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Lake Roosevelt Forum

NEWSletter

SUMMER 2012

INside

Upper Columbia River (Lake Roosevelt) Fish Consumption Advisory Updated

The Washington Department of Health (DOH) updated the Upper Columbia River (Lake Roosevelt) Fish Advisory as follows:

Women who are or might become pregnant, nursing mother, and young children:

- Don't eat Northern Pikeminnow.
- Limit Largemouth Bass and Largescale Sucker to 2 meals per month.
- Limit Burbot, Longnose Sucker, Mountain Whitefish, Smallmouth Bass, and Walleye to 1 meal per week (or 4 meals per month of any combination of these fish).
- Kokanee is okay to eat 3 meals per week. Lake Whitefish or Rainbow Trout is okay to eat 2 meals per week.

Men and women beyond childbearing age:

- Limit Largescale Sucker to 1 meal per week.

Said Dave McBride, the DOH toxicologist who led development of the advisory, "How much fish you can safely consume isn't the same for all people. For instance women who are or may become pregnant, nursing mothers, and children are at higher risk."The advisory is written to protect those most at risk. The chart on page 5 provides more detailed information.

Sampling

The Lake Roosevelt fish advisory is based on one of the most thorough sampling studies ever conducted in Washington.

In the fall of 2009 over 2,300 fish were sampled. Fish species sampled included burbot, kokanee, lake whitefish, largescale sucker, longnose sucker, mountain whitefish, rainbow trout, smallmouth bass, and walleye. They were captured in six areas between Grand Coulee Dam and the Canadian border (or approximately 150 miles). For each fish species, a variety of small (<6 inches), medium (6-12 inches), and large (> 12 inches) class sizes were collected.

Tissue samples for fillets and whole body fish were analyzed for a wide range of metals and organics. Mercury, lead, zinc, arsenic and other elements representing fifty six percent of the periodic table were analyzed. Organic compounds, which are man-made, were also analyzed. These include pesticides like DDT, PCBs, and dioxins/furans. In all, 385 separate chemicals were tested.

What's Been Learned

The updated advisory reports on more fish species not because the situation has gotten worse, but because more species were sampled. New species sampled included kokanee and smallmouth bass.

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Debbie Bird, Lake Roosevelt National Recreation Area Superintendent, Retires

After serving as superintendent at Lake Roosevelt National Recreation Area (LRNA) for over 9 years, Debbie Bird decided to retire on July 1st, 2012. Her long and varied career with the NPS has now been replaced with the care of her ranchette, dogs, and horses. She plans on training some new horses and taking long horseback rides to fill her days.

In her mid-twenties Debbie was a concession employee for the National Park Service (NPS). As Debbie relates the story, "I was infected with a severe case of NPS ideals. I saw not only the value in preserving our Parks, but how important the Parks are to preserving our national heritage." Before serving at LRNA, Debbie was the Chief Ranger at Sequoia and Kings Canyon National Parks in California for nine years. During that time, she also spent fourteen months as the Acting Superintendent for newly formed Manzanar National Historic Site.

In an interview with the Forum after she first came to LRNA, Debbie said "From my perspective, human beings are part of the natural landscape. At NPS sites like Lake Roosevelt, we can celebrate the uniqueness of the lands and water that attract over a million visitors a year. At the same time, we need to work with the community to educate people on what it takes to maintain, as well as respect, these areas as scenic, natural and cultural treasures."

With that philosophy in mind, Debbie worked with staff and the community to address Lake Roosevelt's diverse issues. Issues like shoreline management, the Remedial Investigation/Feasibility Study, cultural resource protection, lake cabin permits, and public safety.

The Forum wishes Debbie a fond farewell. Knowing she was an English literature major at the University of California Santa Barbara, we bid adieu with a verse from a poem by one of her favorite poets, Maya Angelou:

I Know Why the Caged Bird Sings
The caged bird sings with a fearful trill
of things unknown but longed for still
and his tune is heard on the distant hill
for the caged bird sings of freedom.

An Acting Superintendent, Natalie Gates, Chief of Resource Management at Point Reyes National Seashore has been assigned to assist the park for 4 months starting in July 2012. The NPS plans to advertise and fill the vacancy by year's end.

EPA Announces New Project Managers for the Upper Columbia River RI/FS Project

In late June, EPA notified the Lake Roosevelt Forum that the current project manager, Helen Bottcher, will be transitioning off the project by the end of July. Laura Buelow in EPA's Hanford Operations Office in Richland, Washington and Matt Wilkening in EPA's Idaho Operations Office in Boise, Idaho will take the reins at the end of July. Dennis Faulk, manager of EPA's Richland Program Office will be the senior EPA official overseeing EPA's work on the site. Mark Stifelman, Bruce Duncan, Monica Tonel and other EPA staff scientists from the Seattle office will continue to work on the Upper Columbia RI/FS.

The Forum wishes to thank Helen for her dedicated service and commitment to public engagement.

Students, teachers and parents celebrated spring by participating in Student Discovery Week 2012

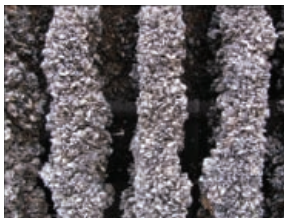
Kids at Spokane Tribal Fish Hatchery

Coordinated by the Lake Roosevelt Forum, each discovery zone is staffed by natural resource specialists from several agencies. Students tour and engage in hands-on activities to learn about research, environmental protection and other actions taking place to enhance and preserve the area for current and future generations.

This year, 324 students from 11 schools participated. Joined by teachers and parents, a great time was had by all. Since 1999, over 4,500 students have participated in this annual May event.

Asian Clams Now Found in Lake Roosevelt

For the past few years, the Northwest has lived under the fear of quagga and zebra mussels invading our water ways. These non-native species can cause millions of dollars of damage to facilities and wreak havoc to the environment. Even in a difficult economic environment, both Idaho and Oregon established watercraft inspection stations to try and stop them at the border.



Asian clam (top) invasive mussels on trash rack (below)

In May, field staff from the United States Fish and Wildlife Service (USFWS) and National Park Service (NPS) made an alarming discovery in Lake Roosevelt. They found 3 small unusual mollusks in the lower portion of the reservoir. After keying them out, it was found that they were Asian Clams (Corbicula fluminea).

Like Quagga and Zebra mussels they can spread quickly, covering surface areas in the thousands per square meter. Once established they can often dominate the benthic community. They can also attach to surfaces such as intake pipes, boat hulls, irrigation pipes, and trash racks.

First found in Washington in the late 1930's, they have slowly worked their way upstream in the Columbia and several tributaries. Said Ken Hyde, Director of Natural Resources at the Lake Roosevelt National Recreation Area, "This is the first time they have been documented upstream of Grand Coulee Dam."

The Asian clam is a filter feeder that removes particles from the water column. It can be found at the sediment surface or slightly buried. It has the ability to reproduce rapidly, but is susceptible to cold temperatures (2-30°C). Some suspect that this species was brought from China by immigrants as a food source and subsequently released.

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New Floating Restrooms Help Improve the Lake Roosevelt Experience

Floating restrooms and pump-out boat

Finding an appropriate place to "use the facilities" can be harder than you think on a lake that's 150 miles long. And that's not counting the 30 miles of the "Spokane Arm" that flows into Lake Roosevelt. Not surprisingly, addressing sanitary and convenience needs associated with human waste was an important component of the shoreline management plan adopted by the Lake Roosevelt National Recreation (LRNA) in 2009.

To help improve the situation, LRNA purchased two new floating restrooms and two pump-out boats through the Federal Lands Recreation Enhancement Act fund in 2011. The floating restroom "fleet" now numbers six. Here's where they can be found:

Two restrooms, porta-potty dumps and boat pump-out capabilities

- Spokane River Arm, approximately two miles east of Fort Spokane (New)
- Chalk Grade, about 12 miles south of Kettle Falls and near Rice, WA. (New)
- Jones Bay area, between Hanson Harbor and Jones Bay
- Ten Mile, about 5 miles south of Keller Ferry
- Spring Canyon, about 4 miles upstream of Grand Coulee Dam

Restroom only

- Welty Bay, just north of Kettle Falls

Floating restrooms have been on Lake Roosevelt for over twenty years. Unless lake levels make it prohibitive, facilities are open from Memorial weekend through mid-October. The restrooms are cleaned and checked

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Upper Columbia River (Lake Roosevelt) Fish Consumption Advisory Updated

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As shown in the chart, the news was good for people who enjoy the particularly popular kokanee and rainbow trout sport fishery. Further, advice regarding consumption of smallmouth bass and walleye improved from two meals (8 ounces of uncooked fish) per month to four meals per month (i.e., one meal per week).

The news was also good for those concerned with PCBs and other organic compounds. Levels of concern were only found in one species, largescale sucker. Said Liz Carr, fish advisory program coordinator with the DOH, "PCBs impact everyone. In addition to women of childbearing age and children, everyone should limit consumption of largescale sucker."

Lastly, mercury findings did not exceed what currently exists for the statewide mercury advisory.

Eat Fish, Choose Wisely

As explained by Mary Selecky, Secretary of DOH, at the Lake Roosevelt Forum Conference, "we want people to eat fish because fish is good for you." It's a great source of omega-3 fatty acids, protein, vitamins and minerals that help maintain your heart, brain and other physical needs.

Choosing wisely simply means know your environment and know your food source. Said McBride, "Go on-line and you can see the Healthy Fish Guide information we have for store bought seafood like salmon, clams and tuna. Eating fish from Lake Roosevelt fits into this bigger picture. Because knowledge is power, we hope people use this information to improve their odds for a long, healthy life."

Fish Advisory Questions?

Contact Department of Health. Toll Free 1-877-485-7316, or www.doh.wa.gov/fish.

The Department of Health fish advisory is based on data collected as part of the Upper Columbia Remedial Investigation and Feasibility Study (RI/FS). RI/FS studies are the result of a 2006 settlement agreement between Teck and EPA to evaluate potential human health and ecological risks stemming from metals and other contaminants released into Lake Roosevelt. Go to lrf.org/Env/Env-Sediment.html for additional background information.

RI/FS 2012 Sampling and Report Status

Surface Water: Sampling occurred in fall 2009, spring 2010, and early summer 2010. These three sampling events covered a wide range of different river flows and lake elevations. Preliminary findings show surface water concentrations for all metals (e.g., arsenic, cadmium, copper, lead, mercury, selenium, and zinc); and organics (e.g., PCBs, and dioxins/furans) to be within limits protective of aquatic life and people.

Beach Sampling: Of the 43 beaches sampled, all but three are considered safe for recreational use. The exceptions are Bossburg Flat due to high lead levels; Evans Campground Beach because levels of lead are slightly above screening levels; and the "Swimming Hole" near Sheep Creek because levels of arsenic are slightly above screening levels. For additional information go to http://1.usa.gov/NPS_Bossburg and EPA's Beach Study fact sheet at http://1.usa.gov/UCRbeach.

Fish Tissue Sampling: The Washington Department of Health issued an updated fish advisory (see article).

Recreational Use Survey: A survey to assess where, when, what, how, and how long visitors utilize Lake Roosevelt and the Upper Columbia River began in October 2010 and completed in 2012. The results will inform key sections of the human health risk assessment. A report is expected in late 2012 or 2013.

Sturgeon Toxicity Testing: Two different laboratory toxicity studies have been completed to assess how exposure to contaminants in surface water and sediment may affect early life-stages of sturgeon. Reports from both studies are expected in 2012.

Sediment Sampling: Teck submitted a Quality Assurance Project Plan (QAPP) for sediment sampling in March 2011. This sampling effort will include the collection of sediment and porewater chemistry data as well as toxicity tests. The purpose of the sediment testing is to evaluate if there are unacceptable risks to benthic invertebrates (sediment dwelling bugs) associated with exposure to metals and other chemicals in sediments. EPA

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Washington State Department of Health

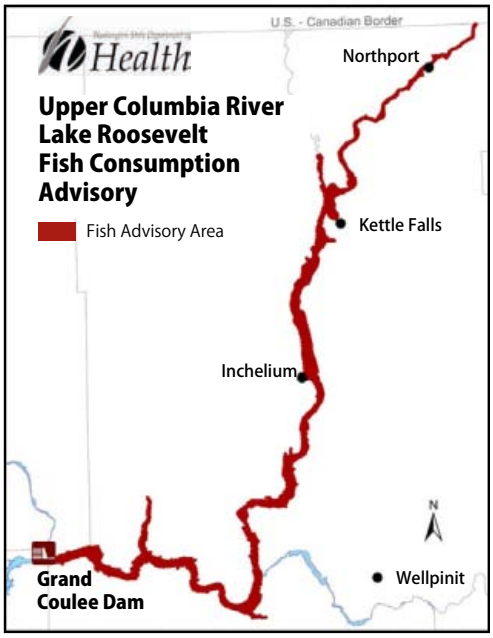
Fish Consumption Advisory

Upper Columbia River (Lake Roosevelt)

Certain types of fish from the Upper Columbia River and Lake Roosevelt contain toxic chemicals (mercury and PCBs) at levels that may harm your health, depending on how much you eat. If you eat fish from this area follow these recommendations. **This is very important for women who are or might become pregnant, nursing mothers, and young children because they are especially at risk for health problems these chemicals may cause.**

Healthy Choice		Meals Per Week*	
Kokanee		3	**Enjoy these fish.** Kokanee, lake whitefish, and rainbow trout are low in contaminants.
Lake Whitefish		2	
Rainbow Trout		2	
Limit		**Meals Per Week***	
Burbot		1	**Limit these fish.** You can safely eat 4 meals per month of any combination of burbot, longnose sucker, mountain whitefish, smallmouth bass, or walleye. If you eat the recommended amount, no other fish should be eaten that month.
Longnose Sucker		1	
Mountain Whitefish		1	
Smallmouth Bass		1	
Walleye		1	
Caution		**Meals Per Month***	
Largescale Sucker		2	Women of childbearing age and children: limit largescale sucker to 2 meals per month. Everyone else: 1 meal per week.
Largemouth Bass		2	
DO NOT EAT			
Northern Pikeminnow		**AVOID**	**Do not eat.**

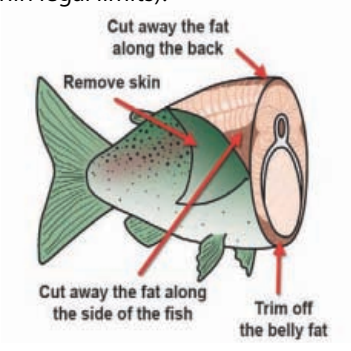
* One meal is 8 ounces of uncooked fish for a 160 lb person. If you weigh more or less than 160 lbs, add or subtract 1 ounce for every 20 lbs of body weight.



Preparing Fish the Healthy Way

Fish are part of a healthy diet. You can make it even healthier if you follow these tips. Some chemicals build up in the fat of fish and can be reduced if you prepare and cook fish correctly. Mercury can't be reduced because it builds up in fish muscle (the fillet).

- When cleaning fish, remove the skin, fat, and internal organs before cooking.
- Grill, bake, or broil fish so that the fat drips off while cooking.
- Eat younger and smaller fish (within legal limits).



Contact Information

Fish Advisory
Department of Health
Fish Advisories Program
Toll Free: 1-877-485-7316
http://www.doh.wa.gov/fish

Contaminants in the River
US Environmental Protection Agency
Upper Columbia River Study
Toll Free: 1-800-424-4372
http://yosemite.epa.gov/R10/cleanup.nsf/sites/upperc

DOH 334-305 July 2012 Fish illustrations © Joseph R. Tomelleri
TDD LINE: 1-800-833-6388 This document is available in other formats for persons with disabilities.

Columbia River Treaty Review: First round of modeling complete

The Columbia River Treaty is an international agreement between Canada and the United States to cooperatively manage water resources in the upper Columbia River Basin. Signed in 1961 and implemented in 1964, the Treaty provides critical flood control and power benefits to both countries.

The United States and Canada are now engaged in a process to determine whether to continue, modify or terminate the treaty. A decision to terminate requires a ten year notice that cannot occur before 2014 and take effect before 2024.

If both countries continue the treaty without modification, implementation of the treaty automatically changes in 2024. Specifically, a system referred to as "Called Upon" flood risk management begins. Here, the U.S. must effectively use all available storage in our reservoirs before Canada is asked for assistance. Canadian assistance comes in the form of managing their reservoirs to assist with our downstream flood needs, and would require compensation.

On this side of the border, a recommendation to continue, modify or terminate the Treaty is scheduled to be given to the U.S. State Department in the fall of 2013.

Deciding what to do

Led by the U.S. Army Corps of Engineers and Bonneville Power Administration, a Sovereign Review Process is considering various scenarios and impacts. Representatives from the four Northwest states, 15 tribal governments and 11 Northwest federal agencies are part of the Sovereign Review Team.

For fact sheets, presentations, study outcomes, background and other information about the Columbia River Treaty Review, go to www.crt2014-2024review.gov.

At the heart of the review process are three "iterations," an increasingly complex set of models (computer simulations) that builds on the previous iteration. The first iteration is complete. The variables it focused on were:

- Flood risk management
- Hydroelectric power generation
- Reservoir elevation and river flow
- Ecosystem and biological opinion

One key variable is deciding how Canada would manage the amount of water moving downstream. For this iteration, modelers assumed "… Canada would optimize its dam operations for electric power production."

A second key variable is deciding how the U.S. reservoirs would be operated for flood control. Modeling scenarios compared:

- current coordinated flood control operations,
- two scenarios based on treaty termination. The difference being operating reservoir systems more or less conservatively to meet flood control objectives. The more conservative flood control objectives would be used to limit the amount of "called upon" assistance that might be needed from Canada.
- two scenarios based on treaty continues. Again, the difference being operating reservoir systems more or less conservatively to meet flood control objectives.

Broadly stated, treaty termination and/or using more conservative flood control objectives results in deeper drawdowns and less frequent refill of some reservoirs. It may also lower winter flows, increase spring flows and lower late summer flows. These outcomes can affect the health of fisheries, irrigation, and recreation.

In this iteration, rough estimates are also provided for 1) lost or increased revenue to the U.S. and Canadian hydropower systems due to changes in river operation, and 2) the payments that would be provided to Canada when Called Upon assistance is required.

The balancing act between environmental, community development and pocketbook issues is at the heart of this and future iterations. To account for as many considerations as possible, the next two iterations "… will consider a broader range of needs of Northwest river users, tribes and stakeholders, including irrigation, water supply and quality, navigation, recreation, cultural resources, fish protection operations and ecosystem function needs, as well as potential effects of climate change."

Iteration 1 and Lake Roosevelt

All scenarios generally show the lake continuing to refill and hold its current summer elevation. If the treaty continues and the more conservative flood control measures are put into effect, draw down scenarios are very similar to current conditions.

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Lake Roosevelt Forum Conference draws over 200 participants

The 2012 Lake Roosevelt Conference was a big success.

Hosted by the Forum every eighteen months, 240 people attended one or both days of the conference in April. Representing agencies, tribes, stakeholder groups and citizens, attendees came from throughout the Northwest and Canada.

Said Andy Dunau, the Forum's Executive Director, "We think of the conference as a modern day potlatch. A place where people of good will come to learn about and discuss the varied and diverse needs we face, be it water quality, lake operations, power generation fisheries, shoreline management, recreation or other interests. The Forum doesn't advocate for a particular solution. We advocate for transparency and dialog."

Over the two day period, forty seven presentations were made. This included two keynote presentations, two plenary sessions and fifteen concurrent sessions.

To view conference presentations, go to http://lrf.org/conf/presentations/StartHere.html.

Thank you to our sponsors

Enjoy Lake Roosevelt, visit www.lrf.org/Recreation.html

Each year, the Forum provides updated information (including phone numbers and web sites) to help visitors and residents enjoy Lake Roosevelt. Learn about Points of Interest, Camping, Boat Launches, Lakeside Information, Fishing and Regulations.

Asian Clams Now Found in Lake Roosevelt

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Please do your part to keep invasive mussels out of our water ways

BEFORE leaving the boat launch

INSPECT your boat, trailer and equipment and remove any plants and animals.

DRAIN, on land, all water from the motor, livewell, bilge, and transom well. Some exotics may not be visible to the naked eye.

EMPTY your bait bucket on land. Never release live bait into a waterway, or transfer aquatic animals between waterways.

AFTER leaving the boat launch

WASH your boat, tackle, trailer, and other equipment to kill any exotic species not visible at the boat launch. This can be done with 104°F tap water, or a high-pressure sprayer. Or DRY your equipment for at least five days-some exotics can survive for long periods of time out of water.

LEARN what these organisms look like, and know which waterways are infested.

REPORT any new infestations

New Floating Restrooms Help Improve the Lake Roosevelt Experience

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twice a week during the summer and are generally pumped out twice a month between July and September.

The new pump-out boats reduce maintenance costs significantly. Prior to the boats, the park used a truck and pump-out trailer loaded on a 56' Military Landing Craft, making for a slow and inefficient process.

In addition, the park has worked out an agreement with the local concessionaires to use the pump-outs at the three marinas within the recreation area. This allows the pump-out boats to remain in the water between July and September and reduces the time and cost to service the facilities.

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Columbia River Treaty Review: First round of modeling complete

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If the treaty terminates and more conservative flood control measures are put into effect, Lake Roosevelt's spring (April) draw down would increase by about 2 to 5 feet during the highest (wettest) water years (20 percent of the time).

If the less conservative flood control measures are put into effect, Lake Roosevelt's deepest spring (April) draw down would put the lake elevation at about 1250' above sea level. Depending on whether it's an average or high water year, that's about 15' to 30' feet higher than current conditions.

From a river flow perspective, more conservative flood control measures or treaty termination result in higher freshet flows (15-30 kcfs) compared to current conditions. They also result in lower summer flows (20-30 kcfs).

RI/FS 2012 Sampling and Report Status

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provided comments to Teck on the draft QAPP in June 2012. Sediment sampling may occur in Fall 2012 or 2013.

Upland Soil Sampling: EPA is working on a "Level of Effort" paper for an upland soil sampling program that will clearly describe EPA's minimum expectations. Teck will work from the Level of Effort paper to develop a draft Quality Assurance Project Plan. Soil sampling data will be used to evaluate potential risk to both people and ecological receptors. Soil sampling is scheduled to take place in 2013.

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