

# Takshanuk Watershed Council

## *The Current* - Fall 2019

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## Upcoming Events: Save the Dates!

**November 8: Wild Art and Wild and Scenic Film Festival at the Chilkat Center. Doors open at 5pm, films start at 6:30. Come early to grab a slice of pizza, beer or wine, and check out Wild Art by local artists! Ticket Prices: Adults \$12 in advance, \$15 at the door; Students 13 and over \$5; Children 12 and under are FREE. Bring your own cup (metal or plastic) and save \$1 on beverage purchases.**

**December 6th: Join TWC at our Jones Point office for a Holiday Open House Party! Stop by between 4 and 6pm. We'll have snacks and beverages, and plenty of holiday cheer. TWC staff and the Board of Directors will be looking forward to catching up with each of you.**

## **Fall Harvest at Starvin Marvin**

Students returned to the Haines School in late August, which means the garden has become much livelier! This year, we harvested over 300 pounds of produce, three times last year's production! Carrots were particularly plentiful, along with tomatoes, kale, cucumbers, and onions. 200 pounds of veggies have been delivered to the school cafeteria and included in daily lunch menus.

Fifth and sixth grade classes participated in work parties at the garden, where they completed projects such as: breaking new ground to expand the raspberry patch, sifting compost, mulching fruit trees, transplanting raspberries and putting beds to rest for the winter. The school compost program is back for another year, which means the lucky sixth grade class is already on the job transporting food waste from the school cafeteria and kitchen to the garden compost bins. So far they have composted 430 pounds of food waste. There's always something new happening at the garden; please stop in and see our progress!

