The Environmental Nightmare You Know Nothing About

How Rural America Got Fracked

by Ellen Cantarow

If the world can be seen in a grain of sand, watch out. As Wisconsinites are learning, there's money (and misery) in sand—and if you've got the right kind, an oil company may soon be at your doorstep.

March in Wisconsin used to mean snow on the ground, temperatures so cold that farmers worried about their cows freezing to death. But as I traveled around rural townships and villages in early March to interview people about frac-sand mining, a little-known cousin of hydraulic fracturing or "fracking," daytime temperatures soared to nearly 80 degrees—bizarre weather that seemed to be sending a meteorological message.

In this troubling spring, Wisconsin's prairies and farmland fanned out to undulating hills that cradled the land and its people. Within their embrace, the rackety calls of geese echoed from ice-free ponds, bald eagles wheeled in the sky, and deer leaped in the brush. And for the first time in my life, I heard the thrilling warble of sandhill cranes.

Corporations are descending on this bucolic region to cart off its prehistoric sand.

Yet this peaceful rural landscape is swiftly becoming part of a vast assembly line in the corporate race for the last fossil fuels on the planet. The target: the sand in the land of the cranes.

Five hundred million years ago, an ocean surged here, shaping a unique wealth of hills and bluffs that, under mantles of greenery and trees, are sandstone. That sandstone contains a particularly pure form of crystalline silica. Its grains, perfectly rounded, are strong enough to resist the extreme pressures of the technology called hydraulic fracturing, which pumps vast quantities of that sand, as well as water and chemicals, into ancient shale formations to force out methane and other forms of "natural gas."

That sand, which props open fractures in the shale, has to come from somewhere. Without it, the fracking industry would grind to a halt. So big multinational corporations are

across the country to produce more natural gas. Geology that has taken millions of years to form is now being transformed into part of a system, a machine, helping to drive global climate change.

"The valleys will be filled… the mountains and hills made level"

Boom times for hydraulic fracturing began in 2008 when new horizontal-drilling methods transformed an industry formerly dependent on strictly vertical boring. Frac-sand mining took off in tandem with this development.

"It's huge," said a US Geological Survey mineral commodity specialist in 2009. "I've never seen anything like it, the growth. It makes my head spin." That year, from all US sources, frac-sand producers used or sold over 6.5 million metric tons of sand—about what the Great Pyramid of Giza weighs. Last month, Wisconsin's Department of Natural Resources (DNR) Senior Manager and Special Projects Coordinator Tom Woletz said corporations were hauling at least 15 million metric tons a year from the state's hills.

By July 2011, between 22 and 36 frac-sand facilities in Wisconsin were either operating or approved. Seven months later, said Woletz, there were over 60 mines and 45 processing (refinement) plants in operation. "By the time your article appears, these figures will be obsolete," claims Pat Popple, who in 2008 founded the first group to oppose frac-sand mining, Concerned Chippewa Citizens (now part of The Save the Hills Alliance).

Jerry Lausted, a retired teacher and also a farmer, showed me the tawny ridges of sand that delineated a strip mine near the town of Menomonie where he lives. "If we were looking from the air," he added, "you'd see ponds in the bottom of the mine where they dump the industrial waste water. If you scan to the left, you'll see the hills that are going to disappear."

Those hills are gigantic sponges, absorbing water, filtering it, and providing the region's aquifer with the purest water imaginable. According to Lausted, sand mining takes its toll on "air quality, water quality and quantity. Recreational aspects of the community are damaged. Property values [are lowered.] But the big thing is, you're removing the hills that you can't replace. They're a huge water manufacturing factory that Mother Nature gave us, and they're gone."

It's impossible to grasp the scope of the devastation from the road, but aerial videos and photographs reveal vast, bleak sandy wastelands punctuated with waste ponds and industrial installations where Wisconsin hills once stood.

When corporations apply to counties for mining permits, they must file "reclamation" plans. But Larry Schneider, a retired metallurgist and industrial consultant with a specialized knowledge of mining, calls the reclamation process "an absolute farce."

Reclamation projects by mining corporations since the 1970s may have made mined areas "look a little less than an absolute wasteland," he observes. "But did they reintroduce the biodiversity? Did they reintroduce the beauty and the ecology? No."

