



Adopt A Stream 2013 *in* Review

Activities on the Chena River in partnership with the Fairbanks Storm Water Advisory Committee

Fairbanks Storm Water Advisory Committee (FSWAC) and Tanana Valley Watershed Association (TVWA) have a Memorandum of Agreement to implement Adopt-a-Stream programs within the cities of Fairbanks and North Pole. FSWAC contributes annual funding and additional in-kind assistance to the TVWA to support the Adopt-a-Stream program efforts. In return, TVWA implements the program and submits an annual report to FSWAC outlining tasks accomplished this past year.

The Adopt-a-Stream programs are community-based programs with a variety of volunteer activities including water-quality monitoring and stream restoration activities which provide residents and other stakeholders with the opportunity to actively participate as stewards of their watershed. Elements of the programs include water-quality monitoring, litter pick-up, invasive species identification, stream bank restoration and maintenance, and management of flow restrictions.

Through implementation of these programs, FSWAC and TVWA raise community education and awareness of water-quality issues, improve local water quality and develop a strong volunteer base by providing members of the community a sense of ownership in local water quality issues.

TVWA administers the Adopt-a-Stream programs with the support of FSWAC. TVWA schedules program activities and maintains a list of stream-section adoptees with the stream sections they are responsible for maintaining. FSWAC provides program support through annual funding and additional in-kind assistance to TVWA, as well as hosting an annual Stream Cleanup Day.

Annual reporting requirements include records of program meetings held, number of community members participating in the programs, description of adopted stream sections, and a summary of cleanup efforts performed by adoptees and other volunteers. The measurable goals of the programs are to increase the number/length of stream sections adopted each year and to continue to expand cleanup efforts within the watershed.

Implementation of the Adopt-a-Stream programs is required by Alaska Department of Environmental Conservation in accordance with Alaska Pollutant Discharge Elimination System (APDES) Permit No. AKS-053406. The permit is collectively held by the City of Fairbanks, City of North Pole, Alaska Department of Transportation & Public Facilities, and University of Alaska Fairbanks, which also comprise the majority of member agencies of FSWAC.



Citizen Scientist volunteers monitoring at Moose Creek Dam



Storm Drain Stenciling & Awareness Campaign

Student Conservation Association (CSA) has worked since 1957 to build the next generation of conservation leaders by engaging young people in hands-on service to the land through programs embodying team work, community service, and volunteerism.

This summer, TVWA and SCA's conservation crew engaged in a collaborative effort to explore and develop educational and conservation service program opportunities providing local and regional youth with hands-on experience and learning about land stewardship, conservation and career opportunities.

One of these efforts was to stencil the storm drains in downtown Fairbanks. If you've walked around downtown, you may have seen "Dump No Waste - Drains To River" stenciled onto the storm drains. Unlike the water that goes down your drain to the sewer, water that flows into storm drains is not treated and filtered for pollutants. This contaminated water flows into our rivers, streams and lakes, then ends up in the ocean. Everything other than pure rain water is a potential contaminant that degrades water quality of our local watershed.

Chena River Elodea Survey with the Fairbanks Cooperative Weed Management Group

TVWA field technicians, board members, and volunteers, floated the Chena River from July 15-19 and again on July 23, to conduct a visual survey for elodea along 40 miles of the Chena River from the Moose Creek Dam to the confluence with the Tanana River. The purpose of this survey was to create a baseline report on elodea's presence in the Chena River. The dates were selected as a time late enough in the season for the plant to have grown as well as when the river's water level is traditionally low, allowing surveyors to see clearly beneath the water's surface.

We divided the 40-mile stretch of the river into five shorter sections based on access points and began closer to town. While on the river, technicians collected data at every significant change in the riparian zone. The size of these stretches varied greatly depending on human uses of the bank and natural fluctuations. 510 data points were taken. At each of these points, a visual survey for elodea was conducted and its presence or absence noted. At predetermined points, a more intense survey was used. These points were selected by the technicians according to distance and based on assumed areas where elodea would likely root. During the intensive surveys, technicians recorded the longitude and latitude of the area surveyed and site description and did a visual search for elodea.

Elodea was identified and tagged at six locations along the 40 mile survey; at Chena Slough, just downstream of Chena Slough, by the playground at Ft., by the bridge at Ft. Wainwright, Ft. Wainwright spill response team, and adjacent to Pike's Landing. No elodea was found upriver of Chena Slough, and was identified elodea only in areas downstream of Chena Slough. It was generally found rooted in slow-moving shallow sections of river where the sunlight could penetrate clear water, except in areas by the confluence of Chena Slough, where both rooted and floating forms were identified.



