# High Country News

When Your Neighborhood Goes

Colorado grapples with multiple fracking explosions By Daniel Glick and Jason Plautz



A well pad near a subdivision in Windsor, Colorado. TED WOOD/THE STORY GROUP, FOR HIGH COUNTRY NEWS

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Colorado grapples with multiple fracking explosions By Daniel Glick and Jason Plautz, The Story Group

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On the cover

Flames erupt from a

gas well in Windsor,

explosion that injured

Colorado, after an

one worker.

JOSHUA POLSON,
THE GREELEY TRIBUNE

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#### yilews 32 IIL/

#### Editor's note

#### Explosive growth

There really isn't any time of day when you won't suddenly need to slam on your brakes to avoid a pileup on Interstate 25 north of Denver. I've driven it dozens of times in recent years, visiting family in Fort Collins and Windsor, Colorado, and the traffic



gets more dense and perilous each trip.

The reasons are clearly visible: Dozens of brandnew subdivisions and malls carved out of former fields to accommodate the influx of new residents. Greater Denver is one of the fastest-growing regions in the country, and the northern Front Range, home to Weld and Larimer counties, is expected to gain another 660,530 people by 2050, more than doubling its 2015 population of 617,401.

Look carefully, and you'll notice a second infrastructure that's also expanding, this one comprised of pump jacks, drill rigs, pipes and compressor stations. The nation's fourth-largest oil and gas reserve lies underground here, and industry is rushing to bring it to market, even if that means drilling in the middle of suburbia.

Can these two quintessential Western booms coexist? They've managed for a couple of decades, but it's an uneasy relationship. Gas-drilling sites today are often surrounded by tall walls, as if sleeping in separate bedrooms might help to save a troubled marriage. But the friction remains explosive, sometimes literally. Last December, a quiet neighborhood in Windsor was rocked by explosions and fires at a cheek-by-jowl gas facility in the town. No one died, and the fires were contained before any houses burned, but as Daniel Glick and Jason Plautz carefully explain in this issue, it could have been much worse.

Incidents like this, combined with unsuccessful attempts by towns to ban or more strictly regulate drilling, have inspired citizen activists to put a measure on the ballot that would create a larger buffer between drilling operations and neighborhoods. Current law requires wells to be set back 500 feet from homes and 1,000 feet from schools. The referendum would extend that to 2,500 feet and allow local governments to increase it even more.

Proposition 112 is a fairly blunt tool, and it doesn't address some related issues, such as water and air pollution. But as one local activist told me, its victory would send a powerful message across the country to industry and state regulators: You need to do a better job of protecting the people. Industry has responded by pouring tens of millions of dollars into ads denouncing the measure as "extreme" and warning that it would kill jobs and starve local governments of badly needed mineral tax revenues.

This is just one of many critical issues and races being decided in the West's midterm elections. And as we learned so dramatically in 2016, election results have real-world impacts. Wherever you are, and whatever your political inclinations, I encourage you to get involved and vote. Your community and country need you.

-Paul Larmer, executive director/publisher

## Citizens put renewable energy on this year's ballots

With the GOP controlling the executive branch and Congress, state-level ballot initiatives are one of the few tools progressives have to advance their own energy agendas. Nationwide, 64 citizen-driven initiatives will appear on state ballots this November, and in the West, many aim to encourage renewable energy development — and reduce reliance on fossil fuels.

**Arizona** Proposition 127, known as the Renewable Energy Standards Initiative, would require electric utilities to get half of their power from renewable sources like wind and solar — though not nuclear — by 2030.

**Colorado** Proposition 112 – the Safer Setbacks for Fracking Initiative – would prohibit new oil and gas wells and production facilities within 2,500 feet of schools, houses, playgrounds, parks and more

**Nevada** Two energy-related questions will appear on Nevada's ballot. Question 6, known as the Renewable Energy Promotion Initiative, would require utilities to get 50 percent of their electricity from renewable sources by 2030. Question 3, the Energy Choice Initiative, would allow consumers to choose where they buy their power.

**Washington** Washington could become the first state to pass a so-called "carbon fee." Initiative 1631 would create funding for investments in clean energy and pollution programs through a fee paid by high carbon emitters. **JESSICA KUTZ** 

Read more online: hcne.ws/renewables

## don't push salmon off the list of concerns when you're permitting development is, I'd say, a pretty high priority.

-Pacific salmon expert Ray Hilborn, a professor at the University of Washington's School of Aquatic and Fishery Sciences, discussing a ballot measure in Alaska that would tighten the rules on protecting fish habitat from development. By mid-September, supporters of the initiative, including a group called Stand for Salmon, had raised about \$1.5 million, while opposition group Stand for Alaska, which is supported mainly by mining and oil companies, had raised more than \$11 million. EMILY BENSON

Read more online: hcne.ws/ak-ballotm1



A man walks by a mural in Albuquerque, New Mexico, that promotes the voting rights of Native Americans and other minority groups. MARK RALSTON/AFP/GETTY IMAGES

#### **5** obstacles for Native voters in the November midterms

In November, voters will see a record number of Native American candidates on the ballot running in all areas of government. In Western states, Native voters make up significant voting blocs, though tribal citizens could not vote in federal elections until 1924 and in some state elections could not do so until 1956. Here are five issues tribal citizens face in casting their votes:

Non-traditional mailing addresses and distance to in-person voting locations

A high number of tribal members live in rural areas far from in-person voting locations, meaning they rely on mail-in ballots. But sometimes tribal citizens don't have mailing addresses, live far from their P.O. boxes and check them irregularly, or else move often and never receive a ballot.

**Limited English proficiency and inadequate translation services** Under the Voting Rights Act, election information must be translated from English where there are high concentrations of people who only speak an Indigenous language, as in Alaska, New Mexico and Arizona.

**Restrictive election laws** A number of election laws affect people's ability to participate in elections, including voter ID laws, requiring street addresses, and banning ballot collection from anyone other than a poll worker or relative.

**Voter purges** Counties sometimes remove voters from the rolls for not participating in elections, meaning they must re-register, though many don't. "Effectively, a voter purge can result in permanent disenfranchisement," says James Tucker, an attorney with the Native American Voting Rights Coalition.

**Unequal internet access** According to the Federal Communications Commission, 41 percent of tribal citizens living on tribal lands in the U.S. don't have access to high-speed internet. In some rural areas, that number jumps to 68 percent. That impacts online voter registration, as well as information gathering about candidates and ballot measures. ANNA V. SMITH Read more online: hcne.ws/5obstacles

#### Trending

#### Christiansen to stay on as head of Forest Service

After seven months as the interim Forest Service chief, Vicki Christiansen was named the permanent agency head on Oct. 10. She replaced former Forest Service Chief Tony Tooke, who resigned amid sexual harassment allegations in March. The Society of American Foresters, a nonprofit organization of forestry professionals, applauded her appointment, writing: "Her accomplishments speak for themselves, and we believe she's the strong leader that the agency needs." CARL SEGERSTROM

#### You say

#### NANCY DEBEVOISE:

"A woman is at least a start, considering the scandals at the USFS over sexual harassment and assault of female firefighters and other women there."

MARK MOORE: "Will she promote forest health, or grow firefighting ability?"

FRANK ERICKSON: "I wish her well."

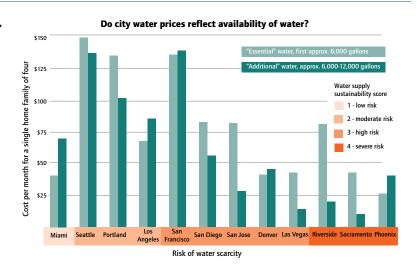
Read more online: hcne.ws/newfs-chief and Facebook.com/ highcountrynews

## The country's cheapest water is in the West's driest cities

According to research from the University of Minnesota, many of the West's driest cities have the cheapest water rates. What's more, the average price goes down as water use goes up. One solution is block pricing, or charging a lower price for a set volume of essential water — used for drinking, cooking and cleaning — and a higher price for additional, nonessential water, which might go to watering lawns or washing cars. Done right, as in Phoenix, Arizona, block pricing encourages conservation, while giving all households access to enough water to meet their basic needs.

MAYA L. KAPOOR

Read more online: hcne.ws/water-cost



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#### **ABANDONED PLACES**

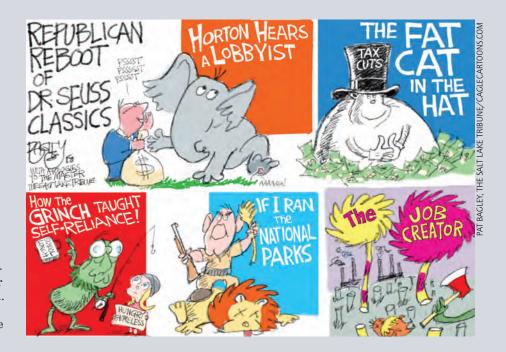
Eileen Muza is one of us ("The Pioneer of Ruin," HCN, 9/17/18). How many of us there are, I have no idea, but we can be found in condemned houses in cities and scattered across the countryside. I myself bought a piece of land adjoining the Chanchelulla Wilderness Area in California in 1987. I moved into a 1958-model house trailer that had been abandoned for 10 years. Out of a \$498 Social Security check, I paid \$243 a month mortgage and had \$255 a month to live on for a start, for food, car and firewood. There is no telephone or public power here. I did a lot of the work myself toward fixing the mess up. Eventually, I got a USDA grant for a roof and a water tank. The local community action agency gave me an oil heater and some help every year for heating oil. I got a VA pension and some help from other sources. I've had trouble with dope growers and various "social workers" trying to run me out. It has been a real hardship to make a go of it, especially now that I am in a wheelchair. But I won't give my home up. Real estate prices have gone so high that it seems like only the rich can afford an apartment or a house. So we homestead the modern way: We find a rathole to crawl into and fix it up. We gather materials from dumps and other abandoned places and make do. And we find inner peace.

Carolyn Munn Hayfork, California

#### **COMPASSION KEEPS US HUMAN**

If killing sentient beings is what keeps us human, then heaven help us ("Can hunting keep us human?" *HCN*, 10/15/18). Taking the life of another being is a regrettable act that is sometimes unavoidable in an imperfect world. However, there is something very dreadful about sanitizing the killing of our animal brethren with a convoluted and romantic mythology that transforms death into gift. What keeps us human is exercising our ability to choose not to kill. We are most human when we act as servants and guardians of all of creation. I would argue that it is a compassion that says "yes" to creation that keeps us human, not killing. A nonviolent, vegetarian choice, when possible, is the real gift that keeps us human.

Bob Muth Kalispell, Montana



#### **GOING DOWNHILL**

I agree with letter-writer John Mumaw ("Letters," *HCN*, 10/15/18). *HCN* is really going downhill. I'm not ready to pull the subscription plug yet, but will cut back on donations. I think you should read, and re-read, daily if necessary, tributes to Ed Marston and Tom Bell. I don't think either of those guys would have produced this latest lame issue (10/15/18). The article on the Navajo police was good, and the op-ed on hunting was good. But two pages on loony Lewis Arthur? He deserved two paragraphs max, unless you could find some depth there. What you published was entirely superficial. And six pages on someplace in Southern California? Sorry, guys, that is not the Mountain West. And the article on prison strikes was so divorced from the land it could have been in Boston or New Orleans. I would beg you to salvage your original mission: Stories of people in the Mountain West as they connect to the land, and the mountain land itself. And stick to it. Content on politics should be measured and minimized, as it makes everything shallow. Focus on human purpose, effort, values and relationship, as they connect to our natural history and geography.

Peg Ferm Monroe, Washington

#### A response from the editor

The mission of  $High\ Country\ News$  is "to inform and inspire people — through in-depth journalism — to act on behalf

of the West's diverse natural and human communities." I think about that mission all the time. And even though the magazine started in the Intermountain West, we have steadily expanded what we cover, to tell the larger story of a region bound by history and geography. The editors believe that the way extremist groups operate in the West is important, as it can perpetuate harmful stereotypes and other mistruths about under-represented groups, which is why we reported on Veterans on Patrol, in Arizona. We also believe that the way humans treat other humans has a direct bearing on how we treat the land, water, air and the non-human beings we share the planet with, which is why we report on prisons and the justice system. And we strongly believe that climate change presents a clear and present danger to the entire region, including the coasts, where many Westerners live, which is why we reported on Imperial Beach, California. We value all of our readers, subscribers and supporters, and we believe that, over time, our reporting will lead people to act on behalf of the entire region, not just one segment of it. Meanwhile, we love getting letters, so please keep them coming. We may not always agree, but we're still part of one community. You can "snail-mail" them to the editor at P.O. Box 1090, Paonia CO 81428; or email editor@hcn.org.

Brian Calvert Editor-in-Chief Gunnison, Colorado



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## **CURRENTS**





MeadoWatch volunteer Mary Marsh observes wildflowers on the Reflection Lakes hike.

✓ Western anemone in its fruiting stage, among other native wildflowers.

COURTESY OF MEADOWATCH

#### Volunteer scientists battle climate dread

The data they're collecting is helping researchers evaluate how ecosystems change

BY JANE C. HU

ost hikers on the Reflection Lakes trail have their cameras pointed at Mount Rainier; Karen Sy, however, had her back to the imposing mountain. Instead, she examined a patch of spindly, tufted plants that look like Dr. Seuss' truffula trees. In any case, Rainier looked hazy; choking wildfire smoke had pushed air quality readings into the "unhealthy" range for days. Luckily, Sy had come prepared with an N-95 respirator mask, so she could concentrate on writing down her observations: Western anemones, in their fruiting stage — typical for mid-August.

She'd braved the smoky weather for MeadoWatch, a program that enlists volunteers to collect wildflower data on hikes at Mount Rainier National Park. Three volunteers at a different plot told me that they find the program rewarding, in part because it provides an opportunity to inject much-needed scientific data into political discussions about climate change. Rather than agonizing over struggling animal species and changing ecosystems, recording observations feels like a proactive step to stave off climate dread.

