Natural Currents

The newsletter for Homer Soil & Water Conservation District Spring 2021

Homer Soil & Water Board of Supervisors

- Chris Rainwater Chair
- Otto Kilcher Vice Chair
- Jason Ritter Treasurer
- Tim Alzheimer Secretary
- Jim Engebretsen

In This Issue:

Homer Soil and Water is growing! Even in a time of relative chaos (Covid turned the world on its head), we are getting more opportunities to do projects that are meaningful to the community. We have gained excellent personnel, running excellent programs and hired several new field technicians for this summer. We have local projects on the Anchor River, out at Fox River Flats, and everywhere in between. We are working with numerous partners on projects peninsula-wide, from firebreaks to invasive species treatments. And on top of all that, we are working with teams on soil and botany surveys state-wide for BLM and NRCS Soil Survey.

If you visit our tiny office on Pioneer Ave, you won't believe that we have grown to a team of twelve staff members. Most of us this last year, thanks to Covid, have been working at home. As times change, however, we are more able to be in the office and more able to receive visitors. Right now vaccinated visitors are welcome without a mask, but we must ask that others wear a mask inside. And we are more than happy to meet outside with anyone, any time.

Depending on field work and other schedule conflicts, we will often have staff in the office from now on, but you can always call ahead to make sure someone is there. The phone in our office is 235-8177 ext 5. Saty tuned and take a moment to read over all our wonderful projects mentioned in this newsletter. Read on and enjoy!

Kyra Wagner
District Manager

Knights of the District

We are full of gratitude for these amazing cooperators!

Sir Darryl and Lady Rieta Walker: A huge shout out goes to these two for allowing Homer Soil & Water to use an acre of their fields for our cover crop study! For years these two have supported local projects including plots for elementary students to raise carrots or for our lime trials on hay fields. They are always excited to learn more, and we really appreciate their support!

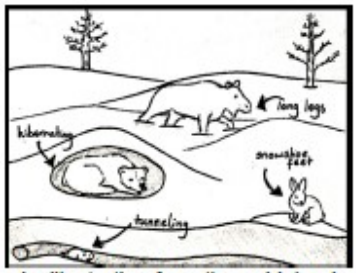
Our Mission: To provide education and leadership in the conservation and sustainable use of soil and water-related resources through cooperative programs that protect, restore and improve our environment.

New ways to explore the Demo Forest

There's lots going on in the Homer Demonstration Forest. Homer Soil and Water has had a student intern helping out at the forest this winter/spring thanks to Kachemak Bay Campus's Semester by the Bay. Under the always fun and wise guidance of Dave Brann, the delightful Mia Werger did all kinds of things to help us enjoy our forest, from installing wildlife cameras to maintaining a beautiful illustrated journal to improving the winter trail to creating a new guidebook for the improved trail. A few illustrations of her contributions are included below, but for lots more, check out the Homer Demonstration Forest Facebook page. The photos are from the April 5 ribbon cutting celebrating the improved winter trail and its guidebook.

From Mia's illustrated journal


Mia cutting the winter trail ribbon



An illustration from the guidebook


Mia holding the new winter guidebook


Dave Brann and Mia Wegner at the winter trail ribbon cutting on April 5


Mia leading a group down the winter trail

From the Ag Side

Homer Grown Radio

Season 2 of Homer Grown is in full swing!

In case you haven't heard, Homer Grown is an hour-long show on public radio, KBBI AM 890, that focuses on agriculture and wild harvest here on the southern Kenai Peninsula. It features interviews with local growers, agricultural scientists and others with expertise to share. Homer Soil & Water co-produces the program with host Desiree Hagen of KBBI and so far this season we've interviewed some very interesting Homer-area producers, including:

- Weatherly Bates of the Alaska Shellfish Co., a Halibut Cove mariculture operation on kelp farming
- Sonja Martin-Young of Alaska Aquaponics on growing salad and Asian greens and fresh herbs for her CSA customers in Homer year-round!
- Anna Meredith and Jake Beaudoin of Bridge Creek Birch Syrup on making birch syrup
- Elder Kathy Brewster of Nanwalek spoke on medicinal plants within Sugpiaq/Alutiiq culture
- Tim Alzheimer (HSWCD Board member) on propagating new fruit bushes from clippings
- And more…..