ELODEA Submersed aquatic plants in the genus *Elodea* are **not native** to Alaska. *Elodea* survives freezing, and can spread by tiny fragments. **These traits make it extremely invasive.**

Elodea has been confirmed in lakes and slow-moving rivers/streams in Anchorage, Fairbanks, and Cordova. It's a popular aquarium plant in Alaska and can spread if released: waders, boats, trailers, floatplanes, and equipment can act as vectors. ***Elodea* will cause serious, irreversible harm to fish and aquatic habitats in Alaska if allowed to spread unchecked.**



Please keep your eyes open for this invasive aquatic plant

Flowers: Small (~ 1/4-inch across), white flowers occur at the ends of long, thread-like stalks.
Leaf: Unlike native species, leaves are mostly arranged in whorls of 3 (occasionally 4) and densely packed along the stem.
Stem: Long, slender, generally branched typically lighter in color than leaves.
Roots: Tufts of fibrous roots.



2013 Highlights & Resources

- TVWA provided volunteers with individual water quality monitoring training at the Pioneer Park pavilion, on June 1st, 2013. The training was approximately one hour in length, included a power point presentation that they are able to take home, and covered how to use a Hanna® meter to measure pH, conductivity, and temperature, useful observations to record, and proper sampling techniques. Volunteers were also given information about invasive weed identification and were asked to report their presence along with the water quality monitoring data. For more information see the AAS power point training.

- Citizen Scientists completed water quality field datasheets each week on write in the rain paper and turned them into staff.

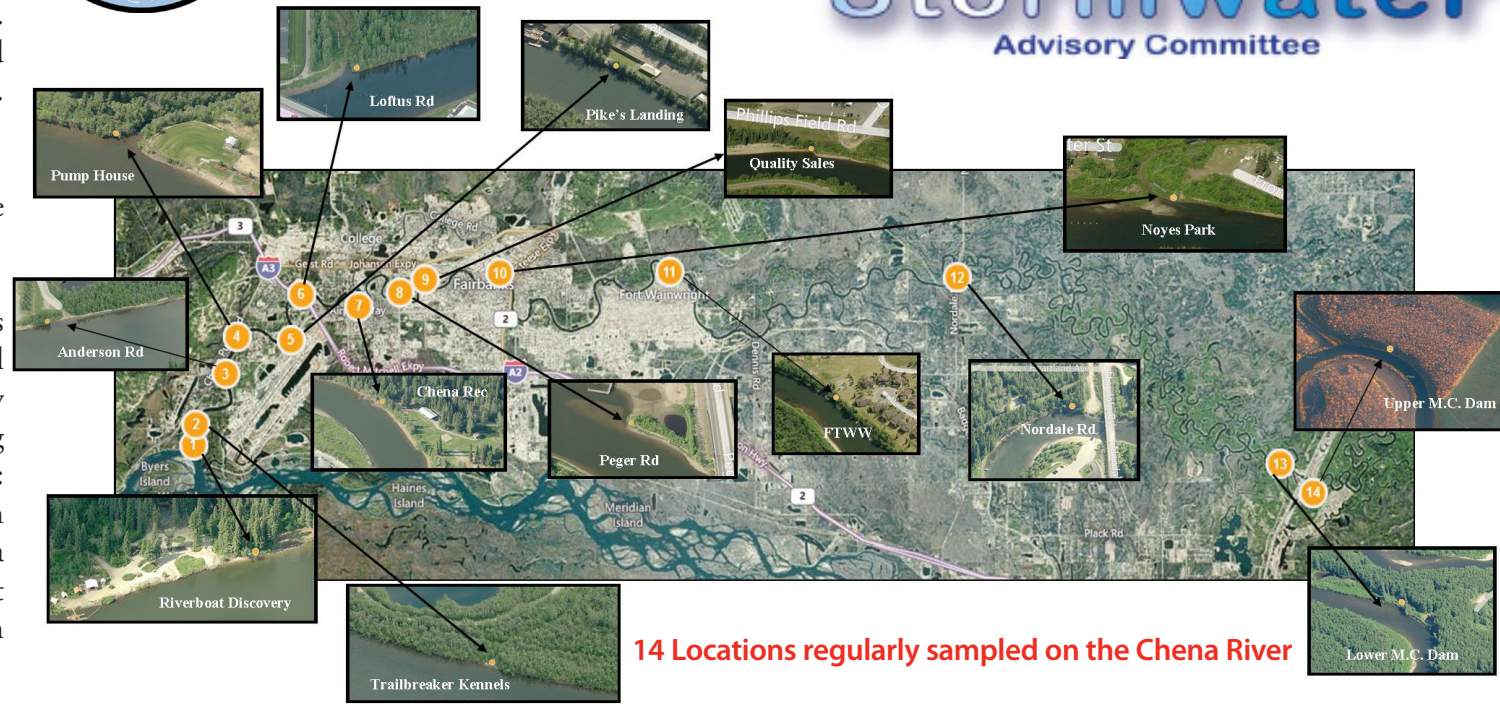
- TVWA maintained a list of stream section adoptees and the stream sections they were responsible for conducting water quality sampling in 2013. A total of 87 volunteers, 63 were youths and 24 adults participated in water quality sampling. Of these participants, all completed at least one sampling event during the 2013 sampling season. A total of 23 locations were sampled on water-bodies: the Chena River (14), Noyes slough (1), Deadman slough (1), Piledriver slough (7). Included in the volunteers were Effie Kokrine Charter School, Salcha Elementary School, and Camp Habitat, who were taught by TVWA, different methods of water quality for their appropriate age groups. For more information see the Chena River location map.

