

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME OFFICE OF THE COMMISSIONER

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December 4, 2008

Ms. Kaja Brix
Assistant Regional Administrator
Atten: Ellen Sebastian
Protected Resources Division
Alaska Region, National Marine Fisheries Division
P.O Box 21668
Juneau, AK 99802

Re: SE Alaska herring

Ms. Brix:

Enclosed are comments from the State of Alaska regarding requests for information on Southeast (SE) Alaska herring as noticed in Federal Register Vol. 73, No. 216 dated November 6, 2008.

Alaska Department of Fish and Game (ADF&G) fishery managers and State of Alaska scientists, after review of available information, found that the best available scientific and commercial information support a determination that listing of the herring in SE Alaska under the Endangered Species Act (ESA) is not warranted at this time.

Herring in Southeast (SE) Alaska are healthy. Documented herring spawn in SE Alaska has increased substantially over the past 40 years. There is no population trend evidence to indicate that herring in SE Alaska are in danger of extinction within the foreseeable future. Also, sufficient regulatory measures are in place to provide for sustained yield management of SE Alaska herring populations. The Alaska Board of Fisheries has adopted a management plan that assures for sustained yield management of herring in SE Alaska and the Department has an active monitoring and management program in place. Finally, sufficient regulatory measures are in place to protect herring spawning habitats throughout SE Alaska. Based on this, and a detailed analysis of the statutory listing criteria (attached), we do not believe that a listing of SE Alaska herring as either threatened or endangered under the ESA could be justified at this time.

Attached are more detailed comments that substantiate our position. If you have any questions regarding these materials, please feel free to contact me.

Sincerely,



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cc: Denby Lloyd, ADF&G – Juneau/HQ
Tina Cuning, ADF&G - Anchorage
John Hilsinger, ADF&G - Anchorage
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Gary Mendivil, ADEC - Juneau
Ed Fogels, ADNR – Anchorage

Listing of Herring in SE Alaska Could Not be Justified Under Statutory Listing Factors Because the Population is Healthy and Adequate Regulatory Measures are in Place to Protect Herring and Herring Habitat.

Herring in SE Alaska are not at significant risk as a result of any of the five statutory factors.

A. Present or threatened destruction, modification, or curtailment of habitat or range is not a significant factor.

Herring in SE Alaska are not threatened by present or threatened destruction, modification, or curtailment of habitat or range. Increased disturbance from vessel traffic, transient lighting, increased turbidity and sedimentation, and increased petroleum hydrocarbons in the water from oil or gas spills are postulated as concerns by the listing proponents. Observations of effects of development in SE Alaska illustrates that development does not necessarily cause harm to herring, and in some cases may improve or increase spawning habitat by providing protected waters and/or increased surface area for spawn deposition. Herring near Sitka consistently spawn around the new Thompson Harbor breakwater and in fact sometimes spawn inside the boat harbor. Spawn frequently occurs along the well developed waterfront road system to the ferry terminal. Boat traffic also does not appear to disrupt spawning. Commercial and subsistence vessels near Sitka are often operating in the area of peak spawn or pre spawn biomass with no apparent detriment to herring. Despite significant development and boat traffic, the herring biomass in the Sitka Sound area is at near record high levels. Similarly, in Lynn Canal, herring were observed spawning adjacent to a new dock and fill at Adlersheim during 2007.

Herring stocks are also fairly resilient to change. The resiliency of herring stocks is demonstrated by the fact that herring stocks naturally disappear and reappear in Washington, British Columbia, and Alaska even when reduced to very low numbers (Stout et al . 2001). It is also illustrated by the fact that large scale fluctuations in spawning biomass have been observed in Southeast Alaska. Pritchett (2005) documented a West Behm Canal spawning aggregate forecast increase from 283 tons in 1991 to 15,968 tons in 1999 followed by a decline to 454 tons in 2005. Similarly, ADF&G data show that Hobart Bay/Port Houghton miles of herring spawn ranged between 0 in the late 1970's/early 1980's to 19.1 nmi in 1998-99 (Table 1, Figure 4).

Herring resiliency and demonstrated ability to successfully spawn in developed areas weighs heavily against a determination that heavily regulated development such as that proposed for the Kensington mine would threaten significant destruction, modification, or curtailment of habitat or range.

Additionally, sufficient regulatory mechanisms are in place to assure that such developments do not significantly impact herring or their spawning habitats. A description of these regulatory mechanisms is summarized in subsection D below.

B. Overutilization for commercial, recreational, scientific, or educational purposes is not a significant factor.

Herring in SE Alaska are not threatened by overutilization for commercial, recreational, scientific, or educational purposes. State fisheries are managed under a constitutional sustained yield mandate and adequate regulatory measures are in place to prevent commercial or recreational overharvest. To conduct scientific or educational activities on state-managed species, a permit is required from ADF&G. We know of no scientific or educational uses that threaten the viability of SE Alaska herring.

C. Disease or Predation is not a significant factor.

Herring in SE Alaska are not threatened by disease or predation. While increasing salmon returns, growth in Southeast Alaska Steller sea lion populations, and increasing humpback and killer whale populations in Southeast Alaska all prey on SE Alaska herring stocks, there is no evidence that this threatens the viability of SE Alaska herring stocks. There is also no information to indicate that disease has or will threaten the viability of SE Alaska herring in the foreseeable future.

D. Existing Regulatory Mechanisms to Protect Herring and Habitats Used by Herring in SE Alaska are adequate.

The Department provides the following information as requested by the proposed rule, consistent with the Service's March 28, 2003, Policy for Evaluating Conservation Efforts (PECE) (68 FR 15100). The proposed rule described the policy by which the Service must consider efforts by the State, political subdivisions of the State, Native American tribes and organizations, local governments, and private organizations to protect species when considering an ESA listing:

The PECE provides guidance on evaluating current protective efforts identified in conservation agreements, conservation plans, management plans, or similar documents (developed by Federal agencies, state and local governments, tribal governments, businesses, organizations, and individuals) that have not yet been implemented or have been implemented but have not yet demonstrated effectiveness. The PECE establishes two basic criteria for evaluating current conservation efforts: (1) the certainty that the conservation efforts will be implemented, and (2) the certainty that the efforts will be effective. The PECE provides specific factors under these two basic criteria that direct the analysis of adequacy and efficacy of existing conservation efforts.

We address the ongoing and planned protective efforts by numerous entities according to the PECE criteria and their effectiveness.

Fisheries Management

Alaska's fisheries are managed by ADF&G and the Alaska Board of Fisheries under a constitutional requirement to manage according to sustained yield principles. ADF&G in conjunction with the Alaska Board of Fisheries has adopted regulations to assure for the long-term viability and sustainability of SE Alaska herring stocks. These regulations relating to commercial fisheries, the only potentially significant harvest source, are:

- 5 AAC 27.190. Herring Management Plan for Southeastern Alaska Area.** For the management of herring fisheries in the Southeastern Alaska Area, the department
- (1) shall identify stocks of herring on a spawning area basis;
 - (2) shall establish minimum spawning biomass thresholds below which fishing will not be allowed;
 - (3) shall assess the abundance of mature herring for each stock before allowing fishing to occur;
 - (4) except as provided elsewhere, may allow a harvest of herring at an exploitation rate between 10 percent and 20 percent of the estimated spawning biomass when that biomass is above the minimum threshold level;
 - (5) may identify and consider sources of mortality in setting harvest guideline;
 - (6) by emergency order, may modify fishing periods to minimize incidental mortalities during commercial fisheries.

