

A close-up photograph of several strips of dried salmon hanging from a metal rack. The salmon is a vibrant orange-red color and appears to be in the process of being dried. The background is dark and out of focus.

KUSKOKWIM RIVER INTER-TRIBAL FISH COMMISSION

ANNUAL REPORT 2020



MISSION

The Kuskokwim River Inter-Tribal Fish Commission aims to develop a meaningful role for Tribes and rural residents to engage in Kuskokwim fisheries management by rebuilding and sustainably managing healthy salmon and other fish populations within the Kuskokwim River watershed and the traditional territories of its Member Tribes. Its Fish Commissioners, Executive Council representatives, and In-Season Managers rely on Yup'ik and Athabascan Dene' Traditional Knowledge and sound salmon science to guide management actions and research and monitoring priorities.



VISION

The Commission envisions a bountiful Kuskokwim River watershed which provides for present and future customary and traditional subsistence harvests and uses of fish.



VALUES

At the heart of the Commission's work are the Indigenous values of:

- Unity, cooperation, and caring for relatives and members of one's community, including fish, wildlife, and plants;
- Sharing in times of abundance and scarcity;
- Respecting the fish, animals, waters, and lands by taking only what one needs and avoiding all waste; and
- Remembering the generations of Indigenous people who have successfully and sustainably stewarded the Kuskokwim region and the generations of Indigenous people who will continue to depend upon and steward the region into the future.

TABLE OF CONTENTS

Mission, Vision, and Values	1
Welcome from the Chair	3
Who We Are	5
Our History	9
The 2020 Season from the Executive Director	13
2020 Project Highlights	15
2020 Financial Highlights	21
Looking into 2021	22



Cover photo: Kairneq, a type of salmon jerky, hanging in the smokehouse (credit: Lisa Hupp).

Page 1, top to bottom: Silver or coho salmon ready for filleting (credit: Terese Schomogyi). Set net above McGrath (credit: Kevin Whitworth). Filleting fish at camp (credit: Terese Schomogyi).

Above: Boater on Straight Slough heading upriver (credit: Terese Schomogyi).



WELCOME FROM THE CHAIR

2020 was a standout year for the Kuskokwim River Inter-Tribal Fish Commission. It was my second year as Chair of the Commission, and I am proud to say my fellow Fish Commissioners, In-Season Managers, and Executive Council members worked hard to protect our fish and our ways of life along the Kuskokwim.

We began our year with the creation of our first ever Kuskokwim River Chinook Salmon Management Strategy, which outlined our Council members' and In-Season Managers' approach to the 2020 king salmon run. Since 2015, we have brought a precautionary approach to the management table. "Precautionary" means that we aim high to get as many fish as possible to their headwaters spawning grounds so that we have fish for future generations. With our Traditional Knowledge and the best salmon science, our Commission does all it can to account for fisheries uncertainties, protect spawning salmon, and provide opportunities for subsistence harvest.

I am made of fish, as are all Fish Commissioners. We want to be able to put fish away for our families – and we also want our children's grandchildren to be able to do the same. This is why our Commission takes a precautionary approach to managing Kuskokwim salmon: to keep our fish and traditions alive for generations to come.



*Drifting on the Kuskokwim
(credit: Janessa Esquible).*



*View from a Bethel area fish camp
(credit: Terese Schomogyi).*



Salmon slabs drying in the sun (credit: Mary Peltola).



Salmon hanging to dry at fish camp (credit: Terese Schomogyi).



Drying salmon slabs (credit: Shane McIntyre).

It was historic for our Commission to create its 2020 Management Strategy out of our precautionary management approach. When the king salmon did not return in 2020 as strongly as the forecast numbers predicted, our new Management Strategy was a key piece of our Commission's successful management of the run. The In-Season Managers, who worked so hard with the Executive Council members to craft and fine-tune the Management Strategy, stuck to conservative-based management as we realized the 2020 king salmon run was one of the weakest runs we had seen. They relied on this Management Strategy to both provide for some subsistence harvest and protect enough king salmon bound for their spawning grounds.

Despite the incorrect 2020 king salmon forecast and the global COVID-19 pandemic that has hurt our Kuskokwim families and communities and prevented our Commission from gathering in-person, I know we gave our full effort to our work as co-managers of our river this year. Although I am stepping down as Chair of the Commission in 2021, I am hopeful for the future of our organization. The many wise, knowledgeable Fish Commissioners who are dedicated to protecting Kuskokwim fish and food security will, I know, continue to lead this Commission as a powerful voice for the people of the Kuskokwim. This is our river, our people, and our voice, and we will use this voice to protect our fish and ways of life for as long as it takes.

Charlene Erik

Charlene Erik, Commission Chair 2019-2020

WHO WE ARE

The Kuskokwim River Inter-Tribal Fish Commission is a 638 Tribal Compact Status agency that unites the 33 Federally recognized Tribes of the Kuskokwim River drainage area as active managers of Kuskokwim River fisheries.

2020 EXECUTIVE COUNCIL The Executive Council is composed of seven Fish Commissioners, one elected from each of the seven Commission River Units. The Council Chairmanship position rotates every two years between the upper, middle, and lower river communities. The Executive Council also includes an Elder Advisor.



CHARLENE ERIK
Chair, Unit 7
Chefornak



GERALD KAMEROFF, JR.
Council Member, Unit 3
Upper Kalskag



MIKE WILLIAMS, SR.
Vice-Chair, Unit 4
Akiak



AVERY HOFFMAN
Council Member, Unit 5
Bethel



JONATHAN SAMUELSON
Secretary/Treasurer,
Unit 2
Georgetown



GOLGA FREDERICK
Council Member, Unit 6
Nunapitchuk



CLAUDE "JOE" PETRUSKA
Council Member, Unit 1
Nikolai



JAMES CHARLES
Elder Advisor
Tuntutuliak

2020 IN-SEASON MANAGERS

Each year, four In-Season Managers representing communities across the Kuskokwim River watershed are appointed by the entire Commission body. These In-Season Managers spend each salmon season at the management table negotiating and fighting for conservation-minded management and continued subsistence fishing priorities.



