

**State of Alaska
FY2013 Governor's Operating Budget**

**Department of Fish and Game
Commercial Fisheries
Results Delivery Unit Budget Summary**

Commercial Fisheries Results Delivery Unit

Contribution to Department's Mission

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

Core Services

- Stock Assessment and Applied Research: Maintain ongoing programs for the enumeration, assessment, and understanding of salmon, herring, groundfish, and shellfish stocks.
- Harvest Management: Control the harvest of fishery resources for subsistence, commercial, and personal uses according to plans and regulations.
- Aquaculture Permitting: Permit and provide regulatory, technical, and planning services to aquatic farmers and private nonprofit hatchery operators.
- Information Services and Public Participation: Develop, maintain and disseminate data, analyses, and published reports.

Results at a Glance

(Additional performance information is available on the web at <http://omb.alaska.gov/results>.)

End Result A: Stable or increasing economic and social benefits derived from the harvest and use of fish, shellfish, and aquatic plants in Alaska.

Target #1: Maintain total annual value of commercial harvests and mariculture production at over \$1 billion annually.

Status #1: The Commercial Fisheries target to maintain the values of the salmon, shellfish, and halibut fisheries increased in 2010, primarily due to increased prices. These increases offset small declines in the value of groundfish and herring harvests to push the total exvessel value for Alaskan commercial fisheries to the second highest level since 2001. Alaska's mariculture industry saw a decrease of about 20 percent in the value of its production.

Target #2: Achieve the Amounts Necessary for Subsistence (ANS) established by the Board of Fisheries in 70% of subsistence fisheries.

Status #2: According to Commercial Fisheries data, only about 50 percent of reported fisheries with Amounts Necessary for Subsistence (ANS) findings yielded the identified level of harvests established in the Board of Fisheries ANS findings. This percentage is below the target of 70% and the majority of those fisheries that did not reach ANS levels were in the Yukon River, Chignik, and the Alaska Peninsula.

Strategy A1: Ensure the conservation of natural stocks of fish, shellfish and aquatic plants based on scientifically sound assessments.

Target #1: Achieve salmon escapement goals in 80% of monitored systems.

Status #1: The Commercial Fisheries target to meet escapement targets in 80% of monitored salmon streams has not been met for the third year in a row.

Target #2: Establish reproductive goals or other baseline biological reference points for all harvested stocks.

Status #2: According to Commercial Fisheries data, the Salmon and Groundfish harvested stocks demonstrate a high percentage of meeting the target of establishing reproductive goals or other baseline biological reference points for all harvested stocks. Other goals based on quantitative and qualitative analysis and assessment indicate more work is necessary in order to fully meet the target.

Major Activities to Advance Strategies

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|---|--|
| <ul style="list-style-type: none"> • Collect age, size, and sex data on harvested finfish and shellfish populations. • Operate aging/tag/otolith, genetics, and pathology | <ul style="list-style-type: none"> • Provide technical oversight in finfish and shellfish health for hatchery and farm operators. • Prevent or prescribe treatment for disease outbreaks |
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Major Activities to Advance Strategies

