

## 'Sentinel' wells designated throughout aquifer

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water usage by 240,000 acre feet per year, about equal to the average annual decline in the aquifer. According to new estimates, the average well user will have to curb water usage by 11 percent per year to meet the goal — slightly less than officials originally calculated.

Nineteen "sentinel" wells have been designated throughout the aquifer to monitor groundwater response to the plan's implementation.

Budge is optimistic the agreement will be approved by most or all

groundwater districts. Participants will be granted safe harbor from curtailment or steep mitigation obligations during future dry years.

Twin Falls Canal Co. General Manager Brian Olmstead said it was a risk for his irrigators to consent to safe harbor, but they've already ratified the agreement, understanding the importance of protecting the aquifer.

"The only solution is the longterm solution, and that's why we've voted to take the risk," Olmstead said. "Doing nothing has more risk than anything."

Thus far, well users have avoided curtailment by providing sufficient mitigation water.

They entered into negotiations when it appeared they would fall short this season — prior to an extremely wet May. IGWA Executive Director Lynn Tominaga said his organization has secured the required 110,000 acre feet to meet this season's debt, despite competition for water from the Bureau of Reclamation, which needed it for flow augmentation.

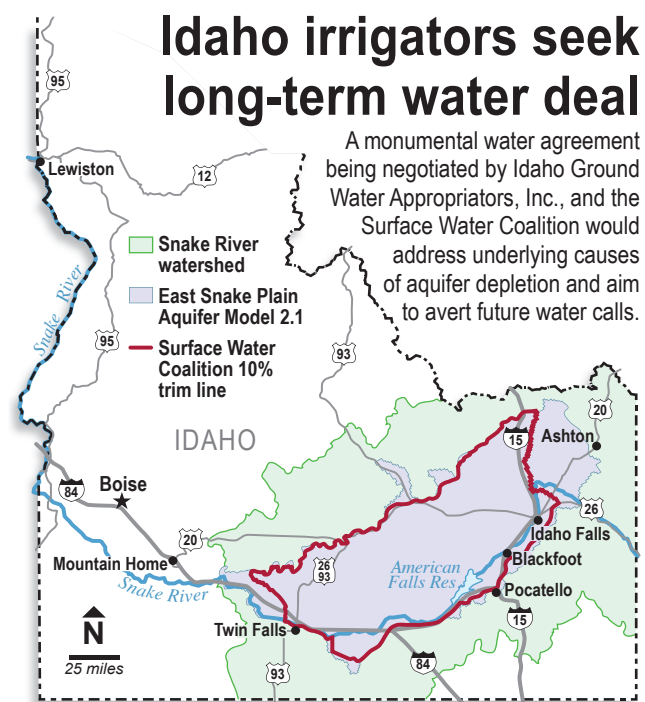
In future years, IGWA will provide a flat 50,000 acre feet of mitigation

water. During wet years, mitigation water will be injected into the aquifer, called recharge, or used for "soft conversions," switching certain groundwater users to surface water.

IGWA has also agreed to invest \$1.1 million annually on soft conversions, when water is available, and has purchased 13,000 acre feet for soft conversions this season.

Furthermore the state has agreed to inject an average of 250,000 acre feet of water into the aquifer annually through an expanded recharge program.

## Idaho irrigators seek long-term water deal



Source: Idaho Dept. of Water Resources

Alan Kenagal/Capital Press

A monumental water agreement being negotiated by Idaho Ground Water Appropriators, Inc., and the Surface Water Coalition would address underlying causes of aquifer depletion and aim to avert future water calls.

## Western juniper is a water hog

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"The object is to get the branches scattered so the sunlight will get to the ground and grass will grow," Breese said.

Grazing cattle — "1,300-pound stompers," he calls them — will grind juniper needles into the ground and release stored nitrogen.

"The whole point is to get this watershed functioning," Breese said.

Native grasses are already thriving amid the debris of downed juniper. That will pay off when cattle come through.

"The direct benefit is the grazing we get out of it," Breese said. "We can double and triple the animal unit months."

