

HJR

40

DATE: 4/29/91

FURTHER:

DATE TURNED INTO OFFICE: _____

Resources Committee considered CSHJR 40 (RESOURCES) am

Requesting a closure of the Eastern Gulf of Alaska East of 140 degrees West longitude to pelagic and on-bottom trawl fishing.

and recommended:

replace with S CS CSHJR 40 Resources
 or adopt _____ CS _____

same title
 new title
 technical title change
(HB only)

attached amendment(s)
 _____ letter of intent adopted

do pass

do not pass

no recommendation

individual recommendations

further referral to _____

ATTACHES NEW FISCAL NOTE(S):
Dept/Date:

fiscal note(s) _____

zero fiscal note(s) _____

appropriation-no fiscal note

APPROVES PREVIOUS:
Dept/Date:

fiscal note(s) _____

zero fiscal note(s) 4/19/91 - House Resources

Governor's bill w/fiscal note

SIGNING DO PASS:

[Signature]

OTHER RECOMMENDATIONS:

[Signature] No Rec

[Signature]
Chair: Signature and Recommendation

Revision Date: _____ Department Affected: _____

Title: Requesting a closure of the Easter BRU: _____

Gulf of Alaska to pelagic and on-bottom Component: _____

Sponsor: Crawl fishing, Rep. Grussendorf

Requestor: House Resources COMPONENT SERIAL NO.

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Expenditures/Revenues: (Thousands of Dollars)

OPERATING	FY 92	FY 93	FY 94	FY 95	FY 96	FY 97
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0

CAPITAL						
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REVENUE						
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FUNDING: (Thousands of Dollars)

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

POSITIONS:

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

Estimate of current year impact: 0

ANALYSIS: (Attach a separate page if necessary.)

Prepared By: Rep. Cliff Davidson, Chairman Phone: 465-2487

Division: House Resources Date: April 19, 1991

Approved by Commissioner: Rep. Cliff Davidson, Chairman

Agency: _____ Date: April 19, 1991

Distribution (by preparer): Legislative Finance, Legislative Sponsor, Requestor, OMB, & Impacted Agency(ies).

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LEGISLATIVE COUNCIL

DISTRICT 3
ELFIN COVE
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PORT ALEXANDER
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TENAKEE

Alaska State Legislature



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MEMORANDUM

House of Representatives
SPEAKER OF THE HOUSE

TO: Senator Lloyd Jones, Chair
Members
Senate Resources Committee

FROM: Rep. Ben Grussendorf
House Speaker

DATE: May 17, 1991

RE: HJR 40-Requesting an emergency closure of the Eastern Gulf of Alaska East of 140 degrees West longitude to pelagic and on-bottom trawl fishing

Since January 1, 1991, federal observers recorded that large ocean trawlers in the Bering Sea and the Gulf of Alaska have killed and wasted more than **64,000 king salmon and 159 million pounds of cod, flounder, sole and other flatfish**. This is in addition to a cap of **16 million pounds of halibut, 4 million tanner crab, 200,000 king crab and 833 tons of herring** the trawl fleet will legally be allowed to catch and throw back this year.

The North Pacific factory fleet is an unbelievably efficient fishing machine. Although they are targeting the more valuable pollock, cod and sablefish, these huge floating processors catch everything in the path of their 200 foot wide nets. This includes not only fish, but sea mammals, including Steller sea lion. In addition, these nets, which are dragged across the ocean floor for many hours at a time, could permanently damage the ecosystem of the Eastern Gulf, making it uninhabitable for many species of sea creatures which now call this area home.

The off-shore factory trawl industry has also had a devastating effect on many coastal communities who have traditionally relied upon shoreside processing jobs to support a large percentage of its residents. More and more Alaskans are losing their jobs as trawlers arrive from Seattle and other Lower 48 ports carrying their own workers with them.

In your packets are resolutions from coastal communities throughout Southeast which ask that an emergency closure of the Eastern Gulf to pelagic, or at sea, and on-bottom trawling be implemented. The main reasons cited in the resolution for

Senator Jones
May 17, 1991
Page 2

the emergency closure are:

- the effects of ocean trawling on the Steller sea lion populations;
- the pressure trawling puts on fish stocks;
- the pressure trawling put on the existing hook and line fishing fleet;
- the depressed populations of several rockfish species.

In addition, the longline sablefish fishery was delayed until May 15 in order to reduce the bycatch of halibut. Unfortunately, the trawlers will be fishing on these same stocks during this same period of time, and many are afraid that the halibut fishery will be adversely impacted.

Also included in the backup for this resolution is information regarding the other devastating effects of the ocean trawl fishery on marine mammals and seabirds, including the impacts of discarded, or ghost, nets which continue to kill many years after they are lost overboard.

Please take time to read the enclosed newspaper articles which give a very accurate and chilling account of what really goes on in the North Pacific factory trawl fleet operating in Alaska waters.

Date FEB 22 1991

Sitka Sentinel

Client No. 618

Longliners Seek Ban on Trawlers in Eastern Gulf

618

By WILL SWAGEL
Sentinel Staff Writer

The Alaska Longline Fishermen's Association (ALFA) is asking federal authorities to ban factory trawlers from working the offshore waters of the Eastern Gulf of Alaska, ALFA executive director Linda Behnken said this week.

On Thursday, ALFA issued a news release calling for an emergency closure of the Eastern Gulf to pelagic (at sea) and bottom trawling in the Eastern Gulf in order to protect sea lions and several stocks of fish.

Behnken said ALFA was warned by someone in the industry, who asked to remain anonymous, that factory trawlers are already planning to work the Eastern Gulf of Alaska, (east of 140 degrees longitude) beginning March 1.

Behnken said she has contacted North Pacific Fisheries Management Council (NPFMC) members Ron Hegge of Sitka and Clem Tillion, who was returned to the council by Gov. Walter Hickel. Both of them oppose trawlers off Southeastern Alaska, and are expected to endorse the proposal, Behnken said.

Behnken said Tillion, Gov. Walter Hickel's special fisheries assistant, told her he was ordered to work toward reducing the number of trawlers in all areas of Alaska and said "we might as well start with the Eastern Gulf."

She said the next NPFMC meeting is not scheduled until April, but she hoped to lobby council members for the emergency action when they gath-

er in Juneau for a fisheries conference next week.

The ALFA news release lists five reasons why the trawlers should be barred from the Eastern Gulf:

— because Stellar sea lion populations are stable and possibly increasing in the Eastern Gulf where trawlers do not presently operate, while numbers are perilously low or declining in other areas of the Gulf where trawlers fish. The release states that barring trawlers from the Eastern Gulf will create a control area, allowing scientists to better assess the effect of trawlers in other areas.

— because the Eastern Gulf has been a hook-and-line fishery for 100 years and has been fully utilized since 1983. Allowing trawlers into the Eastern Gulf will place more pressure on fish stocks and displace existing fishermen.

— because the foreign trawl fleet destroyed some rockfish stocks, a situation the American trawl fleet is threatening to repeat. The effect of trawler bycatch could be the shutting down of the sablefish fishery for traditional vessels, because of federal regulations.

— because the longline sablefish fishery was postponed until May 15 in order to protect halibut stocks, and trawlers would be picking up those same halibut if they should they begin fishing earlier than that.

— because the bottom habitat of the Eastern Gulf is particularly sensitive to bottom trawling, which damages the sea floor. "Increased trawl

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Longliners .

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Continued from Page 1
effort could permanently impoverish Eastern Gulf ecosystem," the release states.

Behnken said the trawler owners have been making inquiries about using Sitka as a supply and repair site for the vessels.

Harbormaster Brian Bergman said he has told vessel representatives that moorage space would not be available for them here because of the draft of the 220-295 foot-long vessels.

He would not comment on whether he would have any jurisdiction over a vessel that chose to anchor off shore.

QUALITY SERVICES

Date MAR 01 1991

Sitka Sentinel

Client No. 618

Fisheries Panel Puts Trawlers on Agenda

618 404A
By ALLEN SYKORA
Sentinel Staff Writer

Fishermen who want the Eastern Gulf of Alaska closed to trawling had some initial success Thursday when the North Pacific Fisheries Management Council agreed to put the issue on the agenda of its April 23-26 meeting in Kodiak.

The Alaska Longline Fishermen's Association has requested an "emergency closure" of pelagic and bottom trawling in the Eastern Gulf, citing concerns about the effect of anticipated trawling on habitat and species of fish that are utilized by the Southeast longline fleet.

The council made the decision to take up the issue in April, while it was meeting as a subcommittee Thursday in Juneau. Nine of the 11 voting council members attended, acting as the fisheries planning committee.

If an emergency closure is granted, said NPFMC Deputy Director Steve Davis, it could go into effect in June or July, and it would be for a three-months period. At the end of those

three months, it could be renewed for an additional three months.

Presumably, there would be discussions during that period on an appropriate long-term solution.

Davis said that some of the debate on the issue may be whether there is an actual biological emergency, in which a decision would have to be made quickly, or whether the issue is one of allocation — which would require a lengthier process to allow for public involvement.

One of ALFA's concerns has been that trawlers will take such a large bycatch of shorttraker and rougheye that it could cause the sablefish fishery to be closed this spring. But Davis and spokesmen with the National Marine Fisheries Service said that so far the take of shorttraker and rougheye is so small that this does not appear likely.

"At this time, I don't see any reason why the sablefish (opening) would be threatened at all," NMFS fish management biologist Ron Berg, who is based in Juneau, said today.

In Sitka, ALFA Executive Director

Linda Behnken said she was happy to hear this year's sablefish opening may be safe, but expressed concern about what may happen in future years, especially if the number of trawlers operating in the Eastern Gulf should increase next year, or if the allowable bycatch of shorttraker-rougheye should be reduced in the future.

"It's sort of the beginning of what could be the end," she said.

Behnken has said that she learned from reliable industry sources that at least three factory trawlers, between 220 and 295 feet long, are expected to begin working the Eastern Gulf this month. Behnken said they purportedly will be targeting grey cod, but will also be keeping a bycatch of sablefish and marketable rockfish.

Southeast fishermen have worried for years that a relatively small number of factory trawlers operating from other states could ruin the livelihoods of Alaskan fishermen, who tend to be independent small boat operators.

Sources say trawlers may be looking at the Eastern Gulf because the

Bering Sea grey cod fishery was closed when the halibut bycatch was exceeded, and also because grey cod prices are high.

Behnken said the trawl industry is expected to oppose the ALFA request.

"It's going to take a real concerted effort from the longline fleet," she said. But already a number of other fishing groups have backed ALFA on the issue.

Davis noted that operators of some of the smaller non-factory trawlers homeported in Alaska, which have traditionally gone after rockfish in the Eastern Gulf, are "scared to death" about a possible influx of the larger factory trawlers.

However, said Davis, the ALFA proposal, as it is written, also would ban even the trawlers which have traditionally operated in the Eastern Gulf.

Should the longliners and traditional non-factory trawlers strike an agreement and present a united front, it may improve their chances of get-

Continued on Page 12

Trawlers . .

618 4044

Continued from Page 1

ting the council to take action against factory trawlers, he noted.

"The more segmented the industry — the council doesn't know what to do," he said.

ALFA has listed several reasons why it wants to prohibit trawling in waters off the coast of Alaska, east of 140 degrees west longitude.

A position paper from the group noted the Eastern Gulf has been a hook-and-line zone for close to a century. Most fisheries are fully utilized by the hook-and-zone fleet, so that the expansion of the trawl fleet into the Eastern Gulf "will place undue pressure on fish stocks and displace traditional users."

ALFA pointed out that opening of the sablefish fishery, which is crucial to longliners, has been delayed this year until May 15, in order to reduce halibut bycatch. But trawlers can be expected to take halibut as part of their bycatch, since they would be fishing the same grounds.

"Only by prohibiting trawling will the halibut stocks actually gain the intended protection," said the ALFA position paper.

And then there was the concern that trawling in the Eastern Gulf could possibly force NMFS to close the sablefish fishery if trawlers should exceed the allowable bycatch of shortraker and rougheye. If this ever did occur, it would result in a severe financial blow to local fishermen, who have come to rely more and more on sablefish as seasons for halibut and salmon have become very short.

The federal government has established new regulations to protect shortraker and rougheye, allowing no direct targeting of these species in the Eastern Gulf, explained Andy Smoker, a resource management specialist with NMFS.

However, a bycatch of 580 metric tons would be allowed for the Eastern Gulf and 100 metric tons in the Western Gulf. The take is 1,320 metric tons in the Central Gulf, the only area where fishermen can legally target shortraker and rougheye.

If fishermen exceeded the allowable 580-metric-ton bycatch of shortraker and rougheye in the Eastern Gulf, they could not keep and sell the fish, but would have to throw them back, said Smoker.