Studies bear out his verdict. "Every year," wrote Mrinal Ghose in the *Journal of Scientific and Industrial Research*, "large areas are continually becoming unfertile in spite of efforts to grow vegetation on the degraded mined land."

Awash in promises of corporate jobs and easy money, those who lease and sell their land just shrug. "The landscape is gonna change when it's all said and done," says dairy farmer Bobby Schindler, who in 2008 leased his land in Chippewa County to a frac-sand company called Canadian Sand and Proppant. (EOG, the former Enron, has since taken over the lease.) "Instead of being a hill it's gonna be a valley, but all seeded down, and you'd never know there's a mine there unless you were familiar with the area."

Of the mining he adds, "It's really put a boost to the area. It's impressive the amount of money that's exchanging hands." Eighty-four-year-old Letha Webster, who sold her land 100 miles south of Schindler's to another mining corporation, Unimin, says that leaving her home of 56 years is "just the price of progress."

As Wisconsinites are learning, there's money (and misery) in sand.

Jamie and Kevin Gregar—both 30-something native Wisconsinites and military veterans—lived in a trailer and saved their money so that they could settle down in a pastoral paradise once Kevin returned from Iraq. In January 2011, they found a dream home near tiny Tunnel City. (The village takes its name from a nearby rail tunnel). "It's just gorgeous—the hills, the trees, the woodland, the animals," says Jamie. "It's perfect."

Five months after they moved in, she learned that neighbors had leased their land to "a sand mine" company. "What's a sand mine?" she asked.

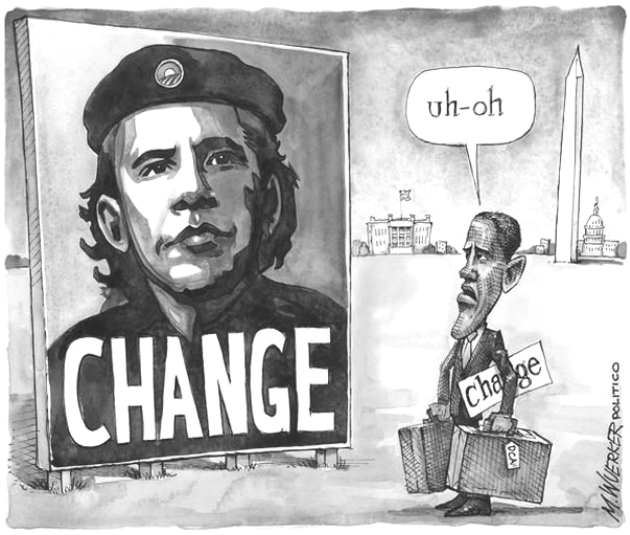
Less than a year later, they know all too well. The Gregars' land is now surrounded on three sides by an unsightly panorama of mining preparations. Unimin is uprooting trees, gouging out topsoil, and tearing down the nearby hills. "It looks like a disaster zone, like a bomb went off," Jamie tells me.

Aerial photographs reveal bleak sandy wastelands.

For Unimin, the village of Tunnel City in Greenfield township was a perfect target. Not only did the land contain the coveted crystalline silica; it was close to a rail spur. No need for the hundreds of diesel trucks that other corporations use to haul sand from mine sites to processing plants. No need, either, for transport from processing plants to rail junctions where hundreds of trains haul frac-sand by the millions of tons each year to fracture other once-rural landscapes. Here, instead, the entire assembly line operates in one industrial zone.

There was also no need for jumping the hurdles zoning laws sometimes erect. Like many Wisconsin towns where a culture of diehard individualism sees zoning as an assault on personal freedom, Greenfield and all its municipalities, including Tunnel City, are unzoned. This allowed the corporation to make deals with individual landowners. For the 8.5 acres where Letha Webster and her husband Gene lived for 56 years, assessed in 2010 at $147,500, Unimin paid $330,000. Overall, between late May and July 2011, it paid $5.3 million for 436 acres with a market value of about $1.1 million.

There was no time for public education about the potential negative possibilities of frac-sand mining: the destruction of the hills, the decline in property values, the danger of silicosis (once considered a strictly occupational lung disease) from blowing silica dust, contamination of ground water from the chemicals used in the processing plants, the blaze of lights all night long, noise from hundreds of train cars, houses shaken by blasting. Ron Koshoshek, a leading environmentalist who works with Wisconsin's powerful Towns Association to educate townships about the industry, says that "frac-sand mining will virtually end all residential development in rural townships." The result will be "a large-scale net loss of tax dollars to towns, increasing taxes for those who remain."