You can catch new episodes every other Saturday at 11:00 AM: 1) on the radio dial at KBBI AM 890; 2) stream it on www.kbbi.org; 3) stream it via the free KBBI AM 890 app for smart phones; 4) or catch recordings of all the past episodes at https://www.kbbi.org/programs/homer-grown. KBBI will also be airing episodes from Season 1 beginning later this month, so that every Saturday folks can tune into Homer Grown and learn about local agriculture and wild habitat topics. Tune in!





Ag in the Classroom

HSWCD collaborated with Homer High School's natural resources teacher, Kendra Nelson, Oct-Dec 2020 to offer presentations for students on local agriculture and also the ecosystem services found in the watersheds here on the southern Kenai Peninsula. Students learned about local farming (from HSWCD's survey of local producers, *Growing Local Food* (2019)), soil nutrients and plant health, soil microbes, watershed interconnectivity, and ways to use GIS databases to locate the soil types and landscape features right around their very own homes. HSWCD staff was more than happy to assist the H.H.S. natural resources class with these lessons and we plan to seek out opportunities to offer more assistance with lessons for local students in the future.

Ag UPdates

Want to stay connected to all the Ag Happenings on the southern Kenai Peninsula?

HSWCD sends out a monthly Email newsletter featuring all the Ag related meetings, trainings and networking events that we hear are coming to our communities. You can sign up on our web page or click HERE to sign up.

Check out our archived and latest Ag UPdates newsletters HERE.

2021 Alaska Women in Agriculture Conference

Homer Soil & Water staff joined a cohort of other Ag support organizations from around the state to conduct the first (annual!) Alaska Women in Agriculture Conference, which was held March 20th via Zoom. Reps from eight Alaskan organizations embarked on creating an Alaska-specific Women in Ag Conference. The theme for this event was "Alaska Women in Ag: Strong Then, Strong Now," which was inspired by all the hard work done by homesteader women and celebrating the agricultural innovation of today's women farmers and ranchers. The conference was a great success, drawing 286 registrants and generated much positive feedback from the women who attended. We would like to thank our partners for making this a fun and inspiring networking event:

We would also like to thank the generous sponsors who helped pay for the t-shirts that attendees were sent, featuring the statistic that women make up 47% of Alaska's farm force- a very high percentage when compared nationally.

Education and Outreach Opportunities for Farmers

This spring HSWCD held a series of online tutorials aimed at helping Alaskan farmers with technology-based supports for growing or marketing their foods. This *Webinar Watch Party* series featured topics such as social media 101, spreadsheets for farmers, using Canva.com (free website) to design marketing images, phone apps for farmers, online sales platforms, touchless payment options, and boosting your business' presence in Google searches. If you have interest in viewing the recordings or other materials from these networking events, we'll be happy to send them your way: email nicole@homerswcd.org with your request.

Seldovia Grower Outreach:

This February Homer Soil & Water hosted a pair of presentations with Q&A specifically for our friends across Kachemak Bay in Seldovia. In the first presentation, "Soils Guy" Brad Casar discussed soil health, fertilizers and amendments to build rich soil for growing food, along with composting tips. In the second presentation, Kyra Wagner and Nicole Arevalo offered insights shared by 39 Homer-area farmers who were interviewed for our 2018/2019 study Growing Local Food ["40+ varieties, small acreage... you can too!"]

We partnered with Seldovia's Sea Otter Community Center to stream the event for those without good internet at home, so that all could participate. We're aiming to host a third meeting which will feature a virtual farm tour of several Homer area farms this summer.

Homer Soil & Water's soil testing services have GONE ONLINE!

That's right. Fill out the form and pay online. **Then bring the soil samples to our handy-dandy, outdoor drop-off station.** Jessica and the gang will get you your test results and soil nutrient recommendations in about three weeks. Easy Peasy!

Find it all on our website www.homerswcd.org.

NEW! Alaska Cover Crop Trials!

Cover crops are plants that are used for erosion control, soil health improvement, weed suppression, and other benefits. They are usually planted after the commodity crop has been harvested, during off seasons, or to prepare new ground for farming. Cover crops have not been widely embraced in Alaska. This is partly due to the short growing season, but also due to a lack of solid information on what varieties thrive in which regions of Alaska, where to get the seed, and how to manage them.

