

# **Overview of the Division of Commercial Fisheries**



**Sue Aspelund  
Acting Director**

I'm Sue Aspelund, Acting Director of the Division of Commercial Fisheries.

I'm glad for the opportunity today to talk with you about the division and its work.

## **Division of Commercial Fisheries Mission**

The mission of the Division of Commercial Fisheries is to manage subsistence, commercial, and personal use fisheries in the interest of the general well-being of the people and economy of the state, consistent with the sustained yield principle, and subject to allocations through public regulatory processes.

The division's mission is grounded in Article 8 of the Alaska State constitution, as well as Title 16 of Alaska statute, subject to allocations of the Alaska Board of Fisheries.

## **Division of Commercial Fisheries Primary Responsibilities**

- Manage commercial, personal use, and subsistence fisheries within state waters.
- Manage shellfish species and some groundfish out to 200 miles.
- Conduct applied research on Alaska's aquatic resources.
- Plan and permit salmon hatcheries and mariculture operations.
- Negotiate fishing agreements subject to the Pacific Salmon Treaty and Alaska-Yukon Treaty.
- Coordinate with federal and international fisheries management agencies.

The Division of Commercial Fisheries manages all commercial fisheries in state waters, with the exception of halibut (which is managed under an international treaty). Some salmon in SE AK and on the Yukon are also subject to international treaty. The division also manages some species in federal fisheries under delegation from the federal government, such as scallops, crab, and some groundfish. In addition, we manage subsistence fisheries in the Arctic-Yukon-Kuskokwim and Southcentral Alaska, and subsistence and personal use fisheries in marine waters in Southeast Alaska and in the Westward region of the state.

Commercially important species of seafood in Alaska include:

5 species of salmon	7 species of crab	4 species of shrimp
Walleye pollock	Pacific halibut	Pacific cod
Sablefish	herring	flatfish and rockfish
lingcod	geoducks	sea cucumbers

sea urchins

aquatic farms also produce oysters, littleneck clams, and geoducks

## **Division of Commercial Fisheries Core Services**

- **Harvest Management**
- **Stock Assessment and Applied Research**
- **Aquaculture Permitting**
- **Information Services and Public Participation**

**Harvest Management:** Control the harvest of fishery resources for subsistence, commercial, and personal uses according to plans and regulations, and subject to allocations of the Board of Fisheries.

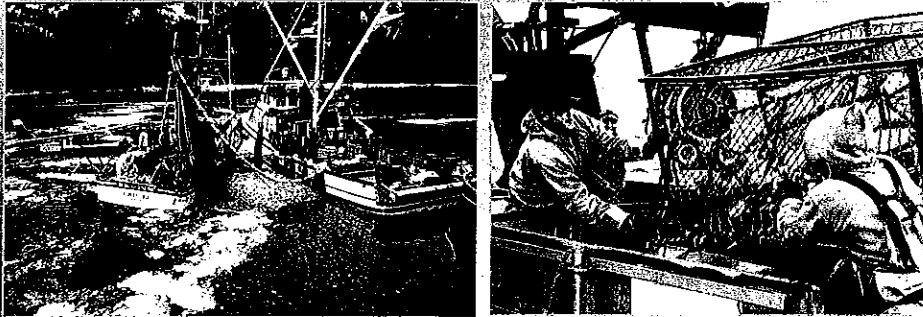
**Stock Assessment & Applied Research:** Maintain ongoing programs for the enumeration, assessment, and understanding of salmon, herring, groundfish, and shellfish stocks.

**Aquaculture Permitting:** Permit and provide regulatory, technical, and planning services to aquatic farmers and private nonprofit hatchery operators.

**Information Services and Public Participation:** Develop and maintain dissemination of data, analyses, and published reports.

## Harvest Management

- Support the Board of Fisheries in establishing regulations and management plans.
- Open and close fishing areas and setting fishing times.
- Collect harvest and biological data.
- Write annual management reports to synthesize information.



Consistent with the *Policy for Management of Sustainable Fisheries* (5 AAC 39.220) and the *Policy for Statewide Escapement Goals* (5 AAC 39.223) in regulation, the division and the Board of Fisheries constantly strive to utilize the most rigorous science available to manage sustainable fisheries.

LEFT: herring seine, tender, and spotter plane.

RIGHT: emptying a crab pot.