Town-busting tactics

Frac-sand corporations count on a combination of naïveté, trust, and incomprehension in rural hamlets that previously dealt with companies no larger than Wisconsin's local sand and gravel industries. Before 2008, town boards had never handled anything beyond road maintenance and other basic municipal issues. Today, multinational corporations use their considerable resources to steamroll local councils and win sweetheart deals. That's how the residents of Tunnel City got taken to the cleaners.

On July 6, 2011, a Unimin representative ran the first public forum about frac-sand mining in the village. Other heavily attended and often heated community meetings followed, but given the cascades of cash, the town board chairman's failure to take a stand against the mining corporation, and Unimin's aggressiveness, tiny Tunnel City was a David without a slingshot.

Local citizens did manage to get the corporation to agree to give the town $250,000 for the first two million tons mined annually, $50,000 more than its original offer. In exchange, the township agreed that any ordinance it might pass in the future to restrict mining wouldn't apply to Unimin. Multiply the two million tons of frac-sand tonnage Unimin expects to mine annually starting in 2013 by the $300 a ton the industry makes and you'll find that the township only gets .0004% of what the company will gross.

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For the Gregars, it's been a nightmare. Unimin has refused five times to buy their land and no one else wants to live near a sand mine. What weighs most heavily on the couple is the possibility that their children will get silicosis from long-term exposure to dust from the mine sites. "We don't want our kids to be lab rats for frac-sand mining companies," says Jamie.

Drew Bradley, Unimin's senior vice president of operations, waves such fears aside. "I think [citizens] are blowing it out of proportion," he told a local publication. "There are plenty of silica mines sited close to communities. There have been no concerns exposed there."

That's cold comfort to the Gregars. Crystalline silica is a known carcinogen and the cause of silicosis, an irreversible, incurable disease. None of the very few rules applied

to sand mining by the state's Department of Natural Resources (DNR) limit how much silica gets into the air outside of mines. That's the main concern of those living near the facilities.

So in November 2011, Jamie Gregar and ten other citizens sent a 35-page petition to the DNR. The petitioners asked the agency to declare respirable crystalline silica a hazardous substance and to monitor it, using a public health protection level set by California's Office of Environmental Health Hazard Assessment. The petition relies on studies, including one by the DNR itself, which acknowledge the risk of airborne silica from frac-sand mines for those who live nearby.

The DNR denied the petition, claiming among other things that—contrary to its own study's findings—current standards are adequate. One of the petition's signatories, Ron Koshoshek, wasn't surprised. For 16 years he was a member of, and for nine years chaired, Wisconsin's Public Intervenor Citizens Advisory Committee. Created in 1967, its role was to intercede on behalf of the environment, should tensions grow between the DNR's two roles: environmental protector and corporate licensor. "The DNR," he says, "is now a permitting agency for development and exploitation of resources."

No one else wants to live near a sand mine.

In 2010, Cathy Stepp, a confirmed anti-environmentalist who had previously railed against the DNR, belittling it as "anti-development, anti-transportation, and pro-garter snakes," was appointed to head the agency by now-embattled Governor Scott Walker who explained: "I wanted someone with a chamber-of-commerce mentality."

As for Jamie Gregar, her dreams have been dashed and she's determined to leave her home. "At this point," she says, "I don't think there's a price we wouldn't accept."

Frac-sand vs. food

Brian Norberg and his family in Prairie Farm, 137 miles northwest of Tunnel City, paid the ultimate price: he died while trying to mobilize the community against Procore, a subsidiary of the multinational oil and gas corporation Sanjel. The American flag that flies in front of the Norbergs' house flanks a placard with a large, golden NORBERG, over which pheasants fly against a blue sky. It's meant to represent the 1,500 acres the family has farmed for a century.

"When you start talking about industrial mining, to us, you're violating the land," Brian's widow, Lisa, told me one March afternoon over lunch. She and other members of the family, as well as a friend, had gathered to describe Prairie Farm's battle with the frac-sanders. "The family has had a really hard time accepting the fact that what we consider a beautiful way to live could be destroyed by big industry."

