

# **State of Alaska FY2023 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

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

### Major RDU Accomplishments in 2021

#### COVID-19

The 2020 COVID-19 pandemic continued to significantly affect Alaskans and the Alaskan economy in 2021. To minimize economic impacts to Alaskans, the division again ensured that the state would have commercial fisheries operated as normally as possible this year. The division made sure the necessary research and management infrastructure was in place to safely conduct fisheries across Alaska. This allowed commercial fisheries to operate and commercial fishermen to fish their permits and thereby make a living and contribute to the state and local economies through collected fish taxes.

Every state agency was challenged by COVID-19 and Alaska Department of Fish & Game was no exception. One of the challenges was having staff in telework situations while simultaneously implementing action plans to operate assessment projects required to open fisheries around the state. Staff members worked with rural communities to develop ways to conduct necessary field work while protecting the community. Additional planning was required to ensure safety of staff in remote field camps. This was additionally complex in 2021 given the availability of vaccines, without a mandate to take them, so that dual procedures were required. The division was able to successfully open nearly every fishery which is a testament to the hard-working, dedicated staff.

#### Managing for Subsistence Harvest Priority

After ensuring sustainability, providing subsistence harvest opportunity is the division's highest priority. This is accomplished several ways. When fisheries must be restricted for conservation purposes, subsistence fisheries are the last to be restricted. While in times of abundance, subsistence fisheries occur with few restrictions, and other fisheries continue under close management based on abundance. Several salmon stocks that are important for subsistence users returned in low numbers in 2021. The division carefully balanced sustainability and subsistence needs in managing these fisheries. In some areas, subsistence needs were not met because fisheries were restricted to meet escapement objectives. The division maintains open dialog with subsistence users to understand how best to meet subsistence needs.

#### Statewide Salmon Harvest, Fishery Value, and Stock Status

The 2021 commercial salmon fishery all species harvest was valued at approximately \$641.1 million, a significant increase from 2020's value of \$295.2 million. A total of 230.9 million fish were harvested, a 98 percent increase from the 2020 total harvest of 116.8 million fish. Of this total, sockeye salmon accounted for approximately 56 percent of the total value at \$361.1 million and 25 percent of the harvest at just under 57.0 million fish. Pink salmon accounted for approximately 28 percent of the value at \$176.3 million, and 68 percent of the harvest at 158.1 million fish. Chum salmon accounted for 10 percent of the value at \$62.7 million and 6 percent of the harvest at 12.8 million fish. Coho salmon accounted for approximately 4 percent of the value at \$23.9 million and 1 percent of the harvest at 2.7 million fish. Chinook salmon harvest is estimated to be just over 265,000 fish with an estimated preliminary exvessel value of \$17.1 million. A total of 6,362 individual permit holders made commercial salmon landings in 2021, a slight decrease from 2020 (6,496 permits).

When compared to the long-term time-series (1975-2020), the 2021 all-species commercial salmon harvest of 230.9 million fish and 850.7 million pounds is the third highest on record for both total fish harvested, and total pounds

harvested. Adjusted for inflation (CPI, 2021 prices), the 2021 exvessel value estimate of \$641.1 million is also the third highest exvessel value reported since 1975.

### **New Fishery Development**

Division staff have worked closely with stakeholders in southeast Alaska to develop a new fishery for hagfish that allows harvest using pots through a Commissioner's Permit. The fishery has a guideline harvest level (GHL) of 170,000 pounds that is distributed across seven different management areas. All research, stock assessment, and management are undertaken collaboratively with stakeholders. This is the first new commercial fishery developed in Alaska in many years and is an open access fishery that continues to provide opportunity for interested fishermen.

In recent years Norton Sound has experienced large returns of pink salmon and in 2021 the division issued Commissioner's Permits to harvest pink salmon in Norton Sound, during an experimental fishery, using purse seine gear. Fishery openings were structured to harvest surplus pink salmon while avoiding harvest of chum and king salmon. A total of 28,769 pink salmon were harvested in 11 fishing periods. Open fishing periods varied from 8 to 36 hours in duration since purse seine gear had not been traditionally used in Norton Sound to harvest pink salmon. Conditions of the Commissioner's Permit restricted the retention of other salmon species and required that any inadvertent harvest of salmon, other than pink salmon, be donated to local communities. Incidental harvest was minimal with no king salmon caught and total of 16 chum salmon that were donated.