No significant sport or personal use fishery targets SE Alaska herring. Any personal use fishing that does occur is subject to regulatory restrictions in 5 AAC 77.672, which require a permit for the most desirable product, spawn on kelp, and which limit take of this product to at most 32 pounds per individual or 158 pounds per household and which prohibit herring harvest in Auke Bay. Sport fishing for herring is limited under 5 AAC 75.030 to use of a single line with 15 or fewer unbaited hooks, so the potential catch would continue to be extremely low if the herring were to be increasingly targeted by sport fishers.

Under these regulations, the herring in SE Alaska herring are healthy. Documented spawn of herring has substantially increased over the past 40 years (Table 1, Figure 1). These data strongly suggest there is no evidence that herring in SE Alaska will decline and become threatened with extinction within the foreseeable future.

The Department also has a comprehensive research and monitoring program in place to monitor the health of SE Alaska herring and to set annual catch limits that do not threaten sustained yield. ADF&G conducts aerial, skiff, and scuba dive surveys to monitor the primary areas where SE Alaska herring are known to spawn. These programs are expected to continue. Also, ADF&G has the capability under the

mentioned management plan to close herring fisheries if their long-term sustainability is threatened.

Based on this, there is no evidence to indicate that herring in SE Alaska are in current or possible future danger of extinction.

Protected Lands

Lands managed by the federal and state governments in SE Alaska help to preserve good herring habitat. These protected lands comprise State game refuges and critical habitats, Tongass National Forest lands, Glacier Bay National Park and Preserve, and state park lands. All of these protected areas have special management legislation limiting land and water use activities, and most have detailed management plans that are effective in protecting habitat.

<u>Agency</u>	<u>Managed Lands (M Sq. Miles)</u>
U.S. Forest Service	422.2
National Park Service	184.2
State of Alaska	38.9
Bureau of Land Management	23.3

Other Existing Regulatory Mechanisms

In addition to land management plans, the State comprehensively regulates activities that occur within SE Alaska watersheds that potentially affect land use, water quality and quantity. Below are detailed examples of some of these management guidelines, regulations, and permit stipulations which are implemented by the Alaska Department of Fish and Game, Alaska Department of Environmental Conservation, and Alaska Department of Natural Resources as part of the State’s role in habitat protection measures.

ALASKA DEPARTMENT OF FISH AND GAME’S ROLE IN HABITAT PROTECTION

Alaska Statute [16.05.841](#) (Fishway Act) requires that an individual or government agency notify and obtain authorization from the Alaska Department of Fish and Game, Division of Habitat for activities within or across a stream used by fish if Habitat determines that such uses or activities could represent an impediment to the efficient passage of fish. For example, culvert installation; water withdrawals; stream realignment or diversion; dams; low-water crossings; and construction, placement, deposition, or removal of any material or structure below ordinary high water require approval from Habitat.

Alaska Statute 16.05.871 (Anadromous Fish Act) requires that an individual or government agency provide prior notification and obtain permit approval from the

Habitat “to construct a hydraulic project or use, divert, obstruct, pollute, or change the natural flow or bed” of a specified waterbody (Quoted portions from AS 16.05.871 (b)). All activities within or across a specified anadromous waterbody and all instream activities affecting a specified anadromous waterbody require approval from Habitat, including construction; road crossings; gravel removal; mining; water withdrawals; the use of vehicles or equipment in the waterway; stream realignment or diversion; bank stabilization; blasting; and the placement, excavation, deposition, or removal of any material.

Some common activities which require a Fish Habitat Permit are stream fords, heavy equipment operated on the ice, water withdrawal, boat launch and dock construction, and culvert placement. Some common activities which don't usually require a permit are hand mining, beaver dam removal by hand and operation of light vehicles on the ice; however, requirements for streambank or streambed disturbance need to be considered. Recreational boating and fishing activities do not require a permit.

The location of specified anadromous waterbodies is contained in the “Catalog of Waters Important for the Spawning Rearing or Migration of Anadromous Fishes.” The Catalog is updated annually after public review. Copies of the Catalog may be viewed [online](#).

In addition to its general responsibilities for the sustained yield management of all fish and wildlife on all lands and waters in the State, the Alaska Department of Fish and Game (ADF&G) manages State lands designated as Refuges and Critical Habitat Areas within SE Alaska.

Alaska Special Areas: Refuges, Sanctuaries and Critical Habitat Areas within or near Lynn Canal managed by ADF&G.

Name of Special Area	Date Established	Enabling Statute		Date of Management Plan
Mendenhall State Game Refuge	1976	AS 16.20.034 (g)		1990
Chilkat River Critical Habitat Area	1972	AS 16.20.585 AS 41.21.610		2002 (w/ADNR)
Dude Creek Critical Habitat Area	1988	AS 16.20.610 (c)		None
Stan Price Wildlife Sanctuary	1990	AS 16.20.150		None

The ADF&G special area management plans are available at: <http://www.wildlife.alaska.gov/index.cfm?adfg=refuge.main>

The ADF&G participates with other State agencies in Oil Spill Contingency Plans. The Alaska Department of Environmental Conservation (ADEC) requires all vessels transporting oil and hazardous substances within the State of Alaska to have a contingency plan in the event of a spill. Each operator is required to follow the ADEC

format as described in 18 AAC 75, Article 4 which is located at the following link:
http://www.dec.state.ak.us/spar/statutes_regs.htm#regs75

In addition to industry contingency plans, ADEC and other agencies, including ADF&G, formalized regional plans to ensure consistency. Southeast Alaska has its own regional plan entitled 'The Southeast Alaska Subarea Contingency Plan for oil and hazardous substance spills and releases'. This regional plan is located at :
www.dec.state.ak.us/spar/perp/plans/scp_se.htm. The industry contingency plans are a way that ADEC can ensure that the company is prepared and thinking in advance before they travel in Alaska waters. ADF&G reviews relevant industry plans with a focus on the protection of fish and wildlife.

Following is the "Unified Plan and Subarea Contingency Plan Description" of the regional plans.

The Southeast Alaska Subarea Contingency Plan is a supplement to the *Alaska Federal/State Preparedness Plan for Response to Oil & Hazardous Substance Discharges/Releases* (commonly referred to as the Unified Plan). The Unified and the Subarea Contingency Plans represent a coordinated and cooperative effort by government agencies and were written jointly by the U.S. Coast Guard, the U.S. Environmental Protection Agency, and the Alaska Department of Environmental Conservation. The Oil Pollution Act of 1990 (OPA 90) requires the USCG and the USEPA to prepare oil spill response plans for the State of Alaska, which is designated as an entire planning region under federal guidelines. Alaska statute requires the ADEC to prepare a state-wide master plan addressing oil and hazardous substance discharges. The Unified Plan meets these federal (National Contingency Plan and OPA 90) requirements for regional and area planning, as well as State planning requirements.

