

**HB**

**98**

<TARGET><BILL>HB 98</BILL><SUBJECT>HB  
98</SUBJECT><COMM>HFSH28</COMM></TARGET>

# ALASKA STATE LEGISLATURE

**Member:**  
House Finance Committee

**Chair:**  
House Budget Sub Committees on:  
- Department of Health & Social Services  
- Department of Transportation & Public  
Facilities



**Session:**  
Alaska State Capitol  
Juneau, AK 99801-1182  
Phone: (907) 465-2679  
Fax: (907) 465-4822  
Toll Free (800) 505-2678

**Interim:**  
600 E. Railroad Ave  
Wasilla, AK 99654  
Phone: (907) 376-2679  
Fax: (907) 373-4745

## ***Representative Mark Neuman***

Rep.Mark.Neuman@akleg.gov

### **Sponsor Statement HB 98**

#### **"An Act relating to escapement thresholds and escapement goals for certain salmon stocks"**

Salmon stocks are critically important to all Alaskans. So much so that we have adopted an escapement based approach to management of this resource. Since statehood we've stipulated these spawning escapements goals are a primary management target to ensure sustainable yields into the future.

Escapement goals are important as they can precipitate actions that greatly curtail, even cease the harvesting of stocks during times of low productivity or likewise increase harvest during abundance.

This legislation addresses an area of concern in the use of and the setting of these goals. Currently salmon manage policies do not require an increase in the lower end of "sustainable escapement goal (SEG) or the biological escapement goal (BEG) to enhance the rapid replenishment of a stock of concern.

In managing a stock of concern, reducing the time to rehabilitate that stock would be a valuable tool for Alaska's Department of Fish & Game.

HB 98 directs the Board of Fisheries to adopt in regulation specific management objective for a salmon stock that has been identified as a stock of concern. The department, in consultation with the board, would set the management objective for that stock. The objective must include a sustained escapement threshold (SET) and optimal escapement goal (OEG).

I would appreciate your support

## **5 AAC 39.222. Policy for the management of sustainable salmon fisheries**

(a) The Board of Fisheries (board) and Department of Fish and Game (department) recognize that

(1) while, in the aggregate, Alaska's salmon fisheries are healthy and sustainable largely because of abundant pristine habitat and the application of sound, precautionary, conservation management practices, there is a need for a comprehensive policy for the regulation and management of sustainable salmon fisheries;

(2) in formulating fishery management plans designed to achieve maximum or optimum salmon production, the board and department must consider factors including environmental change, habitat loss or degradation, data uncertainty, limited funding for research and management programs, existing harvest patterns, and new fisheries or expanding fisheries;

(3) to effectively assure sustained yield and habitat protection for wild salmon stocks, fishery management plans and programs require specific guiding principles and criteria, and the framework for their application contained in this policy.

(b) The goal of the policy under this section is to ensure conservation of salmon and salmon's required marine and aquatic habitats, protection of customary and traditional subsistence uses and other uses, and the sustained economic health of Alaska's fishing communities.

(c) Management of salmon fisheries by the state should be based on the following principles and criteria:

(1) wild salmon stocks and the salmon's habitats should be maintained at levels of resource productivity that assure sustained yields as follows:

(A) salmon spawning, rearing, and migratory habitats should be protected as follows:

(i) salmon habitats should not be perturbed beyond natural boundaries of variation;

(ii) scientific assessments of possible adverse ecological effects of proposed habitat alterations and the impacts of the alterations on salmon populations should be conducted before approval of a proposal;

(iii) adverse environmental impacts on wild salmon stocks and the salmon's habitats should be assessed;

(iv) all essential salmon habitat in marine, estuarine, and freshwater ecosystems and access of salmon to these habitats should be protected; essential habitats include spawning and incubation areas, freshwater rearing areas, estuarine and nearshore rearing areas, offshore rearing areas, and migratory pathways;

(v) salmon habitat in fresh water should be protected on a watershed basis, including appropriate management of riparian zones, water quality, and water quantity;

(B) salmon stocks should be protected within spawning, incubating, rearing, and migratory habitats;

(C) degraded salmon productivity resulting from habitat loss should be assessed, considered, and controlled by affected user groups, regulatory agencies, and boards when making conservation and allocation decisions;

(D) effects and interactions of introduced or enhanced salmon stocks on wild salmon stocks should be assessed; wild salmon stocks and fisheries on those stocks should be protected from adverse impacts from artificial propagation and enhancement efforts;

(E) degraded salmon spawning, incubating, rearing, and migratory habitats should be restored to natural levels of productivity where known and desirable;

(F) ongoing monitoring should be conducted to determine the current status of habitat and the effectiveness of restoration activities;

(G) depleted salmon stocks should be allowed to recover or, where appropriate, should be actively restored; diversity should be maintained to the maximum extent possible, at the genetic, population, species, and ecosystem levels;

(2) salmon fisheries shall be managed to allow escapements within ranges necessary to conserve and sustain potential salmon production and maintain normal ecosystem functioning as follows:

(A) salmon spawning escapements should be assessed both temporally and geographically; escapement monitoring programs should be appropriate to the scale, intensity, and importance of each salmon stock's use;

(B) salmon escapement goals, whether sustainable escapement goals, biological escapement goals, optimal escapement goals, or inriver run goals, should be established in a manner consistent with sustained yield; unless otherwise directed, the department will manage Alaska's salmon fisheries, to the extent possible, for maximum sustained yield;

(C) salmon escapement goal ranges should allow for uncertainty associated with measurement techniques, observed variability in the salmon stock measured, changes in climatic and oceanographic conditions, and varying abundance within related populations of the salmon stock measured;

(D) salmon escapement should be managed in a manner to maintain genetic and phenotypic characteristics of the stock by assuring appropriate geographic and temporal distribution of spawners as well as consideration of size range, sex ratio, and other population attributes;

(E) impacts of fishing, including incidental mortality and other human-induced mortality, should be assessed and considered in harvest management decisions;

(F) salmon escapement and harvest management decisions should be made in a manner that protects non-target salmon stocks or species;

(G) the role of salmon in ecosystem functioning should be evaluated and considered in harvest management decisions and setting of salmon escapement goals;

(H) salmon abundance trends should be monitored and considered in harvest management decisions;

(3) effective management systems should be established and applied to regulate human activities that affect salmon as follows:

(A) salmon management objectives should be appropriate to the scale and intensity of various uses and the biological capacities of target salmon stocks;

(B) management objectives should be established in harvest management plans, strategies, guiding principles, and policies, such as for mixed stock fishery harvests, fish disease, genetics, and hatchery production, that are subject to periodic review;

(C) when wild salmon stocks are fully allocated, new fisheries or expanding fisheries should be restricted, unless provided for by management plans or by application of the board's allocation criteria;

(D) management agencies should have clear authority in statute and regulation to

(i) control all sources of fishing mortality on salmon;

(ii) protect salmon habitats and control non-fishing sources of mortality;

(E) management programs should be effective in

(i) controlling human-induced sources of fishing mortality and should incorporate procedures to assure effective monitoring, compliance, control, and enforcement;

(ii) protecting salmon habitats and controlling collateral mortality and should incorporate procedures to assure effective monitoring, compliance, control, and enforcement;

(F) fisheries management implementation and outcomes should be consistent with regulations, regulations should be consistent with statutes, and effectively carry out the purpose of this section;

(G) the board will recommend to the commissioner the development of effective joint research, assessment, and management arrangements with appropriate management agencies and bodies

for salmon stocks that cross state, federal, or international jurisdictional boundaries; the board will recommend the coordination of appropriate procedures for effective monitoring, compliance, control, and enforcement with those of other agencies, states, or nations;

(H) the board will work, within the limits of its authority, to assure that

(i) management activities are accomplished in a timely and responsive manner to implement objectives, based on the best available scientific information;

(ii) effective mechanisms for the collection and dissemination of information and data necessary to carry out management activities are developed, maintained, and utilized;

(iii) management programs and decision-making procedures are able to clearly distinguish, and effectively deal with, biological and allocation issues;

(I) the board will recommend to the commissioner and legislature that adequate staff and budget for research, management, and enforcement activities be available to fully implement sustainable salmon fisheries principles;

(J) proposals for salmon fisheries development or expansion and artificial propagation and enhancement should include assessments required for sustainable management of existing salmon fisheries and wild salmon stocks;

(K) plans and proposals for development or expansion of salmon fisheries and enhancement programs should effectively document resource assessments, potential impacts, and other information needed to assure sustainable management of wild salmon stocks;

(L) the board will work with the commissioner and other agencies to develop effective processes for controlling excess fishing capacity;

(M) procedures should be implemented to regularly evaluate the effectiveness of fishery management and habitat protection actions in sustaining salmon populations, fisheries, and habitat, and to resolve associated problems or deficiencies;

(N) conservation and management decisions for salmon fisheries should take into account the best available information on biological, environmental, economic, social, and resource use factors;

(O) research and data collection should be undertaken to improve scientific and technical knowledge of salmon fisheries, including ecosystem interactions, status of salmon populations, and the condition of salmon habitats;

(P) the best available scientific information on the status of salmon populations and the condition of the salmon's habitats should be routinely updated and subject to peer review;

(4) public support and involvement for sustained use and protection of salmon resources should be sought and encouraged as follows:

(A) effective mechanisms for dispute resolution should be developed and used;

(B) pertinent information and decisions should be effectively disseminated to all interested parties in a timely manner;

(C) the board's regulatory management and allocation decisions will be made in an open process with public involvement;

(D) an understanding of the proportion of mortality inflicted on each salmon stock by each user group, should be promoted, and the burden of conservation should be allocated across user groups in a manner consistent with applicable state and federal statutes, including AS 16.05.251 (e) and AS 16.05.258 ; in the absence of a regulatory management plan that otherwise allocates or restricts harvests, and when it is necessary to restrict fisheries on salmon stocks where there are known conservation problems, the burden of conservation shall be shared among all fisheries in close proportion to each fisheries' respective use, consistent with state and federal law;

(E) the board will work with the commissioner and other agencies as necessary to assure that adequately funded public information and education programs provide timely materials on salmon conservation, including habitat requirements, threats to salmon habitat, the value of salmon and habitat to the public and ecosystem (fish and wildlife), natural variability and population dynamics, the status of salmon stocks and fisheries, and the regulatory process;

(5) in the face of uncertainty, salmon stocks, fisheries, artificial propagation, and essential habitats shall be managed conservatively as follows:

(A) a precautionary approach, involving the application of prudent foresight that takes into account the uncertainties in salmon fisheries and habitat management, the biological, social, cultural, and economic risks, and the need to take action with incomplete knowledge, should be applied to the regulation and control of harvest and other human-induced sources of salmon mortality; a precautionary approach requires

(i) consideration of the needs of future generations and avoidance of potentially irreversible changes;

(ii) prior identification of undesirable outcomes and of measures that will avoid undesirable outcomes or correct them promptly;

(iii) initiation of any necessary corrective measure without delay and prompt achievement of the measure's purpose, on a time scale not exceeding five years, which is approximately the generation time of most salmon species;

(iv) that where the impact of resource use is uncertain, but likely presents a measurable risk to sustained yield, priority should be given to conserving the productive capacity of the resource;

(v) appropriate placement of the burden of proof, of adherence to the requirements of this subparagraph, on those plans or ongoing activities that pose a risk or hazard to salmon habitat or production;

(B) a precautionary approach should be applied to the regulation of activities that affect essential salmon habitat.

