2/01/11 Overview: Department of Fish & Game - Division of Commercial Fisheries

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Responses to Representative Austerman's questions from 2/1/11 DCF overview in HFSH

Question 1: What's the story with Karluk sockeye escapements and goals?

1. The early run has been below the escapement goal the last three years (2008 thru 2010). The late run has exceeded the lower bound of the escapement goal in five of the last six years.
    a. Note 1: The department is tracking some lake productivity indicators; we believe that the declines were likely caused (or aided) by overescapements seven to twelve years ago, and that we are seeing signs of recovery in the lake.
    b. Note 2: The department is forecasting more fish in 2011 than in 2010, with a 90% chance that the early run will exceed the escapement goal. (Caveat: Forecasts on Karluk are especially challenging; there are relatively few sibling relationships, as well as uncertainties associated with run reconstructions.)
    c. Note 3: Last year's late-run harvest estimate was 49,000 fish.

Question 2: Smolt monitoring is critical to escapement estimates; why isn't the department requesting funds to monitor smolts on "all' (or "every"?) system? Instead, budget requests in question don't appear to request any funding for smolts.

1. There are very good reasons to monitor smolts; at least three have immediate, direct applicability to management (see #2 below). However, smolt monitoring is not a silver bullet for escapement counting; if there is a silver bullet for escapement counts in the KMA, it is technology to count adults, such as a weir or sonar. In difficult fiscal climates, that's why the department tends to prioritize requests for weirs and/or sonar, at the expense of smolt monitoring. As an example, Westward Research requested a DIDSON (sonar) as its highest priority in the current CIP, with intent to use this for improved escapement monitoring. (Westward is the only DCF region without a DIDSON.)
2. That said, smolt monitoring has been done for decades because it:
    a. Provides data to help develop quality escapement goals, which are the backbone of our management strategy.
    b. In some cases, is the best tool we have for forecasting adult returns.
    c. Allows us to partition mortality into freshwater and marine, thereby helping understand the reasons for a stock that is struggling.
    d. We've aggressively sought funding to beef up smolt monitoring, and were just awarded project funding (AKSSF) to monitor Karluk sockeye smolts for the next three years.
3. In a perfect world, we probably wouldn't monitor smolts on every system; rather, we'd target particular species and systems, with an emphasis on doing a few of these "indicator stocks" very well.

4. Many of the datasets in Westward Region are so robust that a new smolt project likely wouldn't provide data improvement for existing goals.
5. A couple of more Westward Region escapement goal factoids:
   - In 2010, KMA salmon escapements were below the goals for four of the twenty-three stocks:
     - Karluk Chinook and early-run sockeye.
     - American and Olds river coho (DSF stocks that are not managed inseason).

Question 4: What is the status of processing samples for achieving completion of the genetic baseline?

Chinook salmon: We have just completed publication of an analysis of 170 populations from Russia to California (95 from Alaska). This represents more than 80% of our collections, but we have ongoing projects to sample Chinook in various regions (Copper River, Cook Inlet, Nushagak River, Yukon River, and Norton Sound). We have good representation of the major spawning groups, but more work is needed to improve our knowledge and estimates on a finer scale. This baseline is being used for bycatch studies by NOAA and in various Alaska fisheries (Yukon, SE Alaska, Kenai River).

Chum salmon: We have just completed publication of an analysis of populations from Russia to Washington. This baseline is undergoing a major analysis as part of WASSIP, but at the end (3 months from now), we will have 230 populations. We have good representation of the major spawning groups, but more work is needed to improve our estimates on a finer scale and to develop applications. This baseline is expected to be used for bycatch as well.

Sockeye salmon: We have completed analysis of 375 populations from Cape Suckling to Seward Peninsula for use in WASSIP. Another 100+ from Southeast Alaska and British Columbia are completed in the lab, but have not been incorporated. More work is needed to develop the baseline for use in Pacific Salmon Treaty fisheries, and the inclusion of 30 Russian populations will enable work in the Bering Sea and Gulf of Alaska.

Coho and pink salmon: Initial work on baselines has been started, but a lot more work is necessary before we can do much with these species. Funding is currently unavailable for this work, but we have begun to submit proposals for funding. Work on both these species, but especially pink salmon, will help in the fundamental analyses necessary for addressing aquaculture issues.