ROBERT LEKANDER
Bethel
Robert retired from his Commission position in May 2020.



JACQUELINE CLEVELAND
Quinhagak



JAMES NICORI
Kwethluk



MEGAN LEARY
Napaimute



The 33 Kuskokwim communities mapped in their River Units (credit: Commission archives).

2020 FISH COMMISSIONERS

Each Tribal or Village Council that has submitted an Authorizing Resolution with the Commission appoints a representative Fish Commissioner. Fish Commissioners are able to vote at Commission meetings.

UNIT 1

Jimmy Nikolai, *Telida*
Claude “Joe” Petruska, *Nikolai*
Betty Magnuson, *McGrath*
Robert Perkins, *Takotna*

UNIT 2

Thomas Willis, *Stony River*
Evan Bobby Jr., *Lime Village**
Ellen Yako, *Sleetmute*
Rebecca Wilmarth, *Red Devil**
Jonathan Samuelson, *Georgetown*
Tim Zakar, *Crooked Creek*

UNIT 3

Megan Leary, *Napaimute*
Tracy Simeon, *Chuathbaluk*
Nick Kameroff Jr., *Aniak*
Gerald Kameroff, *Upper Kalskag*
Walter Morgan Sr., *Lower Kalskag*

**Note: The communities of Lime Village, Red Devil, Oscarville, Atmautluak, Kongiganak, Kwigillingok, and Kipnuk do not currently have Authorizing Resolutions or voting Fish Commissioners with the Commission. The listed Fish Commissioners for these communities are non-voting members of the Commission only. Although the Commission does not officially represent these Tribes, it remains hopeful they will become part of its compact. Regardless of Tribal or racial affiliation, the Commission strives to improve the access of all Federally qualified subsistence users to healthy fish stocks on the Kuskokwim.*

UNIT 4

Noah Alexie, *Tuluksak*
Mike Williams, Sr., *Akiak*
Phillip Peter, Sr., *Akiachak*
James Nicori, *Kwethluk*

UNIT 5

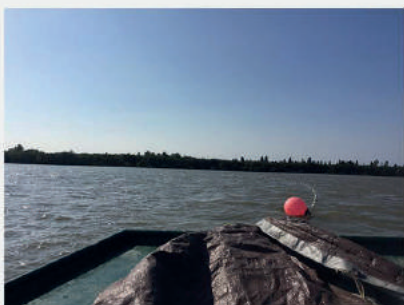
Avery Hoffman, *Bethel*

UNIT 6

Nicholai Steven, *Oscarville**
Chris Larson, *Napaskiak*
Ralph Nelson, *Napakiak*
Melvin Egoak, *Atmautluak**
Natalia Brink, *Kasigluk*

UNIT 7

Adolf Lupie, *Tuntutuliak*
Stella Alexie, *Eek*
Charlene Erik, *Chefornak*
Jimmy Paul, *Kipnuk**
Edward David, *Kongiganak**
Fred Phillip, *Kwigillingok**
Jacqueline Cleveland, *Quinhagak*



Drifting along the Kusko (credit left: Terese Schomogyi, credit right: Janessa Esquible).

COMMISSION STAFF

Mary Peltola, *Executive Director*

Kevin Whitworth, *Fisheries Biologist*

Casey Rangel, *Executive Administrator*

Alana Chronister, *2019-2020 Jesuit/AmeriCorps Volunteer, Communications Coordinator*

Terese Schomogyi, *2020-2021 Jesuit/AmeriCorps Volunteer, Communications Coordinator*

COMMISSION CONSULTANTS

Jim Simon, PhD, *Anthropologist*

Curry Cunningham, PhD, *Salmon Biometrician*

Joseph Spaeder, PhD, *Fisheries Biologist*

Bill Bechtol, PhD, *Salmon Biometrician*

COMMISSION PARTNERS

U.S. Fish and Wildlife Service, *Yukon Delta National Wildlife Refuge*

LaMont Albertson, *Community-Based Harvest Monitoring Program Manager*

Orrie Reich, *Community-Based Harvest Monitoring Program Assistant*

Karen Gillis, *Executive Director, Bering Sea Fishermen's Association*

Association of Village Council Presidents

Tanana Chiefs Conference

Orutsararmiut Native Council, *In-Season Harvest Monitoring Partner*

Organized Village of Kwethluk, *Kwethluk River Weir Partner*

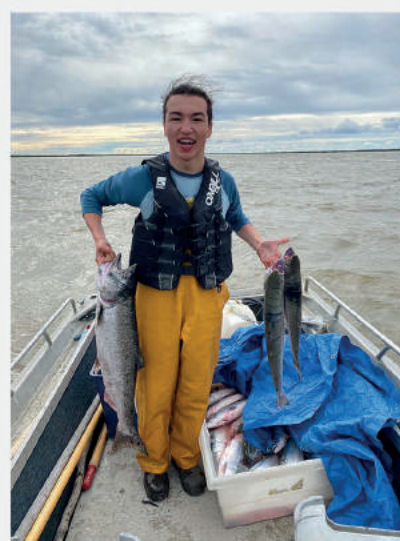
Takotna Village Council, *Takotna River Weir Partner*

Nikolai Edzeno' Tribal Council, *Takotna River Weir Partner*

Alaska Department of Fish & Game, *Takotna River Weir Partner*



Kevin Whitworth and his son Rohn with Rohn's first sheefish catch (credit: Kevin Whitworth).



Van Kapsner with his harvest (credit: Mary Peltola).