Division staff are working closely with stakeholders in Prince William Sound to explore the feasibility of new fisheries for sea cucumber and king crab. These fisheries currently are being evaluated with test fishery stock assessments.

### **Implementation of the Pacific Salmon Treaty**

2021 was the third year implementing the newly renegotiated Pacific Salmon Treaty. The newly revised Treaty is more data intensive than the previous Treaty agreement and requires the implementation of a new monitoring program for the transboundary Alsek River. Northern Boundary area and Transboundary River fisheries were managed consistent with Treaty provisions. Preliminary data suggest that these fisheries met Treaty obligations. Chinook fisheries were managed to not exceed the Treaty harvest limit; overages are required to be paid back the following year. Preliminary data suggest that there was a slight underage relative to the harvest limit; hence there will not be a payback during the 2022 fishery. The fishery was also managed to reduce interceptions of wild southeast Alaska and Transboundary River Chinook salmon stocks identified as stocks of concern or forecasted to be below escapement goal. This strategy successfully reduced harvest rates on these stocks while focusing harvest on other more abundant Treaty stocks.

### **Southeast Alaska Chinook Salmon Mitigation Program**

The newly negotiated 2019 revision to the Pacific Salmon Treaty calls for a 7.5 percent reduction in Chinook salmon harvest levels in southeast Alaska to meet the provisions of the Endangered Species Act. Subsequently, U.S. negotiators agreed that \$22.4 million in mitigation funding should be provided to offset economic consequences of the harvest reduction. The goals and objectives are to mitigate economic impacts of the 7.5 percent harvest reduction by increasing production of and access to hatchery produced salmon in southeast Alaska. Primary impacts of the Chinook salmon harvest reduction are on "hook and line fisheries," which include commercial troll, sport fish, and associated interests. FY2021 investments included \$4.04 million in Department of Commerce and Department of Interior funding to expand hatchery infrastructure at three facilities to accommodate increases in salmon production and conduct hatchery research to optimize fish survival and better understand predator impacts.

### **Rockfish Management Initiative**

Increased catch and effort on several groundfish stocks (e.g., black rockfish) has occurred due to decreases in abundances and bag limits for halibut and salmon. This has prompted concerns regarding their sustainable management into the future. These species have complex life histories that make research and stock assessment inherently difficult. Additionally, there are almost no fishery independent survey data, and while commercial catch data is available, sport catch and effort data are sparse even though effort is increasing. This combination of factors has facilitated an urgent need to review, revise and update assessment methods and management strategies for many data poor groundfish stocks.

Research projects conducted in collaboration with the Division of Sport Fish have helped inform development of management strategies for pelagic and demersal rockfish in the Gulf of Alaska. In FY2021, the divisions continued to host internal workshops regarding management issues and stock assessment needs for groundfish species, primarily

yellow and black rockfish. More specifically, coordination and sharing of data across divisions has been done and several modeling projects for data poor stocks have been initiated. Given growing concerns over stock status, the divisions continue to engage state and federal agency staff with rockfish management expertise, reviewing, and if appropriate, modifying management strategies and collaboratively exploring stock assessment needs. The department anticipates that management of demersal rockfish (e.g., yelloweye rockfish) will become more conservative given their life history characteristics (e.g., long-lived) and lack of stock assessment information.

### **Fish Health Program**

The fish health program administers statewide regulatory oversight and diagnostic responsibilities to 32 hatcheries, several state, federal and private agencies, the public, and any other user groups to help guide resource management decisions regarding the sustained health of both wild and cultured stocks of fish and shellfish. Due to essential diagnostic responsibilities, the Fish Pathology Laboratories continued to operate during the *COVID-19* pandemic while maintaining staff safety. To assist the statewide testing effort, the Anchorage Fish Pathology Laboratory contributed emergency testing supplies, laboratory equipment, and staff time to train the state Public Health Laboratory in Fairbanks in use of automated high throughput extraction equipment. This dramatically increased the Public Health Lab testing rate from 10 samples to about 300 per hour. For this contribution, laboratory staff were acknowledged by the Rasmuson Foundation in their “Unsung Heroes” series.