Overview of the Division of Commercial Fisheries

Sue Aspelund

Acting Director

Division of Commercial Fisheries Mission

Manage, protect, rehabilitate, enhance, and develop the fisheries and aquatic plant resources in the interest of the economy and general well being of the state, consistent with the sustained yield principle and subject to allocations established through public regulatory processes.

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.

Division of Commercial Fisheries Core Services

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

Harvest Management

- Supporting the Board of Fisheries in establishing regulations and management plans.
- Opening and closing fishing areas and setting fishing times.
- Collecting harvest and biological data.
- Writing annual management reports to synthesize information.

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.

Kuskokwim Bay Salmon Fishermen Delivering in Quinhagak

Crab Boat Setting Pots in the Bering Sea

Stock Assessment and Applied Research

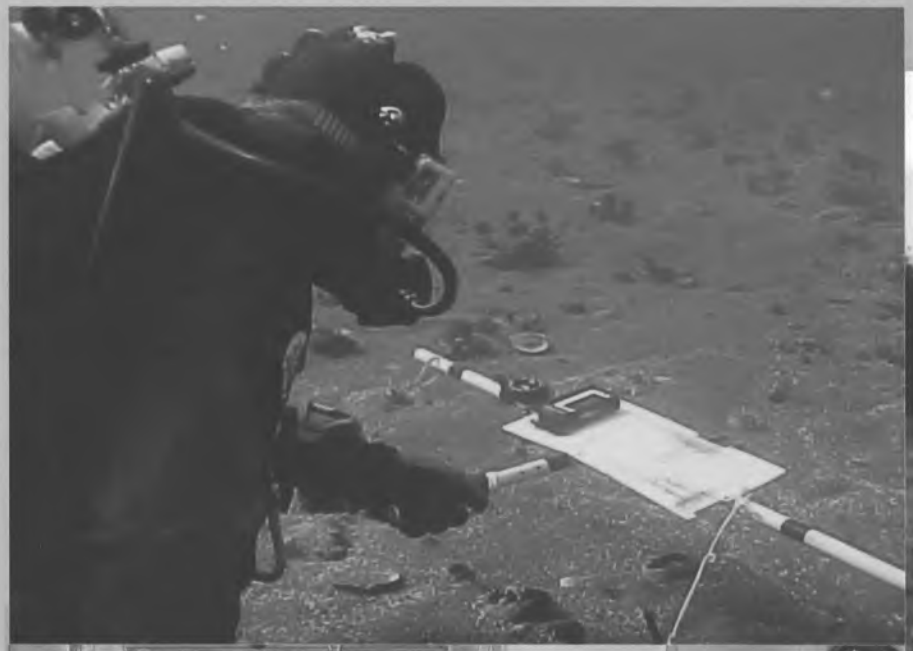
- Salmon Escapement Enumeration:
  - Weirs, Towers, Sonar, Foot/Aerial Surveys
- Juvenile Salmon Estimation
- Groundfish and Shellfish Surveys
- Herring Spawn Deposition and Hydroacoustic Surveys
- Aerial Herring Surveys
- Dive Surveys
- Biological, Genetic, Coded-Wire Tag Sampling

Salmon Enumeration and Sampling

Salmon Enumeration and Sampling

And more...

Other examples of stock assessments...



And yet more...

