moorages will be expedited.

B. Marinas and port facilities. (1) Designs that minimize disruption of currents, restriction of the tidal prism, excavation in shallow waters and wetlands, removal of barrier beaches, and filling of shallow waters and wetlands that do not occupy waters with poor flushing characteristics or sites with high siltation rates; and that preserve environmental values in general will be strongly encouraged.

(2) Facilities for the proper handling of boat and site-generated sewage, litter, other wastes and refuse, petroleum products, and precipitation runoff will be insisted upon with all marina and port proposals, including modifications to existing facilities, insofar as required by law.

(3) Regional and statewide planning for balanced land use and specifically to locate suitable spoil disposal sites, reduce unneeded dredging, and properly locate any new or expanded port, other necessary navigation and other water-dependent facilities will be encouraged. Shipping and support facilities including marine railways and launching ramps will be encouraged to make full utilization of developed areas to forestall disturbing new areas of high environmental value.

C. Bulkheads and seawalls. (1) Bulkheads and seawalls generally will be acceptable in areas having unstable shorelines, but their construction will be discouraged where marsh, mangrove, or other naturally protective and productive areas would be disturbed. In the latter situations, any necessary bulkhead should not reflect wave energy so as to destroy productive wetlands. In rapidly eroding situations where natural, pro-

protective vegetation or other controls are inadequate, bulkheads placed in navigable waters may be acceptable if properly designed to mitigate but not aggravate natural forces and processes.

(2) In extensively developed areas, rip-rap and/or designs utilizing natural vegetation will be encouraged in lieu of bulkheads of wood, concrete, or metal. Bulkheads will be acceptable that esthetically and/or ecologically enhance the aquatic environment.

(3) On barrier and sand islands and sand beaches, bulkheads which would adversely affect the littoral drift and natural deposition of sand materials will not be acceptable.

D. Cables, pipelines, transmission lines, bridges and causeways. (1) The Service will encourage the establishment of transportation-utility access corridors crossing navigable and other waters and wetlands at sites that localize and minimize environmental impact by limiting the encroachments to least valuable and productive areas.

(2) To be acceptable, aerial or submerged cables, pipelines, and transmission lines must be located and designed for maximum compatibility with the environment. In assessing environmental compatibility, Service personnel will give particular emphasis to the provisions made to protect water quality, fish and wildlife resources (notably, interference with migration routes) and to prevent interference with fishing and other public uses. Where unique natural areas, cultural sites, or significant impacts on scenic beauty or public access appear to be involved, Service personnel will alert and cooperate with concerned Interior bureaus and other agencies.

(3) Alteration of the natural water flow circulation patterns or salinity regimes through improper design or alignment will be discouraged.

(4) Enhancement of public access by the installation of fishermen catwalks, boat launching ramps, or other structural features will be encouraged.

(5) Bridge approaches required to be located in wetland areas will be recommended to be placed on pilings rather than constructed as solid fill causeways.

E. Jetties, groins, and breakwaters. Jetties, groins, and breakwaters that do not interfere with or, preferably, that enhance public access, and do not create adverse sand transportation patterns or unduly disturb the aquatic ecosystem will be acceptable. Service personnel will place particular emphasis on preventing project-related erosion and other harmful impacts caused by the installation—such as destruction of sand dunes and beaches and filling of shallows and tidal wetlands due to changes in littoral currents and drift—as well as on protecting fish and wildlife resources and uses.

F. Lagoons and impoundments. Lagoons or impoundments for waste treatment, cooling, or aquaculture which would occupy or damage significant wetlands or other ecologically productive areas in navigable waters will be unacceptable to the Service and denial of permit normally will be recommended.

(A NPDES permit is required to discharge from these; see EPA's wetlands policy, App. F-2a, b, and c.)

G. Navigation channels and access canals. (1) Construction or extension of canals primarily to obtain fill material will be discouraged or opposed as appropriate.

(2) Designs and alignments should adequately serve the needs of commercial and sport fisheries and other water recreation as well as other demonstrated public needs.

(3) Designs should not create pockets, interior channels, or other hydraulic conditions which would cause stagnant water problems.

(4) Designs should not create or aggravate shoreline erosion problems or interfere with natural processes of beach nourishment.

(5) Channel alignments and spoil sites should avoid shellfish grounds, eelgrass beds, beds of other productive aquatic vegetation, coral reefs, fish spawning and nursery areas, fish and wildlife feeding areas, and other shallow water and wetland areas of value to fish and wildlife resources and uses.

(6) Alignments should make maximum use of natural or existing deep water channels.

(7) Designs should include temporary dams or plugs in the seaward ends of canals or waterways and competent confining dikes around spoiling sites to serve until excavation has been completed and all sediment has settled out.

(8) Designs should not alter tidal circulation patterns adversely, create change in salinity regimes, or change related nutrient and aquatic life distribution patterns.

(9) Construction should be conducted in a manner that minimizes turbidity and dispersal of dredged material into productive areas and on schedules that minimize interference with fish and wildlife migrations, spawning, nesting, or human uses.

(10) In addition, the Service will recommend that the applicant or permittee be required to supply the Service with a schedule of the dredging anticipated during the life of the permit (frequency, duration, type of dredge, amounts of material, etc.) and where appropriate give a two-week notification prior to the commencement of work at each location or phase of construction. Recommendation also will be made to require Service notification when work is completed and the amount of materials removed. Similar advice and notice will be requested for previously coordinated Federal projects.