- laboratories.
- Collect and analyze genetic markers from finfish and shellfish populations.
- Survey and sample marine finfish and shellfish populations.
- Calculate annual escapement goals for salmon.
- Establish annual harvest objectives for marine species.
- Prevent the introduction and spread of invasive and introduced species.
- Permit aquatic farms for shellfish and aquatic plants.
- Provide biological and technical assistance to existing and prospective aquatic farmers.
- Open and close areas for commercial fishing to harvest surpluses.
- Collect harvest information from commercial, personal use and subsistence fisheries.
- Operate weirs, sonar projects, and counting towers to track salmon escapements.
- Conduct aerial surveys during management of salmon and herring fisheries.
- Place observers on fishing vessels to sample catches and collect data.
- Conduct test fishing operations as part of stock assessment efforts.
- Conduct life history and habitat utilization research.
- Conduct stock assessment and recruitment modeling.
- Investigate new and improved technologies for determining biological productivity and calculating yields.
- Conduct collaborative research with universities, federal agencies, and non-governmental organizations.
- Expand database of genetic markers to stocks not currently covered.
- Develop models for calculating Maximum Sustained Yield for stocks lacking them.
- Provide training and continuing education for staff from all job classes.
- Conduct life history and other biological research on underutilized fish stocks.
- Respond to industry requests for new fisheries on underutilized stocks.
- Work with Board of Fisheries to authorize fisheries on underutilized stocks.
- Permit and oversee private non-profit salmon hatchery program.
- Approve salmon and shellfish stocks with acceptable disease histories for mariculture and salmon aquaculture programs.
- at salmon hatcheries or shellfish farms.
- Provide harvest and production data to Commercial Fisheries Entry Commission (CFEC) and North Pacific Fishery Management Council (NPFMC).
- Comment to NPFMC and CFEC on fishery management and biological issues associated with rationalization proposals.
- Provide individual fishing history data to boat owners, captains, and federal and state agencies.
- Open and close areas and species for subsistence and personal use harvest.
- Issue permits for personal use and subsistence fisheries.
- Tabulate subsistence and personal use catches.
- Provide reports to the Board of Fisheries and other entities on subsistence and personal use fisheries.
- Work with the Board of Fisheries and the public to craft management plans and regulations that meet subsistence and personal use needs.
- Provide biological and fishery management information to the Board of Fisheries and state fish and game advisory committees.
- Submit proposals to the Board of Fisheries.
- Comment on both staff and public proposals before the Board of Fisheries.
- Provide oral and written biological and fishery management advice to the Board of Fisheries.
- Draft regulations and management plans based on proposals approved by the Board of Fisheries.
- Provide staff support to the Alaska Board of Fisheries.
- Design and maintain electronic databases for catch and production data.
- License fish processors.
- Design, print, issue, collect, edit, and data enter fish tickets recording harvests.
- Collect, edit and data enter annual buying and production data from seafood processors.
- Provide summary information on harvests and production in electronic and print media.
- Maintain confidentiality of protected data.
- Publish catch and production information on web site.
- Provide internet access to searchable database of division publications.
- Publish news releases on department research and management activities.
- Publish articles on fisheries management and research in magazines and trade journals.
- Provide photos and video footage on the web site and to the media.

Key RDU Challenges

Yukon River Salmon Fisheries

Yukon River salmon fisheries are continuing in a period of low productivity for Chinook salmon. This is one of the poorest regions of the state and people are highly dependent on these salmon for both subsistence and commercial fisheries. This creates a challenge for management and research to accurately assess run size and make correct management decisions in season that provide allowable harvests of Chinook and overlapping summer chum salmon (priority program 1) while still protecting the sustainability of stocks. Because of the size of the drainage, the mixed stock/mixed species nature of the fisheries, and the lag time between when the fish enter the river and when they reach the spawning grounds, this is one of the most difficult salmon management challenges in the state. The department needs improved capability to 1) assess the run size early so that management decisions accurately reflect run size with a higher degree of precision than previously available, 2) provide information to and solicit input from users along the river (priority programs 3 and 4), and 3) develop information and analyses that will allow us to prevent intrusion of the federal subsistence program into management of state fisheries.

Bering Sea Crab Research

The multi-year federal grant that had been supporting Bering Sea crab research and fishery data collection and distribution for several years was discontinued in the federal FY08 budget. The state provided one-time funding in state FY09 and federal funds were received again in state FY10 to support this program. The department continues to rely on federal funds again in state FY12 to continue this important research work and essential data collection and distribution. Secure, long-term funding is needed for this program to maintain the research and data collection and distribution program necessary for sustainable management of the highly-valuable Bering Sea and Aleutian Islands crab fisheries. The division is working to assess reproductive potential and to estimate other important productivity parameters of the Bering Sea snow crab stock, a stock that provides the largest crab harvest in Alaska, although harvests are presently much lower than historical levels. The department also performs triennial surveys to improve stock assessment of king crab stocks that are not surveyed, or not adequately surveyed, by the National Marine Fisheries Service trawl survey. Improved stock assessments will allow the department to maximize harvests and avoid overfishing, which is especially important to industry during periods of low stock productivity. The division maintains and distributes the data collected by at-sea observers and dockside samplers, as is essential for fishery management.

Marine Stewardship Council Transition to Industry Client/Third-Party Sustainability Certification

In the fall of 2008, then-Commissioner Lloyd informed the Marine Stewardship Council (MSC) that the Alaska Department of Fish and Game (ADF&G) would no longer continue as the client for certification of the Alaska salmon management program. The client role was taken over by the Alaska Fisheries Development Foundation. ADF&G continues to provide information and assist the client during the annual surveillance audits and the re-certification process, activities that comprise a significant contribution of agency resources to the process. This transition has gone smoothly so far. The Alaska Seafood Marketing Institute is working with Global Trust to develop a third-party sustainability certification program for all Alaskan fisheries. This process is far less onerous than the MSC certification. Alaska's salmon fisheries have been certified and pollock fisheries certification is underway.

