A concerned Minnesota resident

Minnesota's First and Largest Proposed Livestock Facility

Demand for Environmental Impact Study

PART ONE — THE THEME

Minnesota Has Never Seen Anything Like This. That Is Precisely the Point.

Minnesota dairy farming is woven into the identity of this state. On a typical Minnesota dairy in 2025, a family averages fewer than the average 280 cows. They know their herd. They know their neighbors. They know the watershed. They have made generations of careful decisions about how much to take from the land and how much to give back.

What Riverview, LLP is proposing is not a larger version of that farm. It is not a bigger barn or an extra milking parlor. What Riverview is proposing is a facility that would house 18,855 dairy cattle, totaling 26,397 animal units, in a single location. That is nearly double the size of the next largest livestock operation in the entire state of Minnesota. It is more than 60 times the size of the average Minnesota dairy. It would be, from the day it opens, the largest livestock facility Minnesota has ever seen.

> *This is not a farm expansion. This is the industrialization of Minnesota agriculture at a scale this state has never confronted and is entirely unprepared to regulate without a comprehensive Environmental Impact Study.*

And here is what we know with certainty, backed by decades of peer-reviewed science: at this scale, in this concentration, the environmental consequences of a dairy operation are categorically different from what an average family operation of the average 280 cows produces. The water impacts are different. The air quality impacts are different. The public health risks are different. The threat to neighboring farms and rural communities is different.

Minnesota's families, farmers, rural residents, schoolchildren, and people who draw their water from the aquifers and streams of the affected watershed deserve to know what those differences are before the facility is built. Not after. Not once have the wells been drawn down, and the manure lagoons have been constructed, and the 26,000 animal units are in place, and the consequences have become irreversible.

The demand before you today is the most modest, reasonable, legally grounded request that can be made in the face of a proposal this large: conduct a full Environmental Impact Study before a single shovel breaks ground.

PART TWO — THE STORY OF THE EVIDENCE

What the Science Tells Us — And Why Scale Changes Everything

The evidence in this matter is not drawn from a single study, a fringe journal, or an advocacy organization. It represents the convergent findings of dozens of independent, peer-reviewed scientific studies conducted across the United States, Europe, Asia, New Zealand, and Latin America. Wherever researchers have examined what happens when dairy operations reach mega-scale, they have found the same patterns. What follows is the story that evidence tells, about water, health, the land, and the communities that depend on all three.

Chapter One: Scale Is Not Just a Number, It Is a Threshold

To understand why 26,397 animal units in one place is qualitatively different from the average 280 cows on a family farm, consider the arithmetic of waste. A single dairy cow produces approximately 120 pounds of manure per day. Riverview's proposed facility, with 18,855 dairy cattle, would generate on the order of over one million pounds of manure every single day, waste that must be stored in lagoons, applied to fields, and managed in a watershed that has never absorbed anything remotely close to that volume.

The science of nutrient loading is precise on this point. As dairy intensity expands in a watershed, phosphorus loads, the primary driver of toxic algal blooms, have been shown to increase by as much as 91%.[Waller et al., 2021] Studies measuring stream water quality downstream of dairy CAFOs found dissolved nitrogen concentrations eight times higher downstream than upstream during manure application periods. [Sousan et al., 2021] Manure lagoons, which a facility of this size would require at a massive scale, have been documented contributing between 6% and 12.6% of a region's total groundwater nitrogen load while occupying just 0.8% of the land surface. [Baram et al., 2014] Now multiply those impacts by the difference between an average 280-cow farm and an 18,855-cow facility.

Chapter Two: The Groundwater Threat Is Documented and Severe

Minnesota's rural communities depend on groundwater. The families, farms, and small towns near the proposed facility draw their drinking water from wells. Those wells tap the same aquifer system that a facility of this scale would draw upon and potentially contaminate.

The science is unambiguous about what mega dairies do to groundwater. Nitrate concentrations beneath dairy operations have been measured at an average of approximately 64 mg/L, nearly three times the EPA's maximum contaminant level of 10 mg/L for drinking water. [Harter et al., 2002] In California's Central Valley, a region with significant experience with large dairy operations, dairies are identified as major contributors to domestic well contamination. [van der Schans et al., 2009]

And contamination is not limited to nitrates. Groundwater near dairy operations has been found to contain sulfonamide antibiotics [Batt et al., 2006], steroid hormones transported from waste lagoons to depths exceeding 30 meters [Arnon et al., 2008], antibiotic-resistant bacteria and genes [Meyer et al., 2024], and PFAS, the "forever chemicals", documented in groundwater near large livestock operations. [Wang et al., 2025] These are not isolated findings. They are a consistent pattern that repeats wherever mega dairy operations and aquifers intersect, and Minnesota's aquifers would be no exception.

