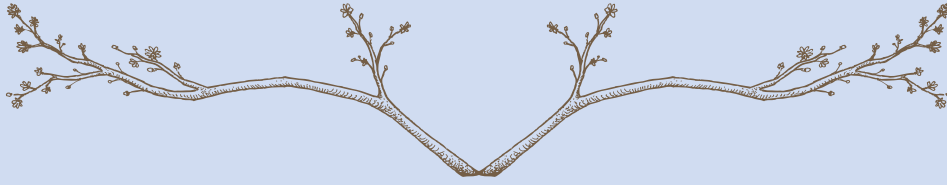


YUKON RIVER INTER-TRIBAL WATERSHED COUNCIL

E-CURRENTS



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ANNOUNCEMENTS

From YRITWC Staff

April 22nd is Earth Day! - Earth Day is coming up on April 22nd and this year marks its 50th anniversary – even more reason to celebrate! This year the theme that is being highlighted is climate action. This theme is one that truly speaks to Alaskans as climate change has been so prevalent to us, from forest fires to temperature records to animal die offs and much more. Help youth find their voice and speak out about these changes, be sure to celebrate Earth Day in your community!

YRITWC'S ION Workshop for water quality, active layer, and snow measurement training in Carcross, Yukon has been CANCELLED due to mandates and concerns related to COVID-19. Please stay tuned for future training updates. Thank you for your understanding and stay safe.

YRITWC's Brownfield Department would like to inform those who have missed the deadline for the Brownfield Leadership Group that we are still currently accepting applications. They are available through Tasha Mockta at tmockta@yritwc.org If you have any questions feel free to contact Birgit Hagedorn at bhagedorn@yritwc.org

Have News to Share?

If you have an announcement, newsworthy story, or would just like to update everyone on your recent projects, please consider submitting content to our next newsletter!

If interested, please contact Tasha Mockta at (907)258-3337 or by email tmockta@yritwc.org

Letter from the Alaska Executive Director

by Theresa Clark

I hope this newsletter finds everyone safe, sound and healthy as we come upon the spring of 2020. We here at the Yukon River Inter-tribal Watershed Council office are practicing healthy safe measures, practicing social distancing and sanitizing. The staff of the YRITWC office are working from home but are available to contact through mail and telephone. Currently, we are keeping the office open and only one staff person is there at a time. Please feel free to email or contact the office. We will return calls and emails.

I have been on board for three months now. It has been a very busy time for me, getting familiarized with operations of the organization. The YRITWC financial books have been audited and will be reviewed and accepted at the next council meeting. The scheduled Executive Council meeting has been postponed for the interim of the current pandemic taking place globally.

Staff have been very busy responding to grant opportunities for the Fiscal Year 2021 with the Bureau of Indian Affairs, the US Environmental Protection Agency and National Science Foundation. So far, we have responded to at least six opportunities with another opportunity pursued through the EPA Brownfield program. YRITWC continues to conduct water samples, climate warming research, drinking water program technical assistance and training opportunities. Once travel restrictions are relaxed and it is safe to travel, we plan to resume these programs.

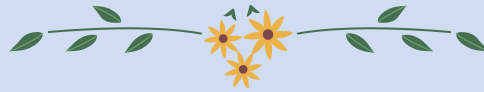
Floyd Green, the YRITWC Brownfields Program Coordinator, has accepted a position with another organization. We will miss him and wish him well with his new endeavors.

Again, everyone, stay safe and healthy. Practice social distancing. Take care of each other and our precious elders. I look forward to meeting Yukon Village residents and leaders, hopefully not too far off in the future. Theresa



A Yukon River Watershed Diagram

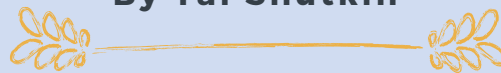
By Tal Shutkin



A watershed is an area of land that drains into a specific body of water such as a river, stream, or lake. The area of a watershed includes the land, plants, animals, communities, and people, along with their stories. It is a concept we can use to understand the connectivity of all actions across a landscape. The Yukon River watershed (YRW), sometimes called the “Yukon River basin”, begins in the mountains above the headwaters lakes of Canada, where glacial melt water starts its journey to the Bering Sea. Any rain or snow that falls inside the watershed eventually makes its way to the river and joins the procession to the Yukon delta. Likewise, the plants, animals, and people living on this land are part of the watershed. Recognizing that most educational tools designed to illustrate the concept of a watershed cater more towards temperate climates and densely populated regions, the Yukon River Inter-Tribal Watershed Council IGAP program decided that we needed a uniquely northern watershed diagram. Though we cannot fit every piece of the watershed into the diagram, we hope that the components included reflect the character of the Yukon River watershed.

