

**State of Alaska  
FY2016 Governor Amended Operating  
Budget**

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

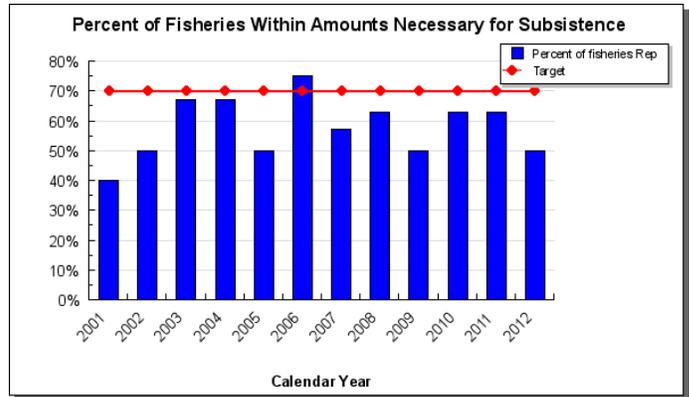
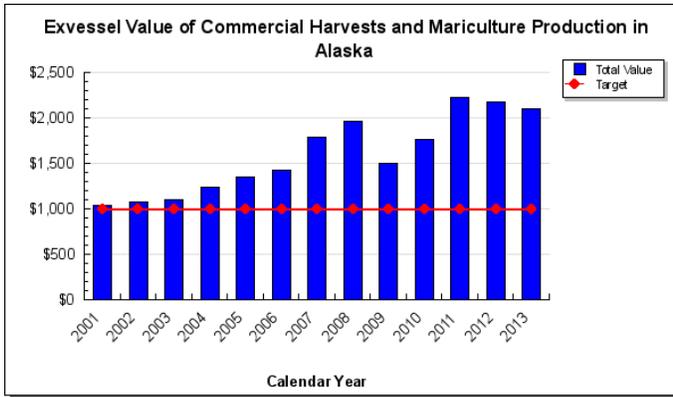
## Commercial Fisheries Results Delivery Unit

### 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.

### Results

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



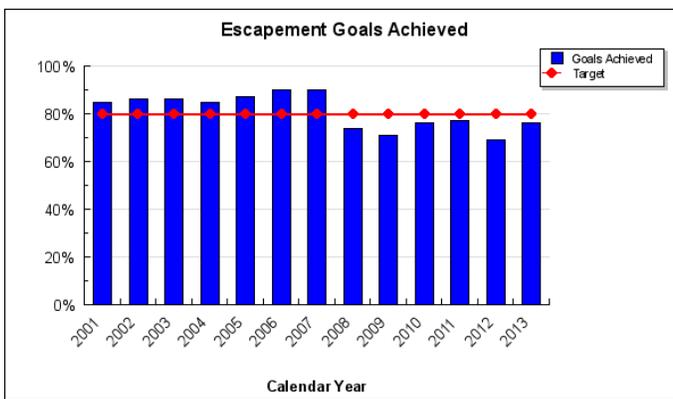
### Core Services

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

### Measures by Core Service

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

#### 1. Ensure the conservation of natural stocks of fish, shellfish and aquatic plants based on scientifically sound assessments.



### Major RDU Accomplishments in 2014

#### Salmon Harvest and Value

The 2014 commercial salmon fishery all species harvest was 156.7 million fish with an estimated preliminary value of \$576.6 million. Sockeye salmon accounted for 61% of the 2014 statewide value at \$349.3 million and 28% of the

harvest at 43.6 million fish. The 2014 pink salmon value is estimated at \$97.7 million, followed by chum and Coho salmon at \$56.2 and \$49.9 million respectively. Pink salmon accounted for 61% of the harvest at 95.3 million fish. The 2014 Chinook salmon harvest of 479 thousand fish valued at \$23.5 million represents 4% of the statewide salmon value. The estimates of value are based on preliminary ex-vessel prices and do not include any post season bonuses paid to fishermen. The all species Bristol Bay harvest value of \$196.6 million was Alaska's most valuable salmon fishery in 2014, accounting for 34.1% of salmon value. The Bristol Bay sockeye salmon harvest of 28.8 million fish was 61% above the preseason forecast of 17.9 million fish with a Bristol Bay sockeye value of \$193 million. Kotzebue's 2014 chum salmon harvest of 633 thousand fish stands out as the 2nd largest harvest on record in Kotzebue, just missing the 1981 record harvest of 677 thousand chum salmon.

