High Country News

THE UNCERTAINTY OF FARMING IN THE COLORADO RIVER BASIN

RESTORING MONTANA'S WATERS THROUGH TRIBAL SOVEREIGNTY

KILLING BEARS TO SAVE CARIBOU IN ALASKA

BLACK COWBOYS ARE NOT AN ABERRATION

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High Country News

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Casey Ryan, Confederated Salish and Kootenai Tribe member and manager of the tribe's Natural Resource Department's Division of Engineering and Water Resources, at Kicking Horse Reservoir, Montana. The reservoir was constructed as part of the 1908 Flathead Irrigation Project, which was authorized by the Dawes Act of 1887 to encourage agriculture on reservation land. (*See story on page 12.*) **Liz Dempsey / HCN**

Know The West.

High Country News is an independent, reader-supported nonprofit 501(c)(3) media organization that covers the important issues and stories that define the Western U.S. Our mission is to inform and inspire people to act on behalf of the West's diverse natural and human communities. High Country News (ISSN/0191/5657) publishes monthly, 12 issues per year, from 119 Grand Ave., Paonia, CO 81428. Periodicals, postage paid at Paonia, CO, and other post offices. POSTMASTER: Send address changes to High Country News, Box 1090, Paonia, CO 81428. See hcn.org for submission guidelines. Subscriptions to HCN are $45 a year, $47 for institutions: 800-905-1155, hcn.org. For editorial comments or questions, write High Country News, P.O. Box 1090, Paonia, CO 81428 or editor@hcn.org, or call 970-527-4898. For correspondence addressed to High Country News, HCN or to the editors, permission to publish will be considered implicit unless specifically stated otherwise.

Look to the future

I DON'T KNOW ABOUT YOU, but I'm having trouble keeping track of all the public comments I've submitted recently. *Don't end the roadless rule. Don't open California's coastline to more offshore drilling. Don't water down the Clean Water Act. Don't endanger the Endangered Species Act.* I submit comments not necessarily because I think they will make a difference, but because I still want to believe in the essentials of democracy. I want to believe that my voice will be heard. So off I go to the *Federal Register*'s website, time and again.

But what about actions that are being taken without any public input? Like the recent repeal of the endangerment finding, which had directed the EPA to regulate the risks that greenhouse gases pose to human health, now and in the future. The *Environmental Protection* Agency, whose mission is "to protect human health and the environment," has now decreed that trucks and power plants can be as dirty as they want to be. Who in their right mind would call this sound decision-making? Who but people under the spell of a desperate deregulatory fever dream? Personally, I would prefer a stable climate and a healthy citizenry to further enriching modern-age robber barons at everyone else's expense. But nobody asked me — or any of us, for that matter.

Anyone who sincerely doubts that climate change is real should visit the farmers in central Arizona who have had their supply of Colorado River water completely cut off in recent years due to the river's diminishing flows. Higher temperatures and reduced snowpack, both attributable to a warming climate, are wreaking havoc on farmers throughout the Colorado River Basin who rely on the river to irrigate their crops. See "The Shrinking River," a photo essay in this issue from Caitlin Ochs *(page 20)*.

Meanwhile, in western Montana, the Confederated Salish and Kootenai Tribes have used their sovereignty to give rivers and waterways unique protections that they wouldn't otherwise have had, and to align agricultural needs with ecological processes. *(See "The wealth of rivers," page 12.)* One waterway is now a primitive area accessible only to tribal members, while another has been designated a cultural waterway. These tribes are using treaty rights and sovereignty alongside traditional ecological knowledge to protect and restore rivers and ensure the future of their culture and people. It is inspiring, especially when considered alongside the seemingly intractable challenge of sharing Colorado River water across the basin. One model looks toward the future, while the other seems stuck in the past. Short-sightedness cannot future-proof the West — only common sense and compassion for our neighbors, human and otherwise.

Jennifer Sahn, editor-in-chief

Kathy Munsel / Oregon Department of Fish and Wildlife

Would you pay 1% more for wildlife?
A bill in the Oregon Legislature would tax tourists for conservation.
By Amal Ahmed

Luna Anna Archey / HCN

The coming failure of Glen Canyon Dam
In Colorado River negotiations, few are talking about the design flaws in the dam that holds back Lake Powell.
By Wade Graham

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ON THE COVER

Water flows through a canal that is part of the Central Arizona Project in Eloy, Arizona, during a monsoon season sunset. (*See story on page 20.*) **Caitlin Ochs**

“The problem is not that Black cowboys are being added to the West’s familiar story; the problem is that the country keeps acting surprised to see them.”

A still from the new docuseries *High Horse: The Black Cowboy*. (*See story on page 46.*) **Peacock**

High Country News is dedicated to independent journalism, informed debate and discourse in the public interest. We welcome letters through digital media and the post. Send us a letter, find us on social media, or email us at editor@hcn.org

HARMONIES VS. HATRED

Jaclyn Moyer's piece "The Sound of Black History in Portland" (February 2026) resonated with me. As a white high school band member in Detroit in 1949-1951, I remember taking the streetcar and transferring to a bus, trombone case in hand, to a Black neighborhood to jam with Black band members in their homes.

Redlining and destructive urban renewal were just as destructive of a vital Black community in Roanoke, Virginia, where I now live, as they were in Portland. Some themes — great Black music and destroying Black communities — seem to be universal.

Rupert Cutler
Roanoke, Virginia

OVERGRAZING YET AGAIN

"The Bird & The Herd" (February 2026) was a good article — another case of overgrazing damaging wildlife. Government agencies fail to follow their own standards. Cattlemen rule, and wildlife suffer!

Max Johnson
Via email

BEARING WITNESS

I'm a longtime subscriber to *HCN* and fan of Ansel Adams. I want to compliment your Editor's Note in the February issue. It's spot-on and a wonderful amalgam of history, art, justice and injustice.

Thank you for the admonition to bear witness and to respond.

Ken Lavine
Portola Valley, California

DEEP LOVE FOR DEEP TIME

Brilliant job on the "Deep Time in the West" special issue (January 2026). From the deepest of deep time to "time immemorial" to pronghorns: Pleistocene survivors, just as we are. This set of articles, all so well chosen and crafted, provide marvelous depth and context on today's West. Some argue that the Earth continually reshapes itself; ergo, we can extract resources and endlessly alter the air, water, soil and land. A fatally misguided viewpoint. Understanding geologic time helps us to realize, deeply, the intrinsic value of nature, our duty to intergenerational equity, and the disproportionate harm that unthinking resource extraction visits on vulnerable populations, now and in the future. Geology — and contemplation of geologic time — teaches us that we have a moral duty to manage our impacts responsibly.

Eric Harmon
Lakewood, Colorado

I was extremely pleased with your issue on deep time. This was the first time in a number of years that I read everything in the issue, and this was because you returned to characteristics that caused me to start subscribing to *HCN* many years ago: focus on the land, editors and authors who actually live in the high country, and minimal political commentary.

In two different articles, you highlighted the fact that a reader needs to be cautious when reading about scientific "consensus" viewpoints — one article on early human settlement of this hemisphere and the other on continental drift. In my experience, these consensus positions can be biased by things like ensuring continued research funding, ideology or sometimes just a researcher's professional ego. It's important for the public to understand this.

Neil Snyder
Evergreen, Colorado

TECTONIC TRAILBLAZER

Your excellent article "Continental shift" (January 2026) reminded me of a series of lectures I attended in a class in the environmental sciences department at the University of Virginia about 1975. The department chair (male, of course) presented his argument that the plate tectonics hypothesis was false. I wonder if, and when, he came around.

Deep appreciation for Tanya Atwater and others like her who kicked the doors open for others to follow.

Bruce Daggy
Washington Grove, Maryland

ROCKIN' AROUND THE WEST

I just finished reading Marcia Bjornerud's conversations with some of Wyoming's finest, and certainly most vocal, lithologic representatives, part of your entertaining and enlightening series highlighting geology in the West ("10 Wyomings," January 2026). Most visitors to Yellowstone, the Grand Canyon and other icons of our national park system have some introduction to the rocks and formations that explains their unique development. But the Western U.S. is filled with many such places, from designated but poorly protected national monuments to backroads outcrops, and all of them are increasingly vulnerable to damage and exploitation, if not outright destruction.

We know the oligarchs running and ruining this country have made it clear that they appreciate formation-of-Earth stories so long as profits can be rung from the rocks holding fossil fuels, lithium, rare earth elements, copper, phosphates and so much more.

Ken Wallace
Via email

INVASION OF THE DATA CENTERS

Belated thank-you for Jonathan Thompson's article about data center proposals springing up all over the West ("The big data center buildup," Nov. 25, 2025). This is essential context for everyone here in Utah, where the media often write as if our own proposals are unique.

Dan Schroeder
Ogden, Utah

CORRECTIONS

In "The Sound of Black History in Portland" (February 2026), we reported that the City Council was among the Williams and Russell project partners. The city is partnering through Prosper Portland and the Portland Housing Bureau. Also, in the February 2026 Editor's Note, we noted that incarcerated people were living in the shadow of razor wire. It was barbed wire. We regret the errors.

Pronghorn are one of the many species found in the sagebrush steppe of Wyoming's Golden Triangle. **Evan Barrientos / Audubon**

REPORTAGE

Weakening the rules

How Republican-led changes to management plans threaten crucial Wyoming habitat.

BY CHRISTINE PETERSON

SOMETIME IN late June or early July, in a part of western Wyoming informally called the Golden Triangle, sage grouse start to roam. Moms and chicks relocate from dry, harsh desert to higher, greener pastures in search of blooming wildflowers and skittering beetles. And because those chicks are at their gangly teenage stage — far from the competent adult fliers that glide effortlessly over the high plains — they walk. For as far as 20 miles.

These sagebrush-covered foothills of primarily Bureau of Land Management land have a higher concentration of sage grouse than anywhere else on the planet, likely in part because the birds have room to move.

More than a thousand elk winter there, too, sustained by the high-elevation landscape's cured grasses, dried wildflowers and shrubs. So do pronghorn and mule deer, wintering or using the area as a stopover on their journeys, which include the longest documented mule deer and pronghorn migrations in the Lower 48.

The Golden Triangle is 280,000 acres of superlatives, "the best of the best," said Tom Christiansen, a retired Wyoming Game and Fish Department biologist who worked in the area for more than 30 years. Perennial and intermittent streams emerge from cracks and meander down wrinkles in the hills, creating wet meadows and irrigated pastures even at higher elevations. So far, the land has been relatively untouched by invasive species like cheatgrass.

But the future of the region and its inhabitants hangs on by little more than a thread. It is one of only a handful of places in oil and gas-rich southwestern Wyoming not currently available for leasing, and the management plan protecting it is facing unprecedented attacks. Conservation groups fear it may be opened to fossil fuel development as the BLM rushes to rewrite the rules governing the area, Congress overturns recently approved land-use plans across the West, and the Trump administration pushes for energy dominance above all else.

A sage thrasher stands on big sagebrush in Sublette County, Wyoming (*left*).

Sagebrush steppe wildflowers bloom in the Golden Triangle (*facing page*). **Evan Barrientos / Audubon**

"There used to be a lot more of the best," Christiansen said. "But this is about the last of it."

UNDER THE BLM'S own management plan, the Golden Triangle is off-limits to drilling. But that didn't stop the agency from announcing in October that nearly 20,000 acres could be available for oil and gas leasing. (Almost 75% of the 3.5 million acres that include the Golden Triangle — the subsurface mineral estate overseen by the BLM's Rock Springs field office — is already available.) Two months later, the BLM reversed course. The Golden Triangle parcels were never intended for leasing, said BLM Wyoming public affairs leader Micky Fisher. The announcement was simply to identify areas drilling companies were interested in before the agency filtered out those that could not be leased. This was unusual: Typically, according to Fisher, the BLM would filter out unavailable leases before making an announcement. A revised document posted in late December no longer included the Golden Triangle.

But the fact that the BLM proposed the parcels in the first place alarmed conservation groups.

The BLM decides what is and isn't allowed in different areas based on resource management plans. These weighty documents tell local field staff how to respond to requests to graze cattle, mine trona, drill for oil or build new hiking or mountain-biking trails. Members of the public are involved throughout the agency-led process, including through countless meetings, discussions and public comment periods responding to environmental impact statements. Plans often take years or even a decade to complete.

The current plan for the Rock Springs area was finalized in late 2024, after more than 13 years of deliberation. But the BLM announced in October that it will spend one year overhauling portions of it. Not only is it uncommon to dramatically change a recently approved plan, but to do it in the span of a year is "disrespectful of the communities that have put a lot of time and effort into this," said Julia Stuble, The Wilderness Society's Wyoming state director.

A BLM news release said the possible changes are a response to President Donald Trump's "Unleashing American Energy" executive order, which, it says, directs "federal agencies to reassess policies that may unnecessarily restrict access to domestic energy and mineral resources." The release specifically called for reexamining areas of critical environmental concern — such as the Golden Triangle — to see if protections are still warranted.

Conservation groups acknowledge that stipulations on drilling can help alleviate negative impacts. The BLM, for example, can designate certain areas open to leasing with "no surface occupancy," meaning companies can access underground oil and gas only through technologies like horizontal drilling. One well pad might connect to a dozen wells that extend for miles beneath the surface, eliminating the need for a dozen different well pads scattered around.

But enacting such stipulations is getting harder: Historically, BLM field staff could add restrictions during leasing. Now, thanks to the 2025 Big Beautiful Bill, they must be written into the management plan before an area is leased.

