

# Understanding the big picture

BY CURT KIPP



**W**ATER IS LIKE LAND in that supplies are finite. As demand increases, it's more important to make the most of the supply.

In Oregon, all the various water users — farmers, municipalities, industries and others — draw close to 3 billion gallons of water per year out of the state's rivers, streams, reservoirs and aquifers.

Agricultural users are responsible for more than 80 percent of that. Municipalities and industrial users are the next largest users, responsible for 5 and 9 percent of statewide consumption.

In the eastern and southern parts of Oregon, which are primarily rural, the competing demands for water have exceeded supply. This has led to intractable conflicts, such as in the Klamath Basin, where farmers, Native American tribes, fish, wildlife and others are all affected by the supply limits. Most areas east of the Cascade Mountains get less than 20 inches of rain per year.

In Western Oregon, where nearly all of Oregon's nursery production is located, rainfall is more abundant. Most of the region gets 35–80 inches per year, with some mountainous areas and coastal rain forests getting much more.

For those in the Willamette Valley, winter Cascade Mountain snowpacks have served as a de facto system of reservoirs, releasing water throughout the spring and

well into summer. But late in the season, problems often arise, and climate change is making them worse.

“When you get 2–3 months of no rain, those surface sources dry up or become less available,” said Steve Shropshire, a water law attorney with Jordan Ramis PC who serves as legal counsel for the Oregon Association of Nurseries.

Low stream levels typically arrive late in summer, around the same time as municipal demand reaches its peak, he added.

When there's not enough for all users, what happens next is governed by rules that go back to Oregon's earliest days as a state. In the old West, conflicts over water sometimes erupted into violence. Oregon and other states adopted water rights systems to provide certainty to water users. Oregon's system, unlike some others, allowed disputes to be settled in the courts.

In 1909, Oregon passed the Water Code, which gave statewide recognition to the water rights people had already claimed, and established procedures for others to claim theirs. It established that water belongs to the public; that any right to use water is assigned by the state; that older rights take priority over newer rights (aka prior appropriation); and that water must be used for “beneficial” purposes and cannot be wasted or the right may be lost.

The system protected the rights of farmers. “They got here first for the most

part,” Shropshire said. “Development happened out in the countryside.”

## Having and getting water

Water rights priority means that when stream flows fall short, senior water rights holders can still demand their full allocation — regardless of the needs of junior rights holders. Watermasters in each county must review any complaints. They must determine who has the right to use the water — and who gets cut off.

In the Willamette Valley, a priority date of 1950 or earlier for stream water is generally considered solid for the full season. For water rights holders east of the Cascade Mountains, one might need a priority date of 1900 or earlier, Shropshire said.

In addition to the surface water rights system, there's a system for allocating groundwater from wells. Here, prior appropriation also applies.

Although well water is often more pure than surface water, not all aquifers are created equal. Those aquifers beneath hilly areas, and west of the Willamette, often have low water quality. The water beneath the flat parts of the valley is, by contrast, usually plentiful and pure. In such cases there's less need to filter it. It lacks the spores, seeds and pathogens seen in surface water.

“If you're in the right part of the valley, you've got a plentiful water source below

Adequate water supplies are critical for agriculture, municipal users, fish and wildlife. Aware that water supplies are finite, the OAN has been working with groups representing all of these user groups to ensure better outcomes for all. PHOTO BY CURT KIPP

you, but it may be completely appropriated,” Shropshire said. “It may be physically available, but not legally available.”

A third source of water is the water impounded as part of the Willamette Project, which consists of 13 major reservoirs along the Willamette River and its major tributaries, such as the Santiam and MacKenzie rivers. This water could become available in the future, but it has been on hold while the Army Corps of Engineers (ACE) studies the water needs of endangered fish.

At the present time, only a few nurseries have access to the reservoir water. Most rely on surface water or groundwater that they have a right to use.