### **Crab Total Allowable Catch**

The department established the 2014-2015 season total allowable catches for the state-federal co-managed crab fisheries in the Bering Sea and Aleutian Islands that met the conservation and economic benefit objectives and requirements of state and federal regulations: 9.986 million pounds for the Bristol Bay red king crab fishery, 0.655 million pounds for the St. Matthew blue king crab fishery, 67.950 million pounds for the Bering Sea snow crab fishery, 8.480 million pounds for the Eastern Bering Sea tanner crab fishery, 6.625 million pounds for the Western Bering Sea Tanner crab fishery, 0.382 million pounds for the Norton Sound red king crab fishery, and 6.29 million pounds for the Aleutian Islands golden king crab fishery. Two Bering Sea crab fisheries (Pribilof District red and blue king crab) were closed to commercial fishing in the 2014-2015 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.

### **Commercial Fisheries Information Technology (IT)**

Commercial Fisheries IT section continues to participate in the interagency electronic reporting system, eLandings, which is designed to provide a single reporting system to report all commercial catch. All groundfish and Western Alaska crab are reported within eLandings. Implementation of eLandings for salmon continues with 55% of all landings submitted electronically.

Electronic reporting for salmon continues to present challenges to the department, but provides multiple benefits to the seafood industry, fisheries management, and the public as it provides more timely and more accurate data. Implementation of electronic reporting was funded by a capital improvement project which ended in FY2014.

Commercial Fisheries IT continues to migrate to a single reporting and analysis system for fisheries management and has now obtained division-wide acceptance and use. The data warehouse and business intelligence toolset (Oceanak) now contains over 80 different subject areas such as commercial harvest, inseason preliminary harvest, escapement, test fisheries, vessels, Commercial Fisheries Entry Commission permits, and various biological data. Significant additions for FY2014 included the Mariculture program, Commercial Operators Annual Report (COAR), Subsistence Survey, and additional project data from Region III. Current design is underway to provide a statewide dataset for age-sex-length (ASL) and in early FY2016 we anticipate incorporating a comprehensive dataset from Alaska Fisheries Information Network (AKFIN) which includes federal fisheries data. Planning has started for capturing historical information about statistical areas. IT staff continue to provide training sessions for department staff in order to produce analysis for fisheries management as well as create dynamic data for the public website. This project also supports the elimination of multiple technologies for reporting, provides a single authoritative source for data, and supports the major goal of historical data rescue and preservation of one of the most valuable and comprehensive datasets of commercial fisheries history.

## **Key RDU Challenges**

### **Alaska Chinook Salmon Fishery Disaster**

In 2014, impacts of low Chinook salmon productivity and abundance continued for many Alaskans in the Yukon, Kuskokwim, and Cook Inlet regions. Fishery closures and restrictions necessary for conservation resulted in a great burden on Alaskans who rely heavily on Chinook salmon for food and income. The State of Alaska recognizes the hardships that management restrictions have caused subsistence, sport, and commercial fishermen, as well as guides, local fish processors, and other local and regional businesses. With funding supported by the administration and the Alaska State Legislature, Alaska Department of Fish and Game (ADF&G) scientists began implementation of its Chinook Salmon Research Initiative (CSRI) in 2014, focused on 12 indicator systems throughout the state and

designed to better assess Chinook run sizes and understand the causes behind this unexpected widespread decline. Fifteen major projects were initiated in FY2014, including a comprehensive effort to assess in-river Chinook abundance and run timing on the Kuskokwim River, nearshore Bering Sea marine studies designed in part to improve forecasting capabilities for Yukon River Chinook stocks, and several projects to document local traditional knowledge and improve subsistence harvest survey data. These projects are continuing during FY2015 with many additional efforts slated for future years.

In some cases, Chinook salmon that require conservative management are co-mingled with chum or sockeye salmon runs with large harvestable surpluses. This creates a challenge for management and research staff to accurately assess run sizes and make correct management decisions inseason. The department needs improved capability to 1) assess 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, and 3) in some cases, develop information and analyses that will allow the state to prevent intrusion of the federal subsistence program into management of state fisheries.

