

# **State of Alaska FY2011 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.**

- Over \$1.9 billion value of commercial harvests and mariculture production of fish, shellfish, and aquatic plants - continuing a solid six year upward trend.
- Amounts necessary for subsistence were met in 60% of the subsistence fisheries, 10% below the 70% target for 2007.

#### **Status of Strategies to Achieve End Result**

- The annual percentage of salmon reproductive goals achieved in monitored systems is within 10% of the goal.
- The number of salmon stocks identified and sampled for inclusion in DNA databases continues to increase and the original target has been achieved for all three species.
- 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.
- In this difficult task, meeting 80% of user group allocation objectives established by the Board of Fisheries by region continue to fall below the target. This strategy is functional because it demonstrates the inherent challenge of achieving allocation targets.
- The Mark Tag and Age Lab is clearly meeting the goal of providing data from coded wire tags and otolith marks within one week or less, usually the data is available within one day and the few occasions where slightly more time is required usually involve a weekend or some other explanation.
- There continues to be a high approval percentage of public requests for new fishery development for which basic harvest guidelines are developed.
- Commercial Fisheries continues to process 100% of all samples submitted by salmon hatcheries, shellfish hatcheries, and aquatic farmers.
- The mariculture section is now reporting a 100% compliance that all farms operate under the terms of a current aquatic farm permit.

#### **Major Activities to Advance Strategies**

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| <ul style="list-style-type: none"> <li>• Collect age, size, and sex data on harvested finfish and shellfish populations.</li> <li>• Operate aging/tag/otolith, genetics, and pathology laboratories.</li> <li>• Collect and analyze genetic markers from finfish and</li> </ul> | <ul style="list-style-type: none"> <li>• Provide technical oversight in finfish and shellfish health for hatchery and farm operators.</li> <li>• Prevent or prescribe treatment for disease outbreaks at salmon hatcheries or shellfish farms.</li> <li>• Provide harvest and production data to Commercial</li> </ul> |
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### Major Activities to Advance Strategies

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| <ul style="list-style-type: none"> <li>• shellfish populations.</li> <li>• Survey and sample marine finfish and shellfish populations.</li> <li>• Calculate annual escapement goals for salmon.</li> <li>• Establish annual harvest objectives for marine species.</li> <li>• Prevent the introduction and spread of invasive and introduced species.</li> <li>• Permit aquatic farms for shellfish and aquatic plants.</li> <li>• Provide biological and technical assistance to existing and prospective aquatic farmers.</li> <li>• Open and close areas for commercial fishing to harvest surpluses.</li> <li>• Collect harvest information from commercial, personal use and subsistence fisheries.</li> <li>• Operate weirs, sonar projects, and counting towers to track salmon escapements.</li> <li>• Conduct aerial surveys during management of salmon and herring fisheries.</li> <li>• Place observers on fishing vessels to sample catches and collect data.</li> <li>• Conduct test fishing operations as part of stock assessment efforts.</li> <li>• Conduct life history and habitat utilization research.</li> <li>• Conduct stock assessment and recruitment modeling.</li> <li>• Investigate new and improved technologies for determining biological productivity and calculating yields.</li> <li>• Conduct collaborative research with universities, federal agencies, and non-governmental organizations.</li> <li>• Expand database of genetic markers to stocks not currently covered.</li> <li>• Develop models for calculating Maximum Sustained Yield for stocks lacking them.</li> <li>• Provide training and continuing education for staff from all job classes.</li> <li>• Conduct life history and other biological research on underutilized fish stocks.</li> <li>• Respond to industry requests for new fisheries on underutilized stocks.</li> <li>• Work with Board of Fisheries to authorize fisheries on underutilized stocks.</li> <li>• Permit and oversee private non-profit salmon hatchery program.</li> <li>• Approve salmon and shellfish stocks with acceptable disease histories for mariculture and salmon aquaculture programs.</li> </ul> | <ul style="list-style-type: none"> <li>• Fisheries Entry Commission (CFEC) and North Pacific Fishery Management Council (NPFMC).</li> <li>• Comment to NPFMC and CFEC on fishery management and biological issues associated with rationalization proposals.</li> <li>• Provide individual fishing history data to boat owners, captains, and federal and state agencies.</li> <li>• Open and close areas and species for subsistence and personal use harvest.</li> <li>• Issue permits for personal use and subsistence fisheries.</li> <li>• Tabulate subsistence and personal use catches.</li> <li>• Provide reports to the Board of Fisheries and other entities on subsistence and personal use fisheries.</li> <li>• Work with the Board of Fisheries and the public to craft management plans and regulations that meet subsistence and personal use needs.</li> <li>• Provide biological and fishery management information to the Board of Fisheries and state fish and game advisory committees.</li> <li>• Submit proposals to the Board of Fisheries.</li> <li>• Comment on both staff and public proposals before the Board of Fisheries.</li> <li>• Provide oral and written biological and fishery management advice to the Board of Fisheries.</li> <li>• Draft regulations and management plans based on proposals approved by the Board of Fisheries.</li> <li>• Provide staff support to the Alaska Board of Fisheries.</li> <li>• Design and maintain electronic databases for catch and production data.</li> <li>• License fish processors.</li> <li>• Design, print, issue, collect, edit, and data enter fish tickets recording harvests.</li> <li>• Collect, edit and data enter annual buying and production data from seafood processors.</li> <li>• Provide summary information on harvests and production in electronic and print media.</li> <li>• Maintain confidentiality of protected data.</li> <li>• Publish catch and production information on web site.</li> <li>• Provide internet access to searchable database of division publications.</li> <li>• Publish news releases on department research and management activities.</li> <li>• Publish articles on fisheries management and research in magazines and trade journals.</li> <li>• Provide photos and video footage on the web site and to the media.</li> </ul> |
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## Key RDU Challenges