Critically, the research documents that groundwater contamination from intensive livestock farming can have legacy effects with lag times exceeding 20 years.[Kim et al., 2021] The full consequences of today's permitting decisions may not fully appear in Minnesota's water supply for two decades. By the time the harm is visible, the facility will be entrenched, the contamination will be established, and the opportunity to prevent it will be gone.

Chapter Three: The Surface Water and Watershed Damage

Minnesota's lakes, rivers, and streams are not just ecological assets; they are cultural and economic ones. The state's identity, its tourism economy, its fishing heritage, and its agricultural water supply all depend on the quality of surface water in its watersheds.

The nutrient loads from a facility of 26,397 animal units, the manure, the runoff from feed storage, and the effluent from milking operations would enter Minnesota's watershed through multiple pathways. The science documents what happens when those loads arrive. Phosphorus and nitrogen fuel eutrophication: the systematic suffocation of aquatic ecosystems by algae that strip oxygen from the water, killing fish, generating toxic blooms, fouling drinking water sources, and degrading the ecological function of lakes and rivers for generations.

Pathogens follow the same runoff pathways. E. coli O157:H7, Cryptosporidium, Giardia, and fecal coliforms enter waterways through manure runoff and field applications [Mohammed et al., 2023; Mausbach et al., 2025], creating direct risks for downstream communities. Pharmaceutical residues, such as estrogens, NSAIDs, and antibiotic compounds, are routinely detected in surface water runoff from manure-amended fields at concentrations sufficient to cause endocrine disruption in aquatic organisms. [Havens et al., 2020; Hill et al., 2021] Minnesota's fishing culture and recreational water economy have no margin for this.

Chapter Four: The Human Health Evidence Is Not Speculative

The people who would live within one to two miles of this proposed facility farm families, rural residents, schoolchildren, elderly neighbors face documented health risks that accumulate with proximity and time.

Air quality monitoring at homes within a quarter mile of industrial dairy operations found ammonia concentrations eight times higher and cow allergen concentrations sixty times higher than at homes three miles away. [Williams et al., 2011] Children with asthma demonstrate measurable declines in lung function on the day after elevated CAFO emissions events. [Loftus et al., 2020] Adults with COPD experience acute lung function drops exceeding 20% following ammonia spikes from nearby operations. [van Kersen et al., 2020] Residents within 1.5 miles show significantly higher rates of asthma, allergies, and persistent lung function decline. [Schultz et al., 2019]

In regions with high livestock density, physicians document higher rates of pneumonia and other infectious diseases among nearby residents. [Hooiveld et al., 2016] A 2026 study across three U.S. states found higher cancer incidence in counties with greater CAFO density. [Son et al., 2026] And the antibiotic resistance threat driven by the documented presence of up to 21 classes of veterinary antibiotics in dairy-associated watersheds [Lee et al., 2020] represents one of the most serious emerging public health threats of our time. A facility producing at the scale proposed here would be a significant driver of that threat in Minnesota's environment.

Chapter Five: What Riverview Has Already Done Elsewhere

We do not need to speculate about how Riverview, LLP behaves when its operations reach a scale that strains the surrounding environment. We have a documented case study. In Arizona.

On December 31, 2025, just months ago, Riverview, LLP entered into a formal Settlement and Release Agreement with Arizona Attorney General Kristin Mayes. The Attorney General had invoked her authority under Arizona's public nuisance statute based on expressed concerns that Riverview's existing groundwater pumping in the Sulphur Springs Valley of Cochise County constituted a public nuisance. The settlement's own recitals acknowledge that groundwater levels in the Valley "continue to decline" and that Valley residents' domestic wells "no longer reach the aquifer." Arizona's own water resources agency found conditions serious enough to designate the affected basins as Active Management Areas, a designation reserved for regions facing critical groundwater depletion.

The result: before Riverview could proceed, the state of Arizona extracted $11 million in remediation commitments, $5.5 million to an independent charitable fund for residents and schools affected by groundwater decline, and $5.5 million administered directly for those closest to Riverview's irrigation wells. Five Valley schools were specifically identified as needing emergency water access assistance. Riverview also committed to removing 2,000 acres of irrigated farmland from production over 15 years.

> *Riverview paid $11 million in Arizona to address what its existing operations already did to that state's groundwater — before adding a single animal. Minnesota is now being asked to permit a facility nearly double the size of anything that state has ever seen, with no comparable assessment of what it will do here.*

To be precise: Riverview denies liability in the Arizona matter. The settlement is not a legal admission. But the Attorney General of the State of Arizona with the full resources of her office found the evidence of groundwater harm serious enough to pursue formal legal action under the state's public nuisance statute That is not a fringe claim. That is the considered legal judgment of a state's top law enforcement officer about Riverview's existing operations. And now Riverview is asking Minnesota to permit a facility that, by its own application, would be the largest livestock operation this state has ever seen.

