

Tanana Valley Watershed Association

2016 Annual Report of Adopt-a-Stream Program Activities for the

Fairbanks Storm Water Advisory Committee

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 and River Walk. 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 2015 season.

2016 Community Outreach Accomplishments, Highlights & Resources

- 2016 Community Events: 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 storm water issues, uninformed public, and trends of disconnect between the youth and nature. Partnerships with the Fairbanks Downtown Association, City of Fairbanks and others facilitated a Storm Drain Art Contest. Other partnerships lead us to green infrastructure installations downtown with FSWCD Habitat for youth group. Overall success of these projects enabled stronger community connection with the natural world and greater education publications, as with the Chena River.

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 storm water 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.). For the past 3 years TVWA has invited local artists to submit design proposals for storm drain art in downtown Fairbanks. The purpose of this project is to raise public awareness that ALL storm drains flow

directly into the Chena River and to provide an opportunity for artists to create public works of art in the downtown and surrounding Fairbanks area. The past art was displayed for one year prior to the construction on Cushman Street (2014) and on Noble Street (2015) and Cowles Street (2016). This project has garnered local, state and national attention.

This project is posted to our website at:

www.tvwatershed.org/storm-drain-art

Storm Drain Art Contest
Decorate the Drains! Inspire the Inlets! Graffiti the Grates!

2016 Cowles Street
Compete for a chance to see your drawing become a real piece of street art!

Wet Weather
Down spout
Storm drain
Outfall pipe to river

More Info: TVWatershed.org

Three Themes:

1. Storm Water Pollution (litter, vehicle fluids, pet waste, soapy water, etc.)
2. Fish, Wildlife, Habitat (moose, beavers, ducks, salmon, grayling, willows, etc.)
3. Quality of Life (clean water for recreation, drinking, natural beauty, etc.)

Calendar:
Call for Art (April 1 to 30) - Voting (May 16 @Big I Pub - Street Painting (June 4 & 5)

Brought to you by these community organizations

Fairbanks Stormwater Advisory Committee, City of Fairbanks, Downtown Fairbanks, U.S. Fish and Wildlife Service, Partners for Fish & Wildlife, Festival Fairbanks

Storm Drain Art – Continued:

After the art submittal deadline - TVWA held an Arbor Day Celebration. During this event - the public picked the winners and we coordinate with the City of Fairbanks on which art / artists paints on what storm drain - to make sure the art fits the best storm drain and sidewalk. We then contact the winning artist with the location and date for them to paint.



The City of Fairbanks works with the Division of Transportation to put out signs for traffic revision and cones for artists safety. The artists are allowed all day to paint their storm drain. Staff from TVWA and the City of Fairbanks are on site to help with any questions they might have.

The City of Fairbanks then seals the art on the storm drains and everyone gets to enjoy the colorful pieces for the rest of the summer.



23 local artists submitted their creative ideas (many of whom submitted more than one idea) and **11 submissions** were chosen by the attendees at the 2016 Arbor Day Celebration held at the Big International on May 16th. **11 storm drain paintings** were completed on Saturday, June 4th. TVWA is proud to host this event - and it wouldn't be possible without the wonderful local support and partnership with the City of Fairbanks, the Fairbanks Stormwater Advisory Committee, the Downtown Association of Fairbanks, Project Fairbanks and Festival Fairbanks.

Storm Drain Art Contest – local media: Newsminer Article

www.newsminer.com/storm-drain-art-contest/image_16dc1ef8-2ac0-11e6-8da0-dfd9121f6489.html

Storm Drain Art Contest

Decorate the Drains! Inspire the Inlets! Graffiti the Grates!

2016!

In the spring of 2016, TWVA partnered with the City of Fairbanks. The Downtown Association and our Adopt-A-Stream program to continue our Storm Drain Art Contest. Twenty-three local artists submitted their creative ideas (many of whom submitted more than one idea) and eleven submissions were chosen as winning designs by the attendees at the 2016 Arbor Day Celebration held at the Big International on May 16th. Eleven storm drain paintings were completed on Saturday, June 4th.



Bottoms up anyone?



These two fish represent all the sea creatures that have to swim in the Chena River. This sea creatures do not have a CHOICE since the Chena River is their natural habitat. So may this design aims to encourage all of us to keep our streets clean. Anything we throw on the ground will be washed into the drains when it rains and will find it's way to the Chena River. What if we turn the tables around. Who would want to drink that glass of water... BOTTOMS UP ANYONE?