What makes this diagram different?

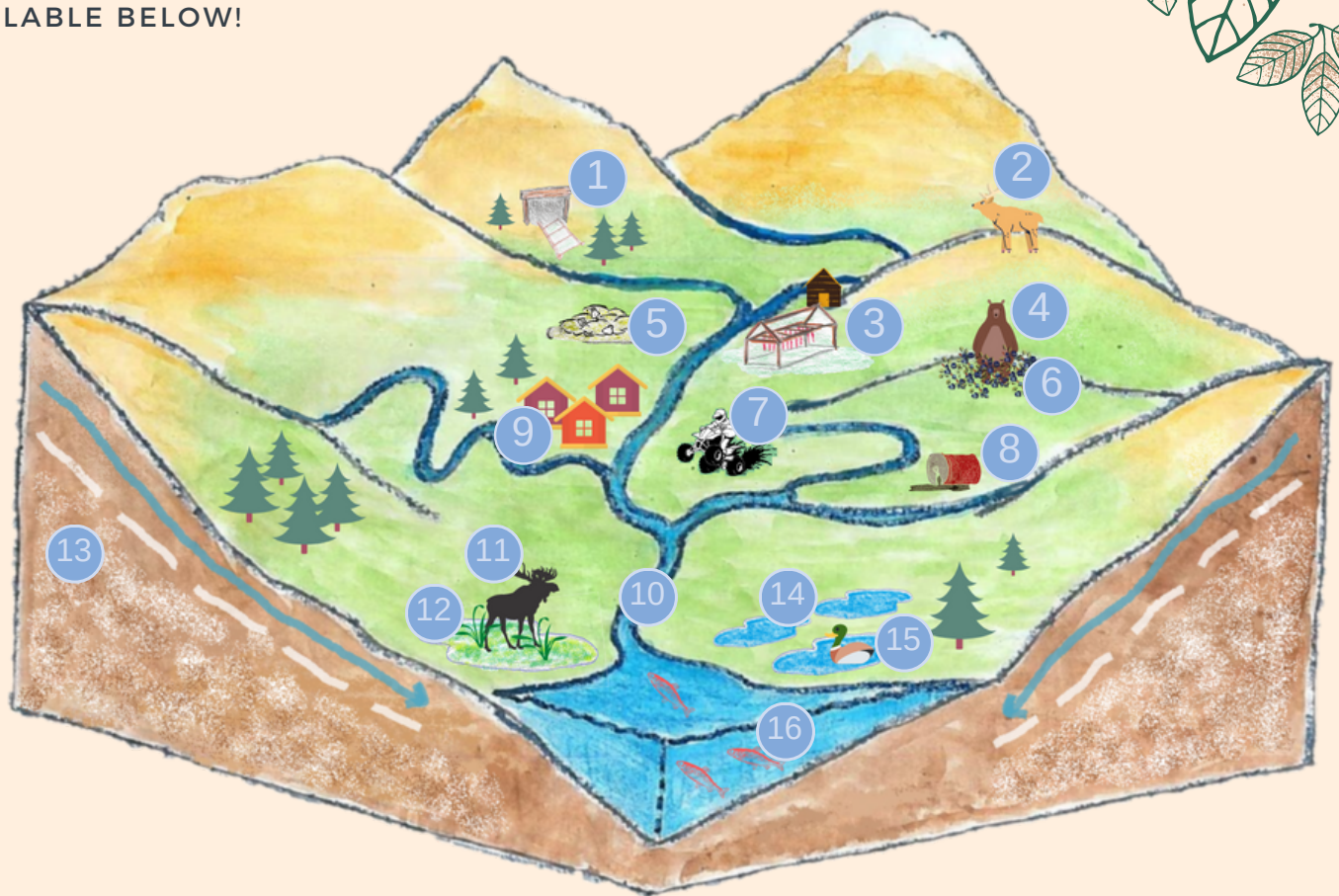
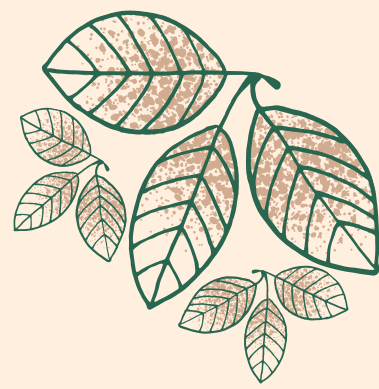
By Tal Shutkin



