

State of Alaska
FY2024 Governor's Operating Budget

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

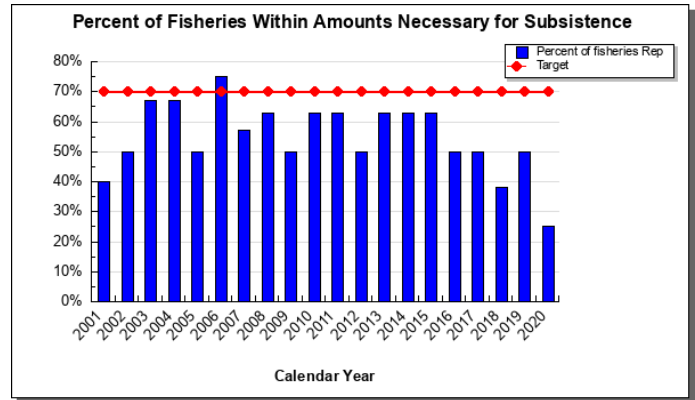
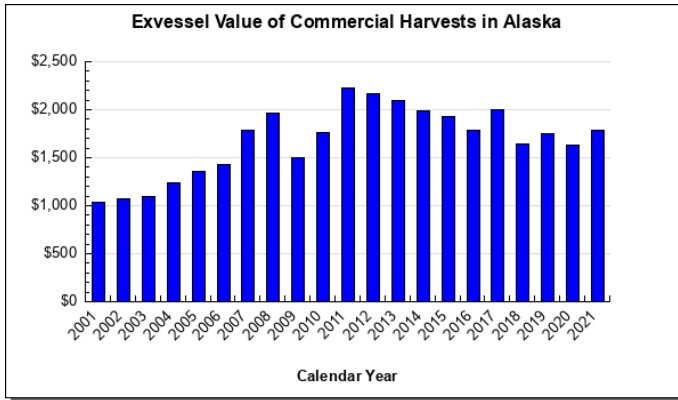
Commercial Fisheries Results Delivery Unit

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>.)



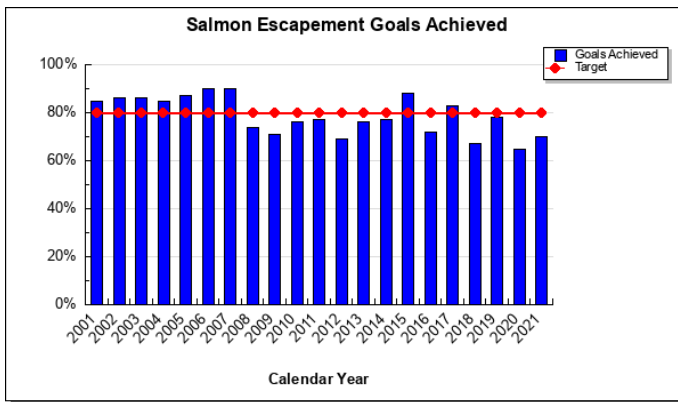
Core Services

- 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 2022

Maintaining Operational Continuity Despite Recruitment & Retention Challenges

Supervisors across the state were challenged to maintain continuity of operations in the face of unprecedented difficulties in the recruitment and retention of employees. These challenges were seen at all levels, ranging from Fish

& Wildlife Technicians (FWT) to Analyst Programmers and Biometricians, where recruitment failures were common. The abundantly clear message from departing employees is that our salaries and benefits are not competitive, and finding adequate housing is often a barrier, particularly as inflationary pressures add to Alaska's already high cost of living.

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 or no 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 2022. 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 spawning escapement objectives. The division maintains open dialog with subsistence users to understand how best to meet subsistence needs and is prioritizing research on salmon stocks of importance for subsistence users to understand cause of the declines.

Statewide Salmon Harvest, Fishery Value, and Stock Status

2022 estimates of value are based on preliminary exvessel prices reported on fish tickets and inseason processor reports. Please note these are preliminary harvest and escapement figures and data may change as fish tickets are processed and finalized. All 2022 preliminary exvessel prices are nominal, meaning they have not been adjusted for inflation, unless otherwise stated. More detailed, area-specific summaries will be distributed as final harvest data become available.

