



**COPPER RIVER**  
**WATERSHED PROJECT**

COPPER RIVER

*Runner*

SPRING 2020



Far right photo by Luke Schmidt, CRNA

## COPPER RIVER BASIN SYMPOSIUM: *Tradition, Science, and Stewardship Take Root*

BY ROBIN MAYO, *Board Chair*

A geologist, a biologist, and an archaeologist walk into a room...it sounds like the start of a joke, but it really happened in late February at the inaugural Copper River Basin Symposium at Wrangell-St. Elias National Park and Preserve Visitor Center. And the results were inspiring!

The idea first appeared at a CRWP staff meeting in 2018. The Copper River Delta has a long-running science symposium which focuses on the region as a system. Could we help create a similar forum for the Copper River Basin? Like a snowball, the seed of an idea picked up layers as it was rolled around, adding partners and scope. How about including and honoring traditional ecological knowledge? What if we dug deeper on a keystone topic, salmon habitat? What partners would share the vision and help make it a reality?

Settling on a theme of *Tradition, Science, and Stewardship*, the idea took root. The two-day symposium included keynote speakers, 26 short presentations, and a poster session. A panel discussion delved into opportunities and challenges in working with indigenous communities. Ahtna elders provided wisdom in daily welcomes, and there was a presentation by Copper River Stewardship Program youth.

Topics ranged widely from fisheries to archaeology to geology, but all related closely to the Copper River Basin. As well as sharing knowledge, participants shared meals, personal connections, stories, and ideas. Moose stew and salmon chowder nourished and rooted us to the land.

From the perspective of a board member, this event represents the heart of CRWP: convening people and knowledge, celebrating our commonalities, finding bridges across our differences. Like so many of our programs, it simply could not have happened without a team of partners: Ahtna Heritage Foundation, Ahtna Intertribal Resource Commission, Alaska Department of Fish and Game, Wrangell Institute for Science and Environment, Wrangell Mountains Center, and Wrangell-St. Elias National Park.

The symposium was a celebration of the region, and the hard work done by the people who study, manage, love, and rely on our resources. It inspired growth and cooperation between diverse groups, and helped raise awareness of the roles of science and tradition, and the importance of stewardship.

Change is everywhere, in natural systems and in human systems. Sometimes it is subtle and sinuous, like a meandering river, and sometimes it happens in a flash. This month I am transitioning away from six years of service on the Copper River Watershed Project board, an experience of growth and inspiration for which I am grateful. The world is facing profound challenges unlike anything we've seen in our lifetimes. Copper River Watershed Project, with our values of collaboration, education, partnership, and resilience, is here to be part of the solution.

## LETTER FROM CRWP DIRECTOR

Dear Friends,

The year 2020 has quickly developed the theme of community and collaboration. In these difficult times surrounding the COVID-19 pandemic, global efforts to reduce the spread of a highly contagious virus has certainly brought to light the power of community and universal collaboration. Being very new to my position within the Copper River Watershed Project, I am routinely struck by the incredible efforts and positive work being done by all residents within our watershed and out, that support a healthy, resilient and vibrant Copper River watershed.

In hopes of spreading some joy during these troubling times, I'm hoping that this newsletter brings you some sense of empowerment that your contributions and support are creating and sustaining positive change on a massive-scale. We hosted (prior to COVID-19) in February the first Copper River Basin Symposium celebrating and sharing Science, Tradition and Stewardship work done throughout the basin, and connected with schools where we brought salmon eggs to develop right in all the classrooms.

We are always working to support a resilient economy for the Copper River watershed so that during economic uncertainty the region will remain an intact and functioning watershed. That was the premise on which the CRWP was founded. With an uncertain future ahead of us now, our goal is to continue supporting the communities of the region and promote economic sustainability.

### CRWP BOARD OF DIRECTORS

Robin Mayo, Board Chair, Kenny Lake  
Pete Mickelson, Vice President, Cordova  
Jackie McMahan, Secretary, Gakona  
Matt Piche, Treasurer, Cordova

Kendra Harder, Copper Center  
Nik Merlino, McCarthy  
Matt Piche, Cordova  
Amanda Wiese, Cordova

### CRWP STAFF

Lisa Docken, Executive Director  
Kate Morse, Program Director  
Chantel Adelfio, Invasive Plant Program Manager  
Shae Bowman, Operations Manager  
Ashley Taylor, Invasive Plants Coordinator  
Kirsti Jurica, Hydrology & Watershed Restoration Staff



Cross country skiing off the Copper River Highway. Lisa and her dog, March 2020.

The CRWP staff are working remotely to continue implementing planned projects. In the coming months, we will be moving forward with contracts to start replacing culverts on the Copper River highway, securing funding to replace failed culverts on the Little Tonsina and opening up 45 miles of upstream spawning and rearing habitat, collaborating with Ahtna Intertribal Resource Commission to develop a restoration plan for Town Lake in Chitina, and we are purchasing equipment to expand recycling capacity in Cordova.

During this time we will be transitioning our community engagement to more virtual and online forums as we continue to work on our mission in as many ways possible. Our continued success is a product of your help and support so thank you to all our watershed supporters!