Indigenous language and culture: The Yukon River watershed spans a vast area that includes Tlingit, Gwitch'in, Koyukon Athabaskan, and Yup'ik' communities. Our diagram features a traditional fish camp along with important subsistence species such as salmon, moose, caribou, and berries. We also translate the watershed features into each language spoken in the watershed. **Unique environmental hazards:** While other watershed diagrams often feature agricultural runoff, this is not as big of a concern in the YRW. Our diagram includes more relevant environmental concerns such as the impacts of mining, unlined landfills, and hazardous waste left by past military or industrial activity. **Unique hydrology:** Most of the YRW is characterized by discontinuous permafrost. This means that below an “active layer” of soil that freezes and thaws with the seasons, much of the soil remains frozen all year around. Permafrost changes the way water moves through the landscape and creates familiar features such as tundra ponds. As climate change reduces permafrost, water will behave differently across the landscape.

Naming Game Created by Tal Shutkin

ASSOCIATE EACH NUMBER ON THE WATERSHED DIAGRAM WITH THE CORRECT LABEL BELOW!



KUIK (RIVER, YUP'IK)

XÁAT (SALMON, TLINGIT)

DENEEGE (MOOSE, KOYUKON)

PULERNEQ (WETLAND, YUP'IK)

BENH T&H
(TUNDRA POND, KOYUKON)

UUTKAAQ (WATERFOWL, YUP'IK)

KAIK'IT (VILLAGE, GWICH'IN)

TL'EEX (GARBAGE, TLINGIT)

NEQLIVIK (FISH CAMP, YUP'IK)

4-WHEELER

AARNARQELLRIIT CIQITAAT
(HAZARDOUS WASTE, YUP'IK)

TLÉIKW (BERRIES, TLINGIT)

SHOH (BEAR, GWICH'IN)

VA'DZAIH (CARIBOU, GWICH'IN)

MAAYNEL (MINE, KOYUKON)

NEN'YEH LOO'U'
(PERMAFROST, KOYUKON)





During these trying times of Covid-19 we see expressions of community resilience throughout Alaska. This past fall YRITWC hosted a Resilience Workshop that brought people together from across the Yukon River Watershed to talk about what makes a community resilient. From these conversations comes the following Resilience Checklist. It is a list of things to keep in mind when planning for resilient communities into the future.

Resilience Checklist

By Maryann Fidel

1.) If environmental changes are impacting your Village, consider starting a monitoring program. This information can be used to make good decisions, and communicate with outside funders. Elder's Traditional Knowledge and Wisdom can help.

For example, if erosion is affecting your Village, you could start monitoring using a simple tape measure, photo and/or drones. You could ask Elders if they think erosion is happening more quickly than in the past, and how Villages have dealt with past erosion. Be sure to write everything down and put it in a safe place.

2.) Think about good partners that can help with your community goals. This could include State and Federal agencies, non-profits, academia, other Tribes dealing with similar issues, etc.

3.) Plan for educational activities for the youth, as they are our future.

4.) Take advantage of opportunities for community members and leaders to train themselves and get involved.

Involvement could include government-to-government consultations, representation on Fish and Game Boards, engaging in EIS's as a cooperating agency, writing letters to leadership, etc. Training will depend on your needs.

5.) Consider documenting current and traditional uses on the land and waters. This documentation is important for future generations. It can also demonstrate impacts from land management decisions, or big development projects. Traditional use maps can 'get the Tribes foot in the door' to be involved in decisions that will affect subsistence and well-being.