The 2022 commercial salmon fishery all species harvest was valued at approximately \$720.3 million, an increase from 2021's value of \$643.9 million. A total of 160.7 million fish were harvested, a 31% decrease from the 2021 total harvest of 233.8 million fish. Of this total, sockeye salmon accounted for approximately 66% of the total value at \$473.8 million and 47% of the harvest at 74.8 million fish, which is the largest sockeye salmon harvest on record, mostly due to significant harvests in the Bristol Bay area. Pink salmon accounted for approximately 14% of the value at \$102.2 million, and 43% of the harvest with 69.1 million fish. Chum salmon accounted for 15% of the value at \$110.5 million and approximately 9% of the harvest at 14.9 million fish. Coho salmon accounted for approximately 2% of the value at \$15.0 million and 1% of the harvest at 1.6 million fish. Chinook salmon harvest is estimated to be just under 310,000 fish with an estimated preliminary exvessel value of \$18.8 million. A total of 6,126 individual permit holders made commercial salmon landings in 2022, a small decrease from 2021 (6,362 permits).

New Fishery Development

Division staff have seen a 30% increase in aquatic stock application permit applications to acquire wild kelp stock for aquatic farm hatchery brood stock as well as increased interest in commercial harvest of wild aquatic plants. Interest in harvesting wild aquatic plants is expected to increase. A challenge will be ensuring this demand can be met sustainably. The department does not currently have any stock assessment programs for wild aquatic plants.

Implementation of the Pacific Salmon Treaty

2022 was the fourth year implementing the newly renegotiated Pacific Salmon Treaty, which is more data intensive than the previous Treaty agreement and requires the implementation of a new monitoring program for the transboundary Alek River. Northern Boundary area and Transboundary River fisheries were managed consistent with Treaty provisions. Preliminary data indicate 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 an underage of 24,000 fish relative to the harvest limit; hence there will not be a payback during the 2023 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 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. FY2022 investments included \$4.21 million in U.S. Department of Commerce and Department of Interior funding to expand hatchery infrastructure at two 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 sustainability. 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 FY2022, 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. However, with the recent filling of some Biometrician vacancies, significant improvements have been made in the Yelloweye rockfish assessment for Southeast and these will soon be incorporated in Westward and Central region rockfish assessments.

Fish Health Program

The fish health program administers statewide regulatory oversight and diagnostic responsibilities to 30 hatcheries, several state, federal and private agencies, and the public to guide resource management decisions to sustain the health of both wild and cultured stocks of fish and shellfish.

Laboratory staff recently published three manuscripts in peer reviewed journals regarding; 1) weak meat disease in Alaskan scallops, 2) black eye syndrome in snow and Tanner crabs and 3) how to determine biological significance of molecular discoveries of new pathogens regarding ongoing management of fish and shellfish health.

Laboratory testing and surveillance is an essential management tool to control disease in hatchery fish and to protect wild salmon stocks in Alaska. In FY2022, the pathology labs processed 10,816 fish/shellfish samples and conducted 28,040 tests for disease diagnostic purposes and statewide surveillance of shellfish and salmonid brood stocks.

For wild populations, fish pathology staff are evaluating *Ichthyophonus* associated mortality of Yukon River Canadian-origin Chinook salmon. *Ichthyophonus*-related mortality is a leading hypothesis to explain two successive years (2020 and 2021) of failure to achieve U.S./Canada border passage objectives per the Yukon River Salmon Agreement, despite adequate run sizes detected near the mouth of the Yukon River and unprecedented harvest restrictions. The ADF&G is collaborating with the US Fish & Wildlife Service in this study.

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.

As an example, in 2022 the GCL worked closely with the mariculture industry to obtain federal Build Back Better funding to support the growth of kelp mariculture in Alaska. The GCL will use this funding over the next four years to

examine genetic relationships among kelp beds throughout Alaska with the goal of refining transport policy to provide opportunities for the utilization and development of kelp mariculture for the maximum benefit of the people of the State of Alaska, while ensuring conservation of wild productivity. Kelp mariculture has significant potential to develop an industry that builds resilient economies.

The GCL is 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 (e.g., further automation of laboratory steps with additional robotics in 2022). 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 versus natural-origin fish. The laboratory is also extending genetic expertise and infrastructure to prepare to meet other divisions and department's missions. Despite these efforts, static general fund support and increasing 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.

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 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.

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 laboratory also provides groundfish and invertebrate age data to managers and researchers statewide. These age data are used to characterize and manage groundfish and invertebrate populations. In 2022, age structures (otoliths, mollusk shells, etc.) representing 18 species were received and aged at the lab. Staff continued to assess and improve species-specific age estimation techniques and collaborated with other agencies to standardize protocols and improve life history information for commercial stock management.

The laboratory continues to conduct research designed to provide information that will improve the Department's capacity for resource management. The activities are currently focused on validating age estimation protocols and reconstructing age-specific life history parameters of fishes that are important to fisheries management such as age of maturity, reproductive frequency, movement patterns, dietary changes, and stress levels.

