2014 Adopt-A-Stream Report

Program Description: How it Works

The Fairbanks Storm Water Advisory Committee (FSWAC) and the Tanana Valley Watershed Association (TVWA) continue the Memorandum of Agreement to implement Adopt- a-Stream programs within Fairbanks and North Pole. TVWA administers the Adopt-a-Stream programs with the support of FSWAC. FSWAC provides program support through annual funding and additional in-kind assistance to TVWA, as well as hosting an annual Stream Cleanup Day. TVWA implements and schedules program activities and maintains the participant list of adoptees and their designated stream sections. TVWA also submits an annual Adopt-A-Stream report to FSWAC outlining tasks and community outreach accomplishments during the year.

The Adopt-a-Stream programs are community-based programs with a variety of volunteer activities. The primary activities encompass water-quality monitoring and stream restoration and maintenance that provide residents and other stakeholders with the opportunity to participate as proactive watershed stewards. These watershed stewards also partake in litter pick-up, invasive species identification, and management of flow restrictions. Community stewards and volunteers hold a sense of ownership and role in local water quality issues. As a result, FSWAC and TVWA raise community education and awareness through implementation of these programs while improving local water quality and develop a strong volunteer base.

The annual reporting includes 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. Measurable goals of the Adopt-a-Stream programs are to increase the number/length of stream sections adopted each year and to continue to expand cleanup efforts within the watershed. Highlights of the year's successes and achievements are included in the report.

The Alaska Department of Environmental Conservation (AK DEC) in accordance with Alaska Pollutant Discharge Elimination System (APDES) Permit No requires implementation of the Adopt-a-Stream programs. AKS-053406. The City of Fairbanks, City of North Pole, Alaska Department of Transportation & Public Facilities, and University of Alaska Fairbanks comprise the major member agencies of FSWAC who collectively hold this permit. AK DEC then submits the Adopt-a-Stream data to the EPA's Storage and Retrieval Data Warehouse (STORET), where the information is joined and preserved with National Water Information. All the data is accessible to agencies and the general public for exploring or for analytical details of each sample taken during the 2014 season.

2014 Community Outreach Accomplishments, Highlights & Resources

- *2014 Community Projects:* TVWA sought creative, visible solutions to engage community learning and care for local waterbodies in addition to traditional citizen-scientist framework. Several public events and educational sessions took place to address large threats to healthy waterbodies, such as stormwater issues, uninformed public, and trends of disconnect between the youth and nature. A

solution to tackle stormwater that TVWA and partners engaged in was to build a rain garden at the Carlson Center. This garden acts as green infrastructure, filtering pollutants exiting the Carlson Center's parking lot and entering the Chena River. Partnerships with the Fairbanks Downtown Association, City of Fairbanks and others facilitated a Storm Drain Art Contest. Other partnerships lead to a Watershed Discovery Zone at THREAD and Camp Habitat. Overall success of these projects enabled stronger community connection with the natural world and greater education publications, as with the Chena River.

- *Carlson Center Rain Garden:* TVWA partnered with UAF's ATLAS youth program to build a rain garden on the banks of the Chena River at the Carlson Center. This project was truly a community collaboration, utilizing donations and volunteers from Great Northwest, the Operator's Union, the Dept. of Forestry, City of Fairbanks, Alaska Dept. of Environmental Conservation as well as individual farmers. The garden is located at a prime location along existing walking trails and bordering the Chena River. It not only helps mitigate the stormwater from the Carlson Center's parking lot but will also serve as a great educational installation to help raise awareness on stormwater-related concerns and innovate solutions to the problem.
- *Storm Drain Art Contest:* Decorate the Drains! Inspire the Inlets! Graffiti the Grates! The goal of the project was to provide public art downtown while also contributing to public awareness that stormwater from Fairbanks drains directly into the Chena River. Local artists were invited to submit designs in the following categories: Storm Water Pollution (litter, vehicle fluids, pet waste, soapy water, etc.) Fish, Wildlife, Habitat (moose, beavers, ducks, salmon, grayling, willows, etc.) or Quality of Life (clean water for recreation, drinking, natural beauty, etc.). Designs were collected and voted on at the Chena River Summit on May 7th. They were painted on June 7th and 8th and on display downtown for the duration of the summer. This project garnered much attention and was widely celebrated as a success for improved community connection and spread stewardship of local waterbodies.
- *"Out in the Community" Public Events:* TVWA hosted educational booths at several events. These events include the Home Show, KTVF Summer Activities for Kids Fair, Fort Wainwright Earth Day Festival, ADF&G Kids days, Fairbanks Days, Solstice Celebration, Red Green Regatta and Chena Hotsprings Renewable Energy Fair. TVWA facilitated the Watershed Appreciation Weekend was held on June 14th. The 10th Annual Stream Clean-Up Day successfully had 56 volunteers attend.
- *Chena River Summit & Riverwalk Events:* TVWA hosted the second annual Chena River Summit on May 7th at the Carlson Center. This year's topics included: quality of life; Tanana Recreation Sites; Noyes Slough Clean Up Day; Yukon River Salmon Treaty; River safety, access, and recreation; bugs, ducks and beaver dams; impaired water; events on the Chena River and more. TVWA also held the third annual Chena Riverwalk connecting people with nature. The event educated youth about water quality and their local watershed. The event had over 20 partner agencies involved, with over 300 people in attendance. Our largest participants count this year!
- *Watershed Discovery Zone at THREAD:* A nature-themed playground using low-cost natural and recycled materials was created to connect kids and parents to the natural world through a safe, inspiring, and wildlife-friendly zone. This pilot watershed discovery zone was installed during