The sablefish season would not be shut down unless the overall shortraker-rougheye limit of 2,000 metric tons was reached for the entire gulf, said Smoker and Berg. And as of Feb. 24, said the NMFS officials, a minute

portion of the allowable catch has been taken — one metric ton in the Eastern Gulf, seven metric tons in the Central Gulf and none in the west.

A forced closure of the sablefish fishery this spring "is a possibility, but it doesn't appear likely to me, looking at the data in front of me," said Smoker.

Smoker added that it is not to the trawlers' advantage to take the full catch of shortraker and rougheye, since they would then be precluded from fishing certain other species which they want to catch.

Still, it makes local fishermen nervous to know that a sablefish closure is even a remote possibility in future years, if not this year.

Harold Thompson, general manager of Sitka Sound Seafoods, estimated that sablefish now comprise about 15 percent of the seafood landings in Sitka. Sablefish prices are expected to be up this spring, he said.

He estimated that if the fishery were shut down, it could cost local fishermen \$6 million in lost income, and the overall economic impact on the community would be even higher.

Referring to the sablefish price that fishermen can expect this spring, said Thompson, "we're very confident it's going to be very strong, probably higher than we've seen before."

He noted that operators of most of the large trolling boats in Sitka now fish for sablefish in the spring. And many owners of small trollers work as crewmen on the larger boats, he continued.

"It's extremely important," he said of the hook-and-line fishery for sablefish.

He said his company has the same concerns as local fishermen. "Our interests are identical."

In its position paper, ALFA said trawling in the Eastern Gulf could also threaten Steller sea lions, which are said to be stable in this region but on the decline in other parts of Alaska.

By keeping the Eastern Gulf trawl-free, a control area of sea lion habitat would be established to compare with areas where trawlers are allowed, said ALFA.

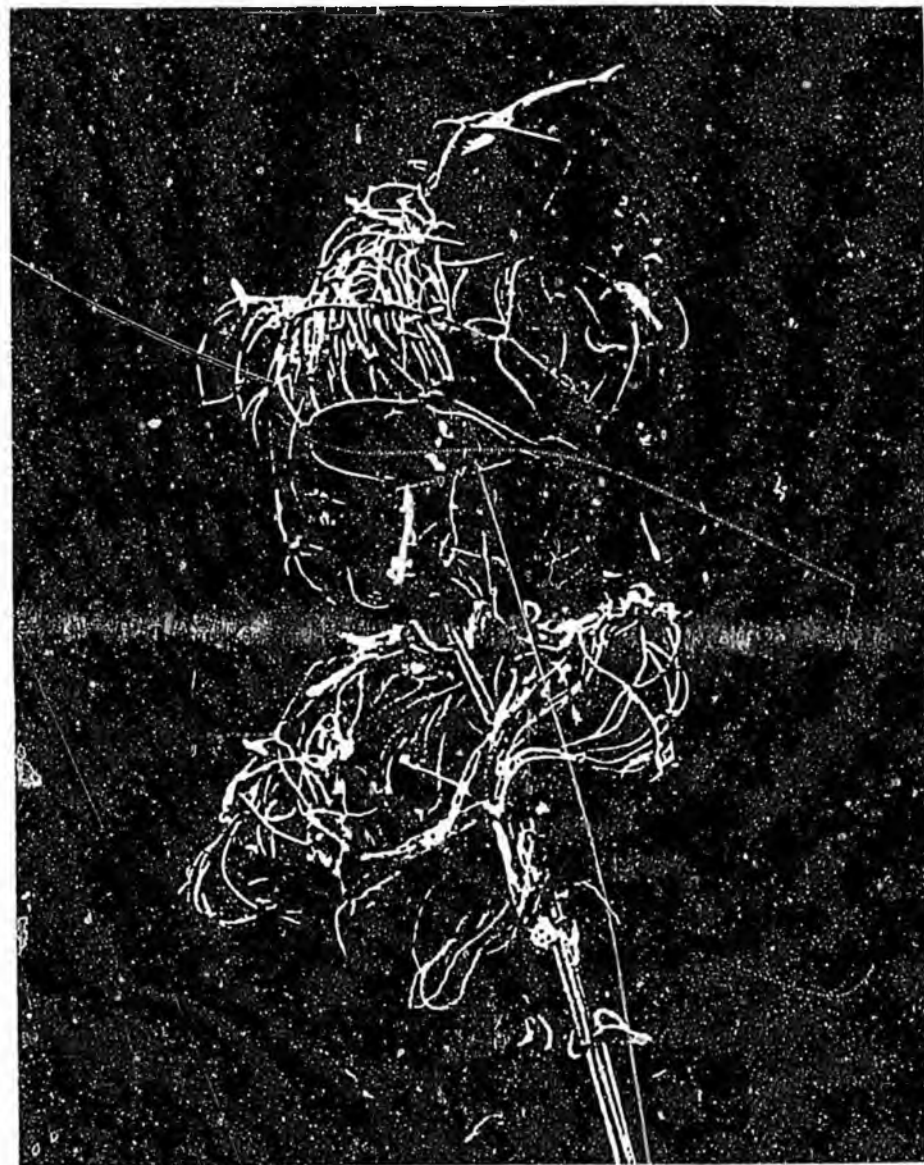
"That rationale has gotten us some support from the environmental groups that want to see sea lions protected," said Behnken.

She noted that former Sitka longliner Ron Hegge, now of Anchorage and a member of the council, played a key role Thursday in getting the issue on the April agenda.

"Without his support, we might not have gotten it," said Behnken.

VICTIMS of Plastic Technology

by Charles W. Fowler and Theodore R. Merrell



C.W. Fowler

Green, blue or orange—at first glance the color of fish netting on the neck of a northern fur seal is striking. The impression changes, however, as the young seal struggles to drag the net across a rocky beach. The unrelenting net has caused a deep and putrid smelling wound, cutting through the skin, blubber, and muscle. This animal is a victim, along with many others, of the plastics it has encountered in its environment.

Stroll along any Alaska beach and you cannot help noticing the great quantity and variety of plastic litter. The ugliness it causes is obvious. More serious, but often less apparent, is the insidious effect of plastic litter on marine life which becomes tangled in fragments of plastic fish net and other litter such as plastic packaging bands.

The debris includes a wide variety of objects from fishing gear to household items. Most of these objects float. Eventually, they wash up onto beaches or become covered by marine organisms and sink. But plastic endures for years in the natural environment, and ocean currents often cycle debris repeatedly around the North Pacific and Bering Sea.

The debris which comes from commercial fishing—such as trawl nets, gillnets, and straps—poses a continual risk to seals, sea lions, fish, birds, and other wildlife. Studies indicate that if net fragments are encountered by seals as frequently as such debris is seen from survey vessels, the average fur seal encounters from two to ten pieces of netting debris each year. Even vessels are disabled when propellers become caught in net fragments or ropes, and cooling systems are clogged with sheet plastic. Nor are land animals immune: foxes, birds, rabbits, and reindeer on Alaska's beaches have been found caught in net fragments.



T. R. Merrill

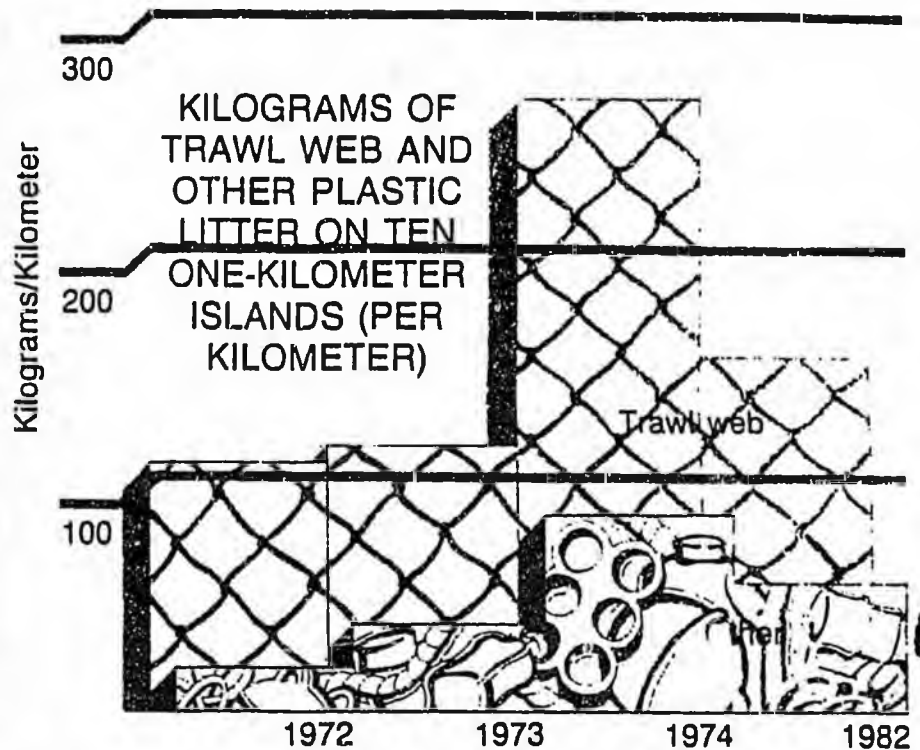
Specialists from the United States and other Pacific Rim nations met in 1984 to assess the entanglement problem. The discussions made clear the hazard to marine mammals, birds, and fish. Research showed that some animals become caught while investigating floating plastic, while others eat plastic objects, mistaking them for food. At this meeting it became clear that the group we call the eared seals (fur seals and sea lions) seem more likely than other marine mammals to become tangled.

Perhaps the best documented example of the results of entanglement involves northern fur seals. Historically fur seal skins have been highly valued and although they are worth little at present, intensive research has been focused on this species for many years. Through 1984, extensive data came from young male fur seals taken in the annual commercial harvest on the Pribilof Islands. These data, along with counts of adult males and pups, document an alarming drop in fur seal numbers. The population of fur seals on the Pribilofs is less than half that observed 30 years ago and is declining at the rate of about 4 to 8 per cent per year. Entanglement is believed to be a primary contributing factor to this decline. Debris has been observed entangling many of the seals harvested.

Seals tangled in ropes and rubber bands were first recorded in the early 1900s. In the 1960s, the number of entangled seals taken in the Pribilof harvest increased. This coincided with the expansion of commercial fisheries off Alaska. Currently, about 0.4 per cent of the young males are seen tangled in pieces of nets or other debris, usually wound around the neck where they often cause severe wounds. A nearly equivalent percentage are seen with scars from previous entanglement.

The small fraction of the population observed entangled on the Pribilof breeding grounds is only a token of the real magnitude of the problem. Only animals entangled in small debris survive to return to the islands to be observed; many more are caught in larger net fragments and die unobserved at sea.

To determine the extent of this



unobserved mortality, scientists have compared entangled plastic trawl net fragments found on the bodies of northern fur seals harvested on the Pribilofs with debris on Alaska's beaches, where trawl net fragments constitute by far the bulk of the litter. It was thought that the prevalence of large net fragments found on beaches compared to those found on the seals might indicate the proportion of seals not seen because of being fatally enmeshed in the larger debris at sea. It soon became obvious that net fragments found on harvested animals were much smaller than fragments found on the beaches. By contrast, fragments found on seals at sea were larger than those on seals that came ashore on the Pribilofs, and most of the seals in these larger fragments were dead.

The population decline is thought to be caused by a decrease in the survival of young fur seals. It is probably not a coincidence that young animals also seem to be most attracted to plastic litter. As the incidence of entanglement among fur seals increased after the mid-1960s, so did

the mortality rate of the young. Five or six years later, fewer pups were born than expected. During this time, it appears that young females, which would have matured to breeding age, died at sea in proportion to the observed entanglement rates. Thus, part of what is seen in the declining population are annual reductions in the numbers of pups born, the greater reductions associated with higher entanglement rates.

By correlating entanglement rates to the mortality of the young and the declining numbers of pups, scientists can estimate the changes that would be observable in the fur seal population if there were no entanglement. The results indicate that, if entanglement is causing the decline, the population would be increasing from 7 to 8 per cent per year if there were no plastic debris in the oceans. This rate of increase was last observed in the early 1920s when the population was at current levels but exposed to very little, if any, floating plastic debris. The population is actually dropping at nearly the rate it should be increasing.

Experiments have shown that young animals are attracted to fragments of debris, either out of curiosity or a desire to play. When an animal is caught in a net fragment, the energy required to swim increases dramatically. A recent study showed that a sea lion about the same size as an adult female fur seal required four times as much energy as usual to move through the water with a one pound net around its neck. This increased energy requirement presents a significant problem to a fur seal searching for food or returning to the breeding grounds. It can be fatal to animals caught in larger fragments, especially the smaller pups which sometimes get entangled as groups—three, four, or more in one piece of net.