Pathology program staff released the third edition of the popular field guide, Common Diseases of Wild and Cultured Fishes in Alaska. A second guide, Diseases of Wild and Cultured Shellfish in Alaska is also available. These hard copy and online pictorial references have been a useful resource for department staff, national resource agency partners, and the public.

In FY2021 the pathology labs processed 10,694 fish/shellfish and conducted 26,304 tests for disease diagnostic purposes and statewide surveillance of shellfish and salmonid brood-stocks. There also are ongoing investigations to determine prevalence of *Ichthyophonus* in Yukon River salmonids and to discover the cause of blackened eyestalks in snow and tanner crabs caught in the eastern Bering Sea fisheries.

### **Genetic Information for Resource Management**

The Gene Conservation Laboratory (GCL) continued to harness new technologies to more efficiently and accurately collect genetic information to fulfill its mission: to protect genetic resources and provide genetic information and advice to department staff, policy makers, and the public to support management of resources consistent with the department's mission. For more than 30 years, genetic information produced by the GCL has been recognized as a vital tool to inform decisions made by the Board of Fisheries, improve forecasts, refine estimates of productivity for escapement goals, inform hatchery and mariculture policy makers, and assess management decisions. This has allowed the state to maximize harvest opportunity and economic benefits from Alaska's fishery resources, while ensuring sustainable fisheries for future generations.

The GCL has become one of the highest throughput fishery genetic labs in the world, genotyping approximately 100,000 samples per year. With this throughput, the GCL continues to look for new opportunities to improve resolution and increase efficiencies using cutting edge technologies, such as expanding applications for new sequencing technology and automating laboratory steps using robotics. The lab continues to look at novel methodologies including genetic mark-recapture, genetic control of invasive species, and pedigree analyses to estimate relative reproductive success of hatchery- vs natural-origin fish. The laboratory is also extending genetic expertise and infrastructure to prepare to meet other division's missions. Despite these efforts, reliance on and uncertainty of external funding poses challenges for GCL in acquiring and retaining expertise for the long term and limits the department's ability to preserve capacity to address critical management issues, including addressing genetic questions related to Alaska's expanding mariculture industry.

The GCL continued to operate at full capacity during the *COVID-19* pandemic in FY2021 while ensuring staff health and safety. The lab also contributed equipment to the Department of Health and Social Services for *COVID-19* testing until replacement equipment could be purchased.

### **Mark, Tag and Age Laboratories**

The Mark, Tag, and Age (MTA) Laboratories help the Division of Commercial Fisheries meet its mission to conserve natural resources by providing the information needed for efficient and sustainable fisheries management. Without the data generated and curated by the lab, several domestic and international treaty agreements would be violated, and

fisheries could not be managed effectively which could negatively affect natural resources or result in closures that negatively impact the economy of many Alaskan communities.

The first component of the MTA Laboratories involves recovery and decoding of coded wire tags (CWTs) in salmon sampled from commercial fisheries in southeast Alaska. The CWTs indicate the origins and age of tagged fish and help estimate the contribution of the harvest from southeast Alaska fisheries, information necessary for the U.S./Canada Pacific Salmon Treaty. All CWT recovery data are made available online as they are generated so that biologists can manage salmon fisheries in real time.

The second component involves collecting age, weight, length, and sex information from southeast Alaska Pacific herring and processing samples of herring spawn (eggs attached to kelp) to validate estimates of spawning biomass made during dive surveys. This information is used to set harvest levels for the herring fishery.

The third component involves reading thermal marks observed on the otoliths of salmon caught in commercial and sport fisheries to distinguish hatchery-released salmon from their wild counterparts. This is necessary for management of fisheries containing mixed stocks of wild and hatchery salmon. The laboratories also coordinate the patterns of marks among Alaska hatcheries and other countries around the Pacific Rim so that all marks released are unique. The lab maintains its online reference collection of images of thermal marks released by Alaskan hatcheries each year, as well as an archive of over 250,000 images of salmon scales used for a variety of retrospective age and growth studies.

The final component involves providing groundfish and invertebrate age data to managers and researchers statewide. These age data are used to characterize and manage groundfish and invertebrate populations. In 2021, age structures (otoliths, mollusk shells, etc.) representing 18 species, were received, and aged at the lab. Staff continued to assess and improve species-specific groundfish age estimation techniques and collaborated with other agencies to standardize protocols and improve life history information for commercial stock management.