(d) The principles and criteria for sustainable salmon fisheries shall be applied, by the department and the board using the best available information, as follows:

(1) at regular meetings of the board, the department will, to the extent practicable, provide the board with reports on the status of salmon stocks and salmon fisheries under consideration for regulatory changes, which should include

(A) a stock-by-stock assessment of the extent to which the management of salmon stocks and fisheries is consistent with the principles and criteria contained in the policy under this section;

(B) descriptions of habitat status and any habitat concerns;

(C) identification of healthy salmon stocks and sustainable salmon fisheries;

(D) identification of any existing salmon escapement goals, or management actions needed to achieve these goals, that may have allocative consequences such as the

(i) identification of a new fishery or expanding fishery;

(ii) identification of any salmon stocks, or populations within stocks, that present a concern related to yield, management, or conservation; and

(iii) description of management and research options to address salmon stock or habitat concerns;

(2) in response to the department's salmon stock status reports, reports from other resource agencies, and public input, the board will review the management plan, or consider developing a management plan, for each affected salmon fishery or stock; management plans will be based on the principles and criteria contained in this policy and will

(A) contain goals and measurable and implementable objectives that are reviewed on a regular basis and utilize the best available scientific information;

(B) minimize the adverse effects on salmon habitat caused by fishing;

(C) protect, restore, and promote the long-term health and sustainability of the salmon fishery and habitat;

(D) prevent overfishing; and

(E) provide conservation and management measures that are necessary and appropriate to promote maximum or optimum sustained yield of the fishery resource;

(3) in the course of review of the salmon stock status reports and management plans described in (1) and (2) of this subsection, the board, in consultation with the department, will determine if any new fisheries or expanding fisheries, stock yield concerns, stock management concerns, or stock conservation concerns exist; if so, the board will, as appropriate, amend or develop salmon fishery management plans to address these concerns; the extent of regulatory action, if any, should be commensurate with the level of concerns and range from milder to stronger as concerns range from new and expanding salmon fisheries through yield concerns, management concerns, and conservation concerns;

(4) in association with the appropriate management plan, the department and the board will, as appropriate, collaborate in the development and periodic review of an action plan for any new or expanding salmon fisheries, or stocks of concern; action plans should contain goals, measurable and implementable objectives, and provisions, including

(A) measures required to restore and protect salmon habitat, including necessary coordination with other agencies and organizations;

(B) identification of salmon stock or population rebuilding goals and objectives;

(C) fishery management actions needed to achieve rebuilding goals and objectives, in proportion to each fishery's use of, and hazards posed to, a salmon stock;

(D) descriptions of new or expanding salmon fisheries, management concern, yield concern, or conservation concern; and

(E) performance measures appropriate for monitoring and gauging the effectiveness of the action plan that are derived from the principles and criteria contained in this policy;

(5) each action plan will include a research plan as necessary to provide information to address concerns; research needs and priorities will be evaluated periodically, based on the effectiveness of the monitoring described in (4) of this subsection;

(6) where actions needed to regulate human activities that affect salmon and salmon's habitat that are outside the authority of the department or the board, the department or board shall correspond with the relevant authority, including the governor, relevant boards and commissions, commissioners, and chairs of appropriate legislative committees, to describe the issue and recommend appropriate action.

(e) Nothing in the policy under this section is intended to expand, reduce, or be inconsistent with, the statutory regulatory authority of the board, the department, or other state agencies with regulatory authority that impacts the fishery resources of the state.

(f) In this section, and in implementing this policy,

(1) "allocation" means the granting of specific harvest privileges, usually by regulation, among or between various user groups; "allocation" includes quotas, time periods, area restrictions, percentage sharing of stocks, and other management measures providing or limiting harvest opportunity;

(2) "allocation criteria" means the factors set out in AS 16.05.251 (e) considered by the board as appropriate to particular allocation decisions under 5 AAC 39.205, 5 AAC 75.017, and 5 AAC 77.007;

(3) "biological escapement goal" or "(BEG)" means the escapement that provides the greatest potential for maximum sustained yield; BEG will be the primary management objective for the escapement unless an optimal escapement or inriver run goal has been adopted; BEG will be developed from the best available biological information, and should be scientifically defensible on the basis of available biological information; BEG will be determined by the department and will be expressed as a range based on factors such as salmon stock productivity and data uncertainty; the department will seek to maintain evenly distributed salmon escapements within the bounds of a BEG;

(4) "burden of conservation" means the restrictions imposed by the board or department upon various users in order to achieve escapement, rebuild, or in some other way conserve a specific salmon stock or group of stocks; this burden, in the absence of a salmon fishery management plan, will be generally applied to users in close proportion to the users' respective harvest of the salmon stock;

(5) "chronic inability" means the continuing or anticipated inability to meet escapement thresholds over a four to five year period, which is approximately the generation time of most salmon species;

(6) "conservation concern" means concern arising from a chronic inability, despite the use of specific management measures, to maintain escapements for a stock above a sustained escapement threshold (SET); a conservation concern is more severe than a management concern;

(7) "depleted salmon stock" means a salmon stock for which there is a conservation concern;

(8) "diversity", in a biological context, means the range of variation exhibited within any level of organization, such as among genotypes within a salmon population, among populations within a salmon stock, among salmon stocks within a species, among salmon species within a community, or among communities within an ecosystem;

(9) "enhanced salmon stock" means a stock of salmon that is undergoing specific manipulation, such as hatchery augmentation or lake fertilization, to enhance its productivity above the level that would naturally occur; "enhanced salmon stock" includes an introduced stock, where no wild salmon stock had occurred before, or a wild salmon stock undergoing manipulation, but does not include a salmon stock undergoing rehabilitation, which is intended to restore a salmon stock's productivity to a higher natural level;

(10) "escapement" means the annual estimated size of the spawning salmon stock; quality of the escapement may be determined not only by numbers of spawners, but also by factors such as sex ratio, age composition, temporal entry into the system, and spatial distribution within the salmon spawning habitat;

(11) "expanding fishery" means a salmon fishery in which effective harvesting effort has recently increased significantly beyond historical levels and where the increase has not resulted from natural fluctuations in salmon abundance;

(12) "expected yields" mean levels at or near the lower range of recent historic harvests if they are deemed sustainable;

(13) "genetic" means those characteristics (genotypic) of an individual or group of salmon that are expressed genetically, such as allele frequencies or other genetic markers;

(14) "habitat concern" means the degradation of salmon habitat that results in, or can be anticipated to result in, impacts leading to yield, management, or conservation concerns;

(15) "harvestable surplus" means the number of salmon from a stock's annual run that is surplus to escapement needs and can reasonably be made available for harvest;

(16) "healthy salmon stock" means a stock of salmon that has annual runs typically of a size to meet escapement goals and a potential harvestable surplus to support optimum or maximum sustained yield;

(17) "incidental harvest" means the harvest of fish, or other species, that is captured in addition to the target species of a fishery;

(18) "incidental mortality" means the mortality imposed on a salmon stock outside of directed fishing, and mortality caused by incidental harvests, interaction with fishing gear, habitat degradation, and other human-related activities;

(19) "inriver run goal" means a specific management objective for salmon stocks that are subject to harvest upstream of the point where escapement is estimated; the inriver run goal will be set in regulation by the board and is comprised of the SEG, BEG, or OEG, plus specific allocations to inriver fisheries;

(20) "introduced stock" means a stock of salmon that has been introduced to an area, or portion of an area, where that stock had not previously occurred; an "introduced salmon stock" includes a salmon stock undergoing continued enhancement, or a salmon stock that is left to sustain itself with no additional manipulation;

(21) "management concern" means a concern arising from a chronic inability, despite use of specific management measures, to maintain escapements for a salmon stock within the bounds of the SEG, BEG, OEG, or other specified management objectives for the fishery; a management concern is not as severe as a conservation concern;

(22) "maximum sustained yield" or "(MSY)" means the greatest average annual yield from a salmon stock; in practice, MSY is achieved when a level of escapement is maintained within a specific range on an annual basis, regardless of annual run strength; the achievement of MSY requires a high degree of management precision and scientific information regarding the relationship between salmon escapement and subsequent return; the concept of MSY should be interpreted in a broad ecosystem context to take into account species interactions, environmental changes, an array of ecosystem goods and services, and scientific uncertainty;

(23) "mixed stock fishery" means a fishery that harvests fish from a mixture of stocks;

(24) "new fishery" means a fishery that new units of effort or expansion of existing effort toward new species, areas, or time periods, results in harvest patterns substantially different from those in previous years, and the difference is not exclusively the result of natural fluctuations in fish abundance;

(25) "optimal escapement goal" or "(OEG)" means a specific management objective for salmon escapement that considers biological and allocative factors and may differ from the SEG or BEG; an OEG will be sustainable and may be expressed as a range with the lower bound above the level of SET, and will be adopted as a regulation by the board; the department will seek to maintain evenly distributed escapements within the bounds of the OEG;

(26) "optimum sustained yield" or "(OSY)" means an average annual yield from a salmon stock considered to be optimal in achieving a specific management objective other than maximum yield, such as achievement of a consistent level of sustained yield, protection of a less abundant or less productive salmon stock or species, enhancement of catch per unit effort in sport fishery, facilitation of a non-consumptive use, facilitation of a subsistence use, or achievement of a specific allocation;

(27) "overfishing" means a level of fishing on a salmon stock that results in a conservation or management concern;

(28) "phenotypic characteristics" means those characteristics of an individual or group of salmon that are expressed physically, such as body size and length at age;

(29) "rehabilitation" means efforts applied to a salmon stock to restore it to an otherwise natural level of productivity; "rehabilitation" does not include an enhancement, which is intended to augment production above otherwise natural levels;

(30) "return" means the total number of salmon in a stock from a single brood (spawning) year surviving to adulthood; because the ages of adult salmon (except pink salmon) returning to spawn varies, the total return from a brood year will occur over several calendar years; the total return generally includes those mature salmon from a single brood year that are harvested in fisheries plus those that compose the salmon stock's spawning escapement; "return" does not include a run, which is the number of mature salmon in a stock during a single calendar year;

(31) "run" means the total number of salmon in a stock surviving to adulthood and returning to the vicinity of the natal stream in any calendar year, composed of both the harvest of adult salmon plus the escapement; the annual run in any calendar year, except for pink salmon, is composed of several age classes of mature fish from the stock, derived from the spawning of a number of previous brood years;

(32) "salmon" means the five wild anadromous semelparous Pacific salmon species *Oncorhynchus sp.*, except steelhead and cutthroat trout, native to Alaska as follows:

(A) chinook or king salmon (*O. tshawytscha*);

(B) sockeye or red salmon (*O. nerka*);

(C) coho or silver salmon (*O. kisutch*);

(D) pink or humpback salmon (*O. gorbuscha*); and

(E) chum or dog salmon (*O. keta*);

(33) "salmon population" means a locally interbreeding group of salmon that is distinguished by a distinct combination of genetic, phenotypic, life history, and habitat characteristics, comprised of an entire stock or a component portion of a stock; the smallest uniquely identifiable spawning aggregation of genetically similar salmon used for monitoring purposes;

(34) "salmon stock" means a locally interbreeding group of salmon that is distinguished by a distinct combination of genetic, phenotypic, life history, and habitat characteristics or an aggregation of two or more interbreeding groups which occur within the same geographic area and is managed as a unit;

(35) "stock of concern" means a stock of salmon for which there is a yield, management, or conservation concern;

(36) "sustainable escapement goal" or "(SEG)" means a level of escapement, indicated by an index or an escapement estimate, that is known to provide for sustained yield over a 5 to 10 year period, used in situations where a BEG cannot be estimated or managed for; the SEG is the primary management objective for the escapement, unless an optimal escapement or inriver run goal has been adopted by the board; the SEG will be developed from the best available biological information; and should be scientifically defensible on the basis of that information; the SEG will be determined by the department and will take into account data uncertainty and be stated as either a "SEG range" or "lower bound SEG"; the department will seek to maintain escapements within the bounds of the SEG range or above the level of a lower bound SEG;

