

## SNOW

Continued from A1

First, the drought left the ground desiccated. Had the ground become frozen, and snow started piling up while the soil was dry, it's likely that in the spring of 2022 much of the melting snow would soak into the ground rather than fill streams, rivers and reservoirs — including Unity Reservoir, the lone impoundment in the Burnt River Irrigation District.

That's pretty much what happened during the spring of 2021. Despite a relatively robust snowpack, the runoff volume was paltry, leaving irrigation supplies short and resulting in reservoirs that receded rapidly. Phillips Reservoir, in Sumpter Valley about 17 miles southwest of Baker City, reached its lowest level since it first filled in 1968.

Morgan's second worry is about this winter's snowpack itself.

Although copious rain during October largely alleviated his fear about snow falling on parched ground, a skimpy snowpack this winter would prolong, and potentially even exacerbate, the drought.

Most of Baker County remains in extreme drought, the second-worst rating on the U.S. Drought Monitor



Lisa Britton/Baker City Herald

Snow-laden trees in the mountains near Pilcher Creek Reservoir on Sunday, Dec. 12.

(exceptional drought is the most severe category).

Through the first week or so of December, the snowpack outlook was decidedly gloomy, with little to no snow at lower elevations and amounts well below average higher in the mountains.

But the past several days have effected a major reversal.

A series of storms starting on Dec. 11 has boosted the snowpack to above average at some measuring sites in Northeastern Oregon.

And overall across the region this vital source of water — for kitchen faucets, irrigation sprinklers and fish habitat, among other things — is close to average.

"It's always concerning as far as snowpack goes," Morgan said on Friday morning, Dec. 17. "But if we hadn't been coming off one of the worst summers, it wouldn't have been so scary."

Although this week's storms are welcome, Morgan points out that it's quite early in the snowpack season.

Typically the pack peaks in March or early April at higher elevations in the Elkhorns and Wallows.

"We're not out of the woods yet," Morgan said.

As of Friday morning, the water content in the snow at 19 sites in Northeastern Oregon was just 8% below average.

(Water content is a more relevant measurement than snow depth, since a foot of powder snow holds much less water than a foot of slush.) Several sites had little or

no snow in the first week of December.

But the wintry pattern that commenced on Dec. 11 has had a dramatic effect, especially in parts of the Wallows and Elkhorns.

At Schneider Meadows north of Halfway, for instance, almost three feet of snow has fallen in the past week.

The automated snow-measuring station there, at an elevation of 5,400 feet, reported 13 inches of snow, and a water content of 3.2 inches, at midnight on Dec. 10.

By Friday morning, Dec. 17, the snow depth was 46 inches and the water content was 8.7 inches.

The latter figure is 32% above average for the date.

At Eilertson Meadow, along Rock Creek in the Elkhorns west of Haines, the snow depth was only one inch, with a water content of 0.7 of an inch, on Dec. 10.

Friday morning the snow depth was 16 inches and the water content was 3.5 inches — 9% above average.

The situation isn't quite as promising at some other sites.

A measuring station near Bourne, for instance, on the other side of Elkhorn Ridge from Eilertson Meadow, the water content Friday morning was 3.1 inches — 24% below average.

The water content has increased this week from 0.8 of an inch, however, and the snow depth has risen from five inches to 20 inches.

At Moss Springs, in the western Wallows above Cove, the water content Friday was 5.7 inches, which is 14% below average.

Recent storms weren't quite as productive in that part of the region. Moss Springs has recorded 14 inches of snow over the past week, the water content increasing from 3.8 inches to 5.7 inches.

## DEER

Continued from A2

The Starkey forest is encompassed within a fence that keeps deer and elk confined to the area, which allows unique types of research.

"Getting at the answer is a little bit challenging because mule deer compete with elk and are preyed on by multiple species," Levi said.

Of the bears, cougars, bobcats and coyotes collared and monitored, Levi said the most interesting results occurred between cougars and coyotes.

"We learned that while coyotes tend to avoid cougars, they are strongly attracted to cougar kill sites," he said.

Analyzing their scat provided further evidence that coyotes are eating elk. Levi said coyotes don't typically kill elk past their young calf stage, but video recordings showed more than 90% of cougar kills were scavenged by coyotes.

This method of eating out is not without its challenges for the opportunistic coyotes. Levi said 7% of the dead coyotes discovered during the study were found at cougar kill sites, and between 20% and 23% of the Starkey coyotes were killed by cougars.

"There's a risk to getting a 'free lunch,'" Levi said.

### Interactions among predators

While looking specifically at the impact of predators on ungulates, Ruprecht said the study provided a unique opportunity to learn something new about carnivores.

"Generally predators are studied solely on how they influence prey, but how they influence and interact with each other was my interest," Ruprecht said.

The research showed little interaction with the other two carnivore species in the study — black bears and bobcats. Based on photos, kill site investigations and the lack of elk found in their scat, Starkey bobcats never scavenged on cougar kills.

Ruprecht said bears visited half of the cougar kill sites monitored, but only about one-third of the bear scat surveyed contained elk. No bears were found killed by cougars, leading researchers to believe there was little competition between those two predators.

"They are scavenging, but not like coyotes," Ruprecht said. "My guess is because they use so many other food sources there is less motivation to incur the risk by potentially encountering a cougar."