Artist: Johanna Bauman

Johanna flew 3000 miles to get to Alaska... that was four years ago. Now, she considers Fairbanks as her home sweet home. When she moved here and started fishing in Chena, Seaward and Kludze. She fell in love with the natural beauty of her surroundings. Everything looks so breath taking. She takes pictures of the sunsets, the running waters, fish she and her husband caught and anything that captures her eyes. And then when they are back home, she would get her colored pencils or watercolor and make her own inspired artwork. She shares her artwork by drawing or painting on fish boxes, packages, letters and envelopes she sends to friends and family in the Interior and Lower 48.

You Otter Not Pollute!

I chose the sea otter as my subject, as she resides where all rivers meet- the ocean. The shellfish she prelates upon are bottom-feeders, meaning they feed upon ocean floor debris- including harmful trash and toxic waste sent from our city storm drains. I wanted my artwork to remind people that the sea otter relies on us to be mindful of our actions- that our actions ensure her health and her survival. The drain grate mimics her ribs, reinforcing the idea that the clean water from our drains help her to live.



Artist: Hannah Foss

Hannah is a CGI Animator/ Digital Artist at the University of Alaska Geophysical Institute. She holds a BFA in Computer Arts (Honors) and a Certificate in Advanced Studies in Character Animation from Animation Mentor. Hannah grew up in Adelaide, South Australia and moved to Alaska in 2008. Some of her adventures include spending several years as a paleontological artist. CGI animating a couple of museum films, constructing a 15-ft long dinosaur puppet called Snaps, eating tasty muktuk, snow-machining on the Chukchi Sea and meeting a polar bear.

Storm Drain Art Posters (for all 3 years) hung up at the Fairbanks City Hall

For the past three years, TVWA has invited local artists to submit design proposals for storm drain art in downtown Fairbanks. The purpose of this project is to raise public awareness that ALL storm drains flow directly into the Chena River and to provide an opportunity for artists to create public works of art in the downtown and surrounding Fairbanks area. These are examples of the 2016 posters that were hung in City Hall this year.



WE need YOUR help!



"WE need YOUR help!" Speaking for the animals. Because we are now starting to see the result of our waste and how much it is impacting our Fish and Wildlife. The time to act is NOW! PRESERVE our QUALITY OF LIFE by helping keep the streets and streams clean.

Artist: Pamela Lipari

Hello, my name is Pamela Lipari. I love my family and have many passions in life. I am born and raised right here in this beautiful town we call HOME, Fairbanks, AK. Growing up in Two Rivers gave me my love for the outdoors. I LOVE ALASKA and all it has to offer. I also love fishing, camping, hiking, taking photos and painting.



Make a Better Life



My design is a red and black tribal fish with a green gas mask. The background is blue with trash like apple core, bottles, and cans. I think it fits in the 3 themes you wanted us to do because its about water pollution with all the trash in the water. It's about a fish trying to live by wearing a gas mask just to survive. The picture teaches that we should throw away trash in the trash can than letting an animal suffer.

Artist: Kaye Seol

My name is Kaye Seol. I am 13 years old. I live in Fairbanks, Alaska. I go to Ryan Middle School. One of my favorite hobby is drawing. I won some award for drawing. Like the 2014 born to vote and I won the dog-gone book fair drawing.

“Out in the Community” Public Events: TVWA hosted educational booths and/or participated in a few community events during the spring and summer this year. We’ve found these events to be very successful at promoting the Adopt a Stream program and education family and youth about water quality issues and watershed stewardship.

April 1-3 IBA Home Show

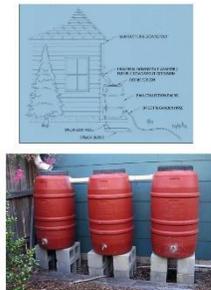
TVWA partnered with Soil and Water Conservation District for a booth. TVWA donated a rain barrel to be raffled off and cohosted a power point presentation about Green Infrastructure and their impacts on water quality. We used this as the first opportunity to talk about the AAS program. This event helped expose water quality issues to a wide range of people that we would normally not have seen. **The Home Show had 5030 attendees.**



Benefits of Green Infrastructure

- Keeps valuable water on YOUR site for YOUR plants!
- Reduces erosion - it keeps your soil on your site, where it belongs!
- Reduces flooding
- Recharges groundwater
- Allows rain water to filter into the ground quickly
- Minimizes pollutants being carried into nearby water, therefore protects the fish in the Chena River!