(37) "sustainable salmon fishery" means a salmon fishery that persists and obtains yields on a continuing basis; characterized by fishing activities and habitat alteration, if any, that do not cause or lead to undesirable changes in biological productivity, biological diversity, or ecosystem structure and function, from one human generation to the next;

(38) "sustained yield" means an average annual yield that results from a level of salmon escapement that can be maintained on a continuing basis; a wide range of average annual yield levels is sustainable; a wide range of annual escapement levels can produce sustained yields;

(39) "sustained escapement threshold" or "(SET)" means a threshold level of escapement, below which the ability of the salmon stock to sustain itself is jeopardized; in practice, SET can be estimated based on lower ranges of historical escapement levels, for which the salmon stock has consistently demonstrated the ability to sustain itself; the SET is lower than the lower bound of the BEG and lower than the lower bound of the SEG; the SET is established by the department in consultation with the board, as needed, for salmon stocks of management or conservation concern;

(40) "target species" or "target salmon stocks" means the main, or several major, salmon species of interest toward which a fishery directs its harvest;

(41) "yield" means the number or weight of salmon harvested in a particular year or season from a stock;

(42) "yield concern" means a concern arising from a chronic inability, despite the use of specific management measures, to maintain expected yields, or harvestable surpluses, above a stock's escapement needs; a yield concern is less severe than a management concern, which is less severe than a conservation concern;

(43) "wild salmon stock" means a stock of salmon that originates in a specific location under natural conditions; "wild salmon stock" may include an enhanced or rehabilitated stock if its productivity is augmented by supplemental means, such as lake fertilization or rehabilitative stocking; "wild salmon stock" does not include an introduced stock, except that some introduced salmon stocks may come to be considered "wild" if the stock is self-sustaining for a long period of time;

(44) "action point" means a threshold value for some quantitative indicator of stock run strength at which an explicit management action will be taken to achieve an optimal escapement goal.

**History: Eff. 9/30/2000, Register 155; am 11/16/2000, Register 156; am 6/22/2001, Register 158; am 6/10/2010, Register 194**

# Petersburg Vessel Owners Association

PO Box 232

Petersburg, AK 99833

Phone & Fax: 907.772.9323

pvoa@gci.net • www.pvoaonline.org

March 29, 2013

Alaska State Legislature  
House Fisheries Committee  
Representative Paul Seaton, Chair  
State Capitol  
Juneau, AK 99811

**RE: Oppose HB 98**

Dear Chairman Seaton and Fisheries Committee Members,

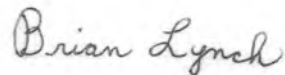
Petersburg Vessel Owners Association (PVOA) is a diverse group of over 100 commercial fishermen and businesses operating primarily in Southeast Alaska. Our members provide millions of meals to the public annually by participating in a variety of fisheries statewide including salmon, herring, halibut, cod, crab, black cod, shrimp, and dive fisheries. PVOA appreciates the opportunity to comment on HB 98.

**PVOA is opposed to HB 98.** While PVOA would likely be opposed to this legislation, as currently written, were it to be presented as a proposal to the Alaska Board of Fisheries, our main disagreement with this bill is because this issue should be taken up by the Alaska Board of Fisheries, not the Alaska State Legislature.

The Board of Fisheries was established for the purpose of the conservation and development of the fishery resources of the state and, as such, is the regulatory body best qualified to consider the merits of establishing technical definitions, procedures and protocols for determining sustainable salmon escapement goals. The Alaska Board of Fisheries process is uniquely designed for thoroughly vetting the technical aspects of proposals affecting the State's fisheries resources, specifically by having Alaska Department of Fish and Game biologists and other technical experts present at all meetings to address those technical aspects. Unless the Legislature is going to dedicate the same amount of time and effort to duplicate or replace the duties of the Board of Fisheries we respectfully request that you do not move HB 98 out of the Fisheries Committee and allow this issue to be addressed and acted upon by the Board of Fisheries.

Thank you for the opportunity to comment on this legislation. If we can provide further information or answer any questions, please feel free to contact us.

Sincerely,



Brian Lynch  
Executive Director



# UNITED FISHERMEN OF ALASKA

**Mailing Address:** PO Box 20229, Juneau AK 99802-0229  
**Physical Address:** 410 Calhoun Ave Ste 101, Juneau AK 99801  
**Phone:** (907)586-2820 **Fax:** (907) 463-2545  
**Email:** [ufa@ufa-fish.org](mailto:ufa@ufa-fish.org) **Website:** [www.ufa-fish.org](http://www.ufa-fish.org)

April 1, 2013

Representative Paul Seaton, Chairman  
House Special Committee on Fisheries  
Alaska State Legislature  
State Capitol, 120 Fourth Street  
Juneau, AK 99801-1182  
Email: [Rep.Paul.Seaton@akleg.gov](mailto:Rep.Paul.Seaton@akleg.gov)

**RE: OPPOSITION TO HB 98 – Escapement Goals**

Dear Chairman Seaton and Committee Members,

United Fishermen of Alaska (UFA) represents 36 Alaska Commercial fishing organizations from fisheries throughout Alaska and its offshore federal waters.

We appreciate the intention behind HB 98 - to protect the sustainability of Alaska's salmon resources.

*However, we have long supported the Alaska Board of Fisheries and its deliberative process as the appropriate forum for fisheries regulations and policies, and for this reason we oppose HB 98 as a matter to be addressed in the Legislature.*

Thank you for your attention on this matter.

Sincerely,

Julianne Curry  
Executive Director

Alaska Bering Sea Crabbers • Alaska Independent Fishermen's Marketing Association  
Alaska Independent Tendermen's Association • Alaska Longline Fishermen's Association • Alaska Scallop Association • Alaska Trollers Association  
Alaska Whitefish Trawlers Association • Aleutian Pribilof Islands Community Development Association • Armstrong Keta • At-sea Processors Association  
Bristol Bay Reserve • Cape Barnabas Inc. • Concerned Area "M" Fishermen • Cook Inlet Aquaculture Association • Cordova District Fishermen United  
Douglas Island Pink and Chum • Groundfish Forum • Kenai Peninsula Fishermen's Association • Kodiak Regional Aquaculture Association •  
North Pacific Fisheries Association • Northern Southeast Regional Aquaculture Association • Petersburg Vessel Owners Association  
Prince William Sound Aquaculture Corporation • Purse Seine Vessel Owner Association • Seafood Producers Cooperative  
Southeast Alaska Herring Conservation Alliance • Southeast Alaska Fisherman's Alliance • Southeast Alaska Regional Dive Fisheries Association  
Southeast Alaska Seiners • Southern Southeast Regional Aquaculture Association • United Catcher Boats • United Cook Inlet Drift Association  
United Southeast Alaska Gillnetters • Valdez Fisheries Development Association