“As an owner, in terms of a secure water supply, if you already have one, it’s a lot different than trying to get one,” Shropshire said. “The primary concern is, ‘Will my source continue to provide me with wet water? Will it hydrologically be there in the future?’ Physical availability for reasons beyond your own control is the biggest concern.”

### Solutions to scarcity

All along the West Coast, mountain snowpacks in recent years have become less dependable. The winter of 2014–2015 barely saw snow in the mountains, and in other years, snowpack has been well short of average.

“Our natural reservoirs, in the form of snowpack, over time will become less reliable as a storage method,” said Mark Landauer, executive director of the Special Districts Association of Oregon, which represents municipal water users. “Our biggest challenge will be, how can we capture sufficient amounts of water to address the needs of farming and municipal supply, while also meeting the needs of threatened and endangered fisheries and wildlife in general.”

In 2010, the Oregon governor issued drought declarations in six out of 36 counties. There were no declarations in 2011, but there were two in 2012, five in 2013, 10 in 2014 and a whopping 25 in 2015.

In 2016, rainfall at midyear was at

normal levels, but officials said that stream flows were still below average and several portions of the state were abnormally dry. Meanwhile, Oregon’s population is expected to grow, meaning that municipalities will require more water. It’s in this environment that water users are trying to work together for the benefit of all.

“We are entering into a new era, where all the available water has been allocated,” Shropshire said. “What we are doing now is talking about the more careful use of the water that is available, and reallocation of water supplies. That involves partnering with groups we have not traditionally been allied with.”

The OAN has been working with groups representing the irrigation community, the natural resource community, and the

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operators of municipal water systems. All agree that cooperation beats competition.

“Largely, when farms, fish and families are competing, it becomes a zero sum game — there will be winners and losers,” OAN Executive Director Jeff Stone said. “We’ve intentionally built a coalition to prevent an all-out war between those three factions. To build trust between those three, it takes more than trust falls. You have to build relationships and demonstrate you’re not going to reverse course and harm them.”

Each group has learned what the other values and now takes it into account.

“It’s indicative of the Oregon way,” said Bryan Hockaday, a spokesman for Gov. Kate Brown. “Oregon does have a history of coming together, collaborating access across the aisle to solve complex

challenges. It’s really the way we’re going to be able to tackle this huge issue. We need to take a look at everyone’s need and with limited resources, ensure the health of our water for natural resources and for local economies.”

The approach already has borne fruit in the form of Oregon Senate Bill 839. Passed in 2015, it created a water supply development fund, and allowed the state to allocate lottery-backed bond proceeds for water supply enhancement projects, including investments in conservation.

Crucially, the bill also created incentives to use less water. Previously, the system encouraged people to use water they didn’t need, just to keep from losing the remaining water in future years. That’s no longer the case. Now, rights holders can retain rights and can also transfer or sell what they gain through conservation.

“If you take a leaky ditch and lose 50 percent of what goes through it, and you build a pipe, you can take the savings and put it onto new land you own, or sell it to someone else,” Shropshire said.

These are positive steps, but more needs to be done.

“Oregon has invested very little money in comparison to our neighbors to the north (Washington), who have invested well over \$250 million in water in recent times,” Shropshire said. “California is investing somewhere on the order of \$70 billion in water infrastructure in that state.”

In his view, Oregon should do the same.

“The lands that are relatively easy to irrigate are irrigated, and everything is appropriated,” Shropshire said. “For the most part, you’re just talking about the allocation of the Willamette Project water to something other than fish, or you’re talking about some sort of new storage. Otherwise, you’re working with a finite world. The low-hanging fruit has been plucked.” ©

### Additional resources

“The Oregon Story: Water.” [http://www.opb.org/programs/oregonstory/water/or\\_water/index.html](http://www.opb.org/programs/oregonstory/water/or_water/index.html)

“Water Rights in Oregon: An Introduction to Oregon’s Water Laws.” <http://www.oregon.gov/owrd/PUBS/docs/aquabook2013.pdf>