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# Lake Roosevelt Forum

# NEWSletter

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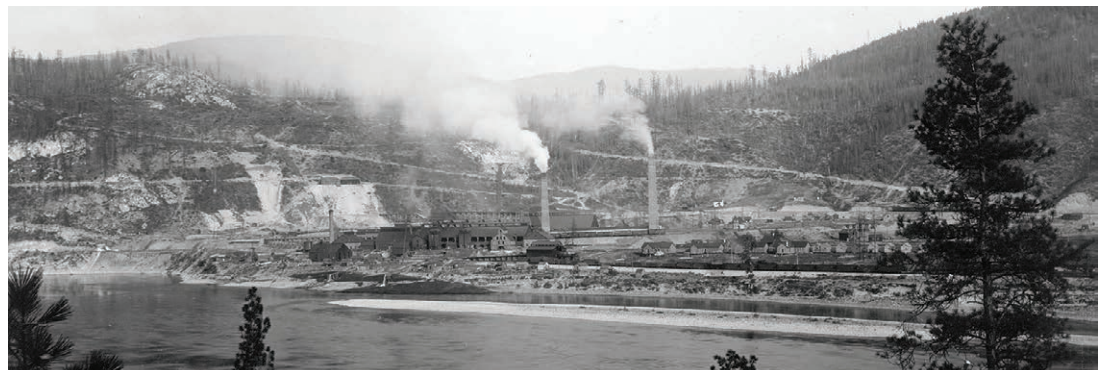
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## Ecology investigating contamination cleanup of Northport waterfront



Le Roi Smelter

The waterfront area in front of Northport City Park and boat launch is expected to have visitors at the end of March and/or beginning of April. Under the oversight of the Washington Department of Ecology, contractors will be taking soil samples, digging test pits, taking direct readings of metals concentrations, and collecting other geotechnical data to investigate and evaluate cleanup of smelter-related metals contamination in this area.

Ecology's goal is to assess options for protecting people and restoring the environment along about 795 feet of the waterfront. This area was polluted by smelter waste deposited and dispersed along the shore from the Le Roi Smelter. The smelter treated copper ores between 1901 and 1911, and lead ores between 1916 and 1921.

In 2004, EPA initiated cleanup activities of the 30-acre Le Roi Smelter site and several of the more heavily affected residential properties in Northport. During that time, BNSF Railway excavated and removed arsenic and lead contaminated soil in the area that we know of

as Northport City Park. Although this waterfront investigation is independent of these efforts, Ecology's investigation extends and builds on their work.

As the investigation unfolds and cleanup options are considered, Ecology is planning on receiving extensive input from local governments, businesses and residents. Their goal is to not only hear the community's concerns but develop a

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Waterfront investigation area

# Getting to Know John Roland

By Upper Columbia River RI/FS standards, John Roland is a silver back. That's the proud distinction someone receives for dedicating the past 15 years of his lengthy career at the Washington Department of Ecology to investigating the nature and extent of contamination entering the upper Columbia and Lake Roosevelt from historic mining and smelting activities. His passion as the state's toxics coordinator for the Upper Columbia is to clean up the metal contaminants revealed by years of investigation and aid in the recovery of the river.

His passion is partly driven by the iconic nature of the upper Columbia. "We're so fortunate," said John, "that in northeastern Washington we have a great river with scenery, recreation, wildlife and fisheries that compare with any in North America."

It's also the sheer size of the river that pose challenges to John's work. "With a site this large and a bulk of the concerns coming from past Trail smelter practices, a lot of people and organizations need to participate, coordinate and eventually find a way to move forward. So it can be very time consuming to make progress."

That said, John goes on to point out that "There's been good work done by professionals across several agencies, tribes, the private sector and local stakeholders."

After 15 years, John is generally upbeat about the accomplishments and direction of the endeavor. "There is dramatically greater awareness of the legacy left by smelting operations. Whether it's fish consumption advisement, having yards tested for lead and arsenic, playing on the beaches, or left-over smelter impacts to the river, the community of the upper Columbia knows a lot more. People can keep updated, be advocates for the future, and can make informed choices for their families and lifestyle."

