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Lake Roosevelt Forum

NEWSletter

WINTER 2018

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Columbia River Treaty negotiations set to begin

The U.S. Department of State announced that the United States and Canada will begin negotiations to modernize the Columbia River Treaty in early 2018.

The treaty went into effect in 1964, unleashing historic flood control and power generation benefits. Three dams (Duncan, Hugh Keenleyside and Mica) were built in Canada; and the U.S. exercised an option to build Libby Dam. This resulted in doubling Columbia Basin water storage capacity, and water flows being managed to achieve both flood control and power benefits.

Initially, Canada received a lump sum payment of \$64.4 million from the United States for flood control; and, over a 30-year period, \$254 million dollars from U.S. utilities for downstream power benefits. Since 2003, the U.S. sends Canada annual payments of one-half of estimated power benefits (currently averaging about \$130 million per year).

The impetus to modernize the treaty is that certain provisions are set to expire in 2024. In addition, issues of concern on both sides of the border are much broader. Beyond

power and flood control are environmental, irrigation, navigation, cultural and other issues that the treaty does not currently address.



Aspects of a modernized treaty negotiation may include continuation of annual payments to Canada for power benefits; alternative water management scenarios that balance environmental objectives (e.g.—ecosystem function, endangered species protection and climate change mitigation) with flood control and power

benefits; the possibility of restoring salmon passage to Canada; and treaty governance.

There is bi-partisan support from the Northwest congressional delegation to modernize the treaty. “It is clear the Columbia River Treaty in its current form needs to be updated to meet the modern-day issues facing the Columbia River Basin, the region, and the nation,” said U.S. Senator Patty Murray.

Said Congresswoman Cathy McMorris Rodgers, “By addressing the ‘Canadian Entitlement’ and other issues we can form a treaty that will serve both nations for generations to come.” 🌍

Getting to Know Janice Elvidge

How does someone entering adulthood with “performance anxiety” and a “fear of speaking in public” end up with a National Park Service career centered on communicating with the public, teachers and students? Let us introduce you to Janice Elvidge.

“When I see a need and I put my mind to do something about it, I’m confident I can organize people and resources to take care of the need,” said Janice. “I don’t worry that I might not know how when I start. I just know I’m good at working behind the scenes to make things happen.”

With that background, Janice’s story unfolds in the late 1980s as a graduate of Central Washington University who lands seasonal jobs at Lake Roosevelt. First at Kettle Falls, then at Spring Canyon.

Janice had an interest in interpretive planning, which is how parks facilitate, encourage and otherwise assist visitor experiences. For instance, kiosks, visitor centers, brochures, trails, etc. are common ways to connect people to story lines such as natural resource protection, human and natural history, safety, and more.

She built on this interest by getting her Master’s degree from the University of Washington College of Forest Resources. Her thesis was based on conducting a Lake Roosevelt visitor use survey to better understand their preferences. By 1992, she found herself as an interpretive and education specialist at Fort Clatsop National Memorial, the winter encampment for Lewis and Clark’s Corps of Discovery.

Said Janice, “Like many NPS sites, we had limited resources to work with. We were getting overrun with classes that wanted to visit, but not enough people to provide a quality experience. My charge was to reimagine the education program.”

What resulted was creation of teacher and parent materials coupled with workshops led by park employees. That allowed teachers and parents to take the lead when visiting, choosing between activities like candle making, fire starting, and documenting hides and birds. “We even gave them quills and ink to experience what it was like to write in those days,” commented Janice.

And with teachers and parents now directly involved in interpretation, the Fort Clatsop park staff and community

members ended up with more positive relationships. The curtain between my turf, your turf was breached. For her efforts, Janice received the Pacific West Region Freeman Tilden Award, the highest award presented to an individual National Park Service interpreter.

In 2005, she was invited to try her skills at Lake Roosevelt. At first her time was split between interpretation and K-12 education. By 2008, the resources were cobbled together to allow her to be devoted full time to education. The River Mile program (see attached article) was born soon thereafter.

“I talked to teachers throughout the area and brainstormed with staff. I felt like we really needed a systems approach to experiencing the river. After testing an initial program for The River Mile I realized that was unlikely to happen for a couple of reasons. First, like Fort Clatsop there were way too many teachers and classes than park staff could support in a deep way. And second, teachers had limited training opportunities and resources.”

So behind the scenes Janice went, imagining a place where teachers and students could treat “a river mile” as an outdoor classroom. She’d find a way to give them STEM training, get classes into the field to do research, share data, and access experts. Ten years later it’s a national model for working in rural areas.

Said Forum Executive Director Andy Dunau, one of the many partners Janice recruited to join the adventure, “She’s doing jazz improv with partners while the

rest of us are thinking about the two-step. She’s indefatigable.”