Sincerely

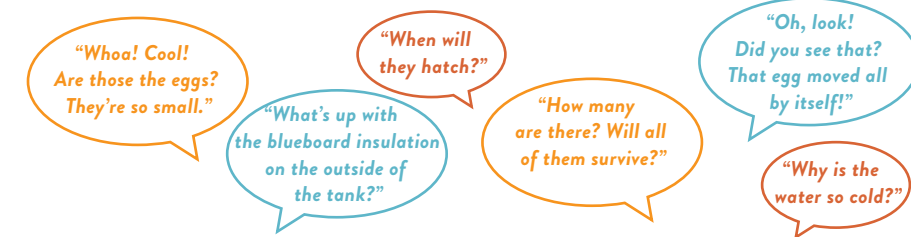
Lisa Docken

## CLASSROOM CURRENTS

A SALMON-REARING PROJECT FOR EVERY SCHOOL

BY KARI ROGERS AND KATE MORSE

200 eyed-eggs delivered to each school.  
Photo by Mary Hernandez – Upstream Learning



These were just some of the enthusiastic questions and comments pouring out from students throughout the Copper River watershed as they watched eyed salmon eggs being carefully transferred into the aquarium in their school. Along with the support of their teachers and Copper River Watershed Project (CRWP), students will be caring for and observing these eggs through May and witness firsthand the fragile early life stages of the vitally important natural resource that helps to sustain their families and communities.

In the past, Kenny Lake School, Glennallen Elementary School, and Upstream Learning Homeschool Office have enjoyed the five-month long interactive project of observing and documenting the gradual growth and development of salmon from the eyed-egg stage into alevin, and then fry ready for release into Alaska Department Fish Game-designated landlocked lakes during the month of May.

Thanks to generous contributions from our partners, two new aquariums, chillers, filtration systems, and all essential add-ons were purchased to outfit Slana and Mentasta Lake schools, ensuring every student in the Copper River watershed has access to this exciting hands-on education opportunity. Generous partners were also able to help us replace aging chiller and filtration units at Kenny Lake and Glennallen Elementary schools.

A total of 1000 coho salmon eggs from Valdez's Solomon Gulch Fish Hatchery were transported to each school (200 eggs each) and gently placed into the cold, clear water while eager school children watched and launched a thousand questions at their teachers. These lead teachers, with the assistance of their students, are responsible for daily monitoring of water temperature and Cumulative Temperature Units which will help predict fish development through these beginning life stages of the salmon in their care.

Using these in-house living science projects, and with support from CRWP, lead teachers will continue to expand their students' understanding of salmon lifecycles, learn valuable lessons in salmon survivability from egg to spawning adult, emphasize the obvious importance of salmon to our local culture and economy, and build upon their students' personal connection to the natural wonders of the Copper River watershed.



Above Kenny Lake students at egg installation.  
Photo by Kari Rogers – Copper River Watershed Project.

Below Initial lifecycle overview.  
Photo by Dianna Woodhams – Slana School.



### MANY THANKS TO OUR PARTNERS

for their shared vision and enthusiasm for this on-going effort and for their continual support of educational activities and opportunities for Copper River watershed school children, including Ahtna Intertribal Resource Commission, Alaska Department of Fish and Game, Copper River School District, Copper Valley Telecom, Prince William Sound Aquaculture Corporation, Valdez Fisheries Development Association, and individual donors to Copper River Watershed Project who specifically contributed to this project during the holiday season. Also, thanks to our super volunteers, Sandy McMahan and Mark Proch.

# INVASIVE WEEDS OF CORDOVA: ELODEA

BY ASHLEY TAYLOR

*Elodea canadensis*, also known as Canadian waterweed, is arguably the most prolific invasive plant in Cordova. You've likely encountered this pesky aquatic plant while kayaking or fishing in Eyak Lake or on the Copper River Delta. It reproduces primarily through stem fragmentation which means that any part of the plant can root and establish new populations of elodea. Even the smallest of fragments can form roots and have high survival rates which allow them to be dispersed over long distances (Redekop et al., 2016). Elodea impacts lakes and rivers of Alaska by degrading fish habitat, displacing native flora and fauna, decreasing water flow, decreasing dissolved oxygen levels, and increasing sedimentation. Other impacts include: impeding boat travel, reducing recreation opportunities, and endangering safe float plane operation.

A recent study conducted by the Institute of Social and Economic Research (ISER) at the University of Alaska Anchorage suggested that elodea has the potential to have negative economic consequences for commercial sockeye salmon fisheries. Elodea is not yet widespread in Alaska but the areas in which it is found have seen a rapid spread of the plant. This has led to proactive preventative steps taken by the Department of Natural Resources. In 2014 the State of Alaska instituted a statewide quarantine that prohibits the importation, transport, purchase, sale, or distribution of plants or plant parts within the state for five aquatic plants, including elodea.