## **Harvest Management Components**

### **➤ Inseason Management**

- **Employ a cadre of fisheries managers proximate to the fisheries.**
- **Managers have broad authority to open and close fisheries.**

### **➤ Applied Science**

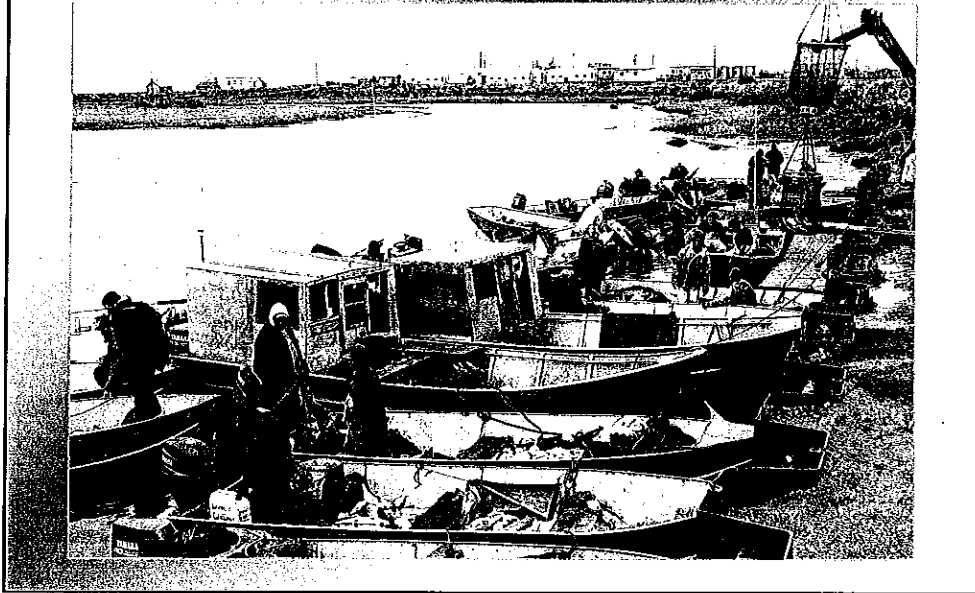
- **To ensure that management of Alaska's fisheries is conducted consistent with the sustained yield principle.**

**MANAGEMENT ACTIVITIES:** work closely with Division of Sport Fish in the conduct of both management and research activities.

**INSEASON MANAGEMENT:** the primary strength of our management system is the ability to open/close fisheries based on professional judgment, the most current biological information, and fishery performance, subject to allocations by the Board of Fisheries.

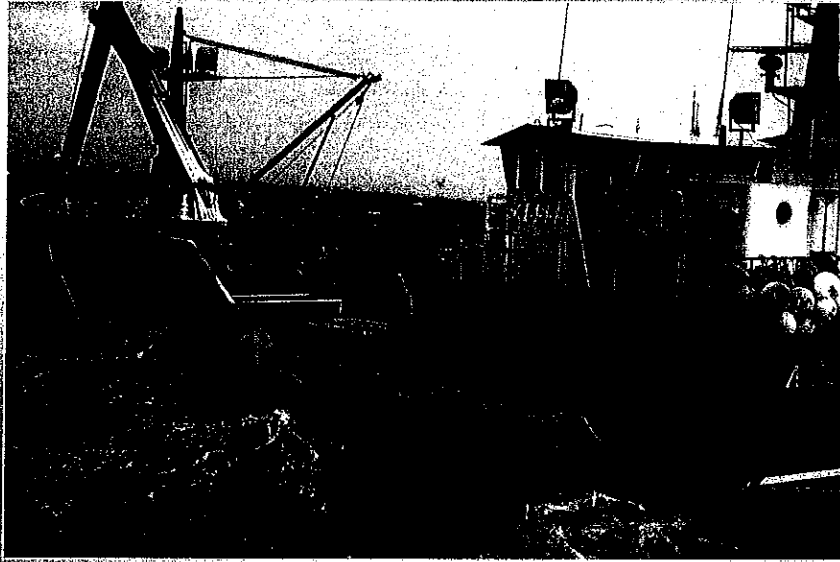
**APPLIED SCIENCE:** research biologists and other specialists conduct applied research in close cooperation with fisheries managers. The purpose of the division's research sections is to ensure that the management of Alaska's fisheries resources is conducted consistent with the sustained yield principle and that managers have the technical support they need to ensure that fisheries are managed according to sound scientific principles, utilizing the best available biological data.

## **Kuskokwim Bay Salmon Fishermen Delivering in Quinhagak**



The commercial fisheries managed by the division are incredibly diverse and range from small boat near-shore fisheries like the one pictured here, showing Kuskokwim Bay salmon fishermen delivering to their processor in Quinhagak...

## Crab Boat Setting Pots In the Bering Sea



...to large offshore fisheries like the one pictured here.