The NRCS is partnering with the Alaska Association of Conservation Districts to implement a statewide cover crop variety trial. Locations include Homer, Kenai, Wasilla, Palmer, Copper Center, Delta Junction, and Fairbanks. The purpose of this project is to collect data on the growth characteristics and production of commercially and/or locally available cover crop varieties. Twenty four different varieties will be tested at each site (including varieties of barley, red clover, oats, radish, brassica, peas, broad leafs, cereal rye, and triticale). Trials will take place in the summer of 2021 and summer of 2022. The results from each region will be analyzed and compiled in a statewide final report.

Homer SWCD will be planting our study plots in mid-summer. The location will be at Darryl and Rieta Walker's place out East End Road. If you are interested in volunteering to help with this project, or have any questions, please get in touch with us!

Know Your Land talks

In Fall/winter of 2020/2021 HSWCD once again partnered with USDA-NRCS' Homer office staff to host a series of public presentations meant to engage local land owners on topics like soil health, land stewardship, planning and enhancing farms, each with plenty of time reserved for Q&A. This year the talks were held online via Zoom and this change of venue to virtual meetings allowed for people to participate from the comfort of their own living rooms and also allowed us to advertise the talks via social media to Alaskans across the state. If you would like to view the recordings from any of these talks (listed below), simply email your request to nicole@homerswcd.org.

- Fundamentals of Erosion
- Principles of Soil Health
- Wildfire and Fuel breaks on the Kenai Peninsula
- Wildfire and Fuel breaks on the Kenai Peninsula (Part 2)
- Shawn Jackinsky on Perennial Vegetables Varieties for Southcentral AK
- State Land for Agriculture
- Farm Planning & Sample Farm Plan
- Anchor River Streambank Revegetation
- Moose Habitat Enhancement Projects on the Kenai Peninsula
- Kachemak Bay National Estuarine Research Reserve (KBNERR) on Salmon Habitat in the Kenai Lowlands: Sustaining Life and Growth
- Weed-Free Hay and Invasive Plants: Keep Alaska Wild and Free!
- Small Acreage Pasture Management

NEW! Homer Seed Library!

Homer Seed Library Online Classes!

Thanks to a generous grant from the Homer Foundation's Martha H. Briscoe Environmental Science Conservation Fund, we were able to support Homer Seed Library lead instructor Saskia Esslinger to offer free classes to the public on seed saving and related topics this spring. Check out her offerings at www.teachgardening.com/homer-seed-library

Recorded sessions from previous classes in this series (including beginning seed saving and no-dig gardening) are available to view. Please reach out to nicole@homerswcd.org for a link.

News from the Invasive Species Desk

KENAI PENINSULA COOPERATIVE INVASIVE SPECIES MANAGEMENT AREA

Keep Alaska Wild and Free from Invasive Species!

Community Invasive Weed Pulls

Homer Soil & Water is coordinating three community weed pull events in honor of Alaska Invasive Species Awareness Week June 13-19, 2021.

Join us at any of these events:

- 6/16 Pratt Museum, 1-5 pm
- 6/17 Homer Demonstration Forest (Rogers Loop/Homestead Trail), 10 am - 2 pm
- 6/18 Chokecherry/Mayday sapling pull at 2070 East End Rd., Homer, 10 am—2 pm

Bring your garden gloves. All are welcome to join!

Contact patrick@homerswcd.org with questions about these events.

K.P Invasive Weed Managers' New Larger Role Includes New Species

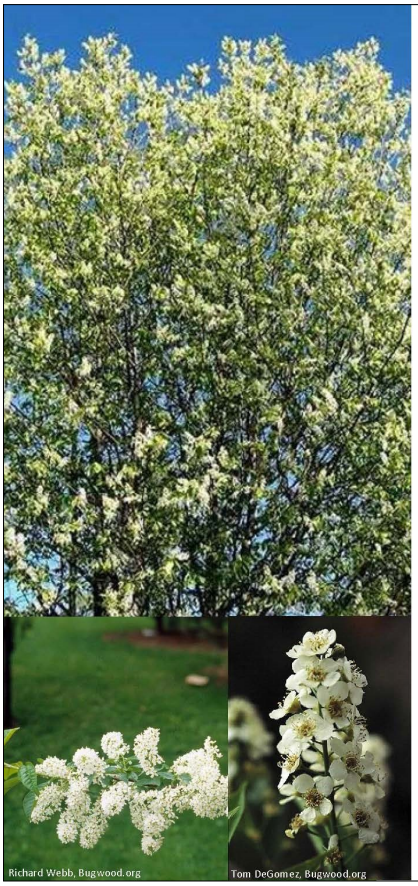
In December of 2020, the Kenai Peninsula Cooperative Weed Management Area voted to change our name to a Cooperative Invasive Species Management Area (CISMA), broadening our scope of work to include all taxa of invasive species that threaten fish and wildlife habitat across the Kenai Peninsula. We have a brand new logo and website!