Due to its important role in fisheries management, the MTA Laboratories has continued to operate during the COVID-19 pandemic. Strict operational protocols were instituted and updated to conform to current State mandates to ensure staff health and safety while continuing to meet production goals.

### **eLandings**

Data Resource Management continued to manage, develop, and expand the eLandings system. All groundfish and western Alaska crab are reported within eLandings, as are most salmon landings. eLandings remains a major success story for the division and its partners, National Marine Fisheries Services, and the International Pacific Halibut Commission. The eLandings development team has maintained the system without any major interruptions and has been very responsive to requests for new features by agency and industry users. Work continues on the new HTML5 browser-based application for processor users. The migration to the browser-based applications will reduce the significant amount of time the eLandings team spends assisting end users with installation support issues. Regular meetings are held to move forward on an updated Memorandum of Agreement between the three partner agencies. Staff adapted to the inability to hold in person trainings by providing new online trainings. The online trainings were customized for different audiences and included a broader group of users than typical in-person trainings.

### **Application Development**

Statewide application maintenance continued to support specialized fisheries management needs. Over one hundred applications and processes are being maintained by staff including mobile data collection, surveys, logbooks, environmental data, geographic information system (GIS) data, observer data, and commercial harvest information. Many applications and processes are in active development status, which includes requirement gathering, design, implementation, or testing. In addition to supporting deliverables, staff modernized and upgraded many applications out of Adobe Flash and into web-based technologies.

### **Business Intelligence and Data Warehouse (OceanAK)**

Data Resource Management continues to migrate existing datasets into a single reporting and analysis system. This system eliminates multiple reporting technologies and enables department end users to produce complex analyses for fisheries management and various reporting needs without a programmer. This project continues to eliminate the need for multiple reporting technologies, provides a single authoritative data source, provides dynamic downloadable

reports from the department website, and supports the major goal of historical data rescue and preservation of one of the most valuable and comprehensive datasets of commercial fisheries history. Staff continued to develop new features available for OceanAK, including additional security models and processes for segregating data sets/subject areas. In addition, staff developed and tested new embedded public facing analyses and data reports.

### **Information Services**

Data Resource Management Information Services Section provides fishery information and data to department staff and the public; issues licenses for commercial fishery buyers, sellers, and exporters; and data captures/verifies commercial fishery buying and production data. Information Services staff continued to support these deliverables. Information Services staff also continued to coordinate efforts throughout the division to migrate paper fishing permits into the department's Online Store, and to oversee maintenance of permits that are already offered online.

### **Key RDU Challenges**

#### **COVID-19 Response**

The division will continue to be challenged to adapt to operations given the COVID-19 pandemic. This includes fielding staff to ensure the necessary research and management structures are in place to conduct fisheries as well as working with fishermen and processors to ensure that they have the tools to harvest and process fish.

#### **Statewide Aquaculture**

The Aquaculture Section consists of three statewide functions: general permitting, the private non-profit salmon hatchery program, and the aquatic farm program. General permitting includes Aquatic Resource Permits for research and education projects statewide. The salmon hatchery program's primary function is support and permitting of salmon fishery enhancement projects, salmon hatcheries, and fish/egg transports. The aquatic farm program's primary function is permitting of aquatic farm operation, aquatic farm hatchery, and aquatic farm related transport/acquisition permits. Since FY2014, the aquaculture section has been reduced by four positions (50 percent), so even with significant efforts to streamline and prioritize efforts, existing staff are challenged to keep up and provide adequate service. Additional challenges are being realized as the aquatic farm industry moves towards the Governor's Mariculture Task Force goal to create a "\$100 million industry in 20 years".

#### **Maintaining Sustainable Fisheries with Declining Budget**

Managing fisheries for sustained yield requires close monitoring of stock status to ensure overfishing does not occur. Maximum sustained yield in commercial fisheries can only be achieved when managers have confidence in estimates of harvest and population size. As general fund dollars become scarcer the Division of Commercial Fisheries has been forced to end or curtail some fishery monitoring projects which has resulted in restrictions on associated fisheries. The division uses a return-on-investment model when making decisions on which projects to reduce or eliminate, where monitoring projects associated with lower value fisheries are eliminated first. The impact of restricting even small fisheries to ensure sustainability is direct to fishermen and communities. In addition, the proliferation of federal and state fishery related disaster requests in recent years has added an additional workload on division staff. Considerable analytical and administrative work is associated with processing each disaster request and no additional funds have been made available to cover these new costs.