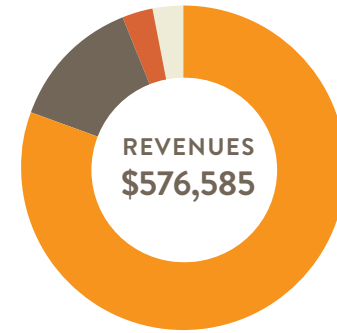
Across the state, efforts to curtail the spread of elodea and eradicate established populations are ongoing. You can stop the spread of elodea by inspecting and cleaning float planes, boats, trailers, and any gear that's been in infested waters. As a friendly reminder, please do not move any part of elodea in accordance with the state quarantine. If you believe you've spotted a new infestation, take a photo, note the location (GPS or mark on a map), and contact CRWP or USFS.



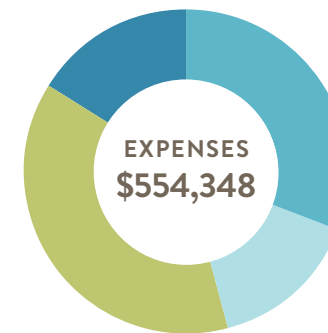
## WHERE IS IT LOCATED?



## 2019 ANNUAL REPORT



- \$464,004 / 80% GRANT INCOME
- \$75,851 / 13% CONTRIBUTIONS
- \$19,959 / 3% SPECIAL EVENTS
- \$16,770 / 3% OTHER



- \$170,647 / 31% PROGRAM STAFF
- \$85,103 / 15% ADMIN. & FUNDRAISING
- \$210,785 / 38% PROGRAM SPECIFIC EXPENSES
- \$87,813 / 16% SHARED OPERATING EXPENSES

### ASSETS

|                      |             |
|----------------------|-------------|
| Current Assets       |             |
| Checking/Savings     | 88,141.39   |
| Accounts Receivable  | 43,924.50   |
| Other Current Assets | 17,100.00   |
| Total Current Assets | 149,165.891 |
| Fixed Assets         | 7,214.32    |
| Investment Reserve   | 58,036.66   |

**TOTAL ASSETS** \$ 214,416.87

### LIABILITIES & EQUITY

|                           |           |
|---------------------------|-----------|
| Liabilities               |           |
| Current Liabilities       |           |
| Accounts Payable          | 2,738.00  |
| Credit Card               | 6,430.47  |
| Other Current Liabilities |           |
| Vacation Accrual          | 15,843.79 |
| Deferred Revenue          | 9,538.17  |
| Payroll Liabilities       | 2,461.47  |
| Sales Tax Payable         | 38.27     |
| Total Liabilities         | 37,050.17 |

|                             |            |
|-----------------------------|------------|
| Equity                      |            |
| Retained Earnings           | 129,625.30 |
| TR Net Assets Contributions | 17,531.06  |
| Net Income                  | 30,231.38  |
| Total Equity                | 177,366.70 |

**TOTAL LIABILITIES & EQUITY** \$214,416.87

## 2019 FUNDERS

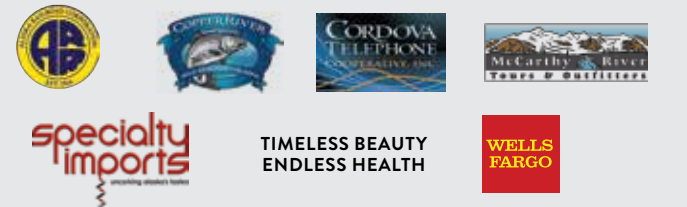
- Bureau of Land Management
- Eyak Corporation
- National Fish & Wildlife Foundation
- Rasmuson Foundation
- U.S.D.A. Cordova Ranger District
- U.S.D.A. Forest Service
- U.S.D.A. Secure Rural Schools
- U.S.D.A. State and Private Forestry
- U.S. Fish & Wildlife Service
- Wild Salmon Center

We'd like to recognize the following businesses who generously supported CRWP events and educational programs with significant gifts in 2019. We hope you can support these businesses that contribute to sustainable economic development in the Copper River region.

### ANCESTORS' LEGACY, \$1000+



### WATERSHED STEWARDS, \$500+



### TRIBUTARIES, \$250 - 499



**ON THE GO  
WITH CRWP!**  
BY KARI ROGERS

Extensive travel throughout the upper Copper River watershed for project work and partner meetings has taken a giant leap forward in recent months for Copper River Watershed Project staff. Thanks to a generous \$6,000 donation from Alyeska Pipeline Service Company the CRWP was able to purchase a used 4-WD truck. We gratefully acknowledge Alyeska Pipeline Service Company's charitable support of our organization which enables us to more efficiently conduct our work within the vast Copper River watershed.

This capable work vehicle will be used to access work sites along the extensive road system to complete a variety of CRWP projects including culvert passage surveys, invasive plant species management work, activities associated with the popular salmon-rearing aquariums education at all five schools within the Copper River watershed, participation with our partners in other environmental education days at local schools, and regular attendance at partnership coordination meetings.

# THE SOWN SEED

BY KRISTIN CARPENTER

The CRWP did indeed begin with a small, sown seed. The CRWP has such a strong staff team and successful programs now that it's a study in high contrast to think back to the beginning, the small steps that have defined the organization and contributed to its accomplishments. But here are some reflections on the moments that seemed so ordinary at the time but turned out to be crossroads that led us to action.



