

CURRENTS

Newsletter of the Kenai Watershed Forum • Fall 2005



KWF Evaluates North Road Remote Subdivisions and Pipeline Access Route

Inside this Issue

- road impact on salmon
- intern perspective
- project updates
- membership
- TNC Award
- KWF Party
- winter lecture series



Buried pipelines, salmon streams, and wetlands share some common needs. All of them can be damaged by heavy use of the land around them. This past July, staff from KWF, ConocoPhillips, and the Alaska Department of Natural Resources teamed up to assess the status of habitat along a pipeline and right-of-way in the northern Kenai Peninsula.

The upland route to access Gray Cliff and Moose Point Subdivision developments located north of Captain Cook State Park is a dedicated Kenai Peninsula Borough right-of-way and pipeline easement held by ConocoPhillips and Tesoro Alaska. The area is popular for recreation, and sees a fair amount of summer and winter traffic. Monitoring such sensitive areas can ensure that heavy use does not threaten the surrounding aquatic environment or jeopardize the integrity of the buried pipeline.

Wetlands are natural sponges that filter sediment from overland runoff, moderate water flows so all the water doesn't rush quickly from the land to the river, process nutrients, and break down carbon in ways that benefit

continue on page 5



Assessing the area around a salmon stream.

Right-of-way crossing of a stream in the northern Kenai Peninsula



MISSION

Working together for
healthy watersheds on the
Kenai Peninsula.

BOARD OF DIRECTORS

Ken Marlow
David Wartinbee
Benjamin Jackinsky
Jeff King
Dennis Gease
Jay Parker
Dan Hakkinen
Leslie Morton

ADVISORY BOARD

Catherine Cassidy
Peggy Mullen
Dan Chay
Mike Sweeney
Sanne Berrig

STAFF

Robert Ruffner
Ole Andersson
Josselyn Burke
Jan Yaeger
Mike Gracz
Stephanie Sims

CONTACT US

Kenai Watershed Forum
PO Box 2937
Soldotna, AK 99669
(907) 260-5449
(907) 260-5412 - fax
robert@kenaiwatershed.org
www.kenaiwatershed.org

KWF Executive Director Receives Conservation Award

On June 25th at a community reception at the Alaska SeaLife Center in Seward, KWF Executive Director Robert Ruffner was awarded the Susan Ruddy Community Based Conservation Award from The Nature Conservancy. The reception was part of a day of events celebrating conservation and the success of TNC's Great Places Campaign. The award, given annually in honor of the first director of the Conservancy's Alaska Chapter, recognizes an individual who has worked to promote conservation in Alaska through partnerships and consensus within local communities. TNC wrote in the press release "such leadership on the part of Robert Ruffner and KWF in bringing together their community exemplifies the work of Susan Ruddy and her commitment to fostering conservation rooted in our local Alaskan communities." Robert is the third recipient of the award. ***Congratulations!***

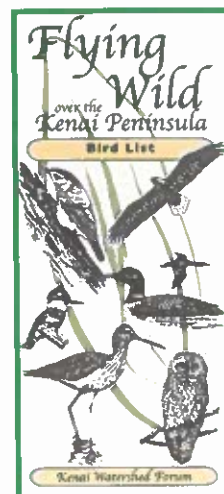


Coming Soon... Winter Lecture Series

Starting this October and continuing through March, Jan Yaeger, KWF Education Coordinator at the Kenai River Center, has organized a Winter Lecture Series. From winter astronomy to native storytelling to outback adventures, this Winter Lecture Series is sure to spark one of your interests. Keep your eyes peeled, a schedule of the Series will be available in early September.

Flying Wild over the Kenai Peninsula

It is with great pleasure that we introduce the first Kenai Peninsula bird list. After several discussions with KWF members and members of the community, it was brought to our attention that this was really something our area needed and that folks wanted. So, with help from several key individuals, we set out make this happen. This bird list would not have been possible without the direction and support of Ken Tarbox, Todd Eskelin, and Ken Marlow. All three played a key role in getting this project off the ground, as well as in the design and technical content of the list. Also, many thanks to Connie Tarbox for coming up with the name for the list and to Leah Rigall for editing. We encourage you to pick up your copy at any of the visitor's centers or at our office in the Blazy Mall.



other important updates...

Slikok Creek restoration at College Loop Road

Engineering and design work are almost complete. We anticipate that construction to replace the existing undersized culvert with a larger and deeper culvert will begin in late Spring or early Summer 2006.

Continuous water quality monitoring of the Lower Kenai River

If you went dipnetting this summer, you probably noticed our new yellow buoy. We have upgraded one of our instruments that monitors water temperature, dissolved oxygen, conductivity, turbidity and pH every 15 minutes round the clock. The data is then transmitted to a satellite via phone modem, then sent to our office via Email. We are now working to get this data published on the internet in near realtime.



KWF buoy in the lower Kenai River

Collaborative efforts with the Kenaitze Indian Tribe

Early last spring, the final details were ironed out on a Targeted Watershed Initiative grant that the Tribe was awarded. This grant allows several partner entities to conduct several studies, including an in-the-river boatwake evaluation (field work completed in July), water quality monitoring of the Kenai River (on-going), and an incentive program that will buy two stroke motors off the river and provide vouchers toward the purchase of newer and cleaner burning outboards in an effort to reduce the estimated 10,000 gallons of gas that enters the river each summer. Details on how the exchange program will work remain to be finalized.

Guide to Insects of southcentral Alaska

Working under contract with the Kenai Watershed Forum and supported largely by the US Forest Service, Dominique Collet has finished the first draft of a forthcoming publication. We've persuaded Dominique to look underwater to include some aquatic bugs, and this is going to be another great publication to his credit. Final publication is about a year away.

ALCES Update

Development of the Alaska Landscape Cumulative Effects Simulator (ALCES) for the Kenai Peninsula has begun. The designer of the model, Brad Stelfox, is currently sifting through the data to create the first draft of a functioning model for the Kenai Peninsula. The model will be complete this winter after meeting with some of the working groups who helped provide insight into the future of the Kenai. When it's complete Brad will return to provide training and distribute copies of the model to interested users.

*Join us for a
Celebration!*

KWF
MEMBERSHIP/VOLUNTEER
APPRECIATION PARTY

SEPTEMBER 18TH
TIME: 2-4PM
AT THE KENAI RIVER CENTER

Join us for an afternoon of good food, great company, and lots of fun. Robert will present project updates and a slideshow from one of his recent adventures.

DOOR PRIZES!

Assessing Road Impact on Salmon & Trout

Continuing to build on our recent success in merging KWF's research and restoration programs, we spent this summer visiting and documenting the condition of all roads maintained by the Kenai Peninsula Borough that cross salmon streams. The Department of Fish and Game has been working to document the condition of state and forestry roads for the past few years. Remaining to be evaluated are a few crossings owned by the cities and a few private roads.

This summer, we found a mixed bag on the roads maintained by the Kenai Peninsula Borough, ranging from some great examples of how to do it right (Henry's Creek Crossing – Anchor Point) to some that are clearly a problem for fish (Raven Road – Cooper Landing). We also discovered a few things we weren't looking for, but that need attention, such as better documentation of juvenile salmon rearing sites. This was particularly true of our visit

to the Seward area.

While in Seward, we spent some time trying to understand the mapped location of salmon bearing streams (i.e. we were lost!). While wandering around, we made one obvious discovery – there is a great deal of salmon rearing habitat in Seward that is not documented in the state's anadromous stream catalog. This is an important gap in our knowledge because streams that are documented to have salmon habitat gain a measure of oversight and protection that non-salmon bearing streams do not. This point hit us most clearly when we stumbled onto a small spring-fed stream with a fair number of juvenile salmon present, running down the middle of a little used road just north of the Exit Glacier Road.

Smaller, spring-fed, cold-water streams provide important temperature refuges for juvenile salmonids on particularly warm summers such as we've seen the past couple of years. The stream we stumbled on in Seward has had a rough go. First it is clear that the stream was diverted and placed in the road ditches rather than being allowed to follow a normal meandering pattern through the nearby treed lots. Even worse, the stream has recently been forced onto the road because of poorly constructed driveways that go to mostly vacant



Henry's Creek - The bridge spans the channel and a significant portion of the floodplain. Wider span bridges more closely mimic the natural conditions of streams and are beneficial to fish and all aquatic life.



2005 Restoration

Repairing Illegal Stream Crossings

The Pepper Road crossing of a tributary to Stariski Creek is yet another case that sums up the reason everyone needs to pay more attention to how roads interact with our salmon streams. This road failed during the normal spring breakup at the end of April, stranding four residents on the other side of the creek and washing about one hundred yards of road fill into a salmon bearing stream. The failure was entirely predictable and preventable; pre-failure corrective action would have benefited both the environment and the pocketbook of everyone involved – which in this case includes all taxpayers and residents of the Kenai Peninsula Borough.



Above: "Perched" culvert at the Stariski Creek Pepper Road Crossing

We first learned of this particular crossing in late summer 2004 when it was pointed out to us as a potential fish barrier by the local EPA staff at the Kenai River Center. We investigated the site that fall, collecting enough information to document that indeed this culvert was "perched," that is, it is high enough that juvenile salmonids could not swim upstream of its outlet. This along with the fact that the road was likely cutting off several miles of salmon habitat was enough information to begin our search for funding that would allow us to remove and replace the culvert.

The U.S. Fish and Wildlife Service awarded us funding in the winter of 2004, with the hope that we could come up with a temporary fix that would keep the road from failing and re-open the salmonid habitat. However, this road and several others that service this particular subdivision were not legal. In addition to not complying with federal environmental regulations, the roads were also built in the Kenai Peninsula Borough's right-of-way with substandard material and substandard design. This means that the borough's road department won't maintain them and they fall in "no mans land" for repair and maintenance.

The fact that the developer was in violation of a federal court order to rebuild this road crossing complicated efforts to obtain federal grant funds to do this work. We redirected the secured US Fish and Wildlife Service funding to another good project that was next in line, but the work on Pepper Road was delayed.



Above: Road washout.

Right: After a failure of this size, road fill is washed out downstream filling the streambed.



Early this spring, we conducted some follow-up field work to see what the creek looked like when break-up started. The standard assessment used to evaluate fish passage for culverts revealed that this one failed on all three measures: 1) it was perched by more than 4", 2) its slope was greater than 2% and 3) it constricted the natural channel by more than 50%. Even

though there was still ice on the stream, it was clear to us that failure was imminent. In a memo dated 4/2/2005 written to several resource managers we predicted that the stream was sure to fail. On 4/24/2005 it did.

With the road washed out, local residents were hamstrung. They weren't supposed to work on the road because it was (and still is) tied up in litigation, and the borough couldn't repair it because it was never built to standards. After a few days of inaction, and after the high water receded, someone made minimal repairs to reopen the road. The "fix" used the same culvert, just cutting the road down so it was passable. Since the same culvert was used, failure was certain to happen again.

This month, with a private funding source, we were able to place a small bridge across the stream that will prevent the road from failing in the same manner. The repair is not perfect, due to limited funding and the wrong time of year to be conducting stream bank revegetation work, but it should keep the road from washing out again this fall. Late next spring, we'll hop back down there and finish up the stream bank work, to restore the channel back to a more healthy condition.



Above: Construction and restoration underway.



up the stream bank work, to restore the channel back to a more healthy condition.

The take-home bottom-line lesson here is that more oversight is needed on road building activities that occur in the Kenai Peninsula Borough right-of-ways. This is particularly true when salmon bearing streams are to be crossed.

Left: Construction of new bridge complete, restoration of steam bank will continue next spring.

Membership Drive

**RENEW
YOUR MEMBERSHIP
TODAY!**

Everyone who lives and plays on the Kenai Peninsula and its watersheds benefits from remarkable natural resources.

Here is your chance to give something back!

More than ever, now is the time to renew your membership in KWF. Your membership gives you a role in shaping the future of the watersheds on the Kenai Peninsula. Join or renew today!

Individual and Family Membership Levels

Benefactor \$500

River Steward \$100

Chinook \$50

Sockeye \$25

Smolt \$10



KWF • PO Box 2937 • Soldotna, AK 99669 • (907) 260-5449
robert@kenaiwatershed.org • www.kenaiwatershed.org

lots. Had this stream been documented and properly cataloged in the Fish and Game's database of known salmon rearing streams, a bit more oversight would have been available to prevent the loss of habitat. The damage is repairable, but as we all know it is less costly to do things right the first time.



Raven Road crossing of Bean Creek: Culvert is "perched", meaning it is too high relative to the natural stream elevation. While evaluating this site, we witnessed an 8-10" fish leaping unsuccessfully to try to get upstream. This culvert blocks access to 1.3 miles of known upstream salmonid habitat.

Northern Subdivision Access, from page 1

many aquatic species. Tracks cut through wetlands by wheeled vehicles act like a hole in the "sponge", creating a ditch, through which water preferentially runs, defeating the sponge-like qualities that wetlands provide. Vehicles crossing streams also break down banks, which causes the streams to widen and become shallow. In extreme cases, the streams develop multiple channels, and as drivers try to avoid the muddiest spots, more and more stream bank is destroyed.

On the July trip we examined the stream crossings on Scaup, Otter, Besser and Seven Egg Creeks. Each of these crossings could benefit from a span bridge placed so that most vehicles would not have to enter the creek. Surprisingly, the creek crossings looked much better than many of those with culverts we have evaluated. Nonetheless, rebuilding the stream banks and building bridges to keep vehicles out of salmon streams would be an improvement. We also looked at a number of the sticky spots in the wetlands that could benefit from some of the newer trail hardening methods that utilize an open block technology that allows vegetative growth to be maintained.

Our next steps are to work on design concepts and cost estimates for bridges that could span the salmon bearing streams. We are also requesting some technical advice and consultation from the

National Park Service's Rivers, Trails and Conservation Assistance Program in Anchorage. This program has helped similar recreational wetland crossings in the Caribou Hills area. ***Stay tuned!***



A span bridge may be a better option for creek/stream crossings.

Intern Perspective

Jennifer McCard: Working for the Kenai Watershed Forum has definitely been my favorite summer job. Not only was I able to return home to Alaska for a beautiful summer, but I also found employment relevant to my future environmental career. One of the best aspects of my internship was the variety of activities and projects I was able to work on. I have come away with a very valuable set of skills and memorable summer adventures. I sincerely believe that the work of the KWF staff and its supporters is vital to the health of the Kenai Peninsula, and I am grateful to have had the opportunity to be a part of such an exceptional organization.

Adam McCullough: What an amazing summer I had doing an internship with the Watershed Forum!!! I had the best introduction to the area when Robert Ruffner and David Wartinbee flew me down from Anchorage in a Cessna. No two days were alike with KWF as we were busy with a number of different projects, and the knowledge I gained from them is immeasurable. I started the summer pretty ignorant of the area and wasn't sure where I'd live and how I'd get around town. But the Forum found Bill and Susan Larned who were great to let me stay with them in their home for the summer. I also got a very chic hotrod of a 1991 Geo Metro to bop around town in.

I really enjoyed doing the culvert assessment project and feel we made some excellent progress in getting problem culverts documented for the Peninsula. It was great to go out with Robert, Mary, Jennifer, Krista, and Estelle looking for these sites. And it was always good fun meeting the locals.

We participated in a boat wake study with the Army Corp of Engineers and I was able to meet some really knowledgeable people. It was exciting to get dropped off from a boat and have three minutes to hook up recording equipment and carry car batteries up onto the bank for power. Felt like the military. Oh, I get it...Army Corp of Engineers.

I got to drive the boat around (which was a first) with Ole and Jennifer setting up the buoy and collecting data loggers. I also got to fly an airplane (another first) doing aerial boat counts. Very cool. Ole gave me a pilot's log to document my hours in case I fly again.

I got the best experience this summer working with Stephanie on computer mapping projects. I aligned several decades of air photos and satellite images to trace the deviations of the Anchor River over the years. Honestly, an invaluable skill, and I may have the chance to use the data for a senior project this semester.

On my last day, Josselyn got me to join Ed on his boat for a morning of sockeye and rainbow trout fishing. I caught three reds and had them smoked to give to my dad. My dad is from Alaska and hasn't been able to enjoy the same quality of fish since he moved to the lower forty-eight. That is pretty much the lesson I learned from this summer. We've really spoiled a lot of our resources down here, and it was such an immense joy to experience all that you have up there. I hope that groups like KWF stay around to keep people aware and working for the unspoiled splendor of Alaska.



Jennifer's enthusiasm for field work is unmatched!



How many boats was that, Adam?



Many thanks to Krista, Jennifer, Adam, and Estelle for all of their hard work! We'll miss you!



MUCH THANKS TO OUR MANY VOLUNTEERS!
WITHOUT YOUR HELP AND SUPPORT, THIS FESTIVAL
WOULD NOT HAVE BEEN POSSIBLE. THANK YOU FOR
MAKING IT SO MUCH FUN.

Patti Berkahn, Jenny Cope, Leslie Morton, Catherine Cassidy, Erik Huebsch, Jim Czarnezki, Linda Swarner, Barb Maynard, Julie Niederhauser, Laura Sievert, Kristen Guinn, Steve Ross, Debbie Ross, Ondreja Johnson, Leslie Lancaster, Mitch Michaud, Sue True, Meg Mueller, Jake True, Pam Killims, Tamra Wear, Susan Hawker, Emily Young, Katherine Fuselier, Brenda Stoops, Paul Dale, Megan Murphy, Kim Fine, Catie Bursch, Terry Thompson, Jake Stephl, Mike Silba, Megan Kokal, Cari Palm, Rachael Simmon, Chris Wettstein, Paul Ostrander, Terri Ostrander, Emerson Winters, Brenda Pilgrim-Ahlberg, Michelle Graves, Janice Tudor, Emily Pugh, Rachel Pugh, Bob Pugh, Tara Slaughter, April Nyquist, Nadia Mataya, Mariah Henson, Mary Wendell, Christina Tachik, Carrie Henson, Susan Larned, Lisa Kent, Emily Pugh, Susan Clardy, Lee Mayham, Bee Wilson, Glynda Hernandez, Beth McCormack, Julie Laker, Brie Darr, Ken Gates, Frank Harris, Laura Zabkar, Doug Palmer, Missy Gambler, Julianna Quintanilla, Brittany Blain, Gary Sonnevill, Meredith McCool, Nicole Johnson, Charlotte, Howard, Colleen Sonnevill, Debbie Harris, Bill Nelson, Tom Kobylarz, Allen Auxier, Becky Hutchinson, Kristy McCullough, Everett McCullough, Doris Saks, Don Elwing, Kimberly Hansen, Allen Auxier, Jenna Merriman, Tami Murray, Glenda Landua, Ed O'Connor, Mike Boyle, Benjamin Jackinsky, Ken Marlow, Judy Marlow, Leanne Marlow, David Wartinbee, Gary, John Czarnezki, Dennis Gease, Ricky Gease, Jay Parker, Merrill Sikorski, Hannah Watkins, Michael Bruxvoort, Dave Lowery, Bill Wirin, Don McKay, Ron Rainey, Rik Bucy, Kelly Johnson, Tammy Whitaker, Carol Lasky, Jessica Lasky, Chuck Williams, Nick Whitaker, Suzanne Ackerman, Ami Himmel, Zach Reser, Sam Reser, Tony Folks, Chase Amador, Danyell Blom, Andrew Blom, Sean Butler, Ian Dukowich, Samantha Wilson, Danielle Deshong, Kacie O'Sullivan, Colin O'Sullivan, Codie Williams, Heather Colten, Chris Thomas, Zach Letyring, Jennifer McCard, Alex, Krista Holman, Caleb, Adam McCullough, Galen Holt, Bill Holt, Dan Chay, Jay Barrett, and to any folks we might have missed,

THANK YOU!

meet estelle...

My name is Estelle Sandvik and I am originally from Paris, France. I graduated, Marine Geography Bsc at Southampton Institute (UK) in 2003. Since then I have traveled around Northern Europe, following my husband, and settled in Norway last year to study the language.



I came across KWF through a Volunteer organization on the internet called Volunteers for Alaska, and decided that volunteering 3 months would be an opportunity to get some hands-on experience with environmental work, especially GIS, and get back into the scientific world. I have so far learned a lot, both in the field and in the office, and am grateful for this experience of a lifetime. I hope to put into use everything I have learned as soon as I head back to Europe, which will be Germany this time.

KWF Membership

As of 8/20/2005

Thank You! The following people have recently contributed to the Kenai Watershed Forum.

**Tom Kobylarz &
Stephanie Sims - \$500**

Todd Boling- \$250

Marge Mullen - \$200

River Steward - \$100

Roy & Sharon Baldwin

Bill Holt and Family

Bonnie Hernbach

Chinook - \$50

Jim Czamezki

Doris & Arthur Saks

Phillip Kimball

David & Patricia Peach

Jim & Nedra Evenson

Alice Hall

Sockeye - \$25

Kris Shine

Mervyn Anderson-Smith

Nicole Johnson

Linda Story

Karyn Noyes

Ralph Van Dusseldorp

Ken Lancaster

Cheryl Schey

Barb Maynard

T.B. Knock

John & Janet Brewer

Don & Trish Roderick

Smolt - \$10

Delbert & Karen Otter

Additional Contributions

Cheri Edwards



*Summer Adventures... KWF staff rafts Six Mile!
With Robert in charge only a few of us got wet
and we all made it home safely!*

**Kenai Watershed Forum
PO Box 2937
Soldotna, AK 99669**

Nonprofit Org.
US Postage
PAID
Anchorage, AK
Permit #537