6.) Consider how individuals and governing entities (Village Corporation, Tribe and City) work together. Are there good ways to work together? Consider shared meetings. Support community activities that bring people together, like spring carnivals. Maintaining a meeting place like a teen center or community hall can make it easier for people to get together. Note: During these times of the Covid-19 pandemic we can think creatively about ways to be together while being physically separate, because we know that this 'togetherness' helps to keep us strong.

RESILIENCE WORKSHOP REPORT

December 2, 2019
By Maryann Fidel



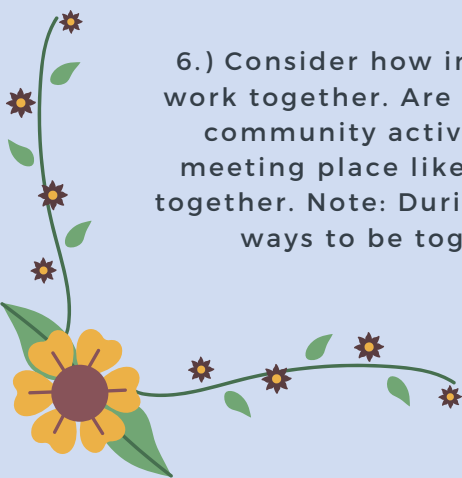
photo credit: Taylor Smith, Hooper Bay, AK.

On September 17, 2019 in Fairbanks, Alaska the Yukon River Inter-Tribal Watershed Council (YRITWC) hosted a Resilience Workshop. The Workshop brought together 14 participants from 10 Indigenous, rural communities within the Yukon River Watershed, and two urban centers. The purpose of the Workshop was to support community resilience.

First, we built an understanding of environmental changes from observations based in traditional knowledge, and the scientific understanding of current and expected changes. These two 'ways of knowing' were brought together, not to test one against the other, since we believe each stands on its own, but instead to build a more holistic understanding of current and future changes.

Second, we built on this understanding and discussed responses to change and resilience, with the goal of learning from each other. Alaska Native and Yukon First Nations are the first responders to environmental change due to their close relationship to the land and animals, and the fast rate of change we are experiencing in the north. People are responding to change now, because they have to. Often northern residents can't wait for scientific certainty and planning. We focused our discussion on what people are doing now, on-the-ground; and what actions communities can take to build resilience based on strength within community and culture.

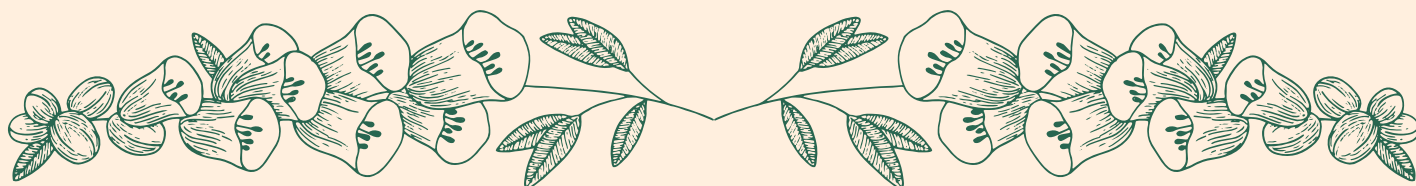
Participants comments are in italics. These are summarized by the author from hand written notes, and are not verbatim. Unless otherwise specified photo credits are those of the author.



I'd also like to share a summary of responses from the Workshop to the question, 'What does resilience mean to you?'

Adaptation to change, flexibility, overcoming circumstance, evolving, endurance, powerful, achieving sustainability, togetherness, survival, no lasting effects from hardship, diversity, forward thinking, planning for future generations, innovation, surviving through hardship, being strategic, leading and making decisions from the heart and not fear.

Check out the Workshop Report on our website (www.yritwc.org) under 'Reports'. Please stay safe out there, and thank you to those who contributed. It was an honor working with you all.



