

15

The Three-Day Stink Out

"Livestock manure is a valuable source of organic nutrients for crops; however, manure can cause odors. Livestock facilities are engineered to minimize odors. Farmers follow best management practices when applying manure to crop land in order to limit odors and protect water quality."

—MINNESOTA FARM BUREAU FOUNDATION, "Moving to the Country"

After the appeals court's decision, my family's feeling of unease in the Dodge County community continued but with new contours and nuances of psychology. Industry insiders already acted as if Dodge County was their mini fiefdom, and now they had proven that resistance was futile. Despite the transparent machinations, despite the mounting evidence of local pollution, despite the illegal maneuver to strip required information from feedlot applications, the county prevailed. We settled into the certainty that the newest and nearest feedlot to our farm wasn't going anywhere, and it wouldn't be subject to adequate oversight.

It didn't take long for the implications of this situation to be made known in spectacularly smelly fashion.

In mid-November 2017 Douglas and I went home for the weekend to join my father on the combine for the fall harvest. We stopped at the grocery store on our way out of the Twin Cities and loaded up on the typical staples required for a weekend visit. With my mother in the nursing home, I frequently made homemade carrot cake, apple crisp, or cookies to leave at the farm for my father and brothers. We also brought the basics, including organic eggs, organic milk, and other healthy items that Lowell didn't have access to at the local grocery. Such a dreadful irony—right in the center of America's heartland, the shelves of area stores were filled with industrial foods that are "not fit to eat," according to my father.

After quickly unloading the groceries, Douglas drove me to the field and dropped me off. I eagerly waited for my father to approach in the

combine. He understood my passion for fall harvest and this special time together, and he readily accommodated the annual father-daughter proceedings. Some daughters join their fathers on annual fishing trips; Lowell and I bonded over combine rides.

It was the end of fall harvest. I admired the progress my dad and brothers had already made, as many of the fields were bare and ready for tillage. The northern portion of our land, though, awaited the combine. Cornfields, a pure deep green during the summer months, turn a deep yellow as fall approaches. The corn stalks stand upright while the ears of corn bend down to the ground, a sign of maturity. Against this honey-gold backdrop, spotting the green John Deere was easy as my father traversed the field.

Lowell, wearing his legendary blue-and-white striped overalls, beige coveralls, and matching beige seed cap, opened the heavy cabin door to greet me. I bent over to give him a kiss, then buckled into the jump seat next to him. My father lowered the corn head, adjusted the throttle, engaged the autosteer function, lined up the corn head with the corn, and expertly maneuvered through the dense ocean of gold.

The late-autumn day was particularly gorgeous. The sun shone brightly, and the air was crisp as we made several rounds in the 360-acre field we lovingly refer to as “the Ponderosa.” We were working from east to west, picking the final 100 acres or so of corn. I took a moment to admire the rich rural landscape stretching before me as far as the eye could see.

And then I was hit with the overpowering stench of CAFO manure. It was not the normal farm smell we all know and accept. This was the concentrated, liquified olfactory output of millions of gallons that have been stored for months before being released all at once onto land that can't hold it. It's the kind of odor that's not just a smell but a toxin-laden health hazard that leads to dizziness, headaches, and vomiting if you don't get out of its way. It's a malodor that has destroyed lives and livelihoods, chasing people out of their homes and robbing them of the value of their land.

Beyond the northern edge of our Ponderosa was a 240-acre parcel that the landowner rented to Roger Toquam so he could spread manure

from his factory farm one mile to the north. Scanning the landscape, we soon spotted the manure crew doing their work. I was appalled, but not surprised, that they were spreading an estimated two million gallons of manure on frozen ground. It was too late in the season for such large-scale spreading because frozen ground increases risk of runoff. The best time to land apply manure has a very small window—that is, after all the fields are harvested but before the ground freezes.