And once an area is leased and then developed, wildlife generally pay the price, said Hall Sawyer, a longtime Wyoming biologist. A paper he authored in 2017 showed that mule deer herds declined by nearly

40% after development of the Pinedale Anticline, another sagebrush-covered landscape less than 50 miles away.

"If it's important habitat, don't lease it, because after that you lose control over being able to protect the resource," he said.

THE THREAT OF leasing and drilling in the Golden Triangle is one more example of Congress and the current administration pushing past historic norms, said David Willms, the National Wildlife Federation's associate vice president of public lands.

In late 2025, House and Senate Republicans used the Congressional Review Act to throw out the newest version of five resource management plans in whole or in part: one in North Dakota, another in Alaska, amendments in Wyoming and Montana and a record of decision in Alaska. House Republicans also used the Congressional Review Act to begin reversing the withdrawal of a mineral lease near the Boundary Waters Canoe Area Wilderness in Minnesota, and are reportedly considering using it to overturn the resource management plan for Grand Staircase-Escalante National Monument in Utah.

"There used to be a lot more of the best. But this is about the last of it."

When management plans are overturned, they revert to older versions that don't take into account new science on migrations, for example, or the effectiveness of energy-development stipulations. The older plans — sometimes decades old — also offer no real insight into how the land will be managed in a future shaped by climate change, data centers and increased recreation.

But if Republicans continue rewriting or overturning management plans, then future Democratic administrations are likely to remake them, too. At some point, locals will stop feeling like their voices matter, Willms said. "If those people are too burnt out and don't show up to help with that, what kind of plan do you end up with? Probably one driven out of D.C., which is not what people want."

That's why Willms and others stressed how important it is for anyone who cares about the ecological future of the Golden Triangle — and all those sage grouse racing to greener pastures — to stay involved. The loss of all those superlatives is not yet a foregone conclusion.

Christine Peterson lives in Laramie, Wyoming, and has covered science, the environment and outdoor recreation in Wyoming for more than 15 years.

REPORTAGE

One frog at a time

In Portland, amphibian-loving volunteers are giving an imperiled species a helping hand.

BY SARAH TRENT
PHOTOS BY BROOKE HERBERT

THE LATE-AFTERNOON sky was surprisingly clear for December, the kind of evening Portlanders revel in after days of rain. But for the half-dozen volunteers gathered on Harborton Drive — a steep frontage road carved into a bluff beside Highway 30, along the city's northwestern riverfront — it wasn't ideal. Frogs, especially the ones they sought, prefer rain. But the crew's leaders remained hopeful: The road was still wet, and the warm temperature, over 50 degrees, might lure the frogs out anyway.

All week, volunteers had met here at dusk, holding buckets and wearing reflective vests with "FROGS" printed across the back. For the 13th winter in a row, they aimed to prevent one of Oregon's largest remaining populations of northern red-legged frogs from crossing the four lanes of high-speed traffic on Highway 30, just below them. Past the roadway, city lights reflected on the Willamette River.

Every winter, this species — a reclusive, palm-sized amphibian that's considered "sensitive," and thereby protected, under Oregon law — must cross this highway to breed. Traversing up to three miles of the city each way, they hop and slide from their forested upland habitat, under sword ferns in undeveloped parkland, to their winter breeding grounds in the few surviving seasonal wetlands along the river. Migrating just after dark in each direction — they return upslope after laying eggs — they brave an urban rush hour twice between December and March.

It was January 2013 when Harborton resident Rob Lee, 74, first realized what a gantlet the animals were running. Lee was carpooling to a local environmental group meeting one evening when he found himself helping the driver navigate a sudden frenzy of frogs crossing Harborton. The next morning, Lee counted 60 carcasses on his barely trafficked road. He suspected that on Highway 30 below, "they were getting obliterated."

Lee contacted Oregon's Department of

Fish and Wildlife (ODFW) and the following winter met a state biologist on Harborton to scoop up frogs and taxi them down to the wetlands. "Then," he said, "it dawned on us that we're going to have to take them back as well."

Friends soon joined them, and the group has since grown into the Harborton Frog Shuttle, a winter tradition that attracts so many volunteers, there's sometimes a waitlist. In 2024, about 100 students, biologists, retirees and enthusiasts shuttled some 1,700 frogs downhill and nearly 2,000 back up again.

It's hard to quantify how much this helps; adult red-legged frogs stay so hidden that biologists don't know how many still live in Portland. Egg counts in the wetlands below Harborton show an upward trend since 2019, but this could also be due to restoration work. (Like many intact local wetlands, this one is owned by a utility, Portland General Electric (PGE), which maintains it as part of the company's environmental mitigation efforts.) But numbers aren't everything, said ODFW biologist Susan Barnes. "Anything we can do," she said, to help frogs survive and hatch young, is beneficial.

Given the lack of rain, Heather Perkins, the night's co-leader — a 68-year-old composer who loves amphibians so much, she named her record label Land-O-Newts — initially had the crew hold off on erecting the landscape-fabric fence they usually clip to Harborton's guardrail to stop frogs from continuing downhill. Then a volunteer spotted the glinting eyes and speckled back of a scrawny male frog in roadside vegetation.

He escaped their grasp — flailing on rust-colored legs back up the steep bluff — but soon they saw another frog, frozen in a headlamp beam, and then a female, round with eggs, hiding under a leaf. Patricia Wolf, a professional musician and DJ, scooped up the slick, squirming creatures, then set them in buckets lined with wet leaves. "This time of year can be so gloomy," she said, "but when you're out here, you're battling it with goodness."

As dedicated as the volunteers are, they can't catch every frog. Many also suspect that veteran females — which can live 15 years — have learned to evade assistance, including by crossing the highway elsewhere.

That's why about a dozen partners, including the Oregon Wildlife Foundation, ODFW, the state transportation agency (ODOT) and PGE, are working toward a permanent fix: a wildlife crossing designed specifically for frogs. Their plan would install a box culvert under the highway and a concrete barrier along Harborton to funnel frogs toward it. The foundation is raising $550,000 for project engineering, but construction — estimated at $4 million — will require additional support.

The biggest barrier, foundation director Tim Greseth said, is ODOT's capacity to help. The agency, which has no mandate to protect wildlife, is currently tackling a $242 million budget shortfall. Because state dollars are all but required for such a costly project, Greseth said advocacy groups are lobbying lawmakers to prioritize conservation here anyway.

The project has a promising precedent: In 2024, a council of regional governments, working with ODOT, ODFW and the federal Bonneville Power Administration, installed Oregon's first amphibian crossing just a few miles west of here, where smaller numbers of red-legged frogs cross the same highway to reach BPA-owned wetlands. Last winter, cameras showed 300 red-legged frogs using the tunnel, along with myriad small wildlife, including weasels, skunks and reptiles. "It's worked as well as we dreamed, and better," said Rachel Wheat, ODFW's wildlife connectivity coordinator.

Wildlife crossings are on the rise across the West, mostly designed for large animals like deer; tens of thousands of Americans are injured in wildlife collisions every year. At least 17 new crossings, from New Mexico to Alaska, were enabled by Biden-era infrastructure funds.

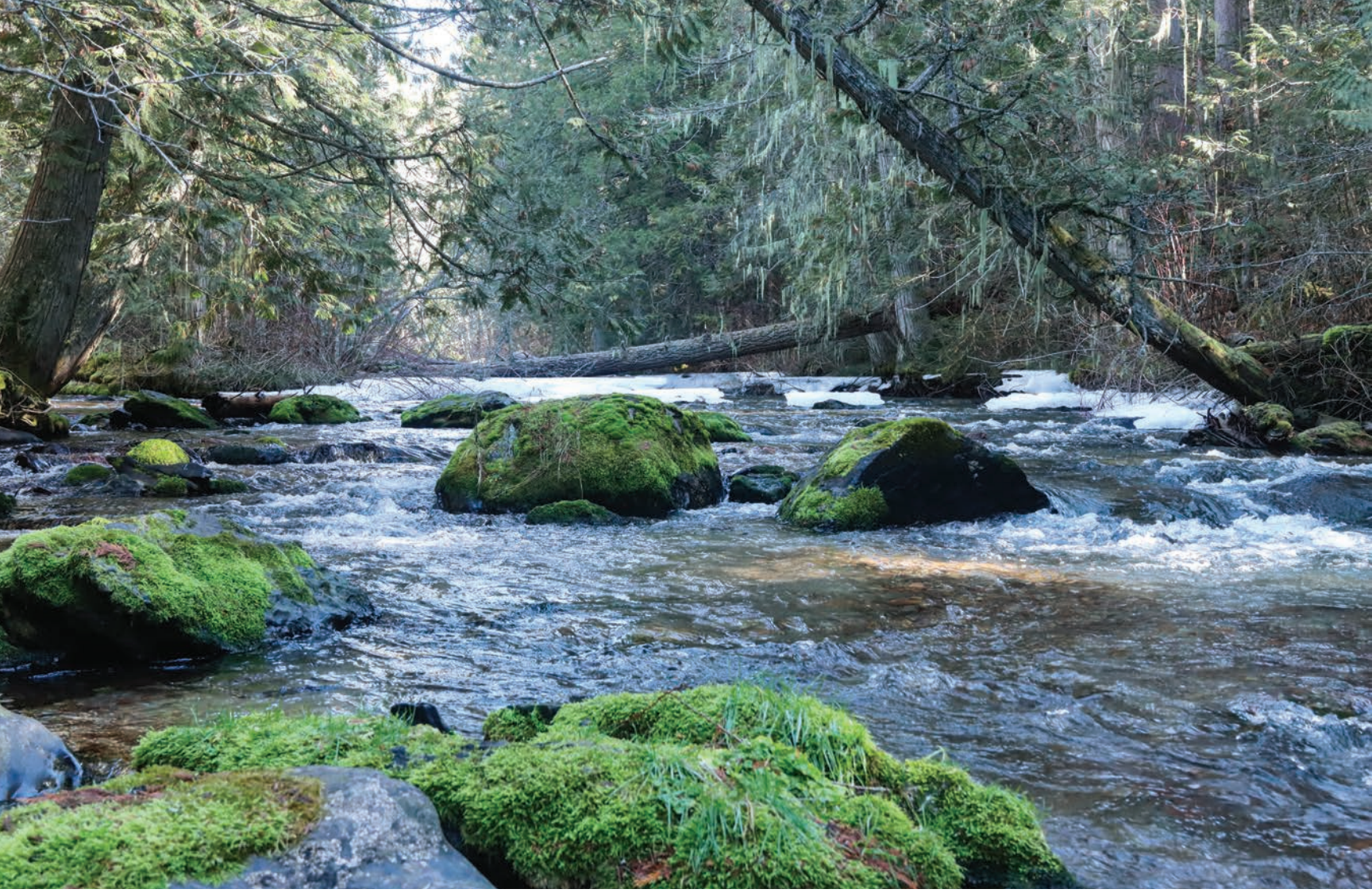
Amphibian collisions usually go unnoticed, since they rarely injure humans. But in Portland, they're a top threat to red-legged frogs. And unlike other hazards — toxic storm runoff and invasive predatory bullfrogs among them — the car problem is solvable. "It would be a shame to lose this species because we don't do something we're capable of," Greseth said.

If fully funded, the crossing could be built as early as 2028. Until then, volunteers will come every warm, wet night through the winter.

Sarah Trent writes about communities navigating climate change and environmental degradation. She lives in Vancouver, Washington.

In January, volunteer Corrie Wisner (*left*) and graduate student Alyson Yates (*right*) examine a northern red-legged frog by headlamp in Portland's Linnton neighborhood (*opposite*).

Volunteer Janelle Coburn scans the road at dusk, looking for northern red-legged frogs (*right*).



REPORTAGE

The wealth of rivers

How Montana tribes are using sovereignty to restore their waterways.

BY EMILY SENKOSKY | PHOTOS BY LIZ DEMPSEY

UNDER THE SUBDUED gray light of the winter sun, Germaine White, enrolled member of the Confederated Salish and Kootenai Tribes (CSKT), reminisced about the Jocko River slowly meandering in the shadow of the Mission Mountains in Northwestern Montana. Once, the river — nisisutetkʷ ntx̣ʷe in the Séliš-Qĺispé language — was laden with bull trout, and its plentiful tributaries provided abundant fresh cold water every spring.

"We live at the backbone of the world, where the water begins," said White. "Scientists call it a 'resource,' but we call it the source."

The Jocko River is fundamental to CSKT life, but over the last century the watershed became disconnected from its floodplain, leveled and channelized when agriculture moved onto the Flathead Indian Reservation. After a decade of negotiations, however, one of the most significant tribal settlements in U.S. history created the 2015 Confederated Salish and Kootenai-Montana Compact Water Rights Compact. Effective in 2021, the compact reauthorizes tribal water rights promised in the 1855 Hellgate Treaty, while also protecting existing water users through a joint state-tribal water management system. The combination of Indigenous-led restoration, shared management structures and targeted funding may help the tribe recover the rivers and the lifeways inextricably intertwined with them.

THE ABORIGINAL TERRITORY of the Selis, Ksanka and Qlispe tribes covered 22 million acres of western Montana and extended into Canada, Idaho and Wyoming. The three tribes coexisted in a rich landscape, amid over 980 miles of rivers and streams — a natural abundance that explains why Salish elder Mitch Smallsalmon famously called the tribes "wealthy from the water."