### Yukon River Salmon Fisheries

Yukon River salmon fisheries are going through a period of low productivity for Chinook, summer chum, and fall chum 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 (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 was 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 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 is relying on federal funds again in state FY11 to continue this important research work. The division is working on new methodologies for stock assessment of Bering Sea snow crab, a stock that until recently provided the largest crab harvest in Alaska. The department is also attempting to improve stock assessment of king crab, especially in those areas not covered, or not well covered, by the National Marine Fisheries Service trawl survey. Improved stock assessments will allow the department to maximize harvests, which is especially important to industry during periods of low stock productivity.

### **Marine Stewardship Council Transition to Industry Client**

In the fall of 2008, Commissioner Lloyd informed the Marine Stewardship Council that the Alaska Department of Fish and Game would no longer be continuing as the client for certification of the Alaska salmon management program, and that some representative from the salmon industry would need to take over the role of client. Such an arrangement is typical of other fishery certification programs conducted by the Marine Stewardship Council. Under this model, the Alaska Department of Fish and Game would continue 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. However, serving as the client for certification of the Alaska salmon management program under the Marine Stewardship Council process is not an essential activity contributing to any of the core services of the Division of Commercial Fisheries. Recognition of this underlies the commissioner's decision to end the agency's role as client with the Marine Stewardship Council.

### **Employee Recruitment and Retention Difficulties**

The division continues to work with the department to overcome recruitment and retention difficulties. As part of this effort the "Fish and Wildlife Careers for Alaskans" (FWCA Program) that helps to identify and recruit young Alaskans interested in working for the Department of Fish and Game is being transferred to Division of Administrative Services to work with a Program Coordinator II, who will lead the Department's workforce development efforts. This year the department took on its fifth Alaska Science and Engineering Program (ANSEP) student intern as well as continued to foster partnerships with the UAF School of Fisheries and Ocean Sciences, UAS Fishery Technology Program, Alaska Sea Grant Marine Advisory Program and the newly formed Alaska Marine Science and Fisheries Career Coalition. In addition to these efforts the FWCA Program has enlarged its scope to include workforce development and is currently dedicating substantial effort to improve retention and recruitment within the department. As part of the workforce development 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 IV, Regional Supervisor, and Assistant Director. 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 the Department of Fish and Game. 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 eroded badly due to retirements of key personnel and difficulty in replacing key positions. As management of Alaska's salmon fisheries becomes more complex, it is essential to rebuild this program by funding the Biometrician IV position to work on statewide issues and by adding three post graduate interns. These positions will strengthen the division's capabilities in stock assessment, setting escapement goals, and conducting applied research in stock identification, genetics, and pathology. The post graduate intern positions are critical to attracting talented professionals to the division to help address the recruitment and retention difficulties described above.

### **Susitna and Cook Inlet Sockeye Salmon Stocks**

Research projects, begun during the 2006 field season, 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 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. While the Kenai and Kasilof rivers have experienced very good sockeye salmon returns in some recent years, the last two years have experienced average runs for the Kasilof River and poor returns for the Kenai River due to high levels of escapement during the parent years. Increased funding will be required for research to 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.