The northern sea lion population seems to be declining at about the same rate as the fur seals, but these animals have not been as thoroughly studied, and it is not known whether this decline is also related to entanglement. It is known that adult sea lions, like adult fur seals, are less likely than young fur seals to become entangled in debris. Less than 0.1 per cent of the sea lions (young and adult) observed in a recent survey of the Aleutian Islands bore entanglement scars or encumbering plastic litter. While this seems a small proportion, this is also the observed entanglement rate for the overall population of fur seals. And as you can see in the photo, entanglement can certainly be a problem for young sea lions.

We now recognize that entanglement is a serious problem, especially for fur seals. Countless diving marine birds and fish are also caught and die in derelict nets but little information is available on the magnitude of these catches or effects on bird and fish populations.

A dramatic, but probably uncommon, cause of entanglement of birds is plastic 6-pack beverage carriers. Dead and starving ducks, gulls, and other surface-feeding waterfowl with necklaces of 6-pack carriers have been reported from around the world. In Alaska, the problem has been nearly resolved. Since 1981, beverage packaging sold in Alaska must be degradable within 60 days when exposed to light. The formula makes the plastic

brittle so it disintegrates.

Crabs, like birds and fish, are also victims of plastic technology but little is known of the extent of accidental entanglement. The first commercial fishery for king crabs in Alaskan waters was a tangle net fishery begun by the Japanese in the 1920s. Tangle nets consisted of panels of large mesh net anchored on the ocean floor, with small glass balls buoying the net off the bottom so walking crabs encountered the net and became entangled. The source of many of the glass balls found on Alaska's beaches today is this tangle net fishery, although it was discontinued over 20 years ago. Monofilament fishing line discarded by sport fishermen is also an increasing problem for crabs. Scuba divers near boat harbors and docks frequently find king, tanner, and dungeness crabs tangled in snarls of discarded line, impairing the crab's ability to feed, mate, and molt successfully.

Many important questions remain unanswered. How much plastic litter is in the ocean? How long does it remain? Where does it come from and who is responsible? What can be done to eliminate it? And is the problem getting worse?

The quantity of plastic marine litter is enormous. In Alaskan waters alone, more than 3.5 million pounds are discarded or lost each year, primarily from commercial fishing vessels. For many years, most of these vessels were Japanese and Soviet so there was little control by the U.S. But the national mix is changing rapidly. Only a few Soviet boats now fish along Alaska's coast, with the proportion of U.S. vessels increasingly rapidly.

Throughout history, ships have disposed of garbage and other worthless material by dumping it overboard. This is still a common practice because it is the cheapest and most convenient means of disposal. In many cases, it is the only feasible method. To do otherwise requires incinerators, garbage grinders, compactors, or storage areas that most small vessels do not have. Stored garbage and scraps of fishing gear require space aboard ships, and shore facilities where they can be safely disposed. Most ports, including those in Alaska, have few pro-

visions to receive and dispose of garbage from ships.

Fortunately, there is hope, since the quantity of marine litter seems to be declining. At Amchitka Island, where litter accumulation studies have been underway for more than a decade, the quantity of litter on beaches has declined (see graph). A parallel decline in entangled seals has not been observed, however. Other hopeful signs are: a growing recognition by fishermen that discarded net fragments and straps are a threat to marine life; increasing salvage and reuse of damaged nets; and adoption by many nations of regulations of the International Maritime Organization prohibiting deliberate ocean disposal of net scraps. Japan, among 33 other nations, has agreed to comply with the regulations. The U.S. has not, although it has other domestic regulations governing marine disposal of debris. The existing U.S. regulations are not easily enforceable, however, and all are ambiguous as to their applicability to discarded net fragments.

Where do we go from here? Surveys of beach litter and observations of floating debris and entangled animals at sea provide partial answers to some remaining questions. Such surveys should be greatly expanded to provide a clear picture. Unfortunately, they are costly.

Unchecked, the continued introduction of plastic waste into marine waters will not only destroy wildlife but threaten the life of the ocean itself. Legal regulations may not be effective in solving the problem of ocean debris. Reducing the quantity of debris in the ocean is an individual responsibility, one that every person associated with the world's oceans should accept.

Charles W. Fowler is Program Manager, Northern Fur Seal Research, National Marine Mammal Laboratory, National Marine Fisheries Service, NOAA, Seattle, Washington.

Theodore R. Merrell is Program Manager, Habitat Investigations, Auke Bay Laboratory, National Marine Fisheries Service, NOAA, Auke Bay, Alaska.

TRANSACTIONS

of the

Fifty-third

North American Wildlife

and Natural Resources Conference

sea turtles annually, principally threatened loggerhead turtles (*Caretta caretta*). Some 12,600 of these turtles drown every year in the nets. Also at risk are the endangered Kemp's Ridley, hawksbill (*Eretmochelys imbricata*), and leatherback (*Dermochelys coriacea*) sea turtles, and the threatened olive Ridley (*Lepidochelys olivacea*) turtles (Weber 1987). The entire female breeding population of Kemp's Ridley turtles may number no more than 520 today, down from 40,000 in 1947. NMFS regulations now going into effect require shrimp fishermen to install nets or grates called "turtle excluder" or "trawling efficiency devices (TEDs)" in their offshore Gulf of Mexico trawl shrimp nets. The TEDs deflect virtually all sea turtles but allow shrimp to pass through unharmed. In addition, the TEDs are designed to reduce the tremendously large bycatch of finfish—approximately 10 pounds of fish for every pound of shrimp—presently estimated at 1.1 billion pounds (0.5 billion kg) of fish caught in federal waters from Texas to Tampa Bay, Florida (Fee 1988). Regulations for inshore TEDs use should go into effect in two years.

Entanglement. The term *entanglement* refers to the capture, entrapment and often death of numerous freshwater and large numbers of coastal and pelagic marine organisms in lost or discarded plastic debris. Among the most damaging are "ghost nets"—lost or discarded nets or net fragments—which can continue to fish for years. They sometimes sink from the weight of dead animals, seaweed or barnacles, and continue to catch fish on the oceans' bottoms. They also may ball up and continue to float, or they wash ashore. Packing bands, six-pack yokes, nets, net fragments and other plastics bind and/or strangle virtually every species of marine mammal, sea turtle, seabird, many varieties of fish and numerous invertebrates.

Perhaps the best documentation of the results of entanglement involves Northern fur seals. Extensive data, including the incidence of entanglement scars, were collected through 1984 from young male seals killed in the annual commercial seal harvest on the Pribilof Islands, Alaska. These and other data indicated an alarming trend. The population is declining annually at 4–8 percent; its numbers are now less than half of that 30 years ago. Entanglement, particularly in trawl net fragments, plastic packing bands, and other plastic trash is believed to be the primary contributing factor in the species' decline (Fowler 1982, 1987, Fowler and Merrell 1986), resulting in an annual estimated mortality of 30,000–50,000 seals. Reported incidents of observed seal entanglement in land-based salmon gillnets in the North Pacific also continued to be high for 1986 and 1987, with clear documentation that fur seals are attracted to driftnets during haulbacks (U.S. Coast Guard 1987). Previous research also indicated that captive seals demonstrated a tendency to swim toward plastic packing bands and net fragments and insert their heads. Some animals were able to free themselves, others were not (Yoshida et al. 1985).

The Japanese claim the problem of lost driftnets in the North Pacific is negligible, estimating that only 0.05 percent of their net sets are lost per operation (the NMFS estimate is 0.06 percent). When applied to the setting of more than 20,500 miles (32,985 km) of net per night (over 1,065,000 miles [1,713,585 km] per season), a 0.06 percent loss of net means at least 12 miles (19.3 km) of net are lost each night and 639 miles (1,028 km) of net each season (Hinck 1986). These figures do not account for discarded nets or net fragments.

Although documented evidence of entanglement is often anecdotal—most deaths are unobserved by man—there are rough estimates of annual mortality, including at



CITY OF HAINES

RESOLUTION NO. 90/91-15

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF HAINES, ALASKA, REQUESTING EMERGENCY CLOSURE OF THE EASTERN GULF OF ALASKA TO PELAGIC AND ON-BOTTOM TRAWLING.

WHEREAS, designation of the Eastern Gulf of Alaska as a trawl free zone will provide protection to our healthy Stellar Sea Lion populations and allow comparison with the Western Gulf where a trawl-implicated precipitous decline of Stellar populations has occurred; and,

WHEREAS, the long line and gillnet fleets of Haines totally depend upon the fish stocks in the Eastern Gulf of Alaska and an increasing trawl fishing effort will place undue pressure on these fish stocks and displace the traditional users; and,

WHEREAS, the trawl effort has already depleted rockfish and sablefish stocks in the Eastern Gulf to the point where the traditional longline fisheries may be canceled; and,

WHEREAS, the halibut populations are in a state of decline in the Eastern Gulf and prohibition of trawling is the only way to protect and manage halibut stocks, and to maintain traditional longline access to halibut stocks; and,

WHEREAS, on-bottom trawling may permanently impoverish Eastern Gulf ecosystems and marine life due to concentrated disturbance of the bottom and unmanageable decimation of many forms of marine life and disruptions to the food chain.

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Haines, Alaska, that:

Emergency closure of the Eastern Gulf of Alaska to pelagic and on-bottom trawling east of 140 degrees west longitude is requested from the North Pacific Fisheries Management Council.

PASSED, APPROVED AND ADOPTED by the City Council of the City of Haines, Alaska this 20th day of March, 1991.

Frank L. Wallace
Frank L. Wallace, Mayor

ATTEST:

Susan V. Johnston
Susan V. Johnston, City Clerk

S E A L:

HAINES BOROUGH
RESOLUTION #301

A RESOLUTION OF THE HAINES BOROUGH ASSEMBLY REQUESTING EMERGENCY CLOSURE OF THE EASTERN GULF OF ALASKA TO PELAGIC AND ON-BOTTOM TRAWLING

WHEREAS, designation of the Eastern Gulf of Alaska as a trawl free zone will provide protection to our healthy Stellar Sea Lion populations and allow comparison with the Western Gulf where a trawl-implicated precipitous decline of Stellar populations has occurred; and

WHEREAS, the long line and gillnet fleets of Haines totally depend upon the fish stocks in the Eastern Gulf of Alaska and an increasing trawl fishing effort will place undue pressure on these fish stocks and displace the traditional users; and


WHEREAS, the trawl effort has already depleted rockfish and sablefish stocks in the Eastern Gulf to the point where the traditional longline fisheries may be canceled; and

WHEREAS, the halibut populations are in a state of decline in the Eastern Gulf and prohibition of trawling is the only way to protect and manage halibut stocks, and to maintain traditional longline access to halibut stocks; and

WHEREAS, on-bottom trawling may permanently impoverish Eastern Gulf ecosystems and marine life due to concentrated disturbance of the bottom and unmanageable decimation of many forms of marine life and disruptions to the food chain.

NOW THEREFORE BE IT RESOLVED by the Haines Borough Assembly that emergency closure of the Eastern Gulf of Alaska to pelagic and on-bottom trawling east of 140 degrees west longitude is requested from the North Pacific Fisheries Management Council.

Adopted: 3/19/91



Frederick L. Shields, Borough Mayor

Attest:



Susan Nelson, Acting Borough Clerk

WHEREAS, the bottom habitat in the Eastern Gulf is particularly vulnerable to on-bottom trawling due to the nature of the benthic community. The vulnerability is compounded by the narrowness of the shelf/slope region which concentrates effort, preventing damaged areas from recovering. Increased trawl effort could permanently impoverish Eastern Gulf ecosystems.

NOW, THEREFORE, BE IT RESOLVED by the Pelican City Council that:
Emergency closure of the Eastern Gulf to Pelagic and On-bottom trawling will be requested.

PASSED, APPROVED, AND ADOPTED by a duly constituted quorum of the Pelican City Council this 2nd day of April 1991.