Rain Barrels



Flow Through Planter



April 16th – KTVF Kids Day Activity Fair

The KTVF Summer Activities for Kids Fair on April 16th, was held at the Big Dipper Ice Arena this year and **had 220 attendees.**





Arbor Day April 29th

Arbor Day was a success. We planted trees, shrubs, perennials within the riparian zone (originally slated to be installed at the FNSB bank – but went in at the park on the other side of Cushman). TVWA provided the plaque for the ceremonial tree planting at Griffin Park. Laura went on the radio on KSUA with on May 13 to talk about Arbor Day events. The public voted on the “storm drain artists” and the Green Up Day winner was announced. John with the Big I provided a tent, pizza and refreshments for all of the attendees.

Get involved...

Plant a Tree, and Celebrate!

Alaska's 50th Anniversary
of Arbor Day at the Big I

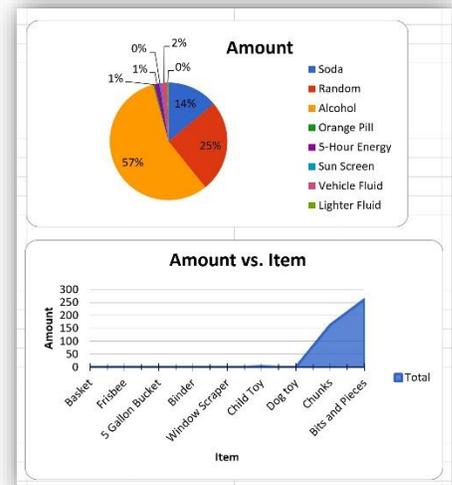
When:
May 16 from 3pm - 7pm

Where:
Big I Pub & Lounge @
22 N Turner Street - along the Chena River.



June 11th - 12th Annual Stream Clean-Up Day

TVWA assisted with the 12th Annual Stream Clean-Up Day. There were 55 volunteers that cleaned up 1100 lbs of trash. TVWA staff then took this trash and started compiling a master list of the types of trash and where it was located. TVWA will be able to partner with another grant assess the types of trash and give suggestions on how to lower the amount of trash in the Noyes Slough.



June 19th – The Midnight Sun Festival

The Midnight Sun Festival was a huge success. The weather was perfect and it had approximately 25,000 attendees this year. TVWA had a booth in the Golden Heart Plaza, right next to the fountain. We showcased the green map and the Adopt a Stream program at this booth.



Partnership with Camp Habitat

TVWA's Science Director continued our collaboration with Camp Habitat this summer. On June 6th, the Science Director trained a dozen Camp Habitat adult staff members in water quality using our adopt-a-stream protocol and 15 new kid kits. Staff members were given appropriate water quality kits to incorporate into their curriculum for use with the campers during their summer activities. See summer schedule.

Pre-School Programs Half-Day Program 8:30 AM - 12 PM or 12:30 PM - 4 PM
 Children explore Creamer's Field Migratory Waterfowl Refuge through developmentally appropriate hands-on activities and games. Your kids will experience the natural world with sensory exploration, discovery hikes, ecology-themed games, songs, and creative craft projects.

Ages 4 - 5
Nature Sprouts June 13-17, 2016 (12:30 pm-4 pm)
Nature Sprouts June 20-24, 2016 (8:30 am-12 pm)

Day Camp Programs Full-Day Program 9 AM - 4 PM
 Kids learn about the natural history of Interior Alaska through engaging activities, games, hikes, projects and guest speakers. They will explore the natural world through themes such as plants, animals, birds, fish, habitats, and people & the environment. Each of the two weeks of day camp offered in each age group follow the same curriculum.