Consistent with the state's constitutional and statutory mandates to manage renewable resources to provide sustained yield, ADF&G will continue to work closely with the Board of Fish (BOF) to ensure that Chinook salmon are conserved, while providing for opportunities on the more abundant species of salmon where possible. ADF&G is engaged in efforts of collaboration with constituents to evaluate fishing gear and management strategies that conserve Chinook salmon while allowing selective harvest of more abundant species. Information on swimming depth of Chinook salmon near the Kenai River was instrumental in designing management strategies that helped exploit abundant sockeye stocks by set-netters while decreasing capture of Chinook salmon. Use of dip nets on the Yukon River to harvest abundant summer chum salmon while releasing king salmon un-harmed was very successful during the 2013 and 2014 fishing season. We continue to explore possible expansion of these and other methods in the Kuskokwim and Yukon Rivers.

#### **Hatchery Research Project**

The Alaska hatchery program produces large numbers of hatchery salmon for harvest, especially in Prince William Sound (PWS) and Southeast Alaska (SE), and to a lesser degree in Kodiak and Cook Inlet. Funding for this research has come from the legislature, the hatchery operators, and Alaska salmon processors. The scale of the program has raised concerns that hatchery fish may detrimentally affect the productivity and sustainability of wild stocks of Alaska salmon. While the hatchery program has numerous safe-guards built into it to protect wild stocks; the department and Alaska hatchery operators have partnered together to undertake research to address several priority questions:

1. What is the genetic stock structure of pink and chum salmon in each region?
2. What is the extent and annual variability in straying of hatchery pink salmon in PWS and chum salmon in PWS and SE?
3. What is the impact, if any, on fitness (productivity) of wild pink and chum salmon stocks due to straying of hatchery pinks and chum salmon?

The ADF&G's gene conservation lab has undertaken analyses of genetic structure of pink and chum salmon. In 2013 ADF&G awarded a contract to Prince William Sound Science Center to conduct activities needed to collect the data to answer questions two and three. The mass-marking of hatchery fish with otolith thermal marks provides the opportunity to estimate the actual number of wild-origin and hatchery-origin spawners in populations of pink and chum salmon in PWS and chum salmon in SE. The combination of thermal marks on all hatchery origin pink and chum salmon coupled with application of available genetic techniques provides a means to set up a robust experiment to evaluate fitness of natural origin versus hatchery origin stray salmon spawning in the wild in streams of Prince William Sound and SE Alaska. Results of this work will be valuable to both harvest and hatchery managers as well as others interested in Alaska salmon production.

#### **Bering Sea Crab Research Funding**

The division is working to assess reproductive potential and to estimate other important productivity parameters of the Bering Sea snow crab and Tanner crab stocks, stocks that have provided for the large commercial harvests, although harvests are presently lower than historical levels. The department also performs surveys to improve stock assessment of king crab stocks that are not surveyed, or not adequately surveyed, by the National Marine Fisheries Service (NMFS) trawl survey. Improved estimation of productivity parameters and stock assessment 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.

Federal funding to ADF&G for Bering Sea Crab Research (BSCR) has been reduced annually since FY2011 and to the extent that federal funds received by ADF&G for BSCR in FY2015 are 64% of what was received in FY2011. Federal funds in FY2015 were not sufficient to provide funding for the July 2014 triennial Norton Sound red king crab trawl survey and were not sufficient to fully fund the “base” research program. Further reductions in federal BSCR funds in FY2016 would require a reduction in the seasonal staffing that is needed for the crab research and stock assessment program and for the entry, maintenance, and distribution of data collected by the state’s at-sea crab-fishery observer and dockside sampling programs. Secure, long-term funding is needed to maintain the research and data collection and distribution programs that are necessary for sustainable management of the highly-valuable Bering Sea and Aleutian Islands crab fisheries.

### **Aleutian Islands Golden King Crab (GKC) Research**

Currently, there is no federal or state survey for GKC for the Aleutian Islands, which hinders the ability of state and federal management to react to changes in abundance of this resource. In collaboration with the commercial fleet, ADF&G is designing a new survey, examining variation in life history parameters (e.g., size at maturity), and investigating population genetics to better inform the stock assessment and subsequent management of this fishery. In addition to improving the stock assessment, this project aims to actively engage the commercial fishing industry in all aspects of the research from design through implementation. The biggest challenge of this research is spatial scale of the Aleutian Island GKC fishery. This translates into additional staff time for facilitating the collaboration, collecting data at sea, and analyzing this new data stream.