Signed: Allen Stewart
Allen Stewart, Mayor

Attest:

Carol Bean
Carol Bean, City Clerk

**Haines Chamber of Commerce
Post Office Box 518
Haines, Alaska 99827**

(907) 766-2202

RESOLUTION NO. 9101
A RESOLUTION REQUESTING EMERGENCY CLOSURE OF THE EASTERN GULF OF
ALASKA TO PELAGIC AND ON-BOTTOM TRAWLING

WHEREAS, designation of the Eastern Gulf of Alaska as a trawl free zone will provide protection to our healthy stellar Sea Lion populations and allow comparison with the Western Gulf where a trawl-implicated precipitous decline of Stellar populations has occurred; and

WHEREAS, the long line and gillnet fleets of Haines totally depend upon the fish stocks in the Eastern Gulf of Alaska and an increasing trawl fishing effort will place undue pressure on these fish stocks and displace the traditional users; and

WHEREAS, the trawl effort has already depleted rockfish and sablefish stocks in the Eastern Gulf to the point where the traditional longline fisheries may be cancelled; and

WHEREAS, the halibut populations are in a state of decline in the Eastern Gulf and prohibition of trawling is the only way to protect and manage halibut stocks, and to maintain traditional longline access to halibut stocks; and

WHEREAS, on-bottom trawling may permanently impoverish Eastern Gulf ecosystems and marine life due to concentrated disturbance of the bottom and unmanageable decimation of many forms of marine life and disruptions to the food chain.

NOW THEREFORE BE IT RESOLVED by the Haines Chamber of Commerce that emergency closure of the Eastern Gulf of Alaska to pelagic and on-bottom trawling east of 140 degrees west longitude is requested from the North Pacific Fisheries Management Council.

PASSED, APPROVED, AND ADOPTED this 12th day of March, 1991.

Patty A. Glackin
Patty Glackin, President

ATTEST: Lucretia G. Smith
Secretary



HAINES BOROUGH

P.O. Box 1209 • Haines, Alaska 99827 • (907) 766-2711

March 27, 1991

MEMORANDUM

TO: Alaska Longline Fishermen's Association
FROM: The Haines Borough
RE: Closure of Pelagic and On-bottom Trawling

Enclosed please find a copy of Resolution #301, requesting an emergency closure of the Eastern gulf of Alaska to pelagic and on-bottom trawling.

This resolution was unanimously accepted and adopted at the Haines Borough regular meeting on March 19, 1991.

CITY of HOONAH

P.O. Box 360

HOONAH, ALASKA 99829

Resolution No. 91-04-06

- WHEREAS, the Eastern Gulf Steller sea lion populations are stable and possibly increasing; and
- WHEREAS, the evidence suggests that trawling may be implicated in the decline of Steller sea lions in other parts of their range; and
- WHEREAS, the Eastern Gulf has been a hook and line zone for approximately 100 years; and
- WHEREAS, the community of Hoonah relies on the longline fishermen for economic support; and
- WHEREAS, the North Pacific Fishery Management Council postponed the longline sablefish fishery until May 15, 1991, to reduce halibut bycatch; and
- WHEREAS, factory trawlers, with 100% halibut bycatch mortality rate, will be working the same grounds closed to longliners in order to protect halibut stocks, and retaining their allowed 15% sablefish bycatch; and
- WHEREAS, there is substantial concern over the amount of salmon bycatch taken by trawlers.

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF HOONAH, ALASKA that trawling be prohibited in the Gulf of Alaska east of 140 degrees West longitude; and

BE IT FURTHER RESOLVED that closing the Eastern Gulf to trawlers will allow the Canadians to believe that the North Pacific Council honestly intends to reduce halibut bycatch.

Albert W Dick
Mayor of Hoonah

ATTEST: Carole Christy
City Clerk

RECEIVED
APR 06 1991

City

of

Pelican



BOX 757

PELICAN, ALASKA 99832

PHONE 735-2202

FAX 735-2258

CITY OF PELICAN, ALASKA
RESOLUTION 1991-3

A RESOLUTION OF THE CITY OF PELICAN REQUESTING AN
EMERGENCY CLOSURE OF THE EASTERN GULF TO PELAGIC
AND ON-BOTTOM TRAWLING.

The Alaska Longline Fishermen's Association (ALFA) requests an Emergency Order to prohibit trawling in federal waters off the coast of Alaska east of 140 degrees West longitude. The request is made for the following reasons:

WHEREAS, the Steller sea lion populations in the Eastern Gulf are stable and possibly increasing. Evidence suggests that trawling may be implicated in the precipitous decline of Steller populations in all other parts of their range. The Steller Sea Lion Recovery Team has indicated the critical importance of comparing the effects of various fisheries on sea lion populations. Designating the Eastern Gulf a trawl-free zone will provide an ideal laboratory for researchers to conduct comparison studies; it will also provide maximum protection to the one area in which Steller populations remain healthy; and,

WHEREAS, the Eastern Gulf has been a hook and line zone for close to 100 years. Most fisheries are fully utilized by the hook and line fleet and have been since 1983 or before. The intended level of trawl effort in the Eastern Gulf this spring is unprecedented, but can only be expected to increase given the extent to which the trawl fleet is overcapitalized. The expansion of the trawl fleet into waters of the Eastern Gulf will place undue pressure on fish stocks and displace traditional users; and,

WHEREAS, the foreign trawl fleet decimated slope rockfish stocks during the 1960's, an attack from which stocks in the Eastern Gulf have not yet recovered. Roughey and Shortraker rockfish stocks also remain depressed. Now the American trawl fleet is threatening the same rockfish stocks. In the Eastern Gulf, the trawl fleet is rapidly approaching the 1991 allowable biological catch (ABC) for the roughey/shortraker rockfish complex and, according to the new federal definition of "over fishing", if the ABC is reached or exceeded all fisheries having an impact on the "over fished" stock will be closed; in other words, the Eastern Gulf longline sablefish fishery could be cancelled before it opened; and,

WHEREAS, at the recommendation of the International Pacific Halibut Commission, the North Pacific Fishery Management Council postponed the longline sablefish fishery until May 15, 1991 to reduce halibut bycatch. Trawlers, with a 100% halibut bycatch mortality rate, intend to target grey cod this spring in the Eastern Gulf (retaining their allowed 15% sablefish bycatch), working the same grounds closed to longliners in order to protect halibut stocks. Only by prohibiting trawling will the halibut stocks actually gain the intended protection. Prohibiting trawling in the Eastern Gulf will also give the Canadians reason to hope that the North Pacific Council honestly intends to reduce halibut bycatch; and,

WHEREAS, the bottom habitat in the Eastern Gulf is particularly vulnerable to on-bottom trawling due to the nature of the benthic community. The vulnerability is compounded by the narrowness of the shelf/slope region which concentrates effort, preventing damaged areas from recovering. Increased trawl effort could permanently impoverish Eastern Gulf ecosystems.

NOW, THEREFORE, BE IT RESOLVED by the Pelican City Council that:
Emergency closure of the Eastern Gulf to Pelagic and On-bottom trawling will be requested.

PASSED, APPROVED, AND ADOPTED by a duly constituted quorum of the Pelican City Council this 2nd day of April 1991.

Signed: Allen Stewart

Allen Stewart, Mayor

Attest:

Carol Bean

Carol Bean, City Clerk

Alaska Longline Fishermen's Association
P O Box 1229 Sitka, AK 99835
March, 1991

REQUEST FOR CLOSURE OF THE EASTERN GULF TO TRAWLING

The Alaska Longline Fishermen's Association requests that trawling be prohibited in federal waters of the Gulf of Alaska east of 140 degrees West longitude. The request is made for the following reasons:

1 The foreign trawl fleet decimated slope rockfish stocks during the 1960s an attack from which stocks in the Eastern Gulf have not yet recovered. Rougheye and shortraker rockfish stocks also remain depressed. Now the American factory trawl fleet is threatening the same rockfish stocks. The 1991 allowable biological catch (ABC) and total allowable catch (TAC) for rougheye/shortraker in the Eastern Gulf is only 580 MT; according to the new federal definition of "over fishing," if the ABC is reached or exceeded all fisheries having an impact on the "over fished" stock will be closed--in other words, the Eastern Gulf longline sablefish fishery could be cancelled before it is opened. Since rockfish are long-lived (up to 100 years), have a low rate of production, and are area-specific, the National Marine Fisheries Services' solution of "borrowing" rockfish quota from the Central Gulf is short-term at best. Rockfish stocks are highly vulnerable to exploitation and should not be subjected to increased fishing pressure.

2 The Eastern Gulf has been a hook and line zone for close to 100 years. Most fisheries are fully utilized by the hook and line fleet and have been since 1983 or before. The intended level of effort by factory trawlers in the Eastern Gulf this spring is unprecedented, but can only be expected to increase given the extent to which the factory trawl fleet is overcapitalized. The expansion of the trawl fleet into waters of the Eastern Gulf will place undue pressure on fish stocks and displace traditional users.

3 The bottom habitat in the Eastern Gulf is particularly vulnerable to on-bottom trawling due to the nature of the benthic community. This community contains an abundance of fragile corals, an ecosystem component recognized as being highly productive and critical to ecosystem health. The vulnerability is compounded by the narrowness of the shelf/slope region, a physical limitation that concentrates effort, preventing damaged area from recovering. Increased trawl effort could permanently impoverish Eastern Gulf ecosystems.

4 At the recommendation of the International Pacific Halibut Commission, the North Pacific Fishery Management Council postponed the longline sablefish fishery until May 15, 1991 to reduce halibut bycatch. Factory trawlers, with a 100% halibut bycatch mortality rate, intend to target grey cod this spring in the Eastern Gulf (retaining their allowed 15% sablefish bycatch) working the same grounds closed to longliners in order to protect halibut stocks. Only by prohibiting trawling will the halibut stocks actually gain the intended protection.

5 NMFS observer data for 1990 substantiated concerns regarding trawler bycatch of salmon. In the Eastern Gulf, this bycatch consisted of both chinook and "other" salmon. Salmon taken in the Eastern Gulf originated from streams in Alaska, British Columbia, Washington or Oregon. Runs in some of these states have been proposed for listing under the Endangered Species Act. Salmon interception undermines conservation and enhancement efforts at both the federal and the state level.

6 Steller sea lion populations in the Eastern Gulf are stable and possibly increasing. Evidence suggests that trawling may be implicated in the precipitous decline of Steller populations in all other parts of their range. The Steller Sea Lion Recovery Team has indicated the critical importance of comparing the effects of various fisheries on sea lion populations. Designating the Eastern Gulf a trawl-free zone will provide an ideal laboratory for researchers to conduct comparison studies; it will also provide maximum protection to the one area in which Steller populations remain healthy.

Resolution 1237-R

A RESOLUTION SUPPORTING THE ALASKA LONGLINE FISHERMAN'S ASSOCIATION (ALFA) REQUEST THAT TRAWLING BE PROHIBITED IN THE GULF OF ALASKA EAST OF 140 DEGREES WEST LONGITUDE.

Whereas, the Stellar sea lion populations in the Eastern Gulf are stable and possibly increasing. Evidence suggests that trawling may be implicated in the precipitous decline of Stellar populations in all other parts of their range. The Stellar Sea Lion Recovery team has indicated the critical importance of comparing the effects of various fisheries on sea lion populations. Designating the Eastern Gulf a trawl-free zone will provide an ideal laboratory for researchers to conduct comparison studies; it will also provide maximum protection to the one area in which Stellar populations remain healthy.

Whereas, the Eastern Gulf has been a hook and line zone for close to 100 years. Most fisheries are fully utilized by the hook and line fleet and have been since 1983 or before. The intended level of effort by factory trawlers in the Eastern Gulf this spring is unprecedented, but can only be expected to increase given the extent to which the factory trawl fleet is overcapitalized. The expansion of the trawl fleet into waters of the Eastern Gulf will place undue pressure on fish stocks and displace traditional users.

Whereas, the foreign trawl fleet decimated slope rockfish stocks during the 1960's, an attack from which stocks in the Eastern Gulf have not yet recovered. Roughey and shortraker rockfish stocks also remain depressed. Now the American factory trawl fleet is threatening the same rockfish stocks. The 1991 allowable biological catch (ABC) and the total allowable catch (TAC) for roughey/shortraker in the Eastern Gulf is only 580 metric tons; according to the new federal definition of "overfishing", if the ABC is reached or exceeded all fisheries having an impact on the "overfished" stock will be closed--in other words, the Eastern Gulf longline sablefish fishery could be cancelled before it is opened. Since rockfish are long-lived (up to 100 years), have a low rate of production, and are area-specific, NMFS' solution of "borrowing" rockfish quota from the Central Gulf is short-termed at best. Rockfish stocks are highly vulnerable to exploitation and should not be subject to increased fishing pressure.

Whereas, at the recommendation of the International Pacific Halibut Commission, the North Pacific Fishery Management Council postponed the longline sablefish fishery until May 15, 1991 to reduce halibut bycatch. Factory trawlers, with a 100% halibut bycatch mortality rate, intend to target grey cod this spring in the Eastern Gulf (retaining their allowed 15% sablefish bycatch),

working the same grounds closed to longliners in order to protect halibut stocks. Only by prohibiting trawling will the halibut stocks actually gain the intended protection. Prohibiting trawling in the Eastern Gulf will also give the Canadians reason to hope that the North Pacific Council honestly intends to reduce halibut bycatch.