## **Stock Assessment and Applied Research**

- **Salmon Escapement Enumeration:**
  - **Weirs, Towers, Sonar, Foot/Aerial Surveys**
- **Juvenile Salmon Estimation**
- **Groundfish and Shellfish Surveys**
- **Herring Spawn Deposition and Hydroacoustic Surveys**
- **Aerial Herring Surveys**
- **Dive Surveys**
- **Biological, Genetic, Coded-Wire Tag Sampling**

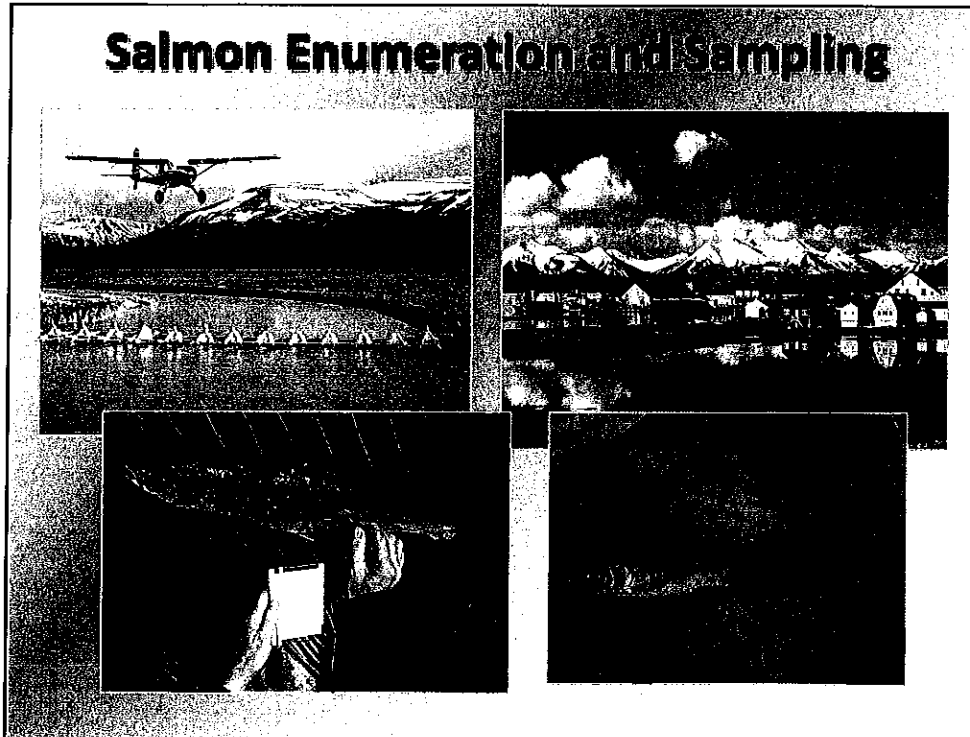
This slide lists a few examples of the many ongoing programs for the enumeration, assessment, and understanding of salmon, herring, groundfish, and shellfish stocks in Alaska's waters undertaken by the division.



This slide highlights just a few examples of ongoing programs for the enumeration, assessment, and understanding of salmon stocks.

TOP LEFT and RIGHT: Ayakulik and Karluk weirs on Kodiak Island.,

BOTTOM LEFT AND RIGHT: Frazer fish pass on Kodiak Island—home to a very successful introduced sockeye salmon run in a previously barren lake back in the 50s. Since the mid-80s, about a million sockeye salmon are harvested from this run annually.



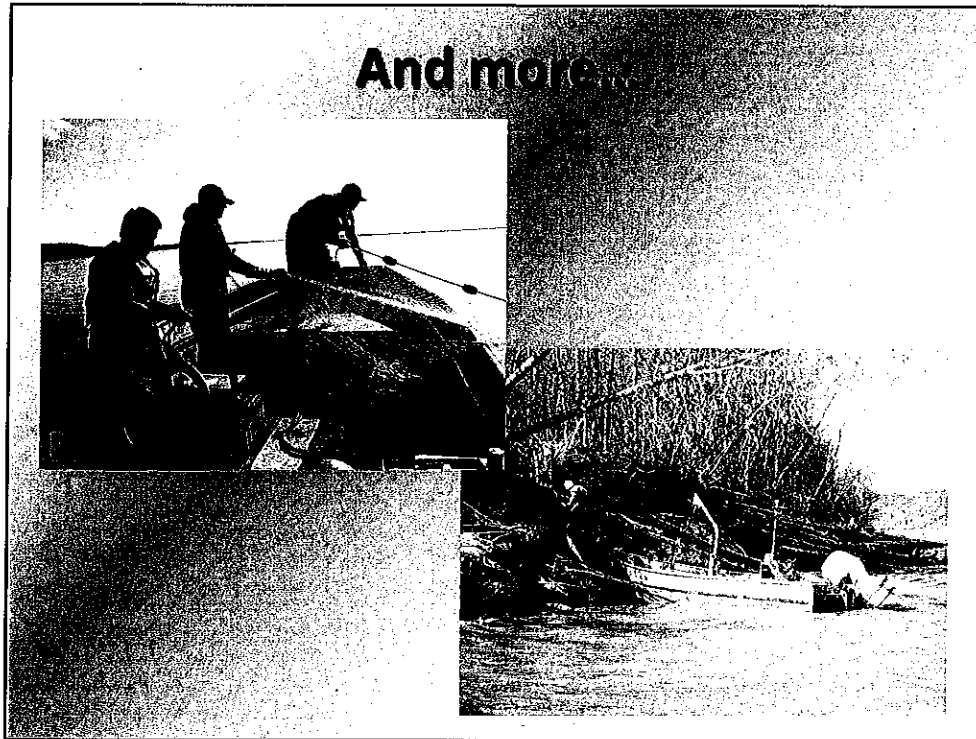
This slide provides examples of some salmon enumeration and sampling tools used by the division.