H. Drainage canals and ditches. Construction of canals and ditches that would drain or facilitate drainage of any of the wetland types identified in the Fish and Wildlife Service's Circular 39, "Wetlands of the United States," will be discouraged, and denial of permit usually will be recommended by the Service. Channels draining such wetlands will be acceptable to the Service only where the

following situation has been conclusively demonstrated: Insect vector control or some other public health, safety, or welfare measure is required as a public necessity and drainage would be the least damaging or only practicable means of accomplishment. But in these instances, the quantity and quality of any discharged waters should be controlled as required by the FWPCA and so as not to adversely affect the aquatic ecosystem unduly (a NPDES permit covering such discharges may be required).

I. Excavation of fill material. (1) Excavation and dredging in shallow waters and wetlands will be discouraged and any permits issued or Federal work approved will be recommended to be conditioned to prohibit activities in fish and wildlife nursery areas and during periods of migration, spawning, and nesting activity.

(2) Whenever the excavation of fill materials from productive submerged or intertidal wetland areas or from wetland types identified in Circular 39 (see Sec. 2.2B(2)) is considered detrimental to fish and wildlife resources and unacceptable, permit denial for such work will be recommended by the Service.

(3) Uncontrolled stockpiling of dredged material in shallow water or on wetlands to achieve full bucket loads will not be acceptable. Unloading barges should be employed wherever possible to avoid such stockpiling of materials. Where stockpiling is required, the use of competently diked upland areas usually will be recommended.

(4) Excavations should not create stagnant sumps or cul de sacs that trap and kill aquatic life.

(5) Dredging operations should be conducted so as to prevent petroleum spill, deposit of refuse, and avoidable dispersal of silt or other fines or other discharges of harmful materials (a NPDES permit may be required).

J. Filling and deposition of spoil and refuse materials. (1) Filling in navigable waters generally will be discouraged and will be strongly objected to where the proposed development is nonwater dependent or would not serve a demonstrated public need.

(2) Whenever the filling of waters and wetlands is considered detrimental to fish and wildlife resources and unacceptable, permit denial for such work will be recommended by the Service.

(3) Spoil confinement works should be properly designed, constructed, and maintained to avoid discharge of fines, other particulates, or harmful material to natural waters and be located on dry upland. The location of outlets and other means of control of the effluent from the spoil retention area should yield water quality that will preserve the aquatic ecosystem (a NPDES permit may be required).

(4) Toxic, oxidizable organic, and other highly harmful materials must be disposed on dry upland areas behind impervious dikes or by other safe and environmentally protective means.

(5) Dikes should be vegetated immediately to prevent erosion.

(6) In-bay, open-water, and deep-water disposal generally will be considered acceptable by the Service only after all upland and other alternative disposal sites have been explored and rejected for good cause. Deep-water disposal will be acceptable only at sites designated under State or Federal regulations or at sites specifically selected, including those selected for deposit of clean material for habitat improvement, where agreed upon by all concerned agencies.

(7) Sediment and/or effluent analysis will be recommended to be required in cases where there is suspected contamination by heavy metals or other toxicants. In cases where contaminant levels are high, the Service will either urge disposal on fully confined impervious upland sites or by other safe and approved means, or recommend denial of permit application.

(8) Turbidity and dispersal of dredged material will be recommended to be controlled in relation to open water dredging and disposal by means of fine-meshed curtains or other effective means.

(9) The foregoing guidelines on spoil deposition are also particularly applicable to Federal channel excavation and maintenance.

K. Mineral exploration and development, territorial waters. (1) To be acceptable, blanket permits issued for mineral exploration and development (including oil, gravel, sand, fossil shell, phosphates, sulfur, salt, placer metals, etc.) must be limited to the shortest time period essential to the work proposed and should provide by explicit conditions of the permits for such of the following that can be utilized to minimize environmental degradation: Areal exclusions; special exploration and development procedures (e.g. slant drilling); use of special equipment (e.g. use of shallow draft barges and low-impact swamp vehicles on wetlands); and limitations on dredging, filling, and spoiling (i.e. use of existing channels wherever possible rather than new ones, avoidance of productive wetlands and shallows for filling and spoiling, etc.).

(2) To be acceptable, proposed activities and works must be described as fully as possible in the original permit application, and to the extent that these cannot be described for the entire extent of the work and period of the permit, the undescribed extension and modifications when known and proposed must be subject to provision of adequate notice and opportunity for on-site assessment of potential environmental impact by the Service or its designee, and the permit must be further conditioned as may be required to protect environmental resources on the basis of such recommendations as the Service may make.

(3) To be acceptable, proposals must meet the applicable general and detailed guidelines set out hereinabove for other particular activities and works involved in the proposed mineral exploration and development.

(4) To be acceptable, proposals must make adequate provisions to keep environmental degradation to the minimum,

particularly that from spillage of oil; release of refuse including polluting substances and solid wastes; spoiling on productive wetlands; dredging of productive shallows; and alteration of current patterns, tidal exchanges, freshwater outflow, erosion and sedimentation.

L. Mineral and other developments, including rights of way, on public lands.

(1) As discussed more fully in Section 1, Interior bureaus and other Federal land management agencies are involved variously in leasing lands and granting permits for rights of way, mineral exploration and development, hydroelectric power development, and other activities on public lands of the United States. To the extent that these activities would involve identifiable effects on navigable waters they also require a permit from the Corps or Coast Guard under the 1899 Act and/or the Federal Water Pollution Control Act Amendments of 1972, and in certain cases a NPDES permit from EPA or the State.

(2) These guidelines do not cover procedures for the intra-Interior review of outer continental shelf and other public lands, mineral leases, and permits nor rights-of-way permits, but it is expected that Service personnel will apply any of the pertinent policy guidelines of this handbook as are appropriate.