Salmon Ocean Ecology Program

Salmon Ocean Ecology Program (SOEP) is a new program tasked with understanding the marine life of Alaskan salmon, using this information to assist fishery management decision-making, and answering pressing questions about factors that drive salmon population dynamics. The program provides support for three regional marine salmon surveys and the International Year of the Salmon North Pacific winter expedition, including operational assistance, data analysis, and development of innovative investigations and methodologies. SOEP regularly disseminates data, information, and guidance amongst department staff on a wide variety of marine salmon issues, including salmon

bycatch in federally managed fisheries, competition at sea, marine heatwaves, and marine ecosystem changes. The program is building its communications component to provide information on the marine life of Alaskan salmon to stakeholders, news media, regulatory bodies, department staff, and others, including maintaining a social media page for the public. Over the past year the program has been building and developing staffing.

eLandings

Staff continued to manage, develop, and expand the eLandings system. All groundfish and Western Alaska crab are reported within eLandings, as are most salmon landings and many Southcentral Alaska crab landings. After targeted outreach during the previous year, the number of Southeast Alaska crab landings reported within eLandings increased to half. eLandings remains a major success story for the division and its partners, National Marine Fisheries Services, and the International Pacific Halibut Commission. Despite staff turnover in multiple positions throughout the year, the eLandings team has maintained the system without any major interruptions and has been responsive to requests for new features by agency and industry users. Development of the new HTML5 browser-based application for processor users continues. 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. During the last year, the three partner agencies updated and signed a Memorandum of Agreement regarding the oversight and management of the eLandings system. Staff continued to hold online trainings for processor users. The online trainings were customized for different audiences and included a broader group of users than 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, and testing. In addition to supporting deliverables, staff successfully modernized and upgraded many applications out of Adobe Flash and into web-based technologies, however, this is an ongoing effort.

Business Intelligence and Data Warehouse (OceanAK)

Staff continue to migrate existing datasets into a single reporting and analysis system. This eliminates 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 research and test new features available for OceanAK, including processes for segregating data sets/subject areas. In addition, staff continued testing new embedded public facing analyses and data reports for implementation in over one hundred public facing analytics/dashboards posted on the department's website.

Information Services

The Information Services Section provides fishery information and data to department staff, other agencies, and the public; issues licenses for commercial fishery buyers, sellers, and exporters; and data captures/verifies commercial fishery buying and production data. 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

Recruitment and Retention Challenges

The division was able to maintain a remarkably high level of operational continuity in 2022 despite ongoing recruitment and retention challenges. This continuity can be attributed to passionate and dedicated staff, who tend to step up and do whatever it takes to keep projects and programs running to support commercial, subsistence, and personal use fisheries. However, the dedication of staff and their willingness to go above and beyond has hidden costs and limits and if extraordinary demands on staff are persistent and unchecked will lead to employee burnout and exacerbated retention problems. Therefore, if recruitment and retention challenges are not remedied, we expect detrimental impacts to operational continuity, including fisheries.

It is also worth noting that federal employees are slated to receive a 4.1% increase in base pay on January 1, 2023 (in contrast to 1% wage increases for Alaska Public Employee Association (APEA) employees in FY2023 and

FY2024). This difference in wage adjustments is significant as previous studies found that federal salaries for biologists and related positions were already 37% higher at the median level.

Statewide Aquaculture

The Aquaculture Section consists of three statewide functions: general research and educational 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 aquatic farm operation, aquatic farm hatchery, and aquatic farm related transport/acquisition permits. Beginning with FY2014, the aquaculture section has been reduced by four positions (50 percent), so even with significant efforts to streamline and prioritize, 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". Currently, the number of permitted aquatic farm/hatcheries is 86. During the 2022 application period, 22 new permit applications were received, which is the most received since 2005. In addition, HB41 was signed into law, which will require new regulations and permitting for invertebrate enhancement projects.

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 support is reduced the Division of Commercial Fisheries has been forced to end or curtail some fishery monitoring projects which has resulted in restrictions on the associated fisheries. Another emerging concern is the lack of aircraft available for charter in Bristol Bay and western Alaska. In most parts of the state, the department relies on chartered commercial aircraft to conduct salmon escapement surveys and support field operations. Lack of commercial aircraft available to charter has resulted in foregone harvest opportunity in these areas. A related concern is the division's aging research vessel fleet. In 2022, one of the division's research vessels had to be mothballed because of safety concerns stemming from lack of adequate maintenance. Loss of this vessel resulted in a negative impact on the division's ability to meet its sustained yield mandate. 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 directly impacts fishermen and communities.