OPA 90 requires the development of Area Contingency Plans for the inland and coastal zones of each federal region. For the Alaska region, there are three Coast Guard Captain of the Port zones and one inland zone. The three Captain of the Port zones are: 1) Southeast, which covers all of Southeast Alaska; 2) Prince William Sound, which covers the Prince William Sound area; and 3) Western Alaska, which includes the rest of coastal Alaska from Cook Inlet out the Aleutians and north to the Beaufort Sea and the Canadian border. The inland zone is subdivided into two sectors: 1) the North Slope oil production area and the Trans-Alaska Pipeline System (TAPS) and 2) all other areas inland from the coastal zones.

Alaska statute divides the state into ten regions for oil and hazardous substance spill planning and preparedness. The USCG and the USEPA joined with the ADEC to use these ten regions for area planning instead of the federal planning divisions since this would facilitate unified planning for the State of Alaska and prove more practical as well (for example, the huge COTP Western Alaska planning area is replaced by seven more manageable divisions). Because the State of Alaska is called a planning "region" under

federal planning guidelines and to avoid confusion with the other federal term, “area contingency plans,” these ten subordinate planning regions of the State are called “subareas” in the context of the Unified Plan.

The Unified Plan contains information applicable to pollution response within the entire State of Alaska and meets the pollution response contingency planning requirements applicable to the federal and State governments. The plan provides broad policy guidance and describes the strategy for a coordinated federal, State and local response to a discharge, or substantial threat of discharge, of oil and/or a release of a hazardous substance within the boundaries of Alaska and its surrounding waters.

Under both federal and State law, the responsible party for an oil or hazardous substance incident is required to report the incident and mount a response effort to contain and cleanup the release. The federal and State governments mandate response plans for oil tank vessels and facilities that have stringent spill response requirements. If the responsible party fails to respond adequately or if no responsible party can be identified, then the federal and State governments will rely on the Unified Plan and the appropriate Subarea Contingency Plan for response protocols and guidance.

Whereas the Unified Plan contains general information for response efforts taking place anywhere in the State of Alaska, the Subarea Contingency Plan (SCP) concentrates on issues and provisions specific to its particular subarea. The Southeast Alaska SCP focuses on the southeast Alaska region of the State. The boundaries of this subarea are described in the Background Section of this plan. The Southeast Alaska SCP provides information specific to the area, including emergency response phone numbers, available response equipment and other resources, specific response guidelines, and information on hazardous substance presence and sensitive areas protection.

Alaska State statute mandates a public review of all new plans, an annual departmental review of these plans, and another public review whenever the plans are significantly revised. The ADEC offers a public review of these plans for a period of 30 to 60 days during which verbal and written comments are accepted. During this comment period, several public meetings are held at locations appropriate for the plan being reviewed. The federal government does not require public review for any of its plans, though the USCG and the USEPA, as part of the Alaska unified planning process, do cooperate with the State of Alaska and participate in the public review process.

Neither the federal nor the State government maintains a formal approval process for these plans. The Unified Plan and the SCPs are presented to the Alaska State Emergency Response Commission and the Alaska Regional Response Team (ARRT) for review and comment. The ARRT’s concurrence is also part of the process for plan promulgation. Final promulgation of the plan is accomplished once the three plan holders – the USCG, the USEPA and the State of Alaska – sign the letter of promulgation.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION (ADEC) ROLE IN HABITAT PROTECTION

The following is a summary of ADEC regulatory authorities and a compilation of mitigation measures that pertain to Lynn Canal Herring.

Water Quality Standards. The Division of Water's mission is to improve and protect water quality. In keeping with this mission, the division:

- Establishes standards for water cleanliness
- Regulates discharges to water and wetlands
- Provides financial assistance for water and wastewater facility construction, and waterbody assessments and remediation
- Trains, certifies and assists water and wastewater system operators
- Monitors and reports on water quality

Water quality standards for the State of Alaska are found in the Alaska Administrative Code at 18 AAC 70. These regulations describe water quality criteria, beneficial uses and also site specific criteria for certain areas such as Sherman Creek. The designated uses for the marine waters of Lynn Canal (means they are protected for)

- Marine water supply (aquaculture, seafood processing, industrial)
- Water recreation (contact and secondary)
- Growth and propagations of fish, shellfish, other aquatic life and wildlife
- Harvesting for consumption of raw mollusks or other raw aquatic life.

In 18 AAC 70 there are tables that establish and describe the water quality criteria for each of the designated beneficial uses outline above. In addition, Section 401 of the Clean Water Act requires the Environmental Protection Agency (EPA) and the U.S. Army Corp of Engineers (ACE) to seek state certification that state water quality standards are being met before issuing a final permit.

Cruise Ships. Cruise Ships in Alaska operate under a number of federal and state regulations.

- Ballast water reporting to the United States Coast Guard (USCG)
- Graywater / Blackwater regulated under 33 C.F.R. 159, Subpart E by USCG
- Graywater/Blackwater also regulated under AS 46.03.460 – 490 and 18 AAC 69

The ADEC Commercial Passenger Vessel Environmental Compliance program regulates visible air emissions and wastewater discharged from cruise ships. Small cruise ships and Alaska Marine Highway vessels (ferries) are required to use best management practice plans and are restricted from discharging treated wastewater in areas identified as herring spawning areas by the Alaska Department of Fish and Game (ADF&G).

Ballast Water Discharge Regulations. All vessels, foreign and domestic transiting Lynn Canal are subject to mandatory federal ballast water exchange regulations at 33 C.F.R. 151, Part D. These regulations require that the entire amount of ballast water loaded at the port of origin is exchanged with sea water during the voyage and include recordkeeping requirements. As a practical matter, ballast exchange discharge does not happen in Lynn Canal.

Oil Spill Prevention and Response. The ADEC Spill Prevention and Response (SPAR) Division's mission is to prevent, respond and ensure the cleanup of unauthorized discharge of oil and hazardous substances. SPAR is responsible for protecting Alaska's land, waters and air from oil and hazardous substances spills. The Industry Preparedness Program (IPP) requires regulated facilities and vessel to develop state-approved contingency plans, to establish a facility-wide spill prevention program and to ensure that personnel, equipment and financial resources are available to respond to spills. In the event of a spill the Prevention and Emergency Response Program (PERP) serves as the State's emergency responders to oil and hazardous substance spills and ensures that cleanup measures are implemented as soon as possible.

ALASKA DEPARTMENT OF NATURAL RESOURCES ROLE IN HABITAT PROTECTION

The following is a summary of DNR regulatory authorities and a compilation of mitigation measures that pertain to Lynn Canal Herring. This information is organized by DNR division.