Sharing data is a perfect example. “In the early years we had a heck of a time figuring out how teachers and students could share data.” Said Janice. “Then I got introduced to ARC GIS on-line and saw the potential for teachers and students to share both data and a sense of place through mapping. We got the funding for the training and haven’t looked back.”

Janice is now focused on making sure a solid foundation for The River Mile is completed and becomes sustainable. She’s confident because a network of teachers, informal educators, and partners continues to step-up to the challenge.

So go Janice, go. Soon enough, everyone will walk The River Mile with you. 🌍



Janice Elvidge

The River Mile Network turns 10

The River Mile (TRM) Network turns 10 in 2018.

Founded by Lake Roosevelt National Recreation Area Education Specialist Janice Elvidge, her vision was to create a unique learning experience for students by using the Columbia River Watershed as a living laboratory to explore an essential question: “How do relationships among components of an ecosystem affect watershed health?”

Little did she know that she was launching a program that would be both widely popular and a national model for offering STEM (Science, Technology, Engineering and Math) opportunities to students in rural areas. Part of TRM’s secret sauce is that its values and strengths mirror those of participating rural communities: self-reliance, pitching in, and getting by with limited resources.

The pivot point for the program is straight forward: students and teachers engage in science education outdoors anywhere in the Columbia River Watershed. Picking a research project such

as crayfish or water quality, they explore scientific practices that mirror the real-life interests and priorities of natural resource managers and scientists.

In addition, teachers receive resources and training from partners such as PEI (the Pacific Education Institute), local universities, the Lake Roosevelt Forum, and a host of federal, tribal, state and local agencies.

It sounds simple, but it’s not. With Elvidge serving as the program’s energizer bunny, a rich tapestry of educators, resource managers, scientists and informal educators in the Columbia River Watershed share what they know and learn about the Columbia River Watershed. For example, on any given day you may find them training teachers in how to lead their students through field investigations and outdoor science programs; offering students career mentoring; or providing technical assistance in the field.



River Mile Participants

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Community takes tour of Spokane Indian Reservation and Lake Roosevelt

In September, over 40 community members, elected officials, government agencies and tribal members enjoyed a bus and boat tour of the Spokane Indian Reservation and the Spokane River arm of Lake Roosevelt.

Thank you to the experts providing presentations on Long Lake Dam improvements, water quality management, Dawn Mill reclamation, the Spokane Tribal Hatchery, Lake Roosevelt fisheries, Midnight Mine cleanup, Upper Columbia RI/FS, invasive species and reopening the road to Porcupine Bay Campground.

Said Andy Dunau, the Forum’s Executive Director, “There’s always a lot going on and none of us has enough time to track it all. The tour helps get folks caught up and, as importantly, network with each other, share information, and trade ideas.”



Participants on Tour



Midnite Mine Cleanup Progresses

After years of development and negotiation, remedial actions to cleanup Midnite Mine are progressing. The former uranium mine, which is located on the Spokane Indian Reservation, operated from 1955 to 1981 and covers over 320 acres.

Radioactivity and heavy metals are among the human health and environmental risks being addressed.

The 2016 Midnite Mine Basis of Design Report identifies the project as a multi-year remedial design with construction activities expected to be completed in 2025. Remedial activities include backfilling two open pits with approximately 18 million cubic yards of mine waste rock and other affected materials which are part of the legacy mining operations.

Backfill operations began with the Pit 4 facility in 2016 and will continue this next construction season. Past Pit 4 operations included the implementation of highwall stabilization, dewatering, sediment removal, drain rock crushing, well installation, and drain rock placement. Over the

next several years, waste rock and other materials placement in Pit 4 will be completed. The backfilled pit will be capped with clean soil and revegetated. While these activities are completed, remedial actions will be conducted preparing Pit 3 for backfill.

During 2017, EPA completed permitting of a new National Pollutant Discharge Elimination Permit (NPDES) for a new water treatment plant which will discharge treated water to the Spokane Arm of Lake Roosevelt. The plants development schedule calls for design in 2018, construction in 2019, and commissioning in 2020.

To conduct activities safely, many additional measures such as stormwater management, dust suppression, air quality monitoring, and water sampling are part of construction activities.

The project has been advanced from years of development and negotiation. A 2012 agreement makes EPA responsible for oversight of cleanup work in coordination with the Spokane Tribe. 🌱



Placing drain rock in Pit 4



Midnite Mine area

Discovery Days are here again this May

This exciting, free event is an exceptional opportunity for upper elementary and middle school students and teachers to explore the ecological, social and economic complexities of Lake Roosevelt's watershed. Programs are staffed by local resource specialists, including biologists, geologists, and foresters representing many different agencies. Sponsored and coordinated by Lake Roosevelt Forum in cooperation with numerous partners.