### **Genetic Stock Identification**

As Alaska's salmon fisheries become more complex, the department and the public have identified a need for greater genetic stock identification capability. Genetic stock identification helps in dealing with fishery allocation issues, meeting treaty obligations in Southeast Alaska and on the Yukon River, assessing stock composition changes in fisheries due to management actions, and allocating catches to the correct stock to better determine stock productivity and set escapement goals that provide for maximum sustained yield. Our lab has begun the analysis of approximately 140,000 tissues collected under the Western Alaska Salmon Stock Identification Project (WASSIP) to determine stock specific contributions of chum and sockeye salmon in Chignik, Alaska Peninsula, Bristol Bay, and Arctic-Yukon-Kuskokwim Region fisheries. As the demand for genetic stock identification has increased, the department faces a challenge staffing the genetics lab adequately to run the required number of samples, analyze the data, and report the results. Current lab capacity is 15 to 30 times that of most other fisheries genetics labs and is still inadequate to meet the demand. Difficulty hiring trained geneticists and biometricians has slowed analysis and reporting of results. Potential Endangered Species Act listings also point out the need to expand lab capability to better deal with such diverse species as beluga whales and herring. The division is seeking to expand its genetics capabilities into marine species to answer a variety of questions related to endangered species 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.

### **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 proposals to reduce bycatch of crab and salmon in groundfish fisheries off Alaska; rebuild overfished crab stocks; implement annual catch limits to guard against overfishing; restructure the federal groundfish observer program to improve quality and utility of observer data; modify fishery management to protect endangered species; establish a management program to replace the congressionally authorized Central Gulf of Alaska rockfish pilot program scheduled to sunset after the 2011 season; and apply 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 non-target species, habitat, state fisheries, and coastal communities as rationalization programs evolve.

### **Vessels and Aircraft Maintenance and Replacement**

The division has several research and support vessels and four small aircraft, which require regular maintenance and periodic overhaul. They are integral to a variety of stock assessment programs and also 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.

### Support for Aquaculture

Both private non-profit 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. Specific challenges for the near future include: 1) completing a full review of hatchery operations and permitting to assure basic management plans are up to date and policies are adhered to, and 2) reviewing the status and condition of state owned facilities that are leased to Private Non-profit (PNP) hatchery associations. Within the last year, interest has been growing to develop techniques for enhancing depressed shellfish populations like red and blue king crab. The division faces the challenge of supporting and helping these various aquaculture and hatchery programs develop while protecting wild stocks.

### Test Fish Revenue Concerns

In recent years, members of the legislature and representatives from the commercial fishing industry have raised concerns over the division's test fish fund program, which uses the sale of harvested fish to pay for critical research and management programs. This practice is highly controversial and disliked by many fishermen. The division faces the challenge of finding alternative ways to support these programs. In the absence of these programs, many fisheries would have to be managed much more conservatively, which would result in reduced economic value of the fisheries.

### Significant Changes in Results to be Delivered in FY2011

The division is requesting an increment to allow for the continued application of genetic stock identification to Chinook salmon fishery harvests by collecting and analyzing individuals from commercial, subsistence, and test fisheries throughout the mainstem Yukon River. Successful management of mixed stock fisheries depends in large part on reliable indexes of abundance and run timing, and estimates of stock composition in the run and harvest.

The division is merging into a single component starting in FY11 and will eliminate the existing six components. The new component will be known as Commercial Fisheries.

### Major RDU Accomplishments in 2009

- Final reports from seafood processors put the value of the 2008 commercial salmon harvest at \$452 million. This marks the second year in a row in which the value of the salmon harvest has exceeded \$400 million, and despite a smaller 2008 harvest, the 2008 value is \$40 million more than in 2007.
- Commercial fishermen harvested a total of 161.7 million salmon in 2009. This is the 11th largest harvest since statehood. The Bristol Bay's sockeye salmon harvest of 30.9 million fish was the 7th largest since statehood. The preliminary statewide average price for sockeye salmon is \$.80 per pound, 4 cents less than last year; prices for other species of salmon also declined compared to 2008. Final prices and exvessel values will be determined after final reports are submitted by processors. These values are usually higher, reflecting post-season adjustments and end-of-season bonuses.
- The division has maintained the percentage of active aquatic farms operating with current permits at 100 percent. This demonstrates the division's performance is in line with our internal performance goal of 100 percent. Five years ago, only 47 percent of the active aquatic farms in the state were operating under the terms of a current permit.
- The division expanded its research program for Bering Sea and Aleutian Islands crab fisheries with a Petrel Bank red king crab survey, a tagging study of Bristol Bay red king crab in cooperation with the National Marine Fisheries Service, research on productivity of Bering Sea snow and Tanner crabs, and analysis of fishery data collected by at-sea observers.
- 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.
- This year the Fish and Wildlife Careers for Alaskans (FWAC) Program supported several partnership projects and internship programs across the state. FWCA continues to partner with the Alaska Native Science and Engineering Program (ANSEP) and provided two 4-week internship opportunities in western Alaska as part of the ANSEP Summer Bridge Program. Through participation at career fairs, science camps and a variety of outreach events the FWCA program continues to partner with a variety of University of Alaska campuses and continues to build relationships between department staff, university colleagues and potential students interested in the fields of natural resource science and management. The program also partnered with a number of local agencies to