(3) Corps, Coast Guard, and EPA permit applications covering such activities should be reviewed in the field for potential site-specific impacts as with any other permit, keeping in mind, however, that general protective conditions are included in the Interior permits which are deemed adequate for all known situations and contingencies and that known highly damageable areas have been excluded from the lease offers and use permits for lands of the Territories.

(4) If a particular case appears to the reviewing biologist to involve substantial impacts of a nature not certainly covered by conditions of the Interior permit, he should initiate action to so notify the district or regional office of the concerned regulatory agency and the responsible office of the concerned Interior bureau or for the Territory. If the responsible local Interior office cannot satisfy the Service concern, the matter should be referred to the Central Office for resolution and the district or regional office of the regulatory agency should be so apprised.

M. Log handling, moorage, and storage.

(1) Log handling, moorage, and storage sites proposed to be located on salmon-spawning and other fish productive streams, shellfish grounds, or shallow water and wetland areas of value to fish and wildlife resources and uses will not be acceptable to the Service.

(2) Log handling, moorage, and storage in public waters will be discouraged, particularly where such activities would obstruct or impede public access, fishing, hunting, and other legitimate public uses of the water body; degrade and destroy fish and wildlife resources; or otherwise degrade environmental values.

(3) Environmentally sound practices of log handling will be encouraged through recommendations for conditioning of any

required Federal permit or contract and otherwise, as follows:

(a) Use of positive controls over bark, other debris, and leachates, including proper confinement, collection and disposal of all floatable, soluble, and settleable refuse. Rapidly flowing water, steep shores or other sites must be avoided for log dumping where positive controls cannot be effected.

(b) Use of easy let-down devices for placing logs in water to avoid safety and environmental hazards of violent free-fall dumping.

(c) Limiting the quantity of logs and the duration of their moorage and storage in public waters to the minimum required for efficiency.

(d) Use of upland sites for bundling of logs and disassembling the bundles.

N. Steam electric powerplants and other facilities using navigable waters for cooling. Although these facilities will be treated in detail in a separate Steam Electric Powerplant and Cooling Facilities Handbook, broad, general guidelines are included here:

(1) As a general rule, once-through cooling systems will be discouraged and closed-cycle cooling will be encouraged where the facility is proposed to be sited on or so as to affect biologically productive navigable waters. In particular, any facility will be strongly discouraged which would significantly change the environment and values of an estuarine area or other biologically productive navigable water by withdrawal and discharge of large volumes of water—thereby depleting aquatic life by entrainment and impingement; altering the natural or existing regime of salinity, temperature, and dissolved oxygen and the patterns of water currents, tidal exchange, volume, tidal excursion, and freshwater flow; disturbing the populations, dynamics, and distribution of aquatic life; scouring productive water bottoms or otherwise endangering the viability and productivity of the ecosystem; and lessening the human satisfactions dependent thereon.

(2) A facility to divert water from and release heated water to navigable waters where proposed to be sited so as to affect harmfully salmonid spawning, rearing, or migration waters or any water or wetland supporting highly sensitive and/or highly valued species of fish or wildlife will not be acceptable to the Service unless such facility is fitted with a closed-cycle cooling system and otherwise incorporates protective features that insure against any significant harm to such species at all times and under all foreseeable conditions.

(3) To be acceptable any facility incorporating once-through cooling involving navigable waters must:

(a) Be sited where wetland destruction, other habitat damage, interference with fish and wildlife and their uses, and overall environmental harm will be at the minimum compared to other possible sites in the region;

(b) Involve a plan layout based on preoperational baseline studies defining current, temperature, salinity, tidal, migratory fish or wildlife, and other pat-

terns sufficient to select the smallest and most desirable heat mixing zone, providing adequate zone of passage, and other plan arrangements, including those of the transmission lines and other appurtenant facilities, that will minimize harmful impacts on fish and wildlife, their habitats and uses as well as overall environmental damages;

(c) Incorporate design features and operating programs and rules to avoid all avoidable harm to fish and wildlife, habitats, and uses as well as other environmental resources and uses; specifically:

(i) Incorporate a cooling system design employing the best available technology and combination of facilities to minimize harmful effects on the environment, including: Mechanical rather than chemical scale and algae controls; intake-outlet arrangements which minimize impingement, and entrainment, and damage to productive bottoms; fish bypasses and other saving devices as well as screens at intakes;

(ii) Schedule shutdowns to avoid harm to aquatic life as fully as possible;

(iii) Meet all applicable water quality requirements and goals; and

(iv) Adequately monitor the operations to satisfy the burden of proof upon the permittee or licensee that the foregoing and other appropriate environmental standards are met.

6. *Coordination, liaison, and negotiation.* It is difficult to overemphasize the value of taking steps at the earliest possible time to gain participation in the planning process to permit offering suggestions of modifications and alternatives and discouraging selection of naturally productive sites or harmful methods of development. This is difficult with piecemeal private developments, but even with these, publicizing Service concerns in the media, assisting concerned citizens who responsibly involve themselves in surveillance, accepting speaking engagements, arranging symposia, educating local planning, zoning, and administrative boards, and other means can be of help in the long run.

With Federal activities close liaison by the Division Field Supervisor with the Federal planning agencies usually leads to early notice of actions and invitation to informal consultation during formulation of plans. This early consultation can be the most productive effort made by Division personnel in relation to Federal activities. If possible the consultation should be between the Division biologist and the lead agency planner assigned to the specific survey or project.

The Ecological Services biologist also must maintain early and continuing liaison and coordination with NMFS and State biologists in connection with each assignment. Summary coordination guidelines follow:

6.1 *Coordination with the State, NMFS, EPA, Corps, other Interior bureaus, and other concerned governmental agencies.* A. Early in his review of a proposal, the Division biologist consults with his counterparts in other agencies to:

(1) Gather information from knowledgeable experts.