# Where Have all the Salmon Gone?



## Upper Cook Inlet Fisheries

by MSB Fish and Wildlife Commission

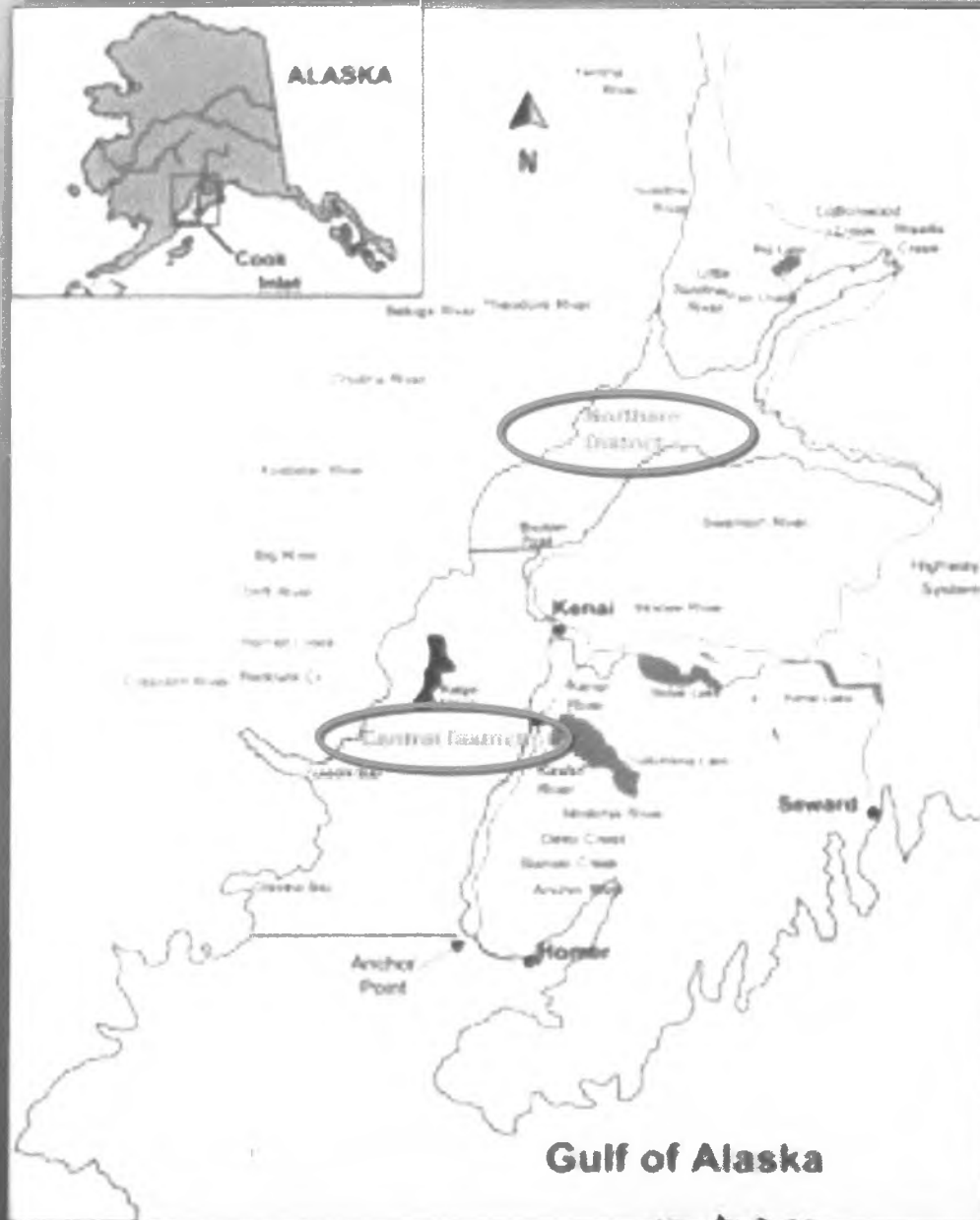
February 21, 2013

# UPPER COOK INLET FISHERIES

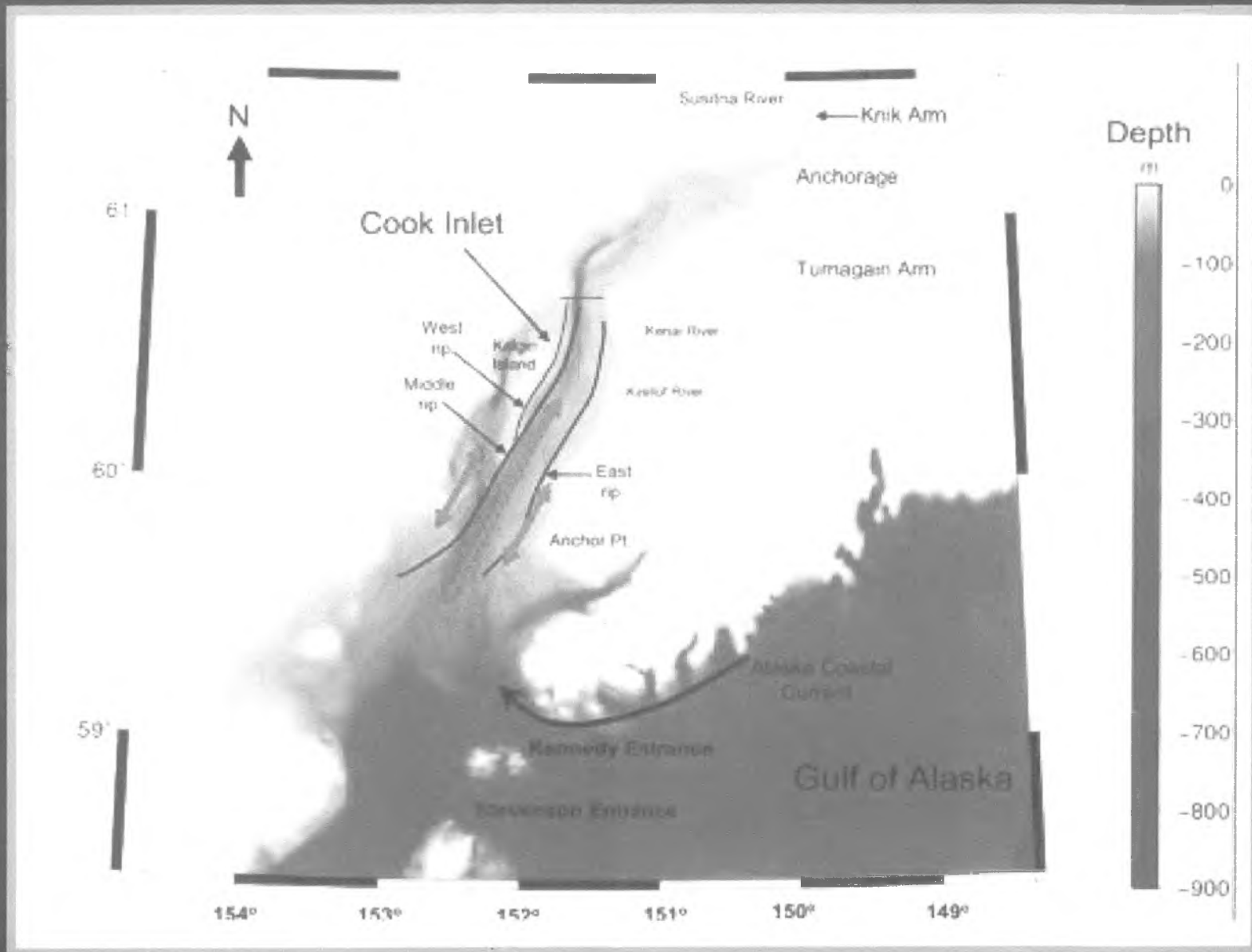
Salmon are *essential* to the character, lifestyle and economy of the Mat-Su Borough



# UCI Commercial Fishery Districts



# Fish Migration Patterns



# Upper Cook Inlet

*a complex, mixed-stock fishery*

## Run Timing of Salmon In UCI



# UCI Salmon Production

UCI SALMON RUNS EXCEED 15 MILLION

LARGEST HARVEST TOP 10 MILLION



AVERAGE HARVEST 4 MILLION

MAT SU DRAINAGES PRODUCE MOST

King salmon  
Coho salmon  
Pink salmon  
Chum salmon

KENAI DRAINAGES PRODUCE MOST SOCKEYE SALMON



# UCI COMMERCIAL Fishery

*About 570 Commercial Drift and 750 Set Net Permits fish UCI*

**Both gear types fish Central District with 70% of set netters on east side**

**Only set nets permitted in Northern District**

**Small subsistence set net fishery near Tyonek**

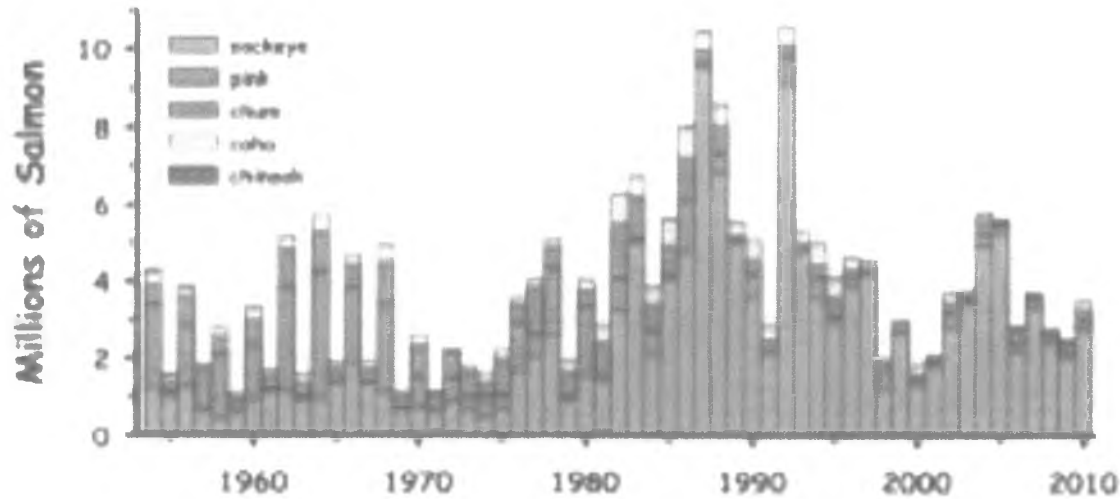


**99% of UCI harvest occurs in Central District  
with sockeye normally 85% of catch**

# UCI Commercial Harvest

1950-2010

1959 Alaska becomes State and takes over fisheries management from the federal government.



Trends in UCI Commercial Harvest by Species

# UCI Sport Fishery

Population - Nearly 2/3s of AK's residents  
reside along shores of UCI

250,000 people sport fish annually  
160,000 are salmon fishermen  
30,000 households fish for personal use

About 1 out of 3 Alaskans sport fish

highest rate in the nation



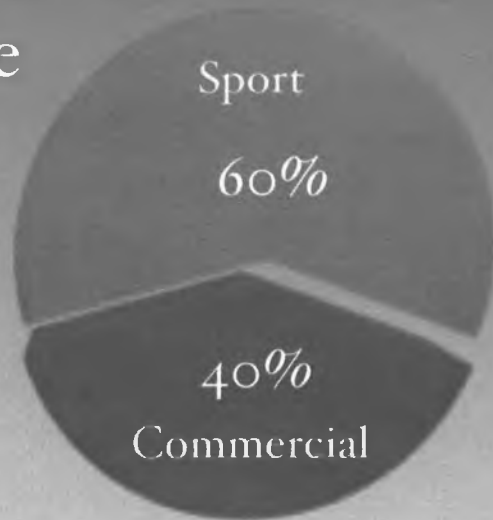
# Upper Cook Inlet Harvest Shares



UCI Sockeye  
3 million/year



UCI Coho  
400,000/year



Kenai Chinook  
30,000/year



All UCI Salmon  
4 million/year

\*sport includes personal use fisheries

# The Economic Value of Sport Fishing

The value of commercial fisheries has always been widely known, yet the economic significance of sport fishing has only recently gained recognition



**Statewide \$1.4 billion spent sport fishing 2007**

Cook Inlet, half of all sport fishing in AK occurs here, Anglers spent \$733 million in 2007, which supported 8,056 jobs and generated \$55 million in state and local taxes

**Mat-Su, anglers fished nearly 300,000 days in 2007 spent \$118 million and generated \$31 M to \$64 M to local economy**



Commercial fishing, in 2007, wholesale value of salmon harvest in Cook Inlet, \$ 77 million



Susitna

OUR SALMON ARE IN  
JEOPARDY



# MAT-SU SALMON STOCKS OF CONCERN



*7 out of 11 Stocks of Concern in Alaska are in North Cook Inlet*

---

Susitna sockeye declared Stock of Concern in 2008

Six king stocks declared Stock of Concern in 2011

Minimum king salmon escapement missed for 6 consecutive years

---

Low king salmon returns throughout Mat-Su

*12 of 17 goals missed in 2011*

*13 of 17 goals missed in 2012*

Little Susitna River Coho escapement missed for four consecutive years

---



## *Sport fishing Is Plummeting in Mat-Su*

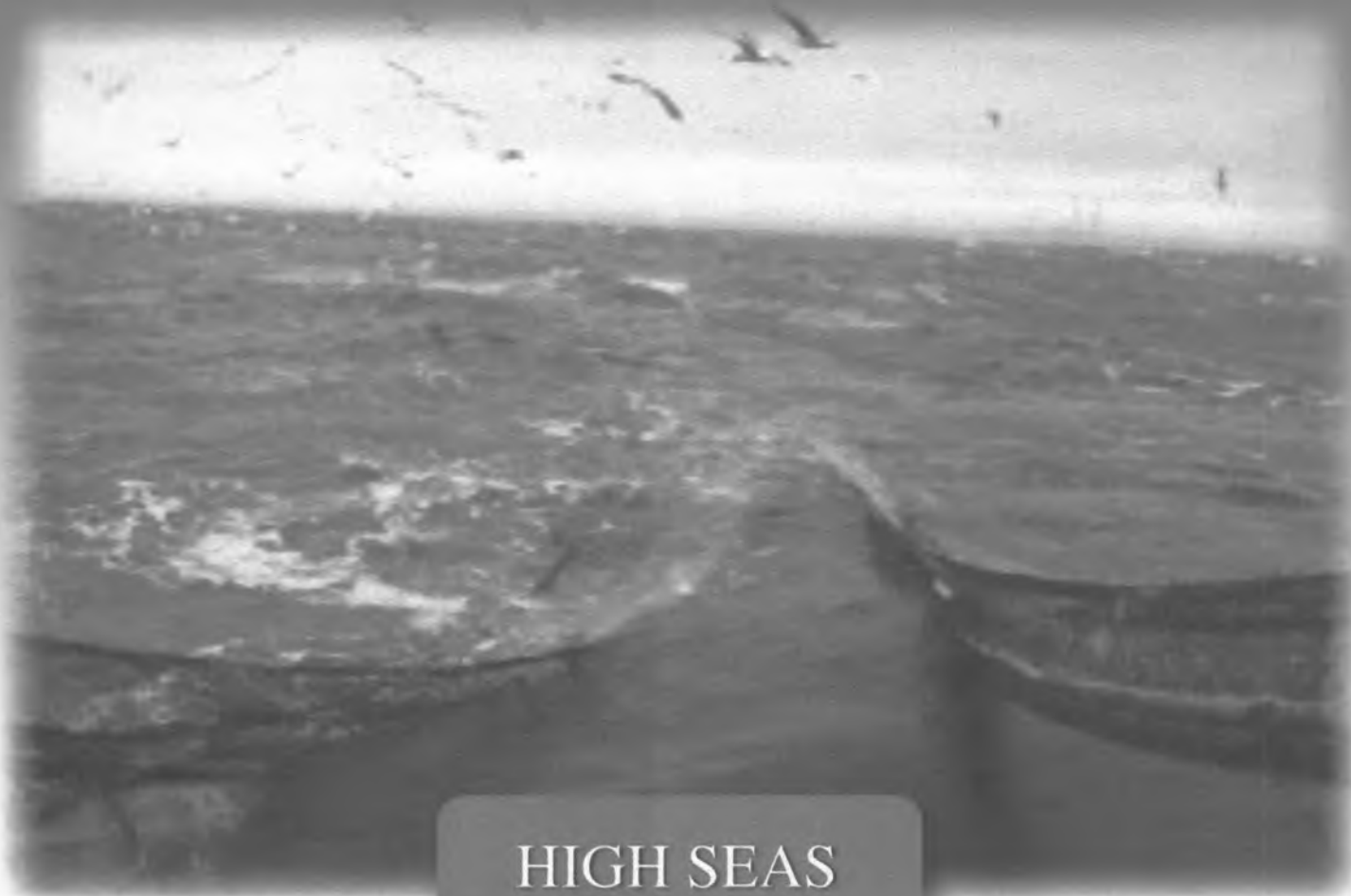


*Angler days Fished in the Mat-Su*

*Closures and restrictions to the recreational fishery have caused participation, as defined by angler-days, to crash.*