## A PICNIC TABLE MEETING

On a trip to the Copper River basin in the mid 90s, when we had a community meeting at the Glennallen High School to talk about the idea of sustainable economic development and what it could mean for the Copper River watershed, a small group got together a day or two later at a picnic table outside the Golden Spruce espresso stand in Kenny Lake. Sam Lightwood, Janelle Eklund, Ruth McHenry, Paul Boos and Riki and I talked about community members who might be willing to help lead on this idea.

## FIRST ON-THE-GROUND RESTORATION PROJECT

Cordova fisherman Paul Swartzbart, who was serving on the State Board of Forestry at the time, was frustrated with local logging activity that wasn't following recommended practices to protect fish stream habitat. He planned a field project, recruited Wesley Ladd and some volunteers, and initiated our first effort at on-the-ground restoration that involved building waterbars and planting alders on logged stream banks to prevent erosion from polluting fish streams and harming salmon fry.



## STAFF THROUGH THE YEARS

Starting with two Dutch interns, Florian Hupkes and Ysbrand Brouwers, connected to the Artists for Nature Foundation and the Alaska's Copper River Delta art project, the CRWP has gone on to benefit from a long list of staff and interns who brought their passion, enthusiasm and skills to our programs. Cristina Cinelli, Colin Kikuchi, Coral Elshoff, Charlie Wilson, Emily Keuthen, Pippa Stanley, Ashley Fitzpatrick, Claudia Hartley are interns we've hosted over the years and are part of our extended CRWP family. Other regular or full time staff are Beth Poole, Matt Kampshoff, Andy Morse, Kate, Chantel, Shae Bowman, Tracey Nuzzi, Shelley Kocan, Michelle Dockins, Danielle Verna, Roger Johnson, Liz Senear, Alexis Cooper, Thomasina Anderson, Kirsti Jurica, and Ashley Taylor.



## CULVERT PRIORITIZATION

When Kirsti Jurica and I learned that the Alaska Department of Fish and Game's 2002 analysis of culverts didn't include looking at which pipes were on fish streams, we set out to develop a way to do that for the Copper River drainage. Becky Clausen wrote a "culvert ranking protocol" for us before she went back to school for her Ph.D., then Kate Morse inherited the effort when she came to work for the CRWP. Now Kate is managing an \$8.1 million project to replace 11 culverts on the Copper River Highway, which acts like a big dyke across the delta, altering its natural hydrology. Today, the CRWP's culvert ranking database for the entire watershed is one of the few examples of regional prioritization of watershed resources based on field work analysis.

## What I Have Learned So Far

BY MARY OLIVER

## A NEW HOME FOR THE CRWP

After the first five years in a 14' x 14' office, in 2003 we were able to move into First Street, store-front office space in Cordova, giving the CRWP much more community visibility. We spent a few days painting with a crew of SAGA volunteers, no small feat in a space with an 18' ceiling. Our first unique, fund and friend-raiser event was one called the Wild Berry Fest, an inspiration of former staff member Beth Poole. The first Wild Berry Festival was at the office, hard to imagine now that we regularly host 80 - 90 people for this event.



Meditation is old and honorable, so why should I not sit, every morning of my life, on the hillside, looking into the shining world? Because, properly attended to, delight, as well as havoc, is suggestion. Can one be passionate about the just, the ideal, the sublime, and the holy, and yet commit no labor to its cause? I don't think so.

All summations have a beginning, all effect has a story, all kindness begins with the sown seed. Thought buds toward radiance. The gospel of light is the crossroads of indolence, or action.

Be ignited, or be gone.

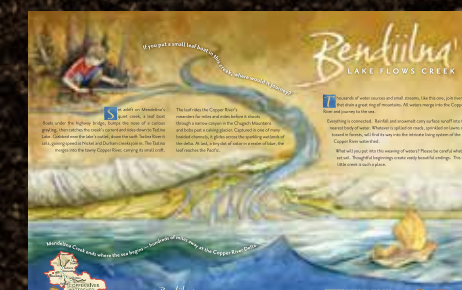
## HARVESTING WILLOWS

For our first big re-planting bank restoration project, we were told we'd need 3,000 willow shoots. That's a lot of stems! But we put out the call for volunteers, and were heartened with ready responses. Cutting willow stems on a sunny March day on the Copper River delta with friends as helpful volunteers isn't hard labor . . . we also had to figure out how to keep them dormant until planting time in June. We learned that that meant burying the super sacks full of willows in snow in the tree-shaded forest.



## COPPER BASIN ROADSIDE INTERPRETIVE SIGNS

"Interpretive signs" seems to come up frequently as an idea when you're trying to think about how get messages out to the public. And sure, make a sign and put a post in the ground, that's not too hard, is it? The series of watershed education signs we created throughout the Copper Basin is one of my favorite projects that we have done because they give the original Ahtna language place name for the location, have beautiful illustrations, and a bit of watershed information incorporated into each one. But the amount of coordination it took between writing the text, creating the illustrations, picking the location and getting them installed was tremendous! And mostly done by Kate Morse.