But the tribes lost some

of that wealth when the 1855 Hellgate Treaty was signed. And in 1887, the Dawes Act, determined to assimilate Indigenous people into settler society, opened parcels of the CSKT reservation to homesteaders. Even though the reservation comprised only about one-twentieth of the tribe's original homeland, the act further divided the landscape, creating a patchwork of private and tribal lands. Many of the place names around the Mission Valley were lost, replaced by the settlers' versions.

"Place names are so profoundly important; they're the oldest words in our language," said White. "They came from our creation stories and the making of this place. In recent times, the land has been altered so dramatically that it no longer resembles the place names."

The legal term "prior appropriation," colloquially known as "first in time, first in right," underlies water rights in the West. Prior appropriation hinges on the idea that whoever first claims water and puts it to "beneficial use" holds first rights to it among subsequent users. During Westward expansion, settlers believed that water was an infinite resource, and water rights were given away freely and gluttonously consumed. But the commodification of water severed tribes from their lifeways.

"We look at the waterways — the veins of our Mother Earth — as a way of life," Sadie Peone-Stops, CSKT member and director of the Sélišˇ-Qlispé Culture Committee, said. "Water gives all life. If people can understand that, they can understand what wealth means to the tribe."

Throughout the 20th century, tribal reservation rights, including fishing and hunting rights, often overlapped with the prior appropriation rights given to white settlers on the reservation, resulting in a quagmire of conflicting rights. Stakeholders raced to the courthouse to have their water rights solidified before their rivals set precedent.

Eventually, the Montana Legislature recognized the need for a system to determine all outstanding water rights, and the Montana Water Court was born. This specialized part of the judicial branch is tasked with untangling the more than 219,000 water rights claimed in Montana prior to 1973. Through a unitary system and the adjudication process, the court works to determine water rights across every river basin in the state. It is also charged with reviewing and ruling on objections to negotiated compacts with the state's tribes and federal agencies. Colorado and Idaho are the only other Western states with water courts.

About three decades ago, a series of cases filed on behalf of the CSKT by the federal government sparked the tribes' fight for quantifiable water rights and eventually led to what is now the Water Compact. The CSKT-MT Compact quantified the tribes' reserved and aboriginal water rights, recognizing existing tribal cultural and religious uses and protecting other existing water rights, regardless of their basis in state or federal law.

But by the time the compact was settled, over 100 years of industrialism had left their mark on watersheds in and around the reservation. Montana's history of mining and milling poisoned rivers, while development fragmented watersheds and drained aquifers.

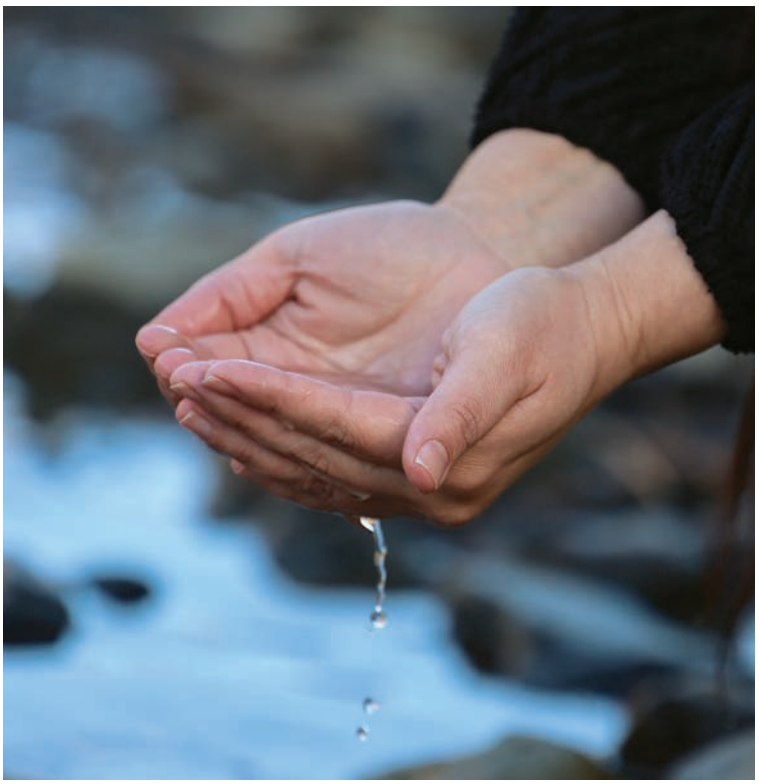
The compact's final decree is still being determined by Montana's Water Court, but it recognizes the tribes' reserved and aboriginal water rights and their existing tribal cultural and religious uses. The compact also protects tribal instream flows, existing uses and historic deliveries to irrigators. The compact's co-management plan uses both Western science and tribal knowledge to recover waterways and manage them more strategically.

THE COMPACT'S implementation phase is led in part by CSKT's Division of Engineering and Water Resources, which expanded in 2020 to meet the compact's needs. Over a dozen activities were outlined to reauthorize tribal water rights while fulfilling the reservation water uses provided by the Flathead Indian Irrigation Project (FIIP).

The FIIP was constructed in 1908 as part of the Dawes Act to help move water across the reservation for agriculture. The project has more than 1,000 miles of canals, irrigates nearly 130,000 acres and has 14 major reservoirs that feed its web of crisscrossing channels.

"The FIIP was ostensibly for the benefit of the Indian," said Casey Ryan, a tribal member and manager of the tribe's Natural Resource Department's

Germaine White, a CSKT member, was in charge of education and information pieces for the Jocko River Restoration Project (*right*). The Jocko River at the confluence of its south and middle forks (*opposite*).



"It's going to bring back life, and with plant and animal life, it could bring life back to the culture in new ways."

Sadie Peone-Stops, a CSKT member and director of the Séliš-Qlispé Culture Committee, at the Flathead River (*above*). The Flathead River near Magpie Creek (*right*).

Division of Engineering and Water Resources. "There were so many changes that our tribe was trying to navigate ... and despite all that, we were highly successful at incorporating agriculture."

Still, the project warped the Mission Valley watersheds, and its antiquated infrastructure showed its inefficiencies as it aged. So federal legislation stemming from the compact prioritized rehabilitating FIIP's infrastructure and repairing the damage it caused.

The notion of "beneficial use" of water was so powerful in the 20th century that any water left in FIIP's irrigation canals was regarded as "waste." The Jocko River, the second-largest river on the reservation, was drastically disfigured — confined to a channel as straight as a bowling lane and severed from its natural meanders, floodplain and side channels, which once supported a flourishing ecosystem. According to Ryan, as early as the 1930s, water surveys showed that FIIP was a deficit irrigation project, meaning that in most years, the water supply was insufficient to meet potential crop needs.

"There are over 34 creeks that come out onto the valley floor, and of those, most die in the canal that runs along the base of the Mission Mountains," said Ryan. "We even have staff that can remember when the Jocko would run dry during the irrigation season."

Restoration on the Jocko started even before the compact was signed, thanks to funds the CSKT won in a pivotal case in the 1980s known as the ARCO lawsuit. Mining and milling on the Upper Clark Fork River Basin had left the river — formerly the tribes' hunting and fishing grounds — so polluted that it became one of the nation's largest Superfund sites.

The $187 million ARCO settlement was used by the tribes and state to finance cleanup efforts. But the lawsuit also demonstrated the weight of the rights outlined in the CSKT's treaty, as well as the tribes' prowess in wielding the law to enforce environmental reclamation. The tribes —determined to save the bull trout, a culturally significant fish — concentrated on restoring the South Fork of the Jocko because it had the same hydrological profile as the Clark Fork.

The bull trout was listed on the Endangered Species Act in 1998, and the Jocko is its final stronghold, home to its last remaining migratory population. According to White, the bull trout had been a vital tribal food source when reserves were low and game was scarce. The fish sustained the people in time of need, enabling the CSKT to avoid

the starvation that plagued other tribes during long harsh winters.

"We always had that incredible gift of the water, and with it, the gift of the bull trout," said White, who managed the education and information pieces for the Jocko River Restoration Project.

The Restoration Project worked to stem further damage by purchasing private land and removing houses from the floodplain while creating an interdisciplinary team to conduct environmental restoration. Today, the CSKT owns over 70% of its reservation, wielding tribal sovereignty to protect lands — including the first tribally designated wilderness area in the nation. The tribe also made the South Fork a primitive area available only to tribal members to preserve its cultural and recreational value. But funding from the ARCO case eventually ran out, leaving the lower reach of the Jocko still channelized and trapped against the Bison Range.

"When we got the Water Compact, the last block clicked into place," said White.

The compact's implementation phase has picked up where the Jocko River Restoration Project left off — with "adaptive management" underpinning the effort. By reconnecting the river to its floodplain and allowing water to slow, spread and seep back into the land, tribal crews are monitoring and evaluating how the river heals. Indigenous traditional ecological knowledge has also been integrated into its recovery. In low-lying areas, tribal crews have created natural filtration zones using cattails and other wetland plants — living buffers that capture agricultural runoff before it reaches the river.

The project's overall goal is to find ways to align agriculture needs with ecological practices. More efficient water delivery can reduce losses and still leave water for instream flows — and, according to Ryan, has already resulted in more bull trout returning to their native streams. Healthier rivers, in turn, support soil, recharge groundwater and stabilize the broader watershed that farming requires.

"One of the beautiful things about the compact is it recognizes that water is a unitary resource, and that it needs to be managed as such," said Ryan. "FIIP's rehabilitation has been good for fish *and* farmers."

THE COMPACT'S foundational measures — including the rehabilitation of FIIP's infrastructure, restoration of environmental damage and improved water management — are essential, but cultural preservation is equally important.

"The restoration's importance cannot be overstated," said Peone-Stops. "It's going to bring back life, and with plant and animal life, it could bring life back to the culture in new ways."

The CSKT's Séliš-Qĺispé Culture Committee, guided by the wisdom of a board of tribal elders, has been at the heart of the tribes' efforts for 50 years, helping to guide the ground-floor application of every project. Besides restoring the landscape, the compact is bringing jobs and reconnecting members to

tribal lifeways. According to Peone-Stops, this helps the tribe re-establish its belief that every natural resource is a cultural resource.

"The Water Compact is helping us to continue our mission: to preserve, protect and perpetuate the Selis and Qlispe culture, language and history," said Peone-Stops. "It's not a one-and-done thing. It will help us continue to serve our membership into the future."

In 2021, the CSKT also established the Lower Flathead River as a cultural waterway through its "Cultural Waterway Ordinance," which mirrors the provisions in the Wild and Scenic Rivers Act that protects a river's free-flowing nature from development. According to Peone-Stops, the tribe also plans to preserve and protect other waterways in the future.

"When I think about this compact, it's not about control or greediness. It's so that the water — and everything connected to it — is protected," said Peone-Stops. "We adapt with what we have to, but our tribal practices, caring for the land in the way we know how, has always been the same."

Emily Senkosky is a writer based in Montana who reports on the changing dynamics of the Western U.S.

Liz Dempsey contributed reporting to this story. Dempsey is a descendant of the Salish and Lakota Sioux. She currently works for Char-Koosta*, the tribal newspaper located on the Flathead Indian Reservation.*

This story is part of High Country News' *Conservation Beyond Boundaries project, which is supported by the BAND Foundation.*

POEM

FROM THE GRIMOIRE

By D.A. Powell

—Spell for Binding the Center to a Center

And when spiritually we are parched like the air
in fire season, laden with the things of this world
caught flame and heaved up into the atmosphere,
it is the earth that grounds us for the lightning strike:
our dam material, our plant medium, our brick paste,
our fortress against dying, our mother's greens
plucked in winter and served in soup, our fodder
and feed lots, our field of unknowing and enfolding,
that we come back to: the dirt of churchyards and
sideyards, the dirt with metal in it, the dirt with
oxygen in it, the dirt with water in it, the dirt
with clay in it, the dirt with salt and sand and silt,
the soil, the loam, the sod, the clod, the gravel,
the mud, the muck, the groot, the grit, the ground.

Say, "I am my earth in the way I want to see it,
from the hot core to the frigid reaches, large at the
equator where it's luscious and wrapped in silky
clouds, puffy thunderheads, belts of rain and snow.
I am my earth that nurshes. I am my earth abundant.
I am my earth in a sheath of green and blue raincoat."

Hunker down in your earth. Listen to the death
in your earth. The life. Listen to the earth under
your feet. Sit down in a field. Feel the way your ass
is supported by the earth. Stretch out against it. Let
your legs sprawl over the soft earth. Lie down
on the hard earth and press against it. Touch its dirt
the way you would touch a lover. Speak your secrets
in the dust. Talk about how long you've been together
and how you've both tried to save each other. Save
each other. Every day come back to the earth and tell
it you're sorry, you'll do better, you'll bring your child,
your lover, your mother back to visit this spot, this place
where you remembered for once, like your papa always
told you, you remembered where you came from
and how good it felt to be at home in the world today.

WEB EXTRA Listen to D.A. Powell read his poem at **hcn.org/grimoire**

Welcome, new HCN board members!

WE OFTEN SAY — AND ARE PROUD TO SAY — that *High Country News* is a reader-supported nonprofit. The "reader-supported" part is straightforward: You, our community of readers, provide three-quarters of our operating revenue through your subscriptions and donations. This organization would literally not exist without you.

That's why our Community Pages, which have a new look in this issue, are in the middle of the magazine: You are literally the heart of this organization.

The nonprofit part refers to our status with the IRS — *HCN* is registered under section 501(c)3 of the federal tax code. That means that your donations are tax-exempt, and that we're governed by a volunteer board of directors who work with the senior management team to ensure that the business is responsibly managed and financially sound.