John's perspective and approach to the work is based on having both private and public sector experience. He started out his career as a geologist in oil and gas industry exploration, then became an industry and government environmental consultant. "Over time I understood that to operate successfully, protect the public interest and improve local communities the field of play needs definition. What are the dimensions of where you can play? What are the rules to play by? Who needs to be the referee? What's realistic? Who is looking out for the communities? Who is looking out for the river? What resources can be assembled to move in the best direction? Sometimes the real benefits of environmental actions end up being realized on the scale of decades. And ironically, often if the job is done right most people may soon not

realize what has been achieved and the very real significance."

When asked if playing in this arena can be adversarial, he replied "Sometimes. On the upper Columbia,



John Roland

I've been part of state Department of Ecology actions that brought litigation when it was necessary. The citizens of Washington have entrusted us to use these authorities when demanded to protect citizens and wildlife. But it's equally true to say we are able to reach solutions with these same parties and we continue striving for this."

The results of 15 years of effort now extend beyond investigation. John points to the State's catalyst role behind EPA-sponsored cleanup actions of several defunct, polluting mining mills in the watershed, including the Young America Mill; Teck American Incorporated (TAI) working closely with Ecology to perform the voluntary industrial slag cleanup at Black Sand Beach; and TAI working with EPA at rural residential properties to complete early cleanup actions, which was spearheaded by initial State soil and lake studies.

Currently, John is coordinating Ecology's investigation to evaluate cleanup options of the shoreline area that's in front of the Northport City Park and boat launch area (see cover story). Said John, "This builds on and will bring to closure previous actions to cleanup legacy pollution at the Le Roi Smelter that used to operate around the City Park and boat launch in Northport."

John is also realistic that the journey to recognize and tackle the legacy of contamination will continue for the foreseeable future. Rather than being frustrated by this, he sees the relationships, partnerships, and friendships forged during this lengthy journey as reasons for optimism. "When we started, who would have guessed that a white sturgeon fishery season would reopen? But because of the relationships built, the RI/FS helped make that happen through sampling that gave people confidence fish consumption of sturgeon is safe."

His final reason for optimism is the character of the people of the upper Columbia. "They are independent, proud and resilient, all want a better greater upper Columbia, each bringing culture and values that add to the uniqueness of the area. On my best days I'm proud to say we're working together to protect future generations by supporting a healthy, upper Columbia River Valley and river extending through Lake Roosevelt." 🌱

# Fishery updates



Raising fish at Spokane Tribal Hatchery

Via hatchery and net pen operations, about 500,000 triploid rainbow trout and 150,000 triploid kokanee will be released in 2019. The Spokane Tribe of Indians, Colville Confederated Tribes, and Washington Department of Fish and Wildlife co-manage the Lake Roosevelt fisheries.

Said Mitch Combs, Washington Department of Fish and Wildlife manager of the Sherman Creek State Hatchery, “Our goal is for upwards of 5 percent or more of the fish we release to be caught by anglers.”

The 2018 creel survey reported over 140,000 fish were caught and 81,000 fish were harvested in Lake Roosevelt. This represents over 55,000 thousand angler trips and nearly 300,000 hours of effort. Rainbow trout and walleye were the most targeted species with anglers making 20,341 and 18,866 trips respectively. Anglers harvested nearly 80% of rainbow trout caught and 75% of walleye.



Catching sturgeon

## Some additional updates include:

- In 2018, the creel survey showed an estimated 7,000 angler trips for white sturgeon resulted in 6,684 white sturgeon being caught. These numbers affirm that this fishery, which was reopened in 2017, has become quite popular.
- Because co-managers continue to see a disturbing increase in the presence and distribution of northern pike throughout the system, suppression efforts continue to be increased. To better assess conditions, co-managers will be performing a Spring Pike Index Netting survey throughout the reservoir beginning March 25th and running through March 29th.
- In 2018, a bounty program funded by the Colville Confederated Tribes, Chelan PUD and Grant PUD removed 603 northern pike from the system. Co-managers also received over \$300,000 in additional funding from the BPA Fish and Wildlife Program to purchase equipment and other resources needed for suppression. Using all suppression methods, 8,865 northern pike have been removed from the system since 2015.
- The Spokane Tribal Hatchery modernization program is complete. This features water reuse modules and other upgrades that provide co-managers greater flexibility to meet fishery objectives.