# THANK YOU, MEMBERS

## ANCESTORS' LEGACY, \$1000+

Alaska Marine Lines  
Bill & Marion Alexander  
Allison & Chris Bovard  
Gail & Peter Cinelli  
Diane & Mark Colleran  
Copper Valley Electric  
Association Community  
Foundation  
Colby & Jeremy Doyle  
Drifters Fish  
John Garner & Liz Cardwell  
Dan Hull & Nancy Pease  
Jim & Martha Hutchison  
Connie & Bill Jones  
Riki Ott  
Prince William Sound  
Aquaculture Corporation  
Sena Sea  
Joan Smith  
Cece Stack & Britt Pedicord  
Jim Staszewski  
Lorna Stern  
Trident Seafoods  
Wilson Construction

## WATERSHED STEWARDS, \$500-999

Alaska Railroad Corporation  
Jonathan Bigley  
Phil & Rich Blumstein-Ervin  
Karen Hyer & Ken Carlson  
Susan Clausen  
Copper River Seafoods  
Cordova Telephone  
Cooperative  
Stuart & Margery Elsborg  
Deirdre Henderson  
Ken Hodges  
Marie & Charles Hoffman  
Gary & Cynthia Jacobs  
Peter & Tanya Johnson  
Iyad & Carol Khalaf  
Donna McBain Evans & Sam Evans  
McCarthy River Tours  
and Outfitters  
Mary Jane & Alan Morse  
David & Darcy Saiget  
Specialty Imports  
Bert Stammerjohan  
& Liz Senear  
Timeless Beauty Endless  
Health  
Wells Fargo Government & Community Relations Group

## TRIBUTARIES, \$250-499

60 Degrees North Seafoods  
Alaska Marine Response LLC  
Rich & Shannon Alloway  
Leo Americus  
Dr. Chris & John Booren  
Tim Brabets  
Chip Brown & Rob Alexander  
Danny & Kristin Carpenter  
Chugach Alaska Corp.  
Debbie & Dino Ciabattoni  
Alexis Cooper  
Cordova Wireless  
Communications  
Copper Valley Wireless  
Currant Ridge Cabins  
Janet & Donald Groschel  
Anne & John Herschleb  
Todd Hess

Kirk Hoessle & Gabrielle Markel  
K & L Distributors  
Lake Louise Lodge  
Ian Lindsay  
Cliff Eames & Ruth McHenry  
Debra Miller D.M.D.  
Pamela Moe  
Diane & Greg Morgan  
Eric Manzer & Molly Mulvaney  
Kelly Neuman  
Ninkasi Brewing  
Orca Adventure Lodge  
Pam Ore  
Dr. Oliver & Eve Osborn  
Peterson Welding & Machine  
Matt & Nicole Piche  
Riverside Inn & Childs  
Glacier Tours  
Arlene & Danny Rosenkrans  
Sena & Rich Wheeler  
Shoreside Petroleum  
Kate & Reid Smith  
Brad & Denise Stern  
Terry & Ann Talcott  
Theresa Tanner  
Dan & Monica Ryan  
Eric & Janice Warga  
Charlotte & Lance Westing

## WRANGELL PEAKS CIRCLE, \$100-249

Acupuncture & Wellness of Cordova  
Thomasina Andersen  
Alaska Wild Seafoods, LLC  
Kate & Alex Arduser  
Dr. Howard & Jean Baumann  
Robin & Skip Jensen  
Laurie Berger & John Jenkins  
Dan Bilderback & Christine Sager  
Mary Anne & Nancy Bishop  
David Blount  
John & Patty Bodner  
Jenny Brandt  
Gabrielle Brown  
Bonnie Lembo & Robert Bundy  
Wade Buscher  
Cheryl Childers & Jim Bowers  
Jim & Marilyn Chu  
Copper Valley IGA  
Natasha Casciano  
Cordova Outboard  
Linda Crider  
Crowley Petroleum Distribution  
Mark Heidbrink & Becca Dodge  
Jeanine Firmin & DeeAnn Haraughty  
Sarah Ecolano & Rick Ballas  
Carole Fisher  
Forest Fusion  
Sandra Friendshuh  
Toni Godes  
Marnie Graham & Douglas Vollman  
Dick & Kay Groff  
Michelle Hahn & Andrew Smallwood  
Kent & Lynda Hamby  
Vicky & Greg Hamm  
Harborside Pizza  
Stormy & Mary Haught  
Jeff Hawley & Nancy Peterson  
Sarah Hayes  
Dr. Phil Hess  
Teresa & Jim Holley  
Meg Jensen & Mike McQueen  
Connie & Bill Jones  
Patti Kallander  
KCHU Public Radio  
Ray & Linda Kelly  
R.J. & Barclay Kopchak

Ray Landgraf  
Laura's Liquor Shoppe  
Bill & Renee Lindow  
Sue Kesti & Dan Logan  
Kevin & Suzanne McCarthy  
Jackie and Bryan McMahan  
Nik Merlino  
Brian Kovol  
Mike Anderson Pottery  
Henry & Marcia Millette  
Virginia & Jack Miller  
Steve Moffitt  
Kate & Andy Morse  
Howard Mozen & Elizabeth Schafer  
MTI Adventurewear  
Tessa Diem  
Old Town Copper Center Inn  
& Restaurant  
Peter Bronz  
Monika Reghetti  
Reluctant Fisherman Inn  
Laura & Neal Resnick  
Steve Richards  
Jonathan Riehle & Angela Bohmann  
Larry Rinder  
Elizabeth & Jim Robinson  
Bruce & Kari Rogers  
Rich Rogers  
Bill & Mary Earl Rogers  
Thomas Rohweder  
Hugh Rose  
David Rosenthal  
Beth & Rich Schluter  
Clair Scribner  
Cathy & Dixon Sherman  
John Shine  
Silver Fox Jewelry  
Copper Oar Rafting  
Karen & Paul Swartzbart  
The Hub of Alaska  
Thea Thomas  
Mark Vail  
Gonzalo Villalon  
Mike Webber & Katrina Hoffman