TOP LEFT: Bear River weir on the north side of the Alaska Peninsula.

TOP RIGHT: Port Moller processing plant on the north side of the Alaska Peninsula. This plan supports our Port Moller test fishing operation that provides information about sockeye salmon run entry into Bristol Bay.

BOTTOM LEFT: pulling a salmon scale for aging.

BOTTOM RIGHT: a salmon fingerling for tagging.



LEFT: test fishing on the Yukon.

RIGHT: sonar deployment on the Yukon.

## Other examples of stock assessments...

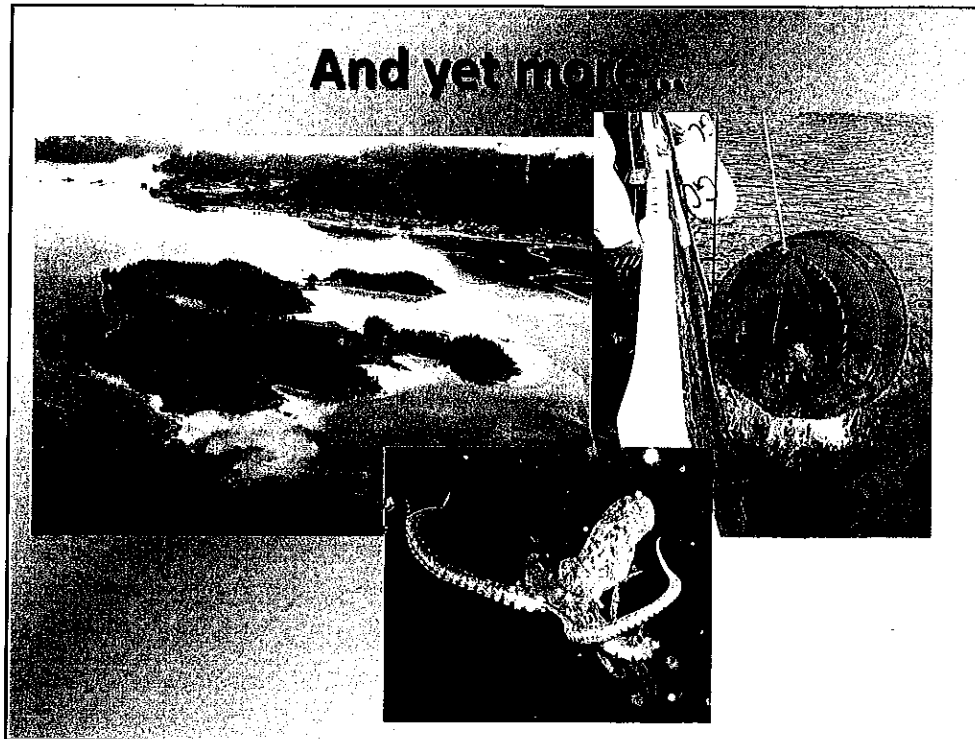


This slide shows examples of ongoing programs for the enumeration, assessment, and understanding of shellfish stocks.

UPPER LEFT: Department diver conducting a sea cucumber transect to estimate abundance.

LOWER LEFT: *R/V Media* tanner crab survey in SEAK, gathering biological data to establish the guideline harvest level for the commercial tanner crab fishery.

RIGHT: Intertidal littleneck clam surveys in PWS.

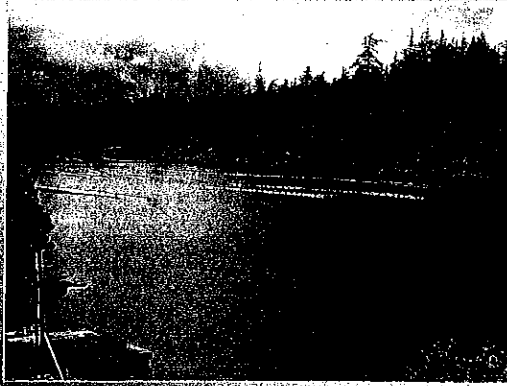


TOP LEFT: herring spawn in Kasiana near Sitka.

TOP RIGHT: a successful prawn pot pull.

LOWER RIGHT: an octopus found during a dive survey.