The program also has the power to expand volunteers' ideas regarding who can be a scientist. Joshua Jenkins, MeadoWatch's program management intern, is a prime example: When lead researcher Janneke Hille Ris Lambers hired him,

Jane C. Hu is an independent journalist who writes about science, identity and the outdoors. She lives in Seattle. **У** @jane\_c\_hu

he was the first intern on the project who didn't have a science background. "Janneke talks about reimagining who can be a scientist, and I think that message is really powerful." he said.

Hille Ris Lambers, who studies the effects of climate change on plants at the University of Washington, launched the program in 2013. She initially turned to citizen science as a means of maximizing data collection; this year, she estimated that the program's 142 volunteers will make around 10,000 observations. "As a scientist, I love nothing more than data," she said. But perhaps the most rewarding part has been getting to know the volunteers. "We don't keep official numbers on it, but I know of at least a couple volunteers who have gone back to school to get a degree in science."

To entice volunteers and collect quality samples, Hille Ris Lambers selected hikes the way Goldilocks picked her porridge: She chose two trails that were known for their wildflower blooms but were not too popular, and that span a range of elevations but are not too steep. Hikers stop at predetermined plots, marked by neon orange tokens, and jot down the flower species they see, as well as the plant's life cycle stage — whether it is budding, flowering, fruiting or seeding.

In aggregate, these observations will give researchers a clearer picture of how plants' life cycles will change in response to climate shifts. "If snow melts earlier, on average, wildflowers are going to bloom earlier," Hille Ris Lambers explained. That will have cascading effects for the surrounding ecosystem; for instance, if

some flowers bloom earlier, the animals that eat those plants may need to adjust their behavior accordingly — or develop a different diet.

Hille Ris Lambers was hesitant to report any definitive conclusions based on the project's six years of data, but hikers on the trail had their own anecdotes about how the plants' environment is changing. On the way back down to the trailhead, I ran into two of Sy's friends, who had decided to take it slow on account of the wildfire smoke. One of them, Dan Paquette, who has hiked around Rainier as a volunteer for MeadoWatch and other programs for 20 years, told me that he'd never seen it so dry and hot. According to a National Park Service report on Mount Rainier's climate, that trend will continue; the average temperature is projected to increase by another 3 to 7 degrees Fahrenheit by the end of this century, causing drier summers and wetter winters.

Paquette also noted that the area where we stood was usually filled with lupines, as far as the eye can see. He was not the only one who noticed; all six volunteers on the trail that day asked Jenkins about it. The lupines we did see were struggling. At one plot, Jenkins pointed out some yellowing leaves, crisp and withered as a neglected houseplant. "This stuff is *definitely* dying," he said.

While the lupines felt like a gloomy presage, the joy of the volunteers was apparent. Despite the smoky haze visible on the trail and palpable in the lungs, the atmosphere was less suffocating than it was in Seattle. After volunteers Pat Cirone, Elly Adelman and Dana Davoli identified a north microseris seedpod, they cheered and laughed. "It's the excitement of the chase," joked Adelman. Plus, Davoli said, the trail provided a welcome reprieve from the dismal headlines the volunteers encounter in everyday life. "Everything is so negative right now politically, and to do something positive is so nice."

#### THE LATEST

#### **Backstory**

In northern Arizona, near the Grand Canyon, some of the nation's richest and easiest-to-mine uranium deposits can be found. In 2012, in response to a rush of mining claims,

Obama's Interior Department put a moratorium on any new uranium mining within a 1 million-

acre area. The Trump administration and some Western congressional Republicans have been pushing to lift that ban, despite broad opposition ("A new era of uranium mining near the Grand Canyon?" HCN, 6/12/18).

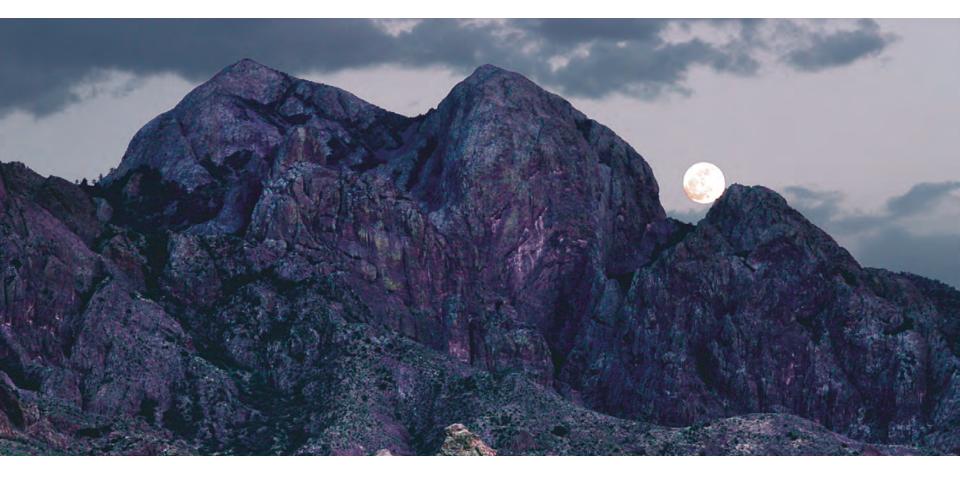
#### Followup

In early October, the Supreme Court upheld the 20-year ban on new uranium mining near the **Grand Canyon**. Last year, an appeals court determined that the moratorium was indeed legal, and the Supreme Court refused to hear a challenge from the mining industry. Environmentalists and local tribes, including the Hualapai and Havasupai, fear that uranium mining could contaminate the Colorado River, which runs through the Grand Canyon, along with its tributaries. Now, they're worried that President Donald Trump will take executive action to dismantle the ban.



JODI PETERSON

At an intertribal gathering, the Havasupai Tribe protests mining. JAKE HOYUNGOWA/GRAND CANYON TRUST



## Public-lands attacks sway voters

Monument reviews and wilderness access are key sticking points in the midterms

BY JESSICA KUTZ AND DAN SPINELLI

Baldy Peak and La Cueva are seen from Baylor Canyon Road. Since the Organ Mountains were designated a national monument in 2014, the range has become even more quintessential to the surrounding communities.

PATRICK ALEXANDER/ BUREAU OF LAND MANAGEMENT Walk through the farmers market in Las Cruces, New Mexico, on a sunny Saturday morning, and it soon becomes obvious that the local people are really proud of their national monument. The granite pinnacles of the Organ Mountains-Desert Peaks National Monument dominate the landscape surrounding this town of a little over 100,000 people. Organ Mountains-Desert Peaks (OMDP) stickers and posters are taped to storefront windows, and customers clad in "Organ Mountains Outfitters" T-shirts weigh their produce. The local coffee shop features bags of its specialty blend: "OMDP" coffee.

These businesses illustrate the economic impact the national monument has had on the region since then-President Barack Obama designated it in 2014. Between 2015 and 2016, an additional 86,000 tourists visited the monument — an increase of 102 percent from the previous year. Their presence translates into big dollars for the local economy. An estimated \$9.9 billion a year is spent on outdoor recreation in New Mexico each year, according to the Outdoor Industry Association.

So, last year when Interior Secretary

Jessica Kutz is an editorial fellow at High Country News. ■ @Jkutzie Dan Spinelli is an editorial fellow at Mother Jones' D.C. bureau. ■ @dspin3 Ryan Zinke indicated that he might reduce its size and President Donald Trump included it on the list of 27 monuments put under review in April 2017, residents worried about what would happen. Was it possible that administration officials would allow drilling or mining on the monument's nearly 500,000 acres of land? In an overwhelming response, residents sent "thousands" of emails to Zinke's office. Rep. Bill McCamley, D, who lives in Las Cruces, said, "There was just zero want from anybody to shrink the thing." Ultimately, OMDP was shielded from the proposed changes.

Voters in the West have always cared about the fate of their public lands, but this year is different. The Trump administration's efforts to slash the size of national monuments, a historically unprecedented move, is bringing the issue into the national spotlight — and squarely into the minds of Westerners ahead of the midterms, said Pete Maysmith, senior vice president of campaigns for the League of Conservation Voters.

For example, a historically Republican seat in the state's 2nd Congressional District, which includes OMDP, could be flipped by 33-year-old Democratic candidate Xochitl Torres Small, a water attorney who has called public lands "a common ground between us all." In other parts of the West, including a competitive House race in Montana and a long-shot bid in Utah, Democratic candidates are

capitalizing on the national attention the administration has drawn to public lands in the hopes of swaying voters.

Apart from the potential environmental impacts of opening up these lands to development, the economic benefits that public lands offer local communities have made the issue central in key congressional races. In New Mexico, for instance, more than 80 percent of voters polled by the Center for Western Priorities considered "public lands, parks and wildlife issues" important in the midterms.

Registered Democrats actually outnumber Republicans in New Mexico's sprawling 2nd District, which is 99.6 percent rural. A Democrat won here in 2008, but a swath of conservative Independent voters has made Republicans ascendant in recent years. The 2nd District, however, is far from ruby-red. After New Mexico Rep. Steve Pearce, R, vacated the seat to run for governor, the nonpartisan The Cook Political Report included the district among its most competitive House races this cycle. "I think all bets are off with that district," said Dede Feldman, a former New Mexico state senator who now works as a political strategist.

To win the open seat, both Torres Small and her opponent, four-term state lawmaker Yvette Herrell, will need to bridge the divide between the district's two major population centers: the sparsely populated, oil-producing Permian Basin to the east and Las Cruces in the west, where a solidly Democratic city council voted in April to get 100 percent of its municipal energy from renewable sources by 2050. A poll conducted shortly after the primary had Herrell leading by 2 percentage points.

Torres Small and Herrell differ on virtually every issue — including immigration, gun control and health care — but none more so than on access to public lands. Torres Small once said she knows parts of the monument "better than the back of my own hand." Herrell is known more for her support of the oil interests that dominate the southeastern part of the state. In 2015, she proposed a bill that would have made it easier to transfer federal land to the states.

A different type of access debate hovers over the race for Montana's sole House seat, where Democrat Kathleen Williams hopes to unseat Rep. Greg Gianforte, R. Polling data shows that public lands, and access to them, will be important to voters in the midterms. In Montana, counties with public lands attracted more new residents and spurred more job growth than those with a smaller share of federal land, according to a Headwaters Economics report. In a University of Montana survey, residents were more supportive of wilderness designations this year than in 2014, with 54 percent of those polled saying they do not want to eliminate existing wilderness areas.

Williams, who won an endorsement from the Montana Conservation Voters, said she voted "against bills that had any relevance to the transfer of public lands" during her time as a state House representative, including one that would have created a public-land task force to review management of federal lands in the state. Gianforte is running for re-election after winning a high-profile special election in May 2017. Out-of-state donors, including the CEO and president of Texas-based Oasis Petroleum, dumped millions of dollars into the race to support Gianforte.

Montanans first became acquainted with Gianforte during his unsuccessful gubernatorial bid in 2016. One controversial issue that emerged then centered on a lawsuit Gianforte filed in 2009 to restrict access from his property to a small "meadow river" outside of Bozeman. Riveraccess points are important in Montana, and Gianforte's Democratic opponent, Gov. Steve Bullock, seized upon news of the suit. "Montanans have been locked in a battle against wealthy out-of-state land-owners buying up land and blocking access to places Montanans have literally enjoyed for generations," he told *The Missoulian* at the time.

Gianforte's stance on that issue could be a problem for voters, given his proposal to "unlock" 29 wilderness study areas - lands protected from mining and motorized access - in a set of two bills he introduced this year. Gianforte says the legislation, which would remove protections on almost 700,000 acres of land, would reopen the land to the public, but environmentalists argue that logging and possible oil and gas development could endanger wildlife and habitat. As a member of the House Committee on Natural Resources, the congressman also supported a bill that would gut the Antiquities Act by limiting the amount of land that can be designated by executive authority and empowering the president to rescind national monument boundaries without congressional approval.

Often, the battles over the future of public lands center on the economic benefits of development versus conservation. There is perhaps no place where this has been more apparent than in Utah, home to both Bears Ears and Grand Staircase-Escalante national monuments. The Washington Post revealed in July, in a batch of accidentally released Interior Department emails, that agency officials privately dismissed the economic benefits of tourism at monuments like Grand Staircase-Escalante. But those are exactly the benefits that Democrat Shireen Ghorbani hopes will play to her advantage as she seeks a spot as the House representative for Utah's 2nd Congressional District.

Ghorbani is considered a long shot in the district, which includes Grand Staircase-Escalante. But the monument has driven economic growth in local communities that have long struggled with boom-and-bust industries such as mining and timber. "It is one of the reasons why I think there is a message here," Ghorbani said. Though one of her campaign's central tenets is to make health care more affordable, her platform is largely based on protecting the district's public lands. Her opponent, Rep. Chris Stewart, who is up for his fourth term, backed the monument review, which ultimately ended in a reduction of Grand Staircase-Escalante.

Nonetheless, Ghorbani is confident that voters care about public lands, especially if they are effectively mobilized by advocacy groups and political organizers. For example, last year Salt Lake City lost its contract to host the Outdoor Retailer, an outdoor industry expo that brought in \$45 million annually. The organization cut its ties in order to partner with "states and elected officials who share our views on the truly unique American value of public lands for the people," Amy Roberts, executive director of the Outdoor Industry Association, told The Salt Lake Tribune last February. Ghorbani believes that these outdoor recreation industries could use their influence to harness support for elections, although she acknowledges that she is not sure if the momentum "has fully translated yet" among voters.

The importance of protecting public lands is still a hard sell for candidates like Ghorbani in places like Utah, where monuments can just as easily divide constituents who support resource extraction over recreation. But the economic benefits of the outdoor industry are becoming "more and more evident as time passes," said Robert Keiter, director of the Wallace Stegner Center for Land, Resources and the Environment. In 2016, for the first time ever, the outdoor recreation industry was included in the country's GDP calculations. The 2016 findings showed that it made up 2 percent of the national GDP more than mining, oil and gas extraction combined. "It would be just about impossible for a politician to ignore that dimension of economic activity in the West," said Keiter.