Our board members serve three-year terms, with a limit of three consecutive terms. And so we bring in new members regularly, seeking out folks with a strong commitment to our mission, the skills necessary for running a nonprofit, and identities and backgrounds that reflect the diversity of the West.

In January, we welcomed four new board members. Here's a little about each:

Tyrone Beason grew up in a working-class Black community in Bowling Green, Kentucky. "My people weren't part of the Great Migration. I was born among the people who stayed," he told us during his board interview. In his youth, he worked on his grandfather's farm. "I grew up knowing where food came from. I wouldn't have called myself an environmentalist, but knew I was a part of the ecosystem."

He fell in love with the West during a college trip to Oregon and spent years as a staff writer and multimedia storyteller at the *Seattle Times*, where he became a beloved mentor to young journalists of color. His most recent job was as a staff writer at the *Los Angeles Times*, where he covered the 2020 election, tribal land co-management, reparations for racist land seizures and a whole lot more.

Heather MacSlarrow found *HCN* in college and says it has shaped her view of the West and her work with nonprofits across the region. She's currently based in Missoula and serves as the executive director of the Society for Wilderness Stewardship, which hosts the Wilderness Policy Center and builds systems and processes for high quality wilderness management. She has been a force in expanding the conversation about wilderness, and land stewardship, to include more diverse voices, including those of Indigenous people. The work has pushed boundaries within agency and nonprofit circles, she said, but it only makes sense: "All cultures come from wilderness," she said. "Our cultural norms come from landscapes."

Amy Maestas grew up in Magna, Utah, near the south end of the Great Salt Lake. She has built a career around innovation in journalism, rising through the ranks at the *Durango Herald* before heading home to help the *Salt Lake Tribune* transition to a nonprofit. In 2020, she joined the Solutions Journalism Network, where she ran the Local Media Project, funding journalism collaboratives across the country.

That job led to her most recent position as director of the Collaborative Journalism Resource Hub at Montclair State University. (Montclair is in New Jersey, but Amy lives in Utah.) She'll be a great help as we build the Western Environmental Reporting Collaborative. A project like this requires time and resources, she said, but "we know what it takes to make these things work."

Mike Tansey grew up in Edinburgh, Scotland, although he's lived longer in the U.S. than the U.K. at this point. He lives in Denver now and considers himself "mostly retired" from a career in publishing, in which he found himself smack-dab in the middle of the print-to-digital evolution. "With print, you threw something out there, and you had no clue what people used it for," he said. "In today's world, you have phenomenal metrics about how many people are reading, how far they're getting into a story, and how you can tie that into communities you're trying to serve."

Mike found *HCN* via climate reporting in the *Los Angeles Times* that referenced our work, and believes strongly in our mission. He'd like to help with fundraising and revenue development, and we're more than happy to put him to work!

Welcome aboard, Tyrone, Heather, Amy and Mike! And thanks to all of those who responded to our call for applicants. We were truly touched by the outpouring of interest.

— Greg Hanscom, executive director & publisher

Tyrone Beason

Heather MacSlarrow

Amy Maestas

Mike Tansey

An ode to Johnny Sagebrush

BART KOEHLER HELPED WESTERNERS PROTECT THE PLACES THEY LOVE | **BY BRUCE HAMILTON**

Bart Koehler at work. **Kurt Kuznicki**

WE OFTEN MOURN when a family farmer or rancher is replaced by corporate agribusiness. But there is another occupation in the rural West that's also endangered and worth honoring: the community-based wilderness organizer.

One of the finest wildland organizers in the past 50 years is my dear friend Bart Koehler, who is now struggling with Parkinson's disease. Millions of acres throughout the West enjoy protection and broad local support because of Bart's decades of on-the-ground advocacy.

Bart started his career as the Wyoming representative of The Wilderness Society. In the 1970s, the Wyoming Legislature passed resolutions opposing any new wilderness designations, and it remains the only state where federal law prohibits the president from establishing new national monuments.

But Bart was undaunted: He organized the people of Wyoming, not just to demand more wilderness areas but to more fully protect existing ones from the resource extraction allowed by the 1964 Wilderness Act. And he did it the old-fashioned way, face-to-face.

As the Wyoming-based field editor of *High Country News* in the late 1970s and early '80s, and later working for the Sierra Club, I quickly bonded with Bart. I was amazed at his knowledge of the land and the laws and his ability to win people over to the wilderness cause.

Many ranchers and outfitters believed that wilderness designations meant an end to grazing and hunting. Bart explained that, in fact, the Wilderness Act guaranteed that these activities could continue. The real threat to their livelihoods and ways of life, he warned, were the mines, oil and gas fields and clear-cut logging operations.

During his travels, Bart often stopped by my log cabin home. He'd help the kids build their treehouse, and we'd spend the evenings singing while he strummed his guitar. We traveled to public-lands hearings where I met many of the unlikely new wilderness supporters he had found, inspired and trained.

Bart always kept things light and fun. To assist in our anti-coal campaigns, he created a band called The Strip Mine Patriots. He organized a boat race on the Snake River through Grand Teton National Park. The winner was whoever came in last. At the finish line, Mardy Murie, the octogenarian *grande dame* of wilderness protection, fed us cookies and read aloud from the Dr. Seuss classic *The Lorax*.

In 1978, The Wilderness Society shuttered its Western organizing operations and focused on lobbyists and policy analysts in Washington, D.C. Bart and other laid-off Wilderness Society staff banded together to keep grassroots wilderness advocacy alive, building up state-level groups like the Wyoming Wilderness Association, the Nevada Wilderness Association, the Utah Wilderness Association and the California Wilderness Coalition.

Then, Bart and a band of brothers established Earth First! as a counter to the established D.C.-based groups that they thought were making too many concessions for minimal wilderness protection. Their motto: "No Compromise in Defense of Mother Earth!"

Dave Foreman (another ex-Wilderness Society organizer) was the primary public speaker and rabble-rouser. Bart took on the role of movement troubadour, calling himself Johnny Sagebrush and leading the crowds and campfire circles in original songs about wilderness destruction, wilderness protection and the joys of wild country.

Bart later led the Southeast Alaska Conservation Council, organizing Native and rural Alaskans and salmon fishermen to halt overcutting on the Tongass National Forest. In later years, he served as a director of the Wilderness Support Center, helping locals in hostile rural areas throughout the West to enact wildland protections.

Over time, Bart's physical condition made it difficult to travel, hike, canoe and organize. He ended his full-time work but never retired from the cause.

Now, Bart is in a care facility in Arizona. His fingers can no longer strum a guitar, so he joins other musicians and beats on a drum to keep the music alive. His wife, Julie, is by his side, and a stream of well-wishers visit and send him notes of appreciation.

He has left in place a powerful community that will carry on his work. For a wilderness organizer, that's the finest legacy of all.

Bruce Hamilton was a field editor of High Country News *and served in various roles at the Sierra Club. He is currently a volunteer at Third Act, an organization of elders focused on protecting the climate and democracy.*

Got a story you'd like to share? Someone deserving of recognition or remembrance? Write it down and send it to dearfriends@hcn.org, or P.O. Box 1090, Paonia, CO 81428. We'll do our best to get it into the Community Pages.

Thank you, readers!

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So many of you donated to *HCN* in December that we are still — much to our delight — working through the list of names. If your name isn't mentioned in this issue, please check the April issue. Thank you for supporting journalism that has a real and on-the-ground impact.

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THE SHRINKING RIVER

Farms on the Colorado River try to adapt in a time of crisis.

PHOTOS AND TEXT BY **CAITLIN OCHS**

A 40-mile canal carries water from Colorado's McPhee Reservoir to the Ute Mountain Farm and Ranch Enterprise. The reservoir also supplies drinking water to the residents of Towaoc, on the tribal nation. Regardless of how much water it gets each year, the farm is responsible for covering a majority of canal maintenance costs.

FOR A CENTURY, the Colorado River has been managed in pieces. Legally and politically, it's divided into two basins, with each state and community focused on securing its respective water supply. But that is not how a river functions. The Colorado River is an interconnected system, sustained by Rocky Mountain snowpack, rainfall and groundwater.

It is fragile, and under increasing stress. Two and a half decades into this century, the river that built the modern West has 20% less water flowing through it than it did on average in the last century. As heat and drought intensify, so do the stakes: Failure to recognize the severity of changing conditions, managing the river in parts without considering needs of the whole and inadequate planning for long-term shortages put the future of all the basin at risk.

For the last five years, I have documented how the Colorado River Basin's farmers are navigating water shortages and uncertainty amid deep political divisions about the river's future. This project, called American Adaptation, examines three agricultural communities whose survival is threatened by a shrinking river, examining what happens to people when policies and water management struggle to keep pace with a changing climate.

In one of the river's northern watersheds, the Ute Mountain Farm and Ranch Enterprise is adapting its management as the water it relies on becomes less dependable. In central Arizona, farmers have returned to well water after becoming the first communities to have their supply cut off completely due to the basin-wide shortage. And in California's Imperial Valley, the farms that receive the river's largest water allocation are under growing pressure to share the burden of shortage.

Together, their stories illustrate the stakes — and rising tensions — of the current negotiations over the river's future management. States, tribal nations and the federal government are reckoning with 100 years of developing water infrastructure based on assumptions of continuing abundance and expansion. These ideas — and the legal frameworks built around them — are colliding with the reality of a river with much less water than expected, raising complex questions about what the Colorado can sustain, how its water should be used and who will shoulder the necessary cuts.

Caitlin Ochs is a visual journalist and National Geographic Explorer. Her work focuses on reporting issues connected to water, climate and agriculture.

This project was supported by the National Geographic Society's World Freshwater Initiative.

WHEN WATER IS UNCERTAIN

Towaoc, Colorado, at the foot of Sleeping Ute Mountain

ON 7,600 ACRES painstakingly carved out of desert brush, the Ute Mountain Farm and Ranch, a tribally run enterprise of the Ute Mountain Ute nation, produces cattle, alfalfa, corn and wheat. Its operations are led by Simon Martinez, Eric Whyte and Michael Vicente, who have deep personal connections to the enterprise. Martinez helped build the dam for the reservoir that provides the farm's water, while Whyte cleared desert brush and mapped where the fields would go. Vicente, as the lead irrigator, can account for every drop of water that's used.

In good years, the farm's circular fields flourish in brilliant green bursts. But the past decade has brought increasingly erratic access to water. Each spring, the local irrigation district announces potential cuts after assessing snowpack runoff and the available water stored in nearby McPhee Reservoir. In 2021, the farm received just 10% of its water allocation and was forced to leave 6,000 acres unplanted. In 2022, 30% of the water came in, and last year, 34%, which the farm was able to increase to 50% after leasing shares from other water users.

To survive, they adapted. Every year, the farm's leadership creates numerous plans for different water scenarios. They have applied for grants, implemented low-flow nozzles in the irrigation system, installed small-scale hydropower generators. They joined a Land Institute pilot program to test crops that use less water.

"We still haven't thrown the towel in," said Simon Martinez. "Nobody ever thought, when the reservoir was built, that there wouldn't be enough water to supply the farms that have been put out here. It's not only us; it's happening all through southwestern Colorado."

Low-water years leave their mark. Brush and scrub quickly reclaim unplanted fields. Employees laid off during dry years are hard to replace. During consecutive years of heat and drought, farms that rely on the basin's many smaller reservoirs become even more vulnerable. As the number of dry years grows, it is increasingly uncertain how much shortage the Ute Mountain Farm and Ranch Enterprise can sustain in the long term, despite the farmers' determination to adapt.

Trees and bare earth line a depleted McPhee Reservoir. Under Western water law, the most senior water users have the most secure rights during shortages, based on their priority date. When the Ute Mountain Ute Tribe settled its water rights with Colorado in the 1980s, the tribe agreed to give up an 1868 water right in return for a 1940s right and infrastructure funding. At the time, models didn't show the long-term shortage risk. Now, modeling shows much greater uncertainty *(left)*.

Lamar Fields, a tribal member, gathers blue corn to sample. With increasingly unreliable access to water, flexible crops like corn have become integral to the farm's survival. To increase revenue, the farm built a mill to process crops like blue corn *(below)*.

In good years, the farm's circular fields flourish in brilliant green bursts. But the past decade has brought increasingly erratic water access.

Sprinkler lines hang from a disassembled center pivot near a fallow field at the Ute Mountain Farm and Ranch Enterprise in Towaoc.

Alfalfa is harvested at the Ute Mountain Farm and Ranch Enterprise. While water-intensive, alfalfa is one of the farm's top-selling crops and integral to its economic survival *(above)*.

Irrigation manager Michael Vicente pauses for a portrait after repairing a center pivot. As a tribal member deeply familiar with the farm's operations, he plans to step into a leadership role managing the farm in coming years *(right)*.

"We still haven't thrown the towel in."

Tracy Weeks checks one of the farm's center pivots for clogged nozzles. During the summer months, this is a full-time, labor-intensive job — one essential for the farm's survival. As the center pivot rotates, if the water is not distributed evenly, plants will either get too much or too little, affecting their growth *(left)*.

Morgan Quick checks the moisture content of a bale of alfalfa during a busy season at the Ute Mountain Farm and Ranch Enterprise. Baling at night is more efficient, due to the cooler temperatures *(below)*.