(2) Identify mutual interests and information sources and obtain useful data and views.

(3) Transmit project data to cooperating entities not otherwise supplied.

(4) Arrange any appropriate joint field studies.

B. As his preliminary assessment and field reconnaissance are completed and he prepares his draft report and recommendations the Division biologist continues coordination and liaison with agencies having coordinate and related responsibilities to:

(1) Assess the public interest and other professional opinion on the merits of the proposal and consider proper means of resolving any environmental issues.

(2) Alert other agencies, particularly other Interior bureaus, to any special environmental concerns in their interest discovered in the Service assessment or reconnaissance and explore any mutual environmental involvements of the proposal with such agencies.

(3) Formulate any appropriate joint position on the proposal among agencies having coordinate responsibilities.

6.2 *Coordination with the applicant or Federal Lead Agency.* A. Early consultation with the Federal lead planning agency can often forestall wasteful efforts addressed to environmentally unsound design or site; yet this advantage is normally long past with permit applicants. Improvement in the latter situation may result from educational efforts by concerned entities and court decisions favorable to the environment which encourage prospective applicants to seek early consultation.

B. Negotiation with the applicant or lead agency planner is conducted as appropriate throughout the Service review process.

(1) If the field appraisal has confirmed that the proposal will have adverse effects on fish and wildlife, their habitat or the naturally functioning ecosystem, efforts must be made either through the regulatory agency (in permit applications) or by direct contact with the applicant or lead agency planners, to have the plan modified to minimize damage to the resource base.

(2) The posture to be maintained by the Service representative in negotiating with applicants or lead agency planners should:

(a) Encourage acceptance of the validity of the national recognition of intrinsic high public value of shallow water and wetlands habitats through citation of Zabel 1 Tabb, other Federal case and statutory law, local law (statutory wetlands and zoning laws and related case law), and findings of the Reuss Committee and ecologists (see App. D and G.)

(b) Avoid acceptance of monetary value as the full measure of significance of ecological and other environmental impacts.

(c) Avoid expedient resolution of issues with the sponsor of the work or

activity which do not satisfactorily resolve the environmental issues.

C. If the applicant or sponsor rejects suggestions for making his plans environmentally acceptable, it must be made clear that the burden of proof is on him to demonstrate that such suggestions are infeasible and that his proposal is of overriding public interest. Without such demonstration the Service policy requires that denial of the application be requested or objection to the project be raised as otherwise proper.

D. The assistance of other governmental agencies having coordinate responsibilities and interest should be requested, even urged, in direct participation and support of negotiations. Also, interested private conservation groups should be advised of the Service position.

E. Following successful negotiations, the agreed upon plan modifications for environmental purposes can be handled by:

(1) The applicant submitting a new application with acceptable plan to the permitting authority, which is then specifically comprehended by the permit and its conditions, or

(2) The applicant submitting in writing to the permitting authority his intention to adopt specific plan modifications, thus amending the application, which is then specifically comprehended by the permit and its conditions, or

(3) The Service and Department recommending and the permitting authority adopting the necessary specific conditions or stipulations as part of the permit which fully and specifically comprehend the plan modifications required for environmental and fish and wildlife protection and conservation purposes.

6.3 *Coordination on unauthorized work and activities.* A. The conduct of Service personnel in exercising surveillance investigations must be cautious and above reproach. Their on-site actions must be limited to gathering information on suspected unauthorized work without unduly exciting workmen or the sponsors of the work. (See Sec. 4.3.)

B. Enforcement actions are generally the prerogative of the Corps, EPA, Coast Guard, and Justice. Once Service personnel have obtained the pertinent biological and other information necessary for action on the case and the Regional Director has alerted and formally notified the Corps, EPA, or the Coast Guard, as appropriate, with copy to the Regional Solicitor and to the appropriate U.S. Attorney, the Service should normally defer to the regulatory agency for further action. Where NMFS interests are involved, a copy of the formal notification or report on a violation should be sent to NMFS when the regulatory agencies are informed. Where expedited action is justified by immediacy of the threat to highly valued resources, the Regional Director may seek assistance from the Office of the Solicitor. (See also Secs. 5.2B, 7.3, and 8.)

7. *Reporting procedures.*

7.1 *Reports and correspondence.* A. Guidelines for preparation and transmiss-

sion of routine letters and reports are included in Secs. 3.000-3.999 of the Division Manual. The manual guidelines cover all kinds of river basin activities and should be followed where applicable.

B. Special letter and report formats applicable to review of permit applications are included in App. A. Standard Forms, checklists, and flow charts are included in App. B, and commonly appropriate standard recommendations for permit applications are included in App. C.

C. General guidelines on report conclusions and recommendations. Any of the following situations may serve as a basis for Service recommendation of denial of a Federal permit or objection to the authorization of a Federal project for similar work in navigable water. (More detailed general and specific guidelines for determining acceptability of plans are included in Sec. 5, above):

(1) The project or activity will directly destroy, damage, or degrade fish and wildlife, their habitat, or other significant environmental values, including part or all of a natural functioning ecosystem.

(2) The project will lead to, encourage, or make possible the destruction, damage or degradation of fish and wildlife, habitat, or other significant environmental values, including part or all of a natural functioning ecosystem.

(3) Public use of a natural or other environmental resource will be restricted or curtailed.

(4) Public benefits will not clearly exceed public losses, ignoring any private gains not clearly related to health, safety, or protection of property.

(5) The project purposes are not water related or dependent.