*In 2011, participation fell to the lowest level in 35 years (2012 was likely even lower)*

## *Causes For Low Salmon Abundance*



HIGH SEAS

Environmental Changes (cold water) and/or bycatch

# *Causes For Low Salmon Abundance*



## Running the UCI gauntlet

UCI MARINE: OVER EXPLOITATION IN GILL NET FISHERY  
TARGETING KENAI SOCKEYE

## *Causes For Low Salmon Abundance*



FRESHWATER: ECOLOGICAL FACTORS SUCH AS CHANGES IN HABITAT

***THIS FALL'S CATASTROPHIC FLOOD WILL LIKELY SEVERELY IMPACT ALREADY WEAK MAT SU RUNS***

## CAUSES OF SALMON DECLINE

UCI Northern District salmon are not getting through commercial fishing gauntlet in sufficient numbers.

ADF&G lacks in-season management tools for mixed stock fishery

Lack of **genetic identification** of salmon species other than sockeye

UCI Fisheries management is **focused on Kenai sockeye**



# UCI DRIFT FISHERY MANAGEMENT PLAN

## Purpose



“to insure adequate escapement into Northern District drainages”



Conservation elements based solely on abundance of Kenai sockeye not northern stocks

1. Less than 2.3 M sockeye.... most conservation for northern stocks!
2. 2.3 to 4.6 M sockeye... some conservation for northern stocks
3. Over 4.6 M sockeye.... No conservation for northern stocks?



**More than 4.6 M sockeye past two years**

# ACTION FOR LEGISLATORS



Science and Research  
Policy and Management changes  
Legislation



## Funding for ADF&G

### 1) Genetic Stock Studies

- ADF&G biological studies for all salmon species

### 2) Joint Legislative Salmon Task Force (2007-2008)

- funding to complete task force report

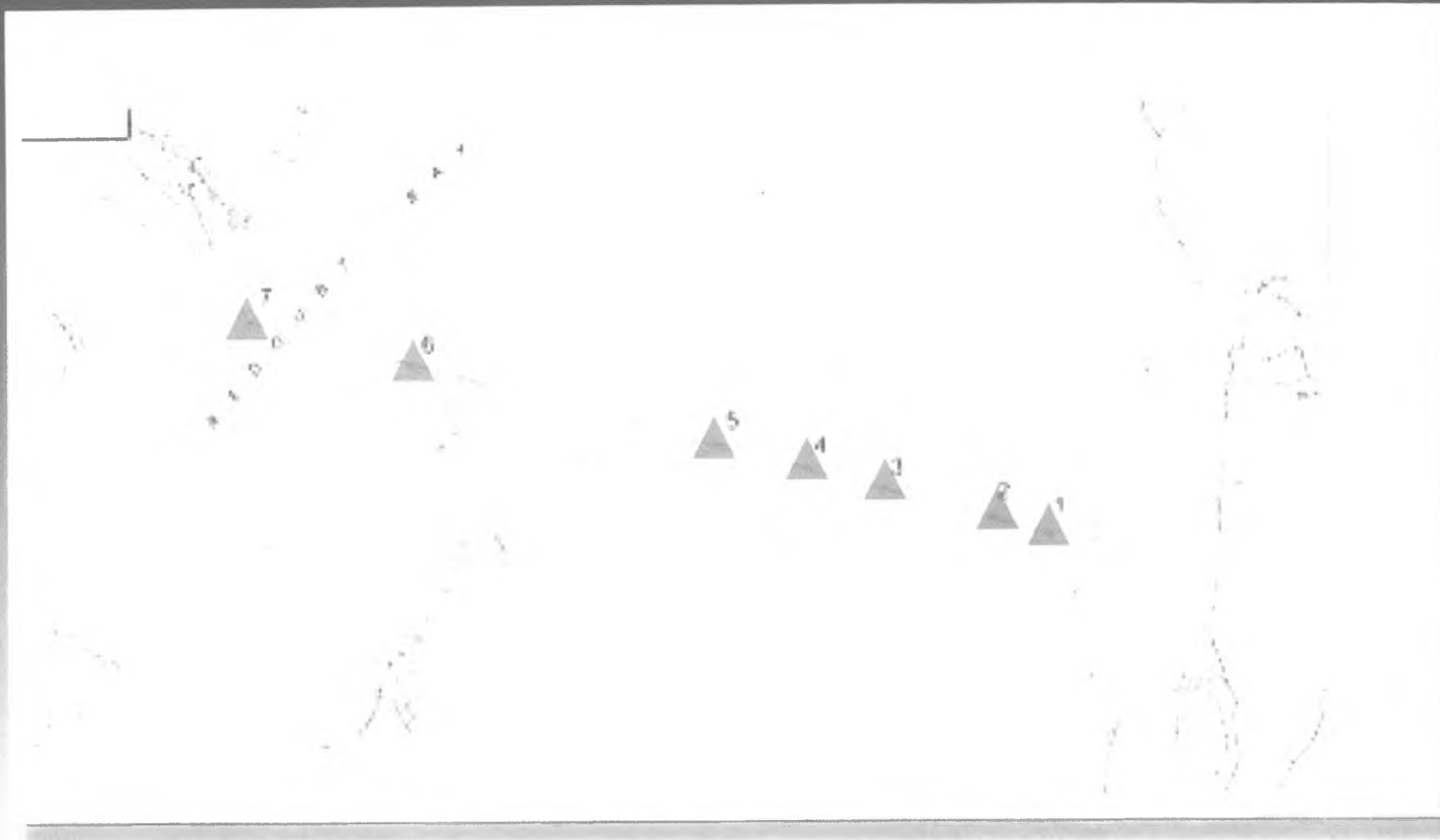
### 3) Economic Expertise for BOF

- professional economic analysts for BOF

### 4) Sport fishing economics

- update 2007 ADF&G study

## (New) Off-Shore Test Fishery



For genetic stock identification

# Policy and Management Changes



## 1) UCI Conservation Corridor

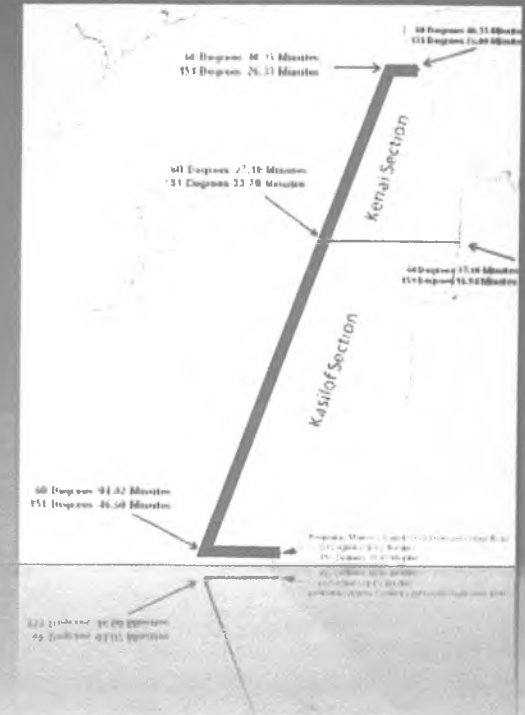
Retain conservation corridor established by BOF in 2011

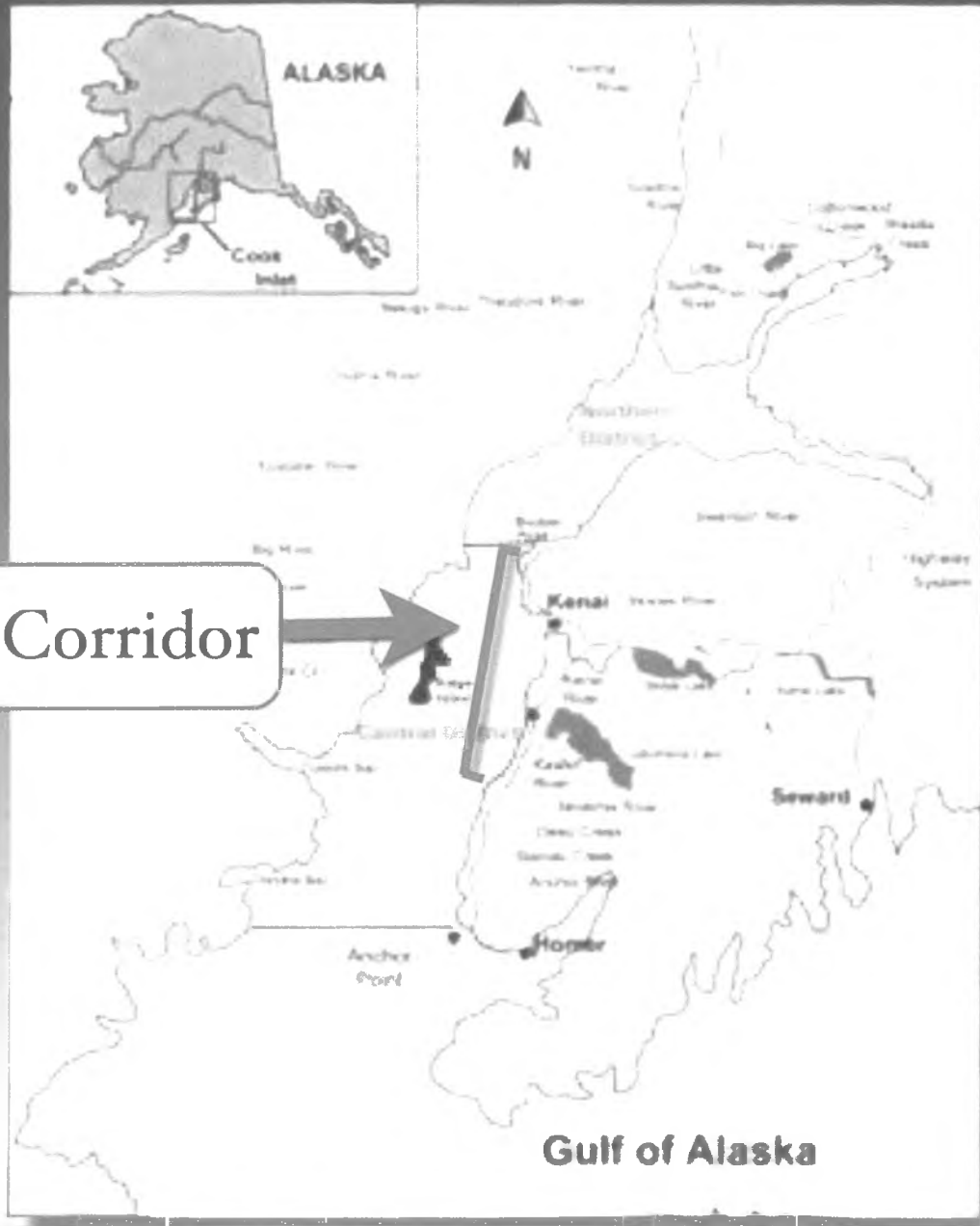
## 2) Revision of Cook Inlet Management Plans