Catching northern pike

From year to year, the fishery is influenced by spring time drawdown and upstream flooding conditions. In 2018, conditions necessitated the net pen project releasing triploid rainbow stock earlier than optimal, causing more fish to be flushed downstream and making this year class less available for anglers. 🌊



# EPA Remedial Investigation updates

Over a decade has passed since EPA reached agreement with Teck in 2006 to conduct an Upper Columbia Remedial Investigation and Feasibility Study (RI/FS). Thus far, the RI/FS remains in the investigative phase to identify the nature and extent of contamination and assess potential risks to human health and the environment. A feasibility study to consider potential cleanup alternatives will follow.

Each newsletter carries an update to highlight recent studies and activities that are underway. To learn about the history of the entire RI/FS and what's been learned, visit our Public Guides at [www.lrf.org/environment](http://www.lrf.org/environment). A new Public Guide is scheduled to be released this June.

## Northern Pike Sampling

In response to increased numbers of Northern Pike catch and consumption that's also being incentivized by the creation of a bounty to help rid the system of this invasive predator, Lake Roosevelt fisheries co-managers worked

with EPA and Teck American Incorporated (TAI) to sample Northern Pike for mercury and other metals. Sampling was completed in July 2018 and results are presented in the draft data summary report provided to EPA in December 2018. EPA provided the data to the Washington Department of Health in December 2018 for evaluation.

## Mussel and Crayfish Sampling

The main purpose of this sampling is to estimate exposure from human consumption 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 throughout the river/lake system. A data summary report was approved by EPA in March 2018 and is posted on the [www.ucr-rifs.com](http://www.ucr-rifs.com) web site. EPA will integrate the data summary report into their human health risk assessment. EPA provided the data to Washington Department of Health in 2018 for evaluation to establish safe consumption advisories.

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# 2019 Phase 3 Sediment Sampling



Specialized boat to support bathymetry

More in-river sampling is being scheduled for 2019 between the Marcus area and the Canadian Border as a continuation of preliminary work started in 2018 for the third phase of the Sediment Study (Phase 3). EPA first conducted sediment studies in 2005. The purpose of Phase 3 work is to inform the Baseline Ecological Risk Assessment (BERA) that Teck American, Inc. (TAI) continues conducting with oversight from EPA.

The BERA evaluates risk (i.e., the potential for adverse effects) to wildlife on land and in water, including river benthic (i.e., aquatic sediment-dwelling) invertebrate life such as mayflies, mussels, and crayfish. This is a key part of the assessment of metals and other contaminants of concern under the RI/FS.

The Phase 3 Sediment Study includes sediment and porewater sampling in three areas of interest (AOIs) in the northern section of the UCR Site: Deadman's Eddy, China Bend and a location upstream of Marcus Flats near Evans. The three AOIs were selected based on evaluation of data from sediment sampling conducted in 2005 and 2013. The Phase 3 study features five main components.