#### **2020 and 2021 Fishery Disasters**

Several fisheries experienced drastic declines in 2020 and 2021 resulting from unprecedented environmental conditions in recent years. On March 8, 2021, Governor Dunleavy requested the Secretary of Commerce declare a fishery disaster for the 2021 Yukon River and the 2020 Norton Sound, Yukon River, Kuskokwim River, Chignik, Upper Cook Inlet, Prince William Sound, and Southeast Alaska salmon fisheries; 2018 and 2020 Copper River salmon fisheries; 2018 Upper Cook Inlet East Side Setnet salmon fishery; 2020 Gulf of Alaska Pacific cod fishery; and the 2019/2020 Bering Sea Tanner crab fishery. These fishery disaster requests are currently pending a final determination from the Secretary of Commerce.

#### **2019 Norton Sound Red King Crab Fishery Disaster**

In 2019, fishery harvests and revenues for Norton Sound red king crab were significantly less than recent years due to poor sea ice conditions and historically low catch rates. The 2019 commercial fishery harvest was 76 percent lower than in 2018, and 83 percent lower than average harvest from the previous five years. The revenue loss from the 2019 fishery resulted in severe negative economic impacts for fishery participants and small, rural coastal communities that rely on this high-value and low-volume fishery for most of their income. The Governor's request for

a federal fishery disaster was sent to the Secretary of Commerce in March 2020. This request was approved by the Secretary of Commerce on June 29, 202, and is now awaiting an allocation of funds from the Department of Commerce. Once funds have been allocated, the department will work with affected stakeholders and the public to develop a spending plan.

### **2018 Gulf of Alaska Pacific Cod and Chignik Sockeye Salmon Disasters**

In 2018, the total allowable catch limit for Pacific cod in the Gulf of Alaska was reduced by 80 percent compared to the 2017 catch limit. Due to severely reduced catch limits, several directed Pacific cod fisheries were preemptively closed, and the remaining fisheries performed poorly, resulting in drastically reduced fishery revenues. Throughout the Gulf of Alaska, direct impacts were felt by harvesters, processors, and support industries which led to the Governor requesting a federal fishery disaster for the 2018 fishery. Likewise, in 2018, extremely low abundance of returning sockeye salmon to the Chignik area prompted a complete closure of the commercial fishery. Final estimated salmon escapement for the Chignik river sockeye run was 34 percent below the most recent five year average, and the lowest since statehood. Due to the significant commercial fishery losses in the Chignik area and an estimated 100 percent decline in revenues and harvest compared to the recent five year average, the Governor requested a federal fishery disaster. These 2018 fishery disaster requests were approved on October 30, 2019, and funds were allocated by the Department of Commerce on February 27, 2020. The department worked with stakeholders through two rounds of public comments to develop spending plans which were forwarded to Pacific States Marine Fisheries Commission (PSMFC) to use as a basis for the federal grants for the disaster funds. The federal grants for the Pacific cod and Chignik salmon disasters received final approval in August 2021. The department is now working with PSMFC as they begin distributing funds from the 2018 fishery disasters.

These spending plans can be complex, involving thousands of stakeholders and the disbursement of millions of dollars, and thus, are controversial and challenging to implement. The department is striving for timely and fair distribution of allocated funds, but this is an additional workload on existing staff whose time is fully allocated. Approval has been received for a part-time Program Coordinator position, funded through the federal fishery disaster grants, to help with disaster coordination. The recruitments for Alaska residents and subsequently for all applicants, have not been successful.