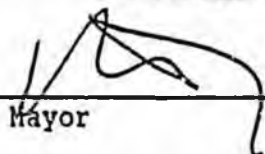
Whereas, NMFS observer data for 1990 substantiated concerns regarding trawler bycatch of salmon. In the Eastern Gulf, this bycatch consisted of both chinook and "other" salmon. Since salmon taken in the Eastern Gulf originated from streams in Alaska, British Columbia, Washington, or Oregon, the threat to salmon stocks is more than a local issue.

Whereas, the bottom habitat in the Eastern Gulf is particularly vulnerable to on-bottom trawling due to the nature of the benthic community. This community contains an abundance of fragile corals, an ecosystem component recognized as being highly productive and critical to ecosystem health. The vulnerability is compounded by the narrowness of the shelf/slope region, a physical limitation that concentrates effort, preventing damaged area from recovering. Increased trawl effort could permanently impoverish Eastern Gulf ecosystems.

Now therefore be it resolved by the Council of the City of Petersburg, Alaska that:


The City of Petersburg supports the Alaska Longline Fishermen's Association request for a closure of the Eastern Gulf of Alaska east of 140 degrees west longitude to pelagic and on-bottom trawling.

Passed and Approved by the City Council of the City of Petersburg, Alaska this 18 day of March, 1991.



Mayor

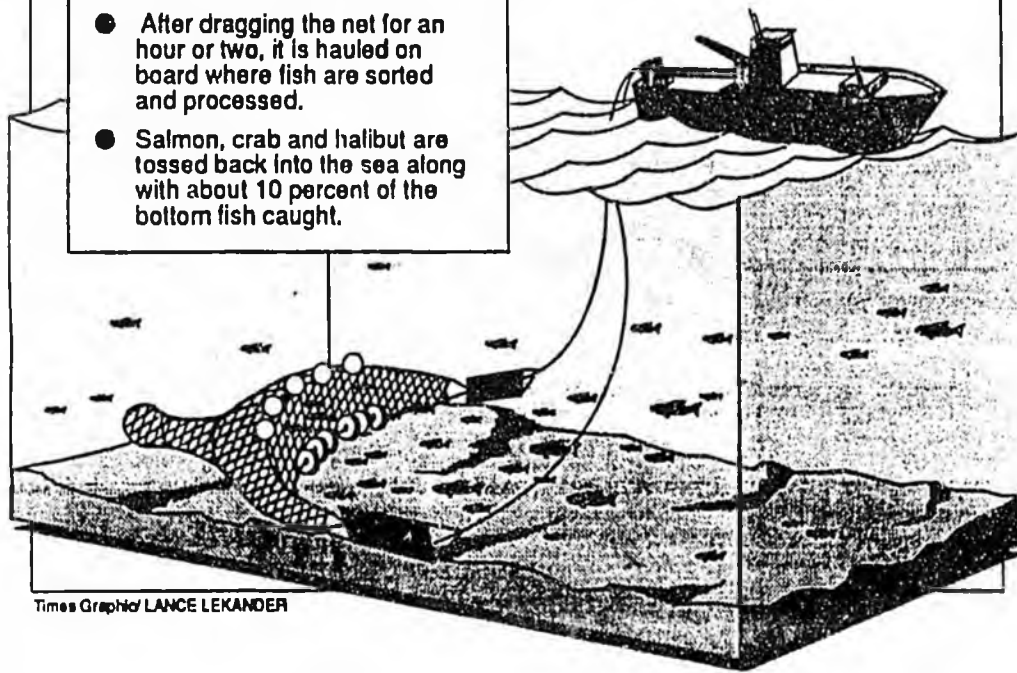
ATTEST:



City Clerk

- Trawl nets roll on large, weighted wheels over the muddy bottom.
- Doors act like airfoils, pulling out the sides of the net and creating a mud screen that scares fish into the middle.
- Floats hold the mouth of the net open, creating a cone with an opening 200 ft. across.
- After dragging the net for an hour or two, it is hauled on board where fish are sorted and processed.
- Salmon, crab and halibut are tossed back into the sea along with about 10 percent of the bottom fish caught.

Factory trawlers crisscross the Bering Sea and the Gulf of Alaska catching and processing 5 billion pounds of bottom fish.



Times Graphic/LANCE LEKANDER



Above, crew members aboard the F/V Silver Sea based in Chignik sort a Pacific cod haul. Vessels must return salmon, halibut and crab bycatch. Right, observers measure the sole, cod and pollock catch in a trawl net on the F/V Sulak.



Photos courtesy MANDY MERKLEIN

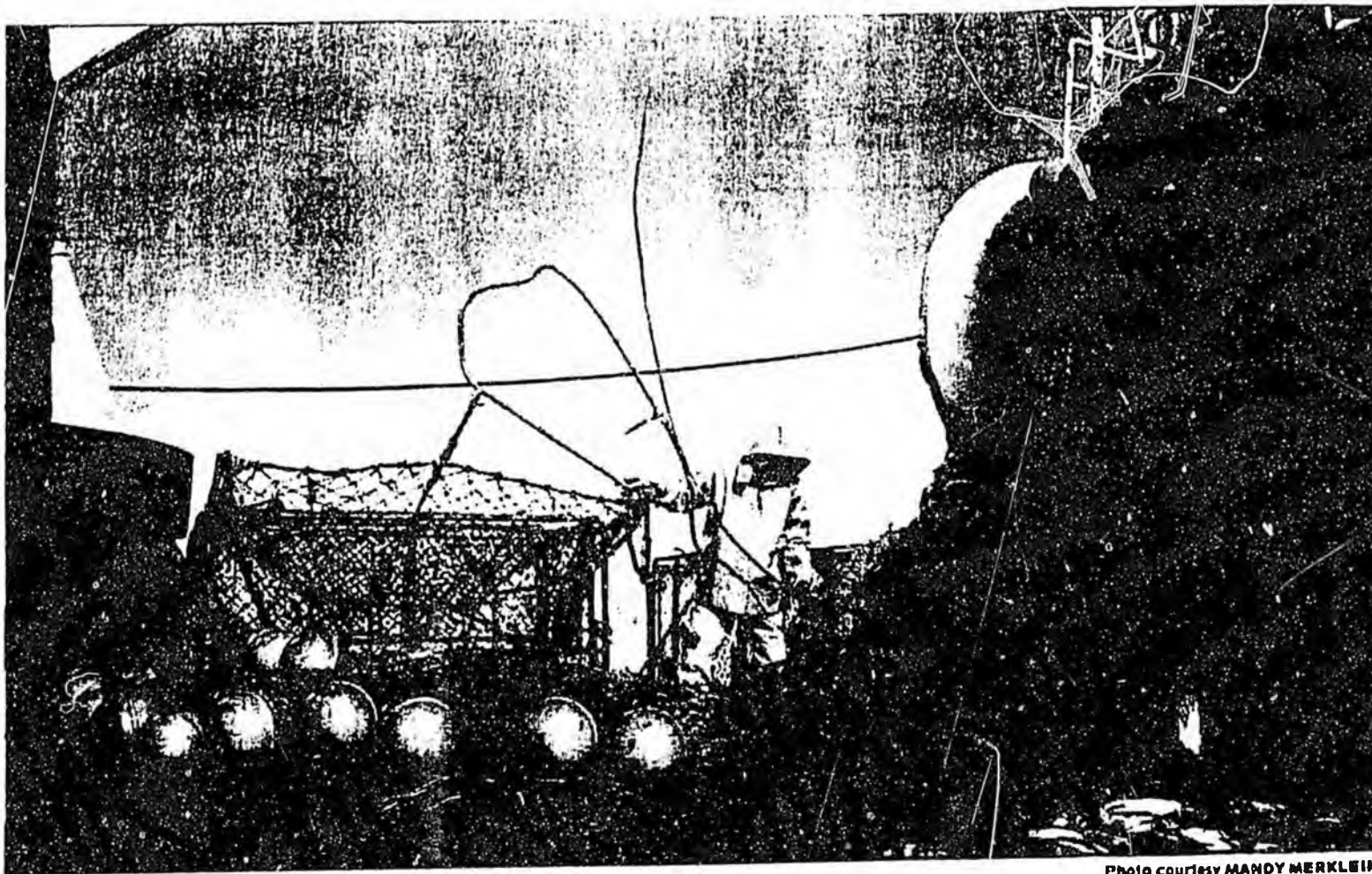


Photo courtesy MANDY MERKLEIN

A crew member on the F/V Silver Sea pulls a crab pot from a net. Crab pots caught in the nets reduce the catch.

4-7-91
Times

Bottom fishing takes toll on state's salmon

404A 0337 618 367

By JOE HUNT

TIMES WRITER

Juvenile king salmon, most bound for Alaska's prized sport fishing rivers, have become the latest casualty of a trawler fleet raking the high seas for a billion-dollars' worth of bottom fish.

Trawlers fishing the Bering Sea north of Dutch Harbor have taken more than 28,000 kings in the first 3 months of the fishery this year, tripling the take during the same period last year. Another 31,000 kings have been caught in trawl nets in the Gulf of Alaska.

That could be just the tip of the salmon lost to the trawl fleets both in and outside of U.S. waters.

Another 60,000 to 200,000 salmon are thought to be intercepted in a unmonitored triangle of international waters between Alaska and the Soviet Union, according to federal estimates.

"People should understand clearly we have a very large salmon bycatch problem outside U.S. waters in the doughnut hole," said Larry Cotter, chairman of the Bycatch Committee for the North Pacific Fisheries Management Council.

Salmon is one of several species the fleet is prohibited from keeping. The management council allows the unintended catch of millions of pounds of halibut, herring, salmon and crab each year. By law, these are counted and tossed back. Most are killed in the process.

This bycatch is only a small percentage of the 5-billion-pound quota of pollock, cod, sablefish and other bottomfish expected to be harvested this year.

The high salmon kill has brought the impact of factory trawlers home to those Alaskans whose lives are tied to the annual return of world-class king salmon.

"I think they are nothing but high-seas pirates," said Tom Elias, president of the Alaska Sportfishing Association.

He said it makes the current dispute between setnet fishermen and Kenai River guides look insignificant. Shore-based set nets in Cook Inlet intercept thousands of Kenai River kings each year, prompting a feud over the best use of the 20- to 90-pound fish.

Recent returns to the Kenai River have been perilously low. Any further drop in numbers could force the setnet and sport fisheries to shut down to protect the run. But Elias said, "One factory trawler can do more damage in a week than all the setnetters could probably do in a season."

Sportfishermen have been screaming about the annual salmon kill for years, Elias said. It has long been documented that foreign factory ships in U.S. waters caught large numbers of salmon. But the American trawlers which took over the fishery did not face that same accountability until 1990 when observers were placed on U.S. vessels.

Alaska fisheries are proving complex and interwoven.

Getting to the bottomfish is not without a high cost in lost halibut, herring, tanner crab, king crab and salmon. Federal observers, placed on 288 factory trawler and longline vessels in the North Pacific last year, report the bycatch figures.

This is only the second year observers have been counting the salmon take from the domestic fleet in the Bering.

"We don't know if this year was some kind of anomaly or an annual occurrence," said Bruce Buis, spokesman for the American Factory Trawlers Association in Seattle. "We're hoping it was. We don't want to catch that salmon. We can't use them."

King salmon that otherwise would return to rivers in Bristol Bay, Cook Inlet or Southeast Alaska are instead being intercepted as juveniles far into ocean waters.

The dead fish, untargeted and unwanted, are discarded by the ton. Economic

studies have shown mature kings caught by sportsmen in the rivers can represent a few hundred dollars to more than \$1,000 each to the tourism industry.

Unlike the other prohibited species, there is no cap on the amount of salmon that can be caught and no incentive for trawlers to avoid catching them. Hitting the 11.8-million-pound halibut limit in the Bering Sea will force the entire fleet to shut down for the season in that region, but trawlers can fish freely among schools of salmon without threat of closure.

That needs to change, Elias said. "They're harvesting the fish by their most efficient means with total disregard for other species," Elias said.

Trawlers need a cap on salmon bycatch, forcing the industry to target bottom fish in a more calculated though less efficient way, he said.

Poor returns of king salmon have forced fishing closures in several Alaska rivers during the last few years, including the Kenai, Nushagak and Naknek rivers.

The declining runs, coupled with this year's high reported bycatch, has the state watching the trawl fleet closely, said David Carlile, the biologist who serves as Alaska's technical liaison to the North Pacific Fisheries Management Council. The council regulates the seasons, fishing methods and limits in the bottomfish industry. State biologists have only an advisory role in the federal fishery.

The salmon bycatch created such a stir that the Alaska Board of Fisheries asked the council to place an immediate ban in the region north of Unalaska where most of the salmon were caught. The move was mostly symbolic, Carlile said.