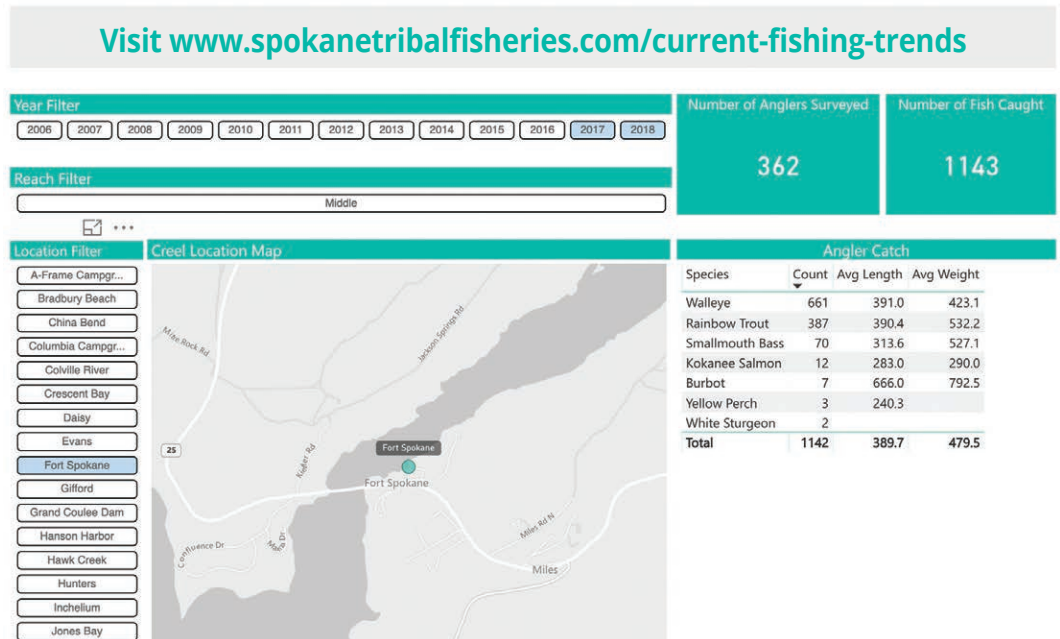
- **Sediment Facies Mapping:** The mapping study will collect high-resolution data to identify and map sediment grain size fractions and texture of the UCR sediment bed in the northern section of the UCR Site. Further characterization of sediment bed attributes is needed to inform and support other subsequent Phase 3 efforts. At varying degrees of measurement resolution, the following data will be collected in support of the mapping effort:
  - Bathymetry and backscatter using a multibeam echosounder (MBES)
  - Vertical velocity profile measurements via acoustic Doppler current profiler (ADCP)
  - Underwater imagery using a drop-frame camera equipped with scaling lasers

For this study component, approximately 35 miles of river from Marcus to just north of Deadman's Eddy were surveyed in 2018. The remaining 5 river miles to the

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# Real-time Access to Lake Roosevelt Fish Catch Data Available

Creel clerks from the Spokane Tribal Fisheries, the Colville Reservation and the Washington Department of Fish and Wildlife are regularly uploading data to servers to provide near real-time access to catch information. 🌐



Example of fishing trend search results

## EPA Remedial Investigation updates

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### Plant Tissue Sampling

The 2014 and 2016 Residential Soil Sampling program, residential yard soil removal actions, and the 2014 Upland Soil Sampling results further documented elevated levels of metals in soils sampled in these study areas. In addition, the Tribal Consumption and Resource Use Survey established the uses of plants harvested from areas where metals are elevated. Residents of the Colville Reservation 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 berries, nuts, roots, and leaves from a variety of plants was 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 for sampling. In 2018, the sampling plan was approved and three rounds of sampling occurred. Samples were analyzed and the draft data summary report was provided to EPA in January 2019 for review.

### Residential Soil Sampling

In addition to sampling and residential soil cleanup activities that took place in 2014-2015, another 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. Using current interim cleanup thresholds, this resulted in 4 additional properties being cleaned up, bringing the total number of properties receiving cleanup since 2014 to 17. Cleanup occurred as part of voluntary agreements between EPA and TAI for TAI to fund and conduct cleanup under EPA oversight. 🌐

## 2019 Columbia Basin Transboundary Conference

The 6th International Transboundary Columbia River Conference will be in Kimberly, BC from September 12-14, 2019. The Columbia Basin Trust and Northwest Power and Conservation Council are hosting the event.

Organizers expect 300 delegates from the United States and Canada will engage in an interactive workshop format to actively share, explore and dialog on a wide variety of

fishery, climate change, energy, ecosystem management and other issues. Built into the format will be field trip opportunities and a celebration of arts and culture unique to the Columbia River Basin.

For more information, email the conference coordinator at [info@transboundaryriverconference.org](mailto:info@transboundaryriverconference.org) or call 250-777-3858.