With the loss of pasture-grazed animals and the conversion of farmland to strictly corn and soybeans, punctuated by the occasional CAFO, manure is now commonly spread on the land all at once later in the fall, when the land is more likely to be frozen. This problematic practice, necessitated by the combination of CAFOs and monoculture, causes polluted lakes, degraded ambient air quality, and contaminated waters.

I called Douglas to ask if he could pick me up. Evidently Toquam was emptying his manure pits, and I wanted to see for myself how the manure was transferred from the pits to the semi tankers and then to the field applicators, which injected it into the soil. While I'd been smelling these epic pit cleanings for years and understood the timing of the process, I'd never had the chance to observe the full scope of it in action.

Douglas showed up in short order, and we drove north. Through the partially harvested cornfields bordering the road, we could easily see Roger Toquam's swine facilities and spotted the manure being transferred from an underground pit to several manure semi tankers. These tankers are a specialized type of semitruck with equipment to transfer the liquified waste from the tanker to the field applicators. We slowed for a moment on the township road and observed the proceedings. We were a good quarter mile away but could see the basics of the process even from our distance.

We continued west on 690th Street, a narrow township road, and observed a field where a tractor was pulling a manure applicator, a massive vehicle with specialized machinery that injects manure into the ground. Minutes later, we watched as a manure semi pulled up to the side of the road, then slowly extended its long hydraulic boom to the waiting applicator sitting at the edge of the field. The waste was

transferred via the semi's discharge pipe into a large rectangular fill opening at the top of the applicator. With the two massive vehicles briefly connected in this way, thousands of gallons of liquid manure were transferred from the tanker to the applicator.

The applicator then discharged the waste to concave discs that incorporate manure with the top layer of the soil. As the applicator went back and forth in the field, the sharp disks sliced the harvested ground, turning the soil laced with manure a pure pitch black. I was amazed by how quickly the manure was laid down—a deceptively fast process with such far-reaching and harmful consequences.

Our curiosity sated, we headed in the direction of Blooming Prairie to visit my mother at the nursing home. Douglas turned around in a large circular drive near the intersection at 690th Street and 120th Avenue so we could return back east. As we made the turnaround, we realized a manure semi tanker was headed toward the same circular drive. Soon enough, the tanker was in our rearview mirror. Up ahead, a tractor with an attached manure applicator waited at the edge of the field for the tanker to arrive and transfer manure. We passed the tractor and headed toward the Claremont Road.

Looking in the rearview mirror, we were startled to see the semi tanker still behind us. It had not stopped to transfer the manure. Instead, the tanker picked up speed, tailgating us. As it came within a few feet of our vehicle, hurled dust enveloped us. Was the driver trying to run us off the road?

Douglas began to panic. I rolled down my window and stuck out my digital camera, showing the driver, only a few feet from us now, that we intended to document the unfolding event. I quickly managed to snap a photo or two.

It seemed to work. The driver slowed down, and the tanker receded in the rearview mirror. My heart continued to pound for several minutes afterward, the adrenaline pumping. Thankfully, we had a fifteen-minute drive to Blooming Prairie and time to regain our bearings before visiting with my mother.

Within a few minutes of arriving at the nursing home, I received a text from my brother Jim asking why a Dodge County sheriff's deputy

was pulling into our farmyard. I called to quickly explain what had happened. We were both amused and infuriated. This wasn't the first time feedlot operators had used the sheriff's department as an instrument to intimidate us. Jim relayed that the deputy drove around the yard, likely searching for our white SUV, then left.

I subsequently obtained a copy of the call for service, which identified Roger Toquam as the complainant. The notes specified that the complainant "states there are protestors blocking his path down the road. They are trying to spread manure. . . . [Complainant] is not currently on the scene but states that the people are using their vehicles to block the road. . . . 2-3 people taking pics and blocking the road refusing to move."¹

There was not an ounce of truth to this complaint, but we knew that the sheriff's department tended to believe feedlot operators, many of whom serve as community leaders. That the Toquams were willing to call in a false report to law enforcement was unsettling. If they were willing to bend the truth on this occasion, what else did we have in store?