Their fight against Procore started in April 2011: Sandy, a lifelong friend and neighbor, arrived with sand samples drillers had excavated from her land, and began enthusiastically describing the benefits of frac-sand mining. "Brian listened for a few minutes," Lisa recalls. "Then he told her [that]… she and her sand vials could get the heck—that's a much nicer word than what he used—off the farm. Sandy was hoping we would also be excited about jumping on the bandwagon. Brian informed her that our land would be used for the purpose God intended, farming."

Brian quickly enlisted family and neighbors in an organizing effort against the company. In June 2011, Procore filed a reclamation plan—the first step in the permitting process—with the county's land and water conservation department. Brian rushed to the county office to request a public hearing, but returned dejected and depressed. "He felt completely defeated that he could not protect the community from them moving in and destroying our lives," recalls Lisa.

He died of a heart attack less than a day later at the age of 52. The family is convinced his death was a result of the stress caused by the conflict. That stress is certainly all too real. The frac-sand companies, says family friend Donna Goodlaxson, echoing many others I interviewed for this story, "go from community to community. And one of the things they try to do is pit people in the community against each other."

Instead of backing off, the Norbergs and other Prairie Farm residents continued Brian's efforts. At an August 2011 public hearing, the town's residents directly addressed Procore's representatives. "What people had to say there was so powerful," Goodlaxson remembers. "Those guys were blown out of their chairs. They weren't prepared for us."

"I think people insinuate that we're little farmers in a little community and everyone's an ignorant buffoon," added Sue Glaser, domestic partner of Brian's brother Wayne. "They found out in a real short time there was a lot of education behind this."

"About 80% of the neighborhood was not happy about the potential change to our area," Lisa adds. "But very few of us knew anything about this industry at [that] time." To that end, Wisconsin's Farmers' Union and its Towns Association organized a day-long conference in December 2011 to help people "deal with this new industry."

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Meanwhile, other towns, alarmed by the explosion of frac-sand mining, were beginning to pass licensing ordinances to regulate the industry. In Wisconsin, counties can challenge zoning but not licensing ordinances, which fall under town police powers. These, according to Wisconsin law, cannot be over-

ruled by counties or the state. Becky Glass, a Prairie Farm resident and an organizer with Labor Network for Sustainability, calls Wisconsin's town police powers "the strongest tools towns have to fight or regulate frac-sand mining." Consider them so many slingshots employed against the corporate Goliaths.

In April 2012, Prairie Farm's three-man board voted 2 to 1 to pass such an ordinance to regulate any future mining effort in the town. No, such moves won't stop frac-sand mining in Wisconsin, but they may at least mitigate its harm. Procore finally pulled out because of the resistance, says Glass, adding that the company has since returned with different personnel to try opening a mine near where she lives.

"It takes 1.2 acres per person per year to feed every person in this country," says Lisa Norberg. "And the little township that I live in, we have 9,000 acres that are for farm use. So if we just close our eyes and bend over and let the mining companies come in, we'll have thousands of people we can't feed."

Food or frac-sand: it's a decision of vital importance across the country, but one most Americans don't even realize is being made—largely by multinational corporations and dwindling numbers of yeoman farmers in what some in this country would call "the real America." Most of us know nothing about these choices, but if the mining corporations have their way, we will soon enough—when we check out prices at the supermarket or grocery store. We'll know it too, as global climate change continues to turn Wisconsin winters balmy and supercharge wild weather across the country.

While bucolic landscapes disappear, aquifers are fouled, and countless farms across rural Wisconsin morph into industrial wastelands, Lisa's sons continue to work the Norberg's land, just as their father once did. So does Brian's nephew, 32-year-old Matthew, who took me on a jolting ride across his fields. The next time I'm in town, he assured me, we'll visit places in the hills where water feeds into springs. Yes, you can drink the water there. It's still the purest imaginable. Under the circumstances, though, no one knows for how long.

The frac-sand companies try to pit people in the community against each other.

Ellen Cantarow's work on Israel/Palestine has been widely published for over 30 years. Her long-time concern with climate change has led her to investigate the global depredations of oil and gas corporations at TomDispatch.com, a weblog of the Nation Institute.

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