the summer for the Fairbanks THREAD home base, located at 1908 Old Pioneer Way. Elements of this playground include a dry creek bed, rain garden, rain barrel, and more. We believe that this project can act as a model, planting a seed for creating spaces for kids to explore our watershed and connect deeply to water. This project continues encourage the next generation of good stewards with years to come.

- *Partnership with Camp Habitat*: TVWA field technicians extended our program to Camp Habitat this summer. On July 11th a TVWA field technician trained a dozen Camp Habitat adult staff members in water quality using our adopt-a-stream protocol and new kid kits. Staff members were given appropriate water quality kits to incorporate into their curriculum for use with the campers.
- *Chena River publication:* TVWA printed 1000 copies and distributed our *Chena River, Living River* book throughout the community, at local events and at the 2014 Chena River summit. The book was offered to all Chena Riverfront property owners. A free digital version is available for download from our website homepage to those interested in an electronic version. The success and demand for the book has lead to the collaboration between TVWA with the Chena Riverfront Commission, Mayors in the watershed, and Military to reprint more hardcopy books for 2015.

- *2014 Resource Highlights and Accomplishments:* Water-quality monitoring equipment was inventoried, cleaned, and serviced before and after the sampling season. Based on the inventory, TVWA was able to obtain more kits that are more kid-friendly. Capacity building and volunteer training took place this summer.
  - *New Kits*: TVWA field technicians designed a new "kid kit," World Water Quality Testing Kits, for the Adopt-A-Stream program in efforts to engage more youth into our program. These kits allowed younger participants to measure turbidity, dissolved oxygen, pH and temperature. Technicians created simplified data sheets to accompany the kits within a colorful clipboard package and needed smaller buckets. Many adults enjoyed the World Water Quality Testing Kits as well as encouragement for shared adult participation in the project with their kids.
  - *Trainings*: TVWA provided volunteers with individual water quality monitoring training at the Pioneer Park pavilion on May 10th and at Moose Creek Dam on July 12th. Additional in-office training was held on July 22nd. Each training was approximately two hours in length, included a PowerPoint presentation and handout document. Information at the training covered proper sampling techniques and how to use a Hanna® meter to measure pH, conductivity, temperature, and record useful observations. 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 *Adopt-a-Stream (AAS) PowerPoint Training*.
  - *Volunteers*: TVWA maintained a list of stream adoptees and their respectable stream sections they were responsible for conducting water quality sampling. A total of 78 volunteers participated in our program this year. Of these, 11 adults and 5 youths participated in the traditional water-quality sampling. An additional 50 youth and 12 adult participants were engaged as part of TVWA's partnership with Camp Habitat.

- *Locations*: A total of 23 locations were sampled on local waterbodies. These watersbodies were: Chena River (7), Noyes Slough (1), Creamer's Field (3), Piledriver Slough (7), Nenana River (2), and Beaver Slough (1). 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 done prior to and after the water testing each week using solution standards of pH 4, pH 10, and 1413µS.