That night at the Trom farm, Douglas and I settled into the master bedroom upstairs to discuss the day's troubling events. My father routinely slept in a recliner in the downstairs family room, so we always slept in my parents' bedroom during weekend visits. The space is elegant and dignified, yet cozy and warm—a reflection of my mother's refined style. Before Parkinson's limited her day-to-day functioning, my mother, Evelyn, had loved interior design and redecorated the entire house. The master bedroom had gold-pleated drapes, gold-and-white wallpaper, a bright red-and-gold damask bedspread, and a small chandelier.

I fell asleep that night to the hum of the grain dryer operating fifty yards away. Jim was still at work. During the fall harvest, he diligently watched the settings on the grain dryer and dried the corn to the proper moisture content. Farmers don't risk storing grain if the moisture content is too high, which can cause moldy grains. The process of drying corn is slow and tedious. It takes several hours, and the hum of the dryer can be heard until 3 or 4 a.m. After drying, the corn

is transported via an auger system to tall steel storage bins, where it remains for several months.

Douglas and I woke up early the following morning, a Sunday, and drove half an hour north to attend Douglas's home church, United Church of Christ, in Berne. Afterward I dropped him off at the Eayrs farm and drove back home to continue helping my father with the last of the corn.

I was dispirited to discover that the manure-spreading activities were continuing for a second day. To my astonishment, the same 240-acre parcel just north of our cornfield appeared to have been coated with a second layer of manure. If so, it was a flagrant violation of the most commonsense parameters of land applying manure and the exact kind of violation that feedlot owners swear up and down during permitting that they won't commit. The area was pitch black; the manure pooled on top of the ground. Dozens of gulls pecked away at the surface.

For a lifelong farm girl who'd seen many a field fertilized the proper way, I thought the birds' appearance was a strange sight. Gulls do not eat manure. Later I learned that CAFO manure attracts the birds because of the mixed-in pig carcasses. Pigs packed into CAFOs are prone to fighting and even cannibalizing one another, and the body parts fall through the slats in the floor to the manure pit below. A soup of decomposed bones, muscle, intestines, and flesh likely dotted the field's surface, along with nitrates, phosphorus, growth hormones, and antibiotics—all lying atop frozen ground just a mile upstream from the headwaters of the Cedar River. The stench coated my nose and throat.

As these manure-spreading activities continued, Lowell and I had no choice but to return outside to finish fall harvest. Abandoning the fields at this time of year would be financially calamitous. Knowing that hydrogen sulfide poisoning was a real possibility, I covered my face with a cloth and advised my father to do the same.

The manure crew moved operations across the road to the old Bass farm. During my youth, Ray and Audrey Bass sponsored summer horse camps there. My parents owned farmland immediately adjacent to the south, our "northwest eighty." As with the final hundred acres of the Ponderosa we had worked the previous day, the northwest eighty had

yet to be harvested. The manure crew set to work injecting manure into an area immediately bordering our field.

By this point, it was apparent that Toquam intended to spread millions of gallons of manure that weekend. We were trapped in the center of an endless loop of manure tankers and field applicators. The semis loaded up at the Toquam swine feedlots, drove south along the Claremont Road, turned west onto 690th Street, and turned south to the manure applicators waiting in the fields. The waste was pumped from tanker to applicator, then the tankers drove by our farm before heading back for another load. These vehicles made countless laps that day around the same mile square where my father was finishing fall harvest. Brad was likewise caught in the dangerous cloud of noxious fumes and dust as he moved grain wagons to and from the field and our farm.

At one point I took a break from the combine and drove over to survey our northwest eighty, just across the road. I pulled into the field driveway leading to our land and sat in my vehicle for a few minutes, watching the manure applicators do their work in the adjacent field. I got out of my SUV and quickly took a few photos, then got right back in, and made certain the windows were rolled up as the fumes were overwhelming.

As I shifted into reverse to head back home, the first semi driver had just finished unloading his toxic cargo into the field applicator. There was a good hundred yards between us. He pulled into the middle of the road, exited the semi cab, and ran toward my vehicle. As he approached the passenger side, I checked that my doors were locked and opened the passenger window a few inches.