Revise and improve management plans to insure sustained yield for UCI northern district salmon

## 3) Allocation Criteria

Update fishery resources allocation to reflect current biological and economic conditions

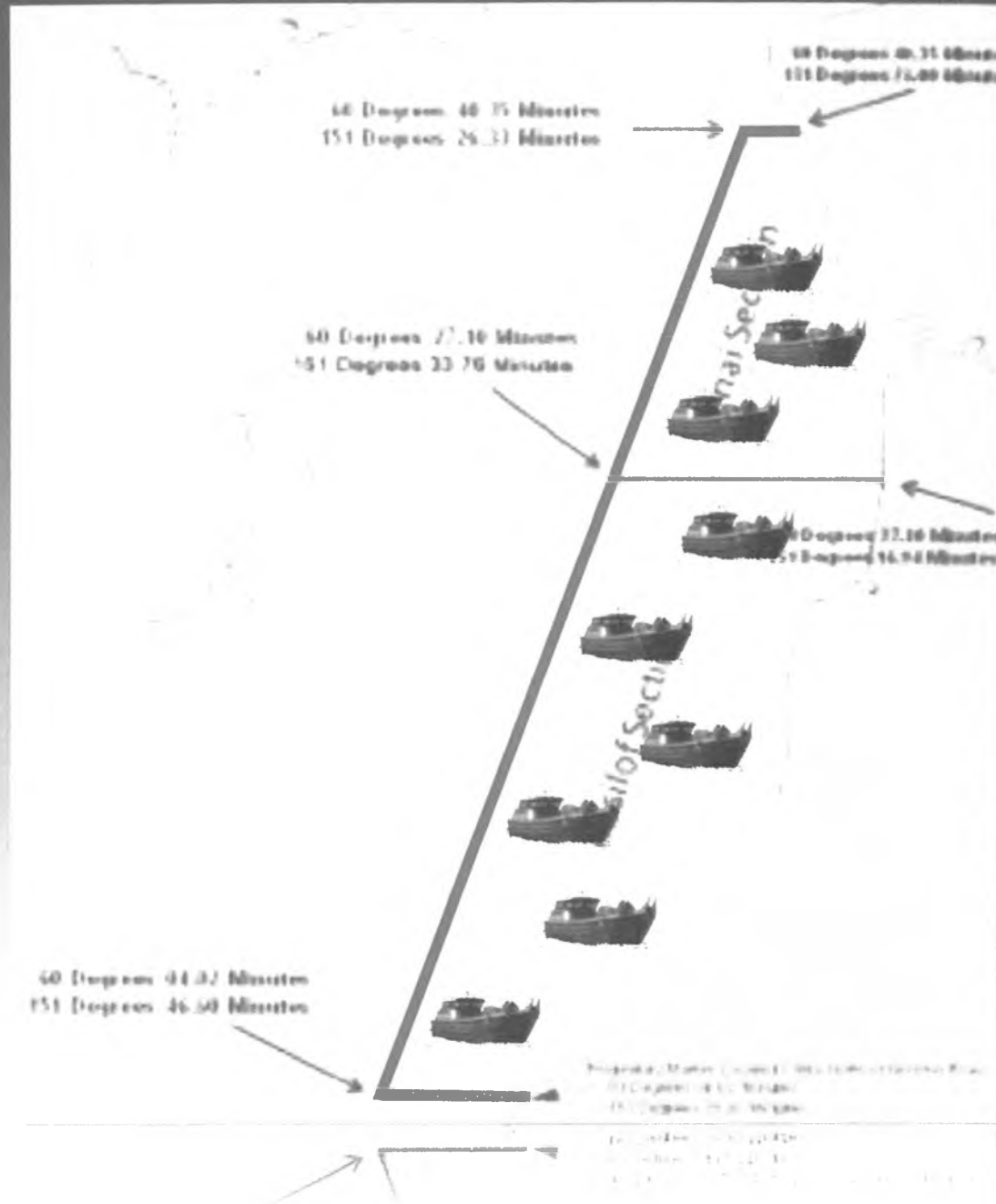




Conservation Corridor

Gulf of Alaska

# Conservation Corridor



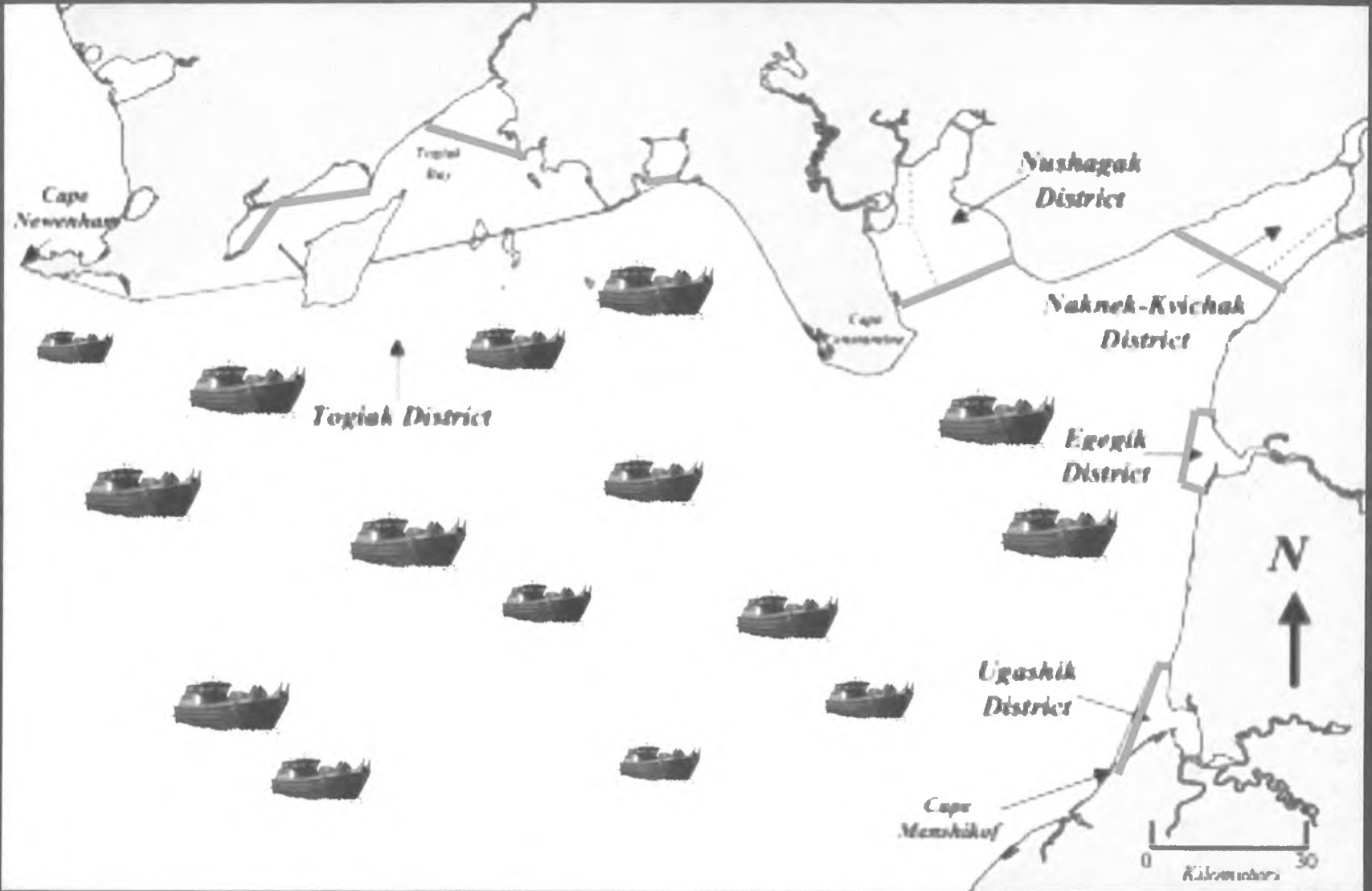
# SOLUTIONS

**Restructure UCI commercial fishery to be more similar to Bristol Bay commercial fishery**  
(most successful salmon fishery in the world)



# Bristol Bay Fisheries

Commercial fishery subdistricts



Discreet stock harvest zones

# Legislation

## 1.HB 98 Salmon Escapement Goals

Require establishment of salmon escapement goals for all salmon stocks identified as stocks of concern

## 1.HB 18 Personal Use Fisheries Preference

Put personal use fisheries preference first in ADF&G management actions



# MSB Capital Funding Requested

## Science and Research

Genetic Sampling of all Cook Inlet salmon species to supplement research being done by ADF&G to better inform management of mixed stock fishery

Economic Importance of Sportfishing in Mat-Su Borough - update of study conducted by the institute for Social Economic Research (UAA)






## Fish Passage

6 projects to restore access for 12.2 miles of salmon habitat. Funds matched by grant and borough funds for culvert replacements



## MAT-SU BOROUGH FISH & WILDLIFE COMMISSION

-  2007 Established as Mayor's Blue Ribbon Sportsmen's Committee, 7 members appointed by Mayor and Assembly
-  2011 Adopted into Borough code as Fish & Wildlife Commission
-  Purpose: to represent the interests of the Borough in the conservation and allocation of fish, wildlife, and habitat



# FISH & WILDLIFE COMMISSION ACCOMPLISHMENTS



- ☑ In-Season Management — Returned the coho weir on Little Su River to original location, saved Deshka weir from being closed down
- ☑ Conservation Corridor — Made compelling case for Board of Fish to allow the creation of an expanded conservation corridor in Cook Inlet to allow passage of northern bound salmon, by limiting the commercial drift net fleet during restricted July openings
- ☑ Test Fishery — Proposed new location for improved stock identification. Legislature funded \$650K to establish a new test fishery

# Partners in Action - Science

Over 50 partners  
(businesses, tribes, NGO's and governments)