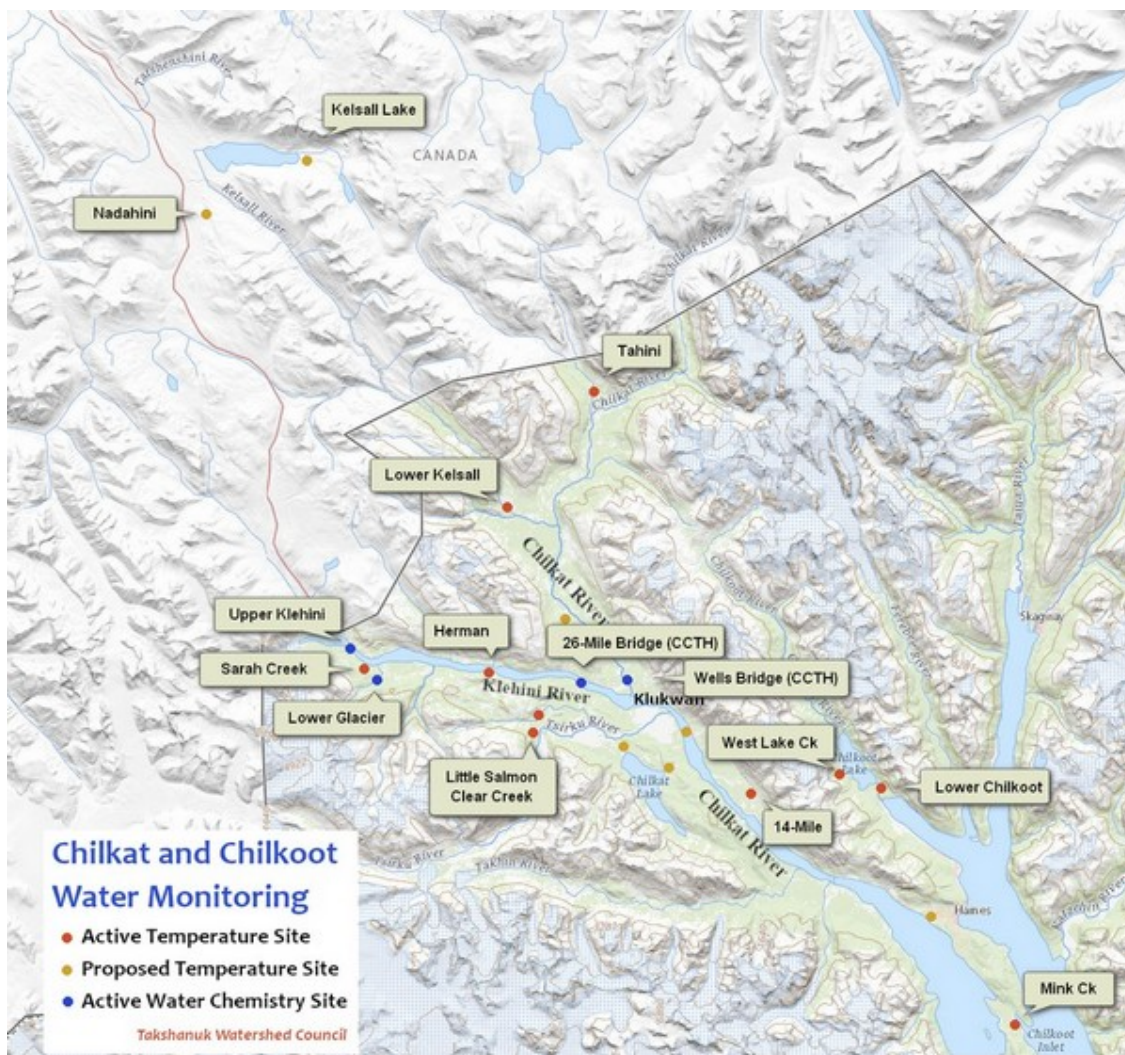




**First graders harvesting carrots to be used by the school cafeteria for students' lunch!**







## Chilkat Watershed Monitoring

TWC partners with Chilkat Indian Village, Chilkoot Indian Association, and Central Council of Tlingit and Haida Indian Tribes of Alaska in collecting water chemistry samples at five sites in the Chilkat watershed. This program aims to document the current baseline (pre-development) conditions for metals and other constituents commonly associated with mining and other industrial activities. Our quarterly water chemistry sampling is providing an important record of the current pristine conditions in the watershed. However, this type of sampling can't always detect either singular pulses of pollution that could be released during industrial activities, or chronic long-term low-level contamination.

Benthic macroinvertebrate sampling is utilized worldwide to detect contamination that may have moved through a site between water sampling events, or persists in the system at chronic levels.

Organisms detected in a macroinvertebrate sample give an indication of water



quality conditions over time, as some species are more vulnerable to certain kinds and concentrations of contaminants than others.

In order to compile a more complete baseline water quality data set, Chilkat Indian Village is partnering with TWC to create a **Macroinvertebrate Study Plan for the Chilkat Valley**. This new program will help us to better understand and document current conditions in the Chilkat watersheds, as well as be able to observe changes over time.



Macroinvertebrate sample from Glacier Creek in the upper Klehini Watershed.

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## 10th Annual CFI Mushroom Dinner

TWC hosted the 10th annual Mushroom Dinner on October 17th! This event features Mario Benassi's delicious family recipe for mushroom pasta, and features a raptor from Mario as well! Thank you to all who showed up to enjoy a great meal, visit with Mario's northern goshawk, and support the Chilkat Forest Investigators (CFI) program!



## Summer Garden Party

The 4th Annual Starvin' Marvin Garden Party and Fundraiser took place on August 23rd. We send so much thanks and gratitude to the Haines community for supporting this event. Their generosity towards the school garden made this year's event the most successful ever. The event generated over \$2,500, allowing the garden program to access an additional \$1,200 from the Douglas-Dornan Foundation. Nearly 100 community members turned out and celebrated the hard work students do each year to plant, maintain and harvest the garden. Visitors enjoyed live music from Extended Play, a salmon dinner and local food potluck, garden tours, children's activities and a rowdy live auction.







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## TWC Staff Transitions

In late July TWC said goodbye to its Executive Director, Meredith Pochardt.

Meredith started as an intern with TWC way back in 2010, and for the past nine years she has been instrumental in making TWC into what it is today.