PART THREE — THE SIGNIFICANCE

Why This Matters: Minnesota Does Not Get a Second Chance

Some harms can be remediated. You can clean a spill, relocate a facility, adjust a management practice. Aquifer depletion, watershed contamination, and the destruction of rural communities are not those kinds of harms.

When an aquifer is drawn down beyond recovery within a human lifetime, the water does not return. Wells that took families years to install become useless. The agricultural economy of a

region, built across generations, can be permanently compromised. Nitrate contamination once established in a groundwater system can persist for decades, affecting the neurological development of infants, the health of elderly residents, and the viability of neighboring farm operations. Studies document legacy contamination effects with lag times exceeding 20 years. [Kim et al., 2021] By the time the full damage is visible, the facility will be entrenched, the permits will be issued, and the opportunity to prevent harm will be a memory.

The economic consequences for Minnesota's rural communities would be profound. A 26,397-animal-unit facility doesn't just compete with family dairies for water it competes with them for land, for local labor, for community identity. The research is clear that mega dairy operations tend to reduce total employment per unit of output relative to smaller farms, concentrate land ownership, weaken local supply chains, and generate community tension that undermines the social fabric rural areas depend upon. The average 280-cow farm that has sustained Minnesota's dairy heritage for generations cannot compete on the same terms as a facility that is 60 times its size and externalizes its environmental costs onto the surrounding community.

And the threat is not merely to this one watershed, or this one community, or this one permitting decision. This is the first proposed livestock facility of its kind in Minnesota. If it is permitted without a rigorous Environmental Impact Study, if the precedent is established that a 26,000-animal-unit facility can be sited and built without a comprehensive, independent, public assessment of its consequences, then every future applicant for a comparable facility will point to this decision as the standard. The precedent set here will shape Minnesota's agricultural and environmental landscape for a generation.

> *An Environmental Impact Study is not a weapon against agriculture. It is the mechanism a responsible state uses to ensure that its most consequential decisions are made with eyes open — not discovered in hindsight.*

PART FOUR — THE CREDIBILITY QUESTION

If the Science Is Wrong, Why Won't They Let Us Check?

Riverview and its advocates will argue that the science is overstated. That their operation is well-managed. That they use the best available technology. That an Environmental Impact Study is unnecessary, burdensome, and punitive. That this is just opposition to progress dressed up as environmental concern.

Consider that argument carefully because embedded within it is a question they have not answered and do not want you to ask:

> *If this facility poses no significant environmental risk to Minnesota's water, air, land, and communities a rigorous, independent Environmental Impact Study will prove it. So why fight one?*

The Environmental Impact Study process is not a presumption of guilt. It is a neutral scientific and regulatory assessment. It requires independent experts, not the company's consultants,

not the company's attorneys, not the company's hired engineers, to evaluate the projected impacts on groundwater, surface water, air quality, public health, and community welfare. If Riverview's facility truly poses no significant harm, the Environmental Impact Study will say so. The permit will be granted with public confidence and legal protection.

The only reason to oppose an Environmental Impact Study is if you fear what it will find.

The Efficiency Argument Is Incomplete

Riverview will point to its conservation practices, and some of them are genuinely meaningful. The 2025 Arizona settlement documents center-pivot systems, low-energy precision application, and variable-frequency drive pumps. These are real technologies with real water efficiency benefits.

But there is a critical distinction that efficiency arguments consistently obscure: per-unit efficiency gains do not offset the aggregate impact of scale.[Rotz et al., 2024; Han et al., 2024] A facility that uses 15% less water per cow but concentrates 18,855 cows in a single location draws dramatically more water from the aquifer system than any collection of smaller farms that those cows would otherwise replace. The manure volume is not reduced by efficiency technology, it is concentrated. The ammonia emissions are not eliminated; they are concentrated. The pathogen load in runoff is not neutralized it is concentrated. Concentration is the variable that an Environmental Impact Study must evaluate. It is also the variable Riverview does not want evaluated.

The Regulatory Gap Problem

The research literature on CAFO oversight is striking in its consistency across states and decades. Federal databases on the number and location of CAFOs are incomplete.[Chugg et al., 2021] Permitting rates are low even for large operations. Inspection rates have declined sharply since 2011. Most compliance monitoring relies on operator self-reporting the very operator with a financial interest in favorable findings. [Glibert, 2020; Moran, 2022] State preemption laws in many jurisdictions block local governments from imposing stricter standards than the state minimum, creating what researchers call "regulatory vacuums" that leave communities with no meaningful recourse. [Moran, 2022]

Minnesota has never permitted a facility of this scale. It has no track record with a livestock operation of 26,397 animal units, no established monitoring infrastructure calibrated to impacts of this magnitude, no regulatory precedent for enforcing against a facility that dwarfs anything that has come before. The Environmental Impact Study is not just about understanding the facility's environmental impacts it is about determining whether Minnesota's regulatory framework is even equipped to manage them, and what additional protections would be required before a permit could be responsibly granted.