(6) Alternative upland sites are available for the proposal which would involve less environmental costs and generally better satisfy the public interest.

D. Format and disposition of reports. (1) Service reports on NPDES permits are submitted by the Regional Director directly to the EPA or the State. Those on nuclear steam-electric plants are submitted through the Director to the Departmental Office of Environmental Project Review for inclusion in the Departmental report.

(2) Service reports on Federal and federally assisted projects are submitted directly to the appropriate office of the sponsoring Federal agency by the Regional Director.

(3) Procedures for review, submission of comments, and resolution of issues on navigation permit applications made to the Corps of Engineers, Department of the Army, are prescribed for all bureaus and offices of the Department of the Interior in 503 DM 1. This Departmental Manual release implements the July 13, 1967, Memorandum of Understanding between the Departments of the Army and the Interior with respect to review of applications for permits for dredging, filling, excavation, and other related work in the navigable waters of the United States issued by the Corps of Engineers. This release assigns responsibility regarding such review to the Director,

Fish and Wildlife Service, and delegates responsibility for coordination among Departmental field offices and for submission of formal Departmental communications with District and Division Engineers of the Corps to the Service's Regional Directors.

(4) A different procedure is to be followed where both the permit application and the related draft environmental impact statements are to be reviewed concurrently as described in Sec. 7.2, below.

(5) Under 503 DM 1 the Service normally has a dual role: providing the consultation and review functions mandated by the Fish and Wildlife Coordination Act and coordination and consolidation of views and recommendations of all Departmental bureaus and offices, including those of the Service, into a formal Departmental letter of comment under Fish and Wildlife Service letterhead.

(6) Informal communications with the Corps by the bureaus and offices are not precluded by 503 DM 1; in fact, each bureau and office is directed to make its own arrangements for receipt of public notices and is encouraged to conduct any necessary informal discussions with Corps personnel.

(7) (a) The role of the Service Regional Directors under 503 DM 1 is to coordinate, collate, and transmit all formal Departmental communications, including requests for extension of time to respond or for more information and the formal Departmental letters of comment (and/or reports) on navigation permits to District Engineers and where appropriate, to Division Engineers.

(b) The Service Regional Director must assure himself that all interested bureaus and offices of the Department have had adequate opportunity to offer comments and that all substantive comments, timely received, are reflected in the formal Departmental response to the Corps on each permit application.

(c) Any unresolved cases of disagreement among field offices of Interior bureaus will necessarily be submitted promptly to headquarters as will any other case which the Corps has indicated it will refer to Washington under the Memorandum of Understanding or which has become so controversial that either the Corps or the applicant is likely to refer it to Washington (see Sec. 7.1E (3)-(6), below).

(8) The Service does not have the above-outlined coordinating function with respect to EPA or the Coast Guard. Nor does it have such function with any other regulatory agency or in relation to review of any Federal or federally assisted project proposals.

(9) The Regional Director's coordinated letter to the responsible Corps officer prepared under 503 DM 1, although on FWS letterhead, is the official Departmental report on a permit application and is to be so identified in the text of the letter.

(a) The first sentence of the letter report stating the Departmental position should include the Public Notice number and date, the Corps District, the waterway or other locational references, and the State.

(b) Service surveys and investigations on permits, prepared in accordance with provisions of the Fish and Wildlife Coordination Act, are to be incorporated in the letter report to the District Engineer.

(c) In the common case where the substantive comments are limited to those of the Service and any compatible views of other Interior bureaus and offices, the letter will incorporate the Service report and the other comments and views and will state that its content represents the Departmental position, or reflects fully the Departmental views and findings on the identified permit application.

(d) Service letters on such matters as unauthorized activities, failure of a permittee to abide by permit conditions, requests for extension of time, etc., may also note Departmental sanction of the concern or request.

(10) Service letters of comment and reports on other than Corps permits do not necessarily represent the Departmental position and should not so indicate unless Departmental sanction has been determined.

(11) The Departmental letter and/or Service report may be released to cooperating State and Federal agencies and the general public once the Departmental or Service letter has reached the District or Division Engineer of the Corps, Regional Administrator of EPA, or District Commander, Coast Guard.

E. Recording permit actions and filing of reports. (1) Records must be maintained in the area and regional offices of the disposition of each public notice received, actions taken, reports filed, and any required follow-up activity accomplished.

(a) Regional offices must maintain records of both Service and Departmental actions in keeping with the role of the Regional Directors as Departmental coordinators for Corps permits.

(b) In addition to maintaining a comprehensive log of permit actions, each public notice received should be filed bearing a notation of its disposition and a reference keying it to the entries made on it in the log (public notices deemed not to involve a Departmental or Service interest are nevertheless logged to assure completeness of records and ease of retrieval in event of later action).

(2) Central Office files must not be burdened. As instructed in Dr. King's memorandum of November 14, 1972 (App. E-16) only those file materials on permits specifically requested by the Central Office should normally be submitted. Exceptions are noted in par. 7.1E(5), below.

(3) The Director should be promptly alerted to permit applications and violations involving properties administered by the Service or another bureau of the Department (i.e. refuges, hatcheries, parks, recreation areas, etc.) and to situations involving policy and other significant Departmental or Service interest.

(4) Alerts on permit involvements of other bureaus of the Department should be forwarded through the Director to the

Assistant Secretary for Fish and Wildlife and Parks only where the other bureau so requests, or where after notification of the other bureau that bureau agrees that inadequate attention was accorded an environmental problem.