Meredith has accepted a job with NOAA Fisheries in Juneau but is maintaining her ties to the Chilkat Valley. TWC looks forward to continuing to work with Meredith on the eulachon research program conducted by the Chilkoot Indian Association.

TWC promoted former Science Director, Derek Poinsette, to take over as the new ED. Derek was hired by TWC in 2017, although he had volunteered on various projects for the organization as far back as 2011. Derek has a varied background in both fish and wildlife research, and the construction industry.

He has been a general contractor for 15 years and hopes to bring that experience and skill set to his role as Executive Director, especially as it may apply to habitat restoration and enhancement projects. His prior experience with research and conservation has been mostly with birds, sometimes fish, and two years with Yellowstone National Park bison.

TWC created a new staff position, Development Director, and hired Jenn Hamblen to fill the role. Jenn has a Master's Degree in Hydrology and Water Resources and has worked on fisheries and aquatic resources projects in Glacier Bay, Sitka, and Juneau for federal, state, and tribal agencies. She also has extensive experience in environmental and outdoor education. TWC is looking forward to Jenn bringing on board additional scientific and technical expertise, as well as professional connections to communities and organizations south of the Lynn Canal. In hiring a Development Director TWC hopes to increase its outreach activities and to more effectively communicate important information

to the community, agencies, and to our project partners.

Marie Boisvert, TWC's Education Coordinator, will continue to develop and expand upon the successes of the Starvin' Marvin Garden, and Haines School composting; Marie and Mario Benassi are facilitating Haines and Klukwan School environmental education and Fish Trivia programs this school year.

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## Upcoming Fish Passage Projects

**7-Mile Kellsall Road.** In 2008, TWC conducted assessments of 37 culverts in the Haines Borough. 28 were identified as impeding fish passage (21 “red” and 7 “gray” culverts). In 2012, TWC completed a study which prioritized potential culvert replacement projects based on a modified Upstream Habitat Assessment Protocol and Biological Significance Index (BSI) developed by the Tongass National Forest. A number of these culverts have now been replaced and fish passage significantly improved.

The culvert shown above is located at 7-Mile Kellsall Road, in an unnamed tributary to the Kellsall River near Nataga Creek. This culvert is classified as red



based on a perch of 17 inches and a gradient of 3%. The stream above is a narrow, low gradient, flood plain channel. It lies within the flood plain of Nataga Creek and is fed primarily by ground water. The stream contains rearing habitat and a minimal amount of spawning gravel.

In the fall of 2018, TWC staff set minnow traps and documented the presence of numerous juvenile coho salmon, Dolly Varden, and trout below the culvert; and only 2 small trout above. Replacement of this culvert will make an additional 310 meters of spring-fed stream available for anadromous fish use. TWC plans to complete this project in summer of 2020.

**Lower Mink Creek (Mud Bay).** Mink Creek empties into the tidal flats of Mud Bay south of Haines on the Chilkat Peninsula. It supports coho salmon, Dolly Varden, steelhead, and cutthroat trout. A small roadway and crossing structure was built 50 years ago when the property was first homesteaded. The roadway is now only used for pedestrian access to the tidal flats, and the property is protected by a conservation easement.

In 2020, TWC is planning to remove the failed crossing structure, rehabilitate the stream, and install a pedestrian bridge.

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## SAIL Interns Work on Garden & Trails

Southeast Alaska Independent Living (SAIL) and TWC partnered to provide four interns and a peer mentor with meaningful jobs that support community programs. The interns helped Marie with the Starvin' Marvin Garden and Compost program by tending to the garden and keeping that compost aerated all summer long! They also helped make progress on hiking trail maintenance and construction at TWC's Jones Point property.

The peer mentor learned the ins and outs of being a leader among her peers. "It was awkward in the beginning," said Gabrielle St. Claire. The group had to agree on expected behaviors and learn to trust one another when faced with challenging projects. "Now we are cohesive and work well together."

One intern noted that he was nervous about returning to the Summer Work Program this year. Although he thought he could do the work, he was worried

about having to interact with new people. He pushed himself to do his best and today, he says, "I have stronger bonds with the people I worked with."