Employee Recruitment and Retention Difficulties

The division continues to work with the department's workforce planning coordinator to overcome recruitment and retention difficulties. As part of these efforts, the division is collaborating on a department-wide level and is partnering with other state agencies and outside entities such as the Association of Fish and Wildlife Agencies, Management Assistance Team, other state fish and wildlife agencies, and the National Conservation Leadership Institute.

The division continues to suffer from insufficient applicant pools for many positions, especially higher level positions such as Fishery Biologist IIIs and IVs, Fisheries Scientists, Regional Supervisors, and Assistant Directors. Insufficient applicants from within the state are requiring supervisors to recruit from out of state for almost all positions and even then, many of our vacancies attract an insufficient applicant pool. The division is addressing this problem through broader recruitment efforts, workforce development for new and existing employees, and development of a program to interest young Alaskans, especially from rural areas, in careers with ADF&G. This problem impacts the division's ability to carry out all priority programs.

Rebuilding Salmon Fisheries Research Program

The division's statewide salmon research program has recently suffered from retirements of key personnel and difficulty in replacing key positions, which has led to specific knowledge gaps in the program. Progress has been made in filling a key fishery scientist position and reorganizing personnel to fill some specific needs. However, as management of Alaska's salmon fisheries becomes more complex, it is essential to continue rebuilding this program into the future.

Susitna and Cook Inlet Sockeye Salmon Stocks

Research projects continue on sockeye salmon stocks in Susitna River. Besides continuing to estimate run sizes, this research is attempting to solve the species apportionment problem so that the transition to dual frequency identification sonar (DIDSON) can continue and this sonar can be a useful tool in the Yentna River (a tributary of the Susitna River) drainage. This on-going research is intended to answer a number of questions about the abundance, productivity, and harvests of sockeye salmon in Upper Cook Inlet and assist in setting escapement goals. Low numbers of sockeye salmon have been returning to the Susitna River and other Northern Cook Inlet systems in recent years. These research projects will help determine the cause of the poor returns to Northern Cook Inlet, to set appropriate sockeye salmon escapement goals in the Susitna River drainage, and to determine if effective management measures can be deployed in the Central District commercial fisheries of Upper Cook Inlet to achieve those goals while still allowing the harvest of more abundant Kenai River and Kasilof River sockeye salmon stocks, and meeting other established management goals, such as reducing king salmon catch.

Karluk Lake Sockeye Salmon Reduced Runs

Sockeye salmon returning to Karluk Lake the past three years have been substantially lower than the recent past, resulting in poor escapements and restrictions to the commercial fishery. Karluk Lake sockeye salmon typically represent the largest runs in the Kodiak Management Area and dictate most commercial fisheries management decisions throughout the west side of Kodiak Island. User groups have expressed significant concern regarding recent run sizes and the department has put considerable effort into exploring the causes for the reduced runs, likely scenarios of recovery, and ways to prevent low runs in the future. The department has initiated pilot projects, such as the feasibility of a DIDSON sonar at the Karluk Lagoon and an early-season test fishery to explore methods to improve management of the stock.

Genetic Stock Identification

As Alaska's salmon fisheries become more complex, the department and the public have identified the need for increased genetic stock identification capability. This increased capability can help the department inform fishery allocation issues, meet treaty obligations in Southeast Alaska and on the Yukon River, assess the effect of management actions, improve estimation of stock productivity, and set escapement goals that provide for maximum sustained yield. The Gene Conservation Laboratory is completing analysis of ~140,000 tissues collected from Western Alaska salmon stocks to determine stock-specific contributions of chum and sockeye salmon in Chignik, Alaska Peninsula, Bristol Bay, and Arctic-Yukon-Kuskokwim Region fisheries. Analysis and reporting of data for this project represents a tremendous challenge for the division. Although current lab capacity is five to ten times that of most other fisheries genetics labs, the laboratory struggles to meet current demand while keeping up with the ever-changing technology. The laboratory is accumulating samples valuable for future analyses from baseline and mixture collections that are either irreplaceable or expensive to replace (conservatively worth \$2 million). The laboratory is facing challenges finding climate-controlled space for archiving these samples. Potential Endangered Species Act (ESA) listings also point out the need to expand lab capabilities to better deal with genetics of such diverse species as beluga whales and Pacific herring. The division is seeking to expand its capabilities into marine species to answer a variety of questions related to ESA listings, federal fisheries management, and mariculture.

Federal/State Subsistence

In order to minimize disruption to state residents, to protect state fish resources, and minimize federal intrusion into state management, significant staff time is spent interacting with the federal system of Regional Advisory Councils, which represent federal subsistence users, the federal Office of Subsistence Management, and the Federal Subsistence Board. The division and the department must find ways to ensure that federal decisions do not adversely impact conservation of fishery resources or unnecessarily restrict non-federally qualified users. A subsistence liaison team leader was hired in November 2010 following two years of difficulty in recruiting and efforts continue to hire a wildlife liaison.

