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Lake Roosevelt Forum NEWSletter

SUMMER 2015

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LRF Conference bigger, better than ever

On April 21st and 22nd, the Forum set a record with 320 people attending one or both days of the 2015 Lake Roosevelt Forum Conference. That's a 17 percent increase over the last conference, and a 27 percent increase when we look back two conferences.

What's with this growth? "From around the Northwest and across the border with our Canadian friends," said the Forum's

Executive Director Andy Dunau, "there's a growing realization just how important Lake Roosevelt and the upper Columbia are to our daily lives. People get that the future isn't about hanging out in silos, it's about networking and learning from each other. The conference fills that need."

Said one conference participant, "The Forum makes it safe to be in the same room with each other." That spirit allows tribes,

natural resource managers from federal, state and local governments, policy makers, elected officials, conservation groups, and community members to come together.

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Thank you to our 2015 conference sponsors!



Teck

Salmon above Grand Coulee Dam

Stephen Smith, Upper Columbia United Tribes

At the recent Lake Roosevelt Forum, I had the privilege of speaking on behalf of the Upper Columbia United Tribes regarding their proposal to investigate the feasibility of restoring salmon above Grand Coulee Dam. When asked by an audience member (and fellow baby boomer) if I thought we would see salmon above the dam in his lifetime, my answer was easy: YES, of course! While many people might find this a bold prediction, I don't.

No single action in the development of what has become our treasured Federal Columbia River Power System has caused such a devastating and enduring loss to our salmon resource as the completion of Grand Coulee Dam in 1942 without fish passage. We not only lost the annual benefits from millions of salmon produced in upper Columbia habitats, but we also separated many Native Americans and First Nations from the fish that is the foundation of their health, culture and spirituality.

Over the past 40-plus years, I have witnessed a number of successful initiatives throughout the Pacific Northwest to restore salmon and, with them, seen the return of social, economic and ecosystem balance and diversity. Through my civil service years working for fishery agencies and the Bonneville Power Administration, I came to appreciate and respect the missions and values that these and other agencies have brought to life in the Pacific Northwest. But nothing in the pursuit of regional optimization has excited me as much as the real possibility of allowing salmon to complete their migration back to upper Columbia habitats and communities.

I am excited because sockeye and Chinook salmon runs below Chief Joseph and Grand Coulee dams are again numerous and productive despite migration past nine other Columbia River dams, through over 400 miles of reservoirs. The potential is now there for the fish to migrate past even more dams.

I am excited because private utilities in the region are installing new fish passage technologies, like the Floating Surface Collector, at their projects. These are capable of successfully collecting and passing juvenile salmon from large reservoirs, a problem that stymied earlier,



Stephen Smith

unsuccessful salmon reintroduction efforts. Equally important, these fish facilities allow projects to continue operating to provide electrical power, flood control and irrigation benefits unimpeded. I am confident our federal agencies can do the same at their projects.

I am excited because innovative minds have created new research tools that allow fishery scientists to tag and monitor salmon, promptly measuring their behavior and survival. This will allow the region to accelerate our progress towards successful salmon reintroduction and minimize bad choices and poor investments.

And I am equally excited because the region as a whole now recognizes that in our singular pursuit of economic development, we have perpetrated historic wrongs that can and should be rectified. The times and our values have changed. After salmon are again swimming towards their upper Columbia spawning grounds, the Pacific Northwest will still possess the most affordable, greenest electricity supply in the nation.