Aquaculture Permitting

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

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

Laboratory Services

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

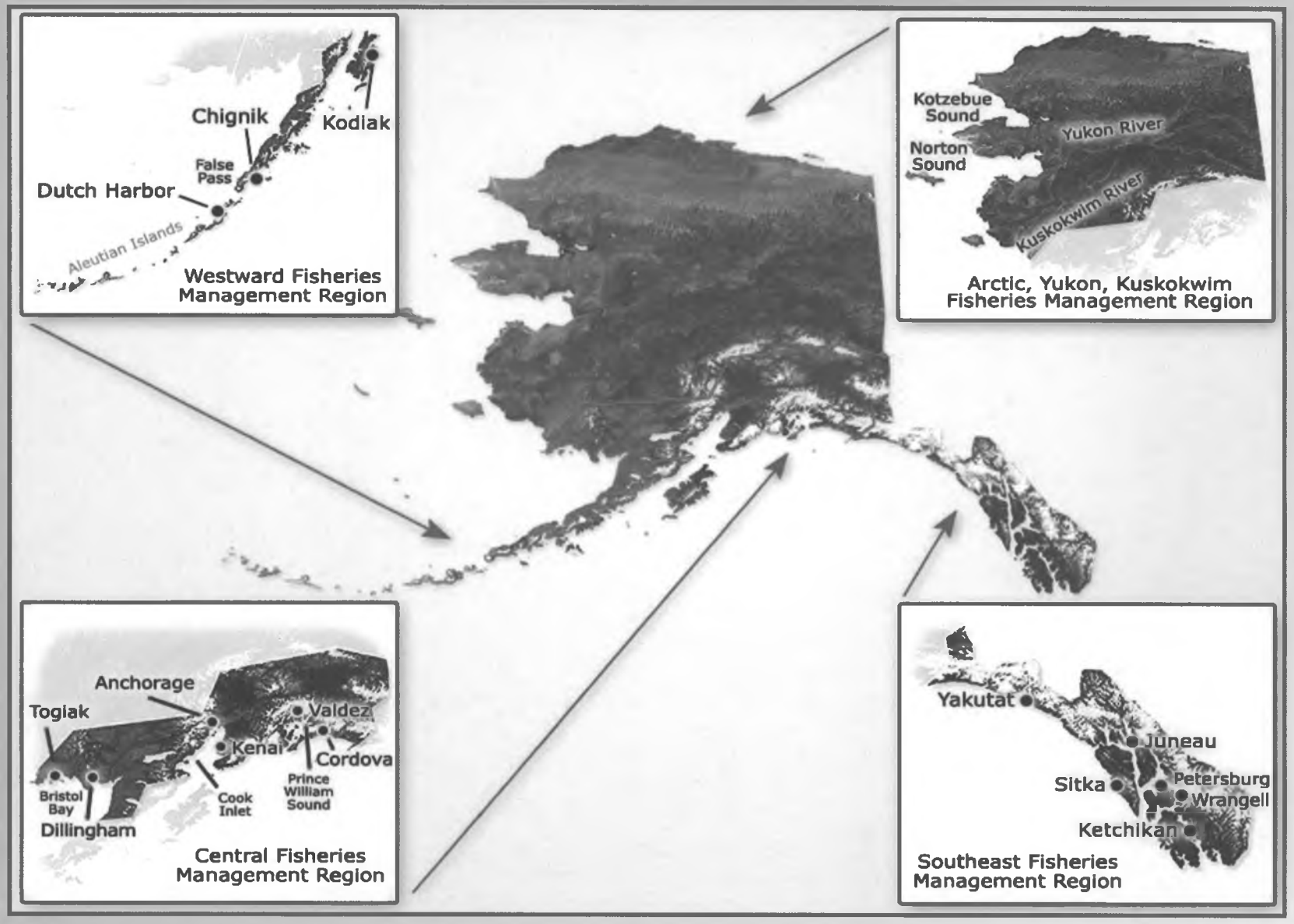
Data Processing

- 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

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

Fisheries Management Regions



Permanent and Seasonal Staff

Dive crew aboard the *R/V Kestrel* in 2002.

In FY11:

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

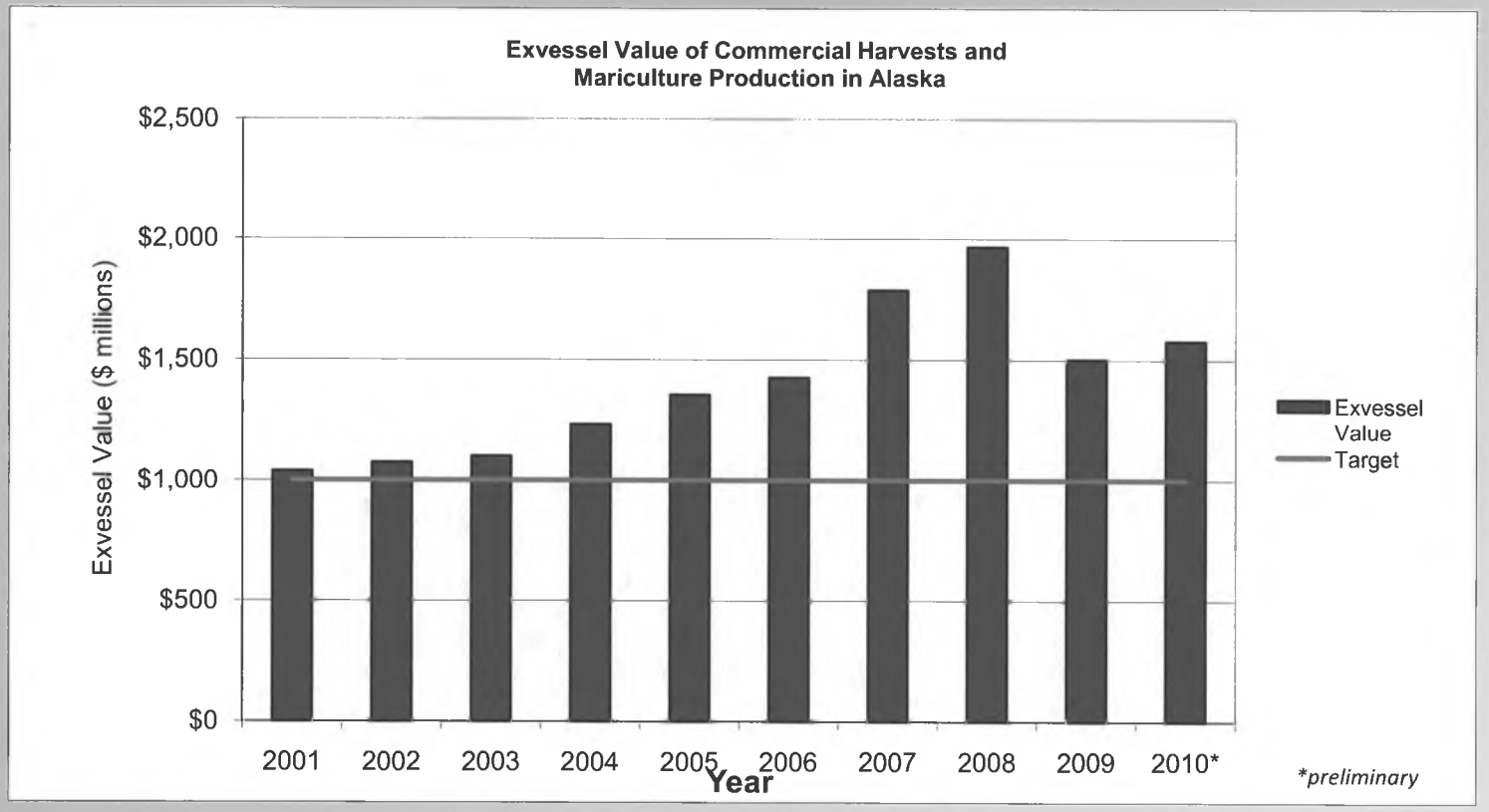
Missions and Measures

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.

