THE PACK RIVER WATERSHED COUNCIL PRESENTS...

THE RIVER RANGER

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FEATURING:

Pack River Flows

"Restoring Idaho's Streams" Workshop

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How Does the Pack River Flow?

Have you ever wondered how much water is in the Pack River? Now you can find out! The Pack River has a gauging station which measures the elevation of the river every fifteen minutes. The elevation data is then correlated to an estimated discharge or flow.

The gauging station is operated and maintained by the U.S. Geological Survey (USGS). The gauging station on the Pack River was in operation from October 1, 1957 until September 30, 1982. The station was put back into operation again on July 23, 2014 and continues to collect water data until the present.

The stream gauge on the Pack River recorded a historical maximum peak flow of 6880 cubic feet per second (cfs) on January 16, 1974. Most likely this event was triggered by a rain on snow event, which is common in the pacific northwest.

This year, we saw above average flows in the Pack River until April. Then flows dipped well below average until November. The Pack River reached a maximum discharge of 3160 cfs on February 8th and a minimum discharge of 14 cfs on August 23rd.

The stream data is stored in the National Water Information System (NWIS). This database maintains information for current discharge, historical discharge, peak stream flow, and multiple statistics. The data is publicly accessible online at http://waterdata.usgs.gov/id/nwis.

Discharge data can be used for everything from weekend boating plans to flood warnings and climate-change strategies. It is also important to consider stream discharge when determining water withdrawal rates for irrigation and electric power generation.

Last, but not least, adequate stream flow is critical for fish. Fast moving streams generally have higher levels of dissolved oxygen and keep sediment suspended longer than slow streams. Fish also need adequate flows to reach their spawning grounds.

Restoring Idaho's Streams Workshop

A "Restoring Idaho's Streams" workshop was held on August 14, 2015, hosted by Chris Schnepf of the University of Idaho Extension Office. The workshop included a half-day indoors going through basic forest stream restoration principles, riparian ecology, and technical and financial resources.

The second half of the day involved going into the field to look at some of the successful stream bank restoration projects the conservation district has completed along Grouse Creek. Other stream restoration projects completed by the U.S. Forest Service were also visited.

The workshop was well attended, with over 25 landowners, conservation groups, and agency representatives. Chris Schnepf, U of I Extension Forester, is hosting another Stream Restoration Workshop in St. Maries, Idaho on August 26th, 2016. If you are interested, contact him at (208) 446-1680 .

"There is too little public recognition of how much we all depend upon farmers as stewards of our soil, water and wildlife resources."

~ John F. Kennedy

Pack River Watershed TMDL 5-year Review

The Pack River and several of its tributaries are currently included on the State of Idaho's list of water quality impaired waterbodies. The Clean Water Act requires states to develop a Total Maximum Daily Load (TMDL) for water bodies that are water-quality impaired and do not support the beneficial uses designated to that water body. Idaho Department of Environmental Quality (IDEQ) is required to review TMDL projects on a five-year cycle to ensure that projects are being implemented and monitored.

IDEQ has recently completed the fieldwork portion for the 5-year TMDL review. They conducted Rosgen Channel surveys as well as a Rapid Watershed Assessment protocol throughout the Pack River, Grouse Creek, and Sand Creek watersheds. IDEQ also conducted a bridge and culvert inventory looking for issues with fish passage and under-sized culverts. They utilized recent data gathered in 2014 for their Beneficial Uses Reconnaissance Program (BURP) and conducted an aerial photo analysis looking at road densities and potential sediment sources.

The Pack River Watershed Council (PRWC) is currently involved in this 5-year review process. We provided IDEQ with water quality data from our monthly monitoring program as well as our nutrient sampling results from the IDAH2O Master Water Stewards Program. We were also able to provide them with long-term temperature data throughout the watershed which we are gathering in partnership with Idaho Fish and Game and Avista.

If you are interested in IDEQ's initial assessment results, they will be presenting their findings at the Pend Oreille Lake Nearshore meeting on Thursday, Dec 3rd from 9:00 – 11:30. The meeting will be held in the conference room at the Panhandle Health District in Sandpoint at 322 S. Marion Ave.