## **Aquaculture Permitting**



- **Private Nonprofit Salmon Hatcheries**
- **Aquatic Shellfish Hatchery**
- **Aquatic Shellfish Farms**

The division permits and/or provides technical assistance and oversight to 34 hatcheries, 1 aquatic shellfish hatchery, and numerous shellfish farms throughout the state.

## **Information Services and Public Information**

- **Design and maintain division website**
- **Publish brochures and other informational materials on divisional programs**
- **Produce, upon request, custom reports from fish ticket and COAR databases**
- **Administer divisional confidentiality policies**
- **Develop and administer divisional publication policies and procedures**

Department data systems provide salmon forecasts, harvest summaries, fish prices, exvessel values, and wholesale values for the staff, the public, and policymakers.

## Laboratory Services

- Pathology Laboratory
- Coded Wire Tag and Otolith Aging Laboratory
- Genetic Stock Identification Laboratory



The division has two additional functions that support all of our core services.

These labs provide critical information to assist managers, inseason and out, and...

## **Data Processing**

- **Fish tickets systems**
- **eLanding electronic catch reporting system**
- **Internet-accessible inseason catch and escapement databases**
- **Geographical Information System databases**
- **Internet accessible news release database**
- **Seafood processor/buyer intent to operate system**
- **Commercial Operator Annual Reports (COAR)**
- **Databases for biological data**

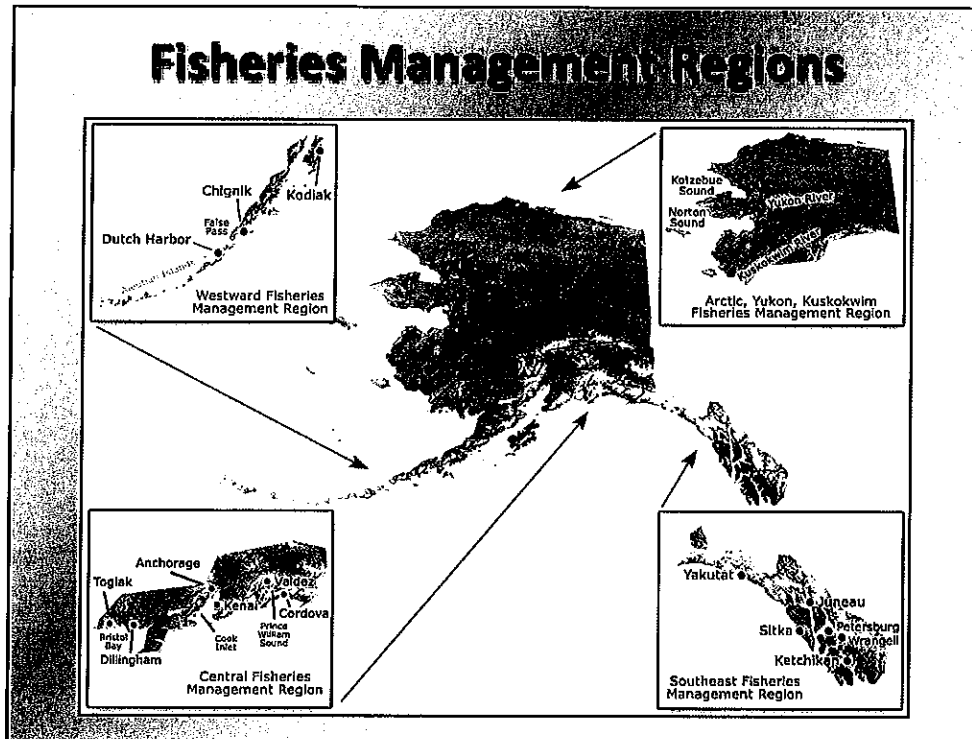
...we have 8 primary database systems used to manage fisheries and provide information about them.

The eLanding electronic catch reporting system comprises an important and innovative element of our data processing systems. The "share-matching" component of the rationalized crab program, where IFQ crab deliveries need to be matched to available processor-held processor quota for a large portion of the fisheries. It is the most complex quota program we manage and precise tracking of accounts is required.

The eLanding program has expanded into groundfish and pilot programs for salmon were undertaken last summer. Expansion of this program will result in real-time reporting of harvest data, reducing manual fish ticket entry and improving our efficiency.

## **Organization of the Division**

- **Southeast Fisheries Management Region - Douglas**
- **Central Fisheries Management Region - Anchorage**
- **A-Y-K Fisheries Management Region - Anchorage**
- **Westward Fisheries Management Region - Kodiak**
- **Divisional Headquarters - Juneau**



SOUTHEAST: Dixon Entrance to Yakutat.

CENTRAL: PWS, Cook Inlet, and Bristol Bay.

WESTWARD: Aleutian Islands, Kodiak, Alaska Peninsula, and the Bering Sea.