This story is a Climate Desk collaboration between Mother Jones and High Country News.

Voters in the West have always cared about the fate of their public lands, but this year is different. The Trump administration's efforts to slash the size of national monuments, a historically unprecedented move, is bringing the issue into the national spotlight.

#### NEW MEXICO 2nd Congressional District



Yvette Herrell, Republican



Xochitl Torres Small, Democrat

### MONTANA Sole house seat



Greg Gianforte, Republican



Kathleen Williams, Democrat

## UTAH 2nd Congressional District



Chris Stewart, Republican



Shireen Ghorbani, Democrat

## Warring figures, hidden costs

While experts feud over the cost of Utah's Lake Powell Pipeline, the public is kept in the dark
— and taxpayers on the hook

BY EMMA PENROD

early a decade ago, Gabriel Lozada, a man with a wiry frame and waves of steel-gray hair who looks exactly like the mathematician he is, set out to answer what he thought was a relatively simple question: Could Utah's proposed Lake Powell Pipeline — a plan to ferry Colorado River water to southern Utah — live up to the state's rosy forecasts of growth and prosperity? Or was it more likely to tank the economy of a small but lively retirement community in the southwestern Utah desert?

Lozada, a theoretical mathematician at the University of Utah and a pro bono consultant for the Utah Rivers Council, suspected that government officials were overstating the pipeline's benefits and ignoring its potential costs. So he began building a mathematical model of its possible impacts on southern Utah residents. While proponents argued that the project was necessary to stave off water shortages, Lozada warned that it might trigger an economic crisis.

But how could he be sure? Even today, more than a decade after it was first proposed, no one seems to know what the pipeline — with 140 miles of buried pipe and five pumping stations between Lake Powell and the town of St. George — is going to cost, much less how it will impact local water rates. Communications from within Utah's state water agencies, obtained during this investigation, suggest officials purposefully withheld those details from the very taxpayers who might ultimately be saddled with the bill. Federal officials also seem wary of the

state's scanty financial information. In September, the Federal Energy Regulatory Commission declined to take action that would have exempted the state from more rigorous financial scrutiny. Despite this, the state Division of Water Resources "remains fully committed to this project," according to Division Director Eric Millis.

As pressure mounts over the project's fate, Lozada has been consumed with trying to discern how the pipeline will impact the residents of Washington County, the intended recipients of its water. And in the process, he's made enemies. His research has become mired in a back-and-forth with Jeremy Aguero, a rival economist in Las Vegas whom the Washington County Water Conservancy District hired to conduct its own cost analysis. His conclusions are very

In the name of increasing the growth and prosperity of St. George, Utah, state agency communications suggest that the details of water rates have been withheld from taxpayers.

NICK ADAMS FOR HIGH COUNTRY NEWS



different from Lozada's. Where Lozada predicted a 500 percent increase in water rates — amounting to about \$370 more per person, per year — Aguero originally promised Washington County could fund the pipeline for just \$25 per person per year, an increase of less than 27 percent.

Aguero pointed out errors in his rival's math, which Lozada corrected; he now believes the water districts' plan to triple its water rates — potentially increasing residents' costs by more than \$300 per year — may, just barely, pay for the pipeline. But he doesn't believe residents will pay such prices without buying dramatically less water, negating the need for the pipeline. And he has grown increasingly frustrated by the county's unwillingness to reconcile the two models and publish a single accurate number. And though Lozada has released his work, Washington County has not released the details behind Aguero's analysis. "Who knows what else is wrong with the model?" says Lozada. "They're not transparent about it, so I can't see what's wrong."

Aguero has also been reluctant to stand by his conclusions. In June 2016, when a state records committee forced him to release a PowerPoint presentation created for the water district regarding his \$25-a-year model, he disowned it. The \$25 figure, he said, was merely a placeholder in an interactive exercise intended to spur discussion about how the public would prefer to pay for the pipeline. The real model, he claimed, did not exist in a format that could be released. He later told local journalists the average residents' water bill would increase by just \$52. Aguero did not respond to multiple requests for comment for this article.

It's not just the cost that is obscure; it's also unclear who will pay the bills. Historically, water projects of this scale were constructed with federal funds. But those dollars have largely dried up, and residents of northern Utah — who continue to outnumber their southern counterparts by a wide margin — oppose a state subsidy for the project. That would leave still-small Washington County to pay for a billion-dollar-plus pipeline essentially by itself.

County officials believe the expense will be worth the risks once they realize their vision for a more vibrant community with jobs and a quality of life that will keep their children nearby. But it's those very descendants who could end up saddled with billions of dollars in debt should the increased cost of water cause local growth to stall.

Emma Penrod is a journalist based in rural Utah who covers science, technology, business and environmental health, with an emphasis on water.

Washington County is currently one of the fastest-growing communities in the nation. In recent decades, it's been discovered by Californians looking for a warm climate with a lower cost of living, and northern Utahns seeking affordable land with milder winters. The quiet desert town of St. George is now a bustling retirement community with a thriving tourism industry. That rapid growth has become Utah's justification for building a pipeline to provide water, despite a nation-wide drop in water use in the last decade, suggesting that a growing population won't necessarily need more, and Lozada's anticipation that local residents won't pay.

Before the population explosion, state leaders envisioned the Lake Powell Pipeline as a way to use Utah's share of the Colorado River to spur economic development in Washington County. Abundant water, they hoped, would attract exciting new economic opportunities that would inspire local youth to build lifelong careers at home in the rural West. But by now, it's clear that the pipeline is no longer needed to achieve that vision; Washington County began transforming in the 1980s and '90s.

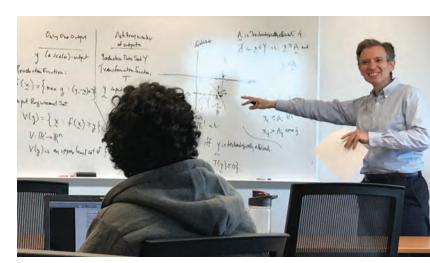
Amid the growth of the budding county, the Utah Legislature agreed in 2006 to build the Lake Powell Pipeline — with certain conditions. According to the terms of the Lake Powell Pipeline Development Act, the state will pay for the construction of the pipeline, but only if the recipients of the water, Kane and Washington counties' water conservancy districts, enter into a contract to purchase it. According to the state statute, the water will be sold at a price that enables the state to reclaim the costs associated with designing and building the pipeline, with interest, over 50 years.

According to David Clark, the now-retired state legislator who originally introduced the Lake Powell Pipeline Development Act, the law was designed to emulate the way the Bureau of Reclamation financed large water projects in the past. But since federal dollars are harder to come by today, the act assumed that the state would play the role of the federal government. The act does not, however, Clark said, authorize a state subsidy for the project.

Outside analyses, though, have since raised doubts about Washington County's ability — or plans — to pay for the pipeline in full.

Tied to promises that new residents will foot the bill, local leaders have hatched a complicated scheme to raise funds for it. But their plan relies heavily on the county's continued growth, presenting a nebulous moving target as the pipeline's costs become increasingly unclear.

Water districts have the authority to levy property taxes, and so tax increases



Gabriel Lozada, mathematician at the University of Utah, believes that the proposed Lake Powell pipeline could trigger an economic crisis.

LISA POTTER/UNIVERSITY OF UTAH COMMUNICATIONS



David Clark, now retired, is the state legislator who originally introduced plans for the pipeline. The development act authorizing it assumed that the state would play a large role in financing the project. Here, Clark makes a presentation to the Executive Water Finance Board.

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MATT BAUN/USFWS

#### THE LATEST

#### **Backstory**

In 2002, 34,000 salmon died in the Klamath River in Oregon and Northern California. Earlier that year, farmers and ranchers had pushed the feds to divert Klamath water for irrigation, and the low flows encouraged deadly fish diseases. It was the largest fish kill in the nation's history. Since then, the Yurok Tribe, which relies on the fish. has been working to prevent water allocations from favoring agriculture over salmon ("How the Yurok Tribe is Reclaiming the Klamath River, HCN, 6/11/18).

#### **Followup**

In September, for the third year in a row, the Yurok **Tribe canceled its** commercial salmon fishery due to low numbers of fall chinook. A small subsistence harvest will be allowed, but the closure is economically devastating. "(Klamath salmon) will remain in jeopardy, until the water quality and quantity issues are addressed, large-scale fish habitat restoration is accomplished and dams are removed," said Amy Cordalis, the tribe's lead attorney. The lower four Klamath River dams will be removed in 2021.

JODI PETERSON

to help pay for the pipeline are already planned in Washington County, according to Ron Thompson, a proud descendant of pioneer settlers and the general manager for the Washington County Water Conservancy District. The cost of fees associated with new development in the county will roughly double, and the price of purchasing water from the district — a water wholesaler that sells to the surrounding cities — is expected to triple.

Many of these changes have already begun to take effect. Water rates alone will increase enough to generate about \$2 billion in revenues, Thompson said, and that by itself could cover the projected \$1.1 billion-to-\$1.8 billion cost of construction.

Critics like Lozada say that Thompson's figures don't take into account numerous complicating factors, such as the fact that the water district is also on the hook for the state's development and permitting expenses, which have already cost Utah tens of millions of dollars and will likely cost even more, given a recent federal ruling that will subject the pipeline to additional government scrutiny. Nor does it take into account interest rates, or the possibility that local growth and demand for water could slow if costs soar.

If growth slows, the water district's projected revenues will fall, potentially trapping the county in a negative feedback loop that could make it impossible for it to repay the debt. Then Utah's taxpayers will be left holding the bag.

But local officials dismiss fears that growth will stall. The price of the average house in Washington County has increased 12 percent in the last year, Thompson said, and people are still moving in. If the average home price has gone up \$25,000 in one year, he doesn't see how adding \$8,000 in development fees over the next decade is likely to slow growth.

Jon Pike, the mayor of St. George, is similarly unconcerned that the pipeline would cause growth to stagnate. He believes that, even if water rates increase, current residents will be willing to pay. "The measure I look to is, who are the people electing? And they are electing people who are pro-Lake Powell Pipeline," Pike said. "Anti-pipeline people are not getting elected."

Critics of the project fear the public is making decisions based on false promises. As steep as the current price increases may seem, even Lozada's figures assume the state's estimated construction cost of just under \$1.4 billion is accurate. But email communications from within the Utah Division of Water Resources, obtained by *High Country News* through state records requests, indicate that it is

MWH Global, an international water

and natural resources consulting firm that has since merged with Stantec, originally put the cost of the pipeline at around \$1.3 billion in 2009. But in late 2015, the consulting firm drew up a new estimate that concluded construction costs had escalated by several hundred million dollars during the intervening years.

Though the original 2015 estimates have not been released, a revised version of the December 2015 report predicted that the project would cost about \$1.5 billion, and possibly as much as \$1.9 billion. That potential escalation has not been communicated to the public. Instead, public officials often insist that there are currently no cost estimates available for the project.

Email exchanges between the project leadership team at the Division of Water Resources and the Washington County Water Conservancy District show that local water managers repeatedly pressured the state and its contractors at Stantec to revise their projections of how much each element of the pipeline would cost. One extended argument, for example, involved the cost of bringing in soil to bury the 140 miles of pipe — Thompson, the leader of the Water Conservancy District, was certain he could find cheaper dirt than what Stantec anticipated paying.

After several months of discussion, the contractors begrudgingly agreed to reduce the estimate to a range of \$1.1 billion to \$1.8 billion — despite the fact that all parties also quietly added some \$140 million in extra features to the project during the same timeframe, according to a memo circulated in early 2016.

Officials with the Washington County Water Conservancy District were particularly persistent in their requests that the state and its contractors reduce the amount they planned to hold in reserve in case of unforeseen costs, which initially accounted for nearly 4 percent of the overall estimate. Despite the lead contractors' repeated warnings that the large contingency fund would be necessary "based on our experience performing other large water resource programs throughout the U.S.," state officials ultimately sided with the water district and reduced the contingency fund by 75 percent.

Slashing that fund decreased the reported price of the pipeline by tens of millions of dollars and reduced the overall amount Washington County has to prove it can raise. But it also increases the chance that the actual cost will exceed what the county is able to pay — potentially leaving taxpayers statewide on the hook should some aspect of the pipeline prove more expensive than planned.

New luxury housing construction pushes up against a pasture.

NICK ADAMS FOR HIGH COUNTRY NEWS

Emails exchanged between state engineers and Stantec staff also show the parties used "significant input and feedback" from the water district to create a carefully crafted picture of Washington County's costs should the pipeline not be built. Initial drafts suggested constructing the pipeline could cost more than the conservation and "mitigation" efforts that would be required in its absence. Subsequent analyses greatly increased the cost of "mitigation" in the event the pipeline was not built.

But as internal emails show, even state employees questioned the accuracy of some components of the new revisions, such as the anticipated cost of using special soilcoating compounds as ground cover if the county didn't have enough water to support growing thirsty lawns.

The capriciousness of the pipeline project has begun to alienate some of its most important allies. Thompson, who sent numerous emails to the state and its contractors demanding revisions to the cost estimates, said he felt the state was biased toward overstating the cost of the project. But he still believes that, with careful management, the Washington County Water Conservancy District can complete the pipeline under budget. Mayor Pike, on the other hand, said he has long suspected that it will cost more than state and county officials have let on. Even if



the state's figures are in the ballpark, Pike said, inflation and other delay-related costs continue to pile up.

Washington County officials originally hoped to break ground in 2020, but that timeline was removed from the water district's website after an abrupt series of decisions by the Federal Energy Regulatory Commission introduced months of unanticipated delays - and increased the rigor of the analysis the project will undergo at the federal level. Construction costs have also dramatically increased in the state of Utah in recent years — the cost of hiring laborers alone jumped 6 percent between 2015 and 2017, according to state data.