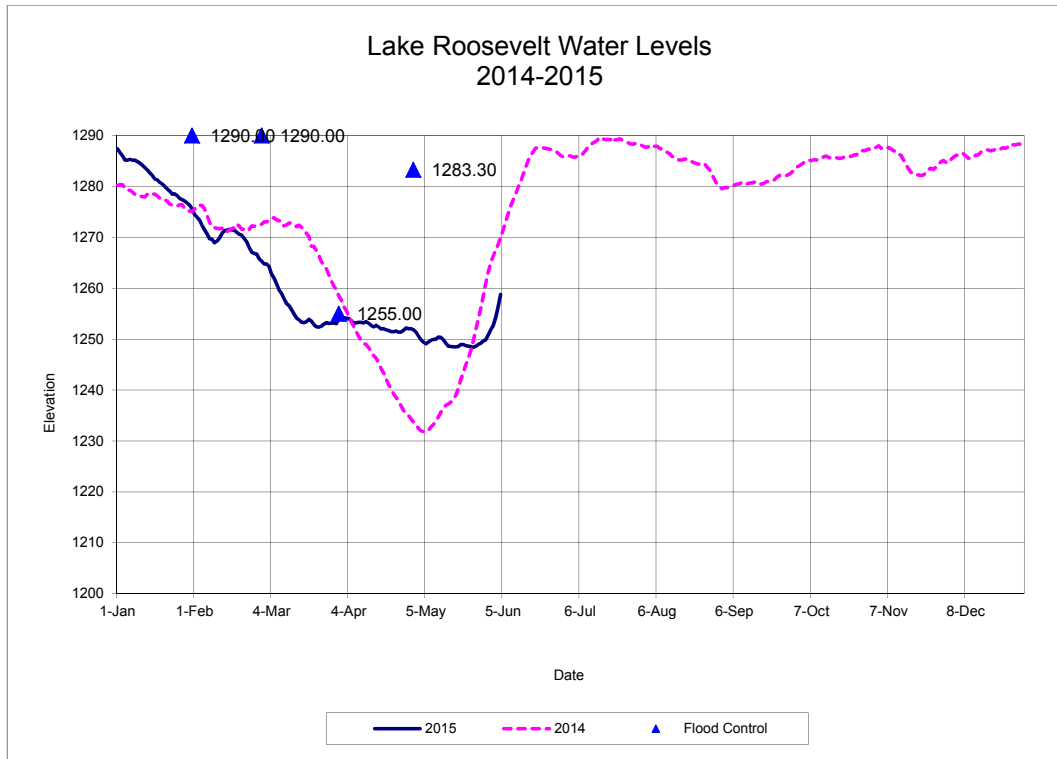
Salmon are amazingly resilient creatures and I am confident that they and the Columbia Basin tribes will see this through for the benefit of all.

Tight Lines! 🌊

Drought year has everyone's attention

What started out as Governor Inslee declaring a drought emergency across three regions in Washington is now statewide. State officials refer to this as a snowpack drought because precipitation fell as rain rather than snow in mountain areas this year. The result is melting snow that provides water supply for our rivers and streams through the spring and summer isn't there.

Snow water equivalent (SWE) is a common means to measure the effect of snow melt on water supply. With red signaling drought trouble ahead, the map on page 8 shows challenges across the Northwest. Said Guy Gregory with the Washington Department of Ecology, "Some of these conditions aren't anything you, your parents or grandparents saw, we're in uncharted territory."



For Lake Roosevelt itself, the effect is not very significant. The graph shows that operators adjusted by not drawing the lake down as much this year. Beginning about June 1, the lake is expected to rise to traditional summer levels. Said Lynne Brouger, Public Affairs Officer for the Bureau of Reclamation at Grand Coulee Dam, "You'll see water levels at Lake Roosevelt in the typical summer range as the reservoir is operated in the top 12 feet, but drought conditions will be evident in the surrounding upland areas and tributaries."

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Lake Roosevelt joins the aquatic invasive species fight

The National Park Service (NPS) is joining the fight against aquatic invasive species (AIS) in a big way.

As reported at the conference by managers throughout the region, invasive zebra and quagga mussels pose the greatest threat to Northwest waterways. An infestation could cost hundreds of millions of dollars annually to infrastructure and personal property if not dealt with effectively.