RESULTS of FIELD SAMPLES:

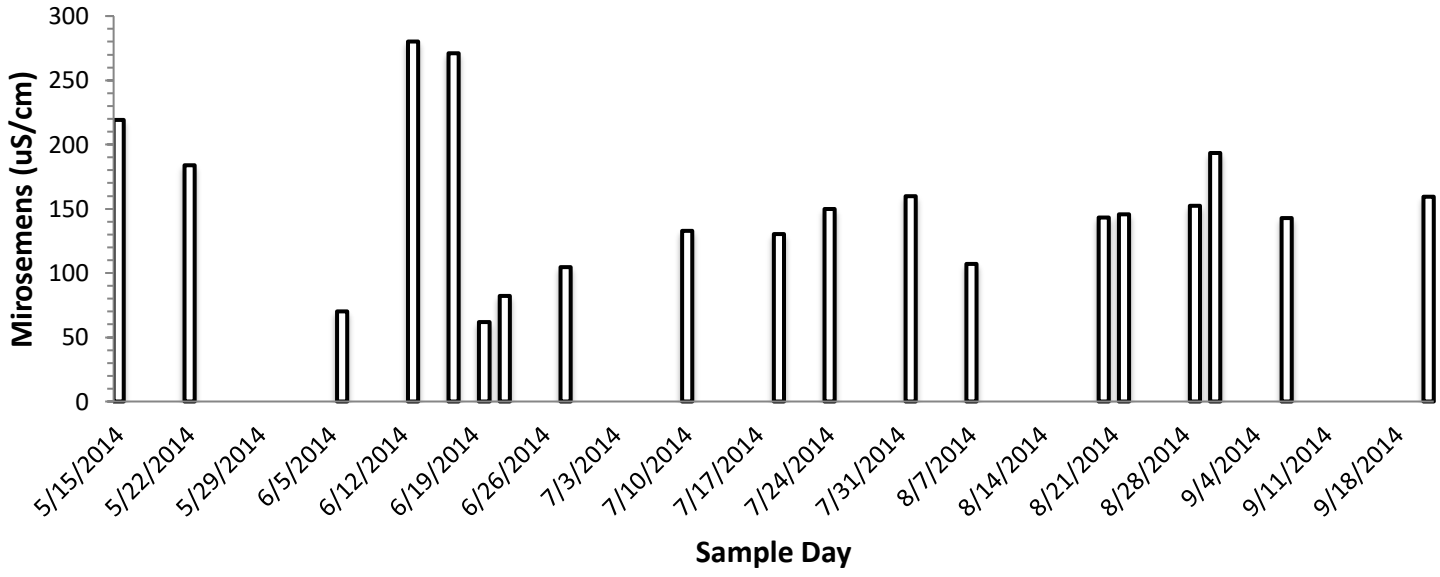

Table 1: Average Conductivity for Sampled Day

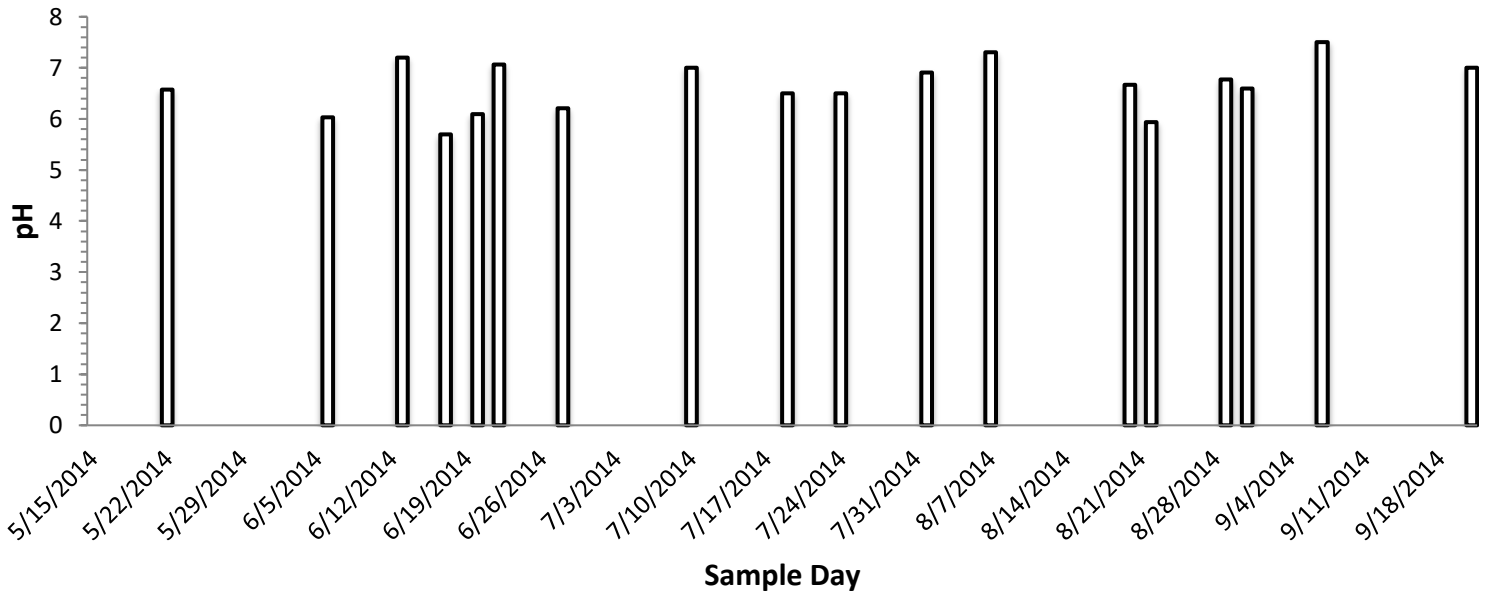