OUR HISTORY

The history of fishing on the Kuskokwim begins before 1980, of course, and long before the Alaska Native Claims Settlement Act (ANCSA) of 1971 abolished aboriginal fishing and hunting rights on these waters and lands. Kuskokwim people have always been and will always be in relationship with the salmon of this river.

Throughout this entire timeline, the Yup'ik and Athabascan Dene' peoples of the Kuskokwim have been tending to the lands, river, and fish, animal, and plant life of this region. Their stewardship is the beginning, present, and future of the work of our Commission.

In 2000, subsistence Chinook salmon fishing was restricted on the Kuskokwim for the first time. Restrictions on subsistence fishing continued in subsequent years as returns continued at numbers lower than historical averages (except for 2005, which showed record high numbers of Chinook salmon escapements).

In 2010, the return of Chinook salmon resulted in one of the lowest numbers of fish spawning on record. However, unlike in past seasons with poor Chinook salmon numbers, the following years did not show rebounds in Chinook salmon returns. 2010 thus marked a turning point in severely Chinook salmon population declines on the Kuskokwim as well as across the entire state of Alaska.



In **December of 1980**, the Alaska National Interest Lands Conservation Act (ANILCA) was passed into Federal law. Heralded by environmental conservation advocates as landmark legislation, ANILCA was also significant for Alaska Native and rural Alaskan communities. Under Title VIII of ANILCA, the customary and traditional subsistence uses of fish, game, and wildlife by Alaska Native and rural Alaskan communities is protected. The Federal government consequently has a legal obligation to manage fish, game, and wildlife populations according to both conservation and subsistence harvest objectives.



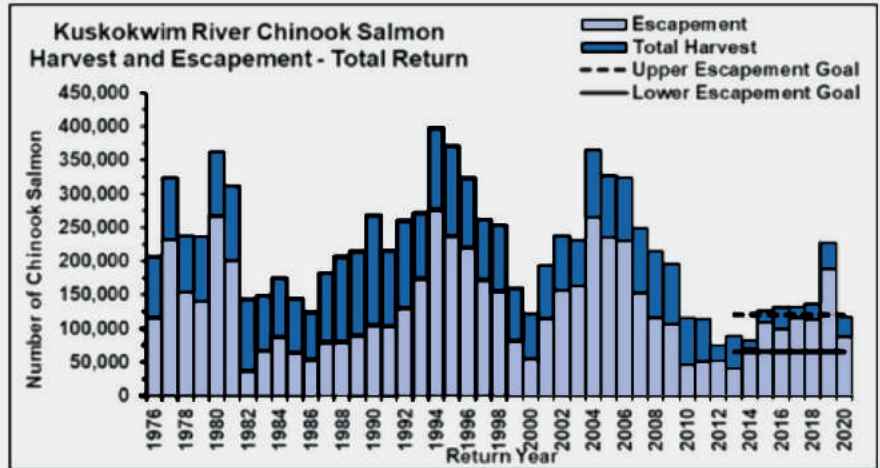
In **1993**, the Federal government formally recognized 229 Alaska Native Tribes, including the 33 Tribes of the Kuskokwim River watershed.

During the **late 1990s and early 2000s**, and most recently in 2015, the State of Alaska and Federal government repeatedly declared economic disasters on the Kuskokwim River because of low returns of Chinook and chum salmon.



*Hauling in red or sockeye salmon
(credit: Mary Peltola).*

In **March of 2012**, the Association of Village Council Presidents (AVCP) hosted a special convention called *State of our Salmon*. This “Salmon Summit” intended to bring together Tribal representatives from the Kuskokwim and Yukon Rivers, State and Federal agencies, and western science researchers to discuss declining Chinook salmon stocks in the Yukon-Kuskokwim region and Tribal engagement in fisheries management.



Chinook salmon returns to the Kuskokwim River, 1976 to 2020. In 2010, total fish returns dramatically declined, and, unlike in past drops in fish returns, Chinook populations have not recovered in the decade since 2010 (credit: ADF&G).

In 2014, under then-Secretary of Interior Michael Connors, USFWS addressed the Alaska Federation of Natives with an invitation to develop a co-management pilot program, which inspired Kuskokwim communities to organize such a management body.

The **2012** Chinook salmon run was the smallest run on record, leading the Alaska Department of Fish and Game (ADF&G) to implement 12 consecutive days of subsistence fishing closures. However, local and Tribal communities, concerned about feeding their families after a long winter, defied state restrictions and fished in protest of the closures. Law enforcement personnel from the Alaska State Troopers and the U.S. Fish and Wildlife Service (USFWS) cited 61 people for fishing, seizing their nets and 1,100 pounds of fish.

In **2015**, after several years of discussions, the 33 Federally recognized Tribes of the Kuskokwim River joined together to create their own Tribally representative fishery management body under Title VIII of ANILCA. On **May 5**, 28 Tribally elected Commissioners gathered in Bethel to adopt a constitution and bylaws of the Kuskokwim River Inter-Tribal Fish Commission, and with the election and appointment of its first Executive Council and In-Season Managers, the Commission was born. The Commission operated as an inter-Tribal fishery management agency for the first time in 2015.

In **2013**, Chinook salmon returns were nearly record lows. ADF&G adopted a Kuskokwim River drainage-wide sustainable escapement goal range of 65,000-120,000 Chinook salmon. However, adherence to an overly optimistic forecast throughout the majority of the season led ADF&G managers to allow for unrestricted subsistence harvest that resulted in an over 50% exploitation rate and nearly the lowest number of Chinook spawners on record to reach the spawning grounds, estimated at 41,027 fish. While not the fault of subsistence fishing families, this example of collective overharvest along the entire river continues to remind Fish Commissioners of the importance of balancing salmon subsistence fishing needs with ensuring enough fish reach the spawning grounds to rebuild the runs.

Below, top: Fish Commissioners, staff, and partners gathered for the 2018 Annual Meeting.