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

The Bering Sea has experienced dramatic environmental changes in recent years, which amplify management challenges related to shifting spatial distributions, fluctuations in recruitment potential, and population declines. Current harvest for most Bering Sea stocks is significantly lower than historic levels. The division is working to better inform the federal stock assessments and state harvest strategies (e.g., minimum thresholds for opening/closing fisheries) through improved understanding of spatial distribution, seasonal movement patterns, natural mortality, and recruitment limitations relative to environmental variability and fishing. The division also performs surveys to bolster assessments. For example, Saint Matthew Island blue king crab are not adequately surveyed by the National Marine Fisheries Service (NMFS) trawl survey because of gear limitations in nearshore rocky habitat. Additionally, NMFS no longer performs the Bering Sea slope bottom trawl survey, which is the only source of fishery independent data for Pribilof Island golden king crab, a stock that has garnered increased interest in recent years because of other stock declines. Thus, pot surveys provide critical supplemental information to improve stock assessments. Improved population indices, spatial distribution, and stock assessments will allow the division 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 the division for Bering Sea Crab Research (BSCR) has been reduced since FY2011, to the extent that federal funds received for BSCR in FY2022 are 63 percent of what was received in FY2011. In addition, Bristol Bay red king crab test fisheries generate needed funds for the at-sea observer program and the Bering Sea Research Program. The extremely low population abundances for Bristol Bay red king crab (BBRKC) and Bering Sea snow crab make future test fishing uncertain. The BBRKC fishery was closed in 2021/22, thus test fish funds generated were reduced to reflect the low stock status and lower observer deployment needs. Bering Sea snow crab are at historic low levels and the stock was classified as overfished in 2021/22. These and further reductions in funds would continue to diminish the division'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. Seasonal staff are critical 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. Stable

funding would benefit 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.

### **Federal Groundfish Fisheries**

The North Pacific Fishery Management Council (NPFMC) has several initiatives underway that affect state managed fisheries and distribution of benefits from the harvest of federally managed fishery resources of Alaska. These include transitioning from fixed halibut bycatch limits in the Bering Sea to bycatch limits linked to halibut abundance; ongoing modifications to the federal groundfish observer program, including expanded use of electronic monitoring, to improve quality and utility of observer data; and consideration of a cooperative style rationalization program for Bering Sea/Aleutian Islands Pacific cod trawl catcher vessels. State managers and researchers must work through the NPFMC process to develop programs that provide stability for fishery participants and communities, while meeting NPFMC objectives and complying with the Magnuson-Stevens Fishery Conservation and Management Act.

### **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. Stock assessments are part of the federal process, which establishes federal overfishing thresholds, federal stock status determinations, and federal annual catch limits, but are led by division staff for many stocks. As part of this process, federal regulations stipulate management measures must be applied to federal FMP fisheries increasing demands on staff for data gathering, analysis, and reporting. In the state process, staff have responded to industry requests by leading a collaborative effort among the division, the National Oceanic and Atmospheric Administration (NOAA), and industry scientists to develop and improve state harvest strategies for various stocks including Aleutian Islands golden king crab and Bering Sea Tanner crab, which are used to set the annual total allowable catch for each stock.

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

The division has five large research and smaller 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 in season management. Maintenance must be provided to protect this capital investment, ensure efficient operations, and meet safety requirements. The division must manage the maintenance on these vessels within existing funds and ensuring minimal impact to program operations. Safely operating and maintaining aircraft within existing budgets is always a challenge. Maintaining a high-quality aircraft program for salmon stream surveys also depends on the ability to recruit and retain excellent pilots with experience flying in rural Alaska at low altitude as well as float equipped planes. Adequate housing for pilots, as well as field staff, is also an ongoing challenge.

### **Data Resource Management (DRM)**

The division collects a vast amount of data, including various types of biological data on fish stocks, environmental data, records of commercial harvests, and records on the buying and production activities of seafood processors. The headquarters component is responsible for the development and coordination of databases, maintenance of the data warehouse and applications, and most of the dissemination of data to the public and for organized aid programs (e.g., fishery disasters, CARES Act). The volume, scale, and requirements for new functionality continue to increase. Meeting the growing demand for increased and earlier access to data is also an ongoing challenge, especially given limited staffing.

### **Business Intelligence and Data Warehouse (OceanAK)**

This project is designed to provide a single toolset and portal for reporting and analysis of all commercial fisheries data. Resources for this project continue to be a major challenge. This project relies on division information technology resources and staff, which already support multiple projects and systems. The division continues to experience challenges with lack of experienced Office of Information Technology personnel to manage and assist with the consolidated Oracle Business Intelligence infrastructure.