(5) The Director should be promptly alerted to controversial permit situations which the Corps has indicated it will refer to Washington under the Memorandum of Understanding or where the applicant or the regulatory agency has so clearly objected to the Service or another bureau's recommendations that the matter will likely be referred to Washington for resolution. Where referral to Washington is deemed to be imminent the alert, in exception to par. 7.1E(2), above, should be accompanied by essential file materials and a concise summary of the case and the Department's involvements (see 503 DM 1).

(6) In cases defined above where file materials are submitted to the Central Office, only single copies of the following are required: The Public Notice and any fact sheet, a project location map (with site superimposed on quadrangle sheet or navigation chart), the completed Field Appraisal form, the Service report, any other pertinent correspondence or hearing records, and the Departmental report.

F. Resolution of issues following report release. (1) Follow-up with the regulatory agency is to be made on a continuing basis to determine the disposition of cases of concern to the Service and the Department. Copies of permits issued are to be obtained for Service files, with copy to the Central Office if appropriate.

(2) Every effort is to be made to resolve problems at the field level. However, if this is not possible, the Corps in accordance with the July 13, 1967, Memorandum of Understanding, will refer the controversial permit matters to the Under Secretary. The following procedure is followed after Interior's report is filed with the District Engineer:

The District Engineer, in deciding whether a permit should be issued, shall weigh all relevant factors in reaching his decision. In any case where Directors of the Secretary of the Interior advise the District Engineers that proposed work will impair the water quality in violation of applicable water quality standards or unreasonably impair the natural resources or the related environment, he shall, within the limits of his responsibility, encourage the applicant to take steps that will resolve the objections to the work. Failing in this respect, the District Engineer shall forward the case for the consideration of the Chief of Engineers and the appropriate Regional Director of the Secretary of the Interior shall submit his views and recommendations to his agency's Washington Headquarters.

The Chief of Engineers shall refer to the Under Secretary of the Interior all those cases referred to him containing unresolved substantive differences of views and shall include his analysis thereof, for the purpose of obtaining the Department of the Interior's comments prior to final determination of the issues.

In those cases where the Chief of Engineers and the Under Secretary are unable

to resolve the remaining issues, the cases will be referred to the Secretary of the Army for decision in consultation with the Secretary of the Interior.

(3) The Associate Director—Environment and Research is to represent the Service on a review committee to advise the Secretariat of the course of action to be followed in the efforts at resolution.

(4) Although procedures have not been agreed upon with regulatory agencies other than the Corps for cases of failure or resolution in the field, any such cases should be referred promptly to the Director with full particulars so that he may attempt resolution of the controversial matters at Washington level.

7.2 Environmental impact statements.

A. Federal agencies have a responsibility to seek consultation with the Service in relation to their preparation of environmental statements required by Sec. 102(2)(C) and other provisions of the NEPA (National Environmental Policy Act) and the Service has a responsibility by law and expertise to advise such agencies.

B. The Service also has a responsibility to review draft environmental statements and to prepare comments thereon as a part of the Departmental comments made in response to requests for official review and comment on prepared draft environmental impact statements.

C. Distinction must be maintained between these two types of responsibility, as follows:

In the first, the Service should provide such advice as it considers appropriate directly to the Federal agency at field level upon its request. Where Service responsibilities are known or suspected of being involved the Service may offer any appropriate advice or remind the agency of its responsibility to consult with the Service and other environmentally expert and responsible bureaus and agencies.

In the second, the Service must make its contribution through the Department's Office of Environmental Project Review. It should comment on the accuracy of the statement with respect to fish and wildlife and related matters, on the completeness and comprehensiveness of the statement in relation to these matters, and on the compliance with the requirements of the NEPA and the guidelines of the Council on Environmental Quality.

D. Consistency must be observed as fully as possible by Service personnel not only in meeting these responsibilities but in reporting on the one or more Federal permits required for the proposal at issue. This will require some considerable care and attention in cases particularly where different persons or different times are involved in the several actions. Concurrent actions by different individuals must be closely coordinated. But in many cases, earlier action on review of a permit application must be carefully reviewed and accounted for in preparation of comments on a subsequent permit application or draft environmental statement.

If circumstances have changed so that current comment necessarily must

differ from an earlier comment, a full explanation of such circumstances must be given and a persuasive justification made for the current position taken. In no case should the reviewer fail to search out and thoroughly consider the validity of earlier actions before taking a different position. On the other hand, a faulty earlier position cannot be ignored, it must be forthrightly addressed and disposed with minimum embarrassment to the Service and Department. It is expected that the problems of non-consistency will be less likely to occur in the future in that coordination among regulatory and review agencies will encourage if not demand concurrent review actions on related permit applications and environmental impact statements.

E. Regional offices of the Service should expect to receive documents and requests for concurrent review of permit applications and draft environmental impact statements to come to them from the Office of Environmental Project Review in Washington, particularly those involving major and extensive proposals. In these cases, the procedure described in paragraph 1.4D of 503 DM 1 will be followed, but in addition, the Service report mandated by the Fish and Wildlife Coordination Act will either be incorporated into the official Departmental comments as an identified section or where appropriate because of the length of the report or other reason, a summary of the report thus incorporated and the report itself filed directly by the Service with the appropriate office of the responsible Federal regulatory agency.

7.3 Reporting unauthorized work or activity. A. Although a detailed report is usually not prepared on unauthorized work, complete records must be maintained (see App. B-5), a field surveillance and appraisal report prepared (App. B-2), and a request made to the regulatory agency by the Regional Director for enforcement action if it is determined that the work or activity is in fact being conducted unlawfully (i.e. without permit or in violation of the permit). It usually will be found more effective for the Regional Director to transmit his request by certified mail (see App. A-5 and A-6).