Details coming soon to website. Visit www.nps.gov/laro/learn/education/festivals.htm. 🌱



EPA Remedial Investigation updates

Over a decade has passed since EPA reached agreement with Teck to conduct an Upper Columbia Remedial Investigation and Feasibility Study (RI/FS) to identify the nature and extent of contamination, and assess possible risks to human health and the environment.

Each newsletter carries an update. To learn about the history of this investigation and what's been learned, visit our Public Guide at www.lrf.org/2015publicguide.

Additional Residential Soil Sampling

In addition to sampling and residential soil cleanup activities that took place in 2014-2015, a new round of soil sampling occurred in 2016. Sampling occurred at some properties within the original boundary from 2014 and extended through the river valley as far south as China Bend. 144 residential properties were sampled. Results were sent to landowners in April 2017.

See newsletter article below.

White Sturgeon and Pike Sampling

Sampling and analysis of hatchery white sturgeon fillet tissue was undertaken in late 2016 as part of opening a fishery season for hatchery white sturgeon. Data reviewed by WA Department of Health placed hatchery white sturgeon in the healthy choice category along with kokanee, rainbow trout, and lake whitefish.

Due to increases in Northern Pike in the UCR and creation of a bounty to help rid the system of this invasive predator, Lake Roosevelt fisheries co-managers are now in discussion with EPA and Teck to sample pike as part of establishing safe fish consumption standards.

Mussel and Crayfish Sampling

The main purpose of this sampling is to investigate possible human health and ecological risks of chemicals concentrating in tissues of fresh-water mussel and crayfish. In the spring and fall of 2016, samples were collected at various depths

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Additional Upper Columbia Residential Property Cleanup

In 2017, four additional residential properties on Mitchell Road were identified for contaminated soil cleanup. These are properties where soil sampling conducted in 2016 showed lead levels exceeding 600 ppm (parts per million).

In 2014 and 2016, landowners were given the opportunity to receive free soil sampling as part of the Upper Columbia River (UCR) remedial investigation and feasibility study. The goal of sampling was to determine if levels of metals in soils could pose an unacceptable risk to human health, particularly to children who live within the UCR Study Area.

In 2014, 74 properties were sampled and 13 received cleanup and restoration of their properties in 2015. This occurred as part of a voluntary agreement between EPA and Teck American Incorporated (TAI) for TAI to fund and conduct cleanup of the 13 properties under EPA oversight.

In 2016, the area for those eligible for free soil sampling was expanded to include property owners along the river valley living as far south as China Bend. In addition, those who chose not to participate in the 2014 sampling were given another opportunity to receive free sampling.



Residential Soil Sampling

TAI with EPA oversight contacted 519 property owners. 276 responded, and 142 granted access to their property to receive free soil sampling. TAI agreed to address four properties with lead level exceedances of 600 ppm.

In the fall of 2017 one property and part of another was cleaned up. The remaining area of one property and the other two agreed upon properties are scheduled for clean up in the spring of 2018. As in 2015, TAI is voluntarily working with land owners to fund and conduct cleanup activities under EPA oversight. 🌟



Contaminated Soil Cleanup

The River Mile Network turns 10

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In the self-reliant way of rural areas, each teacher finds the combination of training, resources and experiences that best fits their classroom. In the background, Elvidge, her staff and partners continue to cook up an array of options. For instance, webinars, academies and symposiums offer both face-to-face and distance learning opportunities. In addition, participants are connected via web-based maps, project webpages, on-line forums and an electronic newsletter.

Put it all together and the wide-open expanses of rural America that are hard to reach, and therefore provide STEM learning opportunities to, shrinks. By doing so, TRM is bucking persistent rural education trends that confound others.

Consider these statistics:

- Rural school systems make up more than half of the nation's operating school districts.
- Nine million students in the United States—nearly 20 percent of the total K–12 population—attend rural schools.
- Almost half of students who are enrolled in rural schools live in moderate to extreme poverty.
- College enrollment rates for rural 18-25-year-olds is 27



River Mile Participants

percent, which is lower than the rate for suburban and urban localities.

- And for reasons ranging from teacher quality to shortages of resources, these students often have fewer opportunities for high-quality STEM learning than their peers in the nation's urban and suburban schools.

Currently, TRM is in about 100 schools with over 448

teachers and more than 12,000 students participating. You can learn more at www.therivermile.org.

The Forum congratulates the many people who have made it a success, helping assure students in our rural neck of the country receive the opportunities they deserve.

And a thank you to the National Park Service and the National Park Foundation, each of whom provided grants to develop model programs,

program materials, teacher training opportunities, and assistance to help schools participate in The River Mile.