Below, bottom: Executive Council members, In-Season Managers, and staff visited the Northwest Indian Fisheries Commission – a model for this Commission on the Kuskokwim – in 2019 (credit both: Commission archives).

In 2016, after a successful year managing the Kuskokwim River Chinook salmon fishery with State and Federal agencies, USFWS signed a memorandum of understanding (MOU) with the Commission. This MOU established the co-management partnership between the Commission and USFWS within the boundaries of the Yukon Delta National Wildlife Refuge, a partnership which has continued to grow and evolve to this day. The Commission was also incorporated by AVCP as a non-profit organization in 2016.

In 2017, the Executive Council and In-Season Managers of the Commission adopted a Chinook salmon escapement goal target of 110,000 fish, which falls within the higher end of ADF&G's drainage-wide escapement goal range in order to implement a precautionary management strategy aimed at protecting stock diversity and rebuilding the Kuskokwim River Chinook salmon run. In 2017, Bering Sea Fishermen's Association (BSFA) became the Commission's fiscal agent. The Commission began partnering with BSFA during this time to implement the existing in-season Community-Based Harvest Monitoring program and operate the Takotna River weir.



2019 saw some of the highest numbers of Chinook salmon returns and harvests in the last decade, but these numbers still fell below historic numbers on the Kuskokwim. One hundred thousand more fish returned than ADF&G had predicted in their pre-season forecast. Additionally, the fish that returned were about 20 pounds smaller than historical averages, meaning fishers need greater numbers of fish per in order to meet their customary harvest needs. However, Commission In-Season Managers remained committed to their strategy of precautionary management to rebuild the salmon run and ensure future generations can continue to depend on Chinook salmon.



The Commission held its Executive Council meetings virtually in 2020 due to the COVID-19 pandemic (credit: Commission archives).

In 2020, the Commission’s Executive Council representatives and In-Season Managers adopted the Commission’s first Kuskokwim River Chinook Salmon Management and Harvest Strategy. When the Chinook salmon failed to materialize with 100,000 fewer Chinook salmon returning than ADF&G had predicted, the Commission’s In-Season Managers relied on their Traditional Knowledge and a precautionary approach to management informed by the best available salmon science embedded in the 2020 Management Strategy to guide their in-season management decisions. Despite overly optimistic forecasts used by both the State and Federal agencies, the Commission’s Management Strategy ensured that sufficient numbers of Chinook salmon (around 88,000 fish) reached the spawning grounds to rebuild the runs for the future while providing for as much subsistence harvest as possible.

In 2020, shut-downs from the global COVID-19 pandemic forced the Commission to postpone its Annual Meeting and Elections to 2021. As a result, the 2019 Executive Council members and In-Season Managers remained the same for the 2020 season.

In 2020, the Commission received Tribal Compact Status under Public Law 93-638, transforming it into an independent inter-Tribal agency. Because of this status, BSFA is no longer the fiscal agent and AVCP is no longer the fiscal sponsor of the Commission.



THE 2020 SEASON FROM THE EXECUTIVE DIRECTOR

The Kuskokwim River is regarded as having supported the largest subsistence salmon fishery in the world, in both the number of people who harvest fish and in the number of salmon harvested. Based on household surveys conducted in the early 2000s by the State of Alaska's Division of Subsistence and in cooperation with Tribes, Kuskokwim people harvest over 360 pounds per person of wild food for human consumption. Fish comprise up to 85% of the total poundage of harvests, with salmon contributing up to 53% of that total.

However, Chinook salmon statewide are clearly facing threats and diminished productivity. Many Alaskan watersheds, including the Kuskokwim, have witnessed the same meager returns. The Chinook salmon on the Kuskokwim River are, on average, one third of their historical sizes, which is in keeping with global trends.

Like nearly everyone raised on the Kuskokwim, *I am made of fish*. Not only do I crave eating fish year-round, but by May and June, I physically feel the need to catch and process fish. We all feel this. As a Bethel Tribal member told me, "Fishing is in my blood and I need to fish when there are fish in the river." Although my body and instincts tell me it is time to catch and put away fish in June, I have had to adjust my mindset because there are fewer fish in our river. I acknowledge that Chinook salmon are in distress and my family must sacrifice putting away dozens of large king salmon. Collectively, this sacrifice is being made to work toward rebuilding our Chinook salmon runs. This is so much easier said than done. Moist weather and blue flies make putting red, chum and silver salmon away so much more challenging. But the alternative – harvesting at historic levels – is not sustainable.



*Mary Peltola cuts fish at fish camp
(credit: Terese Schomogyi).*

Although our recent ten-year average harvest of Chinook salmon is in the range of 20,000-40,000 fish, the historical average harvest was 85,500 Chinook salmon per year, with each fish averaging about 33 pounds each. So, in numbers of fish harvested and certainly in pounds of Chinook salmon harvested, we are making a big sacrifice to our fish racks. Historic harvests of 85,500 Chinook salmon year over year could be catastrophic when the returns since 2007 have been in the range of 100,000-120,000 fish. While everyone mourns the loss of our once abundant runs and hates the fishing restrictions, harvesting at historic levels is not realistic either. As Jonathan Samuelson, the Georgetown Fish Commissioner, has said, "We know we don't take more than we need. But maybe we need more than is available right now." We are all sacrificing, and the alternative would be devastating.



Left: Job Nelson harvests fish at his set net. Right: Nora Nelson out for a drift (credit both: Mary Peltola).

The Commission's Executive Council members and In-Season Managers are true subject matter experts on this river. They are, as all Fish Commissioners are, homegrown to the Kuskokwim. They are all made of fish and are deeply motivated by the desire that all future generations born to the Kuskokwim will be made of salmon as well. The Traditional Knowledge they have brought to the management table has filled gaps in the western science forecasting and discerning run timing. In 2018, fishing time increased because of Traditional Knowledge related to run timing. In 2020, Traditional Knowledge indicated Fish Commission managers should "tap the breaks" on a plan to fish for Chinook salmon every other day for 24 hours, which meant the Kuskokwim was closer to meeting the spawner goal, though it was well under our target of 110,000 fish.