Ages 6 - 7
Nature Detectives July 11-15, 2016
Nature Detectives July 18-22, 2016

Ages 8 - 9*
Water Striders July 11-15, 2016
Water Striders July 18-22, 2016

Ages 10 - 11*
Refuge Adventurers July 11-15, 2016
Refuge Adventurers July 18-22, 2016

**Youth enrolled in Water Striders & Refuge Adventurers sessions will go on an overnight campout on the Thursday night of their camp session.*

2016 Resource Highlights and Accomplishments:

Trainings: TVWA provided volunteers with individual water quality monitoring training at Pike's Landing, on May 7th and May 28th. Training was approximately two hours in length, handout documents and hands-on learning for how to use the water testing kits. 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. Volunteers turned in their data by October 30th and data was entered into the EPA water quality collection spreadsheet.

Tanana Valley Watershed
Adopt - A - Stream

Visit our website!

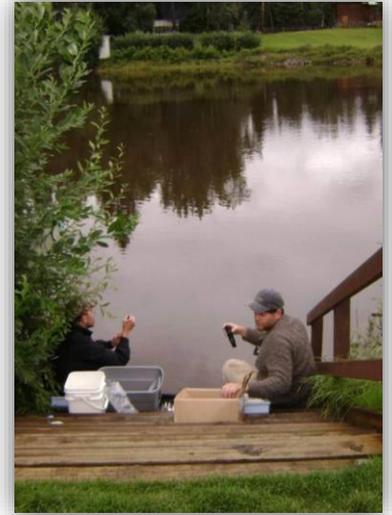
Tanana Valley Watershed Association
 Adopt - A - Stream
 Volunteer Training!
May 28th, 2016
1:00 PM - 3:00 PM
 Next to Pike's Landing
 4438 Airport Way, Fairbanks, AK 99709
 RSVP to andrea.sahby@gmail.com
 We will have the training so long as weather permits.



2016 Resource Highlights and Accomplishments: Continued

New Hanna Meters: With a grant from Norcross, we were able to purchase some new Hanna Meters for water quality testing with the Adopt-A-Stream program.

Locations: The Science Director has worked on sampling 6 locations from mid-May through the end of September. The sampling sites include: Chena River (3), Noyes Slough (2), and Tanana River (1). Water quality (temperature, pH, and conductivity) were 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 1413 μ S.



Green Map: An interactive, online map has been created and known 'green' sites have been added. These sites include parks, businesses, and private residences. The green infrastructure items include roof top gardens, dry wells, and rain barrels. **Green Map** celebrates our region's progress toward becoming a healthy, sustainable urban environment. It provides information about Fairbanks' natural, cultural, and "green" daily living resources through print and interactive maps and education outreach activities. We use the icons of the international Green Map® System, a grassroots network active in 65 countries with over 900 projects.



**Think Global
Map Local**

Local residence were invited to volunteer - added to our community's Green Map and to make a major contribution to a healthier, more sustainable future. The Tanana Valley Watershed Association, in partnership with other local agencies, with funding from the Alaska Clean Waters Act created the Fairbanks, Alaska portion of the Green Map. We updated the forest canopy cover depicting current conditions along the Chena River (within City limits). We then populated sites of the Fairbanks North Star Borough showing the current condition of gray and green infrastructure in the community. With unique global icons and adaptable tools, Green Map System has engaged communities worldwide in mapping green living.

Green Maps chart a sustainable future! Explore and get involved.

<http://www.tvwatershed.org/green-map>

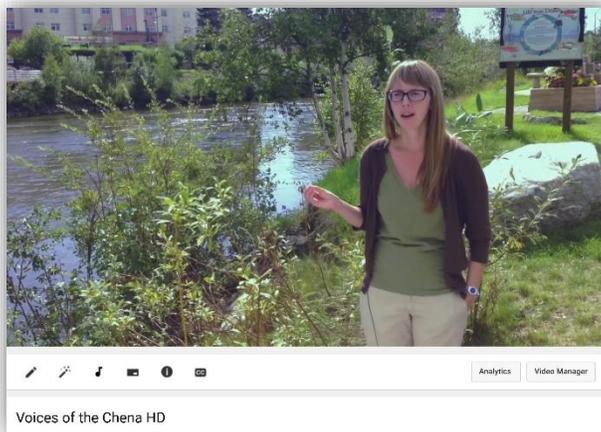
<http://www.greenmap.org>

Chena River Video: TVWA and the US Fish and Wildlife Service partnered to create "Voices of the Chena." This short film explores the Chena River and its importance to king salmon. Through interviews with local residents, business owners, and landowners, it highlights ways we can all be watershed stewards. Water quality and ways to improve the water quality of the Chena River was discussed throughout the short film. The debut was hosted at the Venue on August 26th with **over 150 people in attendance**. TVWA posted the video on YouTube (**has had over 500 views to date**) as well as planning follow up video showings at the Morris Thompson Center – in their rotation or special showings, TVWA website, TVWA Facebook, TVWA Instagram, DTA website, Venue website, the Blue Loon as well as other places.



