



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

**COPPER RIVER**  
*Runner*  
**SPRING 2016**



## TAKING COMMITMENT A STEP FURTHER

BY KRISTIN CARPENTER, EXECUTIVE DIRECTOR

When Bill and Connie Jones visited Cordova from Texas in August 2005, I met them as tourists, exploring Alaska. Today, they and their good friend Larry Lewis are our strong partners in restoring fish passage!

It was a wet, wet summer in 2005, and one afternoon Bill and Connie stopped in the CRWP office (most likely to find a dry spot out of the weather). I talked with them for a bit, gave them my “watershed 101” tour of the Copper River drainage on our USGS topographical map, and then went on with my day after they continued their tour of town.

Imagine how pleased I was when they mailed us a generous contribution in December and became CRWP members! Bill and Connie began following our progress in our newsletters. Once when I called Bill and Connie to thank them for their annual contribution, Bill said “I sure wish there was a way I could help with your culvert projects.”

Engineering costs run about 15 percent of the cost of a culvert replacement, which ranges from \$300,000 up to \$1 million. Knowing that Bill is an engineer, I told him that we are always looking for ways to cover the cost of culvert design. Despite the distance between Texas and Alaska, Bill got to work! He took a class

in “stream simulation” culvert design, and became licensed to practice engineering in Alaska so that he could donate his engineering services to the CRWP.

Why is culvert design so critical? Because culverts manipulate, or facilitate, flowing water. Culverts that mimic natural stream width and slope function more like an actual streambed than a metal pipe. But a too-small culvert or one that is not embedded in the stream is bad for fish and for infrastructure. Juvenile fish need to be able to move up and downstream to find food and sheltered spots. An under-sized culvert constricts water flow, creating a current that’s too strong for fish to swim up against. Small culverts can also cause flooding and road embankment erosion on the upstream side of a road. Embedding a culvert in the stream bed is important, too, otherwise the culvert mouth ends up “perched” above the stream and a fish may not be able to make the jump.

Ten years later, Bill and Connie returned to Cordova along with Bill’s engineering partner Larry Lewis, and they spent a sunny week surveying culverts. Bill and Larry collected stream data for our next fish passage project, the mile 17 culvert on the Copper River Highway.

With construction funding from the National Fish & Wildlife Foundation, we plan to replace the culvert in 2017. In the meantime, Bill and Larry are hard at work crunching data on the size of the basin draining into this stream, estimating the flow levels for the 50-year

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### CRWP MISSION

*To foster the health of the Copper River watershed’s salmon-based cultures, communities, and economies.*

## LETTER FROM OUR BOARD CHAIR

Twelve years ago I arrived in Cordova to work for a research program studying salmon along the Copper River delta. I knew nothing about salmon. In need of a swift education, I turned to new colleagues and friends whose wealth of local knowledge put me up the creek with a very sturdy paddle. I immersed myself in salmon life history, the navigation of jet boats down braided sloughs, and how to set fishery gear to withstand immense tidal influences. My time in the field was intense but in time I began to understand the natural rhythms of the delta.

Flash forward to present day. Salmon is at the center of my life. My career has meandered back and forth between research and commercial fishing, and at every bend I've relied on our human capital, that wealth of local knowledge and skill that residents of this watershed possess, to help me steer the best course. Prior to living in this watershed, I had never been part of a community of people with such an interest in their natural environment and the resources on which they stake their cultures and livelihoods.



Brad, Noah, Julie and Avery Reynolds.

Like many here, I felt compelled to play a role in the stewardship of this incredible place. Serving on the board of the Copper River Watershed Project (CRWP) has been a privilege and a natural outcome of all that I have learned from my watershed neighbors. Local knowledge is at the heart of the CRWP and the realization of its mission: to foster the health of the Copper River watershed's salmon-based communities, economies, and cultures.

In April, our board of directors, comprised of upriver and downriver residents, will meet for our annual retreat and review our current strategic plan so that we can revise and renew it to carry the CRWP forward. We are not starting from scratch. Rather, it is a process that relies on organizational knowledge gleaned by the CRWP since its inception nearly 20 years ago. So much of this knowledge came from community voices throughout the watershed, a history of conversations between staff and board members, residents, stakeholders, and regional partners. The distillation of these conversations guides our goals as an organization and our hope is to regularly reinvigorate the strategic plan to set the CRWP on its best course.

The natural and human histories of this watershed fascinate me and I hope there is no end to the stories this watershed will tell. So let's keep talking and sharing our stories and our knowledge. And like tributaries contributing to the river, we can arrive at a collective wisdom to work together for the stewardship of the Copper River.

Brad Reynolds

### CRWP BOARD OF DIRECTORS

Brad Reynolds, Board Chair, Cordova  
Mark Johns, Vice President, Copper Center  
Alexis Cooper, Treasurer, Cordova  
Robin Mayo, Secretary, Kenny Lake

Erica Clark, Cordova  
Dorne Hawxhurst, Cordova  
Caroline Ketron, Gakona  
Nik Merlino, McCarthy

### CRWP STAFF

Kristin Carpenter, Executive Director  
Kate Morse, Program Director  
Danielle Verna, Invasive Weeds Program Manager  
Don Hofstetter, Invasive Weeds Coordinator/Copper Basin  
Shae Bowman, Operations Manager

## CLASSROOM CURRENTS

AN AMBASSADOR FOR LOCAL SALMON HABITAT



Thanks to the help of my mentor Kate at the Copper River Watershed Project, I got the chance to be a part of two awesome experiences, not only within my own community but on a statewide level as well.