Table 2: Average pH for Sampled Day

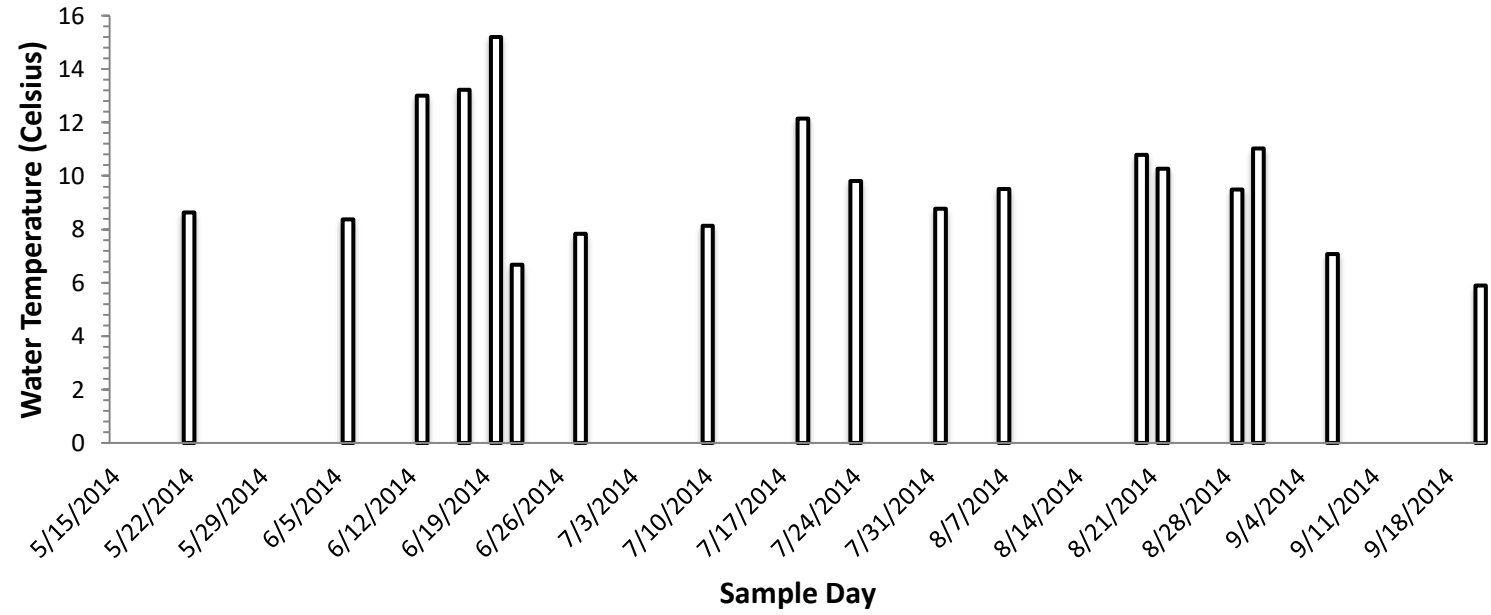

Table 3: Average Water Temperature for Sampled Day