One intern on trail work at Jones Point: "It was really hard but we worked with what we had and stuck with it."

"Thank you!" to SAIL for partnering with TWC on this fruitful (pun intended) and very meaningful program. We hope to continue to work with SAIL next year and are seeking funding to further develop this program to incorporate more job and life skills training with both SAIL and TWC staff.



Upper photo: SAIL Peer Mentor and Interns train peas. We're glad interns enjoyed eating their



work as well! Lower left: Interns fertilize the carrots with homegrown compost. Lower right: An intern and peer mentor working at Culture Camp. Thank you for your hard work!

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## Out in the Field

Through partnerships with Chilkat Indian Village, US Fish and Wildlife Service, National Fish and Wildlife Foundation, Patagonia, and Charlotte Martin Foundation, Takshanuk Watershed Council staff collected data for our water quality and quantity monitoring programs.

Water samples were collected for the Chilkat Indian Village baseline water chemistry program at sites in the upper Klehini watershed. These samples are sent to SGS Labs in Anchorage for analysis of dissolved metals and other properties to give us information on baseline conditions. Results so far indicate waters of extremely high quality at all study sites.

TWC staff accompanied project partner Richard Chapell, Fishery Biologist with the Alaska Department of Fish and Game, to install temperature sensors at our newest site on the Tahini River, a tributary to the upper Chilkat. This site is located in highly productive king salmon spawning habitat. TWC's stream temperature monitoring program is a part of a regional effort coordinated by the Southeast Alaska Watershed Coalition. Stream temperature monitoring gives clues as to how climate change may be impacting water temperature, which is a key driver of ecosystem health and affects stream organisms of all kinds, including salmon.



TWC Executive Director Derek Poinsette along with Richard Chapell, ADF&G Fishery Biologist (and TWC Board Member) install sensors at our newest water temperature monitoring site in the Tahini River.

## Sarah Creek Gaging

TWC staff visited their stream flow measurement site in Sarah Creek in the upper Klehini River Valley, to continue hydrologic investigations in order to apply for an instream flow reservation with the Alaska Department of Natural Resources. If approved, this water right would legally reserve a specific quantity of water for the maintenance of fish habitat, in this case coho spawning and rearing. TWC has nearly completed collecting the five years of daily flow measurements that the Alaska Department of Natural Resources requires in order to apply for this water reservation.





TWC Development Director Jenn Hamblen uses a flow meter to measure water velocity in Sarah Creek. The series of cross-sectional measurements of depth and velocity are used to calculate the total instantaneous discharge of the stream.



# Palmer Mine Project Monitoring - Updates

In April 2019, Constantine Mining LLC of Vancouver Canada applied for State of Alaska development permits which would allow the construction of a 1.25-mile-long mine access tunnel, a wastewater treatment facility and a potentially acid-generating (PAG) waste rock dump. TWC submitted comments on this permit application to the Alaska Departments of Environmental Conservation and Natural Resources (ADEC, ADNR), the Alaska Mental Health Trust, and the Haines Borough.

[View TWC's comment letter to ADEC and ADNR](#)

In its permit application documents, Constantine predicts that the water flowing from the proposed tunnel will not meet ADEC water quality standards, and the Waste Management Permit would allow the discharge of those contaminants underground via a Land Application Disposal (LAD) system. The ADEC permit is assuming that this contamination will disappear into the ground and will not enter surface water. However, this assumption is not supported by the information provided by Constantine in their permit application. Due to the local geology, this contaminated water is likely to immediately enter both ground and surface water. When surface waters are to be impacted by a wastewater discharge, then an Alaska Pollutant Discharge Elimination System (APDES) permit is required. In not acknowledging the likelihood of a discharge to surface water, ADEC is allowing Constantine to avoid the more thorough environmental review process of acquiring an APDES permit.

It is TWC's position that discharge of wastewater to surface water is likely, and this contention is supported by the mining company's own studies as presented in the permit application documents, therefore an APDES permit is required.