This fall, the Copper River Watershed Project organized a Salmon Blitz field trip for 26 Cordova High School students. Salmon Blitz is a program that involves students (and community volunteers) in fish habitat assessments that help generate data for Alaska's Anadromous Waters Catalog. This catalog helps to protect salmon streams all across the state!

While helping to contribute to the catalog, I was able to learn so much from this program on a personal level. We learned how to find traps using a GPS, measure and identify fish, fill out datasheets, and identify the types of waters and vegetation surrounding the streams. Coming from a small fishing town, this was meaningful to me because I got to explore and learn more about the fish that support the fisheries that are so vital to us. ([Learn more about salmon blitz online copperriver.org/programs/fish-habitat-restoration/salmon-blitz.](http://copperriver.org/programs/fish-habitat-restoration/salmon-blitz))

After this field experience, I was offered the chance to go to Anchorage to speak about Salmon Blitz at the Alaska Forum on the Environment. I was able to participate in workshops with other kids my age and learn even more ideas for how I can take action in my community. I watched numerous presentations from adults and my peers in addition to sharing my own experience on Salmon Blitz. Other topics I learned about ranged from invasive species, vegetation restoration, to recycling, and so much more. It was amazing to see the different types of environmental projects happening within our state, not only by adults, but by teens, too. Alaska Forum on the Environment really made me open my eyes and see how important taking care of our planet is. Whether it be in big or small ways, every action makes a difference.

### TAKING COMMITMENT A STEP FURTHER

*continued from page 1*

and 100-year floods, and then calculating what the right size culvert is given those flows, the stream channel width, and the road embankment height.

Thank you Bill, Connie, and Larry for your gift of engineering services that will help salmon cross the borders our infrastructure imposes on them! You have set an inspiring example for putting your skills to use to make an investment in the long-term health of the Copper River watershed.



Livi (in red) and two of her teammates identify, count and measure fish caught during their Salmon Blitz outing on Hatchery Creek in Cordova.



Livi shared her Salmon Blitz experience with her peers and other adults from throughout Alaska during the 2016 Alaska Forum on the Environment. Here she poses with other participants from the Copper River watershed.

## Thanks

to the Alaska Forum on the Environment for supporting the Youth Track and providing travel assistance for youth from rural communities.

One of three sites of invasive bird vetch (*Vicia cracca*) in the Copper Basin, summer 2014. Photo credit: Donald Hofstetter

# INVASIVE (NOT PRETTY)

## INVASIVE SPECIES *A Universal Challenge*

BY DANIELLE VERNA  
INVASIVE WEEDS COORDINATOR

As we arrange our travel plans for another busy field season throughout the watershed, I'm reminded that although our small town is not on an island, it can sometimes function like one. Accessible only by boat or plane, travel from Cordova can be a lengthy, logistical feat. When it comes to invasive species, though, our isolation isn't a guarantee to remain free from introductions. Species are likely introduced to the watershed through choke points (e.g., the ferry, barge, or sparse road system) and by typical vectors such as people, vehicles, equipment, and materials. This limited introduction potential gives us an opportunity to focus on controlling existing infestations (i.e., reducing further spread). But as we return to the same stubborn sites each year, it's helpful to think about invasive species from a broader perspective.

Recently I took a trip to the Seychelles, about 1,400 miles off the coast of eastern Africa and just below the equator. This remote group of 115 tropical islands is home to a host of endemic flora and fauna, including bats, birds, amphibians, and the famed Aldabra giant tortoise and coco de mer palm. But as a tour of the UNESCO World Heritage Site 'Vallée de Mai' revealed, the Seychelles are also home to a surplus of invasive species that actively threaten its unique ecosystem, often unwittingly introduced by visitors. After I returned from my trip, a friend shared with me a first-of-its-kind book recently published on the subject: *Invasive Alien Species in Seychelles* (December 2015). The book was written by two scientists over the course of four years and covers a range of species invasive to the islands such as cinnamon and rats.

The problem of invasive species on islands is nothing new. Take for example brown tree snakes in Guam,

mongoose in Hawaii, and cane toads in Australia. These species triggered severe environmental and economic impacts and have been extremely difficult to control. Nevertheless, islands, and other remote places, are often targeted for eradication attempts due to their isolation as well as the threat of extinction that invasive species pose to endemic species.

One inspiring island eradication success story comes straight from Alaska. In 2008, Hawadax Island, once known as Rat Island, was declared free of invasive Norway rats. Located in the Aleutian Chain, Hawadax and its neighboring islands provide important habitat for a range of native seabirds that were routinely preyed upon by the rodent invaders. The distinctive Copper River Delta similarly provides exclusive habitat to countless shorebirds and many other species. These remote and relatively intact sites are obvious targets for strategic invasive species management.

