



CURRENTS



Citizens Working Together For Community Vitality In A Healthy Watershed

Newsletter of the Kenai Watershed Forum

Spring 2002

Winter Monitoring

More results on pages 3-6

Why monitor streams in Winter?

In the dead of winter, most of us are months away from heading for the water and enjoying our favorite summertime activities, but dedicated volunteers are still out monitoring the water quality of our area creeks. Many people are surprised to learn that there is still a fair amount of water flowing in the small streams that feed the Kenai River. It's a good thing there's all that water in these streams. Last summer's spawning salmon left their eggs buried in the gravel of the streambed, and these eggs depend on a fresh supply of flowing water to hatch successfully this spring.

With everything frozen, you might ask where all this fresh water is coming from?

If you've ever tried to dig a hole in winter, you probably didn't get very far! On the central peninsula, we have a frost line that reaches 3 to 4 feet below the surface. The frozen moisture in these first few feet of the ground holds the soil, sand, and gravel together and proves stronger than most shovels. Below the frost line, the groundwater is not frozen and it continues to do what it does all year -- flow downhill toward our rivers, streams, and lakes. In some special cases where the water is under pressure, the groundwater will flow upward to reach the surface -- but that's another topic. Our monitors are checking the quality of this groundwater as it becomes surface water and flows beneath the snow and ice, replenishing the streams and salmon eggs with a fresh supply of dissolved oxygen and nutrients.

Cliff Bouchard checks the dissolved oxygen levels while monitoring Lower Soldotna Creek Nov. 2001 as part of the KWF Citizen Environmental Monitoring Program (CEMP)



Diesel Spill Found by Monitor on Bean Creek

Dave Westerman, a Citizen Environmental Monitor for Bean and Juneau Creek recently discovered a 10-15 gallon diesel spill on Bean Creek during his monthly water quality monitoring rounds. The spill reached a known spawning area, and D.E.C. responded with a clean-up crew on Jan. 10.

Please support our work.....

If you have been thinking about becoming a member, now is the time! Our organization has been growing, becoming bigger, and better but we need the support of community members to be even more successful. Most of our grant money is tagged specifically to special projects. Money from our memberships and Sponsor-A-Stream programs helps us to continue our smaller projects that have partial or no special funding, like mentoring school children, leading school field trips, printing educational materials, producing educational radio segments, developing community indicators, organizing Summer Program Walks, facilitating neighborhood Watershed discussions, day-to-day office expenses, and more. Help us continue to grow into an even stronger community organization that looks after the health of the Watershed.

Wish List

We are still looking for the following:

- car (for our summer intern)
- summer housing (for intern)
- office desk & chairs
- large office filing cabinet
- 2 office dividers
- conference table
- bookshelf



On-line Donations

www.kenaiwatershed.org

Our first online donation came in just recently! It works, it's fast and easy. Check it out! If you join online, you can choose to receive either a free Kenai River Nature Guide or a can of local salmon.



Abby Popp

Farewell and Good Luck!

Abby Popp is moving back to school (MIT in Boston) to finish her Bachelors of Science in Engineering after helping us as an ACF Intern and as a short-term staff member this winter. Originally from central Pennsylvania, she made the most of her winter stay by taking up skiing and keeping up with her music as a guitarist and singer. Abby will be missed for her help with our Educational Radio Segment Program, Community Indicators Program, and Citizen Environmental Monitoring Program, as well as her technical expertise in getting our electronic water quality monitors (Hydrolabs) up and running for last summer. We wish Abby good luck and hope our paths cross in the near future.

WHO IS KWF? The Key Players

Board of Dir. Charles Quarre -Lisa Parker -Ken Marlow -Mona Painter -Benjamin Jackinsky -Dr.David Wartinbee -Dr.Todd Boling - Sheryl Musgrove - Terry Thompson

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

Staff Robert Ruffner -Kelly Shea -Ole Andersson -Elyse Williams

HOW ARE WE DOING?

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

ADDRESS:	P.O. Box 2937, Soldotna, AK 99669
PHONE NUMBER:	907-260-5449
FAX NUMBER:	907-260-5412
E-MAIL:	robert@kenaiwatershed.org
WEB PAGE:	http://www.kenaiwatershed.org

Kenai Watershed Forum is a citizens' non-profit organization dedicated to working together for community vitality in a healthy watershed.



