

**State of Alaska**  
**FY2017 Governor's Operating Budget**

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

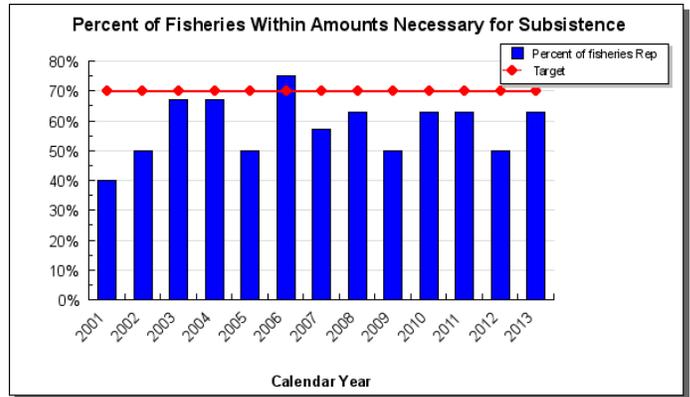
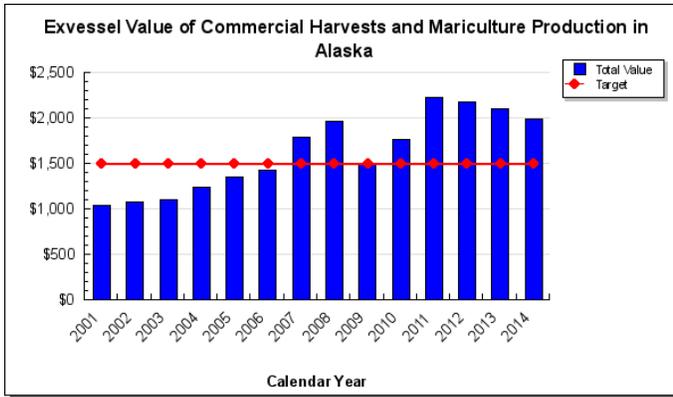
Commercial Fisheries Results Delivery Unit

**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.

**Results**

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



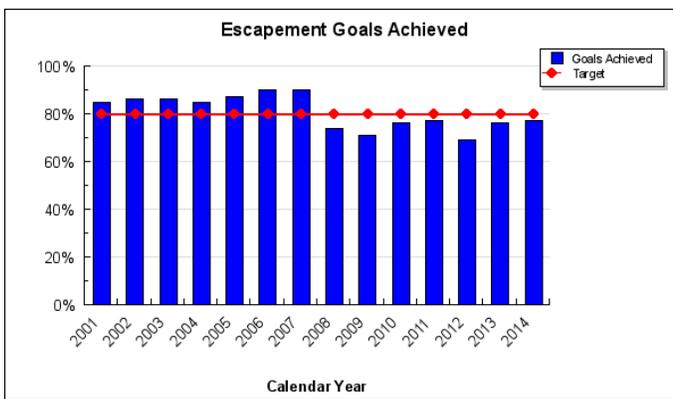
**Core Services**

- 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 2015**

**Salmon Harvest and Value**

The 2015 commercial salmon fishery all species harvest was 261 million fish with an estimated preliminary exvessel value of \$414 million. Of this total, sockeye salmon accounted for 48% of the value at \$198 million and 20% of the

harvest at 51 million fish. Pink salmon accounted for 32% of the value at \$132 million, and 73% of the harvest at 191 million fish. Chum salmon accounted for 13% of the value at \$55 million and 11% of the harvest at 15 million fish. Coho salmon accounted for 4% of the value at \$15 million and 1% of the harvest at 4 million fish. The Chinook salmon harvest was 474 thousand fish with an estimated preliminary value of \$15 million. The estimates of value are based on preliminary ex-vessel prices and do not include any post season bonuses paid to fishermen. The Prince William Sound pink salmon harvest was the largest on record at 98.6 million fish, exceeding the 2013 harvest of 92.6 million fish. The Bristol Bay inshore sockeye salmon run of 58 million fish is second largest in the last 20 years and 12% above the forecast. The Bristol Bay sockeye salmon harvest was 35.7 million fish with an estimated value of \$92.4 million. 2015 was the largest year on record for commercial salmon harvests in Lower Cook Inlet, with seven million salmon harvested.

### **Crab Total Allowable Catch**

The department established the 2015-2016 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: 9.974 million pounds for the Bristol Bay red king crab fishery, 0.411 million pounds for the St. Matthew blue king crab fishery, 40.611 million pounds for the Bering Sea snow crab fishery, 11.272 million pounds for the Eastern Bering Sea Tanner crab fishery, 8.396 million pounds for the Western Bering Sea Tanner crab fishery, 0.394 million pounds for the Norton Sound red king crab fishery, 3.31 million pounds for the Eastern Aleutian Islands golden king crab fishery, and 2.98 million pounds for the Western 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 2015-2016 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.