Considering the risks posed by invasive species, it's easy to see why CRWP dedicates resources to their eradication. It's encouraging to see a growing awareness and commitment to management from others in the watershed, too. We're doing our part in an area that, similar to many others, has an opportunity to regain ground lost to invasive species. Bird vetch in the Copper Basin is a great example: each year since its discovery in 2014, we've been mowing infestations regularly to prevent further spread. This plant is notoriously challenging to control, but remains confined to three known sites totaling less than an acre. You can be a part of this effort. Take a moment as you plan your travel for this summer, around the world or around your watershed, to think about ways you might be transporting invasive species – and then leave the hitchhikers at home.

## NEW MEMBERS



CAROLINE KETRON

After many seasons in the Copper River Basin, beginning in 2004, Caroline Ketron has finally made Alaska home. She has lived in Gakona since 2014 and currently is a seasonal archaeologist for the National Park Service. As an archaeologist, she is interested in subsistence culture, past and present, and in keeping our wild foods available for the future.



ERICA CLARK

Born and raised in a commercial fishing family in Kodiak, Erica grew up on the ocean, earning her first full crewshare at 15 and getting her 100 Gross Ton Captain's license at 22. After three years stationed in the midwest, Erica and U.S. Coast Guard flight mechanic husband Dan moved back to Cordova in 2014 and promptly increased the population again when they celebrated the birth of their daughter Hazel Jade in November 2014. Erica holds a Masters of Education from University of Alaska/Fairbanks and works part-time for the Copper River/Prince William Sound Marketing Association.



CRWP BOARD  
of DIRECTORS



DORNE HAWXHURST

Dorne works from Cordova as an administrative attorney at the Alaska Court System. She manages the 1,200 forms offered by the court system to judges and litigants, and acts as a healthcare advocate for court employees. Her history with salmon goes back two decades when she served as Executive Director of Cordova District Fishermen United.



MARK JOHNS

An Ahtna Native from Copper Center, Mark works as the Environmental Programs Coordinator for the Native Village of Kluti-Kaah. Mark is raising three sons, and also volunteers as a coach for the Kluti-Kaah Native Dance Group.



NIK MERLINO

Nik was born in Seattle, WA and began coming to Alaska in his youth with his father and brothers. He first came to the Copper Basin at ten years old and over time found his way back to McCarthy where he lives with his family (wife Gina, daughter Cassidy, and son Dylan). Nik discovered his love of rivers while on a family raft trip on the Goodnews River in western Alaska when he was 11 and spends his personal and professional time exploring the rivers of the Wrangell Mountains and Copper Basin.



BRAD REYNOLDS  
see page 1



ROBIN MAYO

Robin grew up in Fairbanks, in a family that placed high value on volunteering and serving the community. She has made the Kenny Lake area her home for nearly 20 years. She serves on boards for the Kenny Lake Public Library, Copper Country Alliance, and an Advisory School Board for the Kenny Lake School. Her job as Executive Director of Wrangell Institute for Science and Environment (WISE) means she also works as a partner with the CRWP on education programs.

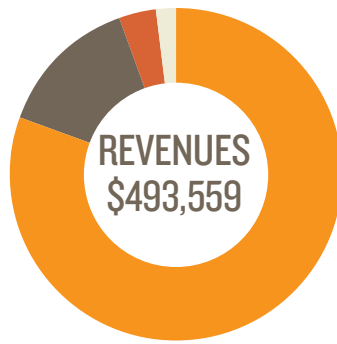


ALEXIS COOPER

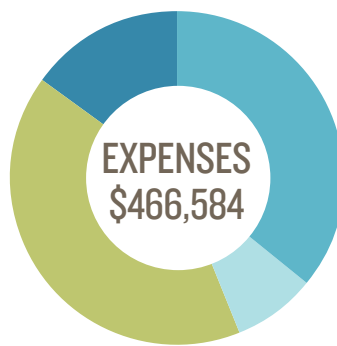
Alexis served as the Executive Director for Cordova District Fishermen United for 4.5 years, a membership organization that represents gillnet and seine salmon fishery concerns for Prince William Sound. Alexis' love of gardening is challenged in Cordova's rainforest climate but her green thumb finds ways to brighten up the space around her.

## RETURNING

# 2015 ANNUAL REPORT



- \$401,054 / 81% Grant income**
- \$68,963 / 14% Contributions**
- \$19,277 / 4% Special events**
- Other \$4,265 / 1%**



- \$168,416 / 36% Program staff**
- \$36,769 / 8% Admin. and fundraising**
- \$190,782 / 41% Program specific expenses**
- \$70,617 / 15% Shared operating expenses**

## ASSETS

### Current Assets

Checking/Savings	20,408.16
Accounts Receivable	48,567.80
Other Current Assets	7,312.30
<b>Total Current Assets</b>	<b>76,288.26</b>

Fixed Assets	8,448.32
Investment Reserve	39,216.60
<b>Total Other Assets</b>	<b>47,664.92</b>

<b>TOTAL ASSETS</b>	<b>\$ 123,953.18</b>
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## LIABILITIES & EQUITY

### Liabilities

#### Current Liabilities

Accounts Payable	11,547.34
Credit Card	1,973.55
Deferred Revenue	1,652.46
Payroll Liabilities	850.46
Sales Tax Payable	(1.13)
<b>Total Liabilities</b>	<b>16,022.68</b>

### Equity

Retained Earnings	61,145.40
TR Net Assets Contributions	19,810.66
Net Income	26,974.44
<b>Total Equity</b>	<b>107,930.50</b>

<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b>\$ 123,953.18</b>
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## 2015 FUNDERS

- Alaska Association of Conservation Districts
- Alaska Conservation Foundation/Watchable Wildlife Fund
- Alaska Geographic
- Alaska Department of Environmental Conservation
- Alaska Forum on the Environment
- Alaska Sustainable Salmon Fund
- Bureau of Land Management, partnership agreement
- Exxon Valdez Oil Spill Trustee Council
- North Pacific Research Board
- Prince William Sound Regional Citizen's Advisory Council
- U.S.D.A. Forest Service, SRS Title II projects and partnership agreements
- U.S. Fish & Wildlife Service

We'd like to recognize to the following business who generously supported CRWP events and educational programs with significant gifts in 2015. Please support these businesses that support sustainable economic development in the Copper River region.

### ANCESTOR'S LEGACY, \$1000+



### WATERSHED STEWARDS, \$500



### TRIBUTARIES, \$250



### SALMON BLITZ

Doreen, age 14, from Chistochina, participated in a Salmon Blitz survey of Sinona Creek, August 2015. She was one of over 120 volunteers who helped conduct 35 stream surveys in 2015. These surveys resulted in approximately 20 miles of new habitat data that will be nominated to Alaska's Anadromous Waters Catalog.



### RESTORING FISH PASSAGE

CRWP facilitated a group of over a dozen state and federal agency representatives from throughout the watershed to prioritize culverts for replacement. The McCarthy Road culvert on Crystal Creek, which has coho salmon, rainbow trout, and Arctic grayling, is the top candidate for replacement in the Copper Basin.



### INVASIVE WEED CONTROL

CRWP began eradication of knotweed in Cordova and worked with WISE to host a white sweetclover weed smackdown in Glennallen. Of 322.35 acres in the watershed surveyed for invasive plants, CRWP and partners are actively treating 69 acres.

ALASKA

CANADA

## COPPER RIVER WATERSHED



### WATERSHED EDUCATION

CRWP offered 37 watershed and salmon-themed education sessions for over 300 students throughout the watershed. When possible, students were literally immersed in the habitat they were studying.



### REDUCING STORMWATER POLLUTION

CRWP worked with the City of Cordova to construct a snow storage V-swale for reducing the amount of pollution from melting snow that reaches Odiak Pond, coho salmon habitat. We are sharing our experience with this project with other small, coastal Alaska communities.



### TOURISM RESOURCES

We work to promote small-scale, independent traveler tourism to help diversify the region's economy. CRWP facilitates the annual Copper River WILD! Salmon Festival to attract visitors to a weekend of music, Small Fry arts and education activities for kids and families, and running events.

# THANK YOU, MEMBERS

## ANCESTORS' LEGACY, \$1000+

Alaska Glacial Mud Co.  
Bill and Marion Alexander  
Alyeska Pipeline Service Co  
American Seafoods Company  
Arthur J. Donald Family Foundation  
Tom Hall & Elizabeth McLoughlin  
Connie & Bill Jones  
Curt & Betty Jones  
Family of John Koch  
Bill Leighty & Nancy Waterman  
Ninkasi Brewing  
Riki Ott  
Russell & Joan Smith  
Jim Staszewski  
Lorna Stern  
Trident Seafoods  
Charles Wilson  
Wilson Construction

## WATERSHED STEWARDS, \$500

Alaska Marine Lines  
Carroll Barclay  
Phil & Rich Blumstein-Ervin  
Allison & Chris Bovard  
Karen Hyer & Ken Carlson  
Copper River Seafoods  
Currant Ridge Cabins  
Stuart & Margery Elsborg  
John & Liz Garner  
John & Barbara Harvill  
Deirdre Henderson  
Marie & Charles Hoffman  
Dan Hull & Nancy Pease  
Gary & Cynthia Jacobs  
Northern Fish Alaska  
Jeff & Andrea Rice  
David Reiser  
Bert Stammerjohan & Liz Senear  
Triton Foundation  
Wells Fargo Bank Alaska

## TRIBUTARIES, \$250

Alaska Railroad Corporation  
Rob Alexander & Chip Brown  
Anchor Bar & Grill  
Carol Bailey & Dr. Steve Medwell  
William Beattie & Evonette Aponte-Beattie  
Amy Bernard & Kirk Larsen  
Kory Blake  
Tim Brabets  
Dr. Ken Hill & Page Brumbley  
Debbie & Dino Ciabattini  
Bob & Susan Clausen  
Copper Valley Telecom  
Cordova Telephone Cooperative  
Cordova Wireless Communications  
G. Warren Elliott  
Mary Hall  
Denton & Tamara Hamby  
Jeff Guard & Dorne Hawhurst  
Anne & John Herschleb  
Ken Hodges  
Gretchen Hull  
Peter & Tanya Johnson  
R.J. Kopchak & Barclay Jones-Kopchak  
Curtis H. Jones, Jr.

Cathy & Fred Keuthen  
Laura's Liquors  
Jack & Lynn Loacker  
Marine Jet Power  
Donna McBain Evans & Sam Evans  
Debra Miller D.M.D.  
Pamela Moe  
Diane & Greg Morgan  
Mary Jane & Alan Morse  
Eric Manzer & Molly Mulvaney  
Jason Nierman  
Becky Nourse  
The Picnic Basket  
Riverside Inn & Childs Glacier Tours  
Shoreside Petroleum  
Kate & Reid Smith  
Specialty Imports  
Rocky Stone & Robert Sullivan  
Terry & Ann Talcott  
Cliff Ward  
Eric & Janice Wurga  
Charlotte & Lance Westing

## WRANGELL PEAKS CIRCLE, \$100

A Rogue's Garden  
Alaska Biological Research, Inc.  
Alaska Marine Lines  
Rich & Shannon Alloway  
Leo Americus  
Thomasina Andersen  
Kate & Alex Arduser  
Heidi Babic  
Baja Taco  
Dr. Howard & Jean Baumann  
Lou Beaudry & Bonnie Makinson  
Gil & Elinor Beck  
Tuffy Beedle & Kim Lamborn  
Bob & Joanie Behrends  
Judy & Mark Berger  
Laurie Berger & John Jenkins  
Dan Bilderback & Christine Sager  
Mary Anne & Nancy Bishop  
Bill Black  
Brittany Blain  
Peter & Robin Blake  
David & Donna Blount  
Toni & John Bocci  
The Boeing Company  
Dr. Chris and John Booren  
Hanley Brite & Nancy Bancroft  
Sharon Brumbley  
Robert Bundy  
Bruce & Shirley Cain  
Danny & Kristin Carpenter  
Mark Casey  
Jim & Marilyn Chu  
Becky Clausen & Dirk Lang  
Beth & Al Clayton  
MTI Adventurewear  
Rich & Debbie Collins  
Xiomara & Steve Copeland  
Copper River Fleece  
Copper Valley IGA  
Cordova Drug  
Andy Craig & Seawan Gehlbach  
Linda Crider  
Crowley Petroleum Distribution  
AnnaMarie Davis  
Mark Heidbrink & Becca Dodge  
Andra & Nathan Doll  
Peter & Nancy Fenner  
Carole Fisher  
Bob & Emilie Frisbie  
Tony Gasbarro  
Glenn Transport  
Toni Godes  
Lynn Grams  
Scott Grieve  
Roslyn Solomon & David Groff  
Janet & Donald Groschel

Nelly & Michael Hand  
Laurie & Bruce Hauptli  
Jeff Hawley & Nancy Peterson  
Richard Henderson & Aziza Powell  
Diane & Kent Herschleb  
Dr. Phil Hess  
Dr. Donald & Louise Heyneman  
Cindy Hjort  
Kirk Hoessle & Gabrielle Markel  
Teresa & Jim Holley  
Judge Marvin & Sophia Holz  
Margaret Hunt  
IBEW Local 1547  
Deborah Jacob  
Robin & Skip Jensen  
Barb & Bob Jewell  
Cynthia Jones & Phil Oman  
Julie Wolf Massage Therapy  
Patti Kallander  
Iyad Khalaf  
Father Tom Killeen  
Heath & Shelly Kocan  
Seth Landau  
Bert Lewis & River Gates  
LFS Marine Supplies  
Bill & Renee Lindow  
Ian Lindsay  
Eric Lutz & Cynthia Buchanan  
Mike Mahoney  
Bill & Kim McAuliffe  
Kevin & Suzanne McCarthy  
Patty & Dennis McGuire  
Johnny & Johana McMahan  
Virginia & Jack Miller  
Bill Mohrwinkel  
Napa/Anchor Auto Marine Inc.  
Kelly Neuman  
Dr. Oliver & Eve Osborn  
Peter Bronz Pottery  
Peterson Welding  
Rich & Laura Pribyl  
Monika Reghetti  
Jonathan Riehle & Angela Bohmann  
Larry Rinder  
Rich Rogers  
Bill & Mary Earl Rogers  
Arlene & Danny Rosenkrans  
David Rosenthal  
David & Darcy Saiget  
Beth & Rich Schluter  
Steve Schoonmaker  
Monica Shah & Gregg Shomaker  
Cathy & Dixon Sherman  
Dawn & Jeff Smallwood  
Jennifer Sutton & Todd Smith  
Wayne & Diann Smith  
Roy & Dede Srb  
St. Elias Alpine Guides & Copper Oar  
Sandra & Rich Staples  
Brad & Denise Stern  
Jim Stratton  
Karen & Paul Swartzbart  
The Hub of Alaska  
Cherri Thomas  
James Thorne  
Timless Beauty, Endless Health  
Lisa & David Totemoff  
Mark Vail  
Danielle Verna  
Gonzalo Villalón  
Shelly Wade  
Ken Hill  
David Hartley & Helen Weagruff  
Jim & Maria Wessel  
Violet & Joe Whaley  
Meredith Yasui & Erin Flory  
Karen Yoshitomi

## RAVEN'S CLAN, \$50

Lilly Goodman & Michael Allwright  
Lee Rolfe & Tony Angell  
Auklet Charter Services

Tom & Barb Bailer  
Dan Bates  
Dave & Laura Beam  
Karl Becker & Nancy Bird  
Charlie & Patty Bell  
Teresa & Andy Benson  
John & Patty Bodner  
Paul Boos & Janelle Eklund  
Jim Bovard  
Tim Bowman & Judy Engh  
Donna & Larry Brown  
Bruce & Karen Butters  
Michael & Lillian Cawdrey  
Barbara Cellarius  
Bill & Diane Cobb  
Susanna Colloredo-Mansfeld  
Joe & Belen Cook  
Erin Cooper & Sean Meade  
Current Rhythms  
Brent Davis & Lauren Padawer  
Pere Davison  
Julie de Boer & Robert Carr  
Micah Ess & Michelle Dockins  
Sue Farzan  
Michael Ferraro  
Fireweed Grill  
First National Bank Alaska/Cordova  
First National Bank Alaska/Glennallen  
Patricia & Walter Foulkrod  
Rick & Cindy Fox  
Mark & Cindy Frohnapfel  
Helen Howarth  
Shawn Gilman  
Kurt Goetzing  
Marnie Graham & Douglas Vollman  
Cheri & John Grocott  
Dick and Kay Groff  
Becky Hawley & Bruce Harvie  
Blair Hensen  
Meg Jensen & Mike McQueen  
Julie Jessen  
Tim Joyce  
Kendra's Creations  
Adam Kenyon  
Alyssa Kleissler & Curtis Herschleb  
Marita Kleissler  
Knot Crazy!  
Rodger & Gerri Koechling  
Ben & Kaitlin Kramer  
Cory & LeAnn Larson  
Les & Joan Larson  
Sue Kesti & Dan Logan  
Judith & Matt Lorenz  
Steve Marshall & Sandra Pedigo-Marshall  
Chris & Heather Maxcy  
NAPA Auto Parts/Alaska Auto Center, Inc.  
Justin & Tracey Nuzzi  
Pete's Treats  
Frank Ramsey  
Virginia Reinhart  
Reluctant Fisherman Inn  
Julie & Brad Reynolds  
Tim Richardson  
Diana & Raymond Schaney  
Clair & Steffan Scribner  
Adrian Smith  
Allison & Doug Smith  
Dustin Solberg & Ann Harding  
Carla & Mark Somerville  
John Stack & Barbara Solomon  
Lisa Stephenson & Matthew Chan  
Jeff & Liz Stonehill  
Vladimir Ulyanov and Tatyana Ulyanova  
Kirsten Valentine  
Kenneth Van Gilder  
Jo & Blaine VanDerSnick  
Gay & David Wellman  
Amanda & James Wiese  
Linda Wright

## KINGFISHERS, \$25

Alaska Seafood Sales, Inc.  
Kris Anderson  
Mike Babic  
Jeff Bailey & Helen Howarth  
Heather Beaty  
Mark & Janet Bloch  
Gabrielle Brown  
Charlette & Virgil Carroll  
Brian Charlton  
Yoke-sim Choong  
Erica Thompson & Dan Clark  
Kara Clegg  
Michael Clutter  
Matt & Jennifer Conforti  
John Cholish III  
Peyton Coyner  
Judy & John Day  
Robert & Kathryn DeLuccia  
Dragonfly Design Images  
Sarah Ecolano & Rick Ballas  
John Egger  
Sally Entrekin  
Jamie Foode  
Signe & Jim Fritsch  
Doug Fulton  
Glennallen Chiropractic Center  
Chris & Leah Grey  
Kathy Halgren  
David & Judy Heller  
Nancy Hill  
Caleb Jacobson  
Dena Jameela  
Kara Johnson  
Caroline Ketron  
Liz & Bill Larzelere  
Wayne Lau  
Becci & Hamilton Long  
Robin Mayo  
Robert McCleary  
Diane McDougle  
Jackie & Bryan McMahan  
Terry & Carol Merritt  
Belle Mickelson  
Marleen Moffitt  
Mountain View Grocery,  
Gas & Liquor  
Linden O'Toole  
Ruby & Cody Oatman  
Jennifer Palmisano  
Joy Persall  
Joe Plotino  
Beth Poole  
Lynn & Carol Potter  
Redden Marine  
Frederic Reid  
Randy & Darlene Robertson  
Alex & Tamara Russin  
Brian & Vera Rutzer  
Praveen Sattaru  
Judy Shaw  
Dick & Sue Shellhorn  
Barbara Sherman  
Jed Smith  
Dana & Anita Smyke  
Danny & Lisa Sparrell  
Kathryn Stoltzfus  
Dotty Widmann  
Ginger Thrash  
Tolsona Lake Resort  
Doyle & Norma Traw  
David & Chris VanCleve  
Seth Walker & Emerald Bogue  
Yang Wren Art

## SUBSISTENCE LIVING, \$10

Becki & Dave Buss  
Dr. Rob Campbell  
Chocolate Spoon Espresso  
Elizabeth Collins  
Courtney Eberhardy  
Tom Haddock  
Mitch & Gail Nowicki  
Pam Ore  
Jim & Charleen Pitta  
Matt & Sherry Shaw  
Trey Simmons  
Tim Skiba  
Theresa Tanner  
Tazlina River Trading Post

# RIDGELINES: AROUND THE WATERSHED

## PRINCE WILLIAM SOUND SCIENCE CENTER ENVIRONMENTAL SUMMER CAMPS

PWSSC's environmental science camps are an opportunity for campers to experience the amazing landscape that surrounds us in an educational and exciting way. Through camp experiences, we'll hike in the rainforest, observe glaciers up close, canoe through wetlands, and explore the tide pools and ocean. From headwaters to ocean... it's all connected. We are dedicated to helping campers develop their understanding of the world around them through scientific inquiry, positive outdoor experiences, leadership skills, and ecosystem stewardship. Camp programs offered this summer include day camps for elementary and middle schoolers, family camp for all ages, and a 10-day restoration field camp for high school students. For more information on each program and to reserve your spot visit our website. *Contact: Lauren Bien, Science Education Coordinator, PWSSC, (907) 424-5800 x231, lbien@pwssc.org*

## WRANGELL INSTITUTE FOR SCIENCE AND ENVIRONMENT LECTURE SERIES

April 13, 7 p.m., Kenny Lake Library: "Alaska's Charismatic Microfauna: Our mostly six-legged neighbors" with Derek Sikes, Curator of Insects at the University of Alaska's Museum of the North. Although Alaska is known for its iconic megafauna, its microfauna contain rich examples of fascinating, but often very poorly-known, diversity with immense ecological importance. *Contact: Robin Mayo, WISE Executive Director, (907)822-3575, wise-edu.org, for more information.*

## COUNTING SALMON PASSAGE IN THE LOWER COPPER RIVER

In-season management of the Copper River salmon fishery is done in part with sonar counts of fish passage at Miles Lake, about 30 miles upriver from the ocean. The delay of several days between when fish enter the river (and become unavailable to the fishery) and when they are counted by the sonars at Miles Lake greatly complicates early season management.

In May 2016 the Prince William Sound Science Center, in cooperation with the Copper River/Prince William Sound Marketing Association, will be deploying fish counting sonars at a site in the lower Copper River delta, near the Clear Martin River (about 12 miles from the ocean). The site appears to be something of a choke point when water levels are low, and fish passage was observed with sonars during tests done there in 2015. The results from those sonars will be passed directly to Alaska Department of Fish and Game managers, to better allow them to manage fishing activity during the early part of the Copper River run. *Contact: Dr. Rob Campbell, PWS Science Center, rcampbell@pwssc.org.*

## SCOPING PERIOD OPENS FOR COPPER RIVER BASIN AREA PLAN REVISION

Alaska's Department of Natural Resources is initiating a public planning process to update the 30 year old Copper River Basin Area Plan, which focuses on the eastern half of southcentral Alaska and encompasses roughly 16 million acres of land within the Copper River Basin. This plan will address the management of about 3.3 million acres of general state lands and waters within the plan boundary. It will not affect federal lands, private lands, borough or municipal lands, or other state lands withdrawn from the public domain. Scoping meetings for this planning process are being held in March 2016 to explain the planning process, schedule, and scope of the plan; provide basic background information on the planning area; and gather information about the area from users. Written comments on scoping phase are due by April 29, 2016. *Contact: Brandon McCutcheon, CRBAP Project Manager, (907)269-8536, e-mail comments to crbaprevision@alaska.gov, or visit <http://dnr.alaska.gov/mlw/planning/areaplans/crbap/> to learn more.*

**watershed**  
(wa-ter-shed)  
the region or area drained  
by a river or stream:  
all the land that carries  
rain to the same river system

## PLANTS BREAK IT DOWN FOR US:

BIOLOGICAL FILTRATION FOR REDUCING STORMWATER POLLUTION

BY SHAE BOWMAN

Stormwater has long been considered a nuisance, and as a result cities were designed to get rid of stormwater as efficiently as possible. The unintended result is rainwater running across hardened surfaces like parking lots and street gutters, picking up pollutants. Maybe you've seen the telltale rainbow sheen on the surface of stormwater? Stormwater washes those pollutants into street drains which empty into local waterbodies. According to the Environmental Protection Agency (EPA), stormwater is the largest threat to water quality in the United States today. Stormwater run-off includes any pollution from streets, parking lots, and driveways that wash into the storm drains when it rains. Pollution sources include heating fuel from home heating tanks, fluids from leaky vehicles, trash, dog poop, sand, gravel, and salt.

Stormwater pollution is especially toxic for the environment because unlike household wastewater, stormwater is untreated and flows directly into local waterbodies. Used oil from a single oil change has the potential to contaminate up to one million gallons of fresh water. According to the EPA, there are approximately 193 million gallons of used oil improperly dumped in America every year. That is roughly the equivalent of 17 Exxon Valdez oil spills!

Of course, the best solution is to prevent pollution in the first place, but when that fails there is an easy and tangible solution for combating stormwater pollution, and it's nothing new! Plants are natural biofilters. Plants filter the water with their roots, extracting pollutants and breaking them down resulting in cleaner water. Reducing impervious surfaces (the surfaces rain cannot penetrate), and creating vegetative buffers is a great way to help reduce stormwater pollution. In Cordova we tackled the issue of stormwater pollution flowing into Odiak Pond by creating a vegetative filter called a bioswale. Runoff from a nearby parking lot drains into the bioswale where it is filtered by native plants. Odiak Pond is spawning and rearing habitat for coho salmon so filtering stormwater before it enters the pond is very important.

If you have a rain gutter, directing the flow of water onto vegetation instead of letting it run down the driveway is an easy way to reduce stormwater run-off. Preventing leaks from cars and home heating tanks also reduces stormwater run-off and saves money.

Next time it's raining, can you see if there is a way to change the course of stormwater so that plants have an opportunity to filter out those nasty pollutants before they reach your local waterbodies? Please do what you can to help prevent stormwater pollution in your neighborhood and Don't Run-off Salmon!



WHEN SHOPPING ONLINE, VISIT [SMILE.AMAZON.COM](https://smile.amazon.com) and select the Copper River Watershed Project as your charitable organization. Once you've selected CRWP, we will receive 0.5% of eligible sales every time you order from smile.amazon.com. To determine if your item is eligible, look for the "Eligible for AmazonSmile donation" on the product detail page.



## SHOP AND GIVE

AT THE SAME TIME

*Did you know that you can make easy shopping choices that will immediately benefit the Copper River watershed?*

The Copper River Watershed Project is registered with AmazonSmile and the Fred Meyer Community Rewards program, two easy ways to give, and all you have to do is shop!

**FRED MEYER** donates approximately \$2.6 million every year to charitable organizations in the Pacific Northwest. To make sure Copper River salmon benefit from this, select Copper River Watershed Project as your Fred Meyer Community Rewards nonprofit and we'll earn a donation every time you shop.



To sign up, link your Fred Meyer Rewards Card to the Copper River Watershed Project at [fredmeyer.com/communityrewards](https://fredmeyer.com/communityrewards)—all you need is your Fred Meyer Rewards Program account number from your card. You can search for us by name or our nonprofit number, 81607. You will still earn your Reward Points, Fuel Points and Rebates, just as you do today, but CRWP will benefit with every item you purchase. Rewards Cards are available for free at the Customer Service desk at any Fred Meyer location.

MANY WAYS TO GIVE

MAKE A NON-CASH GIFT

IT MIGHT COST LESS THAN WRITING A CHECK!

A planned gift to the CRWP can help you meet your financial goals while providing a lasting legacy of thriving Copper River salmon migrations for generations to come. Gifts of appreciated stock, life insurance policy benefits, or retirement plan assets can all be gifted to non-profit organizations and may reduce your estate's tax liability.

Making a bequest is as simple as designating the CRWP as a beneficiary of an asset (e.g. a bank account, retirement savings, or a life insurance policy). Designating transfer of a specific asset to a charity like CRWP makes it possible for you to make your wishes known today without relinquishing needed assets during your lifetime. Contact CRWP today to learn more: (907)424-3334, or send an e-mail to [Kristin@copperriver.org](mailto:Kristin@copperriver.org).

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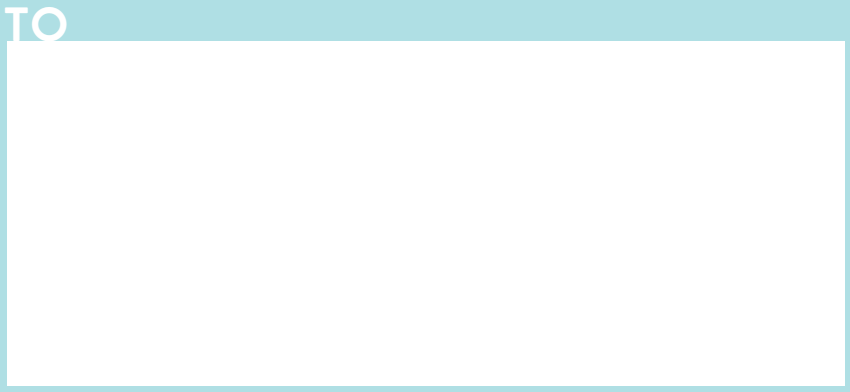
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**COPPER RIVER  
WATERSHED PROJECT**



# Newsletter SPRING 2016

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*inside*  
\*\*\*
- \* Restoring fish passage
  - \* Invasive species
  - \* 2015 annual report
  - \* Don't Run Off Salmon
  - \* Shop and give



## WHY WE SUPPORT CRWP

Thanks to Liane Stephens' interest in the Copper River Watershed Project, the CRWP was able to form a partnership with Ninkasi Brewing Co. on several occasions to "Perpetuate Better Living" in the Copper River Watershed.

I approach my work with Ninkasi as community building, so in July 2014 was my first trip to Cordova . . . I went on a gillnetter and toured the fishing grounds. I met with people that work in all aspects of the industry: on tenders, gillnetters, seiners, net menders, hatcheries, the cannery, harbor maintenance, as well as Alaska Department of Fish & Game fishery managers.

These experiences helped me understand where our food comes from, and how the watershed communities work as a whole to ensure salmon as a renewable resource. I also come from a small island community you can only access by ferry and value preservation of lifestyle that comes with the decisions of remote living vs. a healthy allowance of tourism.

LIANE STEPHENS, (center in photo)  
NW ACCOUNTS & EVENTS MANAGER

### Perpetuate Better Living

The Ancient Sumerians worshipped the beer they made and praised the goddess Ninkasi for the miracle of fermentation. They understood the value of beer: it gave quality to life.

Since 2011, we have donated to registered 501(c) organizations throughout each community where Ninkasi is served whose missions align with our core purpose: Perpetuate Better Living. Our primary focuses are on arts and music, environment, equality, recreation and women.