Tony Lewis

Spotlight on Volunteers

For many years, Tony has been a great asset for us at KWF by helping us create our *Currents* Newsletter in a professional manner. Tony grew up in Oregon and graduated from the University of Oregon with a degree in journalism. In 1991, he came to Alaska fresh out of college to work at the Peninsula Clarion. The highlight of his journalism career was going to the 1996 Summer Olympics in Atlanta where he covered beach volleyball. For three years, he has been a stay-at-home dad for his two children (Isaac, 4 and Aidan, 2) while his wife Sandra works as an art teacher at Skyview High School. During the summers he sets nets about three miles north of the Kasilof River. Recently he started working part-time as a grant writer for the Boys and Girls Club and the After the Bell program in Soldotna.

Soccer has been a big part of his life since he was a child. He still plays regularly with friends throughout the summer and winter (indoors). Tony also coaches the Skyview girls soccer team. Other passions for Tony include flyfishing, particularly for trout in the Russian River and steelhead in the Anchor River.

Some Background on Our Kenai River Water Quality Monitoring

The Kenai Watershed Forum's water quality program is designed to identify and address a wide range of concerns that are directly related to water pollution in the Kenai River Watershed. Working with multiple agencies, local governments, and the public at large to identify and mitigate water pollution. We continue to refine our strategies by bringing new technology and information to the forefront in our communities. In this newsletter, we would like to give you some background on our professional baseline water quality sampling program and where we hope it will go. Additionally we present a continuation of the data from 2000 & 2001.

The Past

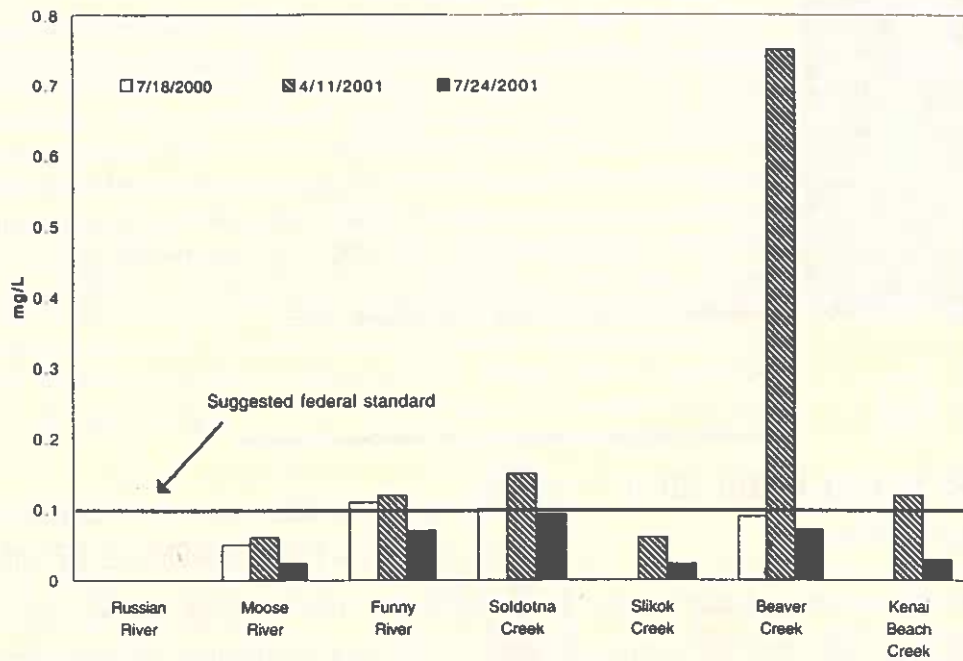
For approximately 3 years from 1988 to 1990, a series of baseline water quality samples were collected by ADF&G. Their studies came from 17 sites within the Kenai River Watershed (Litchfield and Kyle 1992). These water samples were analyzed for basic chemical parameters as well as for nutrients, trace metals, hydrocarbons, coliform bacteria, and macroinvertebrates. In their concluding remarks, the authors' recommendation is that the data is of limited value without some continued temporal context. The authors go on to recommend that someone monitor the river at least twice per year. That did not happen again until July of 2000, when Alaska's Dept. of Environmental Conservation funded KWF to repeat a similar set of studies. The earlier data from the original 1988-1990 study