"What's your problem?" he shouted, waving both arms in the air. "I'm calling the sheriff!"

I calmly responded, "What's your name?" He didn't respond but ran back to his semi, got in, and began to drive toward me.

I pulled over to the side of the road, rolled down the driver's side window, and waved my hand to the driver, signaling him to pass my vehicle. Given the false report to the sheriff's department the day before, I wanted to make clear that I had no intention of interfering

with his activities. It's a narrow road for semis. Thanks to the constant commercial activity associated with the area CAFOS, driving on rural roads in Dodge has become harrowing. They are used as two-lane roads, but nothing is demarcated. When you see a semi or tractor pulling machinery coming from the other direction, you really don't have much room to spare to avoid a head-on collision.

After the semi passed, I drove to our farm, pulled into our driveway, and went into the house. Within fifteen minutes, a sheriff's deputy arrived, informing me that he had received a complaint that protestors were blocking the road. I laughed at this version of events and explained what really happened, as well as what occurred the day prior when a truck tried to run us off the road. I offered to share photos documenting the events that weekend, but the deputy declined. Determined to show my unwillingness to be bullied, I stated emphatically to the deputy, "They're calling *you* to get to *me*, and you tell them it's not working!"

Once again the call for service later identified Roger Toquam as the complainant. The report states, "2–3 people protesting again. . . . Subjects are blocking the road so the manure spreaders are unable to get by."²

The deputy left after our short conversation, and that marked the end of my long-anticipated daddy-daughter fall harvest weekend. It did not go the way I'd imagined.

When the Regulators Don't Regulate

As Douglas and I drove back to the Twin Cities early that evening, my father called from his cell to report that he had become dizzy while picking corn and had stepped off the combine to vomit. I advised him to leave the field immediately and get to the house. I was disgusted and didn't know whether to cry or yell.

Factory farm operators receive education and training—though inadequate—on safety precautions to take when stored CAFO manure is agitated and moved, including when the manure is pumped from the pits, transferred to the applicators, and spread onto the fields. These safety measures represent an implicit acknowledgment of the dangers associated with these activities. As noted in chapter 11, manure releases

concentrated quantities of hydrogen sulfide when agitated, and the gas has caused dozens of deaths among factory farm workers along with health problems in neighboring populations.

Yet CAFO operators are not required to alert immediately adjacent neighbors about a planned pump-out, and the industry frequently underplays and ridicules the complaints of area residents who experience poor associated health outcomes. Its prevailing philosophy amounts to this: there's nothing you can do about it, so get the hell out of our way!

The great stink out of 2017 did not end with the weekend. The next day, Monday, my dad called to inform me that the brand-spanking-new CAFO across the road was pumping out manure. It appeared that Nick Masching had chosen this day, of all days, to empty his million-gallon-plus manure pit and spread the contents on the Toquams' land immediately surrounding his six-acre feedlot.³

We suspected that Toquam and Masching had coordinated their schedules so that they would empty their manure on multiple fields surrounding our farm contemporaneously and during a time that interfered with our fall harvest activities. Toquam's three-hundred-acre parcel is directly across the road from our northwest acreage, the very field that my father had saved for last to harvest. He finally got to the parcel that Monday, and lo and behold, Masching emptied his pits and lathered the parcel immediately to the south the same day.

It was the grand finale of a three-day stink out, a juvenile yet dangerous payback for my parents' lawsuit. Manure canons laced with hazardous levels of hydrogen sulfide, ammonia, methane, and other gases blasted their target—elderly Lowell—just steps away from where he was picking the last few acres of corn.

That Monday night, my family and I talked it over and decided to contact the Minnesota Pollution Control Agency. My father's dizziness and vomiting were the last straws. Besides, we had witnessed manure spread on frozen ground. We also suspected that manure was spread twice on the same parcel and that with multiple operations unloading millions of gallons on a dense cluster of acreage, the hydrogen sulfide

levels in the ambient air were likely well above 0.03 parts per million, the state's public safety standard.