Office of Project Management and Permitting

Ed Fogels, 269-8423 (ed.fogels@alaska.gov)

The Office of Project Management and Permitting (OPMP) functions under AS 38.05.020(b)(9) which requires the Commissioner of DNR to coordinate permitting activities for all large resource development projects, and AS 27.05.010(b) which requires DNR to be the lead agency for permitting all large mine projects. OPMP's goal is to ensure that all aspects of a large project are considered during a single review and approval process. The OPMP is currently coordinating the permitting of mining, oil & gas, and transportation projects, including BP's Liberty project, BLM's planning for NPRA-NE, the Bullen Point infrastructure corridor permitting, and Shell Oil's OCS exploratory activities.

OPMP assigns a project manager to serve as the primary contact for a large project. The project manager coordinates the permitting activities of the state team assigned to work on the project. The Large Project Team is an interagency group, coordinated by OPMP, that works cooperatively with project applicants and operators, federal resource agencies, and the Alaskan public to ensure that projects are designed, operated and reclaimed in a manner consistent with the public interest. The project manager's primary responsibility is to ensure a coordinated process with minimum duplicity of

efforts. This often involves tailoring the process to fit specific project needs.

The goal of the state's Large Project Team is to coordinate the timing and completion of the numerous permits. The team reviews all the complex technical documents generated during the process and provides coordinated comments. The team also coordinates stakeholder involvement and provides a single point of contact for the public. The team provides the public, agencies and the applicant the opportunity to view the project as a whole.

The requirement for the federal authorizations usually triggers the requirement for an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA). The State usually participates as a cooperating agency in the EIS process, and the team endeavors to dovetail the state's permitting process with the EIS process. For example, during the Pogo Mine process, the public Draft EIS included drafts of all the major state permits. This gave the public the opportunity to see how the state's management decisions could be implemented on the ground, and enabled them to comment on the project as a whole.

The Large Project Team also coordinates, to the extent possible, with local governments. For example, the team has been working closely with the City and Borough of Juneau throughout the permitting and EIS process for the Kensington Mine. The City's Conditional Use Permits are critical authorizations for the mine, and may place additional stipulations on the project.

THE KENSINGTON MINE PROJECT

OPMP coordinated the interagency review and permitting of the Kensington Mine Project, which was initially permitted in the Spring of 2005. This gold mine project, located about 40 miles north of Juneau, involved the transportation of mine workers via ferry across Berners Bay. To accommodate the ferry, two dock facilities were proposed, one on the north side at Slate Cove, and one on the south side at Cascade Point. The permitting review of the Cascade Point dock centered around the potential impacts to Lynn Canal herring, and resulted in special stipulations for the project. These stipulations are contained in the state tidelands lease, the City and Borough's conditional use permit, and the state's Coastal Consistency Review, and are summarized below:

- Prohibition of in-water construction from March 15 through June 30
- Suspension of all vessel operations at the dock when herring are spawning within 500 meters of the dock, and will remain suspended until spawning is complete.
- In the event that eggs are deposited within 500 meters of the dock, fueling operations will be suspended until the eggs have hatched.
- During the herring runs, vessel speeds are limited to 13 knots, and operations are limited to daylight hours.

- The dock facility is to be used for mine use only.
- Trained observers are to accompany the vessels to ensure effectiveness of the stipulations.

The current status of the Kensington mine project is uncertain. In *Southeast Alaska Conservation Council v. United States Army Corps of Engineers*, the Ninth Circuit ordered the vacation of both the federal wetlands fill (Section 404) permit and the construction permit for a marine facility at Cascade point. (486 F.3d 638, 9th Cir. 2007). The Ninth Circuit's decision has been appealed to the US Supreme Court, with arguments to be heard in January 2009. A new plan and 404 permit approval may ultimately be needed for the project to proceed; however, there is no reason to expect that restrictions imposed for the protection of herring will be any less protective than under the prior plan if new permits are issued.

Division of Forestry

Chris Maisch, 451-2666 (chris.maisch@alaska.gov)

Forestry Management Guidelines

The timing, location, harvest amounts and methods of timber harvests are controlled by state statutes and regulations. The Alaska Land Act (AS 38.05.110-123) and Regulations (11 AAC 71) provide policy and guidance for management of state forest resources. The Forest Resources and Practices Act (AS 41.17) and Regulations (11 AAC 95) provide additional policy and guidance for managing forest related activities.

Area plans adopted under AS 38.04.065 determine whether forest harvest is an appropriate use of state lands. Area plans designate the main uses for state lands, set guidelines to ensure that multiple uses occur compatibly, and classify the land according to its main uses. Land must be classified before it and any interests in the land can be sold (11 AAC 55.040(i)).

Proposed timber sales throughout the state must be included in two consecutive annual five-year Schedule of Timber Sales published by the DNR Division of Forestry (DOF), with certain exceptions. These annual sale schedules identify the location, timing, and volumes of proposed timber harvests on state forestland managed by DNR. Small sales of 10-160 acres are, as a matter of DNR policy, also listed in the five-year sale schedule at least once.

Site-specific guidelines for forest management activities are addressed through a Forest Land Use Plan (FLUP) prior to offering timber for harvest (AS 38.05.112). A Forest Land Use Plan is required for all sales greater than 10 acres. All timber sales must be in the overall best interest of the state. When a written Best Interest Finding is required under AS 38.05.035, it is made part of the FLUP.

Timber Harvest Guidelines

All timber harvest activities must be compatible with the general management guidelines of this section and with the management intent statements and land use designations identified in specific management units of the area plans.

Timber Harvest Stipulations. All timber harvest operations will be conducted in accordance with the stipulations in the Forest Land Use Plan, the Alaska Forest Resources and Practices Act (AS 41.17 & 11 AAC 95), the Alaska Land Act (AS 38.05 & 11 AAC 71), and other pertinent state guidelines and laws.

Forest Land Use Plans (FLUPs). Although an area plan may establish areas of potential timber harvest, it does not make specific timber harvest decisions. Before timber harvest decisions are made for specific locations in planning area, DOF will prepare a Forest Land Use Plan (FLUP), as required under AS 38.05.112, and a Best Interest Finding, required under AS 38.05.035. FLUPs will contain site-specific guidelines for timber harvest. Negotiated timber sales will occur in the future within the planning area that are less than 10 acres in size or less than 500 MBF. These sales do not require a Best Interest Finding but may require a FLUP if they are greater than 10 acres in size. In either case, they must still adhere to the area plan's standards, guidelines and management intent statements.

Size and Shape of Timber Harvest Units. In determining the size, shape, and spacing of timber harvest units, DOF will take into consideration: reforestation; water body types; effects of soil erosion and mass wasting on water quality and fish habitat; terrain; marketing conditions and other economic constraints; harvest equipment capabilities; efficiency; wind firmness of areas that are not cut. DOF will also make allowances for important fish and wildlife habitat and scenic quality. Harvest units may not exceed 160 acres in size unless approved in an FLUP after consultation with DEC and ADF&G, and public review. The 160-acre limit applies to all harvesting systems except single tree selection. In some subunits, management intent indicates a smaller acreage.