Video Debut

YouTube Video

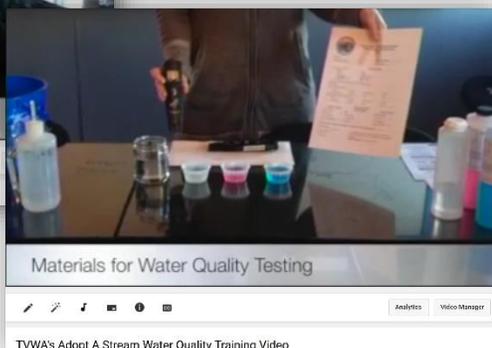


TVWA website: www.tvwatershed.org/voicesofthechena
 YouTube: www.youtube.com/watch?v=QaG_MWBX2BI

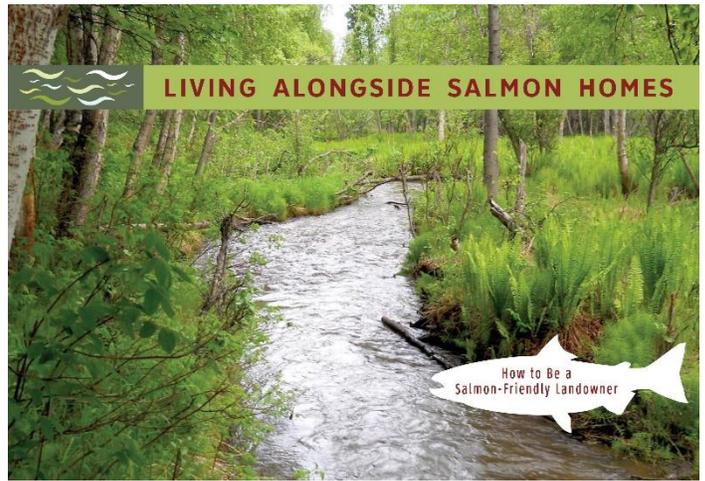
Water Quality Video: TVWA created a short film to be used in conjunction with our Adopt a Stream trainings on how to use hanna meters. This film is posted on our website and YouTube.

www.tvwatershed.org/aas

www.youtube.com/watch?v=Ng7GW-N5ZaY



Salmon Booklet: Residents of Interior Alaska play a critical role in maintaining our state's salmon populations by protecting local water quality and stream habitats. Being a salmon-smart neighbor means making good choices for our streams, rivers, wetlands, and lakes. Good choices also ensure our communities have access to clean drinking water, recreation opportunities, and thriving habitats and ecosystems for future generations. This guide offers information, tips, and resources for community members to help salmon populations and Interior Alaska waterways thrive.



PROTECTING CLEAN WATER & SALMON HABITAT IN INTERIOR ALASKA



Thousands of salmon streams flow throughout Interior Alaska. Salmon are part of our regional identity and way of life. If you are reading this booklet, there is a good chance you live near a salmon stream. More specifically, you most likely live near a stream which serves as a nursery for baby salmon.

Residents of Interior Alaska play a critical role in maintaining our state's salmon populations by protecting local water quality and stream habitats. Being a salmon-smart neighbor means making good choices for our streams, rivers, wetlands, and lakes. Good choices also ensure our communities have access to clean drinking water, recreation opportunities, and thriving habitats and ecosystems for future generations.

This guide offers information, tips, and resources for community members to help salmon populations and Interior Alaska waterways thrive.

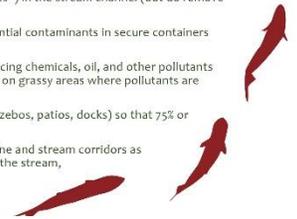


SALMON-FRIENDLY PRACTICES

Water quality in our local streams can be degraded by pollutants that enter into streams from homes, yards, and driveways. These pollutants include chemicals, fuels, oils, bacteria, sediment, and fertilizers.