Check it out here: kenaiinvasives.org along with our 2020 Annual Report to learn more about how we work together to keep Alaska wild and free from invasive species!

Did you participate in our European bird cherry/ chokecherry tree removal program last year?

Have questions about sprouting/ suckering of your cut-stump? Here's a brand new guide on how to control invasive chokecherry on your property.

Need help identifying European bird cherry/mayday trees? Learn more from this Brochure.



KENAI PENINSULA COOPERATIVE INVASIVE SPECIES MANAGEMENT AREA

Help us remove the invasive European bird cherry trees!

Prunus padus **– European Bird Cherry / Mayday Tree**
Prunus virginiana **– Chokecherry**

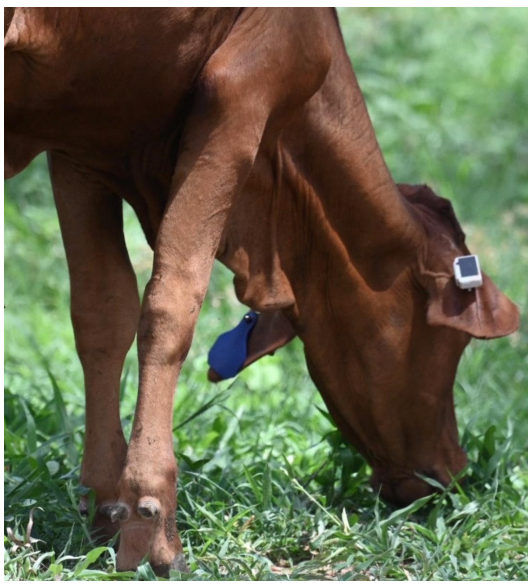
Introduced as landscaping trees, but now we know they are:

- **Aggressive invaders of local forests and waterways**
- **Threaten moose and salmon habitat**
- **Spread to remote areas by birds (they love the fruit!)**
- **Removal can be tricky, contact us to learn best practices:** kenaiinvasives.org

A **$100 reimbursement** for purchasing alternative ornamentals is available to the first 20 people who remove all invasive *Prunus* trees on their property.

For more information email kenaipeninsula.invasives@gmail.com or call (907)235-8177 ext.5

Homer Soil & Water Conservation District



It's 10 pm. Do you know where your cattle are?

Thanks to an NRCS Conservation Innovation Grant, Homer Soil and Water and the Fox River Cattlemen's Association have partnered on a project to use GPS to track cattle in the grazing lease at the head of Kachemak Bay. (See if you can find a few cows in the photo at left, which looks southwest—they're grazing on the near side of Fox River.) In 2021 and 2022, cattlemen will put GPS (global positioning system) collars and ear tags on their cattle to see in real time where they're grazing and where they like to hang out at different times of the day and during different times of the grazing season. In addition, NRCS will gain valuable information about affordable, off-the-shelf livestock tracking systems that are just now becoming commercially available—systems that will work in remote areas lacking cellphone or internet coverage thanks to rapidly evolving technology used for the "internet of things" (IoT).

The cattlemen will try out and compare three GPS tracking technologies. Two types of collar systems from Smarter Technologies in the UK will be used this summer; and next summer, a solar-powered ear tag system from Ceres in Australia will be put on additional cows. The Ceres ear tag—shown on the ear of the cow at left—will be commercially available for the first time starting May 1 of this year (with delivery later this summer) and will communicate with Low Earth Orbiting (LEO) Saddle-lights (oops, satellites) using brand new technology developed by Ceres with the help of Australia's national research organization (CSIRO).