**eLandings:** Data Resource Management continues to participate in and expand the Interagency Electronic Reporting System; *eLandings*, which is designed to provide a single reporting system to electronically report all commercial catch. All groundfish and Western Alaska crab are reported within eLandings, and expansion to salmon continues statewide. eLandings continues to be a major success story for the division and its partners; National Marine Fisheries Services and the International Halibut commission. The system celebrated its 10th year anniversary in September 2015. A cost benefit analysis completed in this last period, confirming major benefits to the seafood industry, reduction of paperwork for all, reduced data entry, and greatly improved the quality and timeliness of data.

**OceanAK**, the business intelligence and data warehousing project, continued towards its goal of 'one-stop shopping' for fisheries data needs throughout the division. Programmers and regional staff statewide continue to contribute to OceanAK, serving both regional and statewide fisheries analysis capabilities. The system now serves over 350 ADF&G personnel who have created thousands of analyses that are used in daily management activities, research, and reports. OceanAK also publishes charts, graphs and reports to our website, ensuring dynamic, up to date reporting wherever feasible.

### **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, however with substantial funding reductions to this initiative in FY2016, project priorities were re-evaluated and some efforts reduced or eliminated due to insufficient resources.

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-Wild Salmon Interactions Research Project**

The Alaska salmon fishery enhancement program produces large numbers of salmon for harvest, especially in Prince William Sound (PWS) and Southeast Alaska (SE), and to a lesser degree in Kodiak and Cook Inlet. The scale of the program has raised concerns that hatchery produced 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?

Funding for this research has come from the legislature, salmon hatchery operators, and Alaska salmon processors. 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 (PWSSC) to conduct activities needed to collect the data to answer questions two and three. The mass-marking of hatchery produced salmon 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. The current contract with PWSSC ends in March of 2016, and funds are expected to be exhausted by 2017. Efforts are underway to identify sources of funding to complete the study. If/when funding is secured, the contract with PWSSC will either be extended, or a Request for Proposal issued to seek a contractor to complete sample collection, through 2023. Results of this work will be valuable to both fishery and hatchery managers as well as others interested in Alaska salmon production. This project addresses challenges to priority programs 1, 2, and 3.

### **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 FY2016 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 federal funds in FY2015 and FY2016 were not sufficient to fully fund the “base” research program. Further reductions in federal BSCR funds in FY2017 would further reduce the department’s ability to perform at-sea research and stock assessment surveys on Bering Sea/Aleutian Islands crab stocks and would require a reduction in the seasonal staffing that is needed for the Bering Sea/Aleutian Islands crab research and stock assessment programs 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 met with the client’s assessment team in December 2014 to provide updates on certification conditions outlined in 2013. Since then, based on desires of Alaskan salmon processors to re-enter the MSC certification process, Pacific Seafood Processors Association (PSPA) has reached agreement with PSVOA to become the new client for MSC. Over the past several years, the Alaska Seafood Marketing Institute has been working with Global Trust to develop a third-party sustainability certification under the Responsible Fisheries Management 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 has historically analyzed in excess of 150,000 samples per year. However, recent CF division budget cuts have decreased laboratory capacity significantly, and eliminated some projects that provide important information needs to fisheries managers and researchers. 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 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 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 update essential fish habitat designations; and applying lessons learned from over a decade of experience with catch share programs off Alaska to better meet state policy objectives in the Gulf of Alaska trawl fisheries. State managers and researchers must work through the NPFMC process to develop programs that provide stability for fisheries participants and communities, while meeting objectives related to minimizing bycatch and waste.

### **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.

A couple of examples where the division tries to address recruitment and retention is through broader recruitment efforts and workforce development for new and existing employees such as our graduate studies program.

As budgets become tighter and positions are either laid off or kept vacant through attrition, existing workloads tend to rise while morale worsens. Highly qualified and motivated staff are the core of our operations without which all functions of the department are diminished. The potential loss of highly qualified individuals seeking more stable work elsewhere coupled with fewer qualified applicants wishing to work for a division going through budget reductions is a significant challenge.

### **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 coupled with commercial charters 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 the Westward Region. Given the great expense of building a vessel, we are finalizing plans to retrofit the existing vessel. We are continuously exploring options to complete deferred maintenance demands on all our vessels.

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.

**Salmon eLandings Implementation:** The division is working towards implementing the mandatory use of tLandings, a component of eLandings for tenders, by introducing regulation changes in FY2016. This would affect processors within a certain threshold only. The current proposal states that beginning January 1, 2016, the proposed change would require all operations, by processor code, which have submitted 2,000 salmon fish tickets or bought more than 20 million pounds of salmon within the last three calendar years (2012, 2013, and 2014) to use the tLandings application for all salmon reporting. In addition, all groundfish delivered to a tender must be reported using the tLandings application. This requires a large effort from our current resources to accomplish this implementation. Although challenging, it is feasible and work is proceeding in that direction.

**Salmon eLandings Funding:** eLandings Salmon is also faced with budget challenges. Although some federal funding exists for eLandings in the form of cost recovery and from the Alaska Fisheries Information Network (AKFIN), none of those funds cover salmon fisheries and dedicated general funds for ongoing maintenance and enhancements in future years have not been identified. Salmon eLandings was initially funded from a multi-year CIP that ended in FY2014.