WHEN WATER DISAPPEARS

Pinal County, Arizona, in the Sonoran Desert

HUNDREDS OF MILES SOUTH, Will Clemens manages his uncle's 2,100-acre farm, cultivating cotton, alfalfa and Bermuda grass. Farmers in this region operate with a year-round growing season punctuated by dust storms and summer monsoons.

In this intense environment, wells were the only water source before Colorado River water became available. Until the 1980s, farmers drew their water from deep underground, contributing to fissures, land subsidence and drying wells. The completion of the Central Arizona Project alleviated the pressure, delivering farmers cheap imported river water that was classified as lower priority and the first to be cut during shortages. Deliveries continued until 2022, when low water levels at Lake Mead triggered federal cuts, and central Arizona farms lost access. In response, Clemens' local irrigation district drilled a dozen new wells.

Without the river, Clemens and his neighbors have seen the canals' water drop. At times, their irrigation district will cut off water before a field is fully irrigated, or struggle to keep up with the farmers' water orders. More pressure on groundwater raises questions about what is sustainable in the future. Large parts of Arizona have no legal limits on pumping water from the ground. Even areas with legally protected groundwater have failed to meet a safe yield goal set in the 1980s to balance groundwater taken each year with naturally replenished water by 2025.

Some central Arizona farmers are selling or leasing their farmland to solar developers, as water dwindles and energy demands grow. Miles up the road from where Clemens farms, sleek black grids of solar panels gleam next to green alfalfa. For years, Arnold Burruel, Clemens' uncle, has been in talks with a solar developer about selling the land.

"I've been asking myself: Does America really need to be in the agriculture industry?" Burruel said. "America is not totally enamored with agriculture when it comes to pesticides, herbicides, groundwater, GMOs — all of the above. We are at a crossroads. Are we going to continue to farm the way we are farming and heavily subsidize growers that can't make ends meet? Society has to come up with an answer."

The Sawtooth Mountains are reflected in a flood-irrigated field. Flood irrigation is the preferred method for most farmers in Pinal County. It's water-intensive but effective — and it also flushes salt out of the crops' root zones, helping them grow *(left).*

Workers prepare to put tarps over a stack of hay ahead of a monsoon rain. In summer 2023, hay prices dropped so low that any farms that were able to do so stored their bales until prices recovered. Fluctuating commodity prices are a constant source of stress *(below).*

Groundwater is pumped into a canal to irrigate a field. Due to Colorado River water shortages, farmers in central Arizona rely completely on water pulled from underground. How much pumping the aquifer can sustain is unclear. A majority of Arizona's groundwater remains unregulated *(bottom left).*

Farm manager Will Clemens dips his hat in a canal to cool off during a 100-plus-degree day. Extreme heat has become an expected part of daily life here. On some days, Clemens and his team rise at 2 a.m. to bale hay and avoid the heat *(bottom right).*

A driller examines a well log of an area being drilled for irrigation in central Arizona. After the water supply from the river was cut, federal and state funding allowed the local irrigation district to expand its existing well field *(right).*

Workers rest after clearing dried mud from an irrigation canal. Less water flowing in canals means increased sediment deposits — yet another challenge for farmers during shortages *(left).*

"I've been asking myself, does America really need to be in the agriculture industry?"

Will Clemens cleans a solar panel that collects data for a company interested in purchasing the land. With uncertain water access, some farms are embracing the transition to solar as a better use of resources. Others, worried about food security and the health of rural communities, argue for preserving farmland *(left).*

Fields of solar panels border farmland in central Arizona. When Pinal County farmers lost their Colorado River allocation, a number of farmers sold their land to solar developers. Some counties have passed laws limiting solar expansion *(below).*

WHEN WATER IS ABUNDANT

Imperial Valley, California, just north of the Mexican border

FROM ABOVE, the All American Canal forms a stark blue line, slicing through the Algodones Dunes. One of the world's largest canals, it is fed by the Imperial Dam, which diverts up to 6.8 million gallons of water each minute from the Colorado River.

This is the only water source for 500,000 acres of Imperial Valley farmland. Farms here are protected by senior rights at low risk of cuts and receive regular releases from Lake Mead, the largest reservoir in the United States. During summer months, the sun looms over the valley's dusty, flat horizon, and temperatures often climb above 100 degrees. Despite decades of drought and growing water shortage, water has flowed uninterrupted to the Imperial Valley.

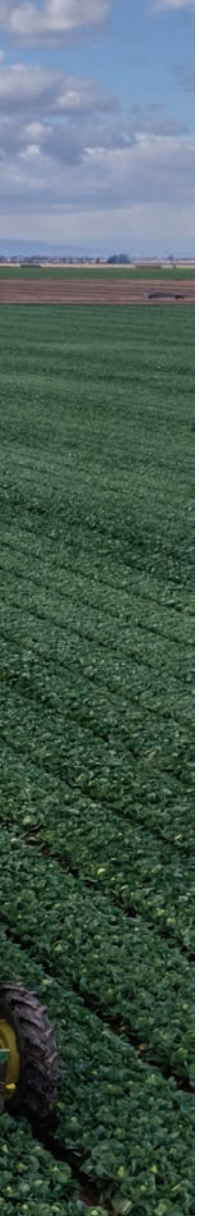
Fourth-generation family farmer Jack Vessey, who oversees a 10,000-acre produce operation, knows the canal system well. Growing up, he searched for places to swim on hot summer days.

"We take water seriously," said Vessey, who added sprinkler systems, which are more efficient than flood irrigation. In recent years, the Imperial Irrigation District joined other communities throughout the basin in voluntarily cutting water through 2026 in exchange for federal funds. The district's compensation was several hundred dollars more per acre-foot than other participants. But as funding set aside for Western water by the Biden administration is drawn down, it is unclear how much will be available to pay for future voluntary cuts.

Vessey is aware of the growing pressure on the river and the valley's farms, but he emphasizes that the community has helped with shortages and is protective of its water.

"I have a responsibility for the people who work here to make sure we survive," he said. "I have to be a little selfish at some point and say, 'Keep giving us the water we need.' I know we've got to do our part, but I can look in the mirror and say we are not wasting water, we are growing food people need.

"If it wasn't for that canal coming off the Colorado River, this would just turn to desert."



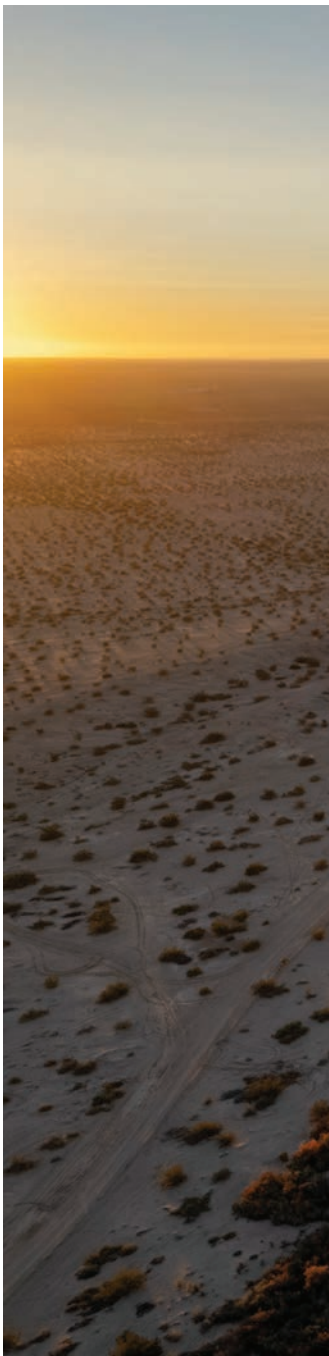
A team harvests green cabbage at Vessey Farm. Each day, hundreds of seasonal workers spend hours on buses traveling from Northern Mexico to Imperial Valley fields. Their labor is essential for the harvest *(left).*

Workers harvest cabbage through intense manual labor — bending, cutting, trimming and sorting fast enough to keep up with the tractor, often in triple-digit heat *(below).*

Jack Vessey *(far right)* speaks while co-leading a meeting with farm manager Bartt Ries. These pre-sunrise meetings allow local leadership to coordinate complex irrigation, harvest and production schedules *(bottom).*

"I have a responsibility for the people who work here to make sure we survive."

Portraits of generations of Vessey family farmers are displayed at the Vessey & Company farm office. With water rights dating back to the early 1900s, the agricultural producers in the Imperial Valley hold some of the most senior water rights on the Colorado River *(above)*.



"I know we've got to do our part, but I can look in the mirror and say we are not wasting water, we are growing food people need."

Jesus, a member of the farm's irrigation team, uses a shovel to help spread water evenly across a flood-irrigated field on a 118-degree day in the Imperial Valley. The Imperial Irrigation District is, by volume, the largest water district in the country *(left)*.

The High Line Canal carries water from the Colorado River to the fields. Creating lush fields in the desert in one of the driest, hottest places on Earth, this system makes farming in the valley possible *(below)*.

The messy politics of protecting Alaska's struggling caribou

To boost one herd's numbers, state officials killed scores of bears.

BY MAX GRAHAM

WHEN JANET BAVILLA WAS A TEENAGER, it wasn't hard to find caribou. The animals swept across the land, dozens or even hundreds at a time, passing near her village on Alaska's Bering Sea coast. On family hunts, Bavilla remembers riding her snow machine just a few miles before encountering the herd.

Bavilla, who is Yup'ik, harvested a couple of animals each season — gathering enough meat to eat, share with neighbors and relatives, and freeze for later. She'd dry some to make a popular snack called *kinengyak* in Yugtun, the local language, and then dip it in seal oil. Or she'd cut frozen hunks into pieces and eat them raw. In all its forms, caribou helped sustain the residents of a region with few grocery stores, hundreds of miles from Alaska's road system and accessible only by boat or small plane.

But those days have waned. It's been years since Bavilla, now in her 40s, has put away caribou meat. "I can't remember the last time I went out," she said.

The Mulchatna herd that Bavilla grew up hunting, like several other Alaska caribou populations, has thinned dramatically in recent years. It reached its latest peak — some 200,000 animals — in the 1990s, when Bavilla was in high school. But then it plummeted to an estimated low of 12,000 in 2022. Caribou no longer pass by Bavilla's village, Platinum, in large numbers, and the changing climate — lack of snow, rivers that no longer reliably freeze over — has made accessing the remaining few much harder. "I feel like a big part of our subsistence is missing," Bavilla said.

To help the Mulchatna herd rebound, state wildlife managers have resorted to drastic measures. In 2021, they prohibited hunting — a move that some local Indigenous leaders and hunters, including Bavilla, say was necessary. Two years later, state employees helicoptered over part of the herd's calving grounds, shooting bears and wolves from the sky. In just over two weeks, state officials killed nearly 100 bears and a handful of wolves. A year later, they continued the culling.

Altogether, officials have killed almost 200 bears and some 20 wolves over the past three years — all in an attempt to increase the Mulchatna caribou's

Caribou from the Mulchatna herd cross a frozen pond near Eek Lake, south of Bethel, Alaska, in 2021. **Katie Baldwin Basile / KYUK**

survival rates. The campaign is expected to continue over the next few summers.

But it has sparked litigation and intense pushback from wildlife advocates, scientists and former state politicians and regulators, who question its efficacy. Former Gov. Tony Knowles called it a "massacre" of one of the state's most iconic animals: the grizzly bear, which is commonly known to Alaskans as the brown bear.

These critics, many of them from urban centers hundreds of miles from the caribou grounds, have raised numerous concerns. While some research suggests that predator control, in certain situations, might temporarily help ungulate populations, skeptics say there's scant evidence that killing bears will actually help the Mulchatna caribou recover. And they worry, too, that it could harm a bear population that's beloved both in and out of the state.

But state officials insist that targeting bears is worth a try, as one of the only actions they can take directly to help the struggling herd. And they have considerable support from some of the people living closest to the animals, many of whom are Indigenous. A number of Alaska Native organizations, including the statewide Alaska Federation of Natives and one of the largest tribal governments in the region, the Orutsararmiut Native Council in Bethel, have passed resolutions supporting the predator control program.

Their support stems from a desire to boost food security and restore traditional hunting in a region far removed from Alaska's road system — a place where imported goods are limited and expensive, and many people harvest food directly from the land. In the western portion of the Mulchatna herd's range, the caribou shortage has coincided with low salmon returns and rising grocery prices, "making it more difficult for residents to feed their families with healthy foods," the Yukon-Kuskokwim Health Corporation, a regional tribal health organization, said in a June 2025 resolution backing the state's efforts.

Not everyone in the region agrees with this approach: Some Alaska Native wildlife experts have criticized the bear killing as a form of cruelty at odds with traditional values, and some subsistence hunters view it as another chapter in a long history of top-down management by settler governments. But many others, including Bavilla, firmly support the program, arguing that early evidence of a rebound in caribou numbers indicates that it's working.

"I believe the caribou are at a turning point where they just need a little help," Bavilla said.

THE IDEA TO KILL BEARS to save caribou first became public during a 2022 meeting of the Alaska Board of Game. The board, made up of seven members appointed by the governor, oversees hunting regulations with guidance from the Alaska Department of Fish and Game.

For years, the agency has supervised the shooting and trapping of wolves on the Mulchatna herd's calving grounds, aiming to boost survival rates among young caribou. Wolves are prolific consumers of caribou; on average, one wolf can kill 25 a year, one scientist told *High Country News*. But despite that program, herd numbers still hadn't recovered.

This worried Stosh Hoffman, an Alaska Native hunter and former commercial fisherman, who was, at the time, the chair of the Game Board. Like many in the region, Hoffman, who lives in the Western Alaska hub town of Bethel, hunted the Mulchatna herd with his family before its precipitous decline.