The past – the history of the grazing lease

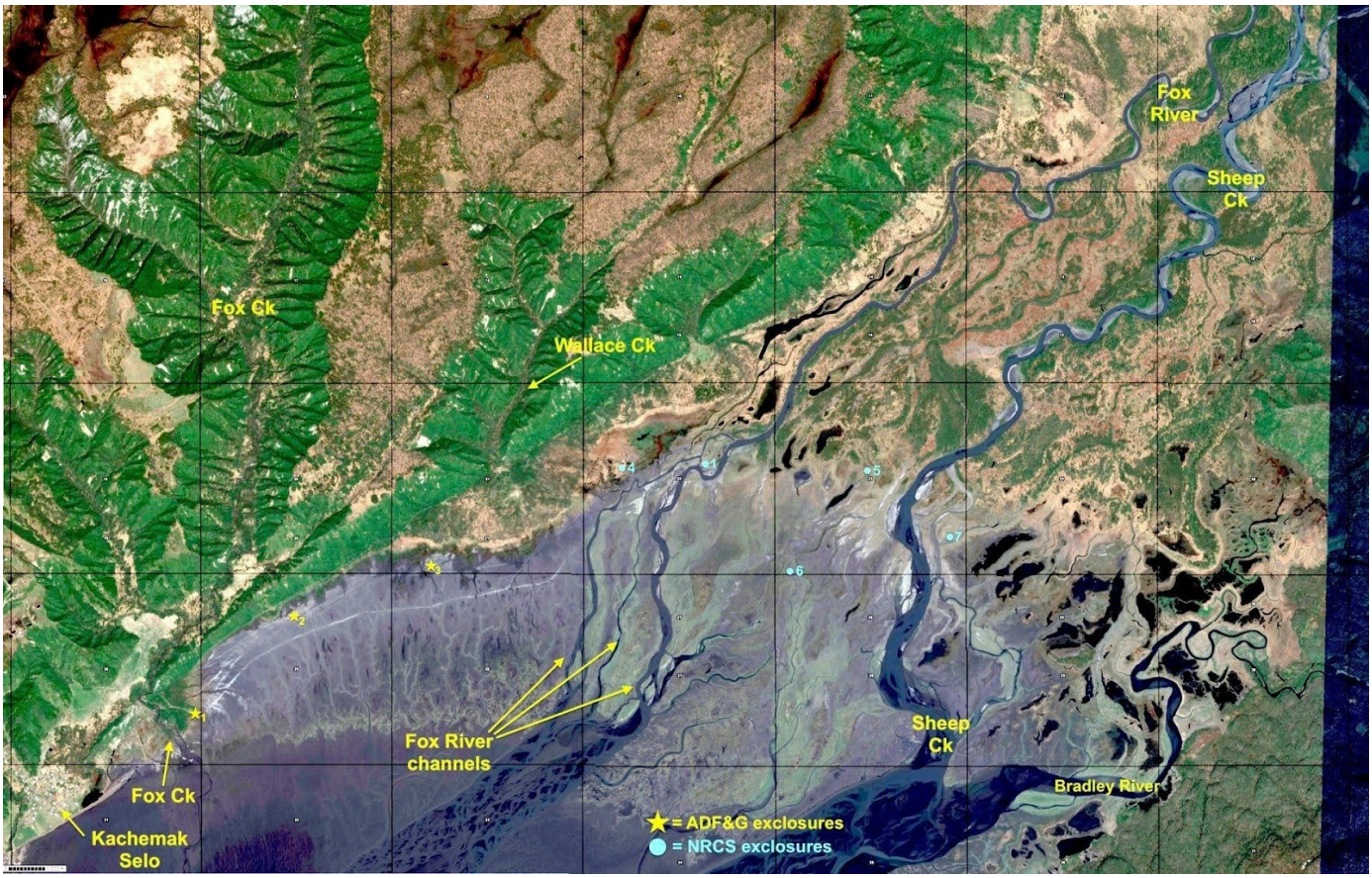
Cattle have been grazing in the Fox River valley since the late 1800s; and the area was officially established as a grazing lease in 1952 when the then-land manager—the U.S. Bureau of Land Management—leased to the cattlemen about 15,000 acres of what was then federal land in the Territory of Alaska. Existence of the lease helped maintain the area in open space as adjacent lands were homesteaded and settled. The lease came under the authority of the Alaska Department of Natural Resources after Alaska became a state in 1959. In 1972, the Fox River Flats Critical Habitat Area was designated by the Alaska legislature on tidelands within the lease. In 2000, leased grazing lands were designated for "grazing" and "habitat" in the state's Kenai Area Plan.