Washington County may be able to raise \$2 billion dollars by tripling its water rates. But officials' ongoing game of costestimate hot-potato suggests that even \$2 billion may not be enough.

Because of so many lingering questions about Washington County's ability — or intent — to repay the state for the pipeline's ultimate cost, Utah Gov. Gary Herbert created an Executive Water Finance Board in 2017 to vet the project. The board's work has only just begun, and its members are reluctant to weigh in on the pipeline's feasibility. But their current projections suggest that the state's entire tax base may be insufficient to fund it

— risking an \$80 million annual shortfall that could spur significant tax increases throughout Utah.

espite the funding quagmire, proponents of the Lake Powell Pipeline continue to believe that it's worth the risk. For all their expressed desire to secure economic prosperity for their children, there is reason to believe it's not just the fate of Washington County that is at stake. Unlike the states in the Lower Colorado River Basin, Upper Basin states like Utah aren't entitled to a finite amount of water under the Colorado River Compact. Rather, Utah is entitled to a proportion of the water that is left over after the Lower Basin states — California, Arizona and Nevada — take their share. But given the ongoing aridification of the Colorado River region, it's not actually clear how much entitlement Utah has left.

"The amount of water available in the state of Utah is not known," said Jack Schmidt, who holds the Janet Quinney Lawson endowed chair in Colorado River Studies at Utah State University. "And when reference is made to unused allocated water, one cannot assume that water is actually available to be developed."

The possibility that water deliveries from the Lake Powell Pipeline could be cut off or curtailed by shortages on the Colorado presents yet another issue inside the financing conundrum: Washington County is expected to repay the state of Utah by purchasing pipeline water. If there is no water available for sale, Utah does not get paid.

But that reality hasn't tempered the desire of Washington County officials to see their little community grow. Development benefits everyone, said Pike, the mayor of St. George. Pike hopes his community will attract a tech boom of its own with the promise of plentiful water. "Some people say they want the good old days," Thompson agreed, "but that's not what I want."

But as state and local officials wrangle over the specifics of who might eventually foot the bill, there's still a chance that Washington County residents could avoid paying it. Under Utah's Lake Powell Pipeline Development Act, it's the state — not the county — that will end up doing so, should Washington County's efforts to pay fall short.

Is that unfair? Washington County Water District Manager Thompson doesn't think so. Growth in Salt Lake City was once made possible by large, expensive water projects funded by a nationwide tax base. If Utah writ large has to raise taxes to pay off multimillion-dollar budget deficits, then so be it, he says. In his mind, it's Washington County's turn.

Washington County
Water District
Manager Ron
Thompson believes
that the state has been
overestimating the
cost of the pipeline,
and that it can be
completed under
budget.

NICK ADAMS FOR HIGH COUNTRY NEWS





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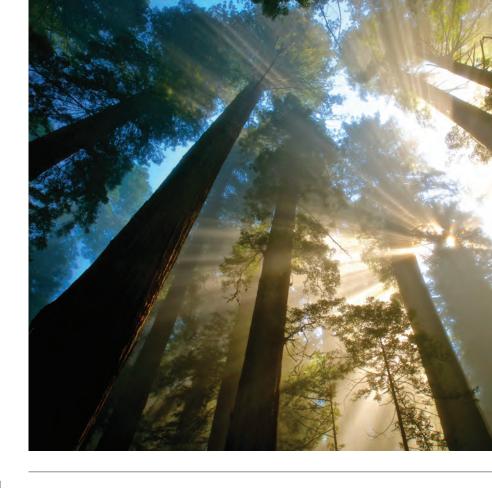
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Established in 1925, Del Norte Coast Redwoods is one of four parks that make up the Redwood National and State Parks, which together protect 45 percent of the last remaining old-growth redwood forest. JON PARMENTIER

#### THE ONCE AND FUTURE FOREST: CALIFORNIA'S ICONIC REDWOODS

Save the Redwoods League, introduction by Sam Hodder. 224 pages, hardcover: \$100. Heyday, 2018.

As part of its centennial celebration, the Save the Redwoods League has released *The Once and Future Forest: California's Iconic Redwoods*, a lavishly produced volume that highlights the ways people have identified with these national treasures over the years. The book features five essays by scientists, writers and environmentalists who are passionate about the forest's preservation, together with over 175 full-color images.

Biologist Meg Lowman's essay, "The Science of Giants," introduces readers to the work of redwood researchers and the scientific discoveries they've made in the ancient forest and its canopy, while author David Harris describes his evolving personal relationship with the giant trees in his essay, "My Redwood Confession."

Described as a "true wonder of the world," by Sam Hodder, the organization's CEO, the forest's grandeur spills out of the pages through the accompanying photography, paintings and maps, which bring to life the mystical beauty of the tallest trees on earth. JESSICA KUTZ

Susanne A. Haffner | Clovis, CA

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#### A hearty welcome, and HCNers afield

As an editorial fellow now working remotely from Spokane, Washington, I'm looking out the window at another brilliant blue sky. But my computer reminds me that it's different back in Colorado, where a healthy dose of October rain and snow has fallen in the high country. We're so thankful for the much-needed precipitation, given the long drought gripping the Southwest, that we're not even complaining about the wet, icy roads. Well, not yet.

The changing weather has blown a friendly new face to our Paonia headquarters. Development Associate Hannah Stevens comes to us after a career in biology and laboratory and data management at the New York Botanical Garden. She has produced research for a number of nonprofits, including the Western Slope Conservation Center, the Cary Institute for Ecosystem Studies and the Wildlife Conservation Society. Hannah will be managing our monthly giving program and helping us prepare for our 50th anniversary in 2020. Welcome, Hannah!

We've been busy afield, too. Assistant Editor Anna V. Smith attended the 28th annual Society of Environmental Journalists conference in Flint, Michigan. Anna spoke on a panel on gender equality and the environment, where she described High Country News' investigations into harassment in federal agencies, including the National Park Service, Forest Service and Bureau of Indian Affairs. Former HCN correspondent Elizabeth Shogren discussed science reporting under the Trump administration. And Anna met up with former HCNers — Editorial Fellow Lyndsey Gilpin and intern Gloria

Dickie, both of whom are now SEJ board members. Assistant **Editor Paige Blankenbuehler** was a guest lecturer for a feature writing class at her alma mater, Fort Lewis College. She also visited *The Indy*, the campus newspaper where she got her start in journalism, and discussed career paths and the industry. Meanwhile, associate editors Maya L. Kapoor and **Tristan Ahtone** attended the Poynter Leadership Academy in Florida, where they honed their skills as news leaders.

Longtime subscribers and sustainers **Ray** and **Donna Phillips** stopped by Paonia and Gunnison to chat us up about all things Westy. They are recently retired and enjoyed pelting us with all kinds of story ideas. Donna called *HCN* "a lone voice in the wilderness," and Ray is writing a dystopian sci-finovel. We're looking forward to reading it when it's done.

We were saddened to hear that longtime HCN reader and supporter Jim Ratzlaff passed on in late August. A lawyer whose love of the natural world and fly fishing led him to retire with his wife, Jane, on the North Umpqua River in Roseburg, Oregon, Jim became deeply involved in restoring Oregon's forests and finding common ground between environmentalists and loggers. His obituary in The Oregonian notes that Jim felt "an intense obligation to give back to the world that gave so much to him. ... A hungry reader and lifelong learner, he was also a skilled pilot, and excellent winemaker, a fledgling truffle farmer and a grand fan of the cocktail hour." A man who lived a rich, full life, he will be truly missed.

—Carl Segerstrom, for the staff

Hannah Stevens, HCN's new development associate, is a welcome addition to the Paonia office.

LUNA ANNA ARCHEY/HIGH COUNTRY NEWS



Previously undisclosed information about the Dec. 22, 2017, explosions and fire at an oil and gas facility in Windsor, Colorado, reveals how site workers and firefighters narrowly averted a much bigger disaster – and how the company behind it avoided any consequences.

# When Your Neighborhood Goes

FEATURE BY DANIEL GLICK AND JASON PLAUTZ

#### PART ONE: CHAOS ON THE VERGE OF CATASTROPHE

A few days before Christmas last year, a dispatcher for the Weld County Sheriff's Office was working through a routine set of calls, ranging from missing cats and parking ticket warrants to domestic disturbances, drunk drivers and a possibly armed meth-head menacing a neighbor. Then, at 8:48 p.m., came a jarring alert: The Windsor Severance Fire Rescue frequency reported a unit "responding to an explosion at an oil well site."

It was 32 degrees and clear on Dec. 22, 2017. A thin, fresh blanket of snow covered Windsor, Colorado, an increasingly suburban community about 60 miles north of Denver. The dispatcher's tones scrambled rural firefighters more accustomed to grass fires and car accidents than an explosion at a hydrocarbon factory. Stress levels skyrocketed as the first responders described the scene over their radios.

"We've got oil burning from an oil fracking truck," one said, reading the operator's name from a sign: "Extraction Oil. Extraction."

"I can see flames about 30 feet in the air, and smoke."
More than 350 homes were within a mile of the site,
and 911 calls from residents flooded the switchboard. The
Greeley Police Department emergency call center summed
up a report: "Heard big boom. Shook the house. Looks like an
oil rig is on fire. Can see flames."

The first engine laid down two hoses and called for another 2,000-gallon water tender, but the incident commander realized that with so much flammable material, they'd need specialized foam concentrate designed to smother hydrocarbon fires. "Water's not going to put the fire

out," he said over the radio. "Our best bet is to cool everything around it until we can get foam."

Karley Robinson, a 25-year-old medical assistant, was playing *Dungeons & Dragons* at home with her husband and brother when they were shaken back to reality by a huge "boom." They stepped outside to see the night illuminated, flames shooting skyward, flashing lights rushing to the scene. Robinson figured it was coming from the massive oil and gas site less than a mile away. But then she remembered the well-pad complex, sitting just 130 feet from her kitchen window.

Robinson's 5-year-old daughter padded up to her parents. "Mommy, is everything going to be OK?" she asked.

Robinson reassured her daughter, "I think everything's going to be OK." Still, she called Extraction Oil and Gas, the operator of the exploded well, and left a message: "Hey, I'm right down the street from where one of your rigs blew up." Even though a different operator owned her backyard wells, she hoped for "some assurance that my house wouldn't explode."

It's a situation that could unfold in any of the dozens of Western communities that have been stampeded by drilling rigs during the latest oil and gas boom: An inferno fueled by toxic, flammable hydrocarbons in backyards, near schools and baseball fields and suburban dwellings. The potential for catastrophe has grown especially high in neighborhoods like Robinson's. Nearly half of Colorado's 55,000 active wells are in Weld County, where Robinson lives and thousands more are on their way. Locals call it "Welled County."

Robinson's D&D campaign sat abandoned on the kitchen

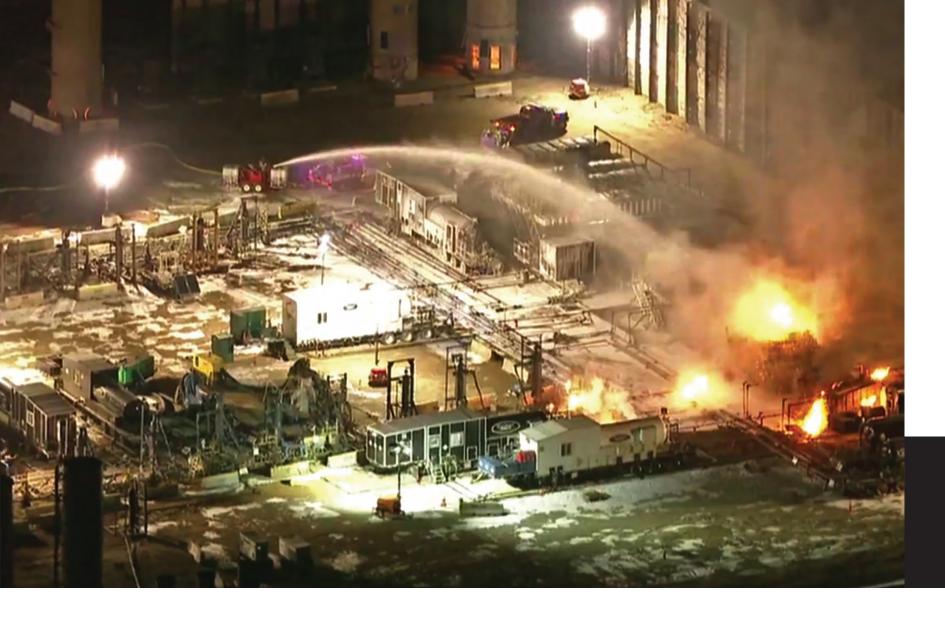


table while she comforted her daughter. But the phone never rang.

When Windsor Severance Fire and Rescue Battalion Chief Todd Vess heard the blast, he thought something had fallen in his basement; that's how close it sounded. The department's alert system flashed "oil and gas explosion" on his phone, but at first Vess wasn't too concerned. Dispatchers received plenty of false alarms regarding drilling sites, especially concerning the fiery nighttime flaring of excess fuel.

Another battalion chief called and told Vess this was the real deal: Flames were consuming an oil and gas site, and a trauma unit was on its way. Vess calmly "prepared for the worst" as more than a dozen neighboring fire districts and regional airport rescue squads converged on the Stromberger well pad with fire engines, water tenders, and trucks carrying firefighting foam. Responders reported flames at least 50 feet high. One firefighter called in for directions and received some deadpan guidance over his radio:

"You're not gonna miss this, Joe."