indicated some degradation of water quality beginning just downstream of the Soldotna bridge, but did not appear to exceed state water quality standards at that time. Our 2000 and 2001 studies show there are some areas of concern. Our Fall 2001 *Currents* newsletter gave detailed information on the Fecal Coliform and Hydrocarbon data collected from our 2000 and 2001 Water Quality Sampling of the Kenai River mainstem and tributary (www.kenaiwatershed.org/currents.html). In the following pages of this newsletter, we will present the 2000 and 2001 data for Nutrients (Nitrates and Phosphates) and Dissolved Metals (Cadmium, Lead, and Zinc). The dissolved metal measurements are one of the best indicators of urban run-off.

The Future

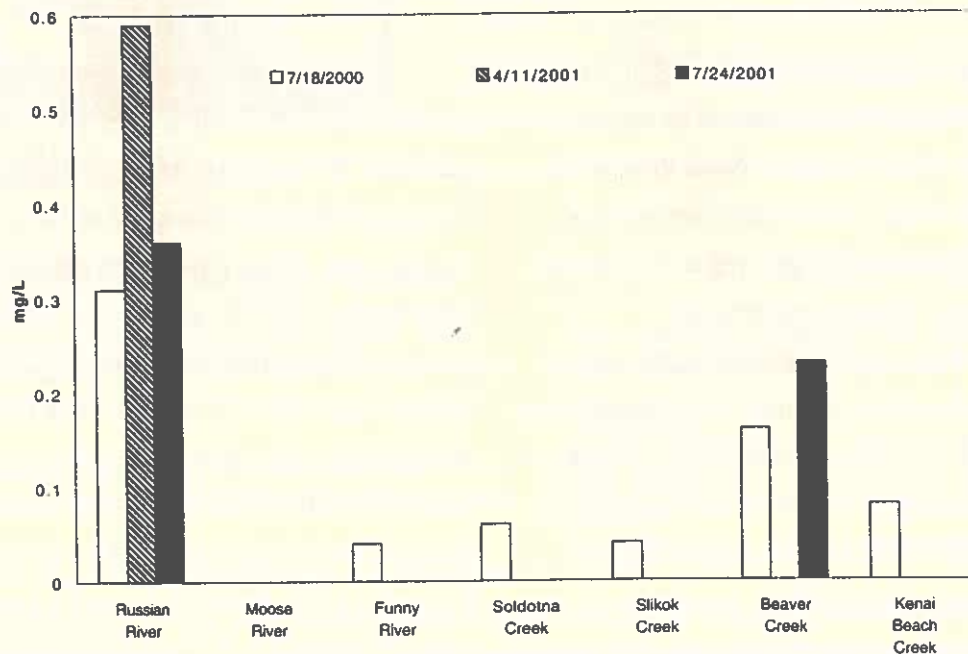
KWF is hoping to gain further funding to answer three specific questions raised as a result of recent data we have collected. We hope to expand our ongoing water quality sampling intensity in both space and time, looking at three contaminants of concern that are present in the tidally influenced reach of the Kenai River. We have identified Total Aromatic Hydrocarbons (TAH-Benzene, Ethylbenzene, Toluene, m,p-Xylene, O-Xylene), Fecal Coliform, and total phosphorous as constituents that each appear to be exceeding state water quality standards and/or are abnormally high in the Kenai River from river mile 12.5 downstream to river mile 0 (mouth) and in Beaver Creek and a small no-name tributary creek at river mile 0.25 of the Kenai River.