The 2020 Kuskokwim River Chinook salmon were fortunate that the Kuskokwim River Inter-Tribal Fish Commission had the perspective of our 10,000-year relationship with Kuskokwim River Chinook salmon. The Commission's In-Season Managers participated as co-managers with the U.S. Fish and Wildlife Service (USFWS) the previous five summers (2015-2019) and saw 13 consecutive depressed Chinook salmon returns (2007-2019) with fish that were fewer in numbers and smaller in size. They regarded the State of Alaska Department of Fish and Game's (ADF&G) 2020 pre-season forecast of 220,000 Chinook salmon with either neutrality or doubt and worked with the Federal Subsistence Program to help co-manage the Chinook run to responsibly harvest a portion of the run. They also stayed true to the Management Strategy and Harvest Strategy they developed in March and April, both of which emphasize precautionary management and attaining a decent Chinook salmon spawner goal.

I do not love restrictions or being in a re-building phase, but I would hate an alternative that would put our kings at risk of returning in smaller sizes and fewer numbers. Kuskokwim subsistence families have carried the brunt of conservation, which has been a huge sacrifice, but there is no one else to carry this burden; without commercial or sport users, it falls on us. It is an honor to work with so many people committed to preserving our way of life and our relationship with salmon. Working on salmon issues has driven home the point that no one is coming to save us; only we can prioritize protecting and building our Chinook salmon stocks. And this is true self determination.

Mary Peltola

Mary Peltola, Commission Executive Director

2020 PROJECT HIGHLIGHTS

2020 KUSKOKWIM RIVER CHINOOK SALMON MANAGEMENT STRATEGY

Throughout the winter of 2019 and 2020, the Executive Council representatives and In-Season Managers worked with the Commission's staff, consultants, and other scientific experts to develop and adopt the Commission's first Kuskokwim River Chinook Salmon Management Strategy prior to the salmon fishing season. This Management Strategy defined the objectives, methods, and goals of Commission management to guide the In-Season Managers' decisions regarding the 2020 Chinook salmon run.

Part of the rationale prompting the creation of the Management Strategy is the lack of in-season run assessment data. Until mid-June – when the Chinook salmon run is nearly, if not already, complete – In-Season Managers from the Commission, U.S. Fish and Wildlife Service (USFWS), and Alaska Department of Fish & Game (ADF&G) only have uncertain and unreliable pre-season forecasts and limited in-season data to inform their management decisions. Having a set Management Strategy in place as the Chinook salmon season started guided the Commission In-Season Managers to address forecast uncertainty and make wise management decisions in spite of it.

Key goals from the Commission's 2020 Management Strategy include:

- To rebuild and sustainably manage healthy Chinook salmon populations within the Kuskokwim River watershed by taking a conservative approach to management and accounting for uncertainty.
- To integrate meaningful local and Traditional Knowledge into the fisheries management decision-making process, including through weekly toll-free teleconference calls with the public during the Chinook salmon season.



Josie Roczicka hanging fish (credit: Mary Peltola).



Chinook (king) salmon (credit: Shane McIntyre).



Stringing fish for drying (credit: Mary Peltola).

- To set a precautionary Chinook salmon escapement target range of 110,000-120,000 fish, which is at the upper end of ADF&G's drainage-wide escapement goal range, to account for forecast uncertainty and decreasing sizes of returning salmon.
- To provide for the continuation of customary and traditional subsistence harvest of Chinook salmon by Tribal citizens and rural residents of the watershed by announcing harvest opportunities throughout the Chinook salmon season.
- To develop a unified fisheries management approach for the entire Kuskokwim River watershed that prioritizes conservation and subsistence uses, specifically under the MOU with USFWS.
- To include lower, middle, and upper river Tribes in all decision making processes.

The 2020 Chinook Salmon Management Strategy also addresses declines in sizes of returning Chinook salmon, implicating drops in reproductive potential and caloric content; threats to local food security with unrecovered Chinook salmon populations; and methods to communicate with local Tribes about avoiding collective, unintended overharvest to provide for equitable and sustainable harvests across the watershed, from mouth to headwaters.



Canning salmon (credit: Mary Peltola).



Drifting on a sunny day (credit: Janessa Esquible).

2020 KUSKOKWIM RIVER CHINOOK SALMON HARVEST STRATEGY

The 2020 Kuskokwim River Chinook Salmon Harvest Strategy developed the goals and principles of the Management Strategy into detailed approaches for the In-Season Managers to consider before deciding whether or not to open the river for fishing. It consisted of a stepwise process that divided the Chinook salmon season into four time periods: the pre-season period (before June 1), early season set net opportunity period (June 1 - June 11), mid-season drift and set net opportunities (June 12 - June 20), and late season harvest (June 21 - 30).

As the season picks up, more information about how the run is doing becomes available. This includes not only the biological information that slowly trickles in from Bethel Test Fishery and the new Bethel sonar, but especially the information received from fishing families themselves. All of this information is critical for in-season management. During each of the four time periods, the In-Season Managers use their local and Traditional Knowledge, information obtained from local fishermen throughout the river, and biological information to help them to understand what kind of Chinook salmon run is likely returning to the

river. While perhaps frustrating to some fishing families, this stepwise approach helps to monitor, assess, and manage the Chinook salmon as it is happening. In 2020, based upon lessons they learned in previous years, the In-Season Managers found this approach preferable to announcing a number of specific gear and time opportunities without any in-season data before the season began.

The Commission intends to continue the process of creating such Management and Harvest Strategies each year to assist the In-Season Managers in making their decisions in the best interests of protecting both the fish and the Kuskokwim River fishing ways of life by combining local and Traditional Knowledge with the best available fisheries science.