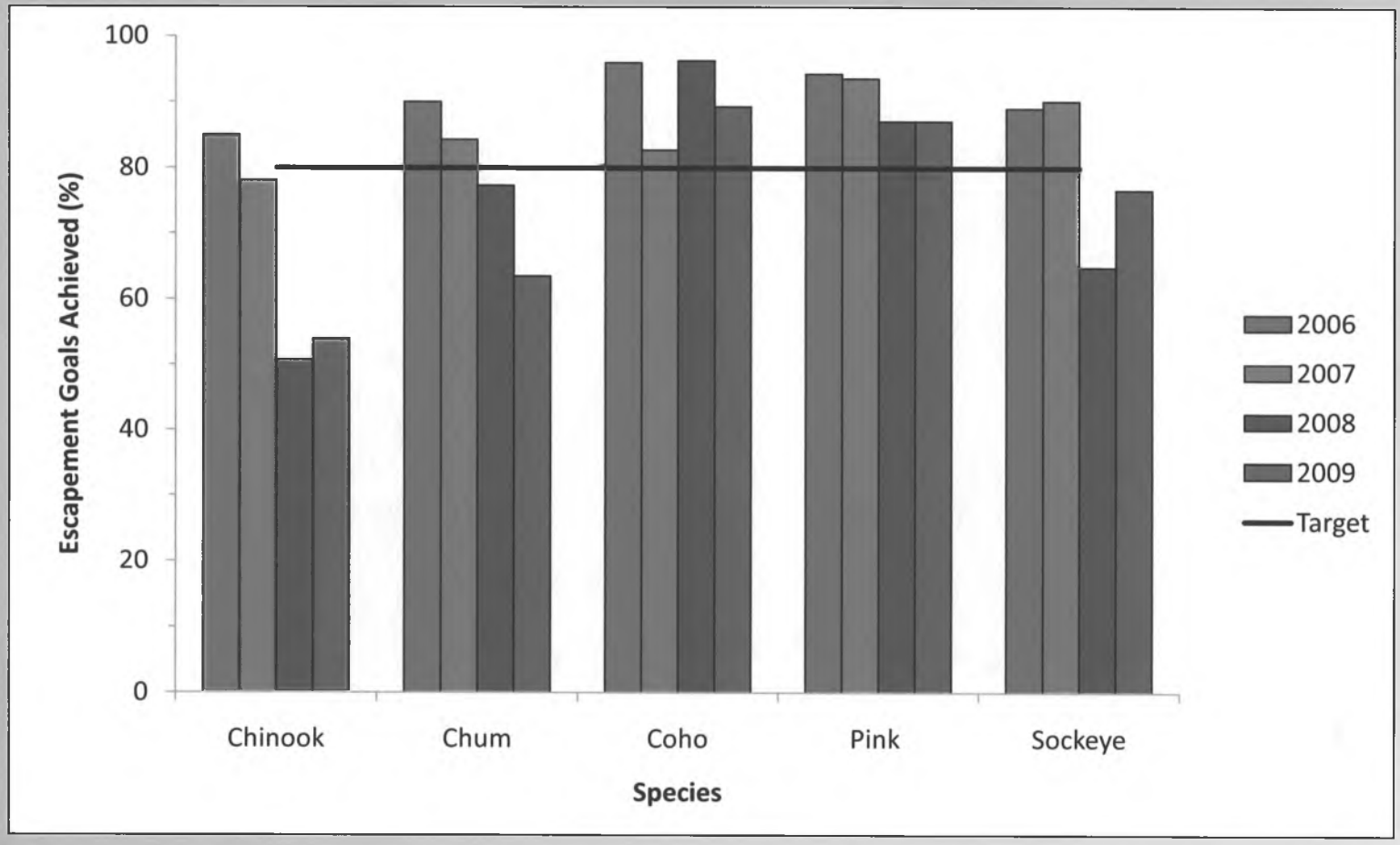
Missions and Measures

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



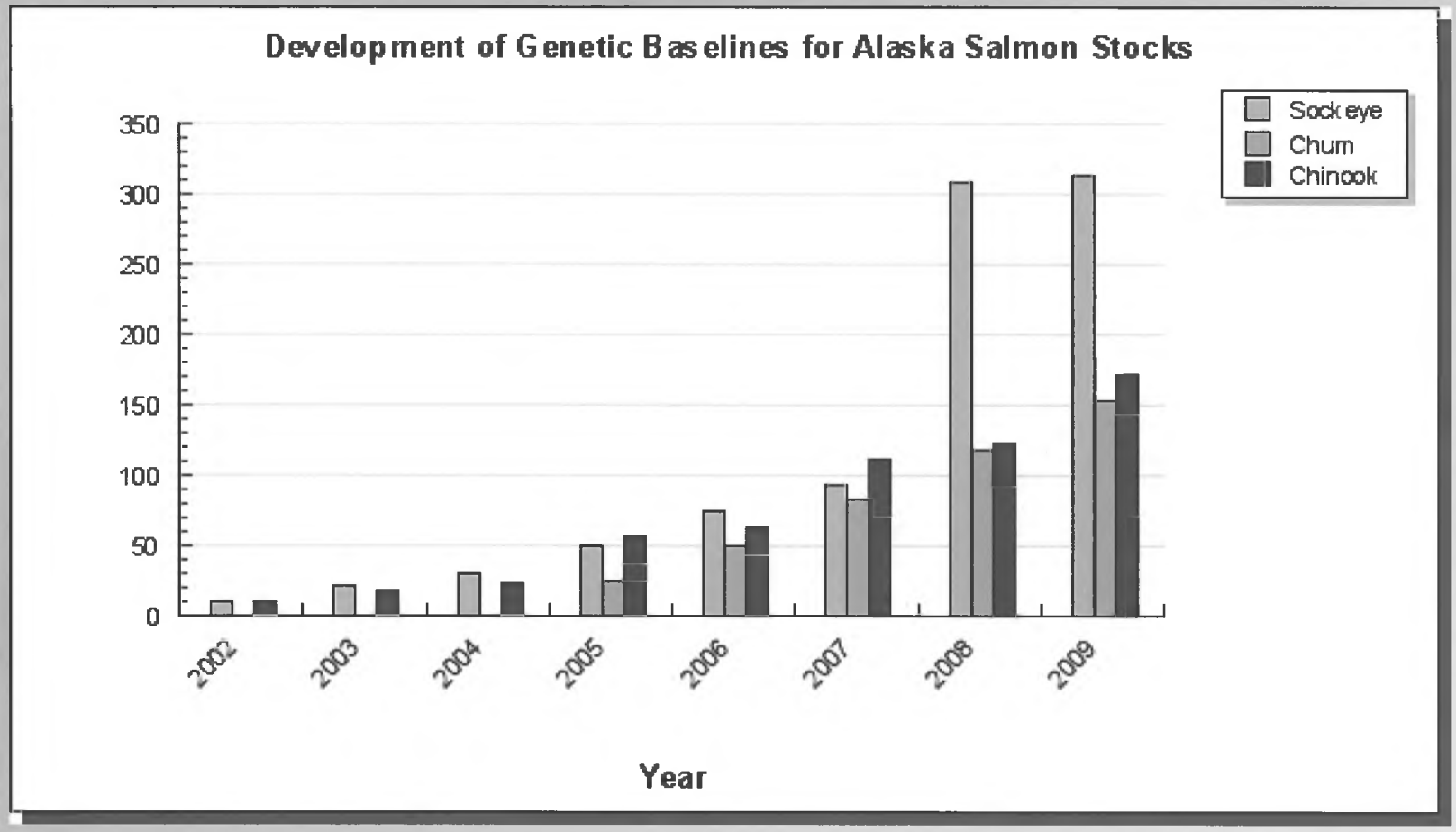
Missions and Measures

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