On the well pad site, every oil worker's nightmare flashed to life with the first terrifying explosion. The crew had been conducting "flowback operations," probably the most dangerous stage of oil and gas development. After drilling, operators "complete" the well via hydraulic fracturing, or pumping a mixture of sand, water and chemicals at high pressure to release hydrocarbons from tight rock formations more than a mile underground. Afterwards, the fracking fluids, along with other toxic chemicals, dissolved solids and heavy metals flow back to the surface at high pressure. The liquids are sorted, stored and eventually moved off-site. The

Stromberger facility, which sprawled across an area larger than eight football fields, contained 19 flowing wells, along with an assortment of other industrial apparatus, much of it filled or flowing with a salty, flammable chemical and hydrocarbon stew.

"Do an emergency shut in. SHUT IN NOW!" supervisors yelled, desperate to ensure that no more oil and gas leaked out and caused an even bigger blast.

Workers darted around frantically, shutting off valves, with some of them wielding fire extinguishers. Ernie

Flames erupt from a gas well in Windsor, Colorado, after an explosion that injured one worker.

FOX 31/2 NEWS VIDEO CAPTURE FROM DEC. 22, 2017

#### "It could've been like an atomic bomb going off."

-Ernie Bouldin, supervisor for one of Extraction Oil and Gas' contractors

Bouldin, 57, a supervisor for one of Extraction's contractors, Colter Energy, who was on-site that night, said that the workers' quick action helped avoid the worst-case scenario. If they hadn't shut everything down, Bouldin later said, "It could've been like an atomic bomb going off."

Pressurized pipelines popped beneath their feet and heat singed their coveralls on the freezing night. As workers hustled to shut valves before heading to a designated "muster" area, two of them saw a figure silhouetted against the flames. Houston "Ty" Pirtle staggered aimlessly, arms hanging awkwardly by his sides. They rushed over and heard him wheezing through a damaged airway. That's when the chilling reality sunk in: The explosion had touched one of their own.

Karley Robinson with her newborn baby outside her home in Windsor. She heard the "boom" and saw the ensuing inferno from the Stromberger well explosion last December. TED WOOD/THE STORY GROUP



#### "I feel like I'm playing Russian roulette with my family."

-Karley Robinson, mother of two, who heard and felt the Extraction gas well explosion from her home in Windsor

Denver media and official reports portrayed the events of that winter night as a quickly contained fire that posed little danger to the public or the environment. But first responder dispatch tapes not made public until now, along with newly released documents and interviews with workers, experts and first responders, paint a darker picture, one of chaos on the verge of catastrophe.

The Windsor explosion highlights what many neighbors wonder: Who is looking out for their safety? Neither the state agency overseeing the oil and gas industry nor the health and environment department conducted an independent investigation of the disaster or its environmental impact. The only fine levied was a small one against an on-site contractor for workplace safety violations. The Colorado Oil and Gas Conservation Commission, or COGCC, issued a "Notice of Alleged Violation" against Extraction in August, which has the "potential to result in a penalty." But no penalty has been announced. And even as Extraction Oil and Gas acknowledges that it still doesn't know exactly what happened in Windsor, the company continues to receive approval to drill more wells in even more densely populated towns.

Nevertheless, fallout from the incident continues to ripple across the state, particularly along the Front Range, where drilling rigs are popping up in backyards while brand-new housing developments sprout next to old oil and gas fields. It's become a rallying point in

an intense campaign around a November ballot measure that would require oil and gas wells to be located farther away from homes and schools.

The incident also reminded Robinson, the young mother, that she may have traded her family's safety for the low cost of their home. Robinson just had her second child in August, a boy born four weeks premature, and now it's always on her mind.

"I feel like I'm playing Russian roulette with my family," she said.

In his eight years as fire chief for the city of Windsor, Herb Brady had watched the steady encroachment of oil and gas wells on new subdivisions, and vice-versa. He had become accustomed to gratefully receiving the "baubles and trinkets" the energy companies offered his rural fire department, including expensive gas monitors and financial donations. He thought "fracktivists" bent on shutting down the industry were hysterical troublemakers.

The Stromberger explosion reshaped his worldview.

Now living in Houston, the 55-yearold said he sees how industry money manipulates public opinion and local politicians, projecting a false aura of competence and oversight over "petrochemical plants in people's backyards." The industry wields influence throughout Colorado, blocking even modest legislative reforms, pressuring regulators and using the courts to get huge tax breaks and intimidate opponents. Brady now recognizes what he calls his "detrimental reliance" on state and federal agencies that oversee the industry. "I always thought that the COGCC and OSHA (the federal Occupational Safety and Health Administration) were on top of things, and all I had to do was do my job."

Now, he said, "The public has a right to be concerned. It is a dangerous situation."

For Brady, seeing that firefighters responding that night lacked the necessary protective gear and training underscored just how unprepared rural departments are for an event of this magnitude. "It was just a roll of the dice, the fact that nobody died. We were lucky."

Right before the blast, the Stromberger crew of 13 "flow-back operations assistants" and three supervisors ticked through their routine rounds, inspecting the wells and aboveground storage tanks, 23 separators, seven combustors and miles of piping around the site. Bouldin, one of the site supervisors on duty, said the workers were "like family" to each other, even as they bitched about the cold and the long hours.

Bouldin, who is on medical retirement unrelated to his oil and gas work, spoke on the record about the explosion; another worker spoke with a promise of anonymity because he still works in the industry. Others relayed through intermediaries that they were told not to speak to journalists, or that they

"don't want to relive it again." Pirtle and his family did not respond to multiple interview requests, although they did share information publicly as he was convalescing.

Houston Pirtle was known for being a hard worker, the kind you'd want on your team. With less than a year of experience, the 6-foot-tall, 190-pound man was still a "green hat" on the Stromberger site. According to a social media post from his mother. Pirtle had been through some rough patches in his personal life recently, but the Colter job provided stability and good pay (employees typically start at \$16 an hour, plus a per diem). The weeks-long blocks of work, sometimes 14 hours a day, were tough, but things were looking up for the 26-yearold, his wife, Rachel Darrah, and their two toddlers.

That night, Pirtle was working in a shack and making hourly rounds to monitor the levels, pressure and temperature readings for the valves, flow-back storage tanks and separators. The generator that powered his shack's light and a nearby portable heater had been acting up lately. A sensor is supposed to shut the generator down if it detects unsafe gas levels, but it kept blinking off, seemingly at random. Repairmen had repeatedly tried troubleshooting it, but hadn't replaced it.

The troublesome generator, which was not "spark-proof," was placed about 10 feet from the trailer, much closer than the 100 feet recommended to reduce fire risk under best industry practices by the American Petroleum Institute. Everyone knew that was a bad idea, but it's one of the many small concessions that complex sites make to keep running. Elsewhere, a flameless heater, which also was not "spark-proof," had been moved to within about 10 feet of the flow-back storage tanks to keep a set of pipes warm on frigid winter nights. Wires and pipes weren't arranged as neatly as usual, creating a high-octane obstacle course. No Extraction employees were on-site, but company spokesman Brian Cain said "an experienced contractor" served as a company representative.

Extraction's accident report filed with the COGCC does not identify a root cause for the explosion, but the investigations support one theory. According to an OSHA investigative report obtained through a Freedom of Information Act request, a third-party forensic team that Extraction hired after the fact found leaks in piping designed to contain hydrocarbon gas emitted from the flowback storage tanks. Leaked gas may have pooled in a corner surrounded on two sides by 32-foot-high, flesh-colored sound barriers, trapped close to the ground by an inversion of cold air.

The balky generator went out, possibly because the gas sensor triggered a shutdown. Pirtle's trailer went dark, so he bundled up to go check on it.

Once there's a pool of gas, any spark can light it. When Pirtle tried to restart the generator, something — the engine kicking on, two pipes scraping together, a bit of static from a fleece jacket — provided that spark. The tank went up in a fireball in an earth-shaking blast, sending the workers scrambling to protect the site. Smaller explosions set off other fires around the site, threatening to spread into a chain reaction of flame.

Even though the workers trained daily for such an emergency, Bouldin said the true test for any crew only comes in the face of real fire. "None of them ran," he said proudly. Bouldin, three hours into his 13-hour shift, was 150 feet from the exploded tank. Alert workers darted around to manually close ball and wheel valves to stop the hydrocarbons flowing to tanks and through the miles of pipes around the site. "If you don't shut those off right away," Bouldin said, "a lot of people are going to die."

The blast badly burned Pirtle's hands and face and seared his windpipe. Two workers carried him away and applied cream from an on-site first aid kit to his second- and third-degree burns, while supervisors kept a running headcount. Bouldin sped his pickup truck through "ungodly" heat and helped hoist Pirtle into the cab. An ambulance met them at

the edge of the site to take the injured man to North Colorado Medical Center in Greelev.

The rest of the crew was taken to a nearby hotel, where many of the men stayed during their 28-day-on, 14-day-off shifts, for a standard emergency debriefing, then returned to the well pad to meet their worried families.

Bouldin acknowledged that there were "things (Extraction) should have fixed," but said that ultimately they were small issues. "We wouldn't have done it if we thought it would have put anyone in danger," he said.

Jason Brooks, general manager for U.S. operations for Colter Energy, which is headquartered in Canada, said the company would "not reply to any inquiries surrounding the fire." Extraction spokesman Cain said in an email that the company "considers safety to be our utmost priority and our record of operations in this basin reflects that commitment."

Even though he's not in the field anymore, Bouldin still wakes up at night thinking about what happened to his younger co-worker. "He got burned pretty danged good," Bouldin said. "We were pretty tore up about that."

## "The public has a right to be concerned. It is a dangerous situation."

-Herb Brady, fire chief for the city of Windsor when the Extraction well exploded

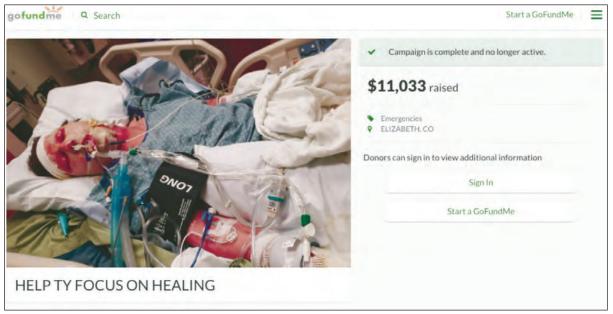


Herb Brady, former chief of Windsor Severance Fire Rescue, stands for a portrait in Houston, Texas, where he now works for an EMS vehicle manufacturer. JEFF LAUTENBERGER FOR HIGH COUNTRY NEWS

#### "If you don't shut those off right away, a lot of people are going to die."

-Ernie Bouldin, supervisor for one of Extraction Oil and Gas' contractors at the time of the explosion





Ernie Bouldin, top, oil and gas contractor, now retired on medical leave. TED WOOD/THE STORY GROUP Above, the GoFundMe page for Houston "Ty" Pirtle, who was badly burned in the explosion.

Bouldin's voice faltered when asked if his mind had changed about how the site was managed. "Right now," he said, "I'd tell you this was unacceptable."

The Windsor explosion and its aftermath reflect an unnerving aspect of life under the latest — and largest — oil and gas boom to hit the West, whether in Wyoming, North Dakota, New Mexico, Utah or here on Colorado's Front Range. Over the past two decades, new horizontal drilling and hydraulic fracturing techniques have allowed the industry to access oil and gas locked up in deep shale formations and to cluster multiple wells on single pads. They've concentrated these mini-industrial sites closer to communities, taking advantage of laws and regulations put into place during earlier demographic and technological eras. As Colorado's population has increased from 4.3 million to more than 5.6 million since 1999, the number of active oil and gas wells over the same time period has increased from less than 22,000 to almost 55,000 today — a 150 percent increase.

These twin growth spurts mean that large drilling operations and vast residential developments are spreading like competing invasive species, often right on top of each other. Subdivisions near the exploded Stromberger pad sport bucolic names like "Peakview Estates," "Greenspire" and the ironic "Windmill Homes." Meanwhile, residents deal with constant thumping sounds, foul smells, industrial lights and toxic emissions from fracking operations a Frisbee-toss away from backyard play areas.

Fearful and frustrated citizens in towns from Lafayette to Loveland and beyond have educated themselves about arcane subsurface mineral rights law while fighting for greater local control. Some cities passed fracking bans, which were overturned by the Colorado Supreme Court. Two months before the Windsor explosion, nine local governments signed a letter to Gov. John Hickenlooper, D, stating: "There is a large and growing consensus that this intensive industrial activity does not belong in residential neighborhoods, near schools or hospitals, or in close proximity to drinking water supplies."

Even some industry officials have publicly stated that safety issues are getting short shrift. Citing former executives saying that top management had de-emphasized safety considerations, Anadarko shareholders filed a class action suit late last year, claiming the company's Colorado operations were a "ticking time bomb."

When Battalion Chief Vess arrived on the scene, small explosions rocked the chilly night as pockets of pressure blew and ignited. The firefighters approached the fire as they would any other, sending firefighters and engines as close to the burning equipment as seemed prudent. The incident commander determined that Engine 1 would be their "line in the sand" at what seemed like a safe distance from the facility.

With flammable fluid still leaking and the danger of re-ignition high, firefighters couldn't extinguish the blaze with water. So they started calling in specialized firefighting foam from regional responders, companies and local airports.

Extraction employees arrived on-site, urging firefighters to protect the well heads and warning them about new hazards. Firefighters relayed the information to Command. At one point, a "little house" near Engine 7 was Extraction's "primary concern" because it contained valves that checked the back pressure. "If that goes, all the back pressure's going to go."

New events raised more alarms. "The separator is something that's at high risk," said a voice on the radio. "We need to get some water on that quickly."

Smaller explosions continued to go off. A voice broke in over the firefighter frequency, relaying a message from Extraction's liaison: "We've got a serious hazard behind the green heaters on the east side where the real heavy black smoke is coming up. He described those as 'bombs.' If they go, then we're all getting hurt."

Another explosion, and the tone of the communications took on more urgency. The incident commander took over. "We need to pull our people back. Everybody pull back. We're going emergency traffic. All units pull back to a safe location. Behind the command post. All units begin clearing out. You guys get your people and your engine out of there, now."