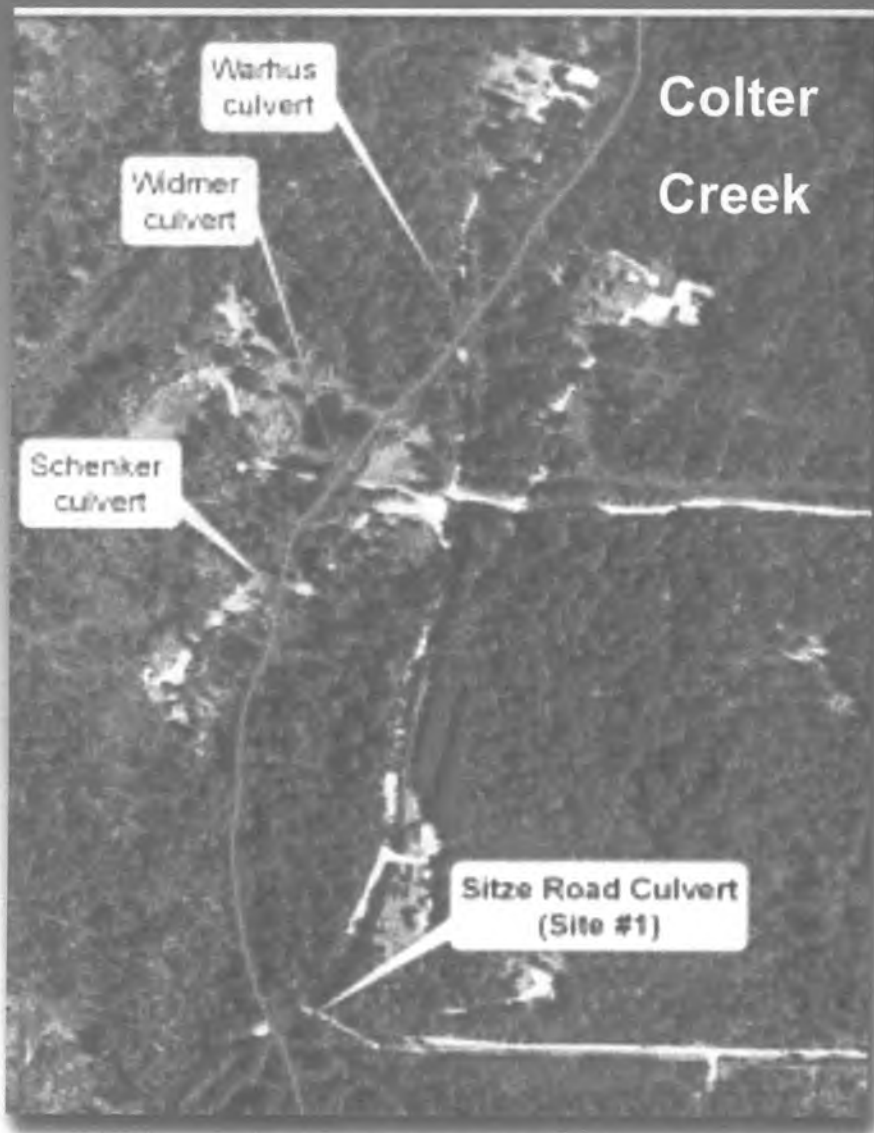
*Salmon Watersheds Atlas* —



**Mat-Su  
salmon**

PARTNERSHIP

# Partners in Action - Fish Passage



# Contacts

## MSB Fish and Wildlife Commission

Bruce Knowles, Chair  
Jim Colver, Vice Chair  
Ben Allen  
Andy Couch  
Howard Delo  
Jehnifer Ehmann  
Larry Engel  
Frankie Barker, MSB Staff  
([frankie.barker@matsugov.us](mailto:frankie.barker@matsugov.us))

## Mat-Su Salmon Habitat Partnership

Laura Allen  
Frankie Barker  
Jeff Davis  
Corrine Smith  
Bill Rice  
Sue Rodman  
Kim Sollien  
Eric Rothwell  
Jessica Winnestaffer  
Jessica Speed, Coordinator  
([MatSuSalmon@TNC.ORG](mailto:MatSuSalmon@TNC.ORG))



Matanuska-Susitna Borough  
350 E. Dahlia Avenue  
Palmer, AK 99645  
(907)745-4801



THANK YOU  
QUESTIONS?

# **Economic Importance of Sportfishing in the Matanuska-Susitna Borough**

Prepared for:

Matanuska-Susitna Borough  
Economic Development Department

Prepared by:

Steve Colt and Tobias Schwoerer  
Institute of Social and Economic Research  
University of Alaska Anchorage  
[www.iser.uaa.alaska.edu](http://www.iser.uaa.alaska.edu)



31 August 2009

contact:  
[steve.colt@uaa.alaska.edu](mailto:steve.colt@uaa.alaska.edu)  
[tobias.schwoerer@uaa.alaska.edu](mailto:tobias.schwoerer@uaa.alaska.edu)

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## Acknowledgments

The authors thank Kathrin Sundet and Bill Romberg of the Alaska Department of Fish and Game, Sport Fish Division, for providing data on fishing effort within the Mat-Su Borough.

## Summary

We estimated the economic importance of sport fishing in the Matanuska-Susitna (Mat-Su) Borough. We based our estimates on year 2007 data. These data come from a recent major study conducted by the Alaska Department of Fish and Game (ADF&G).<sup>1</sup> We allocated a portion of the economic effects for the Southcentral region to the Mat-Su Borough based on relative numbers of Southcentral angler days that occurred within the Borough boundary. Our estimates include a range of results because it is not possible to say with certainty how much of the total reported spending on things like boats, cabins, or food is due exclusively to sport fishing. Also, angler spending patterns in the Borough may be different from overall Southcentral patterns.

Overall, our estimates show that:

- In 2007, resident and nonresident anglers fished almost 300,000 days in the Matanuska-Susitna (Mat-Su) Borough.
- Anglers spent anywhere between \$63 million and \$163 million in the Borough on goods and services primarily used for sport fishing. Alaska residents spent an average of between \$126 and \$517 per angler day, while nonresidents spent an average of between \$344 and \$602.
- After accounting for multiplier effects, this spending generated between 900 and 1,900 jobs and between \$31 million and \$64 million of personal income for people who work in the Borough.
- Mat-Su sport fishing activity also generated between \$6 million and \$15 million in state and local taxes.

**Table 1**  
**Economic importance of sport fishing in the Mat-Su Borough**

(estimates based on Southcentral modeling results allocated using angler days)

	<b>Low</b>	<b>Medium</b>	<b>High</b>
Mat-Su angler days	295,981	295,981	295,981
as % of Southcentral	16.5%	16.5%	16.5%
Direct spending (\$)	62,766,103	118,185,916	162,841,500
Average spending \$ per angler day	212	399	550
Economic contribution			
Employment (average annual)	904	1,180	1,900
Income (\$)	31,406,254	40,118,532	63,660,732
Local & state taxes (\$)	6,085,357	7,721,572	14,957,085

<sup>1</sup> Southwick Associates and Alaska Department of Fish and Game, 2008. Economic Impacts and Contributions of Sportfishing in Alaska, 2007.

Available at: <http://www.sf.adfg.state.ak.us/Statewide/economics/>

## Introduction

We have estimated the economic benefits of sport fishing activity occurring within the Matanuska-Susitna (Mat-Su) Borough, using data from year 2007. Our estimates are based on the recent study entitled, *Economic Impacts and Contributions of Sportfishing in Alaska, 2007*.<sup>2</sup> It contains estimates of angler spending patterns within three regions: Southcentral, Interior, and Southeast. We also used year 2007 data from the ADFG annual Statewide Harvest Survey (SWHS).<sup>3</sup> These data allow us to allocate economic benefits to the Mat-Su Borough.

## Methods

### Step 1. Determine number of angler days spent fishing in Mat-Su Borough

ADF&G provided us with a data extract from their raw survey data on fishing effort in year 2007. The extract included all fishing sub-areas within the Mat-Su Borough. The estimated total number of angler days is 295,981.<sup>4</sup> Since there is no separate data on Alaska resident vs. nonresident split, we have assumed that the nonresident fraction is the same as it is for Southcentral – 39.6% nonresident. Thus, we estimate that Mat-Su angler days account for 16.5% of total Southcentral angler days.

**Table 2. Angler days spent fishing in Mat-Su Borough**

	Alaska Resident	Res. %	Nonresident	Nonres. %	Total
Mat-Su Borough angler days	178,886	60.4%	117,095	39.6%	295,981
% of Southcentral	16.5%		16.5%		16.5%

### Step 2. Determine appropriate values for spending per angler day

The ADF&G economic survey measured direct angler spending by the location of the expenditure, not by the location of the fishing that generated that expenditure. This approach makes good sense, but it means that some caution must be used when

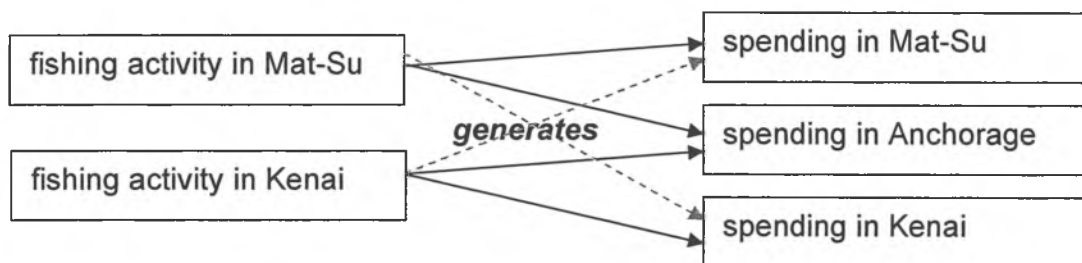
<sup>2</sup> Southwick Associates and Alaska Department of Fish and Game, 2008. *Economic Impacts and Contributions of Sportfishing in Alaska, 2007*. Available at: <http://www.sf.adfg.state.ak.us/Statewide/economics/>

<sup>3</sup> These year 2007 SWHS data have not been formally published as of August 2009. Statewide and regional numbers are reported in the economic impacts study and numbers for areas within the Mat-Su Borough were provided by ADF&G.

<sup>4</sup> About 8% of these angler days were generated at locations with less than 12 respondents to the ADF&G angler survey. While ADF&G recommends not using these data points because of the sampling error involved, we have included them because we are aggregating over all of the 118 locations that have this problem.

interpreting the spending data. Figure 1 shows how fishing in one area can cause angler spending in another area. For example, a German tourist who fishes on the Little Susitna River might spend significant amounts of money in Anchorage. Clearly, Anchorage is the major recipient of this type of spending that relates to fishing outside of Anchorage. The lighter, dotted lines in the figure reflect the idea that fishing in Mat-Su causes very little spending in Kenai, and vice versa.

**Figure 1. Relationship between location of fishing and location of spending**



Because the data on angler days and the data on spending within each region were collected in two separate surveys, we must use caution when speaking of “spending per angler day.” Specifically, we need to remember that a simple calculation of spending in a region per angler day of fishing in that same region is a mixture of two different quantities that were measured in two separate surveys.

Each of the five regions that ADF&G uses in its economic significance reporting are large enough that this problem is unimportant as a practical matter. Clearly Southcentral and Southeast are distinct economic regions. Even the Cook Inlet subregion includes Anchorage plus the major fishing locations close to it.

With this caveat in mind, we calculated numbers for “spending per angler day” in various regions based on the total spending numbers reported by the Southwick/ADF&G study. Table 3 shows these ratios. We looked carefully at these regional ratios to determine whether an allocation of total Southcentral *spending* to Mat-Su and non-Mat-Su subregions could be done based on the relative numbers of angler days. We wanted to consider whether some adjustment was needed to capture the possibility that money associated with Mat-Su fishing is spent outside the Borough. Using the ratios for the Cook Inlet subregion would be inappropriate, because Anchorage weighs too heavily in those numbers. We concluded that the best approach was to use the Southcentral region numbers for average spending per angler day as the basis for determining economic activity within the Mat-Su Borough.<sup>5</sup>

<sup>5</sup> We also looked at regional patterns of spending on fuel, guides, groceries, and lodging to verify that no adjustment was needed based on this spending.