provide career exposure and internships to local high school students including 4 high school internships associated with the All-Alaska Academy and 8 job shadow experiences associated with various youth programs administered by SERCC, the Juneau School District CHOICE Program and the Juneau Workforce Consortium. In addition the FWCA program supported a variety of marine science camps across the state including the TAKU Marine Science Camp, Becharof Science Camp, and three science camps offered in partnership with Springboard, including a science camp in Glacier Bay and on Round Island. A key focus point for the program is its partnership with the Alaska Marine Science and Fisheries Careers Coalition. The FWCA Program Coordinator chairs a position with the coalition and this year participated in the successful hire of a VISTA volunteer to serve the coalition and further the efforts of the department in building a pipeline of Alaskan students in professions related to fisheries and marine science.

- The division has continued to build its genetic database of Alaskan sockeye, chum, and Chinook salmon stocks. As this tool has been developed, it has been used in more and more fisheries. Inseason analysis of genetics samples has aided management of Bristol Bay sockeye salmon, Yukon River Chinook salmon, and was tested in Upper Cook Inlet. Genetic analysis of catches will also greatly assist the division and the Board of Fisheries in managing complex and controversial salmon fisheries such as those in Upper Cook Inlet and Southeast Alaska.

### Contact Information

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**Commercial Fisheries  
RDU Financial Summary by Component**

*All dollars shown in thousands*

	FY2009 Actuals				FY2010 Management Plan				FY2011 Governor			
	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds
<b>Formula Expenditures</b> None.												
<b>Non-Formula Expenditures</b>												
Commercial Fisheries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35,613.9	9,962.8	16,093.1	61,669.8
SE Region Fisheries Mgmt.	5,690.9	325.7	1,082.0	7,098.6	5,819.4	514.4	1,228.0	7,561.8	0.0	0.0	0.0	0.0
Central Region Fisheries Mgmt.	7,518.3	0.0	533.7	8,052.0	7,729.8	0.0	711.8	8,441.6	0.0	0.0	0.0	0.0
AYK Region Fisheries Mgmt.	5,286.2	0.0	284.5	5,570.7	5,747.5	0.0	356.7	6,104.2	0.0	0.0	0.0	0.0
Westward Region Fisheries Mgmt.	7,130.2	0.0	894.3	8,024.5	6,786.3	0.0	1,761.2	8,547.5	0.0	0.0	0.0	0.0
Headquarters Fisheries Mgmt.	8,165.1	0.0	771.9	8,937.0	8,574.5	0.0	921.9	9,496.4	0.0	0.0	0.0	0.0
Comm Fish Special Projects	377.5	7,182.9	8,587.0	16,147.4	871.8	9,528.4	10,719.5	21,119.7	0.0	0.0	0.0	0.0
<b>Totals</b>	<b>34,168.2</b>	<b>7,508.6</b>	<b>12,153.4</b>	<b>53,830.2</b>	<b>35,529.3</b>	<b>10,042.8</b>	<b>15,699.1</b>	<b>61,271.2</b>	<b>35,613.9</b>	<b>9,962.8</b>	<b>16,093.1</b>	<b>61,669.8</b>



**Commercial Fisheries**  
**Summary of RDU Budget Changes by Component**  
**From FY2010 Management Plan to FY2011 Governor**

*All dollars shown in thousands*

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
<b>FY2010 Management Plan</b>	<b>35,529.3</b>	<b>10,042.8</b>	<b>15,699.1</b>	<b>61,271.2</b>
<b>Adjustments which will continue current level of service:</b>				
-Commercial Fisheries	35,613.9	9,912.8	15,593.1	61,119.8
-SE Region Fisheries Mgmt.	-5,819.4	-514.4	-1,228.0	-7,561.8
-Central Region Fisheries Mgmt.	-7,729.8	0.0	-711.8	-8,441.6
-AYK Region Fisheries Mgmt.	-5,747.5	0.0	-356.7	-6,104.2
-Westward Region Fisheries Mgmt.	-6,786.3	0.0	-1,761.2	-8,547.5
-Headquarters Fisheries Mgmt.	-8,574.5	0.0	-921.9	-9,496.4
-Comm Fish Special Projects	-871.8	-9,528.4	-10,719.5	-21,119.7
<b>Proposed budget increases:</b>				
-Commercial Fisheries	0.0	50.0	500.0	550.0
<b>FY2011 Governor</b>	<b>35,613.9</b>	<b>9,962.8</b>	<b>16,093.1</b>	<b>61,669.8</b>