



Wrangell Institute for Science and Environment

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GET OUTSIDE.**



www.wise-edu.org

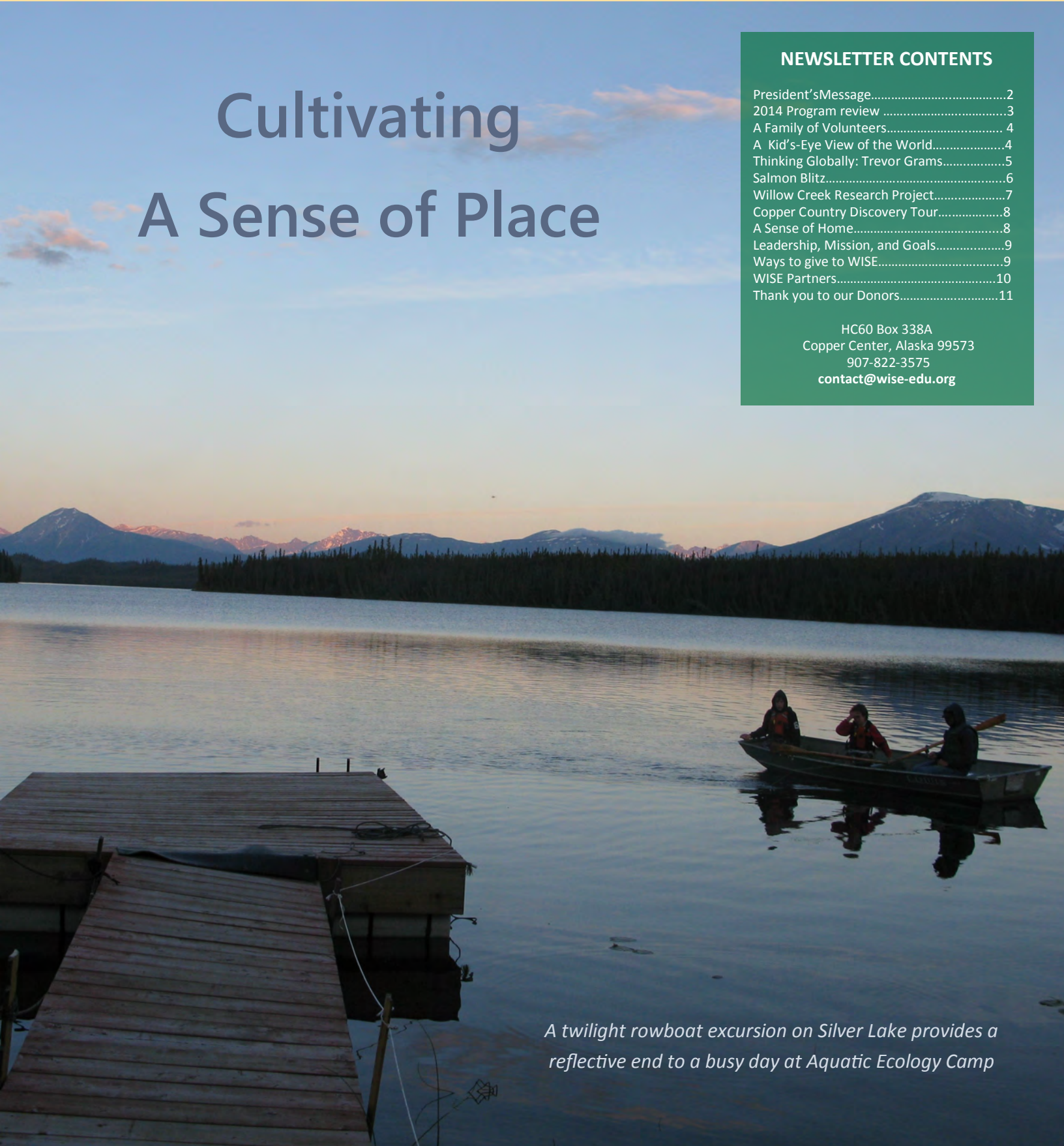
Volume 12 Winter 2014/2015

Cultivating A Sense of Place

NEWSLETTER CONTENTS

President's Message.....	2
2014 Program review	3
A Family of Volunteers.....	4
A Kid's-Eye View of the World.....	4
Thinking Globally: Trevor Grams.....	5
Salmon Blitz.....	6
Willow Creek Research Project.....	7
Copper Country Discovery Tour.....	8
A Sense of Home.....	8
Leadership, Mission, and Goals.....	9
Ways to give to WISE.....	9
WISE Partners.....	10
Thank you to our Donors.....	11

HC60 Box 338A
 Copper Center, Alaska 99573
 907-822-3575
contact@wise-edu.org



A twilight rowboat excursion on Silver Lake provides a reflective end to a busy day at Aquatic Ecology Camp

A Letter from the President

November 25, 2014

Dear WISE friends,

What is home? Home is a sense of place where living beings grow, nurture and are nurtured, where seeds are planted and their fruits are stored or eaten right away, where nests are made - be they of logs or lumber, grass, feathers, tree trunks, soil. It's where the soul finds rest, peace, contentment, healing, sharing. It's a community of symbiotic relationships where respect is the heart and connections are the veins that keep it alive and well.



Pasque Flower (Pulsatilla patens) seedheads

In WISE programs we give participants the tools to take a close look at their home and really experience that sense of place. Whether it be through a microscope, rowing a boat or paddling a canoe, taking stream temperatures and velocity, breathing in fresh air on an invigorating hike, being silent and listening to the heartbeat around them, catching a fish and cooking it over a campfire for the first time, seeing an inspiring view of the watershed they never saw before, watching the fascination of a mud volcano, observing the connection of birds and trees, plants and animals, hearing their songs, and bonding with others as they journey together in the discovery of this sense of place.

I feel fortunate to have the opportunity to watch the blossoming of young minds reach for goals and find opportunities that lead them to a sense of place. WISE is like a gentle wind guiding her brood to discover, ask questions, seek answers, observe, respect, and become one with their sense of place. When they are engaged in these experiences WISE has to offer, it is our goal that

each one contacts with that feeling of joy, that ah-ha! moment, that all is beautiful and right with the world, and their desire is to keep it that way so that they will always come home to a sense of place.

I know this sense of place is working in the WISE programs. On Facebook I often see it alive and well in the heart of Sammie Ellsworth who participated in many WISE programs, including the trip to the World Wilderness Congress in Spain a year ago. I quote from her page: "Wishing for a wild rain storm. With thunder. And lightning. And lots of water falling from the sky."

I would like to thank Robin Underwood, WISE Executive Director, for the passion in her heart to organize and carry through the programs. The breath of life she provides is the key ingredient for setting the stage of a sense of place.

I would also like to thank Lyda Rossi, VISTA Volunteer and Development Coordinator, for her outgoing personality, her excitement for new experiences, the perspective of her young mind, and commitment to bringing WISE to another level of enhanced programming.

And I would like to thank everyone that has given to WISE in some way. With your support the heart of WISE keeps on beating, connecting lives with a sense of place.

With well wishes,

Janelle Eklund, President



Janelle at Changing Seasons

Thank You!

Newsletter Photos: Paul Boos, Janelle Eklund, Marnie Graham, Kate Morse, Lyda Rossi, Robben Taylor, Robin Underwood, WISE program participants, and Willow Creek Research Interns.

Layout and Graphics: Carol Teitzel, Robin Underwood

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2014 Program Highlights

Ice Fishing Day

A great crowd of over 100 people showed up at Silver Lake and enjoyed a glorious day of fishing, pulling dozens of beautiful rainbow trout up through the ice.

In-Class Science Lessons

WISE teachers travelled throughout the Copper River Valley and south to Valdez to bring hands-on science lessons to local students.

Camp Chosen Frozen

We cooperated with Wrangell-St. Elias National Park to pilot a winter science camp for Junior High students.

Earth Discovery Day

Every 4th, 5th, and 6th grade student in our school district attended this day of outdoor learning at Wrangell-St. Elias National Park Visitors Center in May.

Science Lecture Series

From Dall's sheep ecology to the history of research on Mt. Wrangell, we enjoyed 9 evening talks this season.

Project Healing Waters

WISE once again assisted with Project Healing Waters, a fly fishing excursion for wounded veterans at Tangle Lakes in June.

Copper River Stewardship Program

10 high school students from upriver and downriver explored the theme of "we all live downstream" as they travelled throughout the watershed.

'Take it Outside' Hikes

In partnership with the BLM Glennallen Field Office, this summer's hikes led us to the top of Willow Mountain and other fascinating local destinations.

Aquatic Ecology Camp

We made a splash in Silver Lake while learning about aquatic ecology, water safety, and camping at our 3-day Aquatic Ecology Camp.

Copper Country Discovery Tour

See the article on page 8 to learn about this revenue producing program.

"If there's one thing I learned, it's that a drop of water in the ocean is not just that—it's a drop in every body of water, stream, or faucet on earth. We all live downstream." Elvie, Copper River Stewardship Program.



Copper River Stewardship Program students take a turn on the oars while rafting the Gulkana River

Willow Creek Research Project

See article on Page 7.

National Public Lands Day

WISE helped organize and feed an enthusiastic group of volunteers who picked up trash along the Denali Highway in late July.

Invasive Weed Smackdown

We joined our partners in the Copper Basin Cooperative Weed Management Area to organize this annual event.

Salmon Blitz

See the story on page 6 to learn about this new research and educational partner program.

Changing Seasons Program

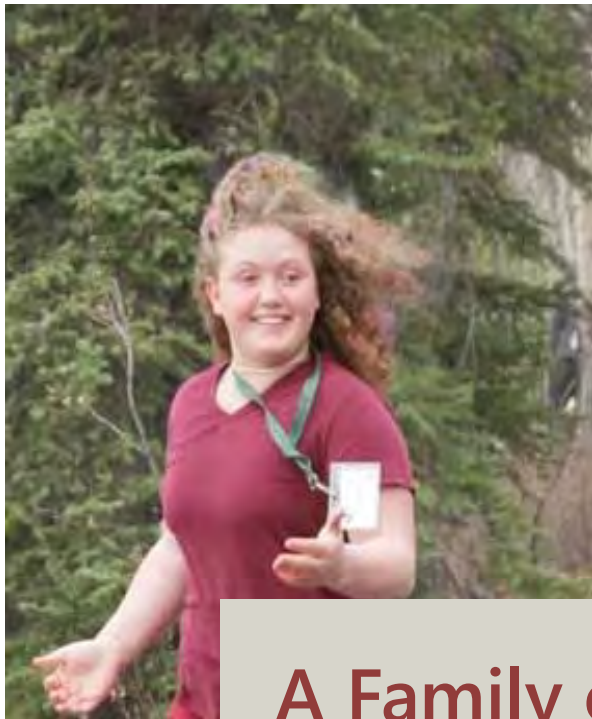
This fall event brings 2nd and 3rd graders outdoors to explore the world as the seasons change in autumn.

WISE also assists with partner programs throughout the year. For details see the 2014 Annual Report at

www.wise-edu.org



Tolsona mud volcanoes hike



Felicity, 14, brings enthusiasm to everything she does

A Family of Volunteers



Becki camped out while assisting at Public Lands Day

Becki Buss and her fourteen year old daughter Felicity are a familiar sight at Copper Valley events, their cheerful smiles and willing hands contributing to whatever task is at hand. The day I visited them for an interview, the large front room of their home was overflowing with an orderly chaos of boxes, bags, toys, goodies, and wrapping paper. Becki explained that they were organizing holiday gift boxes for needy families, a church project. Volunteering is a way of life for this family.

The Buss family moved to Glennallen from Washington State two years ago. Becki had always wanted to come to Alaska, so when her husband retired from the Navy they decided it was time to follow her dream. They landed in the Copper Valley somewhat by accident: a call to a local bed and breakfast led them to a house available to rent, and they committed to coming to Glennallen without really knowing what they would find.

Becki and Felicity are favorite WISE volunteers because they are very proactive, calling to offer their services, showing up early, and taking on less than glamorous jobs with a smile. At Earth Discovery Day Felicity assisted with the Leave No Trace station, and Becki organized the food and other courtesy services for the staff, presenters, and other volunteers. As well as serving the community, Becki values the chance for Felicity to learn about different job opportunities. Felicity says "Half the time it is hard, sometimes it is easy and fun. The good part is meeting people and doing interesting things, the bad part is remembering the names of all the people I meet."

As well as volunteering or attending many WISE events, Becki and Felicity also serve at the Copper Basin 300 sled dog race, the Copper Valley Community Library in Glennallen, their church, and their homeschool group. Becki is on the Advisory School Board for Upstream Learning, and on the Board of Directors for Copper Valley Community Library. With such a busy schedule, we are glad and honored that this family finds the time and energy to contribute so much to WISE programs.

Robin Underwood

A Kid's-Eye View of the World

WISE received a technology grant from the Captain Planet Foundation, and among other things purchased two waterproof, shock-resistant cameras. On our summer programs, the youth shared them hand to hand, and tested their limits repeatedly. Yes, the cameras survived submersion in a mud volcano, but no, the pictures didn't turn out!

After every program, we enjoyed downloading the exuberant photos, reliving moments through the eyes of youthful participants.



Water-level view of the fun at Aquatic Ecology Camp

Thinking Globally

Trevor Grams grew up in an outdoors-loving family, with the great Copper River Watershed as his extended backyard. This confident

young man is equally at ease shredding the backcountry on his snowboard, or wearing a tie and speaking as valedictorian of his high school class.

Trevor grew up attending WISE programs at school, and in 2011 participated in the Copper River Stewardship Program. He had an “aha” moment when learning about the complex land management interactions in the watershed. “It made me realize how small I am, how many different interests are at work here. BLM, Park Service, Forest Service, Native Corporations, all with completely different

“The Copper Valley is special. It is the place where I grew up. It helped define who I am today.”
Trevor Grams

strategies.”

In October 2013 Trevor joined a group from WISE

that travelled to the WILD10 wilderness conference in Spain, and had another awakening. “It opened my eyes up to what is going on around the world, and made me realize how good we have it in Alaska. People were comparing land management strategies, citing Alaska as a good example.” Trevor was pleased to hear that the management of the fisheries in Bristol Bay and tourism in the Tongass are considered models for sustainable industries around the world. The experience in Spain also had an impact on his future plans, as he learned to think about things on a global scale.

What are those future plans? A typical college freshman, Trevor admits they change nearly every week. Officially an earth science major, he has been thinking a lot about geography and economics, both open-ended flexible subjects which deal with global issues. On the day we spoke, he’d just heard that UAF has a new 200 foot icebreaking research vessel, and he was wondering how he might get a chance to be on that ship. Whatever he ends up doing, he wants it to have a global impact, and enable him to live in a place where he can continue to live the active outdoors lifestyle he loves. “Every time I go out in the backcountry it opens my eyes. I feel



Trevor Grams in his element, the mountains of Alaska

refreshed and have a better perspective on things, and it helps me stay motivated.”

When asked about the motivation, Trevor grins. “If I know I have a trip coming up, it helps me get my homework done, so I am free for the weekend.” For teenagers growing up in the Copper River Valley, Trevor advised “get after it! If you want something go for it. Opportunities may be hidden, you need to keep your eyes open.”

WISE is proud to count young people like Trevor Grams among our “Alumni.” His thoughtfulness about the world around him, and his many connections with people and the natural world will serve him well wherever his paths take him.

Robin Underwood



Sammie Ellsworth and Trevor Grams did a project on climate change in the Chugach Mountains for the WILD10 Conference in 2013

Partner Programs



Kenny Lake High School student Kelly Olt checks creek depth on a Salmon Blitz field trip.

An eager group of fifth graders lines up to be fitted for chest waders as we prepare to head out on a stream survey. There is first incredulity, then hilarity as they climb into the adult-sized waders, belting the extra fabric in huge folds around their waists, and pulling the laces tight on size-12 wading shoes. We bushwhack through the forest to the banks of Dry Creek, and the kids shriek and giggle as they plunge in, enjoying the sensation of being waist-deep in frigid water without getting wet. The youth pull up a mesh minnow trap that has been soaking in the creek overnight, baited with salmon eggs. The wriggling 3-inch juvenile fish are transferred into a bucket full of creek water, and the students gather close



A juvenile king salmon swims in a bag of water for identification before being returned to the creek where it was trapped.

Salmon Blitz

as we attempt to identify our catch. Student field trips are just one aspect

of Salmon Blitz, a project initiated by our partner nonprofit Copper River Watershed Project to survey salmon habitat with the goal of adding local waters to the State of Alaska Anadromous Waters Catalog. WISE is cooperating on this three-year project, providing upriver support and logistics, doing stream surveys, and helping with educational and volunteer events. One of the best perks so far has been providing a home for 10 pairs of chest waders to outfit students and volunteers. They are great fun, make for awesome photo ops, and are a wonderful tool for engaging enthusiasm. It is hard not to be excited about the Copper River watershed when you are immersed in the water and mud, doing hands-on science, and contributing to a valuable state-wide database.

WISE supporters will have chances to get involved with Salmon Blitz, as we will be training teams of volunteers to conduct stream surveys. The first summer's work has already found juvenile king salmon in previously undocumented waters, and identified lots more places where we need to do thorough surveys. Our youth programs will also offer the chance for students to don the chest waders, set traps, and collect scientific data.



BLM fisheries biologist Tim Sundlov and Glennallen fifth grade students sampling for macroinvertebrates

Salmon Blitz is supported by North Pacific Research Board, National Fish and Wildlife Foundation, and Wells Fargo.

Robin Underwood



The Copper River Watershed Project works to foster the health of the Copper River watershed's salmon-based communities, economies and cultures.
www.copperriver.org

By Deanna Knutson,
Student Intern

Willow Creek Research Project

For the past few years, community members from the Copper Basin have been exploring the Willow Creek Watershed. It is their purpose to determine any prevailing factors that affect the quality and quantity of water in Willow Creek, Willow Lake, Pippin Lake, and other features within the watershed. These bodies of water sustain a diverse habitat—for fish, birds, wildlife, and people—so it is vital



Dave Wellman and Ann Biddle prepare to take a flow measurement in late October

that, whether it is a wet or dry summer, our ecosystem continues to be supported. This year, Ann Biddle, Abbie Schierholt, Tyler Doherty, Dave Wellman, Ruby Oatman, and myself (Deanna Knutson) assisted in the Willow Creek Research Project. Wellman's dog, Tika, often joined us. Throughout the summer and well into fall, team members measured pH, dissolved oxygen, salinity, conductivity, temperature, depth, nitrates, phosphates, and volumetric flow rates. We concluded the flow measurement portion of the 2014 research on November 2nd after breaking through several inches of ice and standing in ice-cold water in freezing temperatures with rapidly decreasing daylight.

In order to make it a thorough year with a plethora of data, we created a tentative schedule for the season. Three days in one week we measured volumetric flow of Willow Creek at three locations: where it crosses under the Richardson Highway, behind the Wellman's house, and at the mouth where it flows into the Tonsina River. We also measured pH, depth, salinity, conductivity, and temperature, and every other time we completed dissolved oxygen, nitrate, and phosphate tests for each site. Every other week we tested for phosphate, nitrate, and dissolved oxygen in Pippin Lake, Willow Lake, and

three times in Kenny Lake, measured volumetric flow at Rock Creek, searched for springs leading to the Tonsina River, or tested wells at a number of

locations in the area.

The Copper Basin received more than the usual amount of rain this summer, and there was also a multitude of mosquitoes.

Not only were the rain and mosquitoes in copious quantities, but the fungi were as well. One thing this year did not seem to have much of was fish. Some four-inch Arctic grayling were caught when sampling this fall with live traps, and otters were seen munching on fully-grown specimens, so we know that some fish were present in the creek, even though they were generally not seen.

This year we dealt with minor calamities such as lost dissolved oxygen bottle stoppers, out-of-date packets to test for nitrates and phosphates, a lost GPS that later reappeared, wet shoes, mosquito bites, and leaky hip-waders. But despite everything that seemed to go wrong, it was a successful season. We gathered an abundance of data to analyze, providing plenty of information to help determine any prevailing factors that affect the quality and quantity of Willow Creek waters.

Follow the progress of the Willow Creek Research Project online at WillowCreekWater.org, and stay tuned for summers to come.

WISE provides funding and administrative support for the Willow Creek Research Project Student Interns.



Research assistants Deanna Knutson and Tyler Doherty pause to appreciate the view while investigating springs on the Tonsina River Bluff

Capacity Building

Copper Country Discovery Tour

Every time I start up the van to pick up guests for our Copper Country Discovery Tour, I go through a mental checklist of the resources I'll need to introduce these people to the amazing place I call home. I've got geology facts, boreal forest succession figures, stories from the Ahtna natives and early prospectors. But it turns out the thing that piques their curiosity is deeper inside. Over and over, the questions the guests ask the most are at a more personal level. They want to know what it is like to live here. They ask about managing our houses and cars in the bitter cold of winter, where we buy our groceries and how we fill our freezers, how we educate our children, and what we do for fun.

For the Copper Country Discovery Tour's 7th year of full operation, we once again worked with the Copper River Princess Wilderness Lodge, a valuable partnership for WISE. However, the lodge's small capacity combined with the many tour choices available mean bookings are slower than we would like. This fall we approached several small tour operators, offering customized tours for their guests. We have already booked three groups for unique tours in 2015, including hands-on aquatic science and special guests. Revenue from the tour

currently provides about one quarter of WISE's annual budget. We received a Rasmuson Foundation grant to purchase a new-to-us Dodge Sprinter van for the tour this spring.

The Copper Country Discovery Tour would not

be possible without our great partnership with the Wellwood Conservancy, and landowners Dave and Gay Wellman.

Robin Underwood

The mission of Wellwood Conservancy is to manage and operate an educational camp and nature preserve; to actively conserve local lands and waters; and to develop and deliver high-quality research and educational programs aimed at bettering the world.



A Sense of Home

By Lyda Rossi

Last April, I left Saint Louis, Missouri for Kenny Lake, Alaska to serve as WISE's Americorps VISTA volunteer. Now that the temperatures are dropping and the days are getting shorter, I have a chance to look back on a whirlwind summer. Between my work helping out at WISE and weekend adventures exploring my new home,



Lyda studies up on macroinvertebrates while enjoying the sunshine at Aquatic Ecology Camp

there was barely a moment to reflect on all the changes life has thrown at me in the past year.

One of my favorite memories from this summer was a WISE-BLM hike up Willow Mountain in early August. It was one of the few, truly hot days of the season, and the hike was tough. The berries were starting to ripen, and I was learning the names of all the different kinds

as we picked snacks and worked our way up the mountain. The view at the top, combined with the breeze, was a huge relief. As we sat and ate our lunch at the top of Willow Mountain, I realized how much of the Valley was recognizable to me now – I could point out where the WISE office was hiding in the trees; the Wrangell Mountains in front of us were familiar, and I knew where the roads that stretched in front of us led. After months of feeling like a fish out of water in the Copper Valley, I was beginning to feel a sense of home.

I still have a lot to learn about life in Alaska (like how to keep my toes warm in 40 below), but I am so appreciative of my experiences here in the past year and to WISE for giving me this opportunity. I look forward to seeing where the rest of my time here takes me.





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jeklund@cvinternet.net

Dave Wellman, Vice President
welw@wellwoodcenter.com

Gay Wellman, Secretary
welw@kennylakeak.net

Paul Boos, Treasurer
pboos@cvinternet.net

Dr. Daniel Solie
danielsolieak@gmail.com

Barbara Wallace
bwally@kennylakeak.net

Alex VanWyhe
alexvanwyhe@gmail.com

Wendy Goldstein
wgoldstein@pwsc.edu

Staff

Robin Mayo Underwood
Executive Director
runderwood@wise-edu.org

Lyda Rossi
VISTA Volunteer
Development Coordinator
lrossi@wise-edu.org

Join the WISE Board

We currently have one open seat on the board of directors. The board is the governing body of WISE, making important decisions on policy, finances, and governance. If you would like to share your talents to help achieve the WISE mission, please contact the WISE office.
(907) 822-3575 contact@wise-edu.org



Exploring a local stream at Aquatic Ecology Camp

Mission Statement

WISE provides science and environmental education to all age groups, resources for learning, and support for scientific research.

Core Values

- Stewardship~Grassroots Involvement
- Partnerships~ Integrity
- Sharing Copper Basin's Natural Wonders
- Sense of Place~Mentorship

Goals

- Provide: Sense of Place
- Develop: Interconnections
- Instill: Stewardship



Northern Saw-whet Owl

Ways to Give to WISE

- Mail** your donation in the included envelope
- Use a **credit card** at our website, www.wise-edu.org
- Pick.Click.Give** with your Alaska Permanent Fund Dividend
- Use Goodsearch.com or **Goodshop.com** when shopping online
- Register your **Fred Meyer Rewards Card** at www.fredmeyer.com/community_rewards #84993
- Use **AmazonSmile** to donate when you shop
- Call the office** for endowments, monthly giving, or in-kind
- Purchase** our notecards, books, or prints
- Check at your workplace** for employee advised or matching gifts
- Volunteer** at a program, on the board, or in the office

Education Partners

Copper River School District
Prince William Sound Community College
University of Alaska Fairbanks
Valdez City Schools
Campbell Creek Science Center



Journaling on Copper River Stewardship Program

Government and Tribal Partners

Alaska Department of Fish and Game
Americorps VISTA
Cooperative Extension Service
Kenny Lake Soil and Water Conservation District
Mount Sanford Tribal Consortium
Native Village of Gakona
Native Village of Gulkana
Native Village of Kluti-Kaah
US Bureau of Land Management
Wrangell-St. Elias National Park and Preserve



WISE/BLM hike to the top of Willow Mountain

Nonprofit Partners

Alaska Travel Industry Association
Alaska WildBird Rehabilitation
Ahtna Heritage Foundation
Copper Valley Development Association
Copper River Watershed Project
Copper Country Alliance
Copper Valley Community Library
The Foraker Group
Greater Copper Valley Chamber of Commerce
Kenny Lake Community League
Kenny Lake Public Library
Prince William Sound Science Center
Project Healing Waters
Valdez Convention and Visitors Bureau
Wrangell Mountains Center
Willow Creek Water Consortium
Wellwood Conservancy



Copper River Stewardship Program explores the temperate rain forest, Cordova

Thank You!



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Conservation
Foundation**



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Princess Cruises
Stan Stephens Cruises
Glennallen Rustic Resort B&B
Copper Basin Sanitation

For more details on WISE revenues and expenses, please request our 2014 Annual Report, or see it at www.wise-edu.org

Spruce \$500 and up
Janelle Eklund & Paul Boos
Karen Kelleher
Gail and Larry Mayo



Art created on WISE/BLM Outdoor Art Hike

Aspen \$100 to \$499
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Cynthia Buchanan & Eric Lutz
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All WISE Volunteers



Youth take a break from making plaster casts of animal tracks at Tolsona Mud Volcano to encourage WISE donors

Wrangell Institute for Science and Environment
HC 60 Box 338A
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