Newsletter for Drinking Water Improvement Program, (DWIP) USDA TAT 2019 - 2020 *By Katherine Brower*

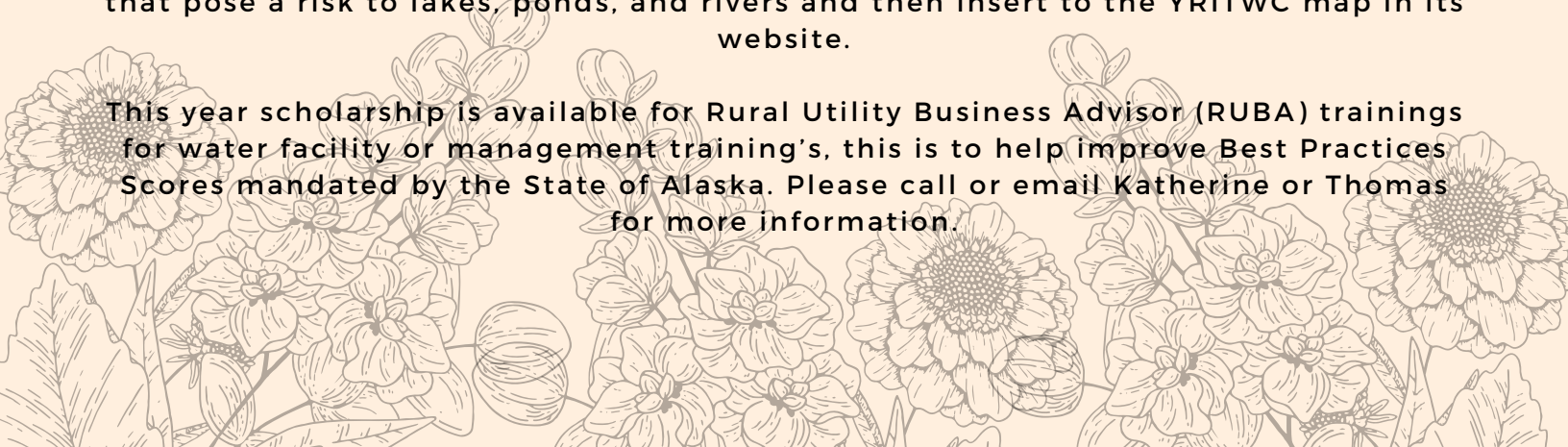
DWIP made changes to its staff, as of October 31, 2019, Katherine Brower is still the Solid Waste Management Coordinator, she also has the roles under DWIP as Environmental Coordinator, and Thomas Brower is the Program Manager.

The Drinking Water Improvement Program is in the process of getting signs made to be delivered to each regional YRITWC Signatory villages boat launch areas in English, "This river is our home; help keep it clean" and translation done in their respective languages. This is to enhance and encourage proper care of our rivers, for proper disposal of marine batteries, used motor oil, fishing gear, old outboard motors and personal responsibility of trash. So far we have received Yup'ik and Koyukon languages, we are still waiting for Athabascan and Gwich'in languages to be sent to us so that they too can get their signs

The DWIP is sponsoring a Mini-Grant to five communities up to \$3,500 each. The mini-grants will be used to improve wastewater (sewage lagoons) upgrades. For more information and to apply please contact Katherine and/or Thomas Brower III.

Every year DWIP staff travel to villages to give technical assistance trainings. Each year, there are different communities that are visited to help and assist in improving local programs to the communities. This year under USDA TAT grant, DWIP will be working and traveling to map traditional drinking water, community source sites, to acquire GPS coordinates also the landfills, wastewater lagoons, and 55 gallon drums that pose a risk to lakes, ponds, and rivers and then insert to the YRITWC map in its website.

This year scholarship is available for Rural Utility Business Advisor (RUBA) trainings for water facility or management training's, this is to help improve Best Practices Scores mandated by the State of Alaska. Please call or email Katherine or Thomas for more information.



YRITWC had a booth during the ATCEM and AFE conferences. Staff members took turns sitting at the table, providing information of all the departments of the YRITWC organization. DWIP staff and the departments gave out information for what the departments do and encourage folks who were at the conferences to fill out a survey to compile information of their respective community. Once an individual submitted the completed survey they were provided water sampling kits and other swags.