"I think there's a lot more we can do to help that herd," Hoffman said at the meeting. One idea, he suggested, would be to target bears as well as wolves. Like wolves, grizzlies feed on caribou calves, and local hunters had reported an uptick in bears near the herd, though state officials had not formally assessed the population. "Every predator is making a huge impact right now, especially the bears on the calving grounds," Hoffman said.

This kind of thinking isn't new; predator control programs, as they're often euphemized, are common across the country. Despite mixed evidence of their effectiveness, proponents have long argued that killing carnivores is one of the few actions government agencies can take to boost populations of prey species. Before launching the Mulchatna initiative, Fish and Game staff indicated they might encounter, and kill, five to 15 brown bears on the calving grounds. When the killing had finished, the agency reported a much higher number: State field workers had gunned down 94 grizzlies, five black bears and five wolves.

"I think there's a lot more we can do to help that herd."

Outrage ensued. An advocacy group, Alaska Wildlife Alliance, and an Anchorage attorney filed lawsuits against the state, arguing there was "no credible scientific basis" for the killing. Opponents wrote strongly worded op-eds in the *Anchorage Daily News*, describing their "disgust and fury mixed with heartbreak" over the "slaughter."

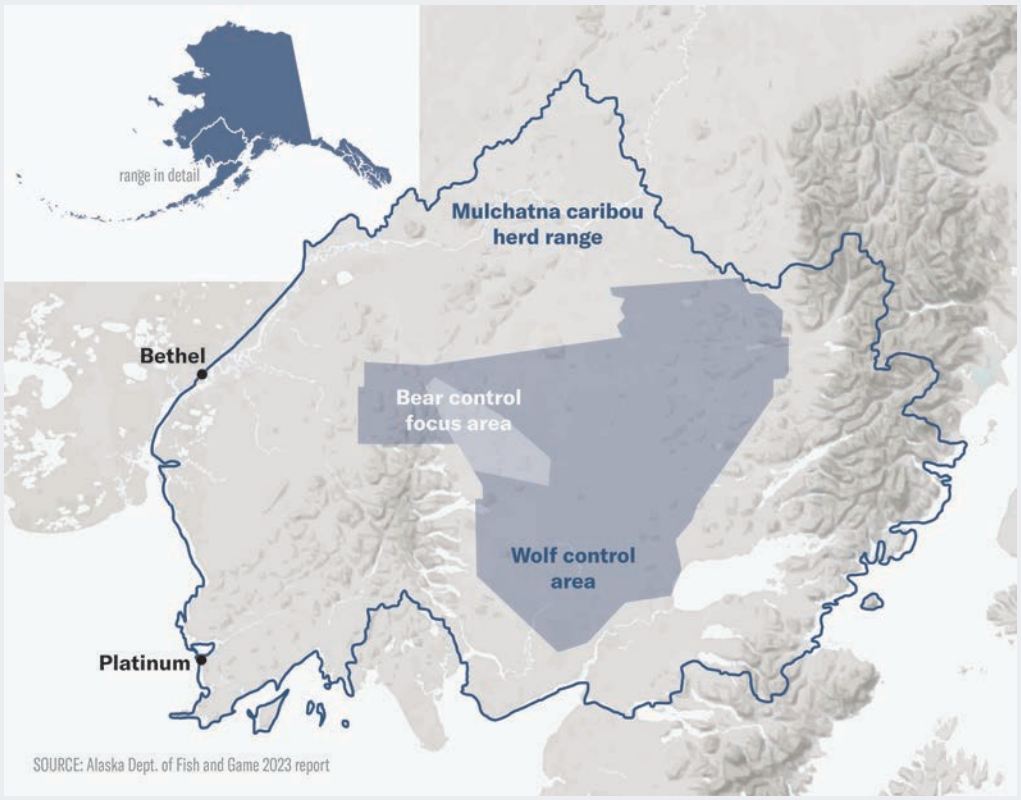
"The state's predator-control program violates Indigenous values and ignores the real drivers of caribou decline: climate change, habitat degradation, disease and nutritional stress," Michelle Quillin, a Koyukon Athabascan wildlife biologist, wrote in an op-ed last year.

Jeff Stetz, a wildlife biologist, has become one of the program's more outspoken critics. He worked at the Alaska Department of Fish and Game for five years and was coordinating Mulchatna caribou research when the Game Board decided to add bears to the predator control program.

"I was absolutely dumbfounded," he said. A major concern for Stetz and others was the way the 2022 meeting was handled: Board members introduced the idea of killing bears and then approved it, without any prior notice or opportunity for public comment. A judge later ruled that this violated Alaska's Constitution.

But Stetz was alarmed by more than the fact that the proposal appeared to come out of nowhere. From a scientific standpoint, he said, it was "wildly inappropriate." Stetz isn't against predator control on principle, but he felt that in this case, the state hadn't done enough research. "The scientific foundation for it was absent."

In their defense, state officials have cited a rise in the Mulchatna herd's numbers over

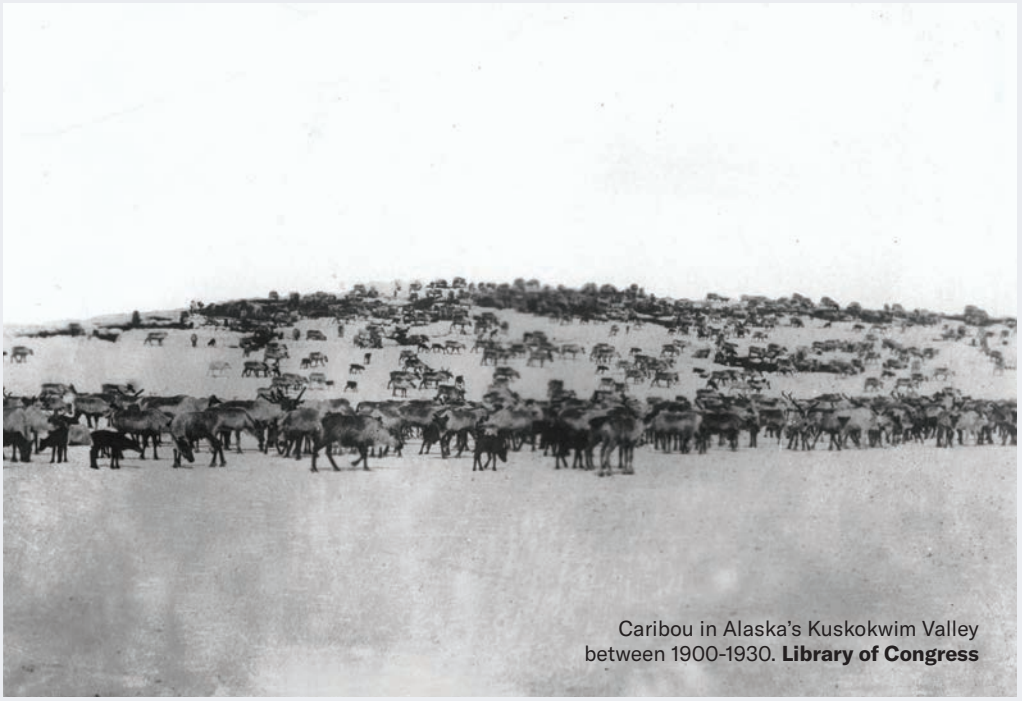


Clockwise from top left: Jake Fletcher, chair of the Alaska Board of Game, and Stosh Hoffman, the board's vice chair, discuss predator control at a meeting in Anchorage last July. **Yereth Rosen / Alaska Beacon**

Doug Vincent-Lang, Alaska Department of Fish and Game commissioner, and Ryan Scott, director of the agency's Wildlife Conservation Division. **Yereth Rosen / Alaska Beacon**

Locals listen during the public comment period at a meeting last March. **Alaska's News Source**

A grizzly bear feeds on a caribou at an unidentified location in Alaska. **Zoonar / Alamy**



Caribou in Alaska's Kuskokwim Valley between 1900-1930. **Library of Congress**

"I don't think there's a silver-bullet perfect solution, unfortunately."

the past three years: The agency estimated the population to be just over 16,000 last year — a 30% increase since the culling started. Critics say it's still too early to be certain whether the program has been effective.

The rift offers a window into the complex science and messy politics of caribou conservation — an issue that's coming into clearer view as herds across the North face new and intensifying threats. Over the last few decades, as the Arctic warmed and industrial development expanded, tundra caribou numbers have fallen by 65%, according to a 2024 report by the National Oceanic and Atmospheric Administration. Caribou are notably adaptable and resilient, with remarkable memories and eyes that change color to adjust to the wide spectrum of Arctic light. But as their ecosystem shifts, they face new challenges: During warmer summers, they sometimes struggle to avoid swarms of harassing insects, while in the cooler months, increasing rain on snow can form ice that traps lichen, a dietary staple.

Many of Alaska's herds have followed this downward trend. But the question of how to stanch the decline has proved vexing to wildlife managers. State and federal wildlife agencies lack the power to reverse global warming, and some of the measures within their control, like prohibiting hunting and killing predators, aren't always effective and tend to be controversial.

As the Mulchatna herd's future becomes increasingly precarious, researchers and managers will be tasked not only with collecting new data and trying to figure out what exactly is going on, but also with the possibly more challenging work of navigating an ever-thornier political landscape, in which hunters, Indigenous leaders, regulators, scientists and conservation groups don't always see eye-to-eye.

AT THE SAME 2022 MEETING where the Board of Game approved the bear killing, two state biologists presented research that cast doubt on the idea that predation was causing the Mulchatna herd's decline.

Instead, they suggested that, based on preliminary data, two other factors — nutrition and disease — were more likely to be inhibiting the herd's recovery. The scientists had detected high levels of exposure to *Brucella*, a bacteria that can cause stillbirths and poor health in calves. They also observed low levels of body fat in lactating females, possibly indicating nutritional deficiencies. Merely getting rid of predators might not help the caribou, the scientists said.

Doug Vincent-Lang, the commissioner of the Alaska Department of Fish and Game, was skeptical. He told the scientists that he was "fundamentally struggling" with the idea that predator control wouldn't have a role in the herd's recovery.

"It may not have been the reason for the decline. It may not be the reason for the lack of recovery. But it certainly seems, given where we are with this population, that efforts, basically, to protect calves from predation would go a long way towards helping," Vincent-Lang said. "It seems like that's one of the only things that's in our direct control."

Vincent-Lang's perspective may make intuitive sense: Fewer predators ought to mean more calves. But skeptics say that won't necessarily translate into a stronger herd if the calves that would have been eaten end up dying anyway from disease or malnutrition.

To Jeff Stetz, the 2022 meeting indicated that the state's wildlife managers were ignoring their own biologists' research and "literally going in the face of the best available information."

One challenge officials face is that studies have been slow to explain why population numbers have stayed low. And there's ample debate about whether the herd's decline is an emergency requiring urgent intervention, or merely part of a natural cycle. Unlike other herds, which face encroachment on their habitat from industrial oil development and mining operations, the Mulchatna's range — which is about six times the size of the state of Vermont — is still largely roadless and wild.

Local hunters and elders observed that overgrazing when the population peaked in the 1990s led to a food shortage, causing malnutrition and greater susceptibility to disease and predation. Biologists have echoed this theory, and some say that climate change-related conditions, like winter rainstorms and the expansion of shrubs and trees into caribou-favored tundra, also pose a challenge.

Natural fluctuations in caribou numbers

are typically driven by habitat changes and the availability of certain foods, including lichen, said Patrick Walsh, who worked for two decades as a wildlife biologist at Alaska's Togiak National Wildlife Refuge, which includes important Mulchatna caribou habitat.

But the Department of Fish and Game has yet to do a formal habitat assessment, Walsh said. According to Walsh, that would give biologists a firmer understanding of the possible factors limiting the herd's growth, including the amount of food and tundra available to the animals. Without that research, it's tough to make prudent management decisions, Walsh said.

"If habitat is the population driver, then trying to correct it with something that's not really driving the population, like predation, doesn't succeed," he added.

Walsh also questions the population target for the Mulchatna herd — 30,000 to 80,000 caribou — that managers set more than a decade ago. He believes that goal is unrealistically high.

Caribou populations naturally cycle through booms and busts. A few decades before it peaked in the 1990s, the herd was estimated to be about the size that it is today. Walsh views its recent decline largely as a natural "correction" to unsustainable growth. "The fact that numbers have changed a whole lot is what you should expect," he said.

But Hoffman, the Game Board member from Bethel, said that while the population has always fluctuated, today's numbers are especially low; there are historical accounts of a boom in the 19th century, when "this country must have been overwhelmed with caribou," Hoffman said.

Both Hoffman and Bavilla, the hunter in Platinum, said they hope local voices don't get drowned out by the lawsuits and comment letters from people who live outside the region. "We have a better understanding of our area than folks who don't live here," Bavilla said.

Ryan Scott, director of the Wildlife Conservation Division at the Alaska Department of Fish and Game, says his agency eventually should reassess its targets for the herd. But he told *High Country News* that he thinks it would be "extremely arbitrary" to do that while officials are still actively working to boost numbers. He expects the Board of Game to discuss its objectives in 2028, when the predator control program expires.