## RAVEN'S CLAN, \$50-99

A/C Value Center  
Dawn Anderson  
Kristy Andrew  
Jeff Bailey & Helen Howarth  
Shelly Balint  
Bayside Storage  
Dave & Laura Beam  
Karl Becker & Nancy Bird  
Brittany Blain-Roth & Brett Roth  
Mark & Janet Bloch  
Katie & Ben Bobowski  
Paul Boos & Janelle Eklund  
Alys Bowman  
Shae Bowman & Joe Hamm  
Brian Brockel  
Barbara Cellarius  
John Cholish III  
Bill and Diane Cobb  
Susanna Colloredo-Mansfeld  
Erin Cooper & Sean Meade  
Linden O'toole & Malani Towle  
Nick and Lisa Docken  
RuthAnn Dohner  
Arne Erickson  
Rachel Ertz  
Michael Ferraro  
First National Bank Alaska  
Fromagio's Artisan Cheese  
Robbe & Robin Gilmour  
Glennallen Rustic Resort B&B  
Eva & Kim Hager  
Diane & Kent Herschleb  
Elizabeth & Martin Hubbe

Phil & Audrey Huffman  
Margaret Hunt  
Julie Jessen  
Kinsey Justa  
Kendra's Kreations  
Adam Kenyon  
Caroline Ketron  
Alyssa Kleissler & Curtis Herschleb  
Knot Crazy!  
Rodger & Gerri Koechling  
Ben & Kaitlin Kramer  
Cory & LeAnn Larson  
LFS Marine Supplies  
Ann Mayo-Kiely  
Molly McCormick  
Kim Menster  
Belle Mickelson  
John & Sandra Myers  
NAPA Auto Parts/Alaska  
Auto Center, Inc.  
Dr. James & Katie Nelson  
Pete's Treats  
Jacob Peterson & Sarah Kathrein  
Andy Pfeiffer  
Dan Reum  
Julie & Brad Reynolds  
Sarah Robinson & Chris Arp  
Brian & Vera Rutzer  
Dave Siegal  
Jed Smith  
John Stack & Barbara Solomon  
Dotty Widmann  
Lisa & David Totemoff  
Barbara Vaile  
Amanda & James Wiese

## KINGFISHERS, \$25-49

Sean Den Adel  
Alaska Seafood Sales, Inc.  
Lilly Goodman & Michael Allwright  
Patience Andersen Faulkner  
Emily Anderson  
Kris Anderson  
Mike Babic  
Lauren Bien  
Carla Bloomquist  
Dr. Rob Campbell  
Casa de la Arte  
Brian Charlton  
Erica & Dan Clark  
Joe & Belen Cook  
Jessica Morningstar Hoover  
Copper River Fleece  
Peyton Coyner  
Alyssa Kleissler  
Miriam & Roger Dunbar  
John Egger  
Bob & Linda Flint  
Signe & Jim Fritsch  
Doug Fulton  
Melissa & Jason Gabrielson  
Madalyn Grahn  
Heidi Hatcher  
David & Judy Heller  
Brooke Johnson  
Kathleen & Chris Jones  
Adra Kusnirova  
Kate & Hamish Laird  
Tom McGann & Sue Laird  
Tom Lanini  
Mike Mahoney  
Robin Mayo  
Stanton Moll  
Sam O'Toole  
Carl Paulsen  
Pet Projects  
Frederic Reid  
Cathy & Micah Renfeldt

Melissa Sikes  
Mary Sine  
Dorothy & Tim Sine  
Dana and Anita Smyke  
Jessica Speed  
Leif Stavig & Denna Francischetti  
Linda & Henry Wall  
Erika Wolter  
XOAK

## SUBSISTENCE LIVING, \$10-24

Dave & Sarah Abbott  
Christy Fletcher  
Teal Barmore  
Ezekiel Brown  
Kayla & Sonny Bruno  
Shelly Crowe  
Diane Ellsworth  
Debra & Chip Ethier  
Joshua Gold  
Amanda Highfield & Carson Tortorige  
Vivian Kennedy  
Lanette Phillips  
Jared Martin  
Bill Novotney  
Desiree Ramirez  
Anne Schaefer  
Margie Steigerwald  
Diane Wilson