Solid Waste Management Department: YRITWC no longer has the solid waste management grant, YRITWC DWIP (Environmental Coordinator, Katherine Brower) currently has the ability to contract within the villages of Yukon River Delta region with a discount; however, the trainings are for Lower Yukon and coastal village region focused on the water and management of water facilities and landfill of the village. Quotes are sent out to the Tribe. DWIP has two HAZWOPER trainings available of which Ruby training will be in Ruby on the week of May 18 to the 22nd. This schedule is pending but will be updated by the Health and Human Services government.

Welcome Our New Brownfield Coordinator!

My name is Birgit Hagedorn. I am a Geochemist and Environmental Scientist by trade and the new Brownfields Coordinator for the Yukon Inter-Tribal Watershed Council. Some of you may have seen me or attended a workshop with me at many of the ATCEM or AFE conferences.

I am looking forward to working with everybody in the Yukon watershed on Brownfields Projects to initiate and facilitate many cleanups. Please always feel free to call or email me with any Brownfields (or other) questions, concerns and/or suggestions.





Hello everyone out there on the Mighty Yukon River

I'm happy to express my thoughts, passion, and incentive to what Yukon Territory, Canada, is up to!!

I've been granted the privilege of Advocating and Coordinating on the Yukon Territory side (Yukon Chapter), and gaining the confidence and interest of all Yukon First Nations (YFN) in reengaging our Societal Status here in Whitehorse, or furthermore within Carcross, Yukon; at the C/TFN Government Administration building; a portion of my employment with C/TFN is committed to the YRITWC.

The Community of Carcross/Tagish wants to re-open our Yukon Chapter office; to its once recognized and thriving goals and objectives of our Mandate and Vision of our Organization as a whole.

We are in the process of reviewing and providing feedback on the Annual 2020 AGM Agenda, Board member status, any outstanding financial obligations and looking at seeking Core funding for the first year (2020), and also of course proposal driven projects and partnerships, in the near future.

I also know the invaluable importance of seeking a YFN interest, to take on the roles and responsibilities of hosting our next 2021 YRITWC Summit here in Yukon.

I have been diligently getting out with my Heritage, Land and Natural Resources (HLNR) Staff at C/TFN, collecting water quality during our open water season (2019) in the Southern Lakes region (Headwaters of the Yukon River) and just recently collected our winter samples at four locations that had the most accessible access for our winter conditions. Overall, thanks to our Indigenous Observation Network (ION) First Nations partners, 55 water samples were collected since May 1st, 2019.

Needless to say, always be prepared out there. I had a bit of a scare, when I broke through the ice, push up, on the Teslin River below the Teslin Bridge at Johnson's Crossing. "I Thanked our Creator," the seasonal truck stop, the restaurant was open this year (year-round) so that I could warm up, change my clothes, and have a delicious bowl of their soup of the day!! Which, I highly recommend you stop in the next time your passing by, on your way to Teslin, Yukon Territory.

I look forward to more project engagements with all of you out there, working so committedly to our vibrant Indigenous Observation Network (ION) and Active Layer Network (ALN) projects year-around.

My contact information is here if you have any questions at all:
coralee.johns@ctfn.ca

In Unity,

Coralee Johns

Natural Resources Technician with Carcross/Tagish First Nation
Carcross, Yukon Territory, Canada
Carcross/Tagish First Nation

Mountain Village Youth Present AFE

By Kari Young



Photographed: Left to Right
Rochelle Peterson (Mt. Village.),
Kari Young (IGAP Manager),
Matthew Andrews (Mt. Village)

In February, YRITWC was able to send two youth and a chaperone to attend the state's largest environmental conference, the Alaska Forum on the Environment (AFE). This sponsorship was made possible through funds from the EPA. This past fall, YRITWC's IGAP department put out a call for signatory tribes to nominate youth and a chaperone to attend and present at AFE's Youth Tracks, the conference's sessions that contain presentations led by youth or that incorporate youth projects. YRITWC's selection committee chose Mountain Village youth, Matthew Andrews and Rochelle Peterson, along with chaperone Gwendolyn Ground. Matthew's and Rochelle's nomination forms were filled with positive words about their good attitudes, outstanding work ethic, how well they worked with their peers, plus many more positive traits. The youth created a PowerPoint and presented on the unique environmental challenges that their community faces. These challenges included climate change, threats to subsistence resources, landfill issues, and more. They ended their presentation by stating that local entities and community members need to work together on how they will face these challenges together and overcome them. I was happy to be able to share the presentation slot time with these two outstanding youth and present on some of the environmental education work YRITWC has been doing and has coming up in the future. The title of our shared presentation was Environmental Issues and Education on the Yukon River Watershed. Even though they may have been a bit shy, Matthew and Rochelle did a wonderful job presenting to a room full of people.