IDAH$_2$O Snapshot Sampling on the Pack River

Pack River sampling site.

The PRWC participated again this year in the IDAH$_2$O Snapshot Sampling event on October 9th. Twice each year, all IDAH2O Master Water Stewards across the state of Idaho have the opportunity to sample their registered stream sites on the same day. This provides a state-wide "snapshot" of our water quality.

We sampled the Pack River at our site near the Northside School Bridge. The sample was tested for Nitrate, total Phosphorous, total Coliform, and E. coli.

Nitrate levels were below detection. Phosphorous levels were very low. While there were some E. coli present, the values were very low as compared with the single sample criteria of a maximum 235 E. coli organisms/100 mL for swimming beaches.

Date	Nitrate (mg/L)	Total Phosphorus (mg/L)	Total Coliform (MPN/100 mL)	E. coli (MPN/100 mL)
10/9/15	ND	0.0131	1299.7	28.2
6/5/14	0.125	0.002	90.9	24.6
10/24/13	0.066	0.018	108.1	8.6

Zebra Mussels found on boats in Idaho

Bonner Soil and Water Conservation District successfully administered three boat inspection stations this year from May 22rd through September 8th.

The Samuels station had 3218 inspections, the station at Albeni Falls Dam had 6739, up almost 1000 over last year, and the new station at Clark Fork had 3976 inspections. Four boats were hot washed. Three boats were intercepted that had zebra/quagga mussels attached to them.

In the state of Idaho this year, over 63,200 boats were inspected with 25 vessels found to be contaminated with zebra/quagga mussels.

Aquatic invasive species pose a serious threat to our waterways, fisheries, and recreation in Idaho.

By detecting new outbreaks early and acting quickly to control them, we can avoid many of the environmental and economic losses caused by invasive species.

Zebra Mussels (by Dave Britton)

Local Resource Concerns…

The Natural Resource Conservation Service and the Bonner Soil and Water Conservation District utilized their Local Work Group (LWG) again this year to identify priority resource concerns in Bonner County.

The goals were to identify priority resource concerns specific to Bonner County, identify high-priority areas needing assistance in the county, and generate or modify five to seven local ranking questions for the Environmental Quality Incentives Program (EQIP).

The meeting was well attended with a diverse range of people from several agencies, conservation groups, and local landowners. New concerns addressed this year included wildlife impacts on plant productivity, wildfire concerns, and under-sized culverts and stream crossings.

NRSC Cost-share Programs

The Natural Resources Conservation Service (NRCS), together with the Bonner Soil and Water Conservation District, continue to offer cost-share programs to assist landowners with land management projects. Although the deadline for 2016 projects has passed, landowners are encouraged to approach the NRCS as soon as possible.

The Environmental Quality Incentives Program (EQIP), as well as other Farm Bill programs, is a voluntary US Department of Agriculture conservation program that provides federal match to eligible projects that support forestry, wildlife, agriculture and water quality enhancements or protection.

EQIP is offered to private landowners and managers, and can provide 50 percent in cost-share funds for completed projects. NRCS offers many programs, but they are also available as a cost-free resource for consultation and technical assistance. Contact Greg Becker, NRCS at 208-263-5310 ext. 104.

"Water links us to our neighbor in a way more profound and complex than any other."

~ John Thorson

Upcoming Meetings…

Nov 19th	Aquatic Invasive Species update for Lake Pend Oreille, 12:00 at Panhandle Health District.
Dec 3rd	Pend Oreille Lake Nearshore meeting will be Thursday, Dec 3rd from 9:00 – 11:30 at Panhandle Health District. IDEQ will discuss preliminary findings for the Pack River and Sand Creek TMDL 5-years reviews. Also the Idaho Conservation League will update us on the Sandpoint Greenprint project .
Dec 15th	Pend Oreille Basin Commission meeting, 9:00am at Dover City Hall.

Pack River Watershed Council

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"The mission of the Pack River Watershed Council is to improve water quality and riparian habitat in the Pack River watershed for people, fish , and wildlife through education, collaboration, and cooperative projects."

Thanks to Avista Watershed Council Funding, we are able to print and distribute this newsletter.