AYK: Kuskokwim and Yukon rivers, and Norton and Kotzebue sounds.

## Permanent and Seasonal Staff

**In FY12:**



Oliver and Boarding RV Kestrel in 2002

- **314 permanent staff**
- **450 non-perm/  
seasonal staff**
- **20 permanent offices**
- **84 seasonal  
offices/field camps**
- **6 large research  
vessels**

The division has 767 total positions in support of its work. Three interns have been recently approved for hire for next summer and aren't reflected in the listing above.

## **Missions and Measures**

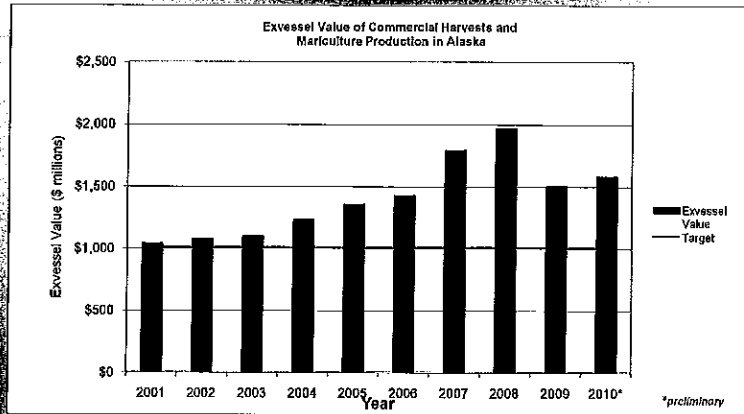
### **Targets**

- 1. Exvessel value of commercial harvests and mariculture production above \$1 billion.**
- 2. Achieve salmon escapement goals in 80% of monitored streams.**
- 3. Develop baselines of DNA-based markers for 100 Alaska salmon stocks for sockeye, chum, and Chinook salmon.**
- 4. Ensure 100% of active aquatic farms operate under terms of current permits.**

These four targets represent the division's current highest priorities.

## Missions and Measures

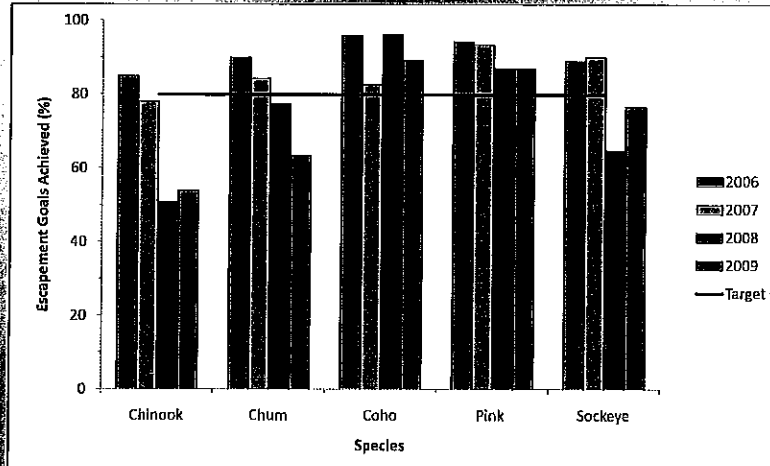
1. Exvessel value of commercial harvests and mariculture production above \$1 billion annually.



We are exceeding the measure for this mission.

## Missions and Measures

### 2. Achieve escapement goals for more than 80% of monitored stocks.



We are challenged by this mission in recent years. As you can see, while we are exceeding the measure for coho and pink salmon, in recent years we are not achieving the measure statewide for sockeye, chum, and Chinook salmon.

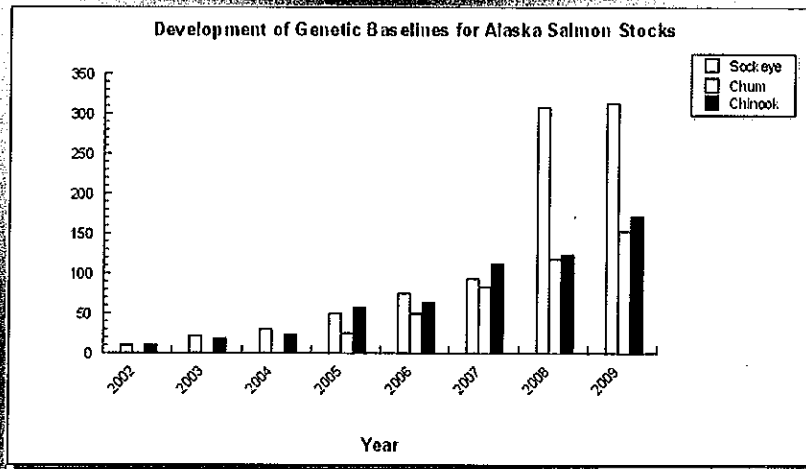
- The department employs a robust, interdivisional approach to developing scientifically-defensible escapement goals for roughly 290 salmon stocks statewide (as of March 2009 and we will have an update for this year soon).
- Division staff have published useful and handy reference document on salmon escapement goals and performance that may be of interest.
- It is well known that Chinook have experienced declines throughout much of the state for potentially many reasons (bycatch, ocean conditions, etc.)
- It is interesting, however, that the Chinook decline isn't consistent statewide; for example, Chignik has met Chinook escapement goals for thirty years running.
- The broad-scale declines point to issues that are not necessarily stock- or river-specific, but reflect some larger influences.

