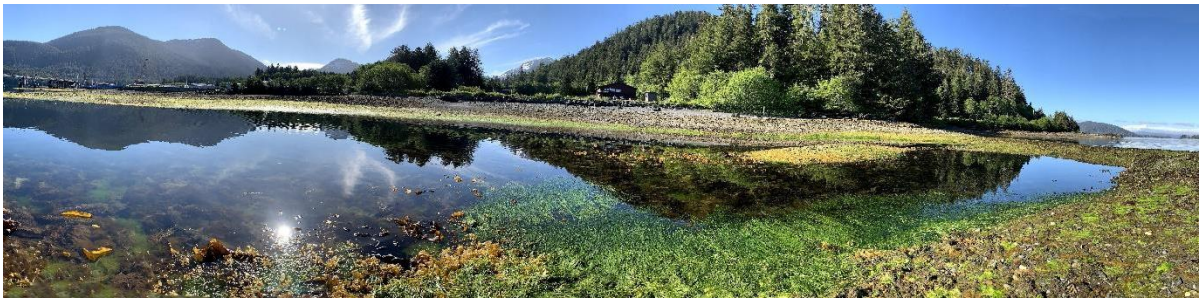
Sitka Tribe of Alaska

Brownfields Program

Results of STA Starrigavan Estuary Contaminant Sampling

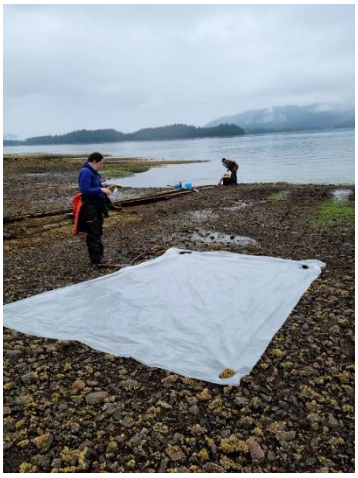


After several years of work, the Sitka Tribe of Alaska recently received results of sediment and shellfish sampling collected in Summer 2020 in Starrigavan Bay. The sediment samples were mostly sand and gravel, and the shellfish samples targeted clams and cockles commonly harvested by locals. Samples were tested for contaminants, which are polluting or poisonous substances that make something impure.

Contamination of concern to human health was first found in 2002 when the State of Alaska was looking to expand the Sitka Ferry Terminal. They found high levels of lead, polychlorinated biphenyls (PCBs), heavy metals and a chemical called tributyltin that was used in boat bottom paint before being banned worldwide. The Sitka Tribe wanted to repeat this testing to see if the contamination was better or worse and if it might have expanded to active shellfish harvesting areas near Old Sitka State Park.

The STA Resource Protection Department was able to carry out this sampling under our Brownfields/ Tribal Response Program, with funding and help from the Environmental Protection Agency (EPA) and their Manchester Environmental Laboratory. Brownfields are lands where there is a presence or potential presence of hazardous substances or contaminants that might complicate use or development of that land. In this case, the area is used as a subsistence harvesting location.

STA hired a consultant, BGES Inc., to conduct the sampling event on July 21st and 22nd, 2020. The samples were shipped to the two laboratories that conducted the analyses that tested the samples for contaminants. The intertidal zone where sampling was done belongs to the State of Alaska and is managed by the Department of Natural Resources (DNR). STA staff member Helen Dangel coordinated the sampling event with BGES, DNR, the Alaska Department of Environmental

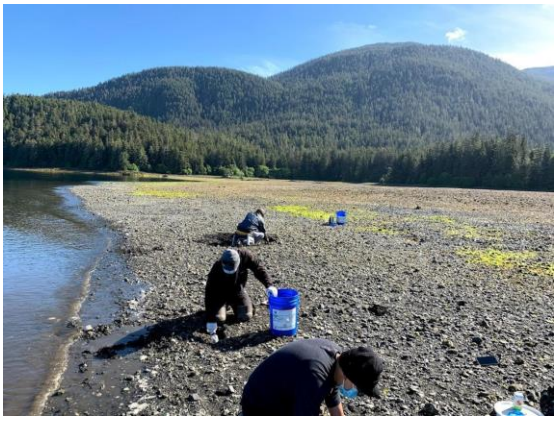


Conservation (DEC) Contaminated Sites Program, nearby landowners, and the City of Sitka. BGES employee, Carson Kent, traveled to Sitka for the sampling event. Mr. Kent is a Qualified Environmental Sampler and was the primary person to conduct sampling and oversee shipping. STA staff members Helen Dangel and Will Peterson assisted Mr. Kent with the sampling process to ensure there was no outside contamination of samples.

STA received results this spring from our consultant, who helped interpret the information. DEC reviewed the report with the sampling results and shared them with the Department of Fish & Game and the Environmental Public Health Program under the Alaska Department of Health and Social Services (DHSS).

The investigation found considerable contamination of many of the same contaminants as previously found, with PCBs, zinc, tributyltin, lead, and other heavy metals in the immediate vicinity of the Ferry Terminal near a boat yard and trap and skeet range. Warning signs are posted near the Sitka Sportsman's Association to discourage shellfish harvesting in the area.

STA also sampled clams and cockles in the harvesting areas near Old Sitka and the Forest Service Starrigavan Campground. The tests indicate that only two contaminants, arsenic and cadmium, were at high levels of concern in shellfish harvesting areas. DHSS epidemiologists indicated that the levels were not an immediate concern for acute (sudden) human toxicity (harmfulness) but may be a concern for chronic (long-term) exposure, meaning that the area doesn't need to be closed to harvesting. DHSS will be investigating the risk to human health further and will issue a "Letter Health Consultation" that summarizes their recommendations for the area, which may include a recommendation for further sampling.



Arsenic has natural high background levels in places in Southeast Alaska, and it is not clear from our testing if the source of the arsenic is naturally occurring. The source of the cadmium is also unclear, though it sometimes comes from smelters, nickel-cadmium batteries, phosphate fertilizers, pigments in paint, or plastics.

STA will continue to monitor the area and hopes to perform additional testing in the future.