Your waterfront may be a nursery for juvenile salmon or a spawning bed. Here are ways you can help protect their habitat and water quality:

- Maintain naturally-vegetated stream banks and avoid obstructing the flow of a stream or altering a stream channel.
- Minimize disturbances to the streambed (keep foot traffic, bikes, ATVs, and vehicles out of the stream). Incubating salmon eggs and young fry are highly vulnerable to siltation, vibration, and physical disturbances.
- Allow the natural accumulation of woody/natural debris ("fish forts") in the stream channel (but do remove any trash or household debris).
- Store oil, grease, household chemicals, pesticides, and other potential contaminants in secure containers and dispose of them properly at the landfill.
- Snow from driveways and streets can contain sediment, salts, de-icing chemicals, oil, and other pollutants harmful to streams. Store snow away from the stream, preferably on grassy areas where pollutants are filtered from the melted water before it flows into a stream.
- Along your shoreline, focus access and outdoor amenities (e.g. gazebos, patios, docks) so that 75% or more of the shoreline edge is protected from foot traffic.
- Maintain as much of the native vegetated buffer along the shoreline and stream corridors as possible. This helps sediments stay rooted and keeps them out of the stream, where they can damage salmon gills.



STREAMSIDE PLANTS

By leaving natural vegetation in place and being careful not to disturb it, or by planting native salmon-friendly vegetation, you give salmon the edge they need. When restoring vegetation, make sure you use only native plants.



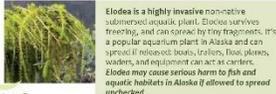
Native plants occur naturally in a region and are not introduced. Once established, native plants require less maintenance than introduced or ornamental plants, and they maintain natural streamside habitat.

Invasive, non-native plants have the ability to displace native species, and they mature early, grow fast, and spread rapidly. Invasive examples include choke cherry, reed canary grass, bird vetch and white sweet clover.*

Invasive plants can potentially cross-pollinate with native plants and can also alter the soil composition. Their ability to out-compete native plants for water and nutrients can threaten local fish and wildlife habitat.

Some of the primary ways invasive plants are suspected to spread in Alaska are contaminated topsoil and gravel used in construction projects, trade and sale of invasive ornamental plants and contaminated potted plants, and dumping aquarium, and yard waste in natural areas.

* For more information about unwanted invasive plants visit: <http://www.uaf.edu/ces/jmp/invasivereplants/> or <http://plants.alaska.gov/invasives/index.htm>



Elodea is a highly invasive non-native submerged aquatic plant. Elodea survives freezing, and can spread by tiny fragments. It's a popular aquarium plant in Alaska and can spread if released from tanks, boats, trailers, washers, and equipment can act as carriers. Elodea may cause serious harm to fish and aquatic habitats in Alaska if allowed to spread unchecked.

IF YOU FIND ELODEA OR OTHER INVASIVE PLANTS CALL 1-877-INVASIV or Fairbanks Soil and Water Conservation District at (907) 479-1913 and www.fairbankssoilwater.org

Resources for landowners interested in revegetating streambanks with native non-invasive plants:
Alaska Plant Materials Center www.plants.alaska.gov
UAF Cooperative Extension (907) 781-6310 | www.alaskainvasives.org



CULVERTS

Providing safe passage is essential to ensuring sustainable salmon populations throughout Alaska.



If you have a culvert on your property and it resembles any of these photos, it is likely that it does not allow young or adult salmon to pass freely! All of the images show culverts that block fish passage and prevent salmon from accessing essential habitats.

Alaska Department of Fish and Game will visit your property and assess whether or not your culvert allows safe passage for salmon. Funds from cost share programs like the Fish Passage Program at the US Fish and Wildlife Service may be available to assist landowners in replacing their culverts with fish friendly culverts.

To have your culvert assessed contact the ADF&G Fish Passage Improvement Program Coordinator at (907) 267-2146 or the U.S. Fish and Wildlife Service Fish Passage Program at (907) 271-1798 or Jeff Adams with USFWS at (907) 456-0218.

Examples of culverts that do not allow fish passage.



A free copy of this is available on our website.

<http://www.tvwatershed.org/chena-river-awareness-campaign>