Western juniper is such a water hog — Lynne Breese calls juniper a "thief" — that removing it has a nearly instant impact on the amount of water available for other plants and for stream flow. In a part of the state that gets by on 10 to 15 inches of precipitation a year, that's significant.

A 10-year study in the Camp Creek drainage 60 miles southeast of Prineville compared two watersheds. On one, all juniper trees older than 140 years were removed; the other was not treated.

"We were able to show a response in a month," said Tim DeBoodt, with Oregon State University Extension in Crook County. According to a published account, juniper removal increased the late season spring flow by 225 percent and increased the time in which monitors detected groundwater by an average of 41 days.

DeBoodt said the needles of mature juniper trees capture moisture. Snow or rain held in the needles either dribbles down the tree for its own use or evaporates.

For every 1 percent of the forest canopy that is juniper, the land loses 1 percent of moisture, DeBoodt said.

"If 20 percent of the canopy is juniper, 20 percent of the moisture never gets to the soil," he said.

"Nine to 35 trees per acre can use all the water delivered to that site," he said. "We have a lot of places where the (juniper) tree density is 50 to 200 trees per acre."

Cutting juniper reduces soil loss to erosion tenfold, said DeBoodt, while forage production can increase six to 10 times per acre.

Juniper trees crowd out sage and provide perches for hawks and other predators that make life tough for sage grouse. As few as four juniper trees per acre can have a negative impact on sage grouse, DeBoodt said.

The problem with removing juniper is figuring



Eric Mortenson/Capital Press

Tim DeBoodt of OSU Extension in Crook County says cutting juniper increases stream flow, provides better habitat for sage grouse and allows native grasses to recover.



Eric Mortenson/Capital Press

Native grasses spring up around the stump of Western juniper tree. Junipers are such water hogs that removing them makes more water available for streams and other plants.

out how to make the work pay for itself. Leaving the wood lay can add to the fuel load when wildfire sweeps through. Selling juniper logs to mills or cutting it for firewood can help offset the cost of clearing them, but that isn't easy, either.

While urban lumber yards say they can sell all the juniper boards and posts they can get, the logging, milling and hauling infrastructure hasn't kept up with demand.

For now, government

grants help landowners, including Breese, offset the cost.

Two bills signed by Gov. Kate Brown during this legislative session will make Oregon Lottery money available to solidify the supply chain, aid rural mills and develop markets.

"There's not enough grant money in the world to do what has to be done," Breese said. "Somehow it has got to pay its way."

It's important to Breese on

### Video available

To see a video about juniper removal, go to:

[https://www.youtube.com/watch?v=niUUC3Z\\_Wnw&feature=youtu.be](https://www.youtube.com/watch?v=niUUC3Z_Wnw&feature=youtu.be)

a personal basis.

The extended family's cattle and timber operation covers 8,000 acres and dates to 1888. John Breese is a high school science teacher but returned to the family property after his father died in the late 1980s.

The first thing that struck him was the sad state of the watershed and its diminished creeks. Breese said he discussed it with Lee Eddleman, a retired OSU range ecologist.

Instead of working along the creekbeds, Eddleman told him to start in the uplands, where the juniper grows.

"Fix the uplands and you're going to win in the creek," Breese said.

Removing juniper became his way of sustaining the family heritage.

"We're not screwing it up on our watch," he said.



Courtesy of Valley Wide Cooperative

A Valley Agronomics truck works in front of the Teton Range in Idaho in the summer of 2014. Valley Agronomics is a division of Valley Wide Cooperative, which will merge with Valley Cooperative on Sept. 1.

## Idaho coop members overwhelmingly support merger

By JOHN O'CONNELL  
Capital Press

JEROME, Idaho — Members of Valley Wide Cooperative and Valley Cooperative have overwhelmingly endorsed a merger that managers say will increase their buying power and help them expand product and service offerings.