One of the firefighters wanted to make sure that he heard correctly, because there was no way to remove hundreds of thousands of dollars worth of equipment without sending personnel closer to the burning site. "If you want apparatus, we're going to have to make another trip back in."

"That's negative. Go ahead and just get your people out."

Two firefighters started to go back in anyway, trying to retrieve equipment. The incident commander ordered them to stop.

"All units, from command," he said.
"We're abandoning the site. We're letting it go."

#### PART TWO: THE AFTERMATH

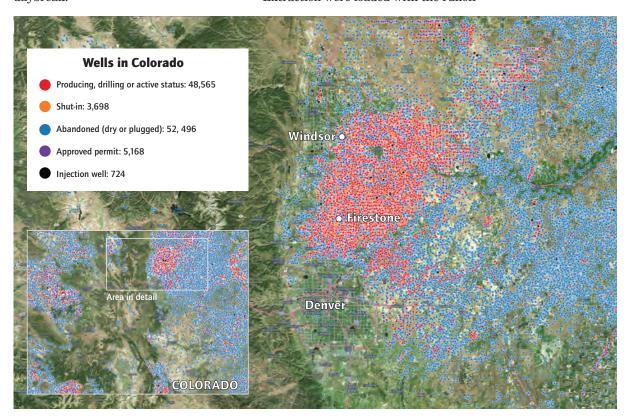
Water tenders and trucks kept arriving, bearing 265-gallon "totes" of foam in 4-by-4-foot tanks and 55-gallon drums, requiring a ratio of 97 parts water to three parts foam. Initially, water supply was tight. It took five minutes to drive each way to the closest hydrant and five minutes to fill each tender, plus waiting time as drivers lined up for their turns. Firefighters called around for a second water source, and at one point sought a highway flare to thaw a frozen connection to a second hydrant. Extraction, which has contracts for emergency water,

trucked in more in 18-wheelers.

Uncertain about how soon the fires would be contained and lacking specialized expertise even in well-heavy Colorado, Extraction called in Houston-based Wild Well Control, a company that's responded to oil disasters from Kuwait to the Deepwater Horizon spill in the Gulf of Mexico. A crew mobilized in Texas but didn't arrive on-site until daybreak.

oil and gas industry operators alike. They have been notably linked to contamination near Colorado's Buckley Air Force Base and other military sites.

During the night, a mixture of water and firefighting foam began flowing towards the site perimeter. Firefighters brought earth-moving equipment in to contain the runoff. Brady said that a "caravan" of big trucks brought in by Extraction were loaded with the runoff



Wells in all stages of development and production on Colorado's Front Range, where most of the state's 5.6 million people live. COLORADO OIL AND GAS COMMISSION DATA COMPILED BY THE DENVER POST VIA CARTO

All night long, firefighters kept a steady stream of foam and water aimed at the facility. Eventually, the abandoned equipment was no longer in danger. Firefighters worked throughout the next morning, monitoring flames that occasionally licked up and popped like bottle rockets.

Firefighters ended up using more than 3,500 gallons of foam. Retired Fire Chief Brady said that figure doesn't include an undisclosed amount that was rounded up from private sources, including other energy companies like Noble Energy. Windsor Severance Fire only had two totes. "We used pretty much all the foam in northern Colorado," Brady recalled, leaving many first responders without any on hand after the fire. Replacement foam had to be trucked in from Texas.

The specification sheets for the foams state that they contain anywhere from 10 to 30 percent of some form of ethylene glycol, a major component of antifreeze, plus an undisclosed percentage of "proprietary" materials that contain chemicals known as PFAS, or polyfluoroalkyl substances. Dubbed "forever chemicals," they are long-lasting in groundwater and of concern to public health officials and

and carted away. Extraction refuses to say where the material was disposed of, and the state does not require such a disclosure. Extraction's Cain said in an email: "The material was taken to a licensed commercial disposal facility. That's all I have to share."

Ultimately, Extraction Oil and Gas "remediated" the Stromberger site by carting away 406 tons of dirt over a week in April, according to manifests filed with the COGCC. They deposited that dirt in the North Weld County landfill, a claylined facility that does not accept hazardous waste. The soil was classified as "Non-regulated solid: E&P Contaminated Soil" on a "non-hazardous manifest."

That nonspecific description of "Exploration and Production" wastes exemplifies the opaque regulations governing the industry. In 2002, for example, the Environmental Protection Agency reclassified fluids emitted from oil and gas drilling operations as non-toxic waste that did not need to be reported. These wastes include produced water containing multiple contaminants, as well as drilling fluids, stimulation fluids, liquid hydrocarbons and hydrocarbon-bearing soil.

The so-called shale revolution took off,

## "The volume of activity that occurs without serious incident in such a large and dispersed industry is also worth noting alongside the accidents that unfortunately do at times occur."

-Todd Hartman, spokesman for the Department of Natural Resources, which oversees the Colorado Oil and Gas Conservation Commission



The Stromberger site as it looks today, after remediation from the 2017 explosions and fire. TED WOOD/

and reclassification soon led to exemption. In 2005, then-Vice President Dick Cheney's "Energy Task Force" led to legislation that exempted hydraulic fracturing fluids from every major federal environmental law.

Doc Nyiro, environmental protection manager for Waste Management, which operates the North Weld landfill, wrote that firefighting foam-contaminated soil is acceptable at the site. Both the Colorado Department of Public Health and Environment and the COGCC said there is no requirement to report the use of firefighting foam, nor to test for related chemicals when companies dump potentially contaminated soil in landfills.

As one consequence, Health Department spokesman Mark Salley wrote in an email, "The extent of PFAS contamination in Colorado's groundwater is unknown."

**Colorado's most infamous gas explosion** occurred on April 17, 2017, when a leak in an underground pipeline exploded a

suburban home in Firestone, less than 25 miles north of the Denver city limits. The blast killed two men, Mark Martinez and his brother-in-law, Joe Irwin, and severely burned Martinez's wife, Erin.

It was followed by a flurry of "neveragain" statements. Though Colorado has not seen another household explosion, natural gas infrastructure continues to pose dangers around the country. In January this year, five workers were killed in an oil well explosion in Oklahoma. In September, explosions linked to natural gas pipelines killed one person and destroyed several homes in three Boston neighborhoods, just a week after a western Pennsylvania town was evacuated for its own pipeline fire.

The Windsor blast is a reminder that the hazard remains high, stoking the fears of communities potentially in harm's way. According to a 2017 study by the Colorado School of Public Health that analyzed state accident reports, there were 116 reported fires or explosions at Colorado oil and gas sites between 2006

and 2015 — an average of almost one per month. But those numbers only reflect incidents covered by the state's reporting requirements at the time, which, as the authors noted, were less stringent than those in Utah, a state hardly renowned for its strict environmental rules.

Until recently, Colorado only required companies to report explosions and fires if they resulted in an injury to the general public that required medical treatment, or if there was "significant damage" to a well or equipment, a judgment left to the operator's discretion.

The authors say the number of actual fires and explosions in Colorado likely would be almost two and half times higher — more than one incident every two weeks — if the state had stronger reporting requirements. They noted: "The increased size and complexity of operations at multi-well pads will likely continue in the future, particularly in urban and suburban areas, increasing the potential risk for those living and working in close proximity to these sites."

Todd Hartman, spokesman for the Department of Natural Resources, which oversees COGCC, said, "Any spill or fire is one too many, and we continue to work hard to reduce those events." Hartman added that with more than 55,000 active wells in the state, 116 accidents is "equal to one event every 1,573,276 well/days," or days a well is operated. "The volume of activity that occurs without serious incident in such a large and dispersed industry is also worth noting alongside the accidents that unfortunately do at times occur."

Still, operators have reported more than 40 fires and explosions at oil and gas facilities since the end of 2015, when the Colorado School of Public Health team stopped their data analysis — more than one a month. The incident descriptions are often vague and are buried in the COGCC's difficult-to-navigate website. Several incidents caused fatalities, including an oil tank battery explosion in Mead a month after Firestone, which killed one worker and injured three.

State oil and gas inspector Mike Leonard, who was on the scene in Windsor that night, says people outside the industry tend to conflate the causes of these oil and gas accidents. "What happened at Windsor is not what happened at Firestone," Leonard said. "It's not what happened at Mead."

Those distinctions may indeed be lost on Colorado communities where wellpads and infrastructure loom over houses and schools. Whatever the cause of individual explosions and fires, keeping neighborhoods safe poses a daunting challenge for under-resourced first responders. "Nobody is really talking much about the low-probability, high-consequence events," said Don Whittemore, a former assistant fire chief for Rocky Mountain Fire and an internationally recognized expert on disaster response. "Your average Joe Firefighter isn't prepared for

these kinds of events."

In February 2018, partly in response to the Firestone tragedy, COGCC tightened its reporting requirements to include "any accidental fire, explosion, or detonation, or uncontrolled release of pressure." A bill to make those agency rules permanent passed the Democrat-controlled state House last session. But industry officials opposed the bill, and the Republican-controlled state Senate killed it.

Concerns about oil and gas development go well beyond explosions. The same gases that fueled the Windsor explosion can also harm human health and the climate.

Methane, a powerful greenhouse gas that warms the planet more quickly than carbon dioxide, can leak during the extraction and transportation of oil and gas. It is often accompanied by volatile organic compounds, or VOCs, a major contributor to the ozone problem in Colorado, where some areas have violated federal ozone health standards for years. Studies from around the country have linked proximity to those emissions with multiple health and environmental impacts, including increased cancer risks and adverse birth outcomes. According to COGCC, there were 17,254 detected leaks in 2017 from compressors, pressure relief

devices, pump seals and other sources. (Most were repaired.)

In Colorado, those oil-and-gas-related VOCs aren't being adequately measured. The Windsor explosion brought that into sharp relief. Detlev Helmig, a scientist at the University of Colorado's Institute of Alpine and Arctic Research, ran an airmonitoring station in Boulder tracking levels of known carcinogens like benzene and toluene. A Windsor resident emailed Helmig after the blast, wondering if his monitors had picked up anything. If enough gas had leaked to cause a wellpad fireball, they wondered, couldn't there be toxic levels of benzene in the air?

Helmig was stunned to see sharp spikes in ethane and benzene levels that night, the highest levels measured before or since. "With very, very high certainty," Helmig said, there was a huge release of gases in the hours before the explosion. Given the wind patterns at the time, the gases most likely came from the direction of Windsor, but because Helmig's monitor is about 40 miles away from the explosion site — and there's not a similar monitor closer — the exact source couldn't be pinpointed.

In August, Boulder County's funding for Helmig's monitoring station ran out.

In this case, Helmig believes, what people don't know can hurt them.

"There's an expectation that changes in regulations will cause improvements to air quality. But the only way to know is to measure," he said. The state health and environment agency, Helmig says, "doesn't seem to have the resources or the interest."

#### PART THREE: THE FIRESTONE NEXT TIME

Industry advocates acknowledge the dangers of oil and gas work, but prefer to highlight new technology and training that makes it safer. On Aug. 22, at the 30th annual Colorado Oil and Gas Association Energy Summit in Denver, attendees — some sporting "Frack Yeah" ribbons on their badges — talked up their role as "good neighbors."

COGA distributed pamphlets detailing more than \$9 million in donations from members last year. Executives encouraged giving employees paid time off to volunteer, or paying to maintain schools and libraries.

Yet critics continue to push back. The upcoming 2018 election will allow voters to weigh in on one of the most influential policy measures in years. Proposition 112 would require wells to be at least 2,500 feet from homes, schools, parks and other buildings, a distance that industry says would severely curtail new production



A video capture from television news footage shows a Firestone, Colorado, home fully engulfed by flames in April 2017. Two men died and a woman was severely injured in the fire, which was caused by a leak in an underground pipeline. YOUTUBE VIDEO CAPTURE FROM DENVER7



A young girl at the Erie Skate Park, Colorado, where a drill rig looms. TED WOOD/THE STORY GROUP

in the state, but advocates say will make neighborhoods safer.

Also on the November ballot is an industry-backed measure, Amendment 74. It would regard any government law or regulation that could have an impact on private property values - including basic zoning codes and subsurface mineral rights — as a "taking" that would require governments to reimburse property owners. The environmental group Conservation Colorado wrote that Amendment 74 would "paralyze state and local governments in their capacity to protect the health and safety of citizens." The Colorado Municipal League, hardly a firebrand on these issues, circulated a memo exhorting its members to defeat 74 because of its "far reaching and potentially disastrous consequences."

The oil and gas industry has launched an all-out blitz, fighting the setback initiative and promoting the takings amendment, at times using dubious methods — harassing signature gatherers and spending millions of dollars on public relations campaigns. Chip Rimer, senior vice president of global operations for Noble Energy, told the August COGA conference that the 2018 midterms would be "one of the most influential elections for our industry." He cited a Common Sense Policy Roundtable report predicting 147,000 lost jobs over 12 years if the setback initiative passed, telling attendees to imagine a town the size of Boulder going dark. "If that doesn't get your blood boiling," he urged the crowd, "you've got to get your passion up."

Protect Colorado, a political action committee opposing any ballot initiatives that would limit fossil fuel development, had pulled in more than \$30 million in 2018 as of early October, and had spent more than \$20 million that year in part on radio, television and digital advertising. Extraction has contributed nearly \$3 million this year to Protect Colorado, while Noble Energy and Anadarko have collectively contributed more than \$10 million.

At the mid-August COGA conference, Colorado's gubernatorial candidates — Democratic Congressman Jared Polis and Republican State Treasurer Walker Stapleton — both stated their opposition to Proposition 112. Even though Polis famously advocated for stricter controls on fracking in the past, including a 2,000-foot setback, he said the latest measure was "simply the wrong solution for Colorado."

Often lost in the debate are regulations, or the lack thereof, restricting how close new homes can be built to existing oil and gas infrastructure. In Firestone, the exploded house was built just 170 feet from an unregulated and abandoned gas line owned by Anadarko Petroleum, 20 feet further than the required setback in the town.

