May 6, 2020

Jill Townley, Environmental Review Unit Supervisor
Minnesota Department of Natural Resources
500 Lafayette Road, Box 25
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RE: Public Comment on the Proposed Nolte Family Irrigation Project Environmental Assessment Worksheet

Dear Ms. Townley,

Thank you for the opportunity to comment on the Environmental Assessment Worksheet ("EAW") for the proposed Nolte Family Irrigation Project ("proposed project"). The Environmental Working Group ("EWG") submits these comments addressing incomplete information contained in the EAW and the demonstrated need for an Environmental Impact Statement ("EIS") analyzing the potential for significant negative groundwater, drinking water, surface water, deforestation and other environmental effects.[1]

Standing alone, the proposed project, as narrowly defined in the EAW, has the potential to significantly and irreversibly contaminate groundwater, drinking water and surface water with nitrates, pesticides, fungicides and insecticides. The project proposer requests three water appropriation permits and a combined appropriation of 100 million gallons per year to irrigate 303 acres of cropland in the shallow, vulnerable Pineland Sands Aquifer area. Moreover, the project proposes growing corn and potatoes, the two crops with the highest nitrate fertilizer application rates,[2] in sandy soils that are certain to leak nitrate pollution into the drinking water aquifer.[3] It is highly likely that cropland best management practices ("BMPs") like cover crops or varied fertilizer application timing – mentioned as potential mitigation actions in the EAW – cannot prevent groundwater contamination that exceeds the state and federal drinking water standard of 10 mg/L. This fact is demonstrated in the attached report by Dr. George Kraft, which concludes that groundwater recharge with nitrate levels double to quadruple the Safe Drinking

[1] Minn. R. 4410.1700, subp. 1, 2a.
[2] Minnesota's recommended nitrate fertilizer rates are as follows: up to 195 lbs of N/acre for corn planted following corn (.05 MRTN); up to 150 lbs N/acre for corn planted following soybeans (.05 MRTN) and 225 lbs N/acre for potatoes. MDA Pesticide and Fertilizer Management Division, Statement of Need and Reasonableness In the Matter of Proposed Permanent Rules relating to Groundwater Protection 14, 15, (April 30, 2018)[hereinafter "SONAR"].
[3] Attachment 1 Memorandum from Dave Wall, PCA, to Bill Lynott, PCA 4 (Sept. 22, 1993).

Water Act standard of 10 mg/L are likely beneath the proposed irrigated cropland. The expert report further concludes that from the project site, nitrate-contaminated water will flow into the Redeye River.[4] Accordingly, the proposed project, even as currently and narrowly defined by the agency, has the potential to cause significant and irreversible negative effects.

However, the crux of this comment is that the proposed project cannot fairly be characterized as an isolated action to irrigate 303 acres of previously forested land. The proposed project is not just an expansion of an independent family farm operation. Rather, it is undeniably part of RD Offutt Company's ("RDO") massive phased action to convert an additional 7,000 acres of pristine forest to irrigated potato farmland in the vulnerable Pineland Sands Aquifer area. Given this fact, the proposed project has an exponentially greater potential for significant and irreversible harm than that currently presented and evaluated in the EAW.

RDO, the corporate giant lurking behind the curtain and directing the proposed project, grows more potatoes than any other company in the world.[5] It supplies potatoes to major companies including J.R. Simplot, Lamb-Weston, Ore-Ida and Northern Star Co. In 1997, a few years after RDO began its irrigated potato farming operations in Minnesota, the company was already producing more than 1.8 billion pounds of potatoes each year, and its annual profits had reached $575 million. Today RDO is reported to have annual profits estimated at $2.5 billion.[6]

RDO C.E.O. Ronald Offutt told Forbes magazine that the company avoids environmental laws by not incorporating its farm division, spreading out its farmed acreage across states and leasing or swapping nearly half of the company's farmland.[7] Public records make clear that RDO has an extensive track record of