Learn more about this multi-use area

In addition to the cattlemen, many others use the grazing lease area—from hikers to photographers to horseback riders to fat tire bikers to 4-wheelers to hunters and anglers. The more we know about the impacts of each kind of land use, the better the area can be managed long-term and sustainably for a full variety of uses. Homer Soil and Water is bringing together resource managers and interested members of the public as it works on updating the Coordinated Resource Management Plan (CRMP) that guides grazing activities on the lease. You can find a copy of the CRMP under "Land Use" on Homer Soil and Water's website—click here.

If you're interested in learning more about the grazing lease at the head of the bay, be sure to check out the FB page called "Fox River Flats and Beyond"—it's maintained by Homer Soil and Water, but anyone can post there. You'll find lots of maps, photos, and files there with information about the grazing lease area. Also, if you want to receive updates on the CRMP process and the GPS tracking project, let Homer Soil and Water know your email address. This amazing area belongs to all of us, and all of us can help to be good stewards of its many resources and land uses.

Image: Part of the Fox River Flats grazing lease area is shown below—both NRCS and ADF&G maintain exclosures to monitor impacts.



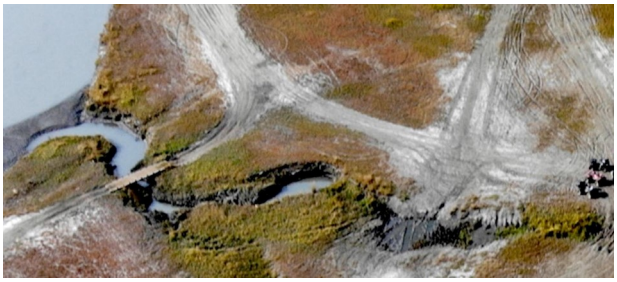


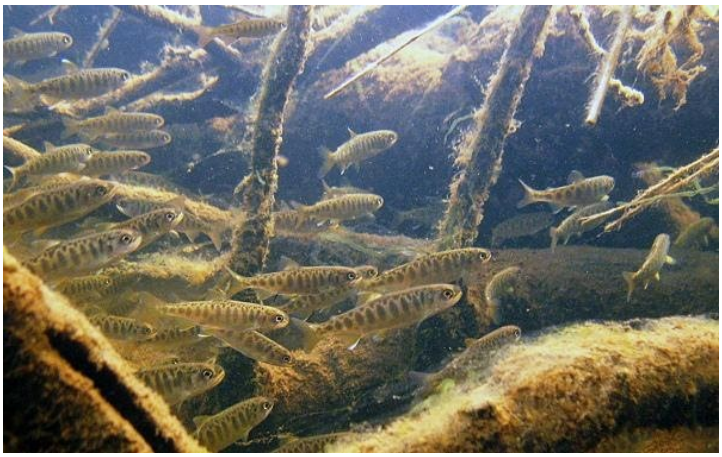
Photo above left: Land managers and cattlemen visiting the grazing lease on August 26, 2019. **Photo above right**: Looking down Fox River towards the bay—impacts of 4-wheelers are visible on the west side of the river (on its right in the photo). Grazing occurs on both sides of the river. **Photo bottom left**: A bridge over a tidal gut—To attempt to reduce vehicle impacts to juvenile salmon, bridges have been installed by HSWCD with ADF&G funding.