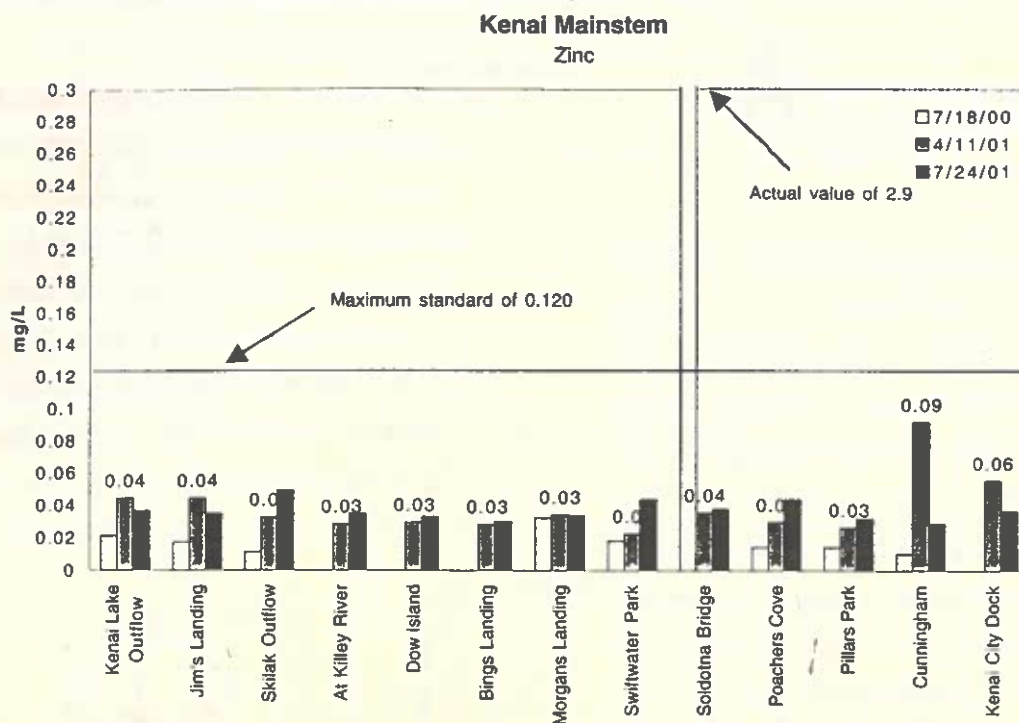
Total Phosphorous
Selected Kenai River Tributaries



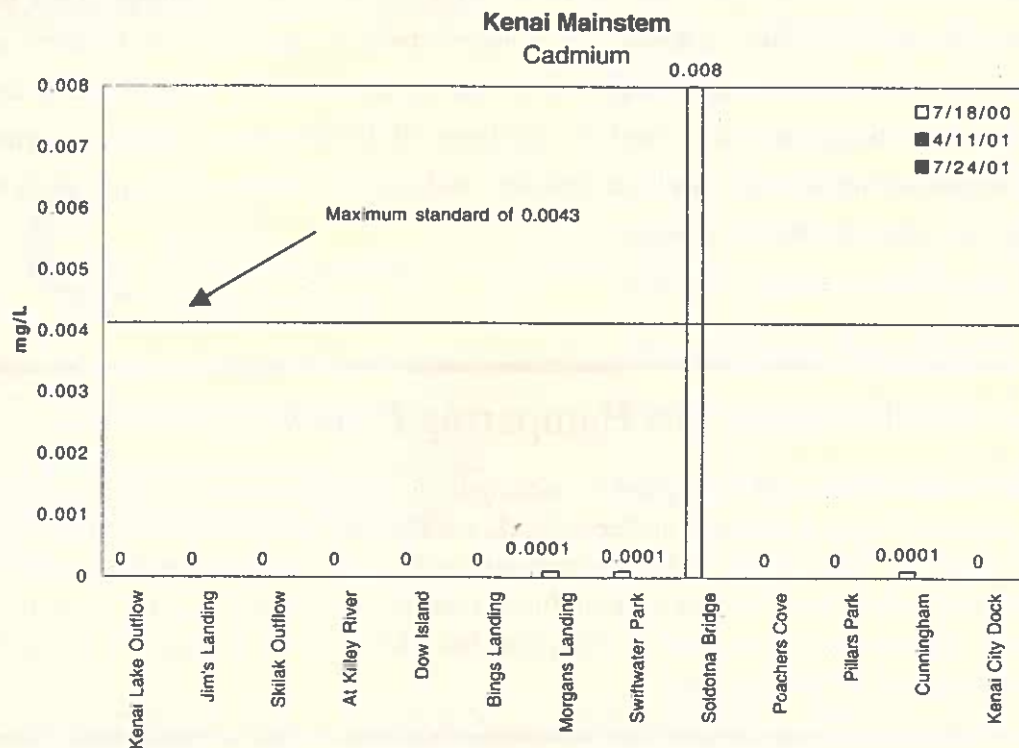
Total Phosphorous and Nitrate are two of the most important nutrient elements available to aquatic life. There is an ongoing effort by many collaborating scientists to understand better the role of nutrients in the Kenai River Watershed. It is possible to have too much of a good thing. Too much phosphorous in the water can result in abundant plant growth, which in turn can lead to low oxygen levels as plants consume oxygen at night. The federal standard for Total Phosphorous is 0.1 mg/L. Since the geology of our area may have a high amount of naturally occurring phosphorous, this standard may not be appropriate for our area. If Beaver Creek shows high values again this spring, we will want to further investigate the source of this phosphorous. You will notice that there is no standard on our chart for nitrate, because the standard is set at 10 mg/L, which is way off of our chart's scale.