After 10 years of success, TRM is now a beacon for other rural areas to learn from and create their own innovative opportunities. 🌟

EPA Remedial Investigation updates

CONTINUED FROM PAGE 5

throughout the river/lake system. A draft data summary report was provided EPA for review in 2017 and should be finalized early 2018.

Plant Tissue Sampling

The 2014 and 2016 Residential Soil Sampling program and the 2014 Upland Soil Sampling results indicated elevated levels of metals in the respective study areas. Further, the Tribal Consumption and Resource Use Survey identifies uses of plants harvested from areas that overlap with locations where metals are elevated. Residents of the Confederated Tribes of the Colville Reservation (CCT) consume, and otherwise utilize, upland, wetland and aquatic plants which may be contaminated with heavy metals. Exposure to these metals in plant tissue through consumption or use, however, is unknown. As a result, EPA determined that data for the concentration of metals in

plant tissue is needed for the Upper Columbia River human health risk assessment. Reconnaissance in focused locations of the study area occurred in August 2017 to identify the type and availability of plants to be sampled in 2018.

Bossburg Flats

2011 beach sampling showed high levels of lead in sediments at Bossburg Flat Beach, which is located adjacent to the historic remains of the Bossburg town site about 4 miles north of Evans campground. As a result, additional sampling took place on beaches and upland areas in a 6-mile river corridor in 2015. As reported in the final data summary report approved by EPA in 2016, results showed the highest lead levels are localized in the area of the historic Bossburg town site. Results will be integrated in human and ecological risk assessments. 🌟

Lake Roosevelt Updates

Porcupine Bay Campground: The National Park Service Porcupine Bay Campground will remain closed until the road leading into it can be repaired. Lincoln County,



Road Damage

which owns and maintains the road, hopes to put road repair out to bid in March. In a perfect world, the road would reopen in July. The National Park Service expects to reopen the campground about one month later.

Although engineering and preliminary permitting is complete, the county needs to acquire property below the slide to stabilize the bank. Said Commissioner Scott Hutsell, "Once the acquisition is complete, the bid will go out." The estimated cost of the project is between four and five million dollars, with federal funding expected to cover over 85% of the cost. The campground is in Lincoln County on the Spokane River arm of Lake Roosevelt National Recreation Area.

Mussel-free Self-Certification: The National Park Service is asking boat operators to participate in the effort to keep Lake Roosevelt free of aquatic invasive species, especially quagga and zebra mussels, by self-certifying that their boat or personal watercraft is free of aquatic invasive species prior to launching. The form, which can be found at www.nps.gov/laro and will be available at all NPS boat launches, leads operators through questions to determine if their boat and trailer has been sufficiently cleaned, drained and dried before launching. If compliant, the operator signs the certificate and displays it in the vehicle windshield along with the launch permit.

This is part of an on-going effort by federal, state and local authorities to prevent the spread of aquatic invasive species into Northwest waterbodies. If a mussel infestation were to occur, the economic impact to the Pacific Northwest is estimated at \$500 million annually.

Kettle Falls Marina: Kettle Falls Marina will be operated by the current concessionaire in 2018. Services such as houseboat rentals, fuel, general store and waste disposal will continue. In June, the National Park Service expects to advertise for a concessionaire to operate the Kettle Falls Marina under a 10-year contract that will start in 2019. Said Dan Foster, Lake Roosevelt National Recreation Area Superintendent, "We hope to award a new contract by the end of the year."



Kettle Falls Marina

Lake Roosevelt National Recreation Area fees: Camping and boat launch fees will remain the same in 2018, as Lake Roosevelt National Recreation Area is not included in a National Park Service proposal to raise entrance fees at 17 of the most popular national parks.

Lake Roosevelt National Recreation Area

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Lake Level Forecast: The U.S. Army Corps of Engineers early bird forecast for Lake Roosevelt's lake level at the end of April is 1248.5' above sea level. This early forecast, however, is likely to change substantially based on actual snowpack and timing of snowmelt in the Canadian Rockies. In 2017, for instance, the early bird forecast projected lake levels to be in the mid-1250' range. The actual 2017 end of April lake level was 1232' above sea level. 🌊

Lake Roosevelt

National Park Service
U.S. Department of the Interior
Lake Roosevelt National Recreation Area



THIS CERTIFICATE MUST BE VISIBLE THROUGH YOUR WINDSHIELD

MUSSEL FREE

Failure to display this certificate through the windshield of your vehicle while parked with an empty boat trailer could result in a citation.

I affirm that my vessel does not threaten Lake Roosevelt with quagga or zebra mussels.

Please check one: Boat not used in last 30 days in states other than WA, ID, or OR.
 Boat cleaned, drained and dried according to recommendations.

Signature: _____ Date: _____

Lake Roosevelt Forum

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