### **Transition to Industry Client/Third-Party Sustainability Certification**

In the fall of 2008, the department informed the Marine Stewardship Council (MSC) that the ADF&G would no longer continue as a client for certification of the Alaska salmon management program. The client role was taken over by the Alaska Fisheries Development Foundation (AFDF) in February 2010. In January, 2012, eight Alaskan salmon processors announced they no longer desired certification of Alaskan salmon fisheries through MSC. In response, AFDF announced its withdrawal as MSC client, and its intent to proceed only with actions necessary to maintain MSC certification of Alaska salmon through October 29, 2012. AFDF continues as the client of record for MSC certification of Pacific Cod in the Bering Sea/Aleutian Islands and the Gulf of Alaska.

Shortly thereafter, responding to desires of one Alaskan salmon processor to maintain MSC certification for Alaskan salmon fisheries, Purse Seine Vessels Owners Association (PSVOA) became the new client for MSC certification. ADF&G’s Chief Fisheries Scientist for salmon will meet with the client’s assessment team in December 2014 to provide updates on certification conditions outlined in 2013. Over the past several years, the Alaska Seafood Marketing Institute has been working with Global Trust to develop a third-party sustainability certification program for all Alaskan fisheries. Alaska’s salmon, halibut, black cod, Pollock, Bristol Bay red king crab, St. Matthew blue king crab, and cod fisheries have been certified by Global Trust with flatfish fisheries certification underway. ADF&G met with the Global Trust assessment team to provide information relevant to the third assessment audit for certification of Alaska’s salmon fisheries. ADF&G has been working with both Global Trust and MSC clients to provide information necessary for fisheries certification. While both processes are less onerous than original efforts through MSC, we are now faced with satisfying the needs of two separate certification bodies.

### **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 SE 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. To fulfill these objectives, the Gene Conservation Laboratory regularly analyzes in excess of 150,000 samples per year. While the Western Alaska Salmon Stock Identification Program is now complete, the laboratory has added a number of new projects associated with the Chinook Salmon Research Initiative, including large scale marine fishery sampling in the Kodiak-Alaska peninsula management area and expansion of similar efforts in SE Alaska and Copper River. Although current lab capacity is five to ten times that of most other fisheries genetics labs, the laboratory struggles to meet current demand as genetic analyses become an ever more important part of modern fisheries management in the future. A significant fiscal challenge is the periodic need to update equipment in an environment of ever-changing technologies. The laboratory is accumulating samples valuable for future analyses from baseline

and mixture collections that are either irreplaceable or expensive to replace (conservatively worth \$5 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 and wildlife 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 as well as the federal land management agencies and the Bureau of Indian Affairs directly. The division and the department must find ways to ensure that federal decisions do not adversely impact conservation of fish or wildlife resources, override state management authority, or unnecessarily restrict non-federally qualified users.

### **Federal Groundfish Fisheries**

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, halibut, and Chinook and chum salmon in groundfish fisheries off Alaska; rebuilding an overfished crab stock; implementing annual catch limits to guard against overfishing; ongoing modifications to the federal groundfish observer program to improve quality and utility of observer data; modifying fishery management plans 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 data gathering, analysis and reporting.

### **Employee Recruitment and Retention Efforts**

The division continues to work with the department to address recruitment and retention challenges. 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 has also contributed to the development of the University of Alaska's Fisheries, Seafood, and Maritime Workforce Development Plan.

In order to provide suitable housing to recruit and retain staff, the division has worked with the department to upgrade remote offices and field camps through the department's deferred maintenance program.

The division acknowledges the continuing importance of employee recruitment and retention. Generally speaking, applicant pools for entry level positions have improved in recent years; however, the division continues to suffer from weak applicant pools for higher level or specialized positions such as Fishery Biologist IVs, Biometricians, Regional Supervisors, and Fishery Scientists. Attracting job applicants in smaller or remote communities is also often difficult.

The division continues to address these problems through broader recruitment efforts, workforce development for new and existing employees such as our graduate studies program, and development of a program to interest young Alaskans, especially from rural areas, in careers with ADF&G.

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

The division has six research and several support vessels and five 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. The division received capital funds in FY2013 to begin the replacement process for the *R/V Resolution*, which services Westward Region. We expect to go out to bid in FY2015 for the replacement of this vessel. The challenge will be bridging the gap between the actual cost of replacement and the capital funds appropriated for this project.

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. Safely operating and maintaining aircraft within existing budgets is always a challenge. Adequate housing for pilots, as well as field staff, is also an ongoing challenge.

### **Significant Changes in Results to be Delivered in FY2016**

No significant changes.