Federal Fishery Rationalization

The North Pacific Fishery Management Council (NPFMC) has a number of initiatives underway that affect state-managed fisheries and distribution of benefits from the harvest of federally-managed fishery resources off Alaska. These include bycatch reduction measures for crab and salmon in groundfish fisheries off Alaska; rebuilding overfished crab stocks; implementing annual catch limits to guard against overfishing; restructuring the federal groundfish observer program to improve quality and utility of observer data; modifying fishery management to protect endangered species; and applying lessons learned from over a decade of experience with fishery rationalization

programs off Alaska to better meet state policy objectives. State managers and researchers must work through the NPFMC process to minimize negative impacts of federal management programs on nontarget species, habitat, state fisheries, and coastal communities as rationalization programs evolve.

State-Federal Co-Management of Bering Sea – Aleutian Islands Crab Fisheries

The federal Fishery Management Plan (FMP) for the Bering Sea and Aleutian Islands king and Tanner Crabs establishes a state-federal cooperative management regime that defers crab management to the State of Alaska with federal oversight. Changes to the Magnuson-Stevens Fishery Conservation Act (MSA) in recent years and resulting federal regulations stipulating management measures that must be applied to federal FMP fisheries (e.g., federal overfishing definitions, federal stock status determinations, federal annual catch limits), have increased demands on Westward and Headquarters staff for analysis and reporting.

Vessels and Aircraft Maintenance and Replacement

The division has five research and several support vessels, and four small aircraft, which require regular maintenance and periodic overhauls. They are integral to a variety of stock assessment programs and provide platforms for inseason management. Maintenance must be provided to protect this capital investment, assure efficient operations, and meet safety requirements. Additionally, three of the division's vessels have reached replacement age and the division must find funds to replace them in the near future. Maintaining a high quality aircraft program for salmon stream surveys depends on the ability to recruit and retain excellent pilots experienced in rural Alaska and flying low altitude and float equipped planes.

Support for Aquaculture

Both private nonprofit (PNP) salmon hatchery operators and aquatic shellfish farmers depend on the division for planning, permitting, disease prevention, and other technical services. The division is now better able to provide the level of support desired, because of improved funding and staffing; however, technical service requests from hatchery operators and aquatic farmers have increased substantially in recent years, which in turn, have increased challenges for staff. We have completed a review of hatchery operations and permitting in the Kodiak area and have moved from there to Cook Inlet. Cook Inlet will be followed by Prince William Sound and the Southeast regions. This review is to assure hatchery management plans are up to date and that programs are adhering to policies. We are also reviewing the status and condition of state-owned facilities that are leased to PNP hatchery associations. The division is following, and has permitted, private efforts to research and develop techniques for enhancing depressed shellfish populations like red and blue king crab, and to reestablish lake enrichment programs to restore and enhance sockeye salmon production in the Kodiak Island area. The division made significant improvements in the time it takes to process and issue permits. We have continued to work with industry on key issues of concern to promote aquatic farm development and growth. The division continues to address the challenge of supporting and helping these various aquaculture and hatchery programs develop while protecting wild stocks.

Significant Changes in Results to be Delivered in FY2013

See component level.

Major RDU Accomplishments in 2011

- The 2011 salmon harvest of 176 million fish generated an estimated preliminary value to commercial fishermen of \$603 million. This estimate is based on inseason information and will be revised after final information is received from salmon processors, buyers, and direct marketers in the spring of 2012. Typically, the revised figure is significantly higher than the preliminary inseason estimate. For example, the 2010 inseason estimate was \$533 million, but the revised estimate topped \$600 million. The values of the 2010 and 2011 salmon harvests are the second and third highest valued harvests recorded since 1975.
- Computer Services implemented a major system to support management of its numerous News Releases. The application was developed with capabilities to offer a single interface for all departmental news releases to the public. The system developed controls for complete publication cycle of a news release document. Agency staff publish a document in the system by adding document metadata such as fishery, location, and release date. When the release date/time is reached, the document is published according to its distribution options, which can include publication to the web, distributed via email and/or fax. This system also includes the department's first 'mobile' interface, which is a scaled-down version of the same system on the division's website.