Leave Area Design Criteria. After consultation with ADF&G as part of the FLUP planning process, leave areas that are identified in the approved FLUP, which may include areas of Old Growth Forest, shall be maintained to make allowances for important fish and/or wildlife habitat. The cumulative benefits of the forest wide protections provided by the Chugach and Tongass Land and Resource Management Plans as well as the opportunities for coordinated federal-state land management at the site and regional levels, should be considered in making determinations of the need for and the subsequent design of leave areas. Leave areas provide interconnected habitat for travel, feeding, resting, and escape or avoidance of predators. Areas where evidence of their use by wildlife is found to occur, natural travel corridors such as ridge points, the forested edge of wetlands, the coastal fringe, portions of Old Growth Forest, and riparian corridors should be considered for inclusion within designated leave areas. To

achieve this intent, special management areas extending out 300 feet from each bank are designated along anadromous and high value resident fish streams to facilitate wildlife movement, and provide important riparian habitat for fish and wildlife. Special management areas shall be greater where larger widths are specified in the management intent statement for upland tracts. Buffers not less than 330 feet will be left around each bald eagle nesting tree unless, upon consultation with USFWS, a site specific activity may be conducted within 330 feet of the nesting tree. Wind firmness of residual trees will be taken into consideration when designing leave areas between designated cutting units. Bridge timbers may be taken from leave areas if there is no feasible or prudent alternative.

Harvest Unit Layout. A mosaic of forest age classes will be created by cutting units and leave areas where feasible and prudent. DNR will lay out units following DOF's Engineering Guide for Southeast Region.

Timing of Harvest Activity. Among those management units with areas designated Settlement or General Use and identified as suitable for timber harvest, DOF will rotate the location of harvest activities between management units over time. Rotating the location of timber harvest will reduce the level of impacts to any particular management unit at any one time. In general, there should be no more than one timber sale in an area designated Settlement every two years, unless the community or the overall public interest supports a more active timber harvest program. This policy applies only to timber sales greater than 10 acres.

Steep Slopes. Forest management activities may not be conducted on slopes consistently greater than 67 percent, on an unstable slope, or in a slideprone area unless approved in an FLUP. DNR shall consult with ADF&G on decisions involving timber harvest in areas steeper than 67 percent. Harvest operations will be designed to prevent mass wasting and to maintain soil productivity, tree regeneration, and fish habitat.

Recreation and scenic values. In determining the size and shape of cutting units, DOF shall make allowance for scenic quality in or adjacent to areas of substantial importance to the tourism and recreation industry. In these areas, cutting units will reflect local topography and, to the extent practical, blend in with the topography and minimize linear borders. The relative importance of scenic quality will be specified in the management statements and controlled by the management intent guidelines for each management unit.

Settlement Areas. In areas designated Settlement, state commercial timber sales will adhere to the Forest Resources and Practices Act (FRPA) and pertinent state regulations for commercial forestry, and will not be considered a "land use conversion" as described in FRPA. Such timber harvest shall be direct support of current or future state subdivision development. However, the salvage of damage trees, including beach salvage, is authorized and may occur separately from subdivision development.

Maintenance of Areas adjacent to the Coast. Areas adjacent to the coast shall be maintained in order to achieve the objectives of fisheries and/or wildlife habitat protection; public access; dispersed recreation; scenic viewshed protection; and, within portions of this area, the selective harvest of timber. The width, configuration, and specific management objectives of these areas are identified for affected upland tracts in the management intent statements of the Resource Allocation Tables in the area plan. These areas are to be provided in existing Old Growth Forest areas. The exact configuration of coastal maintenance areas (forestry) are to be determined by ADF&G and DNR during the FLUP planning process. If authorized in the management intent for a specific tract, selective timber harvest may occur beyond the first 500 feet from mean high water, or as otherwise provided in these descriptions. Within a limited number of tracts, either selective harvest or conventional harvest methods may be used within the 500-1,000 foot area, the type depending on the results of the FLUP planning process. It is recognized that divergence from the inland boundary applying to specific tracts may be necessary to provide flexibility for uses and activities permitted by the state, including timber harvest, but shall only be authorized if the overall objectives of the coastal maintenance area are maintained. DNR shall consult with ADF&G in making decisions of this type.

Sustained Yield of Forest Resources Forestland will be managed to guarantee perpetual supplies of renewable resources to serve the needs of all Alaskans for the many products, benefits, and services obtained from them. Annual allowable timber harvest for the planning area shall be based on the acreage with designations identified as suitable for timber harvest in the Central/Southern Southeast Area Plan, the Prince of Wales Island Area Plan, and the Southwest Prince of Wales Island Area Plan within the Division of Forestry's Ketchikan area, taking into consideration the standards and guidelines of this plan and relevant statutes and regulations. The acreage may change over time as lands are converted to other uses. The number of acres of land suitable for timber harvest will be reviewed and revised periodically, and a new annual allowable harvest calculated. The annual allowable harvest will be calculated using the area control method. The amount of timber harvested annually from the planning area will vary and may be more or less than the annually allowable harvest figure for the area covered by this area plan. However, at no time shall the acreage harvested on a decadal basis exceed the annual allowable harvest for that period within the planning period.

Protection of Fish and Wildlife Habitat. Land designated Forestry, or land where timber harvest is an appropriate use, will be managed for multiple use of all resources and to ensure the sustained yield of renewable resources. Prior to harvest, DNR shall consult with and give due deference to ADF&G on the effects of the proposed harvest on fish and wildlife habitat, and make allowance for important fish and wildlife habitat, as provided under AS 41.16.060 and 41.17.098(d). The relative importance of wildlife habitat will be specified in the management intent statements and controlled by the management guidelines for each management unit. Important fish habitat is defined as

a water body supporting anadromous or high quality resident fish, as defined in AS 41.17.118(a)(2)(A) and consistent with the meaning of AS 41.17.060. Timber harvests of less than 10 acres in size are considered consistent with this guideline without consultation unless activities are proposed for which ADF&G has due deference. Riparian areas shall be managed in accordance with AS 41.17.118 and 11 AAC 95.185. No harvest activities will be undertaken within 100 feet of an anadromous or high value resident fish stream except as provided by 11 AAC 95.275 & .355. Within 100-300 feet from the stream, harvest may occur but must be consistent with the maintenance of important fish and wildlife habitat required under AS 41.17.118(a), with due deference to ADF&G.

Threatened and Endangered Species. All land use activities will be conducted consistent with state and federal Endangered Species Acts to avoid jeopardizing the continued existence of threatened or endangered species of animals or plants; or to provide for their continued use of an area and to avoid modification or destruction of their habitat. Specific mitigation recommendations should be identified through interagency consultation for any land use activity that potentially affects threatened or endangered species.