The MPCA holds emergency powers under state law to “direct the immediate discontinuance or abatement” of polluting activities that pose an immediate risk to human health. Per the EPA, the MPCA's Air Emissions Planning document further states that the agency “is required to monitor feedlots for H₂S [hydrogen sulfide] and take enforcement action when needed,” and adds that “inspection and enforcement of a CAFO's air emissions plan is largely driven by complaints received by MPCA.”⁴

The MPCA's rules further clarify that “smaller feedlots also must comply with the H₂S standard.” This distinction is important because only larger feedlots that exceed a thousand AUS, or 2,400 hogs, are required to obtain an NPDES permit and submit an environmental impact statement as part of the initial feedlot permitting process. Among other requirements, the EIS compels feedlot operators to submit an air emissions plan that delineates the mitigating methods the operator will use during manure removal and to create a plan “to mitigate air emissions in the event of an exceedance of the state ambient hydrogen sulfide standard.”

By specifying that “smaller feedlots must also comply” with H₂S standards, the MPCA is communicating that any feedlot, regardless of size, cannot poison the air with hydrogen sulfide, whether the feedlot possesses an existing air emissions plan or not. While the spirit behind this clarification is commendable, its enforcement is another story.

The Toquams' CAFOS are large enough that they should have been required to submit an air emissions plan for them. The two facilities collectively hold 1,176 AUS, but for reasons that are unclear to me, the Toquams were not issued an NPDES permit for feedlots exceeding 1,000 AUS until 2011, nearly thirteen years after their facilities reached that benchmark. Regardless, it does not appear that the Toquams submitted an EIS or created an air emissions plan, so we assumed that the hydrogen sulfide emissions of their facilities weren't being monitored.⁵

If the MPCA couldn't bother with ensuring an EIS was submitted when the Toquams' feedlots were initially permitted and constructed,

why would the regulators take our concerns seriously years later? We contacted the MPCA as a matter of principle and hoped that it could help us. But our expectations were not high.

I spoke with a feedlot compliance officer at the MPCA's southeast region office in Rochester and reported dangerous levels of hydrogen sulfide in the one-mile-square area where the manure spreading bonanza was taking place. We waited. Nothing happened. I later accessed our complaint file and found that the compliance officer had gone on vacation soon after our conversation and later left these notes: "MPCA did not investigate the land application site after returning from vacation on the 27th. The 27th was two weeks after the manure had been applied, as a result the possibility that any hydrogen sulfide would still be present would be eliminated."⁶

Where do you go for help when the regulators do not regulate? The following spring, I filed another complaint with the MPCA after family members experienced additional episodes of dizziness and headaches. I again spoke with a feedlot compliance officer. In May 2018 he suggested that my father complete an "odor log" and sent me a form titled "Oder Event Recording Log." This was a senseless exercise, as Minnesota feedlots are exempt from odor rules but not from ambient air quality standards. Besides, hydrogen sulfide is odorless when it reaches dangerous levels.

Nothing happened, or so we thought. Three years later, in 2020, I discovered unexpectedly that the MPCA had indeed conducted several tests at the property line of the Toquams' CAFO in 2018 and 2019 as a result of my complaints. Per the MPCA, these tests, called "H₂S Flex Surveys," are conducted based on neighbor complaints and "used to gather preliminary data on hydrogen sulfide levels." If a property fails the initial test, the MPCA is supposed to conduct continuous air monitoring at the facility and follow up with fines and compliance measures to reduce the facility's H₂S output.

The Toquam facility failed the first test, conducted in October 2018, with several readings over the safety limit of 0.03 parts per million.⁷ A failure is meant to trigger continuous monitoring; instead, the MPCA returned the following week for another flex test. Presumably the agency

wanted to confirm the finding before bothering the owners with results as apparently trivial as hazardous levels of hydrogen sulfide.

The result? Another failure.⁸ And still nothing was done.