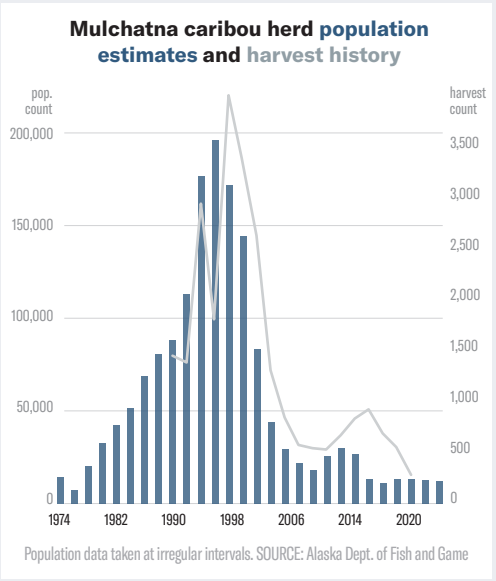
A state judge ruled last year that the culling was unconstitutional because the Game Board had adopted it without sufficient public notice and had not ensured that it could be done without harming bear populations. State officials quickly issued an emergency order to reauthorize the program, and the killing continued, albeit only briefly. Fish and Game employees shot 11 bears over a weekend in May 2025, before a second state judge found them in violation of the earlier court ruling and ordered them to stop.

Seeking to correct the legal flaws, the Board of Game held a special meeting in July and once again approved the culling. There, a biologist with the Department of Fish and Game presented new research that appeared to provide a stronger basis for predator control.

That researcher, Kristin Denryter, said more recent data on body conditions, pregnancy rates and calf mortality suggest nutrition and disease have not been major obstacles to the herd's growth, and that predation was a more likely culprit. "I can't think of anything else that would explain it," she said in an interview. She and her colleagues have identified predation as the primary cause of calf and adult female mortality in the herd, and their research indicates that bears are killing calves that otherwise would survive, she said.

Still, the state's critics haven't given up. In November, Alaska Wildlife Alliance — joined by the Center for Biological Diversity — filed a new legal challenge. The lawsuit focuses less on caribou than on bears: The groups allege that the state "authorized the unchecked killing" of bears without taking a "hard look" at bear population data.

State officials, for their part, have said they are targeting bears in a small area for a limited amount of time and that the wider population is not at risk. (Alaska is home to some 30,000 grizzlies.) "We're not going to drive brown bear numbers in Southwest



Stosh Hoffman's son, Gage, on a caribou hunt at Eek Lake in 2010. **Courtesy of the Hoffman family**

Alaska into the ground," Scott said in an interview before the latest lawsuit was filed.

HOW DO YOU MANAGE a struggling caribou population when you have limited data and competing values?

Managers typically have three tools at their disposal, said Anne Gunn, a British Columbia-based wildlife biologist who has studied caribou for decades. They can influence habitat through industrial development policies — restricting road, mine and pipeline construction, for instance. They can regulate hunting. And they can kill or capture predators.

The most effective strategy is to regulate development, several scientists told *High Country News*. Caribou are capable of remembering remarkably subtle details about landscapes and surviving in harsh conditions, but they're also famously sensitive to industrial activity. Access to open habitat is critical, Gunn said: Making sure they have ample space to make decisions "is likely way more important than predator control."

Generally speaking, she added, removing predators might be useful under dire circumstances, when caribou numbers are extremely low and other measures have failed. But no matter which levers managers pull, they tend to be locked into "reductionist science." Focusing on a single factor, whether grizzly bears or nutrition, inevitably fails to capture the highly complex dynamics between caribou and their ecosystems. "Our thinking and the actual techniques that we can use are mismatched to the subtlety and the intricacy of the systems that we are 'conserving' or 'managing,'" Gunn said.

Given this mismatch, it's no wonder that the science and politics of management remain fraught. In the Mulchatna debate, everyone seems to agree that caribou are important. And everyone seems to want conservation. They just don't agree on how to achieve it.

"I don't think there's a silver-bullet perfect solution, unfortunately," said Nicole Schmitt, executive director of Alaska Wildlife Alliance. One place to start, though, would be "reframing our expectations about what we can do," she added. "We just need to have a really honest kind of look in the metaphorical mirror about what it is we're chasing."

As the controversy continues, the Mulchatna caribou hunt remains closed, aside from an isolated and very limited harvest on remote federal lands on the eastern edge of the range. Janet Bavilla has tried to fill the gap with other foods, like fish, marine mammals and moose, as well as store-bought goods that she orders from Anchorage, more than 400 miles away.

"Moose is nice if you can get it," she said. But it isn't enough to replace caribou, in part because reaching moose habitat is increasingly difficult as snow conditions become more unpredictable.

For now, Bavilla is taking solace in the recent increase in the herd's numbers. She hopes that someday she'll once again head out on her snow machine in search of caribou and return home with a good haul of meat.

Max Graham is a journalist based in Anchorage, Alaska.

Igiugig hunters look for signs of the Mulchatna caribou herd during the winter of 2016. **James M. Van Lanen / Alaska Dept. of Fish and Game**

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Q&A

A very unusual ecosystem

Queer ecology and the fight to save salt lakes in the Great Basin, and elsewhere.

BY ANNIE ROSENTHAL
ILLUSTRATION BY LAUREN CROW

ON CAROLINE TRACEY'S inaugural visit to a salt lake, California's Salton Sea, she heard something crunch underneath her feet. Looking down, she recoiled: She was standing on a bed of fish skeletons.

But once she ventured closer to the water, Tracey discovered that what had appeared to be a wasteland was, in fact, an avian oasis — home to scuttling sandpipers, plovers and snowy egrets.

"This was the first of salt lakes' many lessons for me: places that seem ugly or desolate are vital and complex in ways that you don't notice until you give them a chance," she writes in her new book, *Salt Lakes: An Unnatural History*.

Tracey's debut, which publishes March 17, is a celebration of these strange and embattled ecosystems. Working as a geographer and *High Country News* contributor, she learned that there are dozens of salt lakes around the world — glistening bodies of water hidden deep in desert valleys, teeming with pinkish algae and salt-tolerant shrimp. But agricultural consumption and climate change are causing nearly all of them to dry up, with dire consequences for biodiversity and human health.

Traveling all over the Great Basin, and to Kazakhstan, Mexico and Argentina, Tracey documents both the shrinking lakes and the varied communities working to protect them. The book doubles as a kind

of aquatic autobiography: Interwoven with her reporting is the story of how Tracey came into queerness, learning to understand her own desires and values through her encounters with literature and landscape. *Salt Lakes* is personal, pragmatic and cautiously hopeful — a thoughtful meditation on what it means to inhabit a rapidly transforming world.

HCN recently spoke with Tracey about the challenges facing salt lakes, the solutions emerging to preserve them, and what queerness can teach us about confronting the losses of climate change. The conversation has been edited for length and clarity.

This book documents a full decade of your thinking and writing about salt lakes. Why do you think salt lakes so obsessed you?

I was driving around the Great Basin and I saw these lakes, and they're very striking. Because they have these minerals dissolved in the water, they actually reflect the sky better than fresh water. So I think the draw for me for a long time was just that there are these extraordinarily beautiful, odd bodies of water in the very dry landscape. Once I started doing more research, I became really fascinated by the different histories of water diversion that had affected the lakes; you can't really write about salt lakes without getting deeply into the history of the Bureau of Reclamation and irrigation in the American West. And then, more recently, the different types of activism that people have tried to save the lakes — those tools just gave me a lot of optimism, which is something that's hard to come by as an environmental reporter.

For a book about ecological damage, this one is surprisingly hopeful. You write that salt lakes' decline is actually a very solvable problem in comparison to other ecological restoration issues. What makes you optimistic?

The basic geology of salt lakes is that they form in closed basins. When enough water isn't reaching them, they just start to evaporate. Historically, the issue has mainly been water diversion — irrigation for things like alfalfa or cotton. So, the simple idea is, if we reduce the amount of alfalfa that we are growing in the Southwest, much more water will reach the Great Salt Lake Basin. At the same time, climate change has really accelerated (salt lakes') decline because of diminished snowpack, so we're facing a situation that isn't quite so easy because there's just less water available.

There are a handful of tools being (used) at salt lakes that are really exciting. One is the Clean Air Act. Drying-up salt lakes create a ton of dust; for instance, at the Salton Sea in California, the communities around the lake have experienced really severe respiratory issues. So that's holding the entities that are responsible for drying the lakes up accountable.

Another is the Public Trust Doctrine, which is the idea that the government is responsible for (maintaining) the bodies of water within its borders. In California there was a successful lawsuit where a group of residents said the state needs to uphold this doctrine and protect these salt lakes. Just the very idea that there is a shared value among the people of the state over what the state is responsible for, I think, is powerful.

In the case of the Zuni Salt Lake in New Mexico, there was actually a successful LandBack case, which I think is pretty inspiring, not only for salt lakes but for many different types of land and water around the country. There's also a small but mighty number of environmental humanities scholars of Mormon scripture, and they're directly involved in the Great Salt Lake fight. I think that taking these religious concepts of the sacred allows you to deepen your relationship to place in a way that just thinking about nature as beautiful, or the importance of saving the environment, doesn't quite get you.

As you're tracing the challenges facing salt lakes and efforts to save them, you're also telling the story of your own coming into queer adulthood in the West. Was it always clear that those things were related?

I always had a sense that I wanted to have the book (involve) a degree of coming of age and critical thinking about womanhood. And as I continued to research salt lakes, I discovered that salt lakes are just hotbeds of queer ecology. Brine shrimp can reproduce in, like, three different ways. And the phalaropes have a mating cycle that is reversed with regard to most birds. The females are bigger and showier, and the males are actually the ones that stay and tend the nest.

Ecology teaches that biodiversity is a good thing, right? That we want as much complexity in the landscape as we can have. And I think that's also the lesson of queer theory: that diverse ways of living are a good thing, and we want as much diversity and complexity in our society as we can have.

How has your experience of queerness changed the way you think about climate change, and loss or recovery?

I think queerness and being a writer are very compatible, because both put you at a slight distance from society, in this kind of observer role. And so the benefit of queerness for thinking about the environment is (understanding) there are actually many other ways of life that are possible. We don't need to consume at the rate that we've been consuming, that our parents have consumed.

A lot of conservation historically has been very focused on pristine landscapes, making sure that we keep intact landscapes from being destroyed. Queer ecology has an intervention, which is to say that highly altered landscapes also have a lot of value in terms of biodiversity and ecology.

Some salt lakes, like the Great Salt Lake, exist all year round. And then there are other lakes that are mainly dry. So if you drive by them, most of the time, you'll just see a salt flat. But then, with big storms or snowmelt in the late spring, they'll fill. Those are called "ephemeral" lakes. One of the most powerful experiences for me in writing the book was shifting away from thinking about the efforts to save these perennial lakes and thinking: What can the concept of the ephemeral teach us, especially in a moment of climate change? As we're facing this very likely possibility that a lot of these permanent lakes become ephemeral lakes, what does it mean to embrace and live with the ephemeral?

Annie Rosenthal is a correspondent for High Country News, *focused on rural communities, climate change, and life in the U.S.-Mexico Borderlands.*

REVIEW

The Black cowboy was always here

High Horse tells a story about the West that is honest and long overdue.

BY RUE MAPP

I WATCHED PEACOCK'S *High Horse: The Black Cowboy* with dust on my boots and the kind of soreness that tells you the lesson took. Earlier that day, I met my new mustang for the first time, walking up to her with healthy anxiety, joy, tenderness and a lot of respect. She stood there, quiet, curious and steady, as if she had all the time in the world. I fell in love with her mind — and her questions.

That same day, Andrea, my trainer, had me working on steady low hands, a deep seat and quiet legs while *loping* — a brisk jog. These fundamentals don't look dramatic from the bleachers, but they change everything for you and the horse. In years of lessons at the practice barn, I've learned that confidence can't be faked; a thousand pounds of animal will call your bluff every time.

The honesty and clarity that come from working with horses is why this three-part docuseries landed with such force for me. *High Horse* reminds you that in the Western United States, Black hands have always been on the reins, breaking horses, moving cattle, riding fences, racing and training. The problem is not that Black cowboys are being added to the West's familiar story; the problem is that the country keeps acting surprised to see them.

The series — executive produced by Jordan Peele's Monkeypaw Productions and directed by Jason Perez, an independent filmmaker mentored by Spike Lee — stitches stunning archival footage and photographs with present-day scenes of Black cowboy life, traveling through film, music and marketing history to show that the way the story of the West gets told isn't always the way it plays out in real life. History gets airbrushed, not always with a single dramatic edit

but with a slow narrowing of who gets to be seen as the real thing.

High Horse refuses to treat Black cowboys as a sidebar. It traces a clear line from the skilled labor of formerly enslaved people who handled horses and cattle, to the Black jockeys who dominated early racing, to today's riders, ranchers and entrepreneurs. The series keeps history present without turning it into a lecture.

One of the show's strongest choices is to linger on the physical truth of horsemanship: the rider's seat, their hands, the hours they put in. If you ride, you recognize it immediately. The horse does not care about your story; it responds to consistency and fairness. When you understand this about horses, it becomes apparent how often the cowboy aesthetic is celebrated, while the real work of the craft is overlooked.

In *High Horse,* the camera often holds on a Black rider seated high and steady, looking out over open land or through city streets and urban edges shaped by the same history. The images are simple, almost quiet, but they carry a charge. For Black Americans, land is not only scenery. It is inheritance and loss. It is promises made, then broken. It is the difference between being a visitor and being a steward.