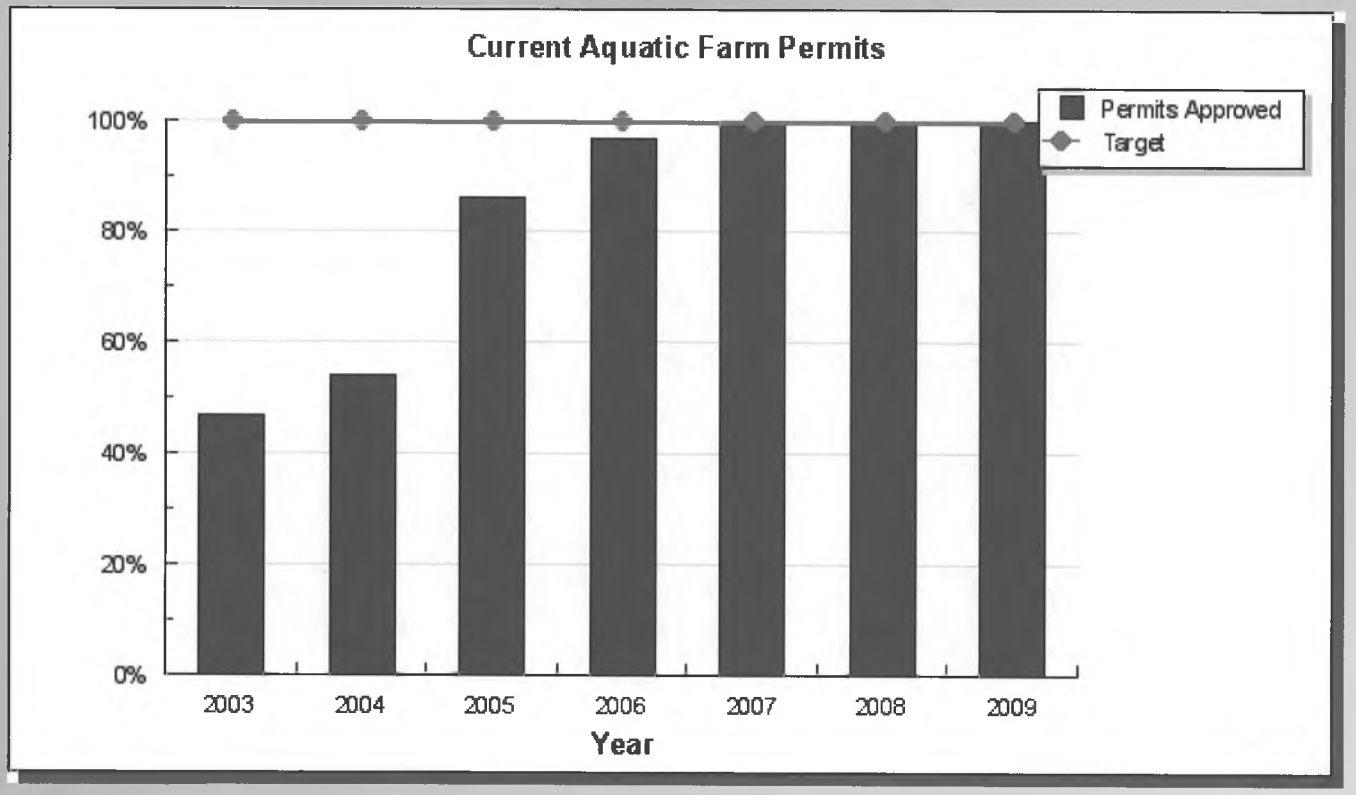
Missions and Measures

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



Missions and Measures

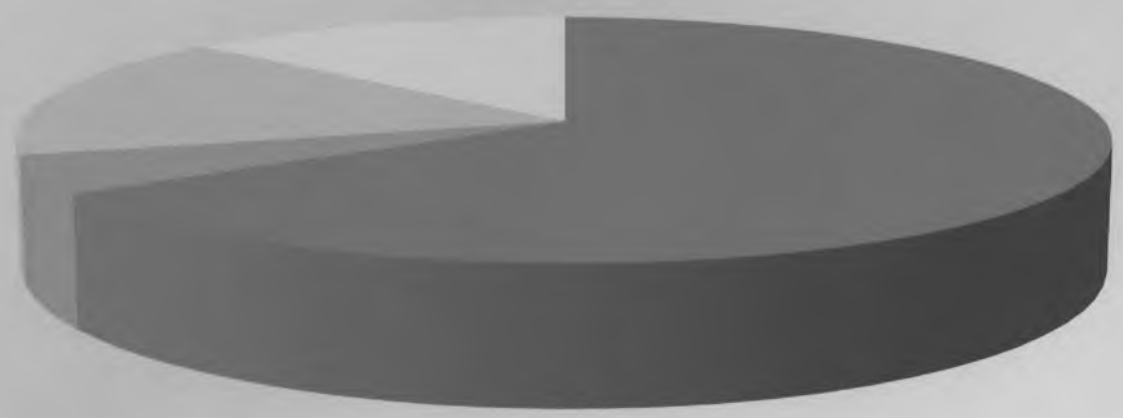
4. **All aquatic farms operating with current permits.**



FY12 Budget Request

Total Request = $66,159.7

(in thousands)



- Unrestricted GF (65.4%)
- Designated GF (5.0%)
- Federal (16.3%)
- Other Sources (13%)