Division of Coastal and Ocean Management

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The Division of Coastal and Ocean Management (DCOM) is responsible for administering the Alaska Coastal Management Program (ACMP). The ACMP facilitates the implementation of various herring conservation measures at several distinct levels during resource planning processes as well as at the level of individual project planning and development. Below is a listing of the ACMP responsibilities of DCOM:

1. Pre-application assistance & meetings. The DCOM is tasked with arranging and scheduling meetings between a prospective developer and the agency personnel that would be reviewing, critiquing and, ultimately, writing permits to authorize a given development project. These meetings provide an invaluable opportunity for industry to meet face-to-face with agency scientists and resource managers. Oftentimes herring issues are brought to an applicant's attention at these meetings. Thus, when a developer is made aware of potential conflicts and/or potential adverse impacts of their planned project ahead of time, the finalized plan of operation or facility footprint is substantially modified before permit applications are even filed. At these meetings, prospective applicants are made aware, if they are not already, of the need to design and site facilities so as to be consistent with statewide standards and district enforceable policies. Applicants are also made aware of the (oftentimes) many distinct special-interest groups that need to be "kept in the loop" for the planning/approval process. This list typically includes commercial and recreational fishing interest groups, conservation and environmental groups, etc.

2. Requirements/Standards for what review materials need be submitted.
Applicants need to provide DCOM and review participants with (A) a completed Coastal Project Questionnaire; (B) map(s) identifying the location of the project and adjacent facilities, diagrams, technical data, and other relevant material; (C) description of any man-made structures or natural features that are at or near the project site; and (D) an evaluation of how the proposed project is consistent with the state standards and with any applicable district enforceable policies, sufficient to support the consistency certification.

These materials are of paramount importance in assisting agency personnel and the public in reviewing a given project for its potential impacts to coastal uses and resources. It is partially with these materials that a review participant can suggest alternative measures that will improve a proposed development project.

3. Public process/ public review. Most federal agency actions and activities that require a State or federal authorization (permits) go through both public and agency review processes often coordinated by DCOM. This fulfills many agencies responsibility for posting/distributing public notice. It also provides a key tool wherein USFWS, NMFS, ADF&G, state agency biologists, the coastal district, and the public can raise and address issues related to scientific, social and/or environmental concerns relative to herring habitats, population dynamics, or health. Federal agency activities and activities that require a State or federal authorization must go through the consistency review process and be found consistent/compliant with ACMP enforceable policies (statewide standards and district enforceable policies) before the authorizations for the activity can be issued. Oftentimes DCOM will negotiate and include specific alternative measures designed to minimize potentially adverse impacts to herring into a project description before it can be found consistent/compliant and authorizations can be issued.
4. DCOM assists coastal districts develop, adopt, and implement Coastal Management Plans, including district enforceable policies. According to statewide standards of the ACMP as well as the local enforceable policies, the ACMP review process functions as a tool for evaluating an activity and modifying the project description by adding minimization or mitigating measures (in the form of Alternative Measures).
5. DCOM works to act as a facilitator to attempt to resolve conflicts among the resource agencies, an affected coastal resource district, and/or an applicant--before, during, or after a project is permitted.
6. Where the specific aspects of an activity that would otherwise be subject to authorization by the ADEC are not subject to that department's authorization because the activity is either a federal activity or is located on federal land or the

OCS, the DEC can review, comment on, and/or add alternative measures to the activity's project description **only** through the ACMP. Thus, the ACMP provides a valuable and substantive venue for the state to review, comment on, allow, disallow or make modifications to certain federal agency activities or activities that require a State or federal authorization that are located on federal land or the OCS. This leverage is of paramount importance in areas that happen to be important as habitat for herring.

Specific Statewide standards and Coastal District Enforceable policies that address herring and herring habitat include, but are not limited to:

- ▶ **11 AAC 112.300. Habitats.** (b)(1) Offshore areas must be managed to avoid, minimize, or mitigate significant adverse impacts to competing uses such as commercial, recreational, or subsistence fishing, to the extent that those uses are determined to be in competition with the proposed use;
 - ▶ **11 AAC 112.300. Habitats.** (b)(2)(B) Estuaries must be managed to avoid, minimize, or mitigate significant adverse impacts to competing uses such as commercial, recreational, or subsistence fishing, to the extent that those uses are determined to be in competition with the proposed use;
 - ▶ **11 AAC 112.300. Habitats.** (b)(4) Tideflats must be managed to avoid, minimize, or mitigate significant adverse impacts to water flow, natural drainage patterns, and competing uses such as commercial, recreational, or subsistence uses;
- 11 AAC 112.300. Habitats.** (b)(9)(A) Important habitat designated by a coastal district must be managed for the special productivity of the habitat in accordance with the district enforceable policy; and
- 11 AAC 112.300. Habitats.** (b)(9)(B) Important habitat identified by a state agency must be managed to avoid, minimize, or mitigate significant adverse impacts to the special productivity of the habitat.

During the ACMP Coastal Consistency Review process for the Kensington Project, under prior regulations, numerous stipulations were developed to mitigate impacts to herring and their habitat (see above). These stipulations were incorporated into the various state authorizations, and will be in force for the duration of the Kensington Project if it proceeds. Similar stipulations are likely to be incorporated under current regulations into any future authorizations or modifications to existing authorizations that may affect the herring habitat in Berners Bay.

City and Borough of Juneau Coastal Management Plan Enforceable Policies

- ▶ The City and Borough of Juneau does not currently have a coastal district plan or enforceable policies in effect. However, DCOM is currently reviewing the proposed City and Borough of Juneau's Coastal Management Plan for approval and incorporation into the ACMP. The proposed CBJ CMP, likely to be effective March 2008, includes

enforceable policies that could, depending on the activity, address herring and/or herring habitat.

City and Borough of Haines Coastal Management Plan Enforceable Policies

- ▶ The City and Borough of Haines Coastal Management Plan (CBH CMP) went into effect August 8, 2007. The CBH CMP includes enforceable policies that may, depending on the activity, address herring and/or herring habitat.

Division of Mining, Land and Water

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The Division of Mining, Land and Water (DMLW) has the responsibility and authority to manage all commercial and recreational use of state land and resources in Southeast Alaska. This area stretches over 600 miles from Cape Suckling south to Portland Canal, and includes 1,000 named islands and 15,000 miles of shoreline. A limited amount of uplands and approximately 11 million acres of shorelands, tidelands, and submerged lands out to the three mile limit are managed by DMLW. In addition DMLW manages water allocations on all lands, including on federal and private land.

The DMLW authority primarily comes from AS 38.05, 41.23, 46.15 and 46.17. The division is responsible for preparing area plans and management plans for state lands. This is done through a public process to create policy and guidance for State land management. This includes consideration of sensitive habitats and development needs. There are six area plans covering the state lands in Southeast Alaska.