That overlap is personal for me. My own Texas-raised father was a rancher from boyhood, who later managed land and livestock in California, sowing the seeds that inspired me to launch Outdoor Afro in 2009 as both a blog and memory of his legacy. Like *High Horse,* Outdoor Afro aimed to set the record straight about our storied connections to the outdoors. That effort evolved into a national organization, and today, it helps thousands of Black families get out in nature annually, not as a trend, but as a reunion.

Now, in midlife, I have returned to horsemanship with a seriousness that surprises even me. Riding has made me more patient and more honest. It has also made me look at land more dimensionally, taking greater responsibility for my own lifestyle choices and the impact they have on both our people and our wild.

My new mare is a mustang from the Twin Peaks Herd Management Area, in the high desert along the California-Nevada line. I named her True Haven as a reminder that God is my refuge, and that peace is something we all can practice in every part of our lives. Horses demand a practice of fairness and consistency, and will immediately let you know whether you're a trustworthy leader, or not.

Owning a wild horse does not make me an expert on public lands and wildlife policy, but it does keep me intimately close to real questions about stewardship and deepens my commitment to protecting our nation's public lands and wild places. Slogans lose their relevance when you are holding a lead rope and concentrating on what another living creature needs from you to feel safe and clear.

High Horse understands that the story of Black cowboys cannot be separated from the story of Black land. Not just the romance of wide-open spaces, but the hard math of acreage, access, titles, taxes and the ways that power decides who gets to stay. It does not get lost in policy details, but it does say what too many Westerners avoid: The freedom of the West was never evenly distributed, and violence, legal and otherwise, is a part of the geography.

But *High Horse* is not a dirge. It is, in its bones, a celebration of freedom. The series shows young riders training and competing, elders passing down knowledge; family traditions and folks gathering around horses the same way other people gather for church potlucks or family reunions. Too often, Black history is served up only as trauma. This series offers another way to see it: excellence, craft, humor, pride, discipline — and joy!

If the series has a weakness, it is the limitation of its scope. Three episodes can raise a banner but cannot hold every complexity. I wanted more time with Black women riders, greater attention paid to the everyday economics of keeping a horse, and a deeper acknowledgment of the way Black and Indigenous histories intersect on Western land.

I also wanted the series to trust its working riders a little more. While the well-known celebrities and scholars add reach and context, providing genuinely illuminating commentary, they risk crowding out the Black cowboys and ranchers, whose stories of working the land and their horses for generations could stand alone without interpretation.

Perhaps *High Horse*'s greatest achievement is its refusal to see the Black cowboy as an exception. It invites the viewer to reconsider what "Western" means when you widen the frame beyond traditional Hollywood narratives. For anyone who loves the West, this argument is right on time.

Watching it, I kept thinking about my first minutes with my mare: How she watched me, how she waited. How she seemed to be asking who I would be with her, and how I asked myself the same. In the way that a horse responds to clarity, consistency, and care, we should treat our history the same. If we want to live in a West that is honest, with a sturdy future, we should plainly tell the whole story and protect the ground beneath it.

High Horse will not be — and should not be — the last word on Black cowboys. But it is a strong step toward a vision of the West where Black riders are not treated as visitors, but as part of the region's foundation and our conservation future.

Rue Mapp is the founder and CEO of Outdoor Afro and the author of Nature Swagger: Stories and Visions of Black Joy in the Outdoors. *She lives in California.*

Paris Wilburd in the *High Horse* epsiode "F*ck Westerns" (*opposite.*) **William Gray / Peacock**.

Rue Mapp with her mare True Haven, a mustang from the Twin Peaks Herd Management Area along the California-Nevada line (*right*). **Courtesy of the author**

An Inuit woman explores living in direct relationship with the land, water and plant and animal relatives of Alaska.

Iditarod idol

Lessons in care from a champion musher.

BY LAURELI IVANOFF

THE LODGE was dimly lit and warm. It smelled of burgers frying and the owner's trademark freshly cut French fries. People crowded around the most powerful person in the room, and everyone seemed to want her attention and time.

Her dogs and sled were still outside, not yet brought to her host family's yard. I stood in front of my dad with my chin down to my chest, a foot shorter than the adults in the room. Breathing shallow. Now and then I'd cast glances at her. She was talking. Answering questions. Laughing. I was nervous and couldn't comprehend what she was saying. I so badly wanted to meet her. But in that particular moment, I was uncharacteristically shy. As if I was in church and God was actually there.

Those were the days when we asked famous people to sign things. "Do you want to get her autograph?" my dad asked, touching my shoulder, prodding me on. Knowing I had a little book and pen in my parki pocket. I couldn't answer, my freeze response fully engaged. I wanted to say yes, but I was too wonderfully afraid. I had not yet learned that most everything cool in life comes on the other side of fear.

This was in Unalakleet in the late '80s. I was 10 years old, and my dad had finally given in and driven me on his blue Indy snowmachine down to the Brown's Lodge, a log cabin/burger joint/boarding house owned by his cousin, which served as the Iditarod checkpoint in Unalakleet. The sled dog race had hit national news, and sportscaster Pat O'Brien was in town. He signed the gas tank on my aunt's red Honda three-wheeler.

The woman commanding attention at the checkpoint was musher Susan Butcher, an Iditarod hero. After her stop in Unalakleet that day, she continued on to the end of the race in Nome, where she won her third consecutive Iditarod, the first musher to accomplish the feat. Two years later, she won again; at the time, she was one of only two mushers with four Iditarod career championships. She was the woman everyone was talking about. The woman a lot of men couldn't stand. The woman who, along with Libby Riddles, another champion racer, inspired the sweatshirt that says: "Alaska… WHERE MEN ARE MEN and Women win the Iditarod."

Back then during those tender years, I observed and listened more than I talked. I knew that some of the men in our family didn't like Susan Butcher. "She babies her dogs," they said. Even today, 20 years after her death, they call her a witch. We heard it on the news, too. As if taking care of dogs, physically and emotionally, was something to look down on. Today, it's a requirement, or the race itself would be in jeopardy. But few animal lovers have an argument, thanks to the 1980s and a woman who beat the men, year after year, through care.

Care.

Susan Butcher teaches me she was the best because she followed her own instincts of care.

Care is soft. In tune. Perceptive and seeking to understand. Responsive. Susan Butcher didn't win through forcing compliance from her dogs. She won through trust and a bond that every good musher today strives for.

For my little 10-year-old brain, Susan Butcher normalized competition between men and women. For my little 10-year-old body, before I knew what feminism was, Susan Butcher showed me that women can push boundaries, be strong, excel and succeed. For my little 10-year-old heart, Susan Butcher showed me women can be more than equal with men: They can be better. And instead of being put on a pedestal like her male counterparts, she taught me we can be called witches and worse and yet keep on pushing and winning.

As an adult, Susan Butcher teaches me she was the best because she followed her own instincts of care. In a world where society values asserting control, exerting of power over others and using violence, she showed everyone that people can be excellent leaders and champions through nurturing, observation and response. I already know we don't have to, and shouldn't, follow patriarchal values of control, entitlement, ownership and violence. But her life, the way she operated and her accomplishments, reaffirm the need to shed what isn't sustainable. What is harmful.

AS A KID, I was excited when teams arrived in Unalakleet every year during the Iditarod. Since the race began in 1973, teams have passed through in March on their way to the finish line. Unalakleet is 775 miles into the race and the first checkpoint on the coast. In the early days, mushers stayed with host families along the trail. I'd beg my mom to house a musher stopping for a rest.

"No way," she'd balk. "They're dirty and stink." I couldn't argue with that. Mom's pride was her clean home.

Today, the first musher to reach our town is awarded $3,000 in gold nuggets. The nuggets are presented to the musher in an outdoor ceremony, no matter the weather, often in the middle of the night. Camera crews, radio and print reporters, the race marshal, chief veterinarian and people of all ages crowd around the musher as the nuggets clink and clank in a brass bowl.

For a lot of people, the race is a marker of spring. Those March days often host the moments we first welcome the sun's warmth on our cheeks.

As our part of the planet turns toward the sun this year, I remember the shy Laureli who didn't get Susan Butcher's autograph. Who heard people speak poorly of a woman who knew what she was doing and was doing it well. This spring, I think that if Susan Butcher could change the way thousands of dogs are treated leading up to and during a 1,000-mile race across Alaska, maybe we can spur change through our work and actions, too. Through care and our own feminine instincts, even if some people call us witches.

Laureli Ivanoff is an Inupiaq writer and journalist from Unalakleet, Alaska, now based in Anchorage.

Susan Butcher and her dog team during training for the 1991 Iditarod sled dog race along the Bering Sea Coast. **WorldFoto / Alamy Stock Photo**

Heard Around the West

Tips about Western oddities are appreciated and often shared in this column. Write heard@hcn.org.

BY TIFFANY MIDGE | ILLUSTRATION BY DANIEL GONZÁLEZ

CALIFORNIA

One very wily coyote was spotted paddling in the dicey waters of San Francisco Bay before climbing ashore on Alcatraz Island — an unprecedented event, according to park biologists and prison-movie aficionados, who noted that most mammals try to escape Alcatraz. An unnamed tourist saw it and told Aidan Moore, who works for Alcatraz City Cruises. Moore told *SFGATE* that he was initially skeptical, but the guest's iPhone footage left little room for doubt. The video shows, not a sea lion or an otter, but an actual *Canis latrans*, doggedly dogpaddling, then clambering out of the water, noticeably shaky and struggling to settle tired paws on the craggy rocks. His exhaustion is understandable, considering it's a mile and a quarter from the mainland to the island. No tugboat ride for this visitor!

So, why did the coyote cross the bay? Christine Wilkinson, a conservation scientist and carnivore ecologist for UC Berkeley, believes that the coyote was "trying to find a territory of its own," a more sophisticated version of the classic chicken motive, i.e., "to get to the other side." Alcatraz certainly offers all the solitude that a young canine could want, lots of rodents and plenty of space. And as any good realtor will tell you, "Location, location, location," though finding a mate could be a challenge. Do sea turtles accept four-legged passengers?

CALIFORNIA

What in the fresh *Zootopia* is happening in the City by the Bay? Another unusual four-legged critter sighting — a young puma prowling the real estate in San Francisco's Pacific Heights neighborhood, no doubt marveling, as we do, at the housing prices. Several locals described having close encounters with the big cat. On Madrey Hilton's video, which she shared with KTVU, she can be heard saying, "I swear to God, am I tripping? There's a (expletive) *mountain lion*," just as the cougar ran behind a bus stop and into the park. And Lindsay Ann Cummings was walking her dog, Elvis, when she ran into the prowler: "He was three feet from us." Cummings "locked eyes" with the lion but quickly backed into the garage and leashed her dog. The 2-year-old cougar — identified as 157M by the Puma Project in Santa Cruz — eluded Fish and Wildlife officers for several hours before they tranquilized it and returned it to the wild. Alys Granados, a wildlife ecologist with the Bay Area Puma Project, told KQED that "several young cats have ended up in San Francisco after getting lost after getting separated from their mothers." Or maybe running away, drawn, like many young humans, to the bright lights and big city.

YELLOWSTONE NATIONAL PARK

Wildlife photographer Keith Allen Kerbs captured an amazing and frankly insane scene on video in Yellowstone National Park, showing a man "alternatively walking toward and backing away from a pack of at least five wolves." The voices of onlookers can be heard in the background, shouting at the man, hollering, "*Get out of there!*" It's a nerve-wracking video to watch: The wolves are enormous, unafraid and clearly ready to rumble, *Canis lupus* vs. *Homo idioticus*. Kerbs, who was filming from a safe distance, posted the video on his Instagram, remarking that the man "almost didn't make it out alive." A spokesperson for the National Park Service confirmed that the incident had been reported and the man "found and cited," natlpark.com reported. Is "First-Degree Public Stupidity" a felony?

WASHINGTON

The flooding in King County last December prompted King County Public Health to issue a safety tip guide — in comic-book form — educating residents about what to do should you find rats in your toilet. We don't recommend the guide for relaxing bedtime reading, but helpful tips include "try to stay calm," though the guide acknowledges "that might not be easy under the circumstances." *Right*. The guide then instructs you to close the lid and flush, following up, if necessary, by squirting some dish soap into the toilet. "The soap makes the rat slide down when you flush. It may take many flushes" — and, though the guide doesn't say so, your plumber may never forgive you. If the problem persists, call a professional: "A large rat may not flush back down. Keep the lid closed and call a pest control company. If the rat escapes, close the door and set a trap." Or, as the guide also does not say, you could just set fire to your house and flee shrieking into the night, then spend the rest of your life paying off therapist bills.

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#IAM THE WEST

RAMONDA HOLIDAY (SHE/HER)
(DINÉ/NAVAJO)
R&B musician, Before the Rocks Cry Out founder
Monument Valley, Diné Bikéyah

My new album starts off telling stories of addiction, sex work, life in survival mode as a trans woman in the early 2000s. It then progresses into when I got sober and got delivered. I close with the gospel song that I wrote in jail, kind of telling God that I'm sorry. My journey inspired my nonprofit work with the organization Before the Rocks Cry Out, which intertwines mental, spiritual and physical health with music. It focuses on Indigenous communities, and we reach out to people who are experiencing addiction, people who have been abused. We had our first-ever event last year with a famous gospel artist, Vicki Winans, and I invited a lot of the behavioral health services in the area to bring resources and speak. Music brings a therapy and an uplifting spiritual experience. So it's very inspirational, uplifting, educational for people who are not comfortable going to get help. We bring the help to you in a safe space.

Evan Benally Atwood / HCN

Do you know a Westerner with a great story?
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