In Windsor, new homes are supposed to be 350 feet from oil wells. But Karley Robinson's home ended up less than the

#### "I'd pay you a million dollars a year not to drill."

-Broomfield, Colorado, Mayor Randy Ahrens, who tried to keep new wells from being drilled in his city

distance of an Olympic swimming pool lap from tank batteries and combustors, due to a setback loophole used by developers and energy companies. "Once the plat is approved, the property owner has the right to build," said Town of Windsor Planning Department Director Scott Ballstadt. "The setbacks don't apply to building permits." The wells, in turn, were approved before the houses were all built, meaning that the oil and gas commission's setback rules apparently didn't apply. Even if they did apply, the town setbacks are measured from the wellheads, not other oil and gas infrastructure that can leak or explode. This kind of play by housing developers, many of whom lease their mineral rights to oil and gas companies, occurs throughout

#### Randy Ahrens, the mayor of Broomfield,

a booming burg halfway between Denver and Boulder, couldn't get the Windsor blast off his mind. Ahrens had spent six years working in oil and gas, but was skeptical of the industry's impact on his community, which some residents were starting to call "Doomfield" because of the influx of well permit applications. Extraction had been seeking approval to drill 84 new wells in his town; how could he assure residents that what happened in Windsor wouldn't happen there?

He still hasn't gotten a good answer. The Colorado Oil and Gas Conservation Commission never conducted an independent investigation, instead relying on an accident report from Extraction that failed to identify a "root cause" for the incident. Instead, the company laid out possibilities for the source of the leak (possibly an open valve or a depressurized tank) and the source of the spark, including a vague mention of "unknown worker activities." The state accepted the filings.

Asked if Extraction's self-investigation into the Windsor explosion was sufficient, the COGCC's Leonard said, "Everything they put in that report lines up with what I saw that night." He explained that the state primarily wants to ensure that another accident like that won't happen again; inspectors now know to look for where heaters and generators are sited.

The state agency's authority is limited, so its investigation and any discipline had to focus on Extraction, not on contractors like Colter that may share blame. Industry insiders say that essentially creates a system of plausible deniability, allowing companies to hire contractors for the most dangerous work. "That's part of the game that gets played," says Bouldin, the former Colter supervisor. "They keep their fingers out of

it so they can blame somebody else."

Meanwhile, the Colorado Department of Health and Environment says that the cleanup from any oil and gas fire, explosion or spill is not their responsibility.

None of this offered much comfort to Mayor Ahrens, who emailed Extraction's inconclusive report to staff and voters alike, vowing to push for more information. "At the end of the day," he said in an interview, "I don't think they (Extraction) really know what happened." At one testy city council meeting, Extraction executives walked out when asked about their safety record.

In response to Broomfield's concerns, Eric Jacobsen, Extraction's senior vice president of operations, wrote a letter stating that the company had identified probable gas and ignition sources that might have contributed to the Windsor explosion. "Because it is difficult to pinpoint the exact contributing gas or ignition source as the definitive cause of the incident, we have implemented corrective actions that address all of these possible sources in our operations going forward." Among those: enhanced supervision of flowback operations, better on-site gas monitoring and new contractor training.

Despite Ahrens' ongoing concerns, state law makes it difficult for Broomfield to say no to new drilling. After Extraction executives originally told Ahrens that Broomfield could receive a million dollars a year in new revenue, Ahrens says he told them, "I'd pay you a million dollars a year not to drill."

As of mid-October, the COGCC had approved 71 new wells in Broomfield.

With his family by his side, Houston Pirtle was stabilized at the hospital. Speaking to CBS Denver on Jan. 3, His wife said that Pirtle's first words when they removed the tubes from his throat were to ask how she was doing. "That's just who he is," Darrah said. "(He) wanted to make sure me and the kids were okay."

Pirtle's family had to set up a GoFundMe campaign that raised \$11,000 to help keep his wife and two infant children afloat as he recovered. Bouldin, the retired supervisor, splutters with contempt when asked about the way Pirtle was treated. "The big leaders of this chain are too cowardly to step up and take responsibility," he said.

Pirtle's family got through his initial convalescence with help from the funds they raised. Within months, Pirtle was back in the field, still physically and mentally scarred. A friend said Pirtle is "up and down."

OSHA investigated the accident, but the agency's legal mandate is narrowly focused on worker safety issues, not dangers to the public. It's even more limited because there are no federal safety standards for oil and gas industry workers. Instead, OSHA relies on "best industry practices" collected by the American Petroleum Institute, the industry trade group.

"This doesn't necessarily mean the best practices," said Richard "Dean" Wingo, a former OSHA regional manager based in Dallas. "The best practices could be beyond what the industry recognizes, but OSHA is not going to hold them to that."

Colter Energy, the contractor whose workers were on-site, was ultimately cited for a handful of workplace safety violations. OSHA levied a \$7,068 fine, but that was negotiated down to just \$3,534 for two "serious" violations: keeping the generator and heater too close to a separator.

According to SEC filings, Extraction Oil and Gas listed \$8.8 million in net income in the second quarter of 2018, selling 73,563 "barrels of oil equivalent" per day in crude oil and gas. The company's top two executives earned more than \$25 million each in 2016 after it went public. XOG's stock value has since halved, but the state has approved applications from Extraction and its subsidiaries for nearly 400 wells since October 2017; the companies have nearly 700 more permits pending.

For its role as operator in the Windsor fire, Extraction escaped without a fine from the federal or state government. It did, however, reimburse 13 local government entities a total of \$140,013.02 for more than 20 hours of firefighting and support.

The Stromberger well pad's neighbors, still reeling from that night, realize that they have to live with the risks or pay a high price to move. Heidi Jette, a mother of five who lives within a mile of the blast, said it helped pierce the industry's assurances that everything is safe. "When you realize everything that's out there, it's just scary," said Jette. "There's so much that gets brushed under the carpet. Everyone is kind of in denial."

In the weeks following the fire, former Windsor Fire Chief Brady said his conscience bothered him. "I'm scared for the firefighters, and I'm scared for these communities," he said. He began sharing his views, but said that nobody wanted to hear them. "Between the lack of information and the cover-up," he told himself, "I'm done."

He doesn't know what will happen if things don't change. However, he does know that he no longer wants to be responsible for Colorado's neighborhood oil rush. "Is this situation really OK with the citizens?" he wondered.

"If it is, well, there you go."  $\Box$ 



Daniel Glick is a cofounder of The Story Group. Previously, he worked for Newsweek for 13 years and has also written for National Geographic, Smithsonian, Audubon, The New York Times Magazine and more than a dozen other periodicals.



Jason Plautz is a journalist based in Denver, Colorado. His work has appeared in Science, HuffPost, 5280, Undark, National Journal, Ars Technica, Industry Dive and Greenwire. He was a Ted Scripps Fellow in Environmental Journalism at the University of Colorado.

Glick, Plautz and photographer Ted Wood are members of The Story Group, an independent, multimedia journalism company based in Boulder. TSG produces print and video stories for publications and electronic media, focusing on environmental and resource issues in the West.

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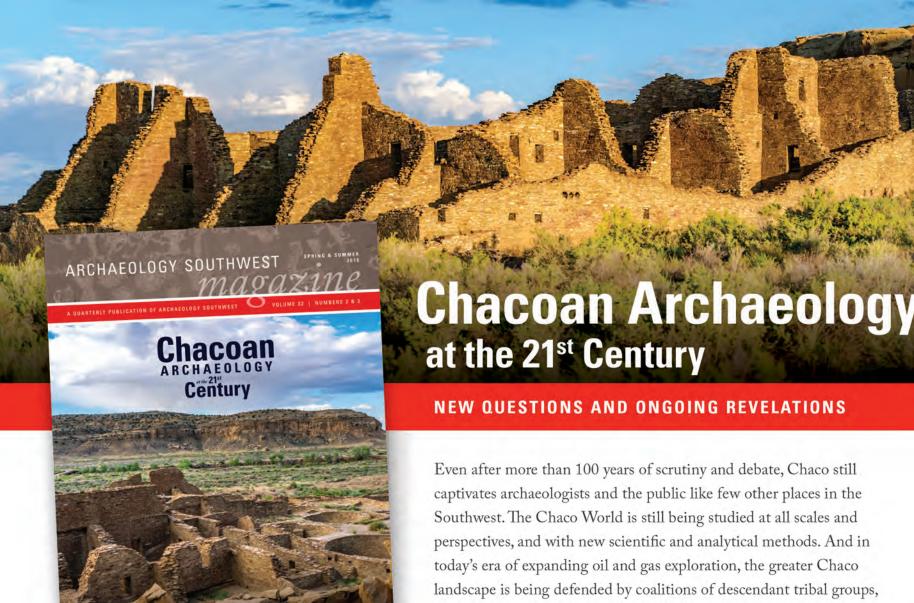
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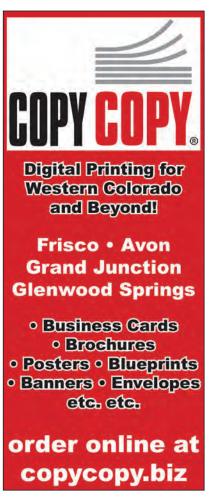
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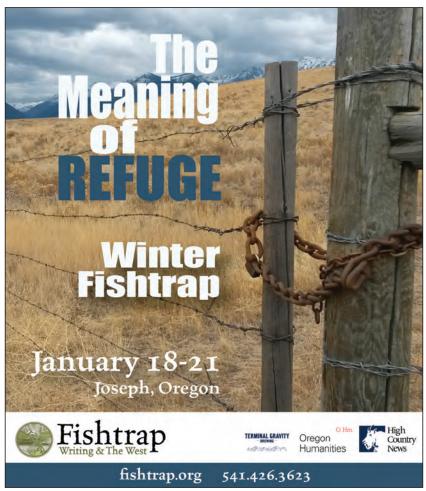
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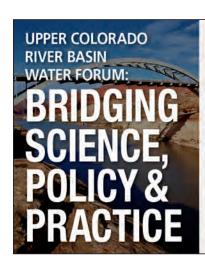












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A diverse classroom at South Denver High School, the setting of Helen Thorpe's recent book.

ANDY CROSS/ THE DENVER POST

## A Denver high school welcomes the world's refugees

The Newcomers explores the lives of immigrant teens and what it takes to become an American



The Newcomers:
Finding Refuge,
Friendship, and
Hope in an American
Classroom
Helen Thorpe
416 pages, hardcover:
\$28.
Scribner, 2017.

n a warm summer evening in Denver in 2015, the writer Helen Thorpe stood outside with a family from the Democratic Republic of Congo. Tchiza and Beya and their children had recently come to the U.S. from a refugee camp in Africa. Suddenly, the *rat-a-tat-tat* of fireworks went off, and Beya dropped to the pavement. She got up cautiously, without a word. Another burst erupted, and Beya flinched again. It was almost the Fourth of July, but to her, the celebrations sounded like gunfire.

In the entire year Thorpe spent visiting with the family, that one wordless response was the only statement they ever made about the violence they had endured in their home country, where one of the world's bloodiest armed conflicts has raged for over a decade. Later, the author wonders how this family could be so joyful. "And were the two matters related, the not-naming and the joy?

Moments like this abound in Thorpe's book The Newcomers, which chronicles the lives of 22 teenagers brought together in a beginner-level English language class at South High School in Denver. The author spent the 2015-2016 school year at South, which has long served as a magnet for immigrant and refugee students, offering teaching assistants fluent in other languages, therapists — even a food bank stocked by volunteers. She devotes the majority of her time to room 142, affectionately dubbed "Newcomer Class," where teacher Eddie Williams helps students who speak little or no English gain the language skills they need to graduate high school and build a life in America.

To get here, many of the students have escaped from some of the most violent countries on earth. But they are also teenagers — like any other teenagers — a fact Thorpe is eager to express through the ordinary dramas of their everyday lives. As she gets to know the students, personalities emerge, crushes develop, and friendships form (and sometimes fade)

In the classroom, the students' abilities vary as widely as their backgrounds. On one end of the spectrum are Solomon and Methusella, Tchiza and Beya's sons, talented athletes and students who acquire English at a rate that astonishes their teacher. On the other end are Mariam and Jakleen, Iraqi sisters forced to flee their country after their father, who worked for the American military, received death threats. But unlike the Congolese brothers, Mariam and Jakleen struggle to improve their English. The girls confide to Thorpe that they miss their father, who disappeared after he returned to Iraq briefly for work.

In these moments, we learn that for the students in Mr. Williams' classroom, learning English is only the beginning of the challenges they face. Upon their arrival in the U.S., refugees have between 90 and 180 days to find jobs before their federal financial assistance stops, at which point they are expected to become economically self-sufficient. Remarkably, all the families in *The Newcomers* succeed, but it is not easy, and many struggle to pay rent and to put food on the table.

Meanwhile, Lisbeth, a bubbly student from El Salvador, must convince a federal immigration judge to approve her asylum application so she can remain in the U.S. with her mother. Deportation would mean a return to the gangs who threatened her mother. But Lisbeth does

not ask for pity. "Es mi historia," she tells Thorpe, simply. "It's my story."

It is impossible, of course, to read *The Newcomers* without considering today's anti-immigrant rhetoric, with its talk of building walls, expelling Dreamers, and barring Muslim refugees. By the end of the book, that rhetoric is no longer abstract — its targets are the kids inside Eddie Williams' classroom.

At bus stops and grocery stores, strangers call Mariam derogatory names when she wears a hijab — particularly galling, Thorpe notes, because Mariam lost her father because he cooperated with the U.S. military in the fight against terrorism.

At times, Thorpe's earnest observations can become overly sentimental, but her reflections are painfully honest, too. How can the author, whose life has always been safe and secure, protected from the conflicts raging across other parts of the world, begin to understand her subjects' stories: "Even if Tchiza had wanted to explain, where would he begin?"