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Residential soil sampling leads to time critical removal action in upper Columbia Valley

A fall, 2012 study by the Washington Department of Ecology reported undisturbed soil samples with elevated levels of lead, arsenic and cadmium within two miles of the U.S./Canada border. As some of the contaminant concentrations found would be a human health concern if located near a residence, the U.S. Environmental Protection Agency (EPA) agreed to further investigation. EPA considers the presence of these metals to be associated with Trail Smelter smoke stack emissions.

The map shows results for lead levels. EPA uses a “screening level” of 400 parts per million (ppm) to determine whether further investigation is needed to be protective of human health. As noted in a letter to property owners from EPA, “We generally consider results below

these screening levels to be safe for everyone living on the property, including children and pregnant women.” EPA provided each participating property owner a letter and map of their property with sampling results.

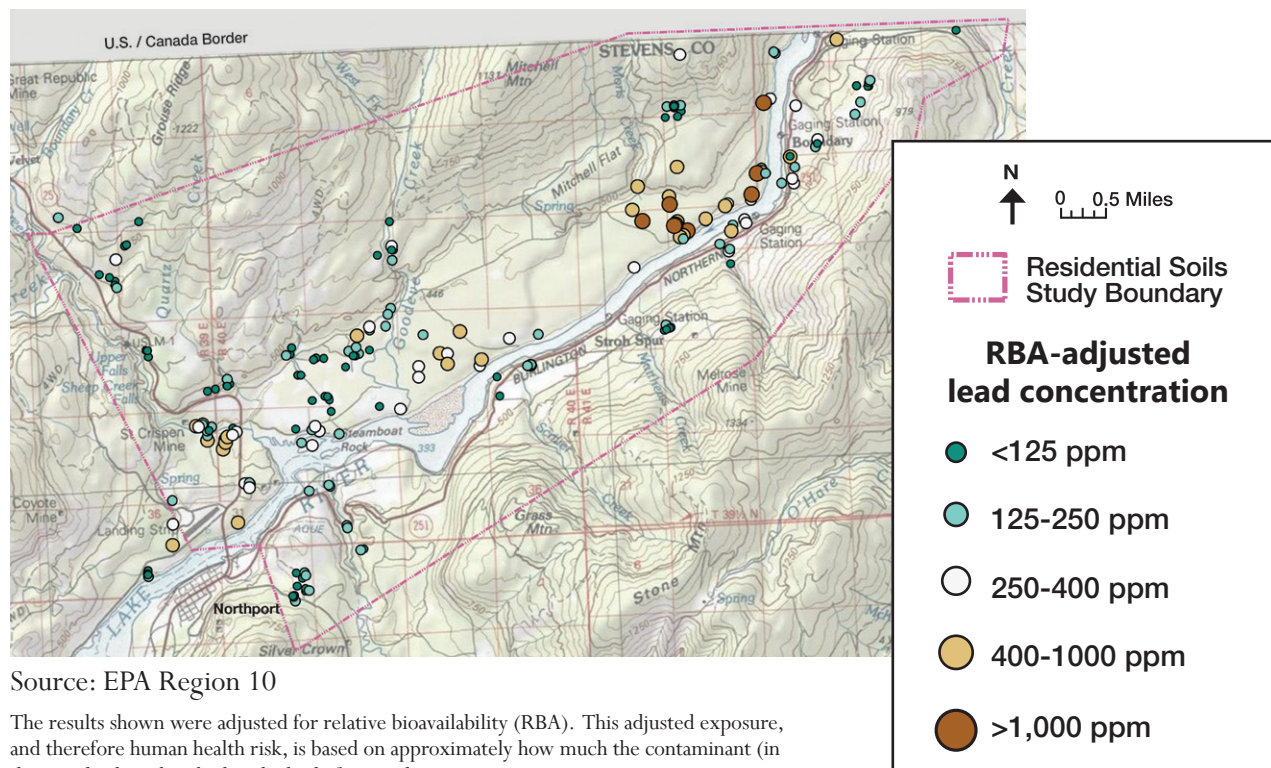
This June the Forum released the 2015 Lake Roosevelt RI/FS Public Guide. The guide provides updates and detailed information on studies, findings and actions being taken. The online version can be found at www.lrf.org/publicguide2015.