Notes continued for slide 24:

- Sampling and genetic programs coming online now will provide the information we need to more precisely assess stock-specific impacts from trawl bycatch, for example, as are project investigations funded by the state and others to identify potential causal factors for the declines.
- As for sockeye and chum, runs for these species are highly variable and trends are inconsistent across the state.
- There is quite a lot of variability with respect to the length and quality of data that goes into development of any escapement goal.
- Regardless, in our triennial reviews of regional/area escapement goals we are always trying to update the information that goes into an escapement goal, which means that sometimes goals change.
- Goals can change up or down, and this is simply a result of gaining more insight into each stock as more information is gained.
- Managers conduct fisheries to achieve goals, making any surplus available for harvest.
- Where possible, escapements are monitored while fisheries are prosecuted, and based upon inseason run projections, fishing effort can be adjusted to ensure that adequate numbers of fish are reaching the spawning grounds.
- However, many goals are postseason report cards because escapement projects are quite distant from fisheries or because the species goal in question is not the target for the fishery.
- In a mixed stock fishery (a fishery comprised of a number of individual runs) we would need additional assessment tools (abundance estimates and stock identification methods) to actually measure fishery impacts on those stocks in real time.
- We may not make all goals all of the time; missing them occasionally is not a threat to sustainability.
- What could be a threat is the chronic inability to achieve them.
- In this case, in addition to taking restrictive management measures inseason when returns appear to be weaker than anticipated, per the *Policy for Management of Sustainable Salmon Fisheries*, when there is a “chronic inability” to meet an escapement goal (4 out of 5 years—the life cycle of most salmon), the department recommends Stock of Concern status to the Board of Fisheries which then sets in place more restrictive management measures, research plans, habitat analysis, etc., in order to protect such stocks and again achieve escapement goals.

## Missions and Measures

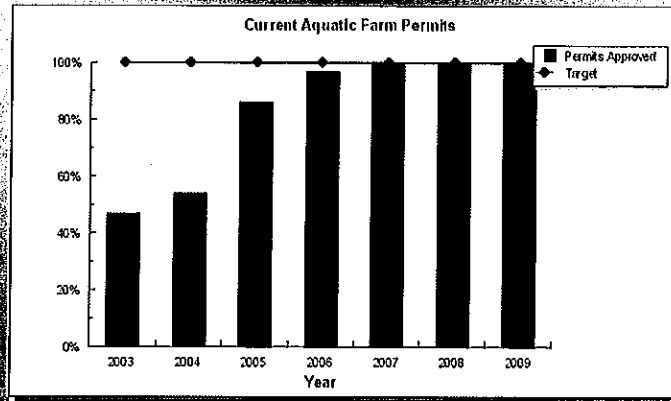
3. Develop genetic baselines for Alaskan Chinook, chum, and sockeye stocks that will include 100 stocks in each baseline.



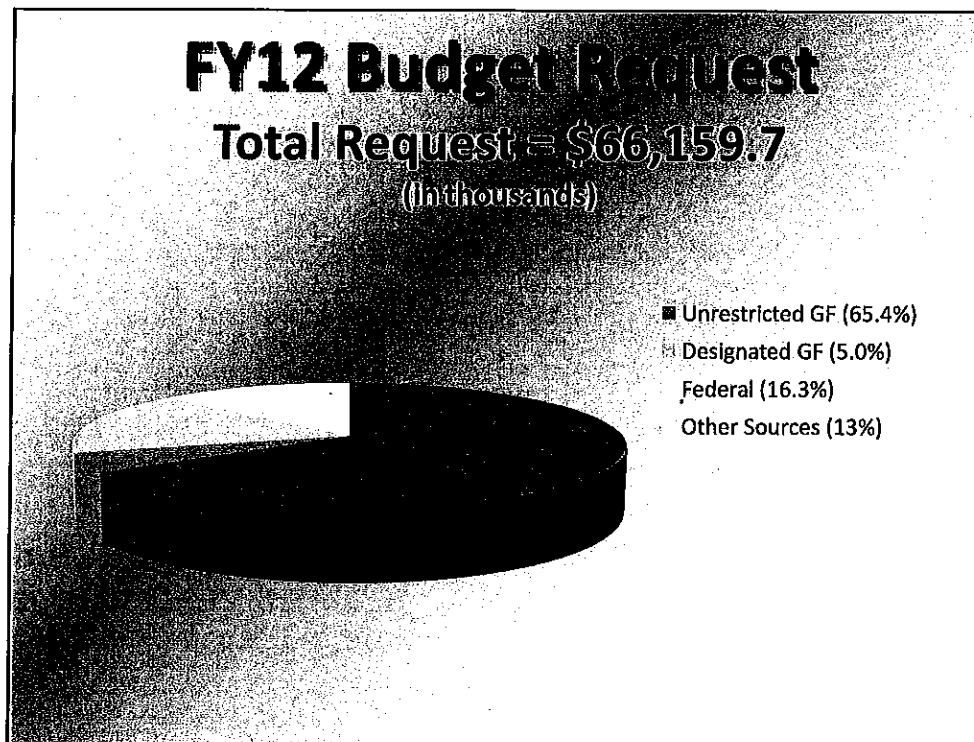
We are meeting or exceeding the measures for this mission.