IN-SEASON MANAGEMENT

With the Chinook Salmon Management Strategy and Chinook Salmon Harvest Strategy in their hands, the Commission In-Season Managers – James Nicori of Kwethluk, Jacki Cleveland of Quinhagak, and Megan Leary of Napaimute – were able to navigate the uncertainty of the 2020 preseason Chinook salmon forecasts provided by ADF&G. These forecasts, based solely on total returns in 2019, predicted a midpoint of 227,000 Chinook salmon would return to the Kuskokwim. By the end of the season, however, just over 116,000 Chinook salmon returned, nearly half as few fish as anticipated.

Due to the high uncertainty and low reliability of ADF&G’s current prior year forecast method, James, Jacki, and Megan wisely focused on in-season indicators of run strength and abundance. This allowed them to make the most prudent and conservation-based management decisions they could in order to balance conservation with pressing subsistence needs in the watershed. When in-season data from the Bethel sonar and Bethel Test Fishery began to show that the Chinook salmon run was not coming in as expected – that it was not just a late run, but one of the poorest runs on record – these In-Season Managers took action. The two Strategies they helped develop guided them to successfully advocate for a total of four 12-hour subsistence harvest opportunities, which allowed for both the conservation of 88,000 critically important Chinook salmon spawners and a drainage-wide subsistence harvests preliminarily estimated at 35,847 Chinook salmon. This was the second largest Chinook salmon subsistence harvest since 2013, when collective overharvest occurred (note: 2019 was the largest harvest since 2013 at 37,941 fish).



– that it was not just a late run, but one of the poorest runs on record – these In-Season Managers took action. The two Strategies they helped develop guided them to successfully advocate for a total of four 12-hour subsistence harvest opportunities, which allowed for both the conservation of 88,000 critically important Chinook salmon spawners and a drainage-wide subsistence harvests preliminarily estimated at 35,847 Chinook salmon. This was the second largest Chinook salmon subsistence harvest since 2013, when collective overharvest occurred (note: 2019 was the largest harvest since 2013 at 37,941 fish).

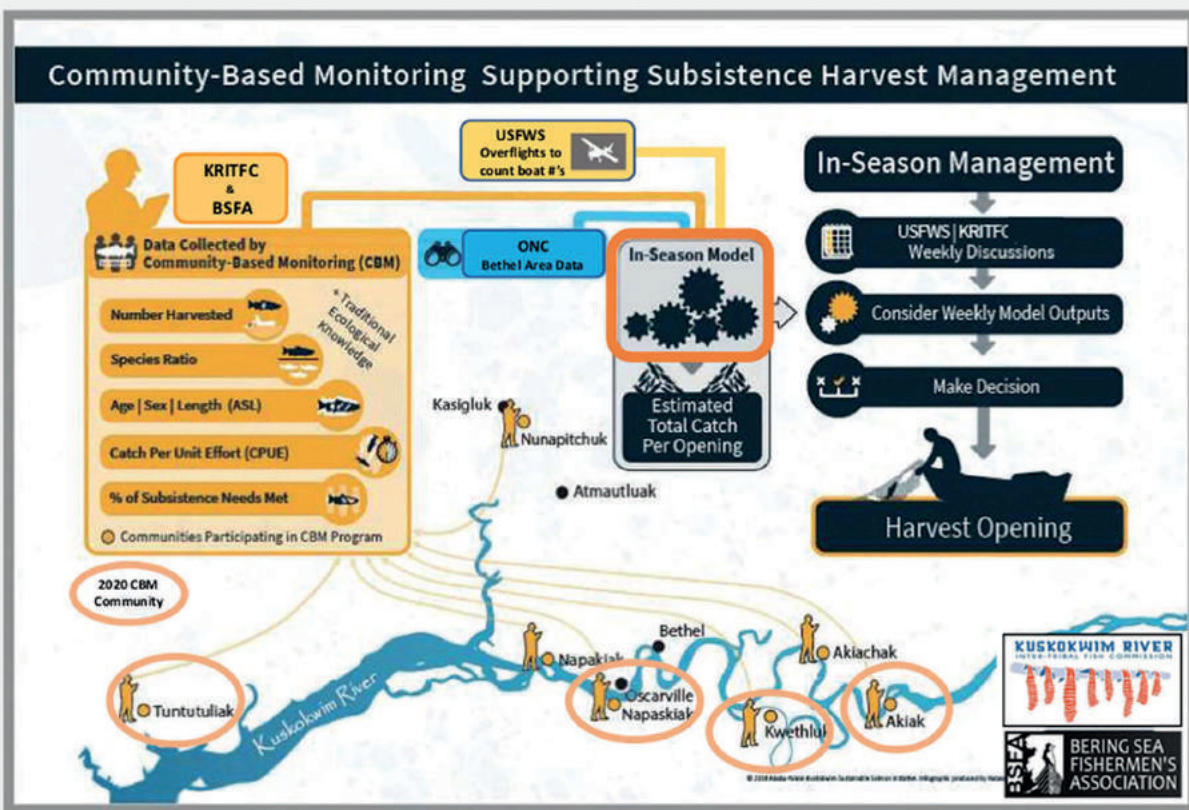
In-Season Managers Megan Leary and Jacki Cleveland and Executive Director Mary Peltola at a 2019 management meeting (credit: Mary Peltola).

Though these numbers fell short of the Commission’s escapement target range, long-term escapement averages in Kuskokwim tributaries, and the number of fish needed for subsistence survival, James, Jacki, and Megan bravely managed the weak 2020 Chinook salmon run to the best of their ability. Their advocacy for a conservative approach to management avoided what would have been a Chinook salmon conservation disaster had Federal managers been allowed to implement their preseason management plan.