The MPCA returned to the property again in July 2019. The regulators appeared to be keeping their fingers perpetually crossed that the Toquams would pass the next test so that the agency didn't have to deal with the issue.

The results this time around, however, were significantly worse: thirty-five recordings registered above 0.03 parts per million, with the highest reading coming in at more than *seven times* the safety standard.⁹

Given the serious dangers associated with hydrogen sulfide poisoning, at this point the MPCA should have immediately ordered continuous air monitoring, which is required for any flex test failure, let alone a failure of this magnitude.¹⁰ The agency did not. Instead, it tested the property again the following week and recorded another failure.¹¹

I discovered the existence of these results only because a reporter with Minneapolis's *Star Tribune* was investigating the MPCA's feedlot oversight capabilities and contacted me to speak about my family's experiences. The reporter had obtained the monitoring data from the MPCA and shared it with me. Noting how odd it was that the agency conducted four tests when enforcement action was required after the first failure, the reporter surmised, "Either the MPCA was sitting on their hands, or they were trying to work with Toquam on a solution. . . . I don't know."¹²

The reporter asked the MPCA why it hadn't installed the required continuous air monitoring. In response, the agency said it planned to do so some time in 2020.

I waited patiently for an update. In September 2022 I drove by the Toquams' facilities. Nearly four years after the first failed test in October 2018, I finally saw a continuous air monitor equidistant between the two swine CAFOS.

Our experience aligns with how the MPCA systemically responds to factory farms that breach air emissions standards. Complaints are ignored; emissions tracking, on the rare occasion that it occurs at all, only occurs after a disaster, a tragedy, or a series of complaints have

been lodged. In our case, apparently the MPCA took the matter seriously only after our repeated complaints and the inquiries from a reporter. It's very rare for a CAFO to be fined or asked to enact measures to mitigate emissions. The agency's after-the-fact compliance system does little beyond creating the illusion that the industry is being regulated.

I find it difficult, though, to lay blame at the feet of the MPCA or even frankly at the feet of the feedlot operators. Human nature is what it is, and people are unlikely to spend extra money on hydrogen sulfide monitors unless they're told they must. The animal livestock industry is exempted from reporting emissions under the multiple relevant federal air pollution acts. In the absence of federal regulation, air emissions reporting and standards are left to state or local governments. For the most part, the states don't go beyond what is required federally, although they absolutely should. A small handful of localities have required emissions analyzers and detailed manure management plans, or have implemented a ban on new CAFOs after a series of local disasters, as occurred in North Carolina. But they are the exceptions.

The great tragedy of the government's continuing failure to regulate is that simple regulations would undoubtedly save lives. While hydrogen sulfide is the air pollutant most likely to cause emergency health situations, the fine particulate matter (PM 2.5) and one of PM 2.5's precursors, ammonia, cause the most mortality and morbidity among the livestock industry's prevalent toxins. Chronic exposure to fine particulate matter and ammonia can lead to lung diseases, heart diseases, and a number of cancers. As mentioned in chapter 11, a groundbreaking 2021 report found that ammonia emissions contribute to 12,400 deaths annually in the United States, and animal agriculture is the leading cause of such emissions. The scientists concluded that changes in farming practices, most importantly in manure and fertilizer management, could reduce these deaths by half.¹³

In Dodge County, feedlot operators would not accept these findings as truth, nor would county officials. At least I hope they wouldn't. Otherwise, I find it impossible to understand why the county doesn't require the mitigations that residents consistently advocate for during feedlot CUP public hearings: installations of odor-reducing biofilters on

all factory farms; inspections to ensure that biofilters, once installed, are in proper working order; hydrogen sulfide analyzers to test air emissions; limits on the size of factory farms in the county; a cap on the concentration of factory farms in the county; and increased setback requirements beyond the state-mandated minimum so that CAFOs are sited farther from the nearest neighbor.

I prefer to believe that county officials, who refuse to implement these measures time and again, reject them out of ignorance rather than other motives.