## Missions and Measures

### 4. All aquatic farms operating with current permits.



We are meeting the measure for this mission.



FEDERAL: PCSRF, NMFS, AKFIN, etc.

OTHER SOURCES: test fish, CIP authority for positions, interagency receipts, statutory designated program receipts (SDPR), EVOS, dedicated F&G fund authority.

## **Economic Impact of Seafood Industry on Alaska's Economy in 2007**

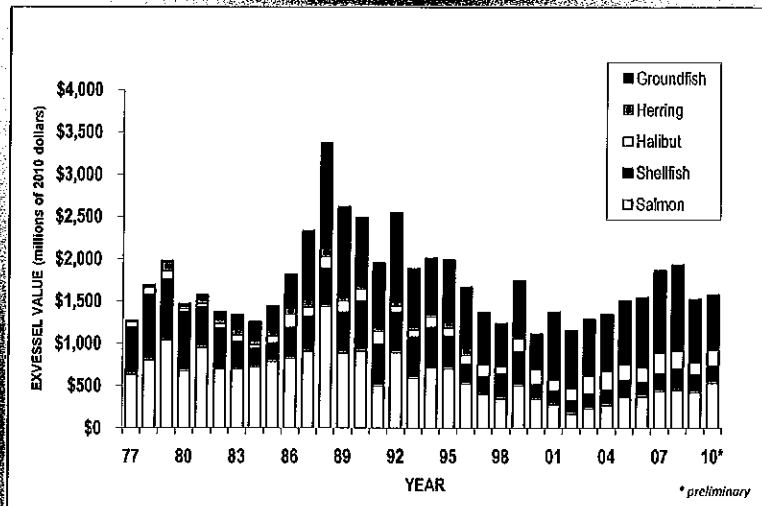
(Source: Northern Economics, Inc. 2009)

- **Generated 78,519 jobs employed in seafood harvesting, processing sectors, and support industries.**
- **Approximately 48,467 of these jobs were held by Alaskans.**
- **Generated \$774.7 million in direct payments to labor with \$237 million going to Alaska residents.**
- **Generated total sales of \$3.6 billion within Alaska.**
- **Paid more in taxes to state general fund than any other industry except oil and gas.**

In 2008, according to National Marine Fisheries Service's commercial landing report, Alaska upheld its position as the #1 fishing state in the nation—harvesting more than 54% of the fish harvested in the U.S, up 32% from 2007, and accounting for 39% of the total U.S. exvessel value.

## Exvessel Value of Alaska's Commercial Fisheries

(Adjusted to 2010 Dollars)



This graph shows the exvessel value of Alaska's commercial fisheries from 1977 to 2010. Exvessel value refers to the postseason adjusted value at the point of the first purchase of the harvest of commercial fishermen – more easily understood as the amount received by fishermen when selling their catch to processors. The values in this graph are adjusted to 2010 dollars for comparison purposes. Each bar represents the total exvessel value for a given year and is broken down by fishery...the aqua bar starting at the bottom of the graph provides the contribution made by salmon.

You can see that the exvessel value of salmon has increased in recent years, while groundfish value has decreased. Salmon is the most valuable commercial fishery managed by the state in state waters. The preliminary exvessel value of the salmon fishery in 2010 was over \$533 million.

In addition to the economic value of Alaska's fisheries, the value to subsistence and personal use harvesters is inestimable—in both cultural terms and in food replacement costs.



In closing, this neat fish is a yelloweye rockfish as seen from the leased survey sub used for demersal shelf rockfish abundance estimate surveys in SE AK.

Thanks for your attention and the opportunity to present this overview of the Division of Commercial Fisheries. I'm happy to try to answer any questions you have.