## THANK YOU FOR DONATING TO OUR SALMON TANK PROJECT.

Ahtna Intertribal Resources  
Commission  
Mike Babic  
Robert & April Beedle  
Alys Bowman  
Russell Bowman  
Shae Bowman  
Bret & Cindy Bradford  
Brian & Angela Butler  
Bill & Diane Cobb  
Alexis Cooper  
Copper Valley Telecom  
Shelly Crowe  
Nick & Lisa Docken  
Rachel Ertz  
Richard Harper  
Curtis Herschleb & Alyssa Kleissler  
Tracy Hook  
Knot Crazy!  
Robin Mayo  
McCarthy River Tours and Outfitters  
Jackie & Bryan McMahan  
Kim Menster  
Pete Mickelson  
Pamela Moe  
Andrew Morin  
Kate & Andy Morse  
Andy Pfeiffer  
Matt & Nicole Piche  
Prince William Sound  
Aquaculture Corporation  
Bruce & Kari Rogers  
Becky & Cory Schwanke  
Bobby Scribner  
Thomas & Ellen Sheridan  
John Shine  
John Stack & Barbara Solomon  
Bert Stammerjohan  
& Elizabeth Senear  
Ashley Taylor  
Paul & Sarah Trumblee  
Valdez Fishery Development  
Association

## MAKING CHANGES TO FIGHT CLIMATE CHANGE

BY CHANTEL ADELFI

Over the past three years I have started each of my climate change articles with one simple piece of data: “The average temperature in Alaska has increased roughly 3 °F over the past 60 years and is projected to increase an additional 2° to 4 °F by the middle of the century (U.S. Global Change Research Program, 2014)”. We have discussed how this change in temperature will have a ripple effect on Alaska’s permafrost, water temperatures, spawning salmon, species abundance and distribution, infrastructure, and subsistence lifestyle. These changes are already happening, 2019 was the warmest year on record for Alaska, and Alaskans are currently learning how to live in this changing environment.

It is not only Alaskans that need to adapt to a changing environment. NASA reports that 2019 was Earth’s second warmest year, with the warmest occurring in 2016, since modern record-keeping began in 1880. Rising temperatures worldwide are leading to major changes in ecosystems and extreme events, such as heat waves, wildfires, and intense precipitation. The most recent extreme event occurred in southeast Australia. The world watched in horror as Australia battled wildfires claiming over 1 billion animals and burning roughly 15 million acres. These events tend to leave people with an overwhelming urge to help. For Australia, people knit kangaroo pouches for injured joeys (baby kangaroo) and donated to fire fighter foundations. But how do we steer the Earth in a better direction? How do we help avoid future catastrophic changes to our environment?

We can help fight climate change by making simple changes in our personal lives, the businesses we support, local and nationwide efforts, and global collaboration. Our goal is to decrease our own carbon footprint and support events, organizations, and products with



a small carbon footprint. What is a carbon footprint? This refers to the amount of greenhouse gases, primarily carbon dioxide, released into the atmosphere by a particular human activity. Individuals can do this by becoming more conscious about lights and appliances in use, choose to carpool or ride a bike, and support businesses that use renewable energies and recycled materials.

We as a community should support efforts occurring at local levels to decrease carbon emissions and increase the use of renewable energy. Cities across the world have started adapting a more “green” lifestyle by increasing the use of solar panels, motion sensor lights, heat trapping windows, and sidewalks made from recycled materials.

We as a nation need to work towards drastically decreasing our carbon emissions, and the best way to succeed is to support the production and use of sustainable energy. Solar, wind, hydro, and geothermal are renewable energy sources being used across the nation. These renewable energy sources are becoming (or in some cases are already) cheaper than fossil fuels used today. Changing our energy sources will help decrease our carbon emissions in future years, but we can also make changes as a nation to help buffer the

negative effects we have already set in motion. Efforts to decrease current and future carbon dioxide levels include reforestation efforts, restoration of wetlands, protecting sensitive lands, and investing in technologies to remove carbon dioxide from the atmosphere.



# RIDGELINES: AROUND THE WATERSHED

## CRWP IS BRINGING A NEW BALER FOR RECYCLING TO CORDOVA

BY SHAE BOWMAN

For three years now, the Copper River Watershed Project (CRWP) has been facilitating plastic recycling events and developing a plan to expand recycling capacity in Cordova. In November 2019, CRWP was awarded a grant from the Rasmuson Foundation for \$50,000 to purchase a baler and conveyor belt, which is crucial for effective recycling activities in our town. However, at this time, we are not able to facilitate plastic recycling efforts due to serious global-wide concerns that recycling plastic is doing more environmental harm than good.

We are in a state of crisis in managing our plastic waste in North America. This realization has not been easy, especially when the Copper River Watershed Project had worked so hard towards keeping plastic recycling efforts moving forward. However, we will be moving forward with the purchase of the baler to expand our recycling efforts for other materials. We will use the baler to recycle aluminum, possibly steel cans, and to significantly expand our fishing web recycling program. If and when there is infrastructure in the US to support a circular economy for plastic recycling under strict environmental guidelines, CRWP will have the equipment in place to implement a plastic recycling program.

The new baler will be stationed at the City of Cordova baling facility on Whitshed road and the baling operations will be done by a part-time CRWP employee. A recycling collection point will also be established at the baler. To ensure that we receive a good price for our recyclable material, all material must be very clean and follow all the protocols we establish for recycling. Our goal is to create a structured business plan for recycling that will allow us to provide long-term stability for the recycling program despite fluctuations in the recycling market while at the same time ensuring that our material is only recycled under strict environmental standards. Please stay tuned for future communications as we are developing our recycling program with our in-coming baler and please reach out with any ideas on what things we can do as a community to reduce our single-use plastic consumption in Cordova.