On behalf of YRITWC staff, I wanted to thank everyone who nominated youth from their community, we wish that we could send more youth to opportunities like these. We also wanted to thank Gwen for being a spectacular chaperone as well as Matt Joe for helping out with chaperoning as well. We send a huge thanks to Matthew and Rochelle for coming and sharing at AFE. We sincerely appreciate their dedication to coming to the conference, especially considering they had to snow machine to catch their St. Mary's flight to Anchorage after their flight from Mountain Village was cancelled.



Science - ION Update

Your Science Team hopes all of you and your loved ones are doing well and staying safe during these uncertain times. In light of coronavirus, we all have a lot of questions. Therefore we want to reach out to you and provide an update. Despite our office closure, we want to assure you that the Science team will try to maintain normal operations as seamlessly as possible for all of our Indigenous Observation Network activities. During these next several weeks, we are developing online workshop opportunities as well as preparing water quality sampling equipment and supplies for the upcoming open water season. As “One People, One River,” collaboratively, we are hoping that ION can act as a beacon of familiarity and consistency. Therefore please stay tuned to YRITWC social media channels for updates as well as the science staff will be reaching out to you in the coming weeks ahead.

On a positive note, some exciting updates and highlights that underlines your consistent support for the ION, and your incredible accomplishments from earlier in the year. With your help and support, we had a successful ION season with 164 water quality samples collected from 20 Alaska and 14 Yukon Territory sites. In addition, seven permafrost sites had active layer measurements are taken, one new active layer site in Hughes was installed, and we are very excited to welcome Alatna into our ION family. Due to your continued commitment to ION, we were able to collect environmental data to understand better changes to our landscape and water resources across the entire watershed, which in return, earned national recognition.

For instance, a five-year National Science Foundation (NSF) funded project title “The Sensitivity of Alaska and Yukon Rivers, Fish, and Communities to Climate” started in collaboration with the University of Colorado Boulder, USGS, and Institute of Tribal Environmental Professional. This project combines water quality, remote sensing, and Indigenous Knowledge data to model historical and future climate and river changes to investigate impacts to fish habitat. The Arctic Great Rivers Observatory project with the Woods Hole Research Center received NSF funding to maintain water quality monitoring activities at Pilot Station for the next upcoming five years. Furthermore, we partnered with NWB Northern Connections, a diverse group of stakeholders, to expand Indigenous Knowledge and environmental observation data sharing and integration efforts towards a sustainable and resilient boreal ecosystem and cultural resources. In collaboration with our partners, we presented on ION and the starting projects during ATCEM, BIA, Yukon Water Forum, and AFE conferences. The science team also hosted an ION workshop with our project partners Nicole Herman-Mercer (USGS), Alexander Kholodov (UAF), and Kevin Elder (USFS) to present on water quality, the active layer, and snow measurement methodology at the AFE conference.

Moreover, two publications have been published highlighting ION. These publications are “Vulnerability of subsistence systems due to social and environmental change: A case study in the Yukon-Kuskokwim Delta, Alaska” authored by Nicole Herman-Mercer, Melinda Laituri, Maggie Massey, Elli Matkin, Ryan Toohey, Kelly Elder, Paul Schuster, and Edda Mutter; and “Mercury export from the Arctic Great Rivers,” authored by Zolkos Scott, Krabbenhoft David, Suslova Anya, Tank Suzanne, McClelland James, Spencer Robert, Shiklomanov Alexander, Zhulidov Alexander, Curtovaya Tatiana, Zimov Nikita, Zimov, Sergey, Mutter Edda, Kutny Les, Amos Edwin, Holmes Robert.

A Huge Thank You! For all your hard work, that helps to contribute to the establishment of new partnerships with University entities, government agencies, and non-profit organizations to widen our ION scope of data collection.