The Arizona Track Record Cannot Be Dismissed

Riverview will argue that Arizona is a different state, a different climate, a different hydrogeology. And that is true as far as it goes. Arizona's desert aquifers face different pressures than Minnesota's.

But the Arizona settlement does not prove a specific quantity of harm in Minnesota. What it proves is something more fundamental: that at the scale Riverview operates, the company's activities can deplete groundwater to the point where a state Attorney General pursues formal public nuisance litigation, where domestic wells go dry, where schools require emergency water assistance, and where $11 million in remediation is required before anyone agrees to stop investigating.

That is a pattern of conduct. It occurred with Riverview's existing operations not with a proposed expansion. Minnesota is now being asked to permit a facility the applicant itself describes as nearly double the size of the next largest livestock operation in the state. The Arizona experience is not a disqualifier. It is, precisely, the reason an Environmental Impact Study is necessary.

The Environmental Justice Dimension

The communities that bear the greatest burden from mega dairy operations are consistently documented to be rural, lower-income, and in many cases, communities of color or Indigenous communities with the least political capacity to demand accountability. [Driscoll & Theis, 2020; Hudlet-Vazquez, 2025; Tulbure et al., 2024] Rural Minnesota families are not corporations. They cannot hire hydrogeologists, retain legal teams, or absorb the cost of a failed well while litigation proceeds. They depend on the regulatory process on the Environmental Impact Study to ensure their government is looking out for them before the damage is done, not after.

When we ask why Riverview opposes a full Environmental Impact Study, part of the honest answer is this: the people who bear the cost of getting this wrong are not the people deciding to build. That asymmetry between who profits and who pays is precisely the asymmetry that environmental review processes were designed to address.

PART FIVE — THE CALL TO ACTION

The Demand Is Reasonable. The Stakes Are Not.

We are not here to end dairy farming in Minnesota. Agriculture is the backbone of this state's economy and identity. Minnesota's dairy farmers, the real ones, the average 280-cow operations that have sustained rural communities for generations, deserve a future. And that future is not served by permitting a single corporate facility that is 60 times their size to externalize its environmental costs onto the land, water, and communities those farmers share.

What we are asking for is not extraordinary. It is not punitive. It is not a backdoor attempt to block development. We are asking for what the law provides, what the science demands, and what any reasonable observer looking at a proposed 26,397-animal-unit facility that would be the first and largest of its kind in Minnesota would recognize as the minimum due diligence owed to the people of this state.

Is it so much to ask for a full Environmental Impact Study conducted independently, reviewed publicly, and completed before a single permit is issued and a single shovel breaks ground?

Minnesota's environmental and community interests.

The Legal and Moral Standard

Environmental review processes exist because Minnesota and the federal government made a foundational decision: when an action is large enough to cause significant environmental consequences, the public has the right to know what those consequences will be before the decision is made, not after.

A facility of 26,397 animal units, the first of its kind in Minnesota, nearly double the next largest operation in the state, 60 times the average dairy, proposed by a company that is already paying $11 million in remediation for groundwater impacts in another state, is precisely the kind of action this standard was designed to address.

The burden in this proceeding does not fall on Minnesota's farmers and families to prove that this facility will cause harm. The burden falls on the applicant to demonstrate, through a rigorous and independent process, that it will not.

> *Minnesota has never faced a livestock facility of this scale. It will never get a second chance to make this decision correctly. Require the Environmental Impact Study.*

We are asking you to require what the law contemplates, what the science demands, and what Minnesota's rural communities deserve: a full Environmental Impact Study before the largest livestock facility in this state's history is permitted to become a permanent feature of Minnesota's landscape.

The family farmers whose livelihoods border this proposed site, the parents whose children will breathe the air within two miles of 26,000 animal units, the neighbors whose wells draw from the same aquifer those Minnesotans cannot afford for you to get this wrong.

Require the Environmental Impact Study. Demand the full picture. Do not let the largest environmental decision Minnesota's agricultural communities have ever faced be made in the absence of the information they are owed.

SCIENTIFIC CITATIONS REFERENCED IN THIS ARGUMENT

All citations correspond to peer-reviewed scientific literature. Full bibliographic details are available in the accompanying Environmental and Health Impact Summary.

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Settlement reference: Settlement and Release Agreement, State of Arizona ex rel. Attorney General Kristin Mayes v. Riverview, LLP, effective December 31, 2025. Riverview expressly denies liability. The Arizona settlement is not an admission of fault or unlawful conduct and pertains to Riverview's existing Arizona operations, not the proposed Minnesota facility.