## REPORT YOUR TRASH FINDINGS TO THE COPPER RIVER STEWARD'S CLEAN-UP JOURNAL

BY SHAE BOWMAN

During the time of Covid-19, we might not be able to gather together as a community for our traditional community clean-up events but getting outside for some trash pick-up is a great way to get fresh air, get exercise (ever heard of plogging), and get the family involved in doing something positive! CRWP has started a new project on Anecdota called the Copper River Steward's Clean-up Journal. If you are interested in participating in the project you can download an app available for IOS and Android systems to easily report your findings, upload your trash photos, and view what others are finding. You can also report at <https://www.anecdota.org/projects/view/714>

Reporting your data to the Litter Journal will help CRWP identify common types of litter and litter accumulation hotspots within the watershed. We plan to use that information to help the watershed communities find more sustainable alternatives to their most commonly littered items and to create awareness for leaving our wild places "better then we found it."



**COLOR AWAY YOUR STRESS AND CABIN-FEVER.**  
Once you've colored this, hang it in your home to help celebrate the return of Copper River Salmon! Our world as we know it might have shut down, but thanks to an in-tact watershed habitat, Copper River salmon will still be making their return journey to their spawning grounds in mid-May.

## NEW COPPER RIVER SOCKEYE SALMON PROJECT

BY DR. PETE RAND

Have you noticed that Copper River sockeye salmon have been getting smaller? This trend began in the 1970s, but the decline has been most dramatic in recent years, corresponding to the heat wave that is affecting the ocean. The Prince William Sound Science Center (PWSSC) and University of Alaska Fairbanks have teamed up to investigate the consequences of this decline. Scientists believe these smaller fish may have a more difficult time completing their migration. The research team will be out this year tracking sockeye using radio tags. The investigators are asking anyone that captures one of their tagged fish (they have a hole in their gill cover and a wire antenna extending from their mouth) to return the tags to drop boxes by the river or at an ADF&G office, or return them via mail (all tags have a mailing address on them). Tags recovered in-season will allow the researchers to tag additional fish. By including your name and contact information, harvesters returning tags will be entered to win a \$100 prize and a PWSSC t-shirt.



NON PROFIT ORG  
US POSTAGE  
**PAID**  
PERMIT #8  
CORDOVA, AK 99574

P.O. BOX 1560, CORDOVA, ALASKA 99574  
tel 907.424.3334 email [INFO@COPPERRIVER.ORG](mailto:INFO@COPPERRIVER.ORG)  
web [COPPERRIVER.ORG](http://COPPERRIVER.ORG)

ADDRESS SERVICE REQUESTED

**COPPER RIVER**  
WATERSHED PROJECT



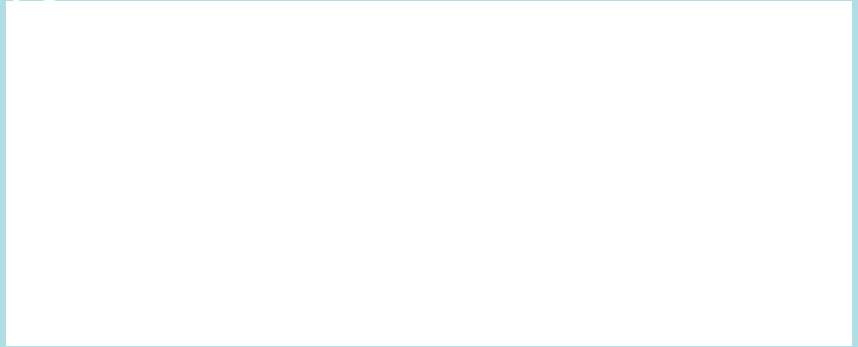
# Newsletter

## SPRING 2020



- \* Salmon tanks in schools
- \* Elodea
- \* 2019 Annual Report
- \* Climate Change
- \* Help collect litter data

TO



### CRWP MISSION

*The Copper River Watershed Project promotes a salmon-rich, intact watershed and culturally diverse communities by forming partnerships for watershed-scale planning and projects.*

### WHY SUPPORT CRWP?

Why support the CRWP? The wakes of a school of silvers rippling up the Eyak; three eagles' keening overwatch from a tall spruce; a bear thirty feet near making a laughing sound as he lumbered away; sunlight and clouds' shadows on the face of Mt. Shiels; the crystal waters of Power Creek tribs brimming with sockeye in spawning colors; the aurora lighting Mt. Eyak; Hawkins Island across Orca Inlet on a clear September morning; sitka spruce and western hemlock brooding on rainy, foggy afternoons; the serene beauty of Eyak Lake; the seals, sea lions, and sea otters patrolling the bay opposite Fleming Spit; the magnificent jagged horizon looking east from Ibeck Creek; the CRWP personnel dedicated to preserving and protecting the spectacular Copper River Watershed.

– Long term anonymous donor



Photo by Jackie McMahan.