[4] Attachment 2 EWG incorporates by reference the attached expert report of Dr. George Kraft, Professor of Water Resources and Director of the Center for Watershed Science and Education at the University of Wisconsin Stevens Point College of Natural Resources; *See also* Section I.h.
[5] https://www.forbes.com/forbes/1997/0519/5910060a.html#64107efc53fe
[6] In addition to its extensive farming operations (which include corn and beans as well as potatoes), RDO also owns a lending company and a vast network of truck and John Deere farm equipment dealerships. RDO's John Deere dealership network is the largest in the United States. https://www.therichest.com/celebnetworth/celebrity-business/men/ron-offutt-net-worth/; https://agree.org/ILF14/Bios/Pre-Forum/PF%20Planning%20and%20Dignitaries/Offutt%20Bio.pdf
[7] https://www.forbes.com/forbes/1997/0519/5910060a.html#28f38a153fed

doing just that – using leases or other arrangements to obscure the extent of its operations and avoid environmental laws – in Minnesota.[8]

The proposed project is a case in point. RDO entered into a sale and leaseback arrangement with the project proposer so that the corporate giant, using yet another strawman, can continue to convert an additional 7,000 acres of forestland to irrigated potato farms, all the while evading environmental review.[9] Because the proposed project is part of RDO's 7,000-acre operational expansion in the Pineland Sands Aquifer area, its potential for significant environmental effects must be evaluated as part of that massive project. This is not a small, isolated project. Rather, it is one phase in a well-documented massive corporate deforestation and land conversion operation.

RDO's irrigated potato farming operations in Minnesota have already left environmental calamity in their wake, and these effects should be considered as part of a complete environmental assessment of the proposed project. For example, in 1973, when RDO entered into business with McDonald's, the company started farming the sandy soil in and around Perham, Minnesota to supply its french fry contracts. Devastating drinking water results ensued. Perham became one of Minnesota's first communities to have dangerously high nitrate levels in its community water supply, hovering in the 1990s just under the Safe Drinking Water Act nitrate standard of 10 mg/L.

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[8] Minnesota Department of Natural Resources Record of Decision on Need for an EAW for RD Offutt Expansion in the Pineland Sands Aquifer (Feb. 12, 2016) ¶ 95 (stating that RDO had 168 irrigation permits on land owned by RDO and that there were an additional 40 irrigation permits "known to be connected to RD Offutt through leases and other agreements for the purposes of agricultural production."). Available at: https://d3n8a8pro7vhmx.cloudfront.net/toxictaterscoalition/pages/96/attachments/original/1455395157/Response_and_Record_of_Decision_for_RD_Offutt_Petition_12Feb2016_(2).pdf?1455395157; *See also* Attachment 3 Memorandum from Paul Stolen, DNR, to Don Buckhout, DNR 7, ¶J (June 30, 1993) (stating RDO told farmer he would be fired for farming a site subject to EAW or would have to "sign up a number of other landowners and sell (or lease) to RD Offutt").

[9] Attachment 4 Contract for Deed Agreement between RDO and project proposer ¶ 21e (May 1, 2017) (requiring project proposer to apply for irrigation permits and lease the land back to RDO for potato farming as a condition of contract for deed sale.). After the original contract for deed with RDO's conditions came to light, RDO, in an attempt to further cover its tracks, amended the deed and deleted the explicit provisions requiring the project proposer to apply for its permits and lease the land back to RDO for potato farming. *See* Attachment 5 Amendment to Contract for Deed Agreement between RD Offutt and project proposer.

In an effort to combat rising nitrate levels and protect the health of its citizens, Perham has spent nearly a million dollars to reduce nitrate flowing into its water supply from farmland.[10] Although these efforts appeared to temporarily reduce nitrate levels between 2003 and 2012, in the years 2016 to 2018, the community again measured high nitrate levels, with one well hitting 9.6 mg/ L nitrate in 2016.[11] It remains to be seen whether Perham will still have to spend additional millions of dollars on drinking water treatment.

Nearby Park Rapids, also surrounded by potato fields, hosts RDO's french fry processing facility, where the company scrubs, cuts and fries 3 million pounds of potatoes per day. In 2009 and 2010, nitrate levels in Park Rapids exceeded the Safe Drinking Water Act nitrate standard. After subsidizing the expansion of RDO's french fry facility to the tune of $3.5 million, Park Rapids was forced to foot another $3.5 million bill to build a new treatment plant and drill a new drinking water well.[12] To cover these costs, the city increased residents' water bills by 25 percent. