



CURRENTS



Our Mission: Citizens Working Together For Community Vitality In A Healthy Watershed

Newsletter of the Kenai Watershed Forum

Fall 2002

CULVERTS PREVENTING FISH PASSAGE

The Stage

Two years ago, the Kenai Watershed Forum took a hard look at where we should invest our time and energy. We worked on a planning document with a number of "experts" and local residents who spend a good deal of time in our watershed. One notable priority we've focused on is water quality. No doubt many of you have seen some of the important results we are documenting with our 14 collaborating partners. However, we have a long way to go towards addressing water quality concerns. Another priority is habitat restoration.

When it comes to habitat restoration, most people think of the highly visible bank revegetation and boardwalk installation projects on the banks of the Kenai and Russian Rivers. Two groups have led this important charge: the Kenai River Sportfishing Association and the Youth Restoration Corps. Their efforts are vital, in part, because the increased vegetation breaks up the swift moving water and provides small pockets of still and slow-moving water that juvenile salmonids need for survival.

We are pleased that a second major effort towards habitat restoration for juvenile salmon is now being launched – culvert assessments. KWF is assisting in the removal and replacement of culverts that block fish pas-

sage. These planning efforts, in collaboration with the Nature Conservancy of Alaska and with support from the Hewlett Packard Foundation, have helped us determine where to make smart conservation investments. (See related story on page 6.)

The Concern

A single bad culvert can block miles of habitat for juvenile salmon in small and relatively slow-moving tributary streams that feed larger rivers. While these culverts are expensive and labor intensive to fix, freeing up miles of habitat for juvenile salmon provides a high return on the investment.

Adult fish capable of leaping up small waterfalls have little or no trouble negotiating most culverts where roads cross small streams; the same does not always hold true for the next generation of fry and smolt. Culverts that are installed and maintained without fish passage in mind often serve as a one-way passage, funneling the fish down-

stream. Juvenile salmon take advantage of the habitat offered by numerous small streams and wetlands, migrating up- and downstream in these waterways for one to two years before heading out to sea. In the cases we are concerned with, the fish are unable to swim back upstream once they pass downstream of a culvert. (Continued on page 3)



Robert Ruffner and Detective Greg Landeis retrieve empty buckets from an oil dump in Soldotna Creek this past spring. See page 7.

MEET JAN, JOSSELYN, AND MIRIAM. . .

JAN YAEGER is the Education Coordinator for the Kenai River Center. She grew up on the western Minnesota prairie, although she hails most recently from Missoula, Montana. She has an undergraduate degree in biology from Concordia College in Moorhead, Minnesota and has worked in environmental education for several years. In her free time, Jan is finishing her master's degree in environmental studies from the University of Montana.

JOSSELYN BURKE started with us in May as our Membership Coordinator/Office Manager. She grew up in McDermott, Ohio, and after various stops along the way landed here on the Kenai Peninsula. Josselyn has a degree in business administration from Florida State University. She spends most of her free time fly-fishing, quilting, or cooking. She also enjoys snowboarding and cross-country skiing.

MIRIAM JONES is our Alaska Conservation Foundation intern who will be staying until the end of November. Miriam grew up in Alabama and graduated this past May from Barnard College of Columbia University with a degree in environmental science. She has helped out with several projects including a study of water quality monitoring, a project assessing different types of gratewalks for controlling erosion, and a site conservation plan for the Kenai-Kasilof Flats. Her next project is to monitor the flow of several small creeks in the Kenai River area. Following her internship, she plans to apply to graduate school.



Josselyn, Miriam & Jan

WHO IS KWF? THE KEY PLAYERS

Board of Directors: Dr. David Wartinbee - Charles Quarre - Ken Marlow - Mona Painter - Benjamin Jackinsky - Pauline Simmons - Dr. Todd Boling

Advisory Board: Catherine Cassidy - Peggy Mullen Dan Chay - Mike Sweeney - Dick Troeger - Warren Hoflich - Will Josey - Sanne Berrig

Staff: Robert Ruffner - Ole Andersson - Jan Yaeger - Josselyn Burke - Miriam Jones

HOW ARE WE DOING?

We're interested in hearing from you. Write, call, fax, e-mail, or stop by; we are located on the 2nd floor of the Blazy Mall in Soldotna.

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PO Box 2937
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907-260-5412 (fax)
robert@kenaiwatershed.org
<http://www.kenaiwatershed.org>

FAREWELL AND GOOD LUCK, ELYSE!

Elyse Williams is leaving us to study medicinal herbs in Central America after a year of working at KWF. She helped out with water quality monitoring, community education and outreach, and writing a site conservation plan for the Nature Conservancy on the Kenai-Kasilof wetlands and North Kenai. Her hard work and sense of humor will be missed. We wish her luck in all her future endeavors.



River Trivia

The first two e-mails with the correct answer will receive a free Kenai Watershed Forum T-shirt. E-mail answers to: josselyn@kenaiwatershed.org Answer will appear in next newsletter.

Q. How many gallons of fuel would it take to reach a contamination level of 10 parts per billion (ppb) in the Kenai River during an average July day?

(Culverts, from page 1) Slikok Creek, Soldotna Creek, and Beaver Creek, along with half a dozen unnamed tributaries in the Kenai / Soldotna area, are streams that provide such habitat. In this area, most of our small creeks come together from wetlands, merging into stream channels that are generally from 10 to 15 miles long. Culverts that block these small channels near the river shut off a large area of habitat.

Most often there are two water conditions that cause this to happen: (1) A low water condition where a small waterfall is created at the downstream end of a culvert whose bottom is higher than the channel bed, a "perched" culvert. and (2) a high water condition where the culvert diameter is smaller than the natural stream channel and water gets "stuffed"



through a culvert, flowing faster than it naturally does in its own channel.

Matching the culvert to the channel is not an easy task if one

wants to maintain the natural conditions of the stream. Flows vary a great deal; for example data collected for Beaver Creek back in the late 1960s shows that the amount of flow varied from a spring-time high of 3,750 gallons per second to a summer low of 216 gallons per second.

Both extremes have to be considered when a culvert is fitted to a stream. To further complicate the matter, streams are always moving sediment around, eroding the sides of the bank, scouring out the stream bottom, and filling in pools. A perfectly designed culvert at the time of installation can become completely out-of-whack in a matter of hours during an unusual flood or ice damming event, or it can very slowly change over several decades. This problem is not unique to fish; road departments everywhere face these challenges while trying to protect roadbeds so they don't become flooded or washed away. There is no doubt that adding fish to the equation of road maintenance complicates and increases the costs to our state and local road departments.

While the concern is not obvious when one is driving over these small creeks, the changes made to streams show up in a surprising place. The next time you pull out your local area map, trace out these small tributaries to the Kenai River. The astute observer will note that on the upstream side of nearly every road that crosses a tributary, the cartographers note a



small pond – coincidence? Not likely. The observation that is mapped is the result of changes that occur over time to the stream as the water flow is modified.

Work is being done to correct this problem on many of our streams. As the Kenai Spur Highway is being upgraded to accommodate the bike trail, the crossing at Beaver Creek is receiving a much larger and hopefully more friendly culvert. The same upgrades have been made to Slikok Creek as it flows under Kalifornsky Beach Road. Last year our intern spent some time in the field with the Alaska Department of Fish and Game assisting them in fieldwork to assess and prioritize the problem culverts. This year we chose the greatest offender and are now working with the Borough to correct the problem.

KENAI RIVER FE

MANY THA



RUN FOR THE RIVER - 2002



UNOCAL 76
Alaska



STOR N LOK

HUTCHIN
CHEVROI

CONTRIBUTORS

PENINSULA MARTIAL ARTS • CITY OF KENAI
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THE NATURE CONSERVANCY
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OUTGOING KWF CHAIRMAN - THANKS, CHARLIE!

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HAVING FUN AT THE RIVER FESTIVAL!

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SILVER SALMON CREEK

Silver Salmon Creek, AK - After assisting fish and game last summer with their culvert assessment work, KWF began searching for ways to fix the worst culverts. With several criteria in mind, we determined (largely with the help of ADF&G) that one of the main tributary streams to Deep Creek would be the place to start addressing culvert problems. Silver Salmon Creek's watershed begins in the Caribou Hills and flows south and west joining with Deep Creek after it flows under Oilwell Road. Those of you who know the road also know this creek as the first dip in the road beyond the bus turnaround. The stream at the bottom of that dip provides spawning habitat for Chinook and Coho. Pink salmon have been documented as present up to the culvert of concern in this small stream. It is also known rearing habitat for both Chinook and Coho juveniles. The culvert is a one-way barrier potentially blocking more than five miles of ideal stream habitat.

Our first step was to determine who owned the road? It turns

out that the Kenai Peninsula Borough owned the road but just barely as the State of Alaska holds title right up to the creek. Our second step was to get some cost estimates for replacing the culvert. After recovering from sticker shock, we set out to find the \$80,000 to \$100,000 it was going to take to remove the culvert and replace it with one that is more accommodating to fish. We approached the Kenai Peninsula Borough with the issue at hand, and Mayor Dale Bagley and roads director Gary Davis were both willing to lend a letter of support in our search for funding.

We found a funding source in a bill sponsored by Rep. Don Young with a program that was originally called CARA, the Conservation And Reinvestment Act. This bill returns some of the federal oil tax funds back to the states where the oil tax was generated. The program has been renamed the Coastal Impact Assistance Program and is administered by the State of Alaska's Division of Governmental Coordination. KWF submitted a proposal and was

awarded \$30,000 toward the purchase and installation of the new culvert.

Our next stop was the US Fish and Wildlife Service, where we were successful in a second competitive grant application that provided us with an additional \$35,000.

KWF and the Borough will both kick in some matching funds, and we hope that the Cook Inlet Aquaculture Association, that has expressed interest in this effort, will help us close the deal with a \$10,000 contribution.

As we move forward, the Kenai Peninsula Borough, the Department of Fish and Game, and the US Fish and Wildlife Service will all be involved as we work on the correction of this fish barrier. Culvert fixes are a major project for a small nonprofit, but we are pleased that we seem to be well on our way. The engineering, designing, and permitting work is now underway in phase I, and next spring we will break out the heavy equipment and have the first culvert fix under our belt by summer. Stay tuned.

SPOTLIGHT ON VOLUNTEERS

Dominique has been an active member of KWF for almost five years. His enthusiasm and support for our programs has added tremendously to our efforts. You may have seen him volunteering at the Kenai River Festival. Dominique has also led several summer programs, including three of the most popular this year. Dominique's most recent project has been to write and illustrate a Willow Guide. This publication is sure to be an informative resource and will be available soon! An organization like KWF would not be nearly as successful if it weren't for the many hours our volunteers give us. Hats off to you, Dominique!



... DOMINIQUE COLLET

OIL DUMP IN SOLDOTNA CREEK

Soldotna, AK - Last Spring KWF received a call informing us that there were oil buckets in Soldotna Creek. Wanting to get to the bottom of this, we called the Soldotna Police Dept. and asked them to accompany us to the site and to help us make an assessment of the situation. Robert and Detective Greg Landeis went to the site in April. They found three 5-gallon buckets at the edge of Soldotna Creek near its mouth. As far as we can tell, about ten gallons of oil were dumped into the creek, which leads to the Kenai River.

Hazardous wastes are wastes that pose not only a threat to human health but to the environment as well. Please report anyone dumping anything into our creeks, streams, or rivers that may be toxic or hazardous. Not only is it harmful, it's illegal!

All of the landfills and transfer stations accept up to ten gallons of used oil and batteries



year round during regular operating hours. For all other hazardous materials around the central peninsula, the Soldotna Landfill collects hazardous waste once a month in the summer and every other month in the winter. The next few hazardous waste pick-up dates

are November 16, January 18, and March 15. If you have any questions regarding hazardous waste, please call the Kenai Peninsula Borough Solid Waste Dept. at 262-9667. They are helpful and willing to answer questions.

SUMMER PROGRAM 2002 IN REVIEW

We would like to thank our *members, volunteers, and participants* for helping to create an incredible SUMMER PROGRAM this year! The programs ranged from flora identification walks, trail blazing with Fish and Wildlife biologists, historic cabin tours, hands-on geology of the Kenai River Valley to two mushroom identification workshops with over 40 participants! If you would like to learn more about our summer programs, help financially, or even volunteer to lead a program next year, please give Josselyn a call at 260-5449. Thanks again, and we look forward to seeing you next year!

MANY THANKS TO OUR LOCAL EXPERTS...

GARY TITUS, DOMINIQUE COLLET, TED BAILEY,
DICK REGER, CATHERINE CASSIDY, AND ALASKA WILDLAND ADVENTURES!!!



KWF MEMBERSHIP

Thanks to the following people for recently contributing to the Kenai Watershed Forum. If you would like to renew your membership, become a new member, or send a donation, please contact us at 907-260-5449 or send a check to KWF, PO Box 2937, Soldotna, AK 99669.

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Harry L. Scholten
Pam Houston
David and Teri Birchfield
Jean Romig
Jerry Dixon

ADDITIONAL CONTRIBUTIONS FROM MEMBERS

Austin and Jean Terrell
Cheri Edwards

WISH LIST. . .

Boat trailer
Corkboard
Bulletin board
2-drawer file cabinets
Mechanic's tool cabinet for Ole
1 conference table and chairs



JOIN OUR E-MAIL LIST

E-mail is the least expensive and most effective way of reaching our members and those interested in our work. If you join our list, we promise not to spam you with unnecessary mail. Instead, we will keep you up to date on issues affecting the Kenai Watershed and current events that we sponsor. Join our e-mail list by contacting Josselyn at josselyn@kenaiwatershed.org or find our e-mail links at our web site www.kenaiwatershed.org



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