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 crab 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, which 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 FY2023 are 59 percent of what was received in FY2011. Further, the steady increase in the indirect rate on federal grant personnel costs in recent years compounds the effects of reduced federal grant amounts: the indirect rate is 26.99% in FY2023, a substantial jump from FY2022 (24.82%) and FY2021 (22.76%). 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 2021/2022, 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 2021/2022. Similarly, federal research funding from Crab Rationalization (CR) is dependent on cost recovery fees collected from fishery quota shareholders. Due to the collapse and closure of prominent Bering Sea crab stocks, funding generated from CR is expected to be reduced by 50 percent after 2021/2022. 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 both seasonal and permanent staffing, which 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 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 ongoing modifications to the federal groundfish observer program, including expanded use of electronic monitoring, to improve quality and utility of observer data; evaluating management measures for chum salmon bycatch in the Bering Sea pollock trawl fishery and crab bycatch in Bering Sea groundfish fisheries; amending the federal Salmon Fishery Management Plan to manage federal waters of Cook Inlet; and implementing a rebuilding plan for Bering Sea snow crab. 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 six 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. One of the large research vessels, the R/V Pandalus, recently failed a stability test and equipment was determined compromised to the point that the vessel has been declared unseaworthy. While the vessel was approaching its life expectancy most of the problems are due to inadequate maintenance funding. At this point vessel replacement is the only option as repair would be prohibitively expensive and still leave a vessel inadequate for assessment programs and safety. The division must manage the maintenance of these vessels within existing funds and ensuring minimal impact to program operations. Safely operating and maintaining vessels and 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 at current funding levels. Charter aircraft and pilot availability has decreased while costs have been insufficient to maintain our vessels and aircraft. At times the department is unable to complete surveys or conduct field work because of the lack of available private sector pilots and aircraft.

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). 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. Staff continue to prepare for challenges related to migrating custom applications to the Microsoft Azure Cloud environment. Migrating applications to a cloud environment will lead to cost savings, however, these applications will need to be re-designed and re-written to function properly.

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 (OIT) personnel to manage and assist with the consolidated Oracle Business Intelligence infrastructure. Efforts to develop new security models for OceanAK were put on hold after Oracle was unable to provide a security solution for public facing reports and dashboards. The contract for the Oracle server-based environment is expiring in one and half years. Upon termination of the contract, staff will migrate all Oracle databases and analytics platforms to an Oracle cloud environment.

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. Staffing for the eLandings project has been a major challenge. The division has faced vacancies in both Analyst Programmer positions and have been unable to recruit a senior Analyst Programmer after five recruitments. The division has also faced turnover in the program management position, causing staff from the Information Services Section to cover knowledge and functional gap in addition to their normal duties. In-person trainings continued to be present challenges including a lack of crucial feedback from users and limited participation from users in remote locations.

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. Treaty obligations are fundamentally a federal responsibility and 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 federal 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 FY2023.

Significant Changes in Results to be Delivered in FY2024

Even without additional significant reductions in the division's budget, due to inflationary pressures flat funding continues to tighten the project budgets requiring the division to prioritize work and look for additional 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. Opportunities to make the division less dependent upon state general funds continue to be explored, and these alternatives may require obtaining receipt authority.

Fishery Disasters

In 2018, there was a significant decline in the Gulf of Alaska Pacific cod stock and 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) for administration of the federal grants. The federal grants were approved in August 2021 and PSMFC has completed the fund distribution process for direct payments to affected stakeholders. Both disaster spending plans include research monies to better understand the factors that led to the fisheries disasters and the process is ongoing for dispersal of those funds. 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 included an allocation of federal funds to the department to support a part-time Fishery Disaster Coordinator position, which was filled in July 2022 and is expected to help alleviate the demands on existing staff to support fishery disaster related workload.

A 2019 fishery disaster for Norton Sound red king crab was approved by the Secretary of Commerce in June 2021 and the Department of Commerce allocated \$1.43 million to this disaster. Department staff have developed a spend plan through a public process with input from affected stakeholders, which is expected to be submitted in the fall of 2022 to PSMFC.