Under the federal Superfund law (CERCLA), EPA has the ability to authorize “Time Critical Removal Action” to address threats to human health from contaminants released into the environment. In April, 2015 EPA announced it would use this ability to

conduct cleanup of residential properties with sample results exceeding 700 ppm for lead. Of the 74 properties sampled, 14 are eligible for Time Critical Removal Action (including properties falling just below the 700 ppm threshold).

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Residential Soil Sampling: Lead Concentrations



Source: EPA Region 10

The results shown were adjusted for relative bioavailability (RBA). This adjusted exposure, and therefore human health risk, is based on approximately how much the contaminant (in this case lead) is absorbed in the body from soil.

Citizens for a Clean Columbia perspective on 2014 residential soil sampling

Mindy Smith, Citizens for a Clean Columbia

Citizens for a Clean Columbia (CCC) is a grassroots, volunteer organization focused on issues of the Upper Columbia River and Lake Roosevelt. Through EPA's technical assistance program, CCC has been very engaged in observing, reviewing, and commenting on study plans and reports from the upper Columbia Remedial Investigation and Feasibility Study (RI/FS). The residential and upland soil sampling in the upper Columbia Valley are on lands that many of our members call home. It's where we live, play, enjoy nature in all its forms, and raise our families.

Results of the 2014 residential and upland soil studies clearly indicate aerial contamination of the upper Columbia River area by emissions from the Trail, BC smelter stacks. Of 74 properties sampled in the residential soil study, seventeen percent of the residential decision units (DUs) were above EPA's lead screening level of 400 ppm. Lead levels of >1000 ppm were found on 6 properties. Fourteen properties with lead levels over 650 ppm will undergo EPA time critical removal action beginning with individualized plans made with the property owners.

In general the residential sampling process went well after a rough start with difficulties with the sampling tools and the GPS system. The teams behaved in a professional manner and the results became available within 5-6 months of the sampling. While results on lead and arsenic concentrations were provided to property owners, no information was provided on the remainder of the 22 metals analyzed. In addition, due to a log-in error, 27 of 943 samples were inadvertently disposed of rather than archived; this problem has been addressed.

CCC is concerned that EPA's time critical removal action response to the study results is not transparent to the community, as these actions provide no opportunity for public input. We hope it is more transparent to the recipients of the action who should be intimately involved in the process. At the very least, information should be disseminated to the community at large.

We feel very strongly that EPA should offer soil sampling and any indicated removal actions to property owners who live adjacent to the properties being cleaned up, if



Citizens for a Clean Columbia members with Teck manager at Black Sand Beach

their properties were not sampled in 2014. This process should continue until no properties are found that require remediation. As the final RI/FS Record of Decision remediation actions are still very far off, we fear that the time critical removal action may be the only remediation that occurs. This clean up should be thorough and complete.

EPA should perform a second round of residential soil sampling that encompasses all properties in the upland soil study site area. This expanded residential soil study should be planned this year for implementation in 2016.

We also believe that the 2004 LeRoi smelter time critical removal action, performed in Northport using different removal action levels based on the presence of children, should be readdressed. Properties that were without children in 2004 may have children present now who are at risk. This should be determined and owners approached about potential additional remediation. New owners of properties who opted out in 2004 should be approached about sampling and potential remediation. Further, the city should be approached about evaluating city property for potential clean up.