The newer plans say that *“essentially all tidelands and submerged lands are used for some form of community or commercial harvest at some time during the year.”* There are references to NOAA maps of “human use of biological resources” and to ADFG Subsistence Division if questions arise. The Central/Southern SE Area Plan states *“Activities in Traditional Use Commercial Herring Areas. Activities should be conditioned to minimize disruption of the harvest within traditional herring fishery areas, including the sac roe and wild kelp harvest fishery areas.”* The Juneau plan says that *“mitigating measures should be designed to protect the specific type of fish and wildlife harvest that occurs in the designated areas.”*

DMLW authorizes land uses through permits, leases, rights of way, sales, and other authorizations. All DMLW authorizations are granted in accordance with the area plans. In addition, authorizations must first be found consistent with the Alaska Coastal Management Program’s plans and enforceable policies. The division will consider these plans and place any restrictions or mitigating measures in the authorizations through stipulations to protect social or environmental concerns, inclusive of critical habitats.

Most authorizations undergo public and agency review, during which ADFG, USFWS or other participating agencies can bring attention to any environmental concerns about the project. DMLW will then address those concerns, commonly through attaching appropriate stipulations to the authorization.

The Division of Mining, Land and Water issues many authorizations for activities on State-owned lands in Southeast Alaska. Many of these approvals involve tideland improvements such as docks, floats, harbors and ferry terminals. Since these activities are within the coastal zone, the permits are subject to a consistency finding under the ACMP.

DMLW's statutes and regulations are fairly general and non-specific regarding fish and wildlife conflicts but generally require compliance with other statutes and regulations and minimization of environmental impacts. For example, the authority for attaching stipulations to DMLW permits is 11 AAC 96.040(b): "Each permit is subject to any provisions the department determines necessary to assure compliance with this chapter, to minimize conflicts with other uses, **to minimize environmental impacts**, or otherwise to be in the interests of the state." Leasing statutes and regulations also don't have any specific language.

Summary of Regulatory Mechanisms

Existing regulatory mechanisms are extensive and sufficient to protect the viability of SE Alaska herring and their habitats.

E. Other Natural and Manmade factors do not require a threatened or endangered listing.

There is no scientific or commercial evidence that suggests that other natural or manmade factors threaten SE Alaska herring stocks. Pacific herring are adaptable to a wide range of habitat and ocean conditions as evidenced by their geographic range which extends from California into the Bering Sea, and which includes a wide variety of habitats even within Southeast Alaska (Mecklenburg et al 2002). As a result herring may be more resilient to climate change than many other species. Herring as demonstrated by healthy herring populations in the Sitka area, are tolerant of both development and significant boat traffic. There is no scientific or commercial data indicating that climate change, oil pollution, or noise pollution are likely within the foreseeable future to occur at levels high enough to threaten the viability of herring in SE Alaska.

SUMMARY OF ANALYSIS OF THE STATUTORY LISTING FACTORS

The best available scientific and commercial information available **do not** indicate that SE Alaska herring are at significant risk as a result of any of the five listing factors found at 16 USC 1533 (a)(1).

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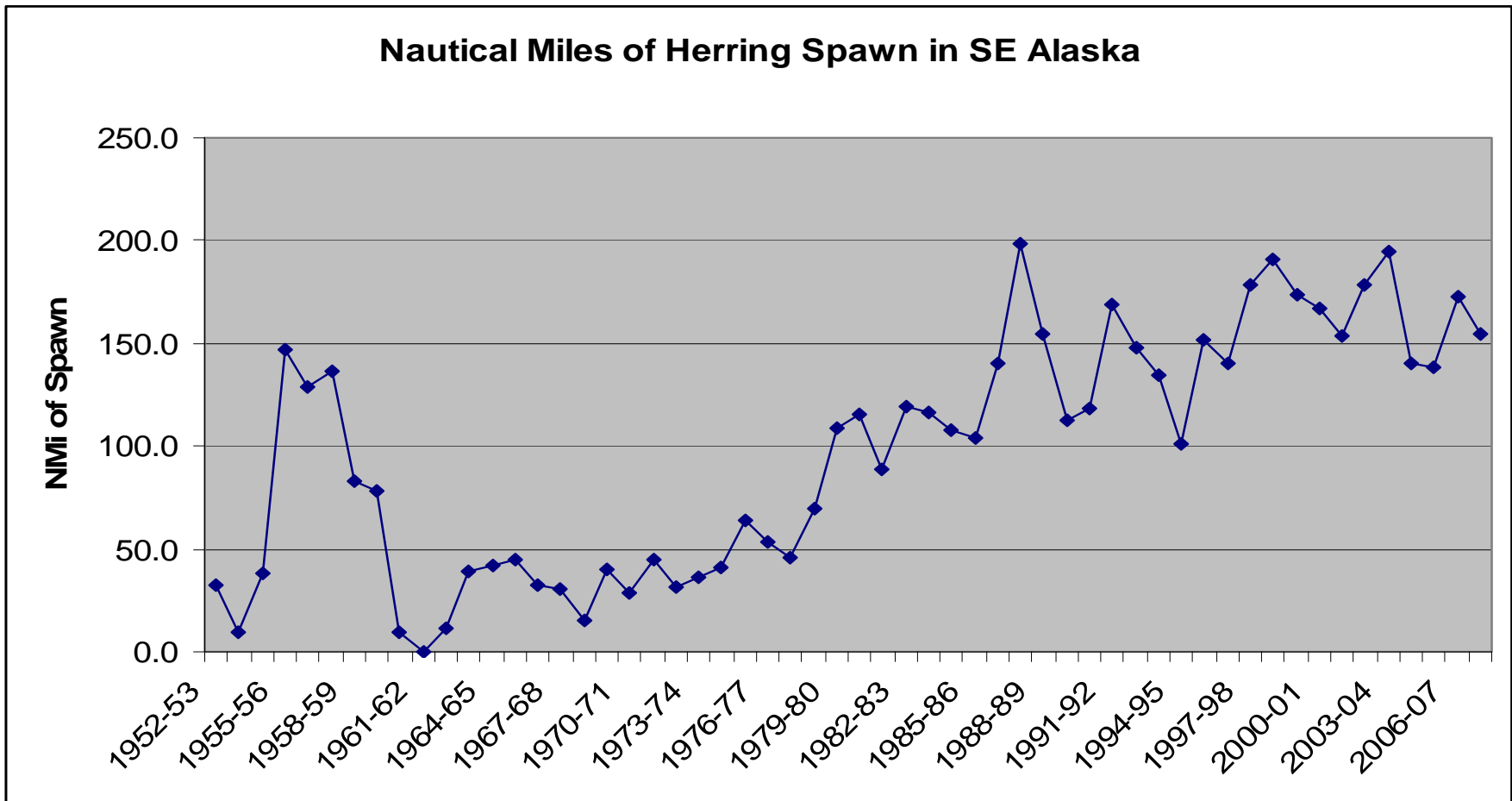


Figure 1. Nautical miles of documented herring spawn in southeast Alaska (graphical presentation of data from Table 1).

Table 1. Nautical miles of documented herring spawn in Southeast Alaska (1952-2008).