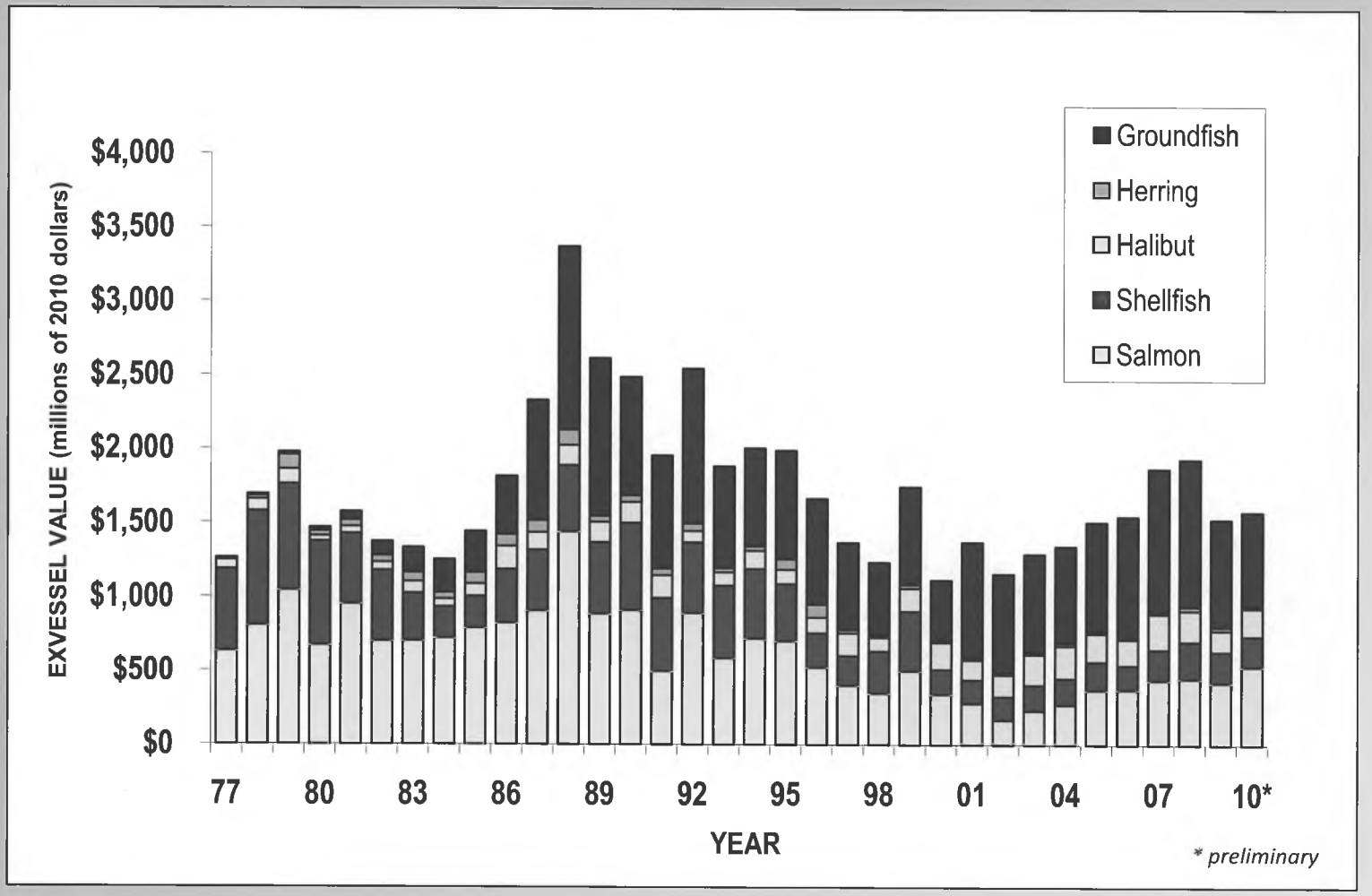
Economic Impact of Seafood Industry on Alaska's Economy in 2007

(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.**

Exvessel Value of Alaska's Commercial Fisheries

(Adjusted to 2010 Dollars)




Thank you!
Questions?