B. If action is not taken in a reasonably timely manner, the Regional or Field Solicitor should be requested to intercede to elicit any essential expedited action. See the flow chart of actions on apparent illegal activities, App. B-4b. If court action ensues the investigating biologist is likely to be called to testify; see Sec. 10 for advice on such participation.

8. Follow-up of permit work and surveillance of illegal work. Successful achievement of the Service objectives and goals in relation to dredge and fill activities requires continuing, consistently diligent surveillance of waters and wetlands throughout the Nation by Service biologists in coordination with responsible Federal regulatory agencies to maintain a comprehensive monitoring of all activities conducted in waters under their purview.

8.1 A variety of techniques have been suggested and used to intensify surveillance coverage with the limited Service resources. These include:

A. Intensive, complete coverage of critical areas—preferably periodic (bi-weekly, monthly, or as resources permit) but varied as to timing to avoid strict regularity.

B. Comprehensive, semi-intensive coverage of an entire length of coast, river, or lake—periodic as under Sec. 8.1A, above.

C. Random, occasional coverage of a critical area or length of coast, river, or lake incidental to field reconnaissance of permit applications and other field studies.

D. Comprehensive coverage with assistance of NMFS, district biologists of the State, and/or concerned citizens, and/or Service personnel of other divisions LE, Refuges, Technical Assistance—periodic (quarterly, semiannual, or as resources permit).

8.2 Assistance in surveillance and in intensifying regulatory agency monitoring can be furthered in a number of ways:

A. Sponsoring work shops and symposia.

B. Issuing special reports documenting the value of shallow waters and wetlands in key areas, such as estuaries, and otherwise supporting the need for regional, environmentally sensitive land management planning and control.

C. Eliciting support from government agencies with coordinate interests, conservation groups, and other influential entities in urging intensified surveillance for illegal work and monitoring of permitted activities by the regulatory agency.

9. Education of the public.

9.1 Basis. Informing the general public and decisionmakers of the ecological, hydrological, and legal bases of the concepts underlying the Service's intensified efforts to save the naturally functioning aquatic and related terrestrial ecosystems of shallow waters and wetlands of the Nation is essential to attaining Service goals.

This is as true for the potholes of the Midwest "duck factory" as it is for the bottomland hardwoods of the Southeast, the extensive estuarine complexes of the Atlantic, Gulf, and Alaska Coasts, the discrete estuaries of Maine and Pacific Coasts, the bays and shoreline marshes of the Great Lakes, and the oxbows and islands of our major rivers.

9.2 Means. A. The Ecological Services biologist must take every opportunity to inform the public of the scientific and legal bases and assist others who are concerned to do so. But he should not merely react to opportunities, for many times these will only permit restatement of the facts to those who already are informed or are at least environmentally oriented and sympathetic. The facts of wetland and other environmental values should be brought to local governments and others who may encourage environmentally damaging development.

B. The legal references of App. D and the technical references of App. G should be perused and frequently consulted in this regard by every Division biologist, and App. H and I are useful aids to the biologists and to his efforts of educating the public and public officials.

C. To be effective in educating others, the biologist must first fully educate himself and continually renew and add breadth and depth to his vision and understanding. The involved ecosystems are in no way simple nor well-understood by even those physical and biological scientists in the forefront of research on these matters. Nevertheless, much is known and the literature is extensive, particularly on coastal and estuarine ecosystems.

D. The following items of literature cover much of the basic knowledge which must be comprehended by all Division biologists involved in dredge and fill activities:

- Annon., 1956. *Wetlands of the United States*. Circ. 39, USFWS (Repub. 1971).
 Leopold, L. B. and W. B. Langbein, 1960. *A Primer on Water*. USGS.
 Swenson, H. A. and H. L. Baldwin, 1965. *A Primer on Water Quality*. USGS.
 Teal, J. M. and M. Teal, 1969. *Life and Death of the Salt Marsh*. Audubon/Ballantine (Paperback Ed.).
 Annon., 1970. *National Estuary Study*. USFWS, 7 Vols. (especially App. A, Vol. 2; App. B, Vol. 3; and App. I, Vol. 6).
 Annon., 1970. *Our Waters and Wetlands: How the Corps of Engineers Can Prevent Their Destruction and Pollution*. U.S. Congress, House Report 91-917 (see App. D-6).
 Wharton, C. H., 1970. *The Southern River Swamp—A Multiple-Use Environment*. Georgia State University.
 Annon., 1972. *Increasing Protection for Our Waters, Wetlands and Shorelines: The Corps of Engineers*. U.S. Congress, House Report 92-1323 (see App. D-6).
 Clark, John, 1974. *Coastal Ecosystems, Ecological Considerations for Management of the Coastal Zone*. The Conservation Foundation.

Many other citations could be listed, of course, but the above, mainly written for the general reader, provide a basic essential overview from which the biologist can branch out to more definitive works. Additional technical sources are cited in the above-listed references and in the App. G-4 and G-5 articles.

E. Many methods and techniques can be used to educate the public, some of which have been noted above in relation to follow-up and surveillance activities:

(1) The media should be utilized as fully as possible to inform the public of ecological principles through articles on locally newsworthy, current situations. Contacts can be made through concerned citizens or directly with news media to properly present the environmental viewpoint of dredge and fill issues. Discretion must be used, however, to avoid jeopardizing any ongoing negotiations with the applicant or lead agency.

(2) Participation in school programs can be helpful in furthering the education of the public on ecological principles. Here are some of the ways:

(a) Lectures and slide talks to primary, secondary, and college-level classes.

(b) Show-me field trips and summer field study classes made in cooperation with schools and summer camps organized by charitable groups, churches, etc.

(c) Field investigations, particularly inventory studies of important habitats, organized with schools to utilize student classes in ecology or field biology for the collection and identification of species, mapping of habitat types, etc.