Season	Juneau Area	Seymour Canal	Tenakee Inlet	Hobart / Houghton	Funter	Idaho Inlet	West Chichagof	Port Althorp	Lisianski Inlet	Port Frederick	Hoona Sound	Gambier Bay	Hood Bay	Bradfield Canal	Craig-Klawock	Ernest Sound	Farragut Bay	Hydaburg	Kah Shakes / Cat I.	Kasaan Bay	Port Camden	Pybus Bay	Sitka Sound	Slocum Arm	West Behm Canal	Zimovia Strait	Bear Creek	Total
1952-53	8.2										12.2				12.2													32.6
1953-54	9.4																											9.4
1954-55	12.2														11.7				7.9						5.9			37.7
1955-56	10														13.6	7.5			9.2				100.0		6.4			146.7
1956-57	28.1														11.6	2.6			3.4				79.8		3.5			129.0
1957-58	24.1														11.5				2.5				92.8		5.9			136.8
1958-59	10.8														12.6				5.7				45.9		7.8			82.8
1959-60	12.9														3.5	10.3			7.0				44.5					78.2
1960-61															9.8													9.8
1961-62																												0.0
1962-63															11.5													11.5
1963-64															11.5			8.0					19.2					38.7
1964-65															12.3			9.0					20.8					42.1
1965-66															14.2			7.8					23.0					45.0
1966-67															12.4			5.0					15.0					32.4
1967-68															9.2			4.5					16.5					30.2
1968-69																							15.0					15.0
1969-70	11.5														11.7			3.8					11.3		2.0			40.3
1970-71		2.6									2.5				4.5	3.0		4.0	0.5	0.2			8.5		3.0		28.8	
1971-72	8.5	6									2				7.5			1.8		4.0			13.5	1.5			44.8	
1972-73	10.6										1				7.1			0.7		1.0			10.0	0.5	1.0		31.9	
1973-74	13.2										3								6.0	1.0			10.0	1.3	2.0		36.5	
1974-75	10.9	3.9	5																11.0	1.0			8.0	0.5	1.0		41.3	
1975-76	15.9	2.8	1								1				7.0	3.0			9.5	4.1	5.3		13.0		1.0		63.6	
1976-77	9.7	2.2	1								3.5		2.3		2.8	3.0		0.7	11.3	2.0	0.3		10.7	0.5	3.2		53.2	
1977-78	8	2.9	3	0.1		0.1		2.1		0.9	5.3		1.7		3.5			0.5	4.5	0.1	0.2		12.5		0.5		45.9	
1978-79	5.7	1	5.2	0				0.9			0.5		0.2		1.0	2.6		2.0	3.8	1.0	0.8		41.0		3.4		69.2	
1979-80	9.8	3.9	3.5	0		1.2				1.1			0.9		1.0	4.0		1.0	12.5	0.5	3.5		63.0		2.5		108.5	

1980-81	9.2	3.9	9.6	0		0.8	1.2	2.3	0.7	6.4	3.5	4.0	10.0	1.0	1.0	60.0	1.5	115.1							
1981-82	2.5	3.5	11.6	0				1.5		7.5		4.3	15.5		1.0	40.8	1.0	89.2							
1982-83	6	9.1	10	0				1	0.5	6.0		2.3	14.7	0.1	0.5	68.0	1.0	119.2							
1983-84	2.6	8.9	10	0.3			0.2	3		0.1	5.0	3.3	11.3	2.8		65.0	4.0	116.5							
1984-85	5.1	7.8	12	0				3.5			5.2	4.5	1.0	8.5		0.1	60.5	0.0	108.2						
1985-86	5	11.7	10	0.7		0.3		3.8			2.0		5.0	10.0	0.5	1.0	51.6	2.5	104.1						
1986-87	2.5	11.3	10	0.1		5.3		3.8		2.0	5.0	1.0	1.0	9.0	1.0	1.0	86.0	0.3	140.2						
1987-88	7.3	16.5	12	1.9			0.6	5		2.0	27.0	2.0	2.0	7.0	1.0	1.0	0	5.3	4.0	198.6					
1988-89	5.8	7.8	12.5	2.3				17			31.7	2.4	1.5	7.0		0.5	65.5		0.5	154.5					
1989-90	3.3	5	4.1	3.6				10			30.0	2.1		14.0		0.5	39.1		1.0	112.7					
1990-91	5.6	5.5	4.3	8.2				8.7			22.0			14.9			44.5		4.5	118.2					
1991-92	7.5	9		7.6			1.4	10.8			22.6	9.1	0.2	21.3			72.5		6.6	168.6					
1992-93	5.1	11	6.4	12.3				5.8			8.4	9.0	0.3	14.0	3.9	3.0	55.3		13.6	148.1					
1993-94	6.2	11.1	0.3	7				9			8.0	8.4	1.9	12.6	4.5		58.1		7.7	134.8					
1994-95	2.1	5.8	0.1	13				4.5			5.5	6.5	2.5	10.8	2.7		37.3		10.0	100.8					
1995-96	8.5	6.5	18.1	13.8		0.4		2.8	10.1		9.9	6.9		9.8	2.0	0.8	45.6		16.2	0.4	151.9				
1996-97	5.6	7.1	14.4	13.8				0.2	14.5		13.2	0.0		14.7			32.8		24.0		140.3				
1997-98	2	14.4	12.4	11.7					14.5		12.5	11.8				1.7	64.6		23.5		178.3				
1998-99	5.5	16.8	11	19.1			1.6	1.0	13.8		5.7	15.4	1.8	1.0	2.5	6.4	4.1	0.2	59.5		25.6	191.0			
1999-00	5.6	18.7	13.8	10		0.6		0.8	13		12.9	9.1	0.9	3.0	10.0	2.8	1.3	54.5		16.4		173.4			
2000-01	6.9	14.7	12.2	6.9				3.7	0.3	13.7				2.2	4.0	0.6	61.0		17.2		167.0				
2001-02	4	12.6	15.4	6				3.8		11.4		13.4		0.6	0.0	2.0	0.1		42.6	1.4	18.0	154.1			
2002-03	3	18.4	12.2	11.4				3.3		16.7	0.1	19.3		0.7	4.5	0.3	0.1	1.3	47.1		19.5	0.6	178.2		
2003-04	8.8	18.1	13	9.6		2.4			11.1		17.9		12	7.1		1.7	0.0	0.0	1.2	79.8	2.8	8.3	1.2	195.0	
2004-05	2.8	9.3	8.9	7.1					10.3		21.8		18	10.1		2.8	0.0	0.0	0.0	39.5		8.6	0.7	139.9	
2005-06	4.5	11.2	5.9	3.9					8.9		23.4		8.1	7.9		0.3	3.0	0.0	1.5	57.4		2.8	0.0	138.8	
2006-07	8.2	14.5	4.4	6.5					16.5		22.6	22.3	11.3	1.3						50.2		15.2		173.0	
2007-08	3.3	10.1	11.4	4.6		4			14.5		10.6	11.0	15.4	1.3		0.1		1.2		55.3		11		0.4	154.2