- The division is addressing funding challenges posed by withdrawal of federal funds for crab observer training. In collaboration with the University of Alaska Observer Training Center, division staff are identifying program and funding needs to ensure an effective observer training program, as well as developing plans to replace federal observer training funds with crab rationalization and test-fish funds.
- The division achieved a significant management milestone in developing an allowable catch limit for the 2009/10 season for Bering Sea snow crab, which was determined this fall to have failed to rebuild to the target level for sustainability. Staff identified a conservative harvest objective that met the stringent requirements of federal law (Magnuson Stevens Fishery Conservation and Management Act) for rebuilding the fishery, while still providing for an economically viable harvest. The department established total allowable catches for the 2010/11 Bering Sea crab season for the Bristol Bay red king crab fishery (14.8-million pounds), the Bering Sea snow crab fishery (54.3-million pounds), and the St. Matthew blue king crab fishery (1.6-million pounds) that met the conservation and economic benefit objectives, and requirements of state and federal regulations; three Bering Sea crab fisheries (the Pribilof red and blue king crab and Bering Sea Tanner crab fisheries) were closed to commercial fishing in the 2010/11 season for stock conservation. The department worked within the federal process to assure that the expertise within the department is directly utilized in setting the annual catch limits that federal regulations require to be established for the Bering Sea and Aleutian Islands king and Tanner crab fisheries in order to minimize risk of overfishing.

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**Commercial Fisheries
RDU Financial Summary by Component**

All dollars shown in thousands

	FY2011 Actuals				FY2012 Management Plan				FY2013 Governor			
	UGF+DGF Funds	Other Funds	Federal Funds	Total Funds	UGF+DGF Funds	Other Funds	Federal Funds	Total Funds	UGF+DGF Funds	Other Funds	Federal Funds	Total Funds
Formula Expenditures None.												
Non-Formula Expenditures												
SE Region Fisheries Mgmt.	7,507.7	0.0	151.9	7,659.6	8,352.6	0.0	89.6	8,442.2	8,844.2	0.0	92.0	8,936.2
Central Region Fisheries Mgmt.	8,436.0	0.0	0.0	8,436.0	8,878.9	0.0	0.0	8,878.9	9,126.5	0.0	0.0	9,126.5
AYK Region Fisheries Mgmt.	6,368.3	0.0	0.0	6,368.3	7,295.4	0.0	0.0	7,295.4	7,901.1	0.0	0.0	7,901.1
Westward Region Fisheries Mgmt.	7,408.4	0.0	0.0	7,408.4	9,073.6	0.0	0.0	9,073.6	9,330.5	0.0	0.0	9,330.5
Headquarters Fisheries Mgmt.	10,400.6	0.0	0.0	10,400.6	10,819.6	0.0	0.0	10,819.6	11,284.1	0.0	0.0	11,284.1
Comm Fish Special Projects	3,058.6	7,412.5	8,678.2	19,149.3	3,913.8	8,724.1	10,354.2	22,992.1	4,256.4	9,290.4	10,331.6	23,878.4
Totals	43,179.6	7,412.5	8,830.1	59,422.2	48,333.9	8,724.1	10,443.8	67,501.8	50,742.8	9,290.4	10,423.6	70,456.8

Commercial Fisheries
Summary of RDU Budget Changes by Component
From FY2012 Management Plan to FY2013 Governor

All dollars shown in thousands

	<u>Unrestricted Gen (UGF)</u>	<u>Designated Gen (DGF)</u>	<u>Other Funds</u>	<u>Federal Funds</u>	<u>Total Funds</u>
FY2012 Management Plan	44,575.0	3,758.9	8,724.1	10,443.8	67,501.8
Adjustments which will continue current level of service:					
-SE Region Fisheries Mgmt.	227.4	4.2	0.0	2.4	234.0
-Central Region Fisheries Mgmt.	243.7	3.9	0.0	0.0	247.6
-AYK Region Fisheries Mgmt.	15.1	0.6	0.0	0.0	15.7
-Westward Region Fisheries Mgmt.	193.3	63.6	0.0	0.0	256.9
-Headquarters Fisheries Mgmt.	274.5	0.0	0.0	0.0	274.5
-Comm Fish Special Projects	73.2	19.4	266.3	277.4	636.3
Proposed budget decreases:					
-Comm Fish Special Projects	0.0	0.0	0.0	-300.0	-300.0
Proposed budget increases:					
-SE Region Fisheries Mgmt.	260.0	0.0	0.0	0.0	260.0
-AYK Region Fisheries Mgmt.	200.0	390.0	0.0	0.0	590.0
-Headquarters Fisheries Mgmt.	190.0	0.0	0.0	0.0	190.0
-Comm Fish Special Projects	0.0	250.0	300.0	0.0	550.0
FY2013 Governor	46,252.2	4,490.6	9,290.4	10,423.6	70,456.8