Numerous fishery disaster requests were forwarded to the Secretary of Commerce in response to fishery declines and closures from 2018 through 2021. These disasters have been approved and federal funds have been allocated to mitigate the impacts of these disasters. The department is currently developing spend plans for the following disasters through a public process with input from affected stakeholders:

1. 2020 Norton Sound, Yukon River, Kuskokwim River, Chignik, and Southeast Alaska salmon fisheries, and 2021 Yukon River salmon fishery. Allocation: \$55,928,849.
2. 2018 Upper Cook Inlet East Side Set Net and 2020 Upper Cook Inlet salmon fisheries. Allocation: \$9,404,672.
3. 2018 and 2020 Copper River and Prince William Sound salmon fisheries. Allocation: \$34,326,265.
4. 2019/2020 Eastern Bering Sea Tanner crab fishery. Allocation: \$12,935,199.
5. 2020 Gulf of Alaska Pacific cod fishery. Allocation: \$17,772,540.

The State has requested additional fishery disasters in response to fishery declines and closures in 2021. The following requests have been forwarded to the Secretary of Commerce and are awaiting approval:

1. 2021/2022 Bristol Bay red king crab, Bering Sea snow crab, and Bering Sea Tanner crab.
2. 2021 Chignik salmon.
3. 2021 Kuskokwim River salmon.
4. 2021 Norton Sound salmon.
5. 2020 and 2021 Norton Sound red king crab

The Governor has received fishery disaster requests for the following fisheries in 2022; at the time of this report, these have not yet been forwarded to the Secretary of Commerce:

1. 2022 Yukon River salmon
2. 2022 Nelson Lagoon sockeye salmon
3. 2022/2023 Bristol Bay red king crab and Bering Sea snow crab

Contact Information

Contact: Sam Rabung, Director
Phone: (907) 465-6100
E-mail: samuel.rabung@alaska.gov

**Commercial Fisheries
RDU Financial Summary by Component**

All dollars shown in thousands

	FY2022 Actuals				FY2023 Management Plan				FY2024 Governor			
	UGF+DGF Funds	Other Funds	Federal Funds	Total Funds	UGF+DGF Funds	Other Funds	Federal Funds	Total Funds	UGF+DGF Funds	Other Funds	Federal Funds	Total Funds
Formula Expenditures None.												
Non-Formula Expenditures												
SE Region Fisheries Mgmt.	9,355.9	2,828.1	3,659.7	15,843.7	9,862.1	1,801.3	6,301.1	17,964.5	10,014.4	1,824.8	6,399.1	18,238.3
Central Region Fisheries Mgmt.	9,928.3	578.9	168.0	10,675.2	10,151.9	1,136.7	245.5	11,534.1	10,324.6	1,149.0	248.3	11,721.9
AYK Region Fisheries Mgmt.	7,211.3	243.2	1,862.9	9,317.4	7,743.5	668.3	2,661.9	11,073.7	8,155.9	673.0	2,685.4	11,514.3
Westward Region Fisheries Mgmt.	10,203.8	971.3	1,930.2	13,105.3	10,688.3	2,149.5	2,743.1	15,580.9	10,880.6	2,175.1	2,773.7	15,829.4
Statewide Fisheries Management	12,323.2	2,496.1	1,370.9	16,190.2	13,999.7	4,322.1	4,540.9	22,862.7	14,177.8	4,380.1	4,568.5	23,126.4
Commercial Fish Entry Commission	3,065.6	0.0	0.0	3,065.6	3,298.0	0.0	0.0	3,298.0	3,480.3	0.0	0.0	3,480.3
Totals	52,088.1	7,117.6	8,991.7	68,197.4	55,743.5	10,077.9	16,492.5	82,313.9	57,033.6	10,202.0	16,675.0	83,910.6

Commercial Fisheries
Summary of RDU Budget Changes by Component
From FY2023 Management Plan to FY2024 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>
FY2023 Management Plan	41,976.5	13,767.0	10,077.9	16,492.5	82,313.9
One-time items:					
-Central Region Fisheries Mgmt.	-800.0	0.0	0.0	0.0	-800.0
Adjustments which continue current level of service:					
-SE Region Fisheries Mgmt.	137.5	14.8	23.5	98.0	273.8
-Central Region Fisheries Mgmt.	160.5	12.2	12.3	2.8	187.8
-AYK Region Fisheries Mgmt.	122.0	5.4	4.7	23.5	155.6
-Westward Region Fisheries Mgmt.	1,155.6	-963.3	25.6	30.6	248.5
-Statewide Fisheries Management	148.8	29.3	58.0	27.6	263.7
-Commercial Fish Entry Commission	-48.6	230.9	0.0	0.0	182.3
Proposed budget increases:					
-Central Region Fisheries Mgmt.	800.0	0.0	0.0	0.0	800.0
-AYK Region Fisheries Mgmt.	285.0	0.0	0.0	0.0	285.0
FY2024 Governor	43,937.3	13,096.3	10,202.0	16,675.0	83,910.6