One of the takeaways, Ruprecht said, was why certain species do scavenge. "There is risk involved and decisions are made under imperfect knowledge of the proximity of a cougar," he said.

In some cases the coyote knows the cougar is there, Ruprecht said.

"An animal who is starving is going to take more risk to get a meal," Ruprecht said.

### Study expands on previous Starkey research

Another reason coyotes may be more prone to scavenge is they are a pack animal while bears and bobcats are not.

"It's the 'many eyes, many ears' hypothesis," Ruprecht said. "They take turns scavenging and take turns keeping watch — and they communicate to alert others of a potential risk or hazard."

Levi said the study is part of a larger body of work the Oregon Department

of Fish and Wildlife and the U.S. Forest Service are conducting that includes population dynamics and nutrition as well as the drastic culling of Starkey's three elk herds, through hunting and transplanting.

Mike Wisdom, Starkey ungulate ecology team leader with the Forest Service, said the predator research related to earlier studies from the 1990s and 2000s that indicated interference competition between deer and elk.

"One species might intimidate another into being displaced," Wisdom said.

A series of analyses and publications indicated elk used the landscape in a way that met their needs while mule deer were avoiding elk. Over time, elk changed their use of the landscape, and mule deer moved to other areas elk were not using.

"It became a concern in the fact that mule deer are declining in large areas at Starkey, throughout Eastern Oregon, and across other areas of the U.S.," Wisdom said.

Increasing elk populations might be causing displacement and reduction of mule deer populations as well as reducing the carrying capacity of the landscape to support them nutritionally.

Now that the elk population is a fraction of

what it was a few years ago, Wisdom said there are a lot of different possible outcomes among the predators and prey — improved nutrition and body condition, behavioral use of the land, direct interactions and changes in predation.

"Predators could dissipate and lessen their use, particularly cougars, but if we reduce that prey base of elk there may not be a positive response — cougars may just switch to eating mule deer," Wisdom said.

Darren Clark, Starkey Wildlife Research Program leader with the Oregon Department of Fish and Wildlife, said for the last seven years the big picture has been to assess competition between elk and mule deer. Over the last three years the elk herd was reduced from 550 head to 75 to see how the mule deer respond.

According to previous work, Clark said, the forage available to the Starkey mule deer doesn't have sufficient calories to meet a doe's energetic demands during peak lactation, resulting in poor body condition.

"If deer shift habitat use, will their body condition and fawn survival increase?" Clark asked.

With the elk herds reduced by 80%, Clark said Fish and Wildlife will gather its first data set next year from fawns collared in 2021.

## OBITUARY

### Alice Saunders

Formerly of Baker City, 1928-2021

Alice Lavina (Martin) Saunders, 93, of Hermiston, and a former longtime Baker City resident, died Dec. 15, 2021.

Her graveside service will be Tuesday, Dec. 21 at noon at the Eagle Valley Cemetery in Richland.

Alice was born on April 6, 1928, in Richland to Herman and Laura Annavea (Haskins) Martin. Her parents owned and operated the telephone company. Since their residence was connected to the back of the telephone office, she claimed to be born in a telephone office.

Alice graduated from Richland High School along with her lifelong sweetheart, Raymond Saunders Jr. Because WWII had already begun, Ray was serving in the Navy when he was granted a 10-day leave to marry Alice on March 10, 1945. She later graduated from Richland High School in May of 1945.

Alice and Ray began their life together in 1946, living in Baker, where they resided for most of their married life. They soon completed their family with the addition of two daughters, Terrilyn and Judith. Alice began working outside of the home when the girls were in school. She was the manager of the S & H Green Stamp Store until it

closed. Then she served in the Baker County Clerk's office for a few years before being elected to three terms as the Baker County Treasurer.

In 2003, Ray and Alice made the decision to move to Hermiston to be near their oldest daughter, Terrilyn Piquet. Flower and vegetable gardening was a hobby and a passion for her entire life. She enjoyed sharing bouquets of flowers with her family and friends.

Alice is survived by her daughters: Terrilyn Piquet (Allen) of Hermiston, and Judith Chapman (Charles) of Abilene, Texas; her granddaughters: Raquel Piquet (Craig), Monique Piquet, Bridget Hinrichs (Jon), Danielle Piquet, Tonya Weatherman (Brendan) and Amy Alice Burson; her great-grandchildren: Damian Piquet, Devin Piquet, Brayden Hinrichs, Brooklyn Hinrichs, Jaelyn Hinrichs, Lirian Holden, Annika Holden, Holton Weatherman, Ellie Weatherman and Hudson Weatherman.

Alice was preceded in death by her husband, Ray, and her parents.

In lieu of flowers, donations can be made to Vange John Memorial Hospice Education Fund or Eagle Valley Cemetery. Please share memories of Alice with her family at burnsmortuary-hermiston.com.



Alice Saunders

## KIWANIS STUDENT OF THE MONTH

DECEMBER



Senior at Baker High School.

Savannah Brown

Baker City Kiwanis

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**Baker County**  
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the Chamber of Commerce & Visitor Center

Senior at Baker High School.

Iriana Rosales



## KIWANIS STUDENT OF THE MONTH

NOVEMBER



Junior at Baker High School.

Gretchen Morgan

Baker City Kiwanis

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Junior at Baker High School.

Angel De Arcos



Baker County Veterans Service Office will be closed from December 20, 2021 through December 27, 2021