### **Significant Changes in Results to be Delivered in FY2017**

Additional budget cuts in FY2017 will further reduce the ability to manage commercial fisheries leading to less harvest opportunities particularly for rural communities with limited financial resources. These funding cuts will result in the loss of escapement data; more conservative management, loss of economic opportunity and fewer tax dollars to the State of Alaska. Continued budget cuts will also result in less participation and support for the general public, fishing organizations, local Fish and Game Advisory Committees, and the department to consider and change regulations in the future.

We have implemented a review of all vacancies within the division and have moved forward with filling key positions needed for continuity of operations while leaving other positions vacant. The new state accounting system has proved more complicated during startup than the old version demanding more staff time per transaction at a time where the division has cut administrative staff through attrition in each of our management regions including headquarters. This has led to more work being spread to remaining staff.

Anticipated layoffs will be a particularly acute problem associated with budget cuts. Highly qualified and motivated staff are the core of our operations without which all functions of the department are diminished. A reduction in workforce will directly result in a diminished customer service, slower fulfillment of data requests, decreased participation at meetings, less information available to research and management staff, the public, user groups and the legislature. Indirectly, layoffs will cause a ripple effect due to union bumping rights, fewer qualified employees, loss of highly qualified individuals seeking more stable work and fewer qualified applicants. To the extent possible, the division will make reductions to programs with the least impact on the resources and the public.

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

*All dollars shown in thousands*

	FY2015 Actuals				FY2016 Management Plan				FY2017 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
<b>Formula Expenditures</b> None.												
<b>Non-Formula Expenditures</b>												
SE Region Fisheries Mgmt.	9,801.2	0.0	98.5	9,899.7	9,281.2	1,312.4	3,285.5	13,879.1	8,529.4	1,312.4	3,285.5	13,127.3
Central Region Fisheries Mgmt.	9,309.1	0.0	0.0	9,309.1	8,858.6	1,885.2	237.4	10,981.2	8,312.2	1,885.2	237.4	10,434.8
AYK Region Fisheries Mgmt.	8,576.8	0.0	0.0	8,576.8	7,898.9	1,057.1	1,300.2	10,256.2	7,397.9	1,057.1	1,300.2	9,755.2
Westward Region Fisheries Mgmt.	10,209.7	0.0	0.0	10,209.7	10,559.5	2,063.7	2,381.2	15,004.4	9,837.9	2,063.7	2,381.2	14,282.8
Statewide Fisheries Management	13,142.9	0.0	0.0	13,142.9	11,809.2	3,858.5	2,240.5	17,908.2	12,234.0	3,858.5	2,240.5	18,333.0
Comm Fish Special Projects	1,918.7	8,024.1	7,353.8	17,296.6	0.0	0.0	0.0	0.0	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
Commercial Fish Entry Commission	0.0	0.0	0.0	0.0	4,195.8	0.0	114.4	4,310.2	4,195.8	0.0	114.4	4,310.2
<b>Totals</b>	<b>52,958.4</b>	<b>8,024.1</b>	<b>7,452.3</b>	<b>68,434.8</b>	<b>52,603.2</b>	<b>10,176.9</b>	<b>9,559.2</b>	<b>72,339.3</b>	<b>50,507.2</b>	<b>10,176.9</b>	<b>9,559.2</b>	<b>70,243.3</b>

**Commercial Fisheries**  
**Summary of RDU Budget Changes by Component**  
**From FY2016 Management Plan to FY2017 Governor**

*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>FY2016 Management Plan</b>	<b>39,927.2</b>	<b>12,676.0</b>	<b>10,176.9</b>	<b>9,559.2</b>	<b>72,339.3</b>
<b>Adjustments which continue current level of service:</b>					
-SE Region Fisheries Mgmt.	-627.0	269.2	0.0	0.0	-357.8
-Central Region Fisheries Mgmt.	-583.4	430.0	0.0	0.0	-153.4
-AYK Region Fisheries Mgmt.	-269.1	118.2	0.0	0.0	-150.9
-Westward Region Fisheries Mgmt.	-550.5	202.8	0.0	0.0	-347.7
-Statewide Fisheries Management	634.0	279.8	0.0	0.0	913.8
<b>Proposed budget decreases:</b>					
-SE Region Fisheries Mgmt.	-394.0	0.0	0.0	0.0	-394.0
-Central Region Fisheries Mgmt.	-393.0	0.0	0.0	0.0	-393.0
-AYK Region Fisheries Mgmt.	-350.1	0.0	0.0	0.0	-350.1
-Westward Region Fisheries Mgmt.	-373.9	0.0	0.0	0.0	-373.9
-Statewide Fisheries Management	-489.0	0.0	0.0	0.0	-489.0
<b>FY2017 Governor</b>	<b>36,531.2</b>	<b>13,976.0</b>	<b>10,176.9</b>	<b>9,559.2</b>	<b>70,243.3</b>