That question is an urgent one. Today, more than 65 million people are displaced from their homes; 22.5 million of them are refugees, and of those, less than 1 percent are ever resettled in a third country by the United Nations. Under President Donald Trump, the U.S. will accept just 0.2 percent of the world's refugees, far less than the historic average. Thorpe does not offer any grand solutions to this crisis, or any cure for the fear and bigotry directed towards those seeking refuge here. Instead, she leaves us with the hope that, inside one high school, at least, America can become the country the world needs it to be.

BY SARAH TORY

# The Ascension of Matthew Shepard

Murder motived by hate, 20 years later

n the painting, Matthew Shepard's hands are finally free. The length of rope that once lashed him to the buck and rail fence drapes loosely around his waist; the caked blood that made his body look like a scarecrow to a passing cyclist is now a gleaming, rich red. He rises into the air surrounded by angels, each bearing the face of Saint Sebastian — patron saint of those who conceal their identities to avoid persecution. The angels' wings stand tall and arched, like the wire and cloth wings Shepard's friends wore at his funeral in 1998 in Laramie, Wyoming, to block out anti-gay protesters from the Westboro Baptist Church.

Titled The Ascension of Matthew Shepard, the portrait is part of a series by painter Carl Grauer that seeks to honor pivotal leaders from the LGBTQ movement through religious iconography. (The full series will be unveiled in June to commemorate the 50th anniversary of the Stonewall riots, demonstrations in New York City that marked the advent of the modern fight for LGBTQ rights.) Grauer, a gay man himself and the son of a former nun, grew up in central Kansas, steeped in the idea that homosexuality was a sin. "I spent my adolescence trying to pray the gay away," he told me recently. But he also grew up surrounded by religious art, which has been used across centuries to enshrine values and social structures, suggesting who was holy and who was not.

Grauer sees a parallel between the saints and martyrs of religion and those in the gay rights movement who have fought for basic freedoms, sometimes at great personal cost: "I'm going to take those same structures that were used against (LGBTQ people) and say, 'We are important.'"

Though he typically paints in his studio in Poughkeepsie, New York, Grauer has been working on the series this fall from Jentel Arts Residency in Banner, Wyoming. (Full disclosure: I was a resident there at the same time.) On his drive north from Denver in September, he stopped at the place on the outskirts of Laramie where Shepard was tortured and left for dead by Aaron McKinney and Russell Henderson on the night of Oct. 6, 1998. Grauer was shocked, and then enraged, to find nothing there to commemorate the murder.

Shepard's murder pushed Grauer to come out as gay 20 years ago, in the days after the news broke. But it was the upwelling of activism that followed that compelled Grauer to commemorate Shepard in the portrait series. "He died

the death of a martyr. Not only was he beaten and tied up, he was set on fire. ... I feel really strongly about documenting this. The history books are not going to cover it," Grauer said. For a time in his 20s, Grauer had moved back to Kansas to document the lives of gay Kansans — to "correct the imbalance" caused when people like him leave town or remain invisible — and he still misses the state, Grauer told me. "The sky, the stars, the isolation and quiet. All that is still in my soul."

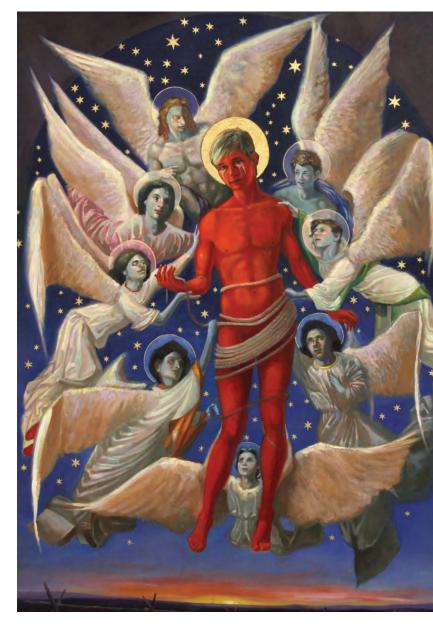
wenty years after Shepard's murder, one might be tempted to assume it's easier to live as a gay person in a conservative state like Kansas or Wyoming. After all, a 2015 Supreme Court ruling ensured that couples can marry nationwide, regardless of sex. In 2009, the Matthew Shepard and James Byrd Jr. Hate Crimes Prevention Act, which labeled crimes motivated by the victim's gender, sexual orientation or gender identity as hate crimes, passed at the federal level. And Laramie, where Shepard was murdered, became the first town in Wyoming to pass a nondiscrimination ordinance in 2015.

But despite its reputation as a "live and let live" state, there are indicators that things remain difficult, if not dismal: Wyoming has refused to pass legislation like nondiscrimination ordinances, conversion therapy bans and hate crime statutes, laws that would help protect LGBTQ people.

Has that lack of legal protections translated to violence? The answer is likely yes, said Sarah McBride, press secretary for the Human Rights Campaign, but it's hard to say to what extent. Reporting hate-related violence is currently voluntary, so accurate statistics are difficult to gather. And the details of an individual crime might not point directly to gender- or sexual orientation-related motivations, excluding it from the official tally.

Compounding the problem, many rural LGBTQ people choose not to report hate-based violence because of the consequences. In states like Wyoming, Montana, and Idaho, "You can be fired for your sexual orientation or gender identity, so you may not want to go directly to police," said Jason Marsden, the executive director of the Matthew Shepard Foundation. "It might end up in the paper."

This is especially a consideration in predominantly Mormon areas. "There's a lot of concern about how kids from LDS families who have nonconforming gender



identities or sexual orientations are going to ... get out of some of the traps of selfharm, family rejection and social rejection," Marsden said.

In The Ascension of Matthew Shepard, Grauer offers one consolation. The painting borrows its composition from classical works depicting a tenet of Catholicism: the assumption of Mary, in which the sinless mother of Jesus is raised to heaven by a flock of angels. In Grauer's version, it is the beaten body of Shepard that is rendered sinless, escorted by those who protected him from the vitriol of religious anti-gay activists. Gold stars watch over him, a reference to the closing comments of Shepard's father at McKinney's trial in 1999: "You left him out there by himself, but he wasn't alone. ... There were his lifelong friends ... the stars and the moon."

Those who see in Shepard's story their own may find themselves on Grauer's canvas: protected, no longer alone, and — perhaps for the first time — made holy.  $\square$ 

Katherine E. Standefer's debut book, Lightning Flowers, is forthcoming in late 2019 from Little, Brown Spark. The painting challenges traditionally exclusive religious imagery by placing Matthew Shepard, the victim of a hate crime, in a place of reverence.

CARL GRAUER



Chaco Canyon has been home to the Pueblo people for thousands of years. JASPERDO/FLICKR CC

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The greater Chaco landscape is one of the richest cultural landscapes in the United States. It is the ancestral home of our Pueblo people. The Chaco Canyon, Mesa Verde and Bears Ears regions of the Four Corners are what we call the "footprints of our ancestors" as we trace our ancient migration. They record the long-living history of Pueblo people in the Southwest United States.

Currently, only a small area of our ancestral homeland is protected as the Chaco Canyon National and Historic Park. Most of the publicly managed lands in the region are unprotected and exposed to industrial development. Sadly, more than 90 percent of public land in the area is already leased for oil and gas drilling. The remaining land — home to thousands of artifacts, ancient houses and roads — is at risk of being damaged by new drill pads, pipelines and a web of industrial access roads.

We, the direct descendants of the ancestral Chacoan people, hold various leadership roles in our respective communities and represent thousands of Pueblo people. The integrity and health of our land is of paramount importance to us. During our Washington trip, we shared our stories with the current administration and Congress. And we have called on Interior Secretary Ryan Zinke and the entire federal government to protect what little remains of this landscape.

Our trip follows two historic meetings over the past two years between the Navajo Nation and Pueblo governors in New Mexico. Tribes throughout the Southwest recognized that the threat to this sacred and important landscape was so great that we joined together in our efforts to save our sacred sites.

Our trip also comes as the Bureau of Land Management prepares to release a plan that could alter our cultural landscape forever. The BLM and Bureau of Indian Affairs are revising a land-use plan for the region that will decide whether the core area around the park, defined roughly by a 10-mile radius, will be open to drilling. New technologies in accessing

oil and gas reserves have led to increased development interest in the greater Chaco landscape. It is imperative that the current administration and members of Congress understand what is at stake should the United States government continue to develop in the region.

Thankfully, legislation has been introduced that would safe-guard some of the lands within the core area outside of the park. The bill, the Chaco Cultural Heritage Area Protection Act of 2018, is supported by the All Pueblo Council of Governors and the Navajo Nation.

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Whether it is through the BLM and BIA management plan, the proposed federal legislation, or both, we want decision-makers in D.C. to know that just as the United States takes great care to preserve churches, we would hope they would do the same for our sacred places. Chaco Canyon is, and always will be, a part of who we are. It is where our ancestors lived and where they continue to reside, and it should be preserved for future generations.

Submitted by the All Pueblo Council of Governors (APCG) Chairman Edward Paul Torres, APCG Vice-Chairman and Pueblo of Santa Clara Gov. J. Michael Chavarria, Pueblo of Acoma Gov. Kurt Riley and former Pueblo of Tesuque Gov. Mark Mitchell, who share the responsibility of co-chairs for the APCG Natural Resources Committee.

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Timber framer Bodie Johansson chisels out floor joist housings in the Handcrafted Log & Timber yard in Ridgway, Colorado. BLAKE GORDON © 2018 Patagonia, Inc.

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#### HEARD AROUND THE WEST | BY BETSY MARSTON

#### OREGON

**Peter Boghossian,** who teaches philosophy of education at Portland State University, is an outspoken critic of political correctness. He says it leads to "morally fashionable" and barely credible academic pursuits that inspire administrators to issue "trigger warnings, safe spaces and micro-aggression" callouts on college campuses. To demonstrate just how absurd a research paper on "gender studies" could be and still get published by an academic journal, Boghossian and two accomplices, Helen Pluckrose and James Lindsay, cooked up a satirical analysis of "dog-on-dog sexual assault" at dog parks. The purported author claimed to have documented more than a thousand instances of a dog mounting another dog. First. however, "the genitals of slightly fewer than 10,000 dogs had to be

respectfully examined ... being care-

ful not to cause alarm and moving away if any dog appeared uncomfortable. ..." And the study's conclusion? "When a male dog was raping/humping another male dog, humans attempted to intervene 97 percent of the time. When a male dog was raping/humping a female dog, humans only attempted to intervene 32 percent of the time." And when male owners used shock collars to deter their male dogs, the author speculated that they might be revealing "homophobic shame." The study — credited to the fictitious Helen Wilson, who purportedly worked for the nonexistent Ungendering Research Institute — was ponderously titled "Human reactions to rape culture and queer performativity at urban dog parks in Portland, Oregon." Published by the legitimate feminist geography journal Gender, Place and Culture, it was retracted Oct. 5, after The Wall Street Journal questioned its authenticity. The newspaper found that the dog park study was just one of 20 fake studies the group submitted to academic journals in the past year, with seven accepted for publication. As for Boghossian, who's getting considerable heat for the hoax, he told Willamette Week that the university had "summoned" him to a meeting: "I think that everybody is walking on eggshells. I think these disciplines are so entrenched and these ideas are so entrenched that people are afraid."



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THE NATION

**Elaborate hoaxes were the specialty** of the late Alan Abel, who founded a national campaign in 1959 to put clothing — especially trousers — on cows and other animals. His bogus group, The Society for Indecency to Naked Animals, even ensnared journalist Walter Cronkite, who repeated its slogan — "A nude horse is a rude horse" — on the nightly news. The Week reported that Abel also ran the two presidential campaigns of a nonexistent Jewish homemaker from the Bronx in the 1960s. Her catchy slogan: "Vote for Yetta and things will get betta." But Abel's greatest triumph involved faking his own death in 1980 and scoring an obituary in The New York Times. He did so by creating a sham undertaker in Utah who confirmed the non-event. The realnews obit for Alan Abel ran in the Times Sept. 17.

#### **COLORADO**

Close to 2 million Facebook users have seen a video of Kamira Trent standing up to an angry woman in the City Market in Rifle, Colorado. Linda Dwire, 64, began harassing two other shoppers because they spoke Spanish to each other. When Dwire ordered them loudly to "speak English and be American," Trent spoke up, saying, "You don't harass people. You leave these women alone. I have respect and you don't

harass people like this." In a Facebook message, Trent said she intervened "because it was the right thing to do. I would do it again if I needed to."

#### WASHINGTON

Harassment, it turns out, is notconfined to humans. In 2010, a tourist on a popular trail in Olympic National Park lost his life when a mountain goat harassed and wounded him and then wouldn't let rescuers approach. It seems that mountain goats - which aren't native to the area, having been introduced a century or so ago — have an insatiable yen for the salt and minerals found in human urine, sweat and clothing. So this September, 114 fluffy and blindfolded goats, looking like giant stuffed animals, were

strapped into slings and hung from helicopters for a 100-mile trip to the North Cascades, where the animals are native, reports the Associated Press. More airlifts will follow, say park officials, but goats that can't be captured will be shot and killed.

#### COLORADO

Determined to find an "isolated scenic location" to propose marriage, Joshua Mason, 27, of Denton, Texas, invited Katie Davis, 28, on a rugged backcountry hike near Boulder, Colorado. But on the way up the scenic 8.2-mile trail, which gains about 3,000 feet in altitude, the ill-prepared couple lost their way and ended up stranded on a cliff. They were lucky: Around midnight, a nearby camper heard their cries and led them to his friends. The couple were dehydrated and suffering from altitude sickness, but by dawn they were safely back at the trailhead — and apparently still engaged.

**WEB EXTRA** For more from Heard around the West, see **hcn.org**.

Tips and photos of Western oddities are appreciated and often shared in this column. Write betsym@hcn.org or tag photos #heardaroundthewest on Instagram.



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