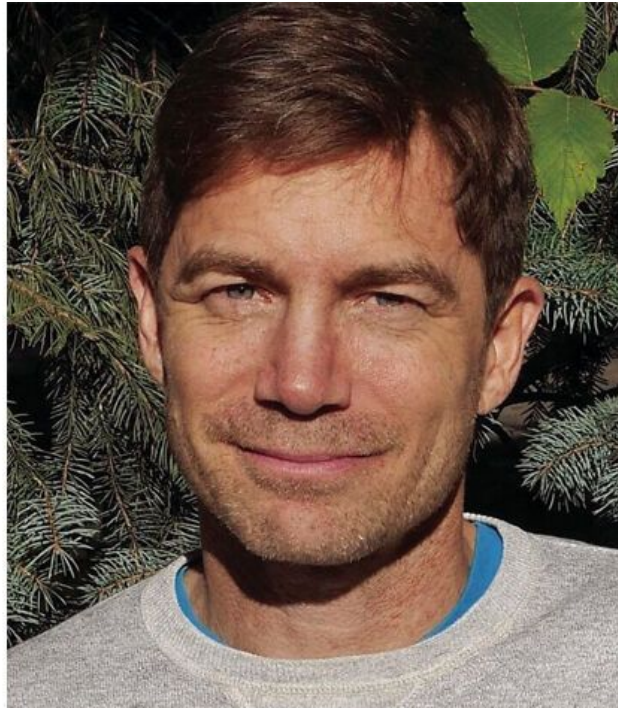


Writers on the Range: A Colorado reservoir gets ready for an epic snowmelt

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Reservoir manager Ken Beck says wryly that he has lots of water coming his way, “and I need a hole to put it in.”

In southern Colorado, Beck is the superintendent of Pine River Irrigation District and Vallecito Reservoir, which catches water from the 13,000 and 14,000-foot-high peaks of the Weminuche Wilderness. It’s a place so wild and beautiful that Teddy Roosevelt protected it in 1905 by creating the 1.8-million-acre San Juan National Forest.

The name Vallecito means “little valley” in Spanish, and the reservoir stores water for the town of Bayfield, population 2,838, as well as providing supplemental irrigation for 65,000 acres of Tribal and non-tribal land to the south.

This winter, Beck has been faced with a near-record snowpack, now expected to turn into some 320,000 acre-feet of water. His 82-year-old reservoir, however, can only hold 125,000 acre-feet. What’s more, snow was still falling in early April.

In late March, Beck saw moisture going up dramatically. Any reservoir manager has to deal with uncertainty, but Beck's job, which he has held for seven years, has an Achilles heel.

"I was told by the Bureau (of Reclamation) to manage my reservoir so I don't use my spillway," he says. "We're restricted because of the needed repairs."

Spillways are critical elements of any dam. When oncoming water overwhelms the intakes for hydroelectric and outlet works, excess water flows into the riverbed below. Beck has few options without the safety valve of a dependable spillway, yet he may be forced to use it.

Beck is well aware that dams can fail. Six major dams have failed in Colorado since 1950, with the biggest disaster occurring in Larimer County, in 1982. When its Lawn Lake Dam failed, three people died and property damage amounted to \$31 million.

Beck says Vallecito's management challenges came to the fore after "the big wakeup call of 2017, when Lake Oroville fell apart in California." California's tallest dam, Oroville, resembles Vallecito in being earthen built. It nearly failed when its spillways began eroding.

Soon after, Vallecito's dam was closely inspected, revealing leaks and erosion in its spillway. The Bureau of Reclamation, which built the dam, patched up the spillway but also put the dam "under review."

By the end of March, Beck had released 15 times more water daily than during the previous month. By late April, Beck estimates, the formerly half-empty Vallecito Reservoir be just 20% full, better prepared for what could be an epic snowmelt.

In the arid West, this makes Beck a reservoir apostate. Spring is when reservoir managers follow a creed that's been honed during periodic drought: Store as much water as possible as early as possible.

For Beck, that's not wise. "But don't mistake my being meek as weak," he says. "I've got an Abe Lincoln style: Wrap good people around you and encourage them to say things you might not want to hear."

Beck has surrounded himself with a team of straight shooters, though he relies most on Susan Behery, a Bureau of Reclamation hydrologic engineer, based in Durango. With Behery's advice, Beck decided that Vallecito's reservoir needed to be dramatically drawn down.

Evidence for doing that was obvious this winter as roofs sagged, driveways became mini-canyons, and snow at the nearby Purgatory ski area outside Durango reached 20 feet high in places. USDA SNOTEL sites above Vallecito Reservoir measured snowpacks at 170% and 180% of normal.

With so much big water ready to head their way, a reservoir manager might have decided to operate quietly and hope for the best. Instead, Behery says, Beck has been transparent with the public and collaborative. She admires Beck for it.

"I'm an engineer and nobody gets into engineering because they're super good with people. I don't do the fluffy stuff."

Beck makes a lot of information available. He holds open meetings and emails a weekly newsletter to anyone interested. “A lot of people are asking why we’re turning out more water,” he says, “but I just met with farmers that say I haven’t brought it down enough.”

What does Beck predict will happen to his reservoir as snowmelt barrels toward Vallecito Reservoir?

“If spring rains come it will add to the pucker factor. But the spillway will hold.” Meanwhile, he’s a little bit on edge.

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