### **eLandings**

The Interagency Electronic Reporting System, eLandings, is designed to provide a single reporting system to electronically report all commercial harvest in Alaska. Resources for this project are a major challenge. The division secures funding from federal grants (e.g., cost recovery, Alaska Fisheries Information Network) and continues to use this funding for maintenance and development related to non-salmon activities and components. Salmon activities



and components must be covered by limited general funds only. The division has two Analyst Programmers who maintain, implement, enhance, and test this system. The ability to add new features or work on new projects is somewhat limited by current workload required of the Analyst Programmers. Turnover at the partner agencies in both program management positions has meant some loss of continuity in ongoing projects. The cancellation of in-person trainings meant a lack of crucial feedback that comes from users in face-to-face meetings. It also meant users in remote locations without fast enough internet were not able to participate.

### **Implementation of the Pacific Salmon Treaty**

The recently renegotiated Pacific Salmon Treaty places new obligations on the state in terms of fishery monitoring and management. As Treaty obligations are fundamentally a federal responsibility; funding is critical for providing the data, analyses, fishery management, and bilateral coordination essential to implement the Treaty. It was anticipated that the state would receive new funds to implement the revised Treaty, however, the department only received a nominal increase of 10 percent to the Treaty base grant of less than \$500,000, continuing the unfunded federal mandate placed on the State of Alaska. The division and the department are heavily reliant on Treaty related soft money sources such as the Northern Endowment Fund, Coded Wire Tag Improvement Fund, and U.S. Letter of Agreement Fund for more than \$2 million annually to fulfill the promises made at the federal level and anticipate similar base grant allocations from the U.S. Department of Commerce appropriation for FY2022.

### **Significant Changes in Results to be Delivered in FY2023**

As budgets continue to tighten the division is required to prioritize work and look for efficiencies. Because revenue to the State from commercial fisheries taxes will decline as commercial fisheries are restricted, the department and the division are using a return on investment theme to ensure that the highest value fisheries to the state are minimally impacted. The loss of commercial fisheries revenues has a direct impact on the ability of the division to manage subsistence and personal use fisheries. Options to make the division less dependent upon state funds continue to be explored and developed.

### **Fishery Disasters**

In 2016, the pink salmon runs in the Gulf of Alaska were some of the smallest on record. A request for federal disaster assistance was approved in 2017 and funding was made available in 2019. Distribution of the funds by Pacific States Marine Fisheries Commission is completed for the harvester and processor components. Of the total amount granted, approximately 6 percent was set aside for research to improve forecasts and to better understand the interaction between hatchery and wild pink salmon. The research monies were distributed to each of the large regions encompassed by the Gulf of Alaska (Westward, Central, and Southeast) and expire June 30, 2023. The research activities identified within each region were tailored to primary research needs. One example being a large-scale research project in Prince William Sound that uses genetic methods to investigate the effect that existing large-scale hatchery programs might have on local wild populations. This is a long-term project and the funding made available will accelerate the analysis allowing timely results to be available to researchers, managers, and the Board of Fisheries.

In 2018, the total allowable catch limit for Pacific cod in the Gulf of Alaska was reduced by 80 percent compared to the 2017 catch limit. Due to severely reduced catch limits, several directed Pacific cod fisheries were preemptively closed, and the remaining fisheries performed poorly, resulting in drastically reduced fishery revenues. Throughout the Gulf of Alaska, direct impacts were felt by harvesters, processors, and support industries which led to the Governor requesting a federal fishery disaster for the 2018 fishery. Likewise, in 2018, extremely low abundance of returning sockeye salmon to the Chignik area prompted a complete closure of the commercial fishery. Final estimated salmon escapement for the Chignik river sockeye run was 34 percent below the most recent five-year average, and the lowest since statehood. Due to the significant commercial fishery losses in the Chignik area and an estimated 100 percent decline in revenues and harvest compared to the recent five-year average, the Governor requested a federal fishery disaster.