- Water quality (temperature, pH, and conductivity) was tested during each sampling event using a Hanna HI 98129 pH/EC/TDS/Temperature meter. Meter calibration was checked each week before and after testing using pH 4, pH10, and 1413µS standard solutions.

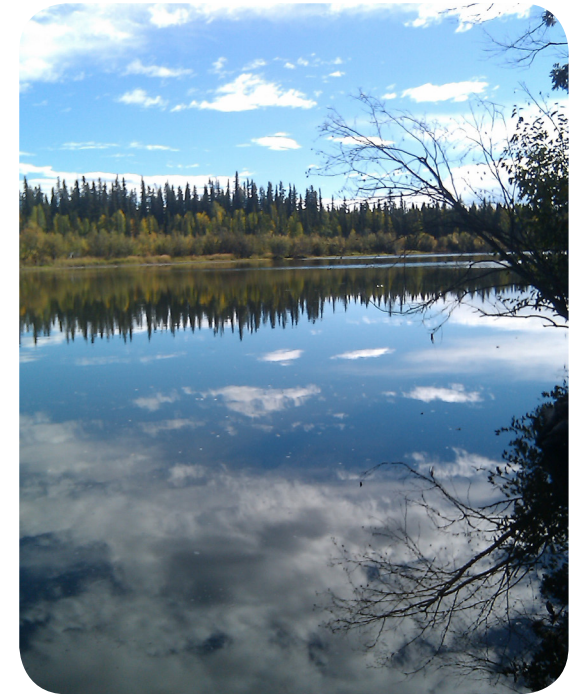
- Watershed Appreciation Weekend was held on June 8th. The Annual Stream Clean-Up Day had about 44 volunteers in attendance. TVWA also held the second annual Chena Riverwalk, connecting with nature. The event was held to educate youth about water quality and their local watershed. The event had over 20 partner agencies involved, with over 200 people in attendance (more than double the amount of last year).



Noyes Slough clean up volunteers - Photo courtesy of Daily Newsminer

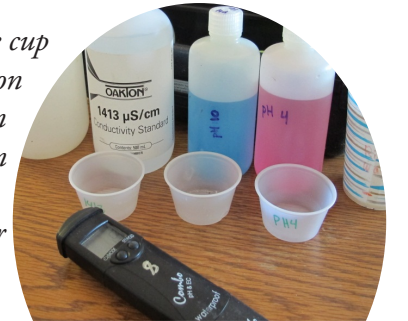


14 Locations regularly sampled on the Chena River



Water Quality Sampling Supplies

Water sample cup
pH 10 solution
pH 4 solution
1413 solution
Solution cups
Hanna Meter
Waste bottle



- Water quality monitoring equipment was inventoried, cleaned, and serviced before and after the sampling season.

- Advertisements for the annual Stream Clean-up and Riverwalk included: TVWA's e-news; advertisements in the Fairbanks Daily News Miner; posters distributed to the attendees of the Chena River Summit as well as the Outdoor and Home Shows at the Carlson Center; and via radio talk on 97.0 KFBX AM news radio.

- To broaden the experience for the Citizen Scientists, habitat surveys based on the EPA Habitat Walk method were undertaken during the season to record changes in riparian habitat over time.

- Alaska DEC submits all of the AAS data to EPA's Storage and Retrieval Data Warehouse (STORET) where the information will be joined and preserved with all National Water Information which is accessible by agencies and general public to look up all analytical details of each sample taken during the 2013 season.

- Bioengineering restoration work performed on Shoreway Park included stormwater management as well as willow planting upon removal of a cement shoot. A joint effort from City Public Works, DOT&PF Maintenance, Tanana Valley Watershed Association, Student Conservation Association, and U.S. Fish & Wildlife Service and their Wounded Warrior and Youth Corps crew was held on August 6, 2013.

- TVWA promoted Adopt-A-Stream activities at local events including the Home Show, the Yukon Intertribal Fisheries Meeting, the Watershed School Outreach, the Outdoor Show, The Earth Day at Ft WW & the TVWA Open House, the Chena Riverfront Commission, the Chena River Summit, and the Chena Salmon Project Training.

- FSWAC provided \$10,000 in annual funding to the TVWA in early 2013 in support of program costs.



TVWA staff & volunteer citizen scientists