By the time the fisheries board made its request, trawlers had already moved on to fish in other areas, he said. It did, however, add emphasis to the state's concern. Placing a cap on the salmon bycatch will undoubtedly be one of many suggestions forwarded by the state to the council, he said.

Another answer would be to roll the season back a month, he said. About 60 percent of the king salmon were caught

in the first two weeks of the season which began Jan. 1. Salmon are most vulnerable in the deep sea fishery during the winter months, he said.

"If you roll the start of the fishing season to February, that may well reduce the catch of chinook (kings)," Carlile said.

In the Gulf of Alaska, the king catch remained low throughout the winter and skyrocketed from 5,000 to 31,000 in March.

Buls said the industry may support a later start to the season, but does not like the idea of another bycatch quota. The cap system promotes reckless fishing practices, Buls said.

The trawling association would like to see the system replaced with one that

penalizes individual boats for overfishing the bycatch species rather than one that shuts the entire industry down.

"We're looking for something to get the dirty fisherman out of the fishery, temporarily if not permanently," he said.

"Everyone's desperate to get in as much fishing as they can before the bycatch shuts the fishery down. So screw it, they fish all they can," he said. The dirty fisherman "thinks 'I'm going to make hay while the sun shines.' That's the problem," he said.

The trawl fleet may be just one of many factors in the reduced king salmon returns, Carlile said. This year's high salmon bycatch may also be nothing more than an indicator of a large return to come.

A large salmon bycatch in past years was followed two years later with high salmon returns to some Alaska rivers, he said. He admitted, however, that the evidence is sketchy at best.

Scientists are studying the scale patterns of the salmon and doing genetic analysis to determine which rivers the kings were from. Scale patterns from salmon caught by the foreign fishing fleet in the late 1970s showed 60 percent of Bering Sea kings were from western Alaska, 17 percent from Southcentral rivers and 9 percent from the Southeast.

Tagged salmon were retrieved from ships in the Gulf of Alaska throughout the 1980s. The majority came from Southeast Alaska rivers, while several came from Cook Inlet.

Total catch of bottom fish discarded

Listed by species as of March 17, 1991; only the Bering Sea

SPECIES	TOTAL RETAINED	TOTAL DISCARDED
Arrowtooth Flounder	110,000	5,284,400
Atka Mackerel	24,549,800	1,786,400
Greenland Turbot	52,800	539,000
Other Flatfish	1,716,000	13,875,400
Other Red Rockfish	46,200	6,600
Other Rockfish	114,4000	495,000
Pacific Cod	563,200	7,037,800
Pacific Ocean Perch	116,72,000	5,207,400
Other species	930,6000	926,200
Pollock	1,150,296,400	68,637,800
Rock Sole	30,665,800	30,742,800
Sablefish	1,108,800	11,000
Squid	30,800	189,200
Yellowfin Sole	81,400	7,436,000

BYCATCH CAPS FOR TRAWL FISHERIES

	Hallbut	Herring	Red King Crab	Tanner crab
Bering Sea	11.6 million lbs.	1.8 million lbs.	200,000	4 million lbs.
GOA	4.4 million lbs.	N/A	N/A	N/A

SOURCE: North Pacific Fisheries Management Council

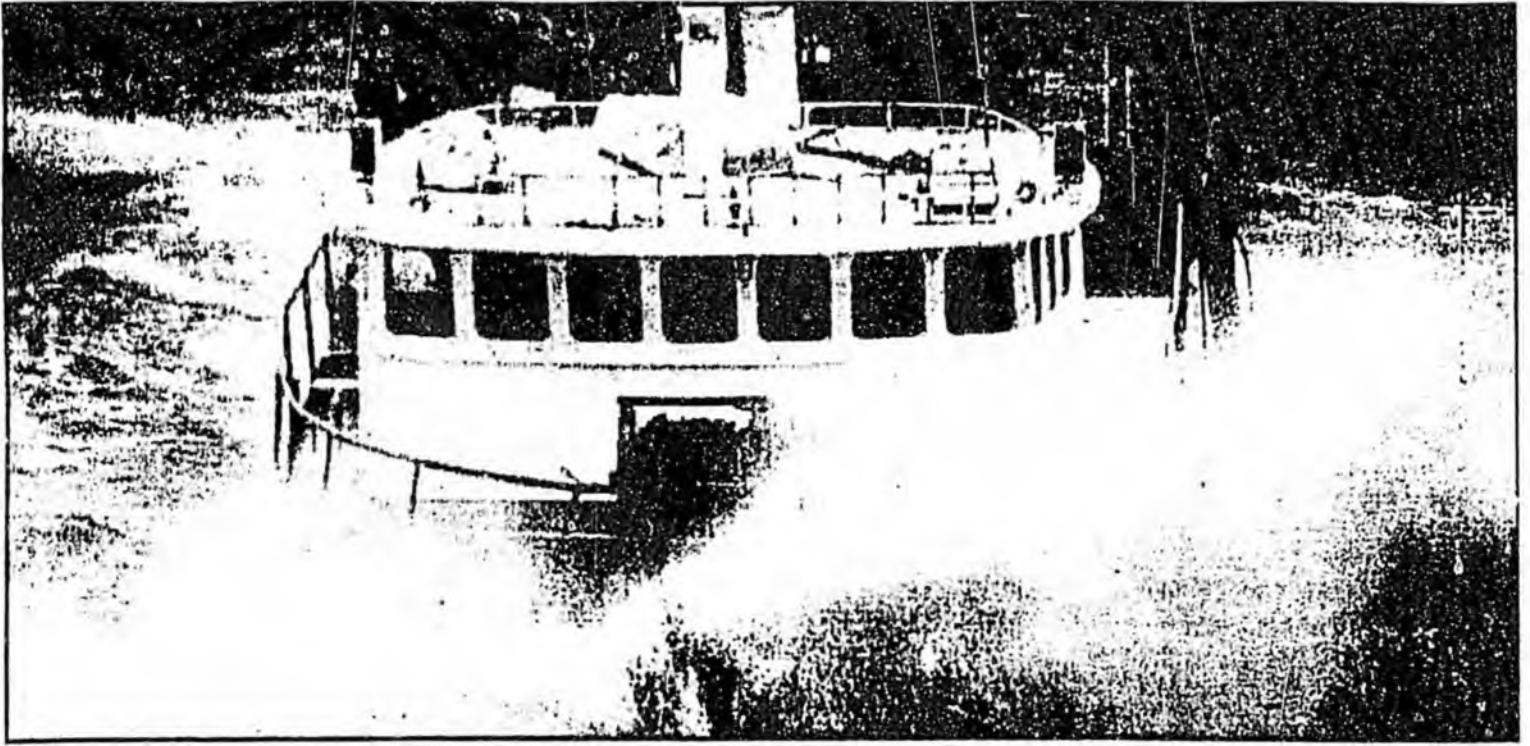
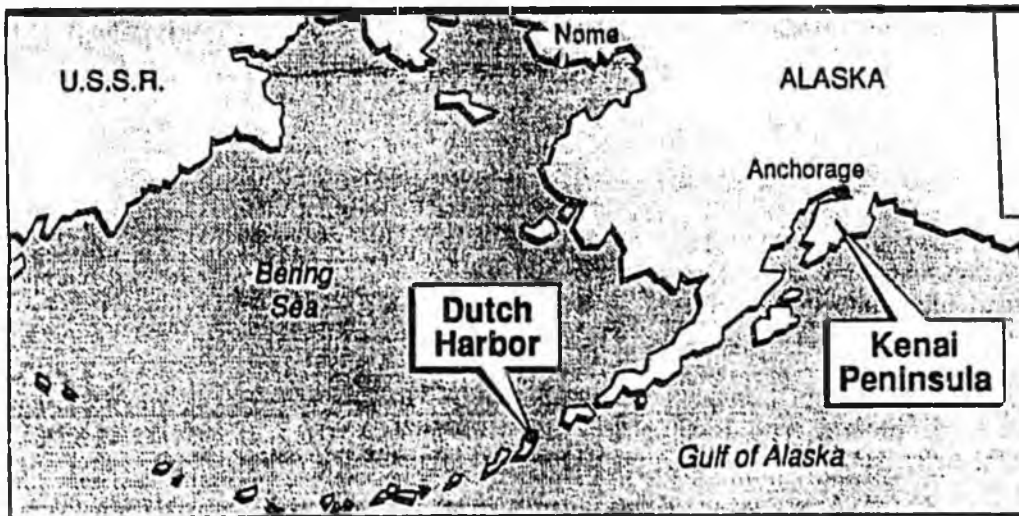


Photo courtesy MANDY MERKLEIN

A small bottom trawler targeting yellow fin sole is pictured in the rough Bering Sea. This fishery is often closed early in the season because of the large bycatch of crab and halibut.



Times Map/ LANCE LEKANDER

Trawlers take heavy toll on king salmon

Empire
4-15-91

THE ASSOCIATED PRESS

ANCHORAGE - Trawlers in the Bering Sea and the Gulf of Alaska have killed about 64,000 king salmon as bycatch already this year, more than double the number they discarded in 1990, and fishery managers are calling for emergency action.

"Those numbers are absolutely unacceptable," said Rick Lauber, chairman of the North Pacific Fisheries Management Council, which regulates the trawler industry.

"No one is going to argue that point. I can't say what we are going to do about it, but I know if there is something we can do legally this

year, we will."

The council meets again the week of April 21 in Kodiak.

"We all knew this was coming and I am furious that nobody ever did anything," said Clem Tillion, a council member and special fisheries assistant to Gov. Walter J. Hickel. "We are going to raise hell. This is the fourth year they have been hammered."

The Alaska Factory Trawlers Association was at a loss to explain the big increase.

"This just came up last week," said Bert Larkins, executive director

Please turn to Trawlers, Page 8

Trawlers...

Continued from Page 1
of the Seattle-based group. "We certainly are scratching our heads. I sure can't give you any reason."

But Steve Penoyer, regional director for the National Marine Fisheries Service, said the numbers are high when compared to last year but are not higher than past years.

This is only the second year regulations have required full-time observers on large trawlers. But regulators have bycatch figures dating back to 1977, when most of the trawlers were operated by foreign and joint ventures, and observer numbers were not systematically kept.

The record high of 114,790 king salmon killed as bycatch was reported in 1980 for the Bering Sea. Four years later, an estimated 74,360 salmon were reported thrown overboard in the Gulf of Alaska. King salmon have a lifespan of up to seven years, so rivers may just now be feeling the impact of the 1984 deaths.

Before the 1978 Magnuson Act, which gave control of waters within 200 miles of the coastline to the United States, bycatch numbers were "markedly higher," said Dave Carlile, a state Fish and Game Department biometrician.

Because some of the dead fish this year were tagged, scientists can trace their origins to rivers across the Pacific Northwest.

One fish was from the Upper Snake River in Idaho, Tillion said. Others were from waterways in

Washington, Oregon, California and Alaska. Tagged fish from Halibut Cove and the Crooked Creek Hatchery, both in Cook Inlet, were found.

Emergency actions could include shutting down the trawlers or curtailing their fishing. That may be premature, Penoyer said, until the reports filed by observers are analyzed or the cause of the increase pinpointed.

Even without emergency action, the council is expected to adopt regulations for the 1992 season that would cap the number of king salmon killed by trawlers, but sport fishermen want slaughter stopped now.

"This has been going on for years," said Tom Elias, president of the Alaska Sport Fishing Association. "There has been a drop in the production of king salmon. There are just less coming back every year because the giant trawler fleets are getting more efficient and more effective."

Last year, the Kenai River was closed to all but catch-and-release fishing the last four days of July because sonar readings showed the target number of 19,000 spawning salmon was 500 short, said Loren Flagg, executive director of the Kenai Peninsula Fishermen's Association, which represents setnet fishermen.

The trawlers, which inadvertently

scoop up halibut and salmon in their quest for bottomfish like pollock, use huge nets on or near the bottom of the sea. Regulations require them to throw the salmon and halibut back because they would glut the fish market if sold. Few survive.

Limits have been set on how many halibut the trawlers can destroy, but there is no such limit for salmon.

The salmon bycatch numbers began high in the Bering Sea with the start of the trawler season in January. By early April, about 29,000 salmon had been thrown overboard.

By mid-March, the trawlers reached their limits for bottomfish and halibut and began migrating to the Gulf of Alaska to join other trawlers there. About the same time, the bycatch number for salmon in the Gulf skyrocketed.

Preliminary figures show that by early April, an estimated 35,000 salmon had been killed there. State biologists still are awaiting some of the observers' reports, but made projections on current patterns.