Nitrate
Selected Kenai River Tributaries

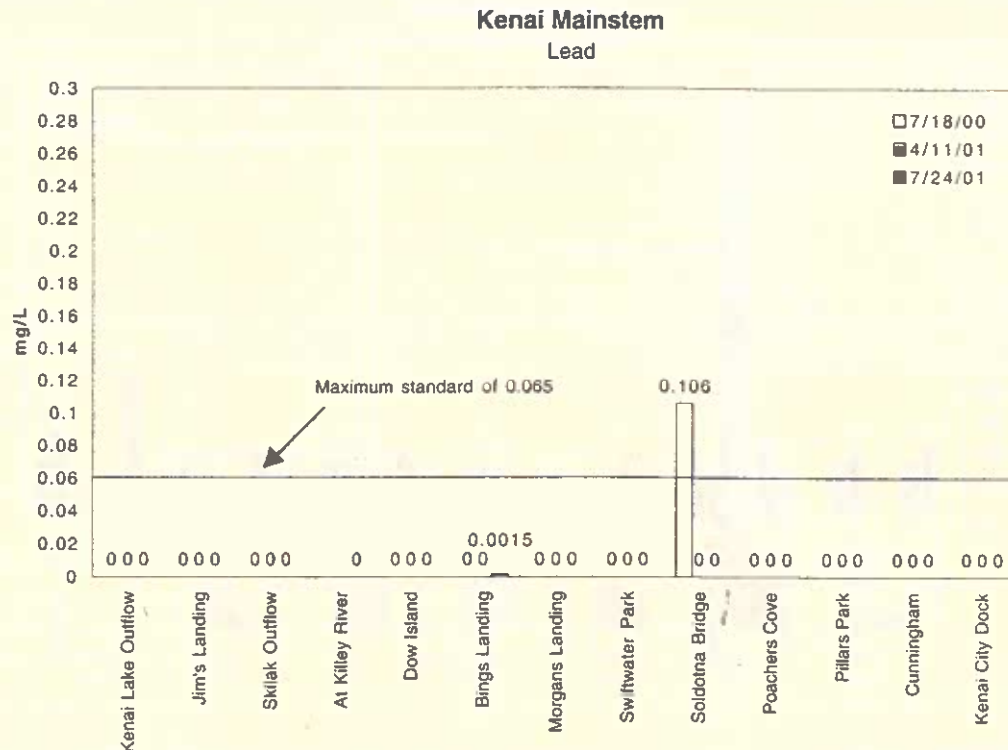




Here and on the following page, we show our results for the Mainstem of the Kenai River. The three metals that we plot on these graphs are Zinc, Cadmium, and Lead. These metals are one of the best indicators of urban runoff and give resource managers a first glimpse at what is reaching the Kenai River. Our "flags" arose for the summer of 2000 near the Soldotna Bridge. It is too early for us to know if this is a fluke or a real concern. We hope to continue our studies to increase our confidence in the data.



See Lead graph on following page.



Educational Radio Segments on the Way

We have some exciting KDLL radio segments in the works for this spring/summer! Curt Terrill's biology class at Skyview High School is joining forces with some elementary students from K-Beach and Soldotna Elementary to educate the peninsula on topics ranging from glacier effects on the Kenai River to the difference of using two-stroke vs. four-stroke engines on our beloved rivers. With over twenty different segments aired, it is certain there will be something new to learn for everyone...and you may even catch an original song or two! So stay tuned; we'll give you more details soon!

Problem Culvert Hampering Fish Migration

The Kenai Peninsula Borough has agreed to participate in a grant proposal to replace a problem culvert on Silver Salmon Creek, a tributary of Deep Creek, located just past the end of the pavement on Oilwell Road in Ninilchik. The existing culvert is hampering fish migration, so replacement of the culvert would be advantageous to fish runs. We are seeking funds through the State of Alaska, Coastal Impact Assistance Program. We received strong letters of support from Mayor Dale Bagley, the Kenai River Center, and the Department of Fish and Game.

THANK YOU - THANK YOU - THANK YOU - THANK YOU - THANK YOU - THANK YOU

Rasmuson Foundation - for a grant of \$23,880 for office infrastructure and water quality monitoring equipment. This grant will allow us to upgrade our office computers, making a faster and more efficient office, and to purchase several additional Hydrolab electronic monitoring devices, strengthening the educational component of our Water Quality Program. The Rasmuson Foundation invests in non-profit organizations that provide a unique public service.



Kenai River Sportfishing Association Inc. - for a \$5,000 contribution toward our baseline water quality monitoring program. This funding will be used to help offset the high cost of laboratory analysis that KWF incurs for the water quality monitoring partnership.



**Alaska
Conservation
Foundation**

Alaska Conservation Foundation - for \$7,000 to be split among a Membership Development Program, Educational Radio Segment Program, and our Community Indicators Program

Agrium

Agrium - for \$500 towards our Sponsor-A-School program. This money will help our staff to educate students about Watersheds, Water Cycling, Glaciers, Erosion, Groundwater, and Wetlands through slide shows and models and to lead field trips for area schools. During these trips, our staff will use state-of-the-art scientific monitoring equipment to demonstrate how water and chemistry is used outside the classroom. Through the Sponsor-A-School program, we are able to use these great educational tools to teach local students about our area.



Alaska Soil & Water Conservation District - for several cash awards from local Conservation Districts for development and production of a written Guide assisting in the identification of Willow for river bank restoration and for the development of an educational Radio Segment Program.

Homer Soil and Water Conserv. Dist. - \$5,000

Wasilla Soil and Water Conserv. Dist. - \$3,000

Kenai Soil and Water Conserv. Dist. - \$1,000

THANK YOU - THANK YOU - THANK YOU - THANK YOU - THANK YOU - THANK YOU

KWF MEMBERSHIP

Thanks to the following people for recently contributing to the Kenai Watershed Forum. If you would like to renew your membership or become a new member, please contact us at 907-260-5449 or online at www.kenaiwatershed.org.

RIVER STEWARD(\$100-\$499)

Ed Berg
Todd Boling
Louis Bregou
Georgia Bryce
Janette Cadieux
Catherine Cassidy & Erik Huebsch
Calvin & Jane Fair
Jim & Colleen Fassler
Jack & Jane Handy
Jane Kaiser
Ken & Judy Marlow
Peggy Mullen
Margaret Mullen
Mike Navarre
Robert Ruffner
Kenai Convention & Visitor Bureau
Kenaitze Indian Tribe
Chris Degernes & Bill Shuster
Laura Sievert
David & Kathy Wartinbee

CHINOOK (\$50-\$99)

Angler's Lodge & Fish Camp
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Michael & Judy Blair
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Dominique Collet
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Robin West

SMOLT (\$10-\$24)

Gerald Brookman
Jerry Dixon
Jerry & Betty Essick
Janice Rodes
Jean Romig

SUSTAINING MEMBERS

(Monthly or Quarterly Contrib)

Cheri Edwards
Austin & Jean Terrell

ADDITIONAL CONTRIBUTIONS

George McDowell

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