Valley Coop, which serves patrons from 10 Magic Valley locations, including farm and convenience stores and a propane store, hosted a June 30 election and breakfast, garnering support for the merger from 82 percent of members. Valley Wide Cooperative, which serves patrons at 34 locations from Western Wyoming to Eastern Oregon, received support from 97 percent of members who mailed in ballots, which were tabulated on June 4.

Senior staff members hosted their first meeting since the elections on July 6 and are now commencing with details of the merger, such as integrating their computer systems.

The new entity, scheduled to start business on Sept. 1, will be based in Jerome and operate as Valley Wide Cooperative, with more than 700 employees serving more than 3,000 members.

Richard Lloyd, general manager with Valley Wide's agronomics division, said soon after the merger takes effect, the new cooperative intends to expand certain operations in Idaho's Magic Valley and Treasure Valley.

Lloyd said the cooperatives have partnered on agronomics, including farm chemical and fertilizer sales, for several years and enjoyed a considerable savings due to their increased buying power.

Lloyd said farm chemical and fertilizer savings have been greater than a couple of percentage points due to the partnership and "we now expect to see similar savings on farm retail, refined fuels and propane."

Lloyd said both companies use the same software for their farm stores but are evaluating which of their operating systems would work best for their energy division.

Lloyd doesn't envision any reductions in staff. In the long run, he believes more staff will be needed to accommodate planned expansions.

"I would say there will be a spot for everyone," Lloyd said. "This merger isn't about fewer people and cost savings as far as reducing staff. This merger is about expanding the business."

Lloyd said the cooperatives are in the process of finding "the right fit for everyone."

Cortney Beck, manager of Valley Wide's Rexburg agronomy center, believes the merger will spread business over a broader geography in case one region experiences down times. He expects greater stability in the farm store market — an area in which he believes Valley Cooperative shines — and access to new products and suppliers.

Valley Wide marketing manager Eric Holbrook said the cooperatives also provide growers with expert crop advisers, satellite imagery to monitor fields and livestock feed. Members must pay a small, one-time processing fee, maintain a minimum acreage and make a minimum in purchases from the cooperative. Both cooperatives have roots in Idaho dating back to the 1930s.

Aaron Johnson, an agri-business faculty member with University of Idaho who specializes in cooperatives, said successful mergers require a great deal of face-to-face communication with members and staff.

"I would revisit every operational procedure and every policy and make sure I have everything on the same page and all of my employees and managers on the same page," Johnson said.

## Virus may have adapted and become more lethal to chickens

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it. Equipment and humans traveled between infected barns in the country's largest poultry producing states, the USDA reported.

Also, strong and sustained winds may have spread virus particles between barns, according to the agency.

Baker said he doesn't see airborne spread as a threat in

Washington because the state doesn't have clusters of commercial poultry farms.

More concerning is that the virus may have adapted and become more lethal to chickens, he said.

For five weeks in the Midwest last spring, the virus struck only turkey farms, about 20. The virus finally infected a chicken farm in Wisconsin. After that, the disease

broke out in chicken farms in several states.

In Washington last winter, the virus spread among flocks with a variety of birds. In Benton County, backyard chickens remained healthy though separated by only a mesh fence from an infected flock of chickens, turkeys and ducks.

A virus lethal to chickens may be spreading among wa-

terfowl that spend the summer in Alaska and Canada and migrate to Washington for the winter, Baker said. "It could cause us more problems because there could be more spread (of the virus) neighbor to neighbor," he said.

It's unclear how common bird flu is among wild birds, which are not sickened by the virus. The USDA didn't

confirm a case of the virus in a wild bird outside the West until early March. Since then, cases in several states have been confirmed. In May, a dozen Canada geese tested positive in Michigan.

Baker said it's possible the disease is spreading more widely now among migratory birds.

He said WSDA will try to impress upon farmworkers

and backyard poultry enthusiasts the importance of preventive measures.

"Biosecurity is really everything you have to live something. You can't just talk about it. You can't just draft plans," Baker said.

WSDA has posted information about protecting flocks from bird flu at [agr.wa.gov/FoodAnimal/AvianHealth/](http://agr.wa.gov/FoodAnimal/AvianHealth/)