The Commission expresses sincere gratitude for the dedication, emotions, and perseverance that James, Jacki, and Megan displayed during in-season management in 2020. The sacrifice these In-Season Managers and all the families along the Kuskokwim River made for the preservation of salmon fishing cannot be understated. It is tremendously difficult to not fish when there are fish in the river, but the deepest hope of the Commission is that there will be abundant and sustainable customary and traditional harvests for future generations of Kuskokwim fishers because of the sacrifices we are making today.

COMMUNITY-BASED HARVEST MONITORING

The Community-Based Harvest Monitoring (CBHM) program, established by Bering Sea Fishermen’s Association (BSFA) in 2017, employs local community members to work as Harvest Monitors who collect in-season harvest data used to develop total harvest estimates for a large portion of the lower river. These estimates in turn directly inform the in-season management decisions of the Commission, USFWS, ADF&G, and other management stakeholders (see the graphic below). In 2020, for the fourth season, the Commission partnered with BSFA and participating Tribal and Village Councils to implement the CBHM program.



A graphic of the CBHM program that describes how in-season harvest data is collected by Harvest Monitors and used by the Commission and USFWS to make management decisions. In 2020, the CBHM program was carried out in Akiak, Kwethluk, Napaskiak, and Tuntutuliak (credit: BSFA).

Harvest estimates developed directly from the information shared by fishing families inform in-season management decisions in various ways. One way is by helping managers anticipate how many fish might be harvested in a future subsistence fishing opportunity. For example, USFWS aerial boat counts, integral to this program, also help In-Season Managers predict how much fishing effort there might be during future openings. The In-Season Manager team has become successful at predicting how many boats will participate in a future opening based on how many boats were counted previously, as they understand that people fish only enough to ensure they can process all the fish and avoid spoilage. These harvest estimates also can help In-Season Managers evaluate the status of the run, where the fish are located along the river, or whether there are simply too few fish in the river.

The data collected by Harvest Monitors through interviews following subsistence fishing opportunities includes age, sex, and length data of Chinook salmon as well as harvest and effort data of community fishers. In addition to collecting data, community Harvest Monitors serve as conduits between fishery management agencies and local communities by communicating information about management goals and helping develop local capacity to engage in fishery management.

The in-season harvest data collected by community Harvest Monitors, coupled with the Traditional Knowledge of the In-Season Managers and Executive Council members, guided decision making when data from Bethel sonar and Bethel Test Fishery were not yet robust enough to be reliable. The harvest estimates provided by CBHM data directed Commission, Federal, and State managers to provide for as much subsistence harvest as possible, avoid collective overharvest of Chinook salmon across the watershed, and aim for adequate Chinook salmon spawner escapement.

The Commission extends its deep thanks and appreciation to the Tribal members of the four lower Kuskokwim River communities of Akiak, Kwethluk, Napaskiak, and Tuntutuliak. We also gratefully acknowledge the hard work of our six Harvest Monitors: Corey Jasper (Akiak), Colleen Andrew (Kwethluk), Emmitt Nicori (Kwethluk), Wesley Nicholai (Napaskiak), Alexander Beaver (Napaskiak), and Brianna Dock (Tuntutuliak). Combining CBHM data from the four villages with in-season harvest data collected by Orutsararmiut Native Council (ONC) in Bethel and aerial boat counts from USFWS aerial surveys provided fisheries managers from the Commission and USFWS with invaluable information about the run as it progressed. This in-season harvest information was critical for the Commission In-Season Managers to avoid a Chinook salmon conservation disaster in 2020.

WEIR OPERATION AND HEAT STRESS MONITORING

A weir has been operated on the Takotna River for 18 years (2000-2013 and 2017-2020), providing the only long-term data set for upper Kuskokwim Chinook and chum salmon spawning and escapement. Since 2017, the Commission, in partnership with the Takotna Tribal Council, Nikolai Edzeno' Village Council, BSFA, and ADF&G, has operated this weir, located 2 miles upstream of Takotna. Each year, local community members from Takotna are recruited and hired to monitor weir operations, helping to develop local economic prospects and build capacity for involvement in fisheries management.

The Takotna River weir historically operates between July 1 and August 10. In 2020, due to inter-village travel restrictions from the COVID-19 pandemic and unusually high waters on the Takotna River, installation and operation of the weir (which typically begins in late June) was delayed until July 12. Continued high waters did not allow weir counts from July 19 to July 23 and July 30.

The Commission wishes to thank the 2020 Takotna River weir crew members: Robert Perkins, Manuel Martinez, Richard Wachter, Joe Martinez, John Lindemann, and Michael Dopler. This crew counted Chinook and chum salmon spawner escapement into these important headwaters spawning grounds; collected age, sex, and length data from some of the Chinook salmon that passed the weir; and gathered environmental data like water and air temperature at the weir. The Takotna River crew estimated that 353 Chinook salmon and 1,000 chum salmon passed the weir during its operation.

In 2020, the crew also collected muscle samples from 40 Chinook salmon to test for heat stress in the fish. Fish samples collected through this non-lethal technique provide a way to analyze how river water temperatures – which are rising with climate change – affect Chinook salmon health and productivity. These samples have not yet been processed, but other data the weir crew collected indicate that there was minimal heat stress in Chinook salmon in the Takotna and upper Kuskokwim Rivers in 2020.

The Commission, in partnership with the Organized Village of Kwethluk (OVK) and USFWS, also installs and operates a weir on the Kwethluk River, located about 35 miles upstream of Kwethluk. The Kwethluk River weir monitors Chinook salmon on the second most productive tributary of the Kuskokwim River watershed. This long-term salmon assessment project provides critical information to the drainage-wide annual run abundance and provides an important opportunity for capacity building within the community of Kwethluk.

Operation of the Kwethluk River weir in 2020 did not occur because the COVID-19 pandemic prevented our partners from performing field work. The Commission is looking forward to collaborating with OVK and USFWS to continue this important Chinook salmon monitoring project in 2021.



