

Drought

Klamath water transfer bill awaits governor's signature

By MATEUSZ PERKOWSKI
Capital Press

SALEM — Legislation that permits water right transfers by Klamath basin farmers has been approved by Oregon lawmakers. Supporters say it will provide flexibility during chronic water shortages.

Senate Bill 206, which allows such leases and transfers before water rights in the regional are adjudicated in court, was approved by the House on June 4 after earlier passing the Senate and now awaits Gov. Kate Brown's signature.

While water rights in the Klamath Basin have been quantified by state regulators, the legal adjudication process is still pending, which has prevented growers from making transfers.

Aside from shifting limited water among growers, transfers let farmers dedicate water to in-stream uses for environmental benefits without risking a forfeiture of their water rights, said Greg Addington, executive director of the Klamath Water Users Association.

"It's another tool we're able to use, not just in drought years," he said.

Lawmakers also recently passed companion legislation, Senate Bill 264, which authorizes Oregon water regulators to oversee a water agreement among tribes and irrigators in the Upper Klamath Basin.

Both pieces of legislation have drawn fire from opponents of a controversial proposal to remove four hydroelectric dams along the Klamath River, which is meant to improve its hydrological function.

Opponents fear that dam removal will release built up toxic sediment. They also say it will deprive local governments of tax revenue.

Idaho coping with 'snow drought'

By JOHN O'CONNELL
Capital Press

BOISE — Idaho water experts are using the term "snow drought" to describe the state's water year to date.

Since the start of October, precipitation has been near normal across Southern Idaho, including in the Owyhee, Bruneau, Salmon Falls, Oakley and Upper Snake basins. But far too little moisture has fallen as snow, and unseasonably warm winter and early spring temperatures prematurely melted low- and medium-elevation snowpack.

Many major reservoirs are nearly full following a May that brought 250 percent of average monthly precipitation to parts of Southern and Eastern Idaho, according to the final USDA Natural Resources Conservation Service moisture report of the season.

The Boise reservoir system is now 93 percent full, and Jackson Lake and Palisades Reservoir in the Upper Snake system have 125 percent of their average fill to date. Salmon Falls Creek Reser-



John O'Connell/Capital Press

Crops are irrigated in Aberdeen, Idaho. The water year has brought much of Idaho about normal moisture, but far too little of it fell as snow, leading to drought concerns for many irrigators.

voir and Magic Reservoir water managers were able to shut off irrigation flows during much of May and accumulate more storage, to the point that Salmon Falls returned to its seasonal peak storage volume.

Before May, Lyle Swank, watermaster of the Upper Snake water district, said many users were concerned about running out of water before finishing even their grain crops.

"I don't think you have that same concern any more," Swank said.

Nonetheless, more of Idaho has been added to a drought map as May precipitation largely missed Northern Idaho, which received 40 to 60 percent of its normal monthly moisture, and a lack of mountain snowpack has natural flow forecasts ranging from 20 to 70 percent statewide.

Tim Dillin, who farms in Bonners Ferry, said his grain and hay have matured two weeks early due to hot and dry weather in Northern Idaho. He was concerned

the dryness would harm his spring wheat, until a timely rain arrived at the end of May.

Ron Abramovich, Idaho's NRCS water supply specialist, said 55 of the 137 snow survey sites in and around Idaho would normally retain snowpack by this time of year, but only 16 sites still had snow as of June 1. Abramovich anticipates shortages will occur in the Oakley, Salmon Falls, Owyhee, Big Wood, Little Wood, Big Lost and Little Lost basins.

"Our money supply in terms of stream flows isn't there this year," Abramovich said, adding minimal inflows into reservoirs this summer will result in low storage carryover into next year.

Willamette Basin's dam, reservoir system studied

By ERIC MORTENSON
Capital Press

With drought and changing precipitation patterns on the minds of farmers and ranchers, an ongoing study of the Willamette River Basin's dams and reservoirs is taking on a new urgency.

One of the key issues to be answered in the Willamette Basin Review is how much water agriculture really needs — or wants.

"That is indeed the question," said Jim Johnson, land use and water planning coordinator for the Oregon Department of Agriculture.

The study is a joint project of the Oregon Water Resources Department and U.S. Army Corps of Engineers, and it could ultimately result in Congress being asked to re-allocate water stored behind 13 dams in the Willamette River drainage system.

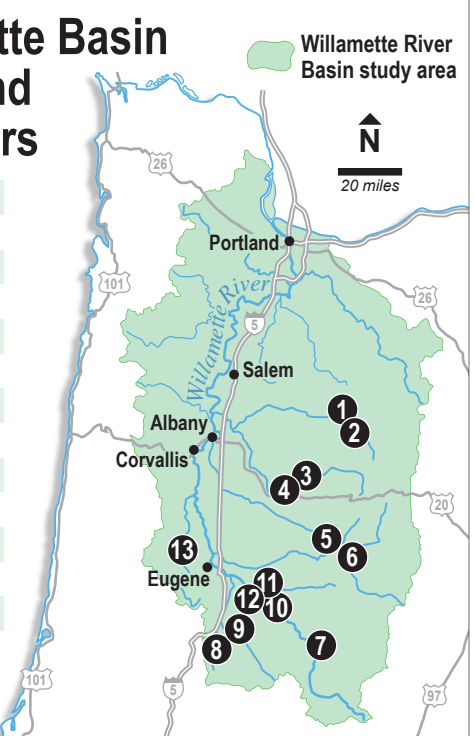
The Corps of Engineers owns and operates the dams and reservoirs. The projects were built for flood control, irrigation, power production, navigation, wildlife and other purposes, but it's water for agricultural use that is getting close attention.