More than 200 public comments were submitted during the initial comment period which closed on May 30. In July, ADEC issued the Waste Management Permit, ADNR approved the Reclamation Plan, and the Alaska Mental Health Trust approved the Phase 2 Plan of Operations.

A request for agency review of the ADEC Waste Management Permit was filed by a number of individuals and organizations, and in September ADEC remanded the permit. The permit is currently undergoing its second agency review, and a decision is expected in December.

[Chilkat Valley News story on the permit remand](#)

[View TWC's request for agency review - July 2019](#)



See <https://www.takshanuk.org/research-and-restoration> for more information.

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Red Chris Mine. Stikine Watershed, British Columbia. Photo by Garth Lenz | DeSmog Canada

## TWC Attends Mining Impacts on Salmon Streams Workshop

In late October, researchers from the University of Montana's Flathead Lake Biological Station (FLBS) hosted a workshop focused on advancing the scientific knowledge of mining impacts on water quality and salmonid-bearing watersheds.

Thirty-nine science and policy experts from academic institutions, state and federal agencies, Indigenous governments, and NGOs, gathered at the FLBS facilities in Yellow Bay to participate in the candid and collaborative workshop. Those in attendance included representatives from Alaska, Idaho, Montana, Washington and the Canadian provinces of British Columbia and Ontario.

For FLBS researchers Erin Sexton and Chris Sergeant, who co-organized the event, it was an opportunity to create strategies for ensuring that the best possible science is used in management decisions, and mining impacts to watersheds are minimized.

Future products resulting from the workshop will include two peer-reviewed scientific articles, the release of documented workshop proceedings, and the production of outreach materials designed to deliver key findings to interested communities in a user-friendly format.

More importantly, organizers and participants hope that the workshop will create a lasting and cohesive network of practitioners who are dedicated to evaluating and addressing the risks and impacts of mining in salmonid-bearing watersheds.

“Many people, from community members to government officials, are asking what they need to know about mining impacts to rivers,” Sergeant said. “If we can arm people with the knowledge present in the room last week, that will be a big win for the special rivers in our region and the people that depend on them staying healthy.”

Takshanuk Watershed Council staff will soon schedule a public meeting to share information learned at this workshop as well as other Chilkat Watershed Monitoring Program updates.

You can read more about the workshop by following this [LINK](#).

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## Yoga in the Garden

We had a great time in the garden doing yoga with Mandy! Despite a little drizzle, there was a great turnout, with donations raised to support the garden. Thank you for your donations and support! Marie provided snacks fresh from the garden, including a delicious fresh raspberry spritzer. We plan to host more yoga in the garden in 2020, and we hope you can join us!





Mandy leading yoga in the garden. Thank you for leading your yoga in our unique setting, it was a wonderful experience!

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**Check out TWC's YouTube channel by clicking the icon below**



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## Thank You!

TWC's work would not be possible without the generous and ongoing support of the community--both financial and otherwise. Thanks especially to our institutional partners and supporters:

Alaska Conservation Foundation  
Alaska Department of Fish and Game  
Alaska Department of Environmental Conservation  
American Bald Eagle Foundation  
Audubon Alaska

Central Council of Tlingit and Haida Indian Tribes of Alaska  
Charlotte Martin Foundation  
Chilkat Indian Village  
Chilkat Valley Community Foundation  
Chilkoot Indian Association  
Clif Bar Foundation  
The Conservation Fund  
Crossett Fund  
Douglas Island Pink and Chum, Inc.  
The Douglas-Dornan Foundation  
Haines Borough  
Haines State Forest  
Juneau Community Foundation  
Keen Footwear  
Klukwan School  
Lynn Canal Conservation  
National Fish and Wildlife Foundation  
The Nature Conservancy  
Northern Southeast Regional Aquaculture Association  
Oregon State University  
Patagonia  
Southeast Alaska Land Trust  
Southeast Alaska Conservation Council  
Southeast Alaska Independent Living  
Southeast Alaska Watershed Coalition  
University of Alaska, Southeast  
US Bureau of Land Management  
US Fish and Wildlife Service  
US Environmental Protection Agency

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