# Lake Roosevelt Updates

## National Park Service

### Kettle Falls Concessions Contract

**Awarded:** The National Park Service announced selection of Lake Roosevelt Vacations, Inc. to provide marina services in Kettle Falls. This continues over 30 years of Lake Roosevelt Vacations operating the Kettle Falls Marina.



Per NPS news release, “The new park concessions contract is anticipated to begin May 1, 2019 and extend for a period of 10 years. The contract will continue amenities that have been in the area for a number of years, such as fuel sales, marina sewage pump-out, a convenience store, and slip rentals for boat moorage. The operator will also have the option to provide houseboats and marine craft rentals, primitive lodging, sailboat mast raising services, water taxi service for backcountry camping, remote on-lake sewage pump-out services, and interpretive boat tours.”

**Lake Roosevelt National Recreation Area fees and amenities:** Camping and boat launch fees will remain the same in 2019.

**New asphalt may affect access:** Campgrounds, parking lots, and other surfaces with asphalt will receive a new treatment this summer. Because NPS will only receive 14 days’ notice when a specific area will be resurfaced, visitors will need to do extra planning. Said Superintendent Dan Foster, “Getting these improvements done will require patience and understanding. For instance, options to reserve a camp site may not be available this summer because we can’t guarantee access at all times.” Although this will not affect boat launches, visitors using boat launch parking lots as they enjoy boating and camping on the lake will need to check periodically to make sure the parking lot is not going to be closed while they are out on the lake.

Visitors are advised to check the Lake Roosevelt National Recreation Area web site to see if your plans will be affected.

**Potable water supply being shut off at seven camp sites:** Due to state regulations, iodine purification systems for potable water on shallow wells can no longer be used at the following campgrounds: Kettle River, Snag Cove, North Gorge, Marcus Island, Kamloops Island, Cloverleaf, Hawk Creek and Haag Cove. The NPS is examining options, but campers are advised to bring their own water supply this summer. NPS will continue to maintain vault toilets at these sites.

## Lincoln County

### Porcupine Bay Road and Campground Reopening:

Construction of Porcupine Bay Road is expected to be complete this spring. Delays occurred when a slide occurred during construction. After further engineering review, an additional 5,000 yards of material was removed from the site and construction resumed.

Lincoln County is coordinating with NPS to arrange access for campground maintenance needed for reopening. Said Lincoln County Commissioner Scott Hutsell, “We’re hoping the road and campground can be reopened to the public in May.”



## Bureau of Reclamation

**Lake Forecast:** The February forecast for lake elevation at the end of April is 1275.0 feet above sea level. This probably will change with the March forecast based on actual snowpack and timing of snowmelt in the Canadian Rockies. Last year the elevation at the end of April was 1222.7 feet above sea level. Visit <http://www.lrf.org/recreation/boat-launch-lake-levels> to check daily lake levels and availability of boat launches.



**Generating Unit Overhauls:** Overhaul of generating unit G-23 is close to completion, and overhaul of G-22 is expected to begin in March. G-22 will be the third generating unit in the Third Power Plant to undergo a complete overhaul.

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## Ecology investigating contamination cleanup of Northport waterfront

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plan that supports the community’s vision for the waterfront. Examples of possible cleanup options include removing or capping the smelter-related wastes.

The rationale for conducting field work this spring is that parts of the shoreline falling under investigation for cleanup are only fully exposed during very limited times of the year.

Results of the field work will feed into a Remedial Investigation (RI) report that will take several months to complete and is expected to be made available to the public later this year.

Based on the investigation findings, Ecology will develop options for possible cleanup. Visit [www.lrf.org/northport](http://www.lrf.org/northport) to access an Ecology web site with a fact sheet and updates about this project. 

## Lake Roosevelt Updates

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To date, one generating unit at Grand Coulee has been overhauled since 2013. With completion of the Environmental Assessment and a Finding of No Significant Impact (FONSI), solicitation of bids for units G19-21 will soon begin.