As noted in the Lake Roosevelt Forum RI/FS Public Guide, areas of contamination that were above human health screening levels for metals were identified in the upland soil

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STOP



Milfoil

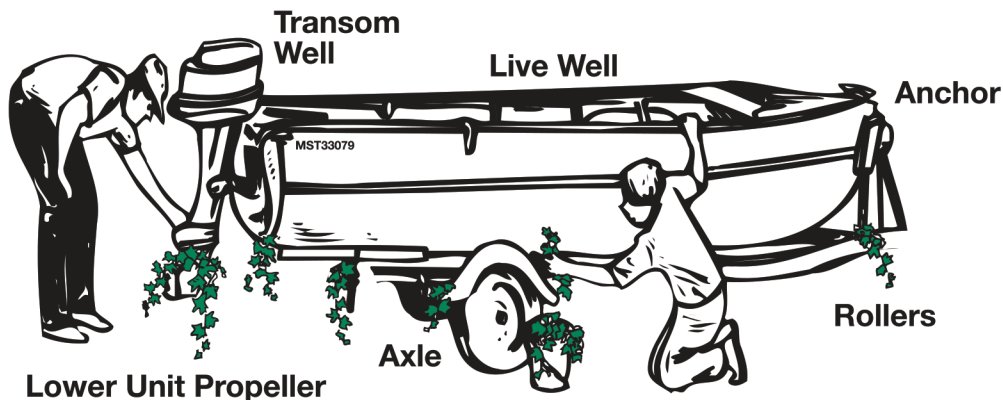


Zebra Mussel

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Plants & Animals from Watercraft, Trailer and Gear.
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To obtain information on free boat inspections, Report a sighting or
Find out more about Aquatic Invasive Species:
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Lake Roosevelt joins the aquatic invasive species fight

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Fortunately, Lake Roosevelt is currently free of these mussels. Other AIS species in our midst, however, include Asian clams, northern pike, Eurasian milfoil, and crayfish.

NPS has secured funding for a new staff person and seasonal work crew, purchase of 6 hot water decontamination units, and public outreach materials. On point is Meghan Lyons, who joins NPS staff after 10 years working in fisheries in the Colville National Forest. Said Lyons, “The biggest thing people can do is clean, drain and dry their boat every time they go in and out of a waterbody.”

A high visibility piece is putting into service 6 hot water decontamination units purchased earlier this year by NPS. “Three of these units will be used by NPS staff, and three will go to our partners: the Spokane Tribe of Indians, Colville Confederated Tribes, and Washington Department of Fish and Wildlife (WDFW),” said Lyons.

This year NPS will, on randomly selected days, conduct inspections and place decontamination units at various boat launches. Said Lyons, “Starting in mid-June we’ll pick popular, frequently used boat launches.” Here’s what to expect if you arrive at a boat launch with inspection activities:

- A seasonal crew will ask you where your boat’s been the last thirty days. If it’s local waters and the boat is clean and dry, inspection could be done in 5 to 10 minutes.
- If your boat has come from Lake Mead or other waters known to be infested, the inspection could take 15 – 30 minutes. Even if nothing is found a hot water decontamination may be suggested because the presence of AIS can be very hard to detect.

Those doing inspections will also provide brochures and other information to educate and inform the public, including teaching boaters how to do their own inspections. Signage advising people of WA State AIS regulations will be posted at boat launches. And NPS is providing a phone

number (509-754-7869) to encourage people to reach out for assistance, including scheduling a time for hot water decontamination.



NPS mobile decontamination units like this one will, on randomly selected days, conduct inspections at various boat launches.

“Really,” said Lyons, “the best thing for folks coming from infested areas is to have your boat out of the water, clean and dry for a week or longer. The next best thing is to call us and ask questions. We’re here to help.” Two excellent web resources are from WDFW (wdfw.wa.gov/ais), and the 100th Meridian Initiative (100thmeridian.org).

With 22 boat launches operated by NPS and additional ones operated by tribes, it’s certainly possible to avoid inspection. “This

only works,” said Andy Dunau, the Forum’s Executive Director, “if people see this as doing their part to protect Lake Roosevelt and protect property. The benefits of finding and addressing problems before they get in the lake are enormous.”

WDFW will operate their decontamination unit out of their Spokane Office. Those trailering boats from other areas can call ahead for inspection and assistance. In addition, those stopped at Idaho or other inspection stations can be escorted to WDFW’s Spokane Office to address matters of concern.