Another federal agency, the Bureau of Reclamation, holds the water rights certificates for the entire conservation storage

Willamette Basin dams and reservoirs

1. Big Cliff
2. Detroit
3. Green Peter
4. Foster
5. Blue River
6. Cougar
7. Hills Creek
8. Cottage Grove
9. Dorena
10. Lookout
11. Fall Creek
12. Dexter
13. Fern Ridge

Source: U.S. Bureau of Reclamation
Alan Kenagal/
Capital Press



available in the Willamette system. The certificates authorize 1.64 million acre-feet of stored water for irrigation annually, but less than 5 percent of it is used. Meanwhile, growing cities and industrial users can't get at the remainder. The Willamette Basin, running roughly 120 miles south from Portland to Cottage Grove, holds about 75 percent of the state's population and is growing rapidly.

But agriculture is big in the Willamette Valley as well, growing about 170 crops and accounting for more than 40 percent of the state's gross farm sales, according to a 2013 Water Resources Department draft report.

Johnson and others point out that a significant amount of farmland in the valley isn't irrigated and potentially could be used to grow higher-value

crops if farmers could turn on the sprinklers. That capability should be taken into consideration when deciding future water allocations, Johnson said in an email.

"We have a great deal of acreage in the Valley that has greater potential if water could be made available," he said.

Climate change is a big part of the discussion. In the Pacific Northwest in recent years, winter precipitation has arrived as rain rather than snow. This year, meager mountain snowpacks have already melted, according to federal hydrologists.

The WRD draft report says that may be the new normal. Scientific models indicate the Willamette Basin is headed for warmer, wetter winters and hotter, drier summers. The average temperature is projected to increase by 2 to 7 degrees Celsius over the next century, and the Cascades snowpack will decrease by 60 percent, according to the report.

Melting snow traditionally provides up to 80 percent of the Willamette River's flow in late summer, but that flow is expected to decrease by 20 to 50 percent as the mountain snowpacks diminish, according to the report.

"The area's reliance on high-elevation water during summer months highlights

the vulnerability of the Willamette Basin to the influences of a warming climate," the report concludes. "Water stored in the Willamette Basin Corps Reservoirs is viewed as the last remaining supply of water for meeting future needs, both in-stream and out-of-stream needs."

The changing patterns already play havoc with reservoir operators. This year, despite near normal precipitation in some areas, water levels in the Willamette Basin reservoirs are 51 percent of normal because the peak snow melt runoff occurred before operators began refilling reservoirs.

Corps of Engineers spokesman Scott Clemans said he's heard some people question why the Corps doesn't begin refill operations in December or January instead of waiting until February.

The reason is that the dams were built primarily for flood control, Clemans said, and the risk from flooding must be accounted for throughout the winter months.

Clemans said there are likely to be "wilder and wider swings" in refill operations as climate change takes hold.

The Corps and state Water Resources Department are expected to finish a report to Congress in three years.

Washington climatologist already foresees warm winter

Another low snowpack could pile on drought hardships

By DON JENKINS
Capital Press

A strengthening El Nino suggests Washington will have another warm winter, possibly deepening the state's drought, State Climatologist Nick Bond said Monday.

"The odds are for a warmer and drier winter overall," he said. "And a lower than normal snowpack at the end of it."

Climatologists for several months this year saw a weak

El Nino, a warming of the Pacific Ocean that often presages a mild Northwest winter. After dipping in some places in April, sea temperatures increased in May, according to a report Monday by the National Oceanic and Atmospheric Administration.

The agency now says there's a 80 to 90 percent chance that El Nino conditions will persist until at least the end of the year, up from a 50 to 60 percent chance in early March.

"There no question it's out there, and it's honking," said Bond, a University of Washington research meteorologist. "There's almost no doubt it will be there the remainder of the year."

This could be good news for California, which typically receives soaking winter rains during El Nino years.

But Washington can expect only near normal precipitation to go with higher temperatures, a repeat of the 2014-15 winter.

A second straight mild winter could build on hardships, particularly for irrigation-dependent farmers in the Yakima Basin and the Olympic Peninsula rain shadow who rely on melting snow to keep river levels up.

El Nino's greatest effect on temperatures and precipitation typically occurs between January and March, according to NOAA. The El Nino may have weakened by then, Bond said. "That's the silver lining to this."

Bond called "last winter mostly a fluke" as warm weather kept snowpacks

small, even though rainfall was near normal or above average in most of Washington.

By mid-spring, rain-filled Yakima River reservoirs were full and held about 1 million acre-feet of water. But without melting snow to replenish the reservoirs, the U.S. Bureau of Reclamation has estimated that by Oct. 1 the reservoirs will hold only 110,000 acre-feet, instead of the usual 320,000, creating a deficit heading into the winter.

Melting snow from the Olympic Mountains normally keeps the Dungeness River high enough for farmers to draw from, even as salmon migrate upstream to spawn. This summer, the river is expected to fall to record lows, possibly forcing mandatory cutbacks on irrigators.

In May, temperatures were above normal across Washington, according to the state climatologist.

NOAA predicts above average temperatures between June and August for Washington, Oregon, Idaho and California.

The agency forecasts below average rainfall in Western Washington and north-west Oregon. The rest of Washington and Oregon, as well as California and most of Idaho, have equal chances of above or below normal precipitation, according to the agency.

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