<b>Contact Information</b>
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**Commercial Fisheries  
RDU Financial Summary by Component**

*All dollars shown in thousands*

	FY2014 Actuals				FY2015 Management Plan				FY2016 Governor Amended			
	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
<b>Formula Expenditures</b> None.												
<b>Non-Formula Expenditures</b>												
SE Region Fisheries Mgmt.	9,688.1	0.0	72.5	9,760.6	10,065.1	0.0	135.0	10,200.1	9,839.3	1,431.3	3,285.5	14,556.1
Central Region Fisheries Mgmt.	9,589.9	0.0	0.0	9,589.9	9,524.1	0.0	0.0	9,524.1	9,409.0	1,654.4	209.7	11,273.1
AYK Region Fisheries Mgmt.	8,632.9	0.0	0.0	8,632.9	8,540.1	0.0	0.0	8,540.1	8,192.1	992.1	1,300.2	10,484.4
Westward Region Fisheries Mgmt.	10,064.9	0.0	0.0	10,064.9	10,831.3	0.0	0.0	10,831.3	11,292.2	2,063.7	2,381.2	15,737.1
Statewide Fisheries Management	12,100.4	0.0	0.0	12,100.4	13,194.6	0.0	0.0	13,194.6	12,987.4	4,035.4	2,268.2	19,291.0
Comm Fish Special Projects	3,804.7	7,197.4	7,696.9	18,699.0	1,577.7	10,068.0	9,179.9	20,825.6	0.0	0.0	0.0	0.0
Unallocated Reduction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Totals</b>	<b>53,880.9</b>	<b>7,197.4</b>	<b>7,769.4</b>	<b>68,847.7</b>	<b>53,732.9</b>	<b>10,068.0</b>	<b>9,314.9</b>	<b>73,115.8</b>	<b>51,720.0</b>	<b>10,176.9</b>	<b>9,444.8</b>	<b>71,341.7</b>

**Commercial Fisheries**  
**Summary of RDU Budget Changes by Component**  
**From FY2015 Management Plan to FY2016 Governor Amended**

*All dollars shown in thousands*

	<u>Unrestricted</u> <u>Gen (UGF)</u>	<u>Designated</u> <u>Gen (DGF)</u>	<u>Other Funds</u>	<u>Federal</u> <u>Funds</u>	<u>Total Funds</u>
<b>FY2015 Management Plan</b>	<b>49,264.7</b>	<b>4,468.2</b>	<b>10,068.0</b>	<b>9,314.9</b>	<b>73,115.8</b>
<b>One-time items:</b>					
-SE Region Fisheries Mgmt.	-260.0	0.0	0.0	0.0	-260.0
-Central Region Fisheries Mgmt.	-273.0	0.0	0.0	0.0	-273.0
-AYK Region Fisheries Mgmt.	-200.0	0.0	0.0	0.0	-200.0
-Statewide Fisheries Management	-250.0	0.0	0.0	0.0	-250.0
-Comm Fish Special Projects	-534.0	0.0	0.0	0.0	-534.0
<b>Adjustments which continue current level of service:</b>					
-SE Region Fisheries Mgmt.	234.4	74.5	1,431.3	3,150.5	4,890.7
-Central Region Fisheries Mgmt.	424.9	213.1	1,654.4	209.7	2,502.1
-AYK Region Fisheries Mgmt.	324.4	167.6	992.1	1,300.2	2,784.3
-Westward Region Fisheries Mgmt.	275.2	398.5	2,063.7	2,381.2	5,118.6
-Statewide Fisheries Management	-2,475.5	3,202.0	4,035.4	2,268.2	7,030.1
-Comm Fish Special Projects	0.0	-1,043.7	-10,068.0	-9,179.9	-20,291.6
<b>Proposed budget decreases:</b>					
-SE Region Fisheries Mgmt.	-274.7	0.0	0.0	0.0	-274.7
-Central Region Fisheries Mgmt.	-480.1	0.0	0.0	0.0	-480.1
-AYK Region Fisheries Mgmt.	-640.0	0.0	0.0	0.0	-640.0
-Westward Region Fisheries Mgmt.	-212.8	0.0	0.0	0.0	-212.8
-Statewide Fisheries Management	-683.7	0.0	0.0	0.0	-683.7
<b>FY2016 Governor Amended</b>	<b>44,239.8</b>	<b>7,480.2</b>	<b>10,176.9</b>	<b>9,444.8</b>	<b>71,341.7</b>