Protecting Anchor River streambanks for juvenile salmon, people, and cleaner water

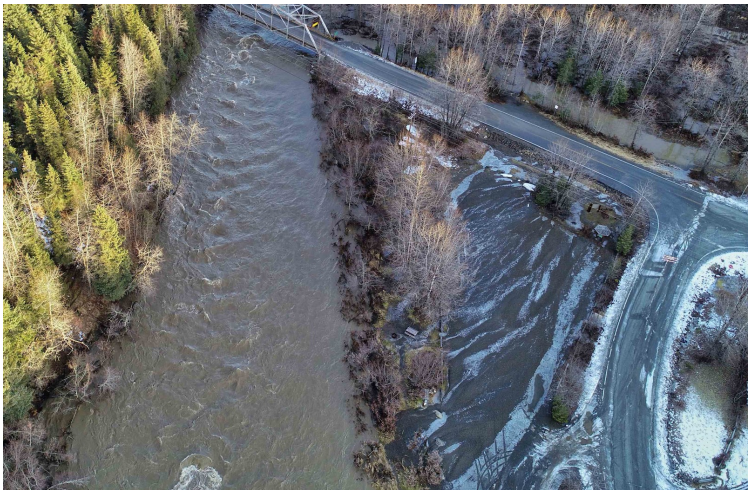
This article is about protecting and improving streambanks in the Silverking Campground, which is just below the Old Sterling Highway bridge, in the Anchor River State Recreation Area. There's not much streambank between the parking lot and the river channel in Silverking—as shown on the map below. What's there is important and worth protecting.

Why streambanks matter

Since 2018, Homer Soil and Water has received ACWA funding from the Department of Environmental Conservation to work with State Parks, ADF&G, USFWS, the Anchor Point community, and other partners to explore how best to protect streambanks in Silverking Campground (ACWA stands for Alaska Clean Water Actions program.) Plants growing along the river in Silverking CG hold the streambank together and protect it from erosion. They also filter out pollutants washing into the river from the parking lot and the road—thereby improving water quality. And maybe most importantly for those of us who love salmon, vegetation along the river and within or above the flowing water is essential for survival of baby salmon rearing in the lower Anchor River. Streambank plants provide these juvenile salmon with food, concealment from predators, shelter from strong currents, shade from overheating sunlight, and visual barriers that reduce competition among them when they defend little territories for resting and feeding. Four species of salmon rear in the Anchor River—coho, chinook, chum, and pink—and all but pink spend from 1 to 3 years rearing in the river's mainstem, tributaries, or both. For a study of salmon use of the lower Anchor River, click here. For a video showing juvenile salmon sheltering among willow leaves and branches in British Columbia, click here.



What threatens streambank vegetation?



From the fall rainy season through spring meltoff, streambank plants are subjected to storms, flooding, ice flows, and ice jams. Surprisingly, except for occasional events that gouge out a chunk of bank here or strip off a chunk there—for example, when a tree falls into the river and its rootwad rips out of the ground, or when ice chunks carried by floods shear off streamside plants—vegetation handles these challenges remarkably well. The photo at right shows the huge amount of sediment left in Silverking in December 2020 after floodwaters swept across the parking lot—but as many photos below show, streambank vegetation handled this sediment dump and flooding without serious damage.

What riverside plants can't handle well is what happens during the summer growing season in popular campgrounds and recreation areas near the river's edge. That's when summer visitors arrive. To enjoy the river and to fish, visitors walk along the river's edge—as close to the water as possible—and clamber into and out of the channel. This trampling removes plants stem-by-stem and root-by-root exactly at the time they should be extending roots and adding to stems and branches.

As shown in the **photo at left**, visitors walking along the river's edge destroy the vegetation in the pathways they create, while also compacting the soil so that rainfall and runoff flow along the path, eroding it deeper instead of infiltrating into the ground. Over time, these cleared pathway areas slowly pull apart and slump down the bank into the river, where they're washed away, eliminating streamside habitat and widening the river. As sections of river grow wider, the water gets shallower, leading to warmer water temperatures that can be dangerous for salmon. When one trail disappears, visitors create a new pathway upslope, starting the process over.

Where visitors make trails into the river—as seen in the **photo below**—or scramble or slip down the bank to access the water, they can create denuded slides that erode into deep gouges.

In Silverking Campground, these problems are worsened because there's so little bank between the active river channel and the parking lot. During flooding—as shown above—sediments, road oil, and other debris is flushed into the river.

[This article has been edited for length. Continue reading to find out what HSWCD is planning for Silverking Campground's streambank restoration by clicking here]

Meet The Staff

Kyra Wagner, District Manager

Kyra has moved from years of experience as a general community volunteer extraordinaire to the lead juggling acrobat in the office. In charge of accounting, grant writing and other general management, she loves seeing who the next person will be who walks through the door and what the latest issue may be.