**Cayuse Cove Shoreline Stabilization Project:** Located upstream of Porcupine Bay campground on the Spokane Arm of Lake Roosevelt in Lincoln County, a proposal to stabilize the shoreline and halt bank erosion continues to move forward. Natural and human-caused erosion, including that from wave action, seasonal reservoir drawdowns and boating, is causing this erosion. Erosion and potential loss of cultural resources would be mitigated by stabilizing the streambank with installation of gabion baskets and a cellular containment system, then reinforcing this with native shrub plantings and grass seeding. Developed with input from other federal agencies, Washington State and the Spokane Tribe, final comments for the Environmental Assessment (EA) have been received. The EA is expected to be published fall 2019.

**Geezer Beach:** The Bureau of Reclamation is preparing a draft Environmental Assessment (EA) to address a possible change in recreational activity at Geezer Beach. The EA is scheduled to be released for public comment at the end of February. Geezer Beach is located just upstream of the

Third Power Plant. It is a popular fishing area where people have driven on the drawdown in the spring to access the lake. Safety concerns about driving on the shoreline have been raised to Reclamation. Reclamation is preparing the EA to address possible changes in recreational use at Geezer Beach. 🌊

### Save the Date!



The logo features the words "Lake Roosevelt Forum" in a stylized font. "Lake" is in a smaller font above "Roosevelt", which is the largest word. "Forum" is below "Roosevelt". A sun with rays is positioned above the "e" in "Roosevelt", and wavy lines representing water are below "Roosevelt".

## 2019 Conference

*November 19-20, 2019*  
*Historic Davenport Hotel*  
*Spokane, Washington*

## 2019 Phase 3 Sediment Sampling

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US-Canada border will be surveyed this summer. The survey is of higher clarity and resolution in the AOIs. The survey data were used to develop "facies maps" to classify areas such as gravel, cobble and sand that would help identify the best sites for sediment sampling in the three AOIs. Less detailed facies maps will also be developed in 2019 for the river surveyed outside of the AOIs.

- **Sediment Sampling:** Samples of river sediment will be collected to measure concentrations of metals and other chemicals of interest that could pose risk to benthic invertebrates and other aquatic organisms in the AOIs.
- **Porewater Sampling:** Porewater refers to the water between the grains of sediment in the river. It's of interest because metals and other chemicals of interest leach from the sediments into porewater and thus can become available to benthic organisms living in and ingesting this water. This sampling will assist in better understanding risk to benthic invertebrates due to metals in porewater, and in better understanding the relationship between concentrations of metals in sediments and metals in water.
- **Bioassays:** Contaminated sediment toxicity to aquatic benthic invertebrates can be evaluated with laboratory tests known as bioassays. Extensive bioassay testing has

previously been performed. This additional bioassay testing will be performed in conjunction with other measurements on sediments collected within the three AOIs. This may help further evaluate risk to organisms coming in contact with site sediment and porewater. If biological effects are observed in sediment bioassays from the sediments sampled, an additional laboratory sediment assessment techniques known as toxicity identification evaluations (TIEs) will be employed on the sediment samples. TIEs will be conducted to potentially help better describe the substances or conditions that cause toxic responses in site sediments.

- **Benthic Invertebrate Community Survey:** Benthic invertebrates are organisms such as mayflies, crayfish, and mussels that live in or on the bottom sediments. Benthic invertebrates can be adversely affected by sediment contamination, and the types of organisms present in a sediment sample also can provide information about whether contaminants in the sample are having an effect on the benthic community. The survey will provide information on the species composition and diversity of benthic communities in the AOIs to be sampled.

A Quality Assurance Project Plan (QAPP) is currently in development and, if approved, will result in field work beginning in the fall of 2019. 🌊

# Lake Roosevelt Forum

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## WDFW Introduces Free 'Fish Washington' Mobile App

You can download this app at Google Play and Apple's App store for use on your iPhone or Android mobile device.

The app provides up-to-the-minute fishing regulations for every lake, river, stream and



marine area in the state. So whether it's catch or size limits for Lake Roosevelt rainbow trout, kokanee, white sturgeon or other fish, download the app to make sure answers to your questions are one tap away. 🌐

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*This publication received funding through a grant from the Department of Ecology. While these materials were reviewed for grant consistency, this does not necessarily constitute endorsement by Ecology.*

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