The Takotna River weir, located 2 miles from the village of Takotna.



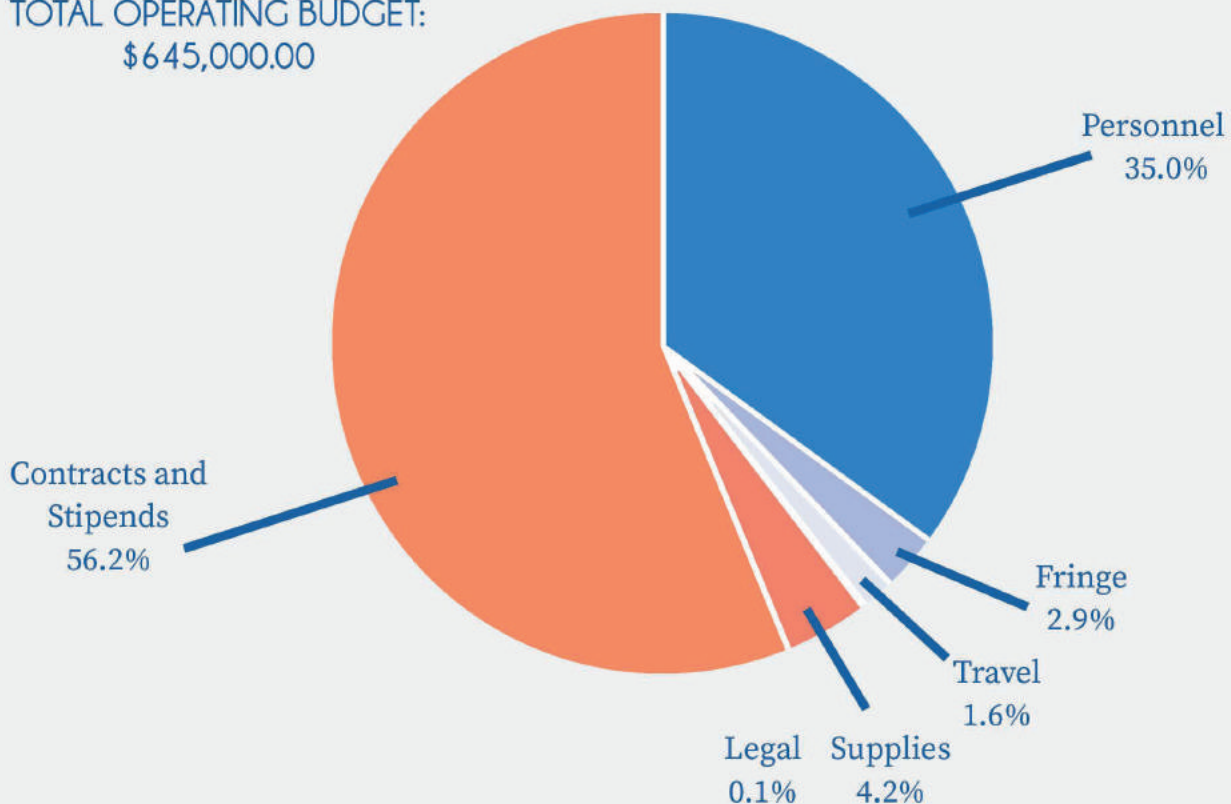
Brothers Scott and Shawn Gover were two Takotna River weir technicians in 2017.



An aerial view of the Takotna River weir (credit all weir photos: Kevin Whitworth).

2020 FINANCIAL HIGHLIGHTS

TOTAL OPERATING BUDGET:
\$645,000.00



In 2020, the Commission reached a financial milestone by securing Tribal Compact Status through the Bureau of Indian Affairs under Public Law 93-638, which gives Tribes and Tribal agencies increased management of Federal programs that affect Tribal members, resources, and governments. Achieving Tribal Compact Status grants the Commission financial independence and allows it to continue its work to protect Kuskokwim fisheries and subsistence ways of life now and into the future.



A delightful snack of roe and crackers with cream cheese (credit: Shane McIntyre).



Dry fish ready for eating (credit: Janessa Esquible).



Jarred roe looks so tasty (credit: Shane McIntyre)!



Pulling in the drift net (credit: Commission archives).

LOOKING INTO 2021

The Commission's Executive Council members, In-Season Managers, Fish Commissioners, and staff are looking into 2021, a year in which the Commission hopes to:

- Hold its 2021 Annual Meeting and Fish Commissioner Elections on April 7 and 8, 2021. Because of the ongoing COVID-19 pandemic, the 2021 Annual Meeting will be held via teleconference.
- Welcome in the 8 Tribes that have not yet submitted Authorizing Resolutions so that the Commission can fully represent and receive input from the 33 communities of the Kuskokwim.
- Encourage participation in the Commission's toll-free weekly river-wide teleconferences, held every Monday during Chinook salmon season. These teleconferences are a space to share and listen to fishing information, harvest and closure updates, and knowledge. Public voices are wanted; to call in, dial the toll-free Zoom number (833) 548-0282 and enter the Meeting ID 569 490 3415 and passcode 390829.
- Partner with USFWS staff at the Yukon Delta National Wildlife Refuge as co-managers, as per the 2016 MOU. The Commission is eager to work with Boyd Blihovde, the new Refuge Manager, and Spencer Rear-don and Aaron Moses, the local staff on his fisheries management team, to develop and implement collaborative 2021 Salmon Management and Harvest Strategies.
- Oversee various in-season fisheries projects, especially operation of the Takotna River weir, Kwethluk River weir, and the CBHM program.

KUSKOKWIM RIVER

INTER-TRIBAL FISH COMMISSION



PO BOX 190, BETHEL, AK 99559

821 N SUITE 103, ANCHORAGE, AK 99501

INFO@KRITFC.ORG | 907-545-7388

 KUSKOSALMON.ORG

 @KUSKOSALMON

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