Devony Lehner, Natural Resources Specialist

Devony is the queen of Web Soil Survey, NRCS programs, and all the resources needed to make wise decisions on your land. With nothing more than the purest intent to inform each and every landowner on the Peninsula of these resources, Devony is OUR greatest resource and institutional memory bank.

Brad Casar, Natural Resources Technician

Brad has been our soils guy for 6 years but this year he's focusing on summer remote field work for our BLM/NRCS Soils projects. He is usually the helicopter manager for the trips he goes out on and this summer he will have five other Homer Soil and Water employees out working with him. Never boring!

Charlotte Crowder, Biological Technician

Charlotte works with the NRCS Soil Survey team on their mapping projects as well as helping S&W process soil health study samples. As a botanist, she gets friendly with flowers, measures tree girths and rings, and records vegetation coverage at survey sites. And she really likes a nice afternoon tea.

Nicole Arevalo, Outreach Coordinator & Food Systems Analyst

Nicole was hired n 2018 to conduct the Food Systems Study for the southern peninsula, bringing 18 years work experience in food service and a BA in Anthropology. Since then, she's been our Ag outreach person, Ag in the Classroom coordinator and does other projects to help our local food system thrive.

Katherine Schake, Natural Resources Specialist

Katherine is our Invasive Species Manager. She has guided hikes in Denali NP, managed remote-sensing mapping projects, a statewide salmon data synthesis, and coordinated the Mat-Su Salmon Science Symposium. In her spare time, Katherine guides in Iceland, maintaining a passion for botany and birding.

Jessica Sharp, Natural Resources Specialist

Jessica is our soils guru now, though she was at Fairbanks Soil & Water for years before we got her here. She does all our soil and fertilizer recommendations and is leading our cover crop trial. Give her a call with your soil questions! She works from home so she can stay with her two kids, Gryphon and Lulu.

Matthew James, Forester

Matt was hired in June of 2020 as a Forester. He'll be working closely with the ADF&G to complete moose habitat restoration projects on the Kenai Peninsula. Matt is a long time Homer resident and has recently finished up a 25-year career of wildland firefighting with the Division of Forestry.

A Final Note: Public Notice

Attention Aquarium and Marimo Moss Ball Owners

If you have marimo moss balls in your aquarium, fish bowl or decorative container, please read!

Full grown adult zebra mussel.

Dumping anything (including fish, animals, plants and even the water) out of your aquarium into any body of water or storm drain, can have devastating consequences for Alaska fisheries and water bodies. And it's illegal.

The marimo ball you placed in your tank or fish bowl could be harboring small, invasive zebra mussels. The other fish and plants in your tank are likely not native to our state either. When aquarium contents are dumped into our waters, they can introduce diseases or invasive species causing serious environmental and economic problems. The invasive plant Elodea was once in someone's aquarium and now it is threatening fish habitat and native species in 24 waters bodies in Southcentral and Interior Alaska. Invasive species cost millions of dollars over years to manage or eradicate.

If zebra mussels were introduced to your aquarium on a moss ball, they will quickly take over your tank, making it inhospitable to your aquatic community. If you dump aquarium water down the drain or toilet, zebra mussels could become established in your plumbing. Sanitize aquarium water for 10 minutes before dumping, and never flush unwanted aquatic pets down the toilet.

Far worse consequences could occur if you dump your aquarium contents into the wild. Zebra mussels could become established and destroy the habitat and food resources that support our fisheries and native species. Once zebra mussels become established there is no way to get rid of them.

Keeping marimo moss balls and zebra mussels in your tank is a bad decision for your aquarium and for our environment.

Call the *Invasive Species Hotline:* 1-877-INVASIV (1-877-468-2748) if you have marimo balls in your aquarium, fish bowl or decorative jar. We can help!

The Alaska Department of Fish and Game will provide guidance on how to treat and dispose of your moss ball and any zebra mussels that may have hitched a ride into your aquarium.

U.S. FISH & WILDLIFE SERVICE

ALASKA DEPARTMENT OF FISH AND GAME

ALASKA DEPARTMENT OF NATURAL RESOURCES

Never dump your aquarium into Alaska's waters!

It's against the law and could harm the environment.

Report Invasive Species in Alaska.
Scan the QR code for more information.