**Table 3. High case regional spending per in-region angler day, by region using total spending amounts reported by Southwick/ADFG (dollars spent in the region per angler day of fishing in the region)**

<b>Statewide</b>	Resident	Nonresident	Total
Licenses & stamps	5	15	9
Trip	151	321	223
Package	-	127	54
Equipment	297	38	187
Real Estate	50	102	72
<b>Total</b>	<b>502</b>	<b>604</b>	<b>546</b>

<b>Southcentral</b>	Resident	Nonresident	Total
Licenses & stamps			
Trip	167	332	233
Package	-	127	50
Equipment	302	41	199
Real Estate	47	102	69
<b>Total</b>	<b>517</b>	<b>602</b>	<b>550</b>

<b>Cook Inlet</b>	Resident	Nonresident	Total
Licenses & stamps			
Trip	162	327	226
Package	-	49	19
Equipment	383	46	252
Real Estate	56	149	92
<b>Total</b>	<b>602</b>	<b>571</b>	<b>590</b>

<b>Other Southcentral</b>	Resident	Nonresident	Total
Licenses & stamps			
Trip	180	343	248
Package	-	290	120
Equipment	112	31	79
Real Estate	25	3	15
<b>Total</b>	<b>317</b>	<b>666</b>	<b>462</b>

<b>Interior</b>	Resident	Nonresident	Total
Licenses & stamps			
Trip	100	443	182
Package	-	155	37
Equipment	317	31	249
Real Estate	18	61	28
<b>Total</b>	<b>435</b>	<b>691</b>	<b>496</b>

### **Step 3. Determine total Mat-Su spending, jobs, and income based on Southcentral spending per angler day**

We multiplied the average spending per angler day in Southcentral by the number of Mat-Su angler days to determine total spending in Mat-Su from sportfishing activity that occurs in Mat-Su. We then applied the economic multiplier values for the Southcentral region from the Southwick/ADF&G analysis to these spending numbers. For the High case, our final results for direct spending, jobs, and income occurring in Mat-Su are simply equal to 16.5% of the ADF&G values for all of Southcentral.<sup>6</sup> The 16.5% number is the Mat-Su share of Southcentral angler days, as determined above in step 1. The 16.5% share is assumed to be the same for resident and non-resident angler days because we have no direct data to indicate otherwise.

### **Step 4. Develop Low, Medium, and High cases to better reflect the uncertainty about spending patterns**

As a final step we considered the fact that much of the spending on equipment, real estate, and even on trips may not be attributable solely to sport fishing. ADF&G attempted to address this issue by asking survey respondents to say what percentage of their equipment and real estate spending was attributable to sport fishing. They used those percentages when determining the total spending and average spending per angler day. However, we believe these numbers represent a high case estimate of spending that relates directly to fishing. There are three reasons for this belief. First, as we have already mentioned, some of the spending associated with Mat-Su fishing may occur in Anchorage. Second, some of the spending on a trip whose "primary purpose" is fishing might well have occurred anyway, albeit in a different pattern. Third, the ADF&G numbers reflect the total, or overall, economic effects of all existing sportfishing. However, if one is interested in how a *change* in fishing opportunities might translate into a *change* in spending, the resulting numbers are lower. That's because many expenditures are fixed costs. People who fish 10% more days are not going to buy 10% more hip waders or 10% more cabins.

We developed Low and Medium cases by assuming lower expenditures in some categories – especially equipment and real estate. The Low case uses 75% of the reported numbers for trip-related and package categories and none of the equipment and real estate category spending. For the medium case we include 100% of the trip-related and package expenditures, 50% of the reported equipment spending, and 25% of the reported real estate spending. The High case includes 100% of all spending reported to ADF&G for all categories – trip-related, package, equipment, and real estate. The following table summarizes these assumptions.

---

<sup>6</sup> ADF&G did not develop Low, Medium and High cases. They only reported one set of estimates. These correspond to our High case estimates.

**Table 4. Difference in spending pattern assumptions  
between low, medium, and High cases**

(Fraction of total reported spending that is included in each case, by category)

	Low	Medium	High
Licenses & stamps			
Tri-related	75%	100%	100%
Package	75%	100%	100%
Equipment	0%	50%	100%
Real Estate	0%	25%	100%

## Results

Overall, our estimates show that:

- In 2007, resident and nonresident anglers fished almost 300,000 days in the Matanuska-Susitna (Mat-Su) Borough.
- Anglers spent anywhere between \$63 million and \$163 million in the Borough on goods and services primarily used for sport fishing. Alaska residents spent an average of between \$126 and \$517 per angler day, while nonresidents spent an average of between \$344 and \$602.
- After accounting for multiplier effects, this spending generated between 900 and 1,900 jobs and between \$31 million and \$64 million of personal income for people who work in the Borough.
- Mat-Su sport fishing activity also generated between \$6 million and \$15 million in state and local taxes.

**Table 5  
Economic importance of sport fishing in the Mat-Su Borough**

(estimates based on Southcentral modeling results allocated using angler days)

	Low	Medium	High
Mat-Su angler days	295,981	295,981	295,981
as % of Southcentral	16.5%	16.5%	16.5%
Direct spending (\$)	62,766,103	118,185,916	162,841,500
Average spending \$ per angler day	212	399	550
Economic contribution			
Employment (average annual)	904	1,180	1,900
Income (\$)	31,406,254	40,118,532	63,660,732
Local & state taxes (\$)	6,085,357	7,721,572	14,957,085

**High Case.** We first present results for the High case, because they correspond most directly to the previously published spending numbers.

Table 6 shows estimated direct spending from Mat-Su sportfishing. More than \$163 million was spent, of which more than \$70 million came from people who came from outside Alaska. Residents spent heavily on equipment, while nonresidents spent heavily on trips and packages.

**Table 6. Direct spending from Mat-Su sportfishing – High case**

	Alaska		Total
	Resident	Nonresident	
Licenses & stamps	-	-	-
Trip	29,961,901	38,879,365	68,841,266
Package	-	14,846,871	14,846,871
Equipment	54,058,396	4,779,358	58,837,754
Real Estate	8,383,744	11,931,864	20,315,609
<b>Total</b>	<b>92,404,041</b>	<b>70,437,459</b>	<b>162,841,500</b>
Average spending			
\$ per angler day	517	602	550

Table 7 shows our High case estimates of the economic importance of Mat-Su sport fishing. Under the High case assumptions, the direct spending by anglers immediately generates 1,300 jobs and almost \$40 million of income. After multiplier effects are included, Mat-Su sport fishing generates 1,900 jobs and \$63.7 million of personal income for people working in the Borough.

**Table 7. Economic importance of Mat-Su sportfishing – High case**

HIGH case	Alaska		Total
	Resident	Nonresident	
Mat-Su angler days	178,886	117,095	295,981
as % of Southcentral	16.5%	16.5%	
Direct effects			
Spending			
Income	17,957,673	21,536,960	39,494,633
Employment	588	713	1,301
Multiplier effects			
Income	10,841,421	13,324,678	24,166,099
Employment	264	335	599
Total effects			
Income	28,799,095	34,861,638	63,660,732
Employment	852	1,048	1,900
Tax revenues			
Local and state	7,513,582	7,443,503	14,957,085
Federal	6,745,651	7,990,043	14,735,694

Spending on fishing also generates significant amounts of tax revenues. As the original ADFG study authors stress, these numbers must be interpreted with special caution, since they reflect average, overall ratios of economic activity to tax collections.<sup>7</sup> However, it is clear that much of the spending, especially by nonresidents, does contribute incremental revenues through taxes on lodging, meals, rental cars, and sales.

<sup>7</sup> Southwick/ADFG study, p. 56.

**Low and Medium Cases.** The following tables show the results for spending, income, and jobs for the Low and Medium cases.

**Table 8. Direct spending from Mat-Su sportfishing – Low and Medium cases**

LOW case	Alaska		Total
	Resident	Nonresident	
Licenses & stamps	-	-	-
Trip	22,471,426	29,159,524	51,630,950
Package	-	11,135,153	11,135,153
Equipment	-	-	-
Real Estate	-	-	-
<b>Total</b>	<b>22,471,426</b>	<b>40,294,677</b>	<b>62,766,103</b>

MEDIUM case	Alaska		Total
	Resident	Nonresident	
Licenses & stamps	-	-	-
Trip	29,961,901	38,879,365	68,841,266
Package	-	14,846,871	14,846,871
Equipment	27,029,198	2,389,679	29,418,877
Real Estate	2,095,936	2,982,966	5,078,902
<b>Total</b>	<b>59,087,035</b>	<b>59,098,881</b>	<b>118,185,916</b>

**Table 9. Economic importance of Mat-Su sportfishing – Low case**

LOW case	Alaska		Total
	Resident	Nonresident	
Mat-Su angler days	178,886	117,095	295,981
as % of Southcentral	16.5%	16.5%	
Direct spending (\$)	22,471,426	40,294,677	62,766,103
Average spending \$ per angler day	126	344	212
Economic contribution			
Employment (average annual)	351	553	904
Income (\$)	11,192,675	20,213,579	31,406,254
Local & state taxes (\$)	1,827,203	4,258,154	6,085,357

**Table 10. Economic importance of Mat-Su sportfishing – Medium case**

MEDIUM case	Alaska		Total
	Resident	Nonresident	
Mat-Su angler days	178,886	117,095	295,981
as % of Southcentral	16.5%	16.5%	
Direct spending (\$)	59,087,035	59,098,881	118,185,916
Average spending \$ per angler day	330	505	399
Economic contribution			
Employment (average annual)	468	712	1,180
Income (\$)	14,923,567	25,194,965	40,118,532
Local & state taxes (\$)	2,436,270	5,285,302	7,721,572

## References

Alaska Department of Fish and Game 2008. Economic Impacts and Contributions of Sportfishing in Alaska, 2007. Available at:  
<http://www.sf.adfg.state.ak.us/Statewide/economics/>



Paul Seaton &lt;pkseaton@gmail.com&gt;

**data request**

1 message

**Shields, Patrick A (DFG)** <pat.shields@alaska.gov>

Thu, Apr 4, 2013 at 9:21 AM

To: "pkseaton@gmail.com" &lt;pkseaton@gmail.com&gt;

Cc: "Baker, Tim (DFG)" &lt;tim.baker@alaska.gov&gt;, "Lingnau, Tracy L (DFG)" &lt;tracy.lingnau@alaska.gov&gt;

Representative Seaton: please find attached an Excel file that shows drift gillnet pink salmon harvest from 1970 through 1998. It shows even year harvests only because pink salmon are even year dominant in Cook Inlet. Basically, what the data show is that drift catches of pink salmon tend to peak in the last two weeks of July. Recent catches compared to historical averages are down primarily for a couple of reasons. 1. Management plan changes by the board of fisheries to afford protection to sockeye and coho salmon - the board reduced the amount of time that drifters can fish in the open waters of the Central District in order to reduce harvest rates on sockeye and coho salmon swimming to northern Cook Inlet drainages. 2. For a number of years in the 1990s and 2000s drifters actually avoided harvesting pink salmon as much as they could due to very low prices for this stock.

You also asked about what is occurring at Shell Lake regarding sockeye salmon. A few years ago (I believe 2006) an adult enumeration project at Shell Lake showed nearly 70,000 sockeye salmon escaping into the lake. Since then, escapements have plummeted and smolt estimates conducted by Cook Inlet Aquaculture Association also showed very few smolt emigrating the lake. There are a number of issues occurring at Shell Lake that are likely contributing to the decline in sockeye salmon production in this system. 1. Pike are present in this lake; 2. CIAA has documented numerous beaver dam blockages of Shell Creek in recent years; 3. In 2012, samples from adult sockeye salmon that had perished but failed to spawn revealed the presence of *Loma salmonae* - a parasite of Pacific salmon. As a result of the significant declines in sockeye salmon adult escapement and smolt production, ADFG authorized (through the RPT process) CIAA to take approximately 100,000 eggs from sockeye salmon at Shell Lake in the fall of 2012. The progeny from these eggs will be released back into Shell Lake as smolt.

Because you needed this information as quickly as possible, my response was not as thorough as it could have been. Hopefully this helped answer your questions.

Pat Shields

Upper Cook Inlet

Commercial Fisheries Division

907.260.2941