These 2018 fishery disaster requests were approved in 2019 and NOAA Fisheries allocated \$10.3 million to the Chignik fishery disaster and \$24.4 million to Pacific cod fishery disaster. The department, in cooperation with fishery stakeholders, developed spending plans for these disasters that were submitted to Pacific States Marine Fisheries Commission (PSMFC) who is administering the federal grants. The federal grants were approved in August 2021 and PSMFC has begun work on the fund distribution process. Both disaster spending plans include research monies to better understand the factors that led to the fisheries disasters. These spending plans can be complex, involving

thousands of stakeholders and the disbursement of millions of dollars, and thus, are controversial and challenging to implement. The department is striving for timely and fair distribution of allocated funds, but this is an additional workload on existing staff whose time is fully allocated. The 2018 Chignik and Gulf of Alaska Pacific cod fishery disaster spending plans include an allocation of funds to the department to support a part-time Fishery Disaster Coordinator position which is expected to help alleviate the demands on existing staff to support fishery disaster related workload. Recruitment attempts have not yet identified a qualified candidate.

A 2019 fishery disaster for Norton Sound red king crab was approved by the Secretary of Commerce in June 2021; funds have not yet been allocated by the Department of Commerce. Once funds are allocated, department staff will help develop a spend plan with affected stakeholders. Numerous fishery disaster determination requests were forwarded to the Secretary of Commerce in 2020 (see fishery disasters under Key Component Section above). These requests are currently pending a determination from the Secretary.

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**Commercial Fisheries  
RDU Financial Summary by Component**

*All dollars shown in thousands*

	FY2021 Actuals				FY2022 Management Plan				FY2023 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.	8,412.6	958.8	3,507.0	12,878.4	9,447.1	950.5	4,400.2	14,797.8	9,774.8	1,781.9	6,242.2	17,798.9
Central Region Fisheries Mgmt.	8,743.3	744.9	119.3	9,607.5	10,193.1	1,159.4	246.8	11,599.3	10,044.6	1,126.4	242.5	11,413.5
AYK Region Fisheries Mgmt.	6,783.0	257.8	900.4	7,941.2	7,782.8	667.7	2,676.3	11,126.8	7,678.6	664.2	2,644.4	10,987.2
Westward Region Fisheries Mgmt.	9,779.4	1,023.1	2,291.7	13,094.2	10,727.0	2,164.3	2,787.0	15,678.3	10,575.5	2,127.7	2,717.1	15,420.3
Statewide Fisheries Management	12,349.0	2,738.9	1,169.4	16,257.3	14,743.1	4,333.1	4,562.4	23,638.6	13,787.8	4,242.1	4,518.7	22,548.6
Commercial Fish Entry Commission	3,238.0	0.0	0.0	3,238.0	3,218.9	0.0	0.0	3,218.9	3,164.5	0.0	0.0	3,164.5
<b>Totals</b>	<b>49,305.3</b>	<b>5,723.5</b>	<b>7,987.8</b>	<b>63,016.6</b>	<b>56,112.0</b>	<b>9,275.0</b>	<b>14,672.7</b>	<b>80,059.7</b>	<b>55,025.8</b>	<b>9,942.3</b>	<b>16,364.9</b>	<b>81,333.0</b>

**Commercial Fisheries**  
**Summary of RDU Budget Changes by Component**  
**From FY2022 Management Plan to FY2023 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>
<b>FY2022 Management Plan</b>	<b>41,177.8</b>	<b>14,934.2</b>	<b>9,275.0</b>	<b>14,672.7</b>	<b>80,059.7</b>
<b>One-time items:</b>					
-Central Region Fisheries Mgmt.	-800.0	0.0	0.0	0.0	-800.0
-Statewide Fisheries Management	-800.0	0.0	0.0	0.0	-800.0
<b>Adjustments which continue current level of service:</b>					
-SE Region Fisheries Mgmt.	461.7	10.2	831.4	1,842.0	3,145.3
-Central Region Fisheries Mgmt.	644.3	7.2	-33.0	-4.3	614.2
-AYK Region Fisheries Mgmt.	-110.6	6.4	-3.5	-31.9	-139.6
-Westward Region Fisheries Mgmt.	-175.1	23.6	-36.6	-69.9	-258.0
-Statewide Fisheries Management	-167.5	12.2	-91.0	-43.7	-290.0
-Commercial Fish Entry Commission	-88.4	34.0	0.0	0.0	-54.4
<b>Proposed budget decreases:</b>					
-SE Region Fisheries Mgmt.	-144.2	0.0	0.0	0.0	-144.2
<b>FY2023 Governor</b>	<b>39,998.0</b>	<b>15,027.8</b>	<b>9,942.3</b>	<b>16,364.9</b>	<b>81,333.0</b>