(3) Lectures, slide talks, and show-me field trips can be profitably arranged with adult groups, especially with organizations of adults such as Rotary, Kiwanis, religious groups, etc.

F. In connection with the foregoing direct involvements with the public, further publicity can be arranged with news media and the education success can be heightened by distribution of printed material.

Such printed material is available in the Service's popular pamphlets on estuaries, endangered species, and the like, as well as from State sources, Sierra Club, Soil Conservation Service, local conservation groups, and many others.

Also, special publications can be prepared by the Service such as those prepared by the Northeast Region on the Long Island wetlands, by the Pacific Region on Southern California estuaries and coastal wetlands, and by the Southeastern Region on guideline for permit applications.

10. Participation in judicial and other hearings.

10.1 Basis. A. Involvements with navigation permits frequently requires participation by Service personnel in the resolution of issues through hearings.

B. Participation in judicial hearings, and presumably in those quasi-judicial hearings and proceedings of regulatory agencies such as the Corps, EPA, AEC, and FPC, must be authorized in writing by the Regional Director (see Service Manual 6 AM-3.1). If the Director on advice of the Regional Director decides that participation is not proper, the Solicitor, acting for the Secretary, reviews the decisions and provides counsel on related legal actions.

C. The Office of the Solicitor should be kept advised of any judicial involvements of the Service; his office should be called upon to serve as liaison with U.S. and other attorneys and to provide any other needed counsel. Any publicity of hearing matters must be restricted to that approved by counsel.

D. This section is addressed to participation by Service personnel on matters of fact or expert opinion in hearings in relation to Government business and records. Participation by Service employees as expert witnesses in proceedings between private litigants is normally prohibited. Yet an employee may be permitted to testify as an expert on his own time at his own expense if he clearly avoids representing his testimony as in any way stating official position.

10.2 Gathering information in support of testimony at hearings. A. On-site, first-hand observations and data usually will provide far more persuasive evidence in judicial hearings than evidence from the literature, although familiarity with

the literature and other sources of information is also essential to well rounded testimony.

B. In preparation for cases to be brought to court or other formal hearing the Service biologist must not only search out all available knowledge from cooperators and other sources, but he must also make as detailed and comprehensive field studies as time and his resources of manpower and equipment will permit.

C. Field investigations on-site ideally include:

(1) An inventory (population estimates by species) and delineation on maps of the distribution of all important species of plants and animals in the impact area;

(2) Determination of the salient physical and chemical characteristics of impact area waters—temperatures, salinities, current patterns, tidal ranges, sediment transport and shoaling patterns, turbidity, dissolved oxygen, degree of pollution, stream discharge rates, turnover or flushing rates, etc.;

(3) Estimation of human uses and satisfactions including sport and commercial harvests;

(4) Comparison of topographic and other data furnished by the project sponsor with that observed on-site to detect any discrepancies;

(5) Assessment of the physical, biological, and esthetic impacts of the proposed works from on-site observations made while visualizing and imagining the planned works in place and noting the agreement of plan orientation points, borrow areas, fill areas, roads, etc., to observed physical, biological, and other environmental features of the site, including tide marks, vegetation lines (by

species), depth lines, water current lines, etc.; and

(6) Documentation by written field notes, photographs, map notations, instrument readings, biological samples, records of interviews, etc., including completed field appraisal forms for each significantly different instance of field observation (see App. B-2 and B-3).

10.3 Preparation of material for legal briefs or submission for the record.

A. The witness must prepare his testimony and record material in the closest possible harmony with his attorney.

B. Since each hearing officer or judge has wide latitude in laying down requirements of format, time of submittal, number of copies, and other matters related to presentation of record material within the differing guidelines of the several regulatory or judicial forums, only a few general guiding principles can be set forth here:

(1) The points of fact or opinion to be developed must be jointly selected by the attorney and witness, seeking those that can be presented most persuasively and eschewing weak points and those on which the attorney and witness are not both fully conversant.

(2) The points selected must be thoroughly researched by the witness and explored fully with the attorney to reach common understanding and develop the proper means of presentation.

(3) The points selected must also be critically examined with help of counsel to discover potential weaknesses and develop rebuttal answers to questions that may be posed by opposing attorneys.

(4) With guidance from his attorney, the witness must prepare his brief and record material strictly in accordance with the standards and requirements of the hearing officer or court.

10.4 Oral testimony. A. Advice on this point is given in the Service Manual (6 Am 3.1B) as follows:

In an appearance on the witness stand, an employee should keep this advice in mind:

(1) Be sure the question is understood before giving an answer.

(2) Do not be rushed into answering; stay calm and deliberate.

(3) Be as courteous and responsive as possible.

(4) Stick to facts and do not venture into hearsay and opinion. (An exception might be in the case of expert opinions.)

B. The Manual advice is good. However, the Ecological Services biologist usually will be testifying as an expert witness and need not hesitate to express opinion he believes to be well founded on his training and experience.

C. Some additional advice particularly related to adversary proceedings follows:

(1) Avoid involved answers which open up debatable points or burden the proceedings. Yet do not assume the hearing officer knows or already understands the facts of the situation or the basic ecological principles; give simple, concise, and fully intelligible answers that form a complete record.

(2) Be alert for questions which permit fuller development of your position.

(3) Do not try to answer unanswerable questions or those for which you do not know the factual answer, unless the question admits of developing your position in a tangential way.

(4) Shun belligerency; it is never helpful to your credibility or position.

(5) Avoid evasive, counter-punching, or "cute" answers which can only alienate the hearing officer or judge; such answers will not help your position.

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