In Juneau, a resolution has passed in the Alaska Senate and will be considered by the House next week calling for both emergency action and regulations for the 1992 trawler season that would save more king salmon.

Northwest lawmakers criticize U.S. driftnet policies

By SCOTT SONNER

THE ASSOCIATED PRESS

WASHINGTON - Reps. Jolene Unsoeld and Peter DeFazio are attacking the Bush administration's stand on driftnet fishing, but U.S. negotiators say the critics are ignoring strides being made to drive the nets from the North Pacific.

Unsoeld, D-Wash., said the United States is standing idly by while driftnet fishermen from Japan, Taiwan and Korea use the "30-mile-long curtains of death" that destroy hundreds of thousands of salmon, marine mammals and seabirds.

The United Nations will invoke a ban on driftnets in June 1992. But Unsoeld wants President Bush to seek his own international moratorium because the U.N. plan has too many loopholes.

"Unless Congress and the administration keep the pressure on these countries, they will look for an 'out.' This wasteful and destructive prac-

tice will live on - and the senseless killing will go," she said in a House floor speech last week.

The nets are used primarily by Asians to harvest squid. But critics say the nearly invisible, mesh monofilament nets act as a vacuum indiscriminately stripping the ocean of seabirds, dolphins, turtles and tuna.

Unsoeld and DeFazio, D-Ore., blasted a new driftnet agreement the U.S. has reached with Taiwan because it reduces the number of U.S. observers counting the catch on Taiwanese driftnet vessels.

Administration officials and an aide to Rep. John Miller, R-Wash., said they were surprised by the criticism.

In making public the agreement, Miller praised the deal for strengthening safety requirements for the observers and improving their access to the vessels. But Unsoeld press secretary Doug Levy said Miller appar-

'The Japanese are not only strip mining the ocean with their nets, they are stealing our salmon.'

- Rep. Peter DeFazio, D-Ore.

ently was trying to find some good news in a bad deal from a Republican administration.

Larry Sneed, director of the Office of Fisheries Affairs for the State Department's Bureau of Oceans, International Environmental and Scientific Affairs, said a reduction in the number of U.S. observers from 14 to 11 will have no effect on driftnets.

"That's hogwash," said DeFazio, D-Ore. "The administration is allowing them to deploy their fleet with less observers as if this is not a con-

tinuing problem.

"The Japanese are not only strip mining the ocean with their nets, they are stealing our salmon," he said.

Roddy Moscoso, a spokesman for the National Marine Fisheries Service, is pleased with the steps being taken to halt driftnetting and said the charges from Unsoeld and DeFazio are unfounded.

"If the criticism is that the agreements have not been in our best interest or have not been done in good

faith or as well as they could have been, we feel the charge is not accurate," Moscoso said Friday.

"We think the agreements have been effective and continue to be effective," he said. "It certainly is not the intent of the United States to require or lead a charge to dismantle another country's fishery without assessing the impacts of the fishery."

Moscoso refused to answer directly when asked if he felt the Northwest lawmakers were trying to play on an emotional issue by continuing to hammer the administration's position on driftnets.

"I can't really say anything about that, but that is a pretty fair assumption," he said.

Ray Sanders, a senior staff person for the American Institute in Taiwan, said Taiwan should be commended for taking its own steps to cut the size of its driftnet fleet by denying new driftnet licenses, buying

back existing licenses and buying back driftnet vessels.

"Now they have to have transponders on their vessels. They are subject to inspection by authorities and the U.S. Coast Guard, they are eligible to have scientific observers on their decks and then there's the sheer economics of it. A lot of these guys are involved in tuna fishing and the canners are not taking tuna from drift netters because they can't be assured it is dolphin-safe," Sanders said.

The United States cut off direct diplomatic relations with Taiwan in 1979 so the AIT, a private non-profit corporation, conducts negotiations on behalf of U.S. officials.

Sanders said the new enforcement tools in the agreement with Taiwan "more than offset" the cut in observers. He said the number of Taiwanese driftnet vessels has dropped from about 200 to approximately 130 over the past few years.

TRAWLERS DON'T JUST KILL FISH, THEY KILL OCEANS

& seabirds &
sea lions & dolphins
& seals & whales
& sea turtles

WHAT DO THE NORTH SEA, THE NORTH ATLANTIC AND THE GULF OF MEXICO HAVE IN COMMON? LOTS OF TRAWLERS AND NO FISH

"We have seen that where large pollock [trawl] fisheries have occurred such as in the Central and Western Gulf, the Steller sea lion population has gone down. And where it has not, such as in the Eastern Gulf, the sea lion population has gone up."

-Steve Zimmerman,
Director National Marine
Fisheries Service Endan-
gered Species Division,
Alaska.

"—Atlantic halibut, that is. They land about a half boatload a year out here: 47,000 pounds in 1988. That's for the entire East Coast. Atlantic halibut used to be as abundant as Pacific halibut—a larger fish, too—but the trawlers trashed the resource. The few you see on the dock would have to go back in the water in Alaska: all babies."

-Fitzgerald, Roger. 1991.
Lunching with the codfather.
Alaska Fisherman's
JOURNAL 14(3).

The North Pacific factory trawl fleet is grossly over-capitalized and hungry for new grounds. Closures in western areas have caused the fleet to spread into previously untrawled areas. As a result, an unprecedented amount of effort by domestic factory trawlers is expected in the eastern Gulf of Alaska this spring. For the traditional fisheries of southeast Alaska—and for the resource itself—this could be the beginning of the end. Unless trawling is prohibited in the Eastern Gulf now, it may be too late. YOUR HELP IS NEEDED!

WHY THE CONCERN?

1. Rockfish Several rockfish stocks have not yet recovered from the 1960s onslaught of the foreign trawl fleet. The domestic factory trawl fleet now threatens the same stocks. Rockfish are long-lived (100 years or more), area specific, and have a low rate of production. Many are dependent on the rough bottom, coral habitat that is easily destroyed by bottom trawls.

2. Salmon 1990 and 1991 National Marine Fishery Service observer data revealed significant salmon bycatch by trawlers in both the Bering Sea and the Gulf of Alaska. This bycatch explains recent dramatic declines in Bering Sea chinook salmon runs, and may be contributing to declines in Oregon and Washington chinook returns.

3. Entanglement Lost or discarded "ghost" nets kill fish, sea turtles, seabirds, and marine mammals. More trawlers mean more deadly nets to strangle marine life and choke beaches.

4. Steller sea lions Although Steller sea lion populations have declined significantly in the Bering Sea and both the Central and the Western Gulf of Alaska, populations in southeast Alaska (Eastern Gulf) remain stable and may even be increasing. Since evidence suggests that the pollock trawl fishery may be implicated in Steller sea lion population declines, declaring the Eastern Gulf a trawl-free zone will provide maximum protection to the one area in which sea lion populations remain healthy.

4-7-91
Times

WASTED HARVEST

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As thousands starve around the world, millions of pounds of high-protein fish are being killed in the north Pacific

STORIES BY JOE HUNT

Huge factory trawlers raking the seabeds off Alaska are too deadly efficient. So far this year, they have killed and wasted enough fish to feed each Alaskan a high-protein dinner for more than three months.

Some say this waste — in a world where many go hungry — is a national scandal. Others counter it is just the cost of doing business.

The vessels trail thousand-foot nets to scour the ocean bottom in the Bering Sea and the Gulf of Alaska and haul in tons of pollock, cod and other bottom fish.

About 10 percent of the fisheries' 5 billion-pound quota is thrown overboard. Dead.

The fleet has wasted 159 million pounds of edible fish in the first 11 weeks of this year, says the North Pacific Fisheries Management Council.

Larry Cotter is chairman of the bycatch committee for the fisheries council, which sets the regulations for the trawling industry.

"In my own opinion, we are wasting an enormous amount of fish," Cotter said. "That is unconscionable. If they learned about this Outside, it would become a national scandal, a disgrace."

But discarding fish is an economic reality of the fishery, dictated by world markets and prices, said Bert Larkins, director of the American Factory Trawler Association. If trawlers could avoid catching unwanted species or fish too small to process they would, he said.

"There is not only the social stigma of throwing fish back," Larkins said. "There's also an economic penalty because it takes a lot of manpower to do that."

"Any entrepreneur who is throwing away a percentage of his raw product is desperately looking for a way to utilize his whole catch. There's a real incentive for him to do that."

The trawlers target pollock, cod, sole, flatfish and other bottom fish for sale in Japan.

But their nets are indiscriminate.

A trawler net trails a vessel like sock. Its mouth may be more than 200 feet across, with weighted wheels to roll it along the muddy bottom and floats at the top to keep its mouth open.

Federal law requires that tons of high-value crab, herring, halibut and salmon, inadvertently caught and killed in the nets, be thrown back as bycatch.

But trawlers also toss back fish they are authorized to take. Industry insiders excuse the waste, saying the fish are the wrong size for processing machinery, that they are damaged in the enormous net-loads hauled from the bottom or because no profitable markets exist.

During the Bering Sea bottom fish season, which started Jan. 1, federal observers recorded 144 million pounds of cod, sole, flounder, flatfish and other species tossed overboard. Another 15 million pounds have been discarded in the Gulf of Alaska.

The public tends to focus on the bycatch, but

See Waste, page A8

Waste

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Continued from page A1

the waste of low-value bottom fish is the bigger moral issue, Cotter said.

He estimates 400 million to 500 million pounds of bottom fish will be tossed overboard by the end of the season.

This is in addition to a cap of 16 million pounds of halibut, 4 million tanner crab, 200,000 king crab and 833 tons of herring the trawl fleet will be allowed to catch and toss back this year.

Assuming one-third of that poundage represents fileted meat, that is roughly enough to provide every Alaskan with 1 pound of filets a day for a year.

"The real rape in the ocean right now is waste," Cotter said. "Prohibited species catch is the sexy part of waste, but finfish discard is absolutely appalling.

"The factory trawler is without question the most efficient harvesting machine on this planet. But when it comes to processing what it catches, it's extremely inefficient."

Trawlers net so many fish, operators can be picky about what they keep, processing only the most profitable grade of fish and tossing back the rest, he said.

Pollock filet machines are set for a certain size of fish. So far this year, the industry has tossed back 69 million pounds that was too small or too large to be efficiently processed, he said.

"It's a crime the amount of fish discarded," said Mandy Merklein, a fisheries observer on contract with the National Marine Fisheries Service. "It doesn't seem right we have to discard that much fish. Even the processors hate it. No one is happy about it."

Merklein is a veteran of 20 trips on foreign and American vessels in the Bering Sea and the Gulf of Alaska.

"I've been on boats where I've thrown more overboard in value than what we kept," Merklein said. "It just seems so stupid. What it really comes down to is bottom-dragging is not very clean."

An observers' primary job is to document the waste, providing weekly reports on bycatch to ensure trawlers do not exceed their quotas. In 1990, the first year observers were required aboard American trawlers in the North Pacific, 513 observers monitored 288 vessels.

THE AMERICAN factory trawler industry in Alaska is still in its infancy, having taken over the fishery from a well-established foreign fleet in the last 10 years. Council members, biologists and fishermen say the industry is learning how to target its preferred catch without killing and wasting unwanted fish.

Officials say they are optimistic many of the problems will be solved during the 1990s. But the process seems unbearably slow, they admit — especially when raging controversies are so widespread.

- Fishermen are edgy about a plummeting halibut population, reducing their harvest year after year. Meanwhile, factory trawlers will take 16 million pounds of halibut this year.

- Interception of king salmon on the high seas has brought the impact of factory trawlers home to the Bristol Bay, Cook Inlet and Southeast Alaska where rivers are prized for world-class sport fishing. During the first 3 months of the Bering Sea fishery this year, 28,000 juvenile king salmon were killed and thrown back. Another 31,000 were killed in the Gulf of Alaska.

- Bering Sea crab fishermen, starting their comeback after the crash of the king crab population in the early 1980s, are angry because trawlers are allowed to kill 200,000 of the highly sought crab and 4 million of the lower-priced tanner crab each year.

- The government's requirement that crab, salmon, herring and halibut be thrown back is viewed as market protection by some and waste by others. Critics say they would rather those species be sold, with the profits used to fund research to reduce waste.

- Onshore processing plants, providing jobs in Alaska's coastal communities, say they are mostly shut out by the Seattle-based factory trawlers. The feud has spawned a proposal that would require a 50-50 split between onshore and offshore processors.

Controversies are popping up faster than solutions can be found. "The tendency over the last few years is things seem to be getting more polarized, worse really," said Larkins of the American Factory Trawler Association.

Virtually nobody condones the waste. If the trawlers do not find a solution, the fisheries council may someday force action.

"I think we need to consider implementing a program that prohibits discards," Cotter said. "We may have to say 'If you catch it, you have to process it.'"

Trawlers could install meal plants to grind up the unsalable fish, creating fertilizer and animal feed, he said.

Discarding fish is more of a social or aesthetic problem than a threat to the species, Larkins said. It is popular to con-

dern the waste because there are starving people in the world, but none of those fish would make it to the struggling Third World countries that need them, he said.

"It's not as if those fish being thrown back are being taken out of somebody's mouth," he said. "They would never have had them in the first place."

Larkins said as long as there is no biological threat to the species, the waste is not a moral issue. It is similar to the waste in the timber industry or in vegetable farming, he said. "Whether or not you catch them and throw them back or leave them in the water in the first place, to me there's not much difference," Larkins said.

Other fishermen also discard fish, Larkins said. Halibut longliners commonly throw back cod and other species, he said. Longliners in Southeast Alaska cannot target king salmon without also snagging and wasting dogfish, he said.

Dr. Jim Brooks, deputy director of the National Marine Fisheries Service in Juneau, said nothing is wasted in the sea. Discarded fish become nutrients, fodder for other species in a complex food chain, he said.

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UNTARGETED SPECIES are thrown overboard in fisheries in Alaska waters, the Gulf of Mexico and the North Atlantic. "We could be talking about 3 (billion) or 4 billion pounds a year," said Harry Upton of the Center for Marine Conservation in Washington, D.C.

The Gulf of Mexico shrimp trawl fishery alone accounts for 1.1 billion pounds of unprocessed waste, he said.

"I think in fisheries we're looking at some extreme problems that have been neglected," he said. "It's not something people have taken up the cause for yet."

The combined political muscle of the fishing industry on both coasts has made change come slowly, he said.

The Magnuson Fishery Conservation and Management Act of 1976, which set up the American trawl fleet by putting all waters within 200 miles of the coast under U.S. control, spells out the process for regulating fisheries in federal waters.

The act, enforced by the National Marine Fisheries Service, requires regulators to consider biological, economic and social factors. The economic impact on the industry often overrides social concerns, Upton said.

"My feeling is we've shifted too far to

the benefit of the user groups and the public interest in some cases has been neglected," he said.

The Magnuson Act, after 14 years of practice, essentially "replaced foreign overfishing by domestic overfishing," concluded a report released April 1 by the Center for Marine Conservation. The act set high principles and showed promise for a well-organized U.S. fishery, the study said. But it has exacerbated U.S. fisheries problems, it concluded.

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THE NORTH Pacific Fisheries Management Council does not have the necessary staff to handle the many issues it faces, said Arni Thomson, director of the Alaska Crab Coalition. "And if the analysis doesn't get done, then who wins? The factory trawlers," he said.

United Fishermen of Alaska, the largest organization of commercial fishermen in the state, has asked the Department of Fish and Game to assist the council with its scientific analysis to speed up the process. Thomson is chairman of the group's Bycatch Committee.

Cotter said Alaska's bycatch problem is caused by fishermen who do not want their rivals on the high seas to profit by catching prohibited species. Their least-of-two-evils is to allow the valuable fish to be wasted.

"The reason is political," Cotter said. "That's all there is to it." Cotter said.

The millions of pounds of bycatch in Alaska waters is incidental to the 5-billion-pound quota of pollock, cod, sablefish and other bottomfish expected to be harvested this year. But to the crabbers, halibut longliners and salmon fishermen, it is money out of their pockets, Thomson said.

The crab fleet took in \$100 million last year by harvesting 4 million king crab. Trawlers discarded 300,000 king crab, most of them dead, worth about \$7.5 million. That directly reduced the amount of king crab Alaska fishermen could catch, Thomson said.

"We still don't think there is enough protection for king crab," he said. "King crab stocks are still depressed in the Bering Sea."

The Alaska bottomfish industry boomed in the 1980s after the crash of the king crab population. Crabbers harvested 20 million king crab in 1980. But the crab fishery collapsed in following years, providing a harvest of only 540,000 crab in

1982 before closing completely in 1983. Scientists still cannot explain the reasons for the steep decline in the population.

Crabbers turned their efforts to bottom fish and began delivering their catch to a well-established fleet of foreign processors. With the Magnuson Act backing them, the American trawl fleet mushroomed and forced out the foreign fleet.

The Seattle-based trawl industry, with an efficient fleet of 60 factory trawlers and four monstrous factory ships, quickly overwhelmed the fishery.

Industry officials say intense competition prompted some fishermen to cut corners and aggressively fish without regard to bycatch and waste. Conscientious processors move out of an area if they discover a large percentage of a bycatch species in a haul, they say.

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THE DECLINE of halibut stocks in the North Pacific since 1988 often is blamed on the trawler industry. The Bering Sea is the North Pacific's nursery for halibut and the decline of those fish coincides with the increase in trawler pressure.

The trawl fleet is allowed to take and throw back 11.6 million pounds of halibut in the Bering this year as it pursues its legal species. At an average of 3½ pounds each for juvenile halibut, the figure represents more than 3 million fish.

While critics blame trawlers, International Pacific Halibut Commission biologists say they believe the decline is a natural fluctuation. A complex formula compensates for the halibut killed by the trawlers and reduces the annual quota given to longliners.

Trawlers are not to blame for the drop, but their halibut bycatch will hurt the longliners more each year as numbers continue to dwindle, said Bob Crumble, senior biologist with the halibut commission. The available harvest of halibut statewide by 1996 may be below 25 million pounds, a third of the peak in 1988, he said.

"It may be that quantities available over the next four to five years could be fairly painful for people," Crumble said.

"We believe this natural downturn we see now is going to continue for several more years. We don't know how far the decline will continue or when it will begin back up again."

Greg Seider, director of United Fishermen of Alaska, said he is not so sure trawlers are innocent in the halibut decline.

"None of it is going down real well," he said. "It's really easy to say it's the trawlers, but prove it. That's the rub, because we really haven't seen the resources dedicated to really get a handle on it."

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CRITICS and defenders of the trawl fishery and the drawn-out regulatory process remain optimistic. Better technology, regulations and fishing methods, along with developing markets for fish now discarded could drastically reduce waste.

"I think we're still kind of new to the game and we're still trying to figure out a way to do it," said Bruce Buls, a spokesman for the American Factory Trawlers Association.

"We're looking for some mechanism to get the dirty fisherman out of the fishery, temporarily if not permanently."

Cotter and Larkins agree on the long-term solution. Both said they want a system that rewards efficient trawlers while penalizing those with a large bycatch.

The current system penalizes the entire fleet. When the bycatch limit for any prohibited species is reached in a given region, the entire fleet must quit fishing in that area. The system proposed by Cot-

Continued on page A9

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ter and Larkins would force offending vessels to sit out all or part of the season while their competitors continued fishing.

"The way I envision it, the dirty vessels will not be able to survive and will go bankrupt," Cotter said. "Eventually, we will have a rational fishery, but I think it will take five years to get there and in the process there will be a lot of bankruptcies."

Larkins said he would like to take what he calls the "penalty box" concept one step further, tying the bottom fishery to the shore-based halibut and crab fishery. Each of those fisheries would be closed to further entries, under one industry-sponsored proposal. Those grandfathered in to the program would receive a certificate giving them a set percentage of each year's allocation.

...
A TRAWLER wanting to fish in halibut waters would have to buy a halibut allocation from longliners. The halibut would be processed and not thrown back, and the trawler would strive to make its halibut allocation last as long as possible by fishing the waters selectively.

"Once you get a certificate, if you want to expand your market, you go out and buy someone else's certificate," Larkins said. "This way the marketplace decides where the best benefit of these fisheries lies. You don't have to make political judgments.

"It's got to come down to where the individual fisherman has some kind of incentive to fish as cleanly as possible."

...
THE PROBLEM is worldwide, although other countries have explored op-

tions for solving the problem. For example, New Zealand uses a trade-off program to reduce its high-seas waste problem.

Captains have the option of selling their bycatch to the government or paying to keep it, using a complex trade-off formula which takes into account the value and quotas of the target species, said Dr. Malcolm Haddon.

Haddon is a biologist with the Ministry of Agriculture and Fisheries in Auckland, a port on New Zealand's North Island. Trawler operators sort their catch and use separate freezers for different species, he said.

"The fishermen get a minimal price for bringing it in, but it encourages them to bring it in and not dump it," he said. The low price deters operators from targeting the bycatch species, he said. All transactions must be individually ap-

proved and the program is coordinated by computer.

"People monitor the bycatch trade to be certain that it's honest," he said. "It's not the answer to everybody's prayers, but it does avoid waste."

In New Zealand's peak season, 30 to 40 commercial boats fish offshore. Government observers are assigned to about half the boats to monitor the catch and stop operators from illegally transferring fish to another vessel.

Upton, of the Center for Marine Conservation in Washington, said he sees a hard fight ahead for the industry to find its balance in the Bering Sea fishery.

"In the Northeast, we fished the resource to hell," Upton said. "We haven't done that yet in Alaska, but the danger signals are there. I think we're going to solve these issues in time. Unfortunately, we're learning the hard way."

RESOLUTION NO. 91-469

A RESOLUTION OF THE CITY AND BOROUGH OF SITKA
REQUESTING EMERGENCY CLOSURE OF THE EASTERN GULF
TO PELAGIC AND ON-BOTTOM TRAWLING

The Alaska Longline Fishermen's Association (ALFA) requests an Emergency Order to prohibit trawling in federal waters off the coast of Alaska east of 140 degrees West longitude. The request is made for the following reasons:

WHEREAS, the Steller sea lion populations in the Eastern Gulf are stable and possibly increasing. Evidence suggests that trawling may be implicated in the precipitous decline of Steller populations in all other parts of their range. The Steller Sea Lion Recovery Team has indicated the critical importance of comparing the effects of various fisheries on sea lion populations. Designating the Eastern Gulf a trawl-free zone will provide an ideal laboratory for researchers to conduct comparison studies; it will also provide maximum protection to the one area in which Steller populations remain healthy; and,

WHEREAS, the Eastern Gulf has been a hook and line zone for close to 100 years. Most fisheries are fully utilized by the hook and line fleet and have been since 1983 or before. The intended level of trawl effort in the Eastern Gulf this spring is unprecedented, but can only be expected to increase given the extent to which the trawl fleet is overcapitalized. The expansion of the trawl fleet into waters of the Eastern Gulf will place undue pressure on fish stocks and displace traditional users; and

WHEREAS, the foreign trawl fleet decimated Slope rockfish stocks during the 1960's, an attack from which stocks in the Eastern Gulf have not yet recovered. Roughey and Shortraker rockfish stocks also remain depressed. Now the American trawl fleet is threatening the same rockfish stocks. In the Eastern Gulf, the trawl fleet is rapidly approaching the 1991 allowable biological catch (ABC) for the roughey/shortraker rockfish complex and, according to the new federal definition of "over fishing", if the ABC is reached or exceeded all fisheries having an impact on the "over fished" stock will be closed; in other words, the Eastern Gulf longline sablefish fishery could be cancelled before it opened; and

WHEREAS, at the recommendation of the International Pacific Halibut Commission, the North Pacific Fishery Management Council postponed the longline sablefish fishery until May 15, 1991 to reduce halibut bycatch. Trawlers, with a 100% halibut bycatch mortality rate, intend to target grey cod this spring in the Eastern Gulf (retaining their allowed 15% sablefish bycatch), working the same grounds closed to longliners in order to protect halibut stocks. Only by prohibiting trawling will the halibut stocks actually gain the intended protection. Prohibiting trawling in the Eastern Gulf will also give the Canadians reason to hope that the North Pacific Council honestly intends to reduce halibut bycatch; and

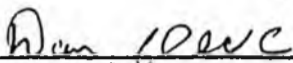
WHEREAS, the bottom habitat in the Eastern Gulf is particularly vulnerable to on-bottom trawling due to the nature of the benthic community. The vulnerability is compounded by the narrowness of the shelf/slope region which concentrates effort, preventing damaged area from recovering. Increased trawl effort could permanently impoverish Eastern Gulf ecosystems.

Resolution 91-469

NOW, THEREFORE, BE IT RESOLVED by the Assembly of the City and Borough of Sitka that:

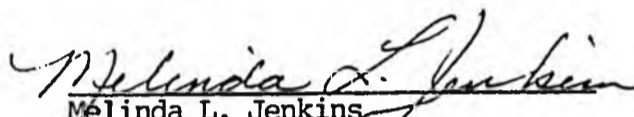
Emergency closure of the Eastern Gulf to Pelagic and On-bottom trawling will be requested.

PASSED, APPROVED, AND ADOPTED this 26th day of February, 1991.



Dan Keck, Mayor

ATTEST:



Melinda L. Jenkins
Municipal Clerk