The Spokane Tribe of Indians and Colville Confederated Tribes are determining how to integrate decontamination units into existing staff time and resources.

On the monitoring and inventory side of the equation, this summer NPS will be focusing on locating and mapping AIS like Eurasian milfoil and crayfish. As for suppression, they’re encouraging catch and permanent removal of northern pike and non-native crayfish.

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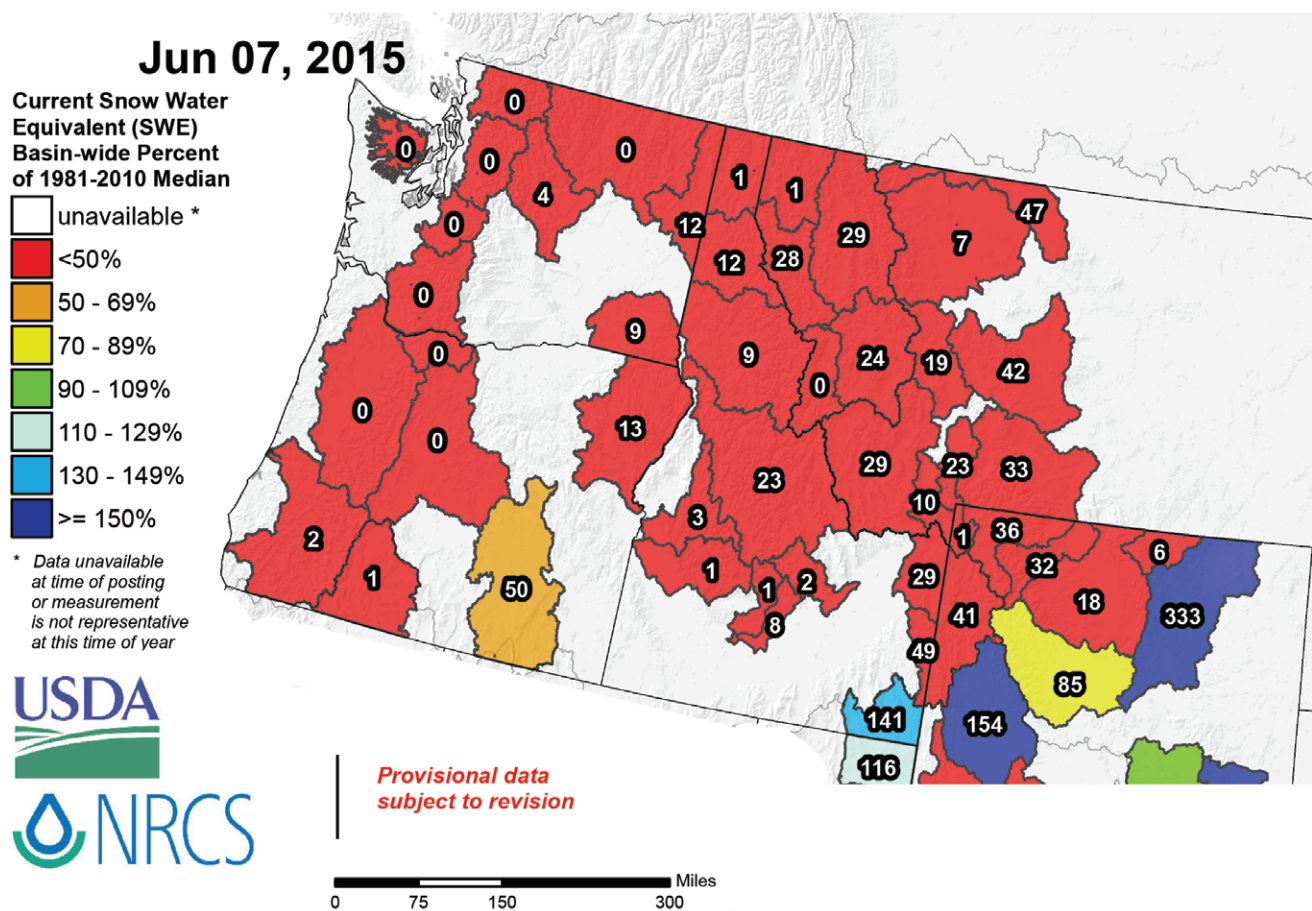
Drought year has everyone's attention

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For the Columbia River as a whole, BPA, the U.S. Army Corps of Engineers, Bureau of Reclamation and others are now meeting power, fish, irrigation and other needs using dry year operation protocols. These are implemented when the April through August forecast at the Dalles Dam for total volume runoff is less than 72.2 million acre feet (maf).

In practical terms, this means reservoirs on the Columbia River system will be drawn down further than normal in the late summer and fall to provide more water for fish. On the power side, Kieran Connolly, vice president of Generation Asset Management for BPA, said "We don't have as much water as we would like, but we're well prepared to handle the current situation." 🌐

Westwide SNOTEL Current Snow Water Equivalent (SWE) % of Normal



The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by:
 USDA/NRCS National Water and Climate Center
 Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Citizens for a Clean Columbia perspective on 2014 residential soil sampling

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study. Based on the draft results of this study, of the 142 DUs sampled from the aerial deposition areas, arsenic was exceeded at 68 DUs and lead for 21 DUs after adjusting for bioavailability. For the 16 relic floodplains DUs sampled, 8/16 exceeded the screening level for arsenic and 2/16 exceeded screening level for lead after adjustment.

As just over half of the proposed relict flood plain areas were sampled, we believe that additional relict flood plain areas need to be sampled. Property owners located in these areas who originally declined the study should be approached again for enrollment in a second phase upland soil study.

A formal evaluation of legacy issues should also be performed by EPA with community input. Legacy issues include inheritance, subdivision, sale and any other new land use on properties that undergo time critical removal actions or had values above screening levels. Property value concerns for owners with contaminant levels above screening levels but below time critical removal action levels should be addressed. The impact

of potential property value decline in the study area and the concomitant tax basis decline and impacts to Stevens County should be evaluated.

There is a great deal of concern by residents about the potential for continued aerial deposition, despite improvements by Teck on stack emissions. EPA should perform a formal air monitoring study to determine if aerial contamination is ongoing. This air monitoring study should be planned this year for implementation in 2016.

CCC strongly encourages EPA to expand the upland soil study so that topographical maps of contaminated areas can be drawn with reasonable accuracy. Aerial contamination is not necessarily contiguous. The community needs to know which areas are contaminated and which areas are not contaminated for both human health and ecological risk.

Finally, the residential soil study results indicate that aerial deposition is very near the surface. A study should be performed to determine if 1 inch sampling would give higher contaminant levels than the 3 inch sampling performed in the upland soil study. 🌱

Residential soil sampling leads to time critical removal action in upper Columbia Valley

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Said EPA in a letter to tribes and agencies, “Conducting the Time Critical Removal Action for residential properties at the Site is intended to address the immediate threat to human health from lead exposure, and will contribute to the long term cleanup of the Site through the remedial action program.” For agreeable property owners, soils will be cleaned up to less than 250 ppm, which is also consistent with Washington Department of Ecology’s toxics cleanup program.

The RI/FS will continue to assess human health risks and potential cleanup actions for soils not addressed in the time critical action. No further cleanup action, however, is anticipated on properties below 700 ppm before EPA completes a human health risk assessment and a record of decision issued, a process that may take several years to complete. 🌱

LRF Conference bigger, better than ever

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The conference agenda and presentations can be found on the conference web site at www.lrf.org/conf.

Rather than try to recapture the breadth of presentations and thoughts at the conference, this newsletter focuses on

follow-up to a few of the sessions. Some articles are timely updates, like drought conditions and fighting invasive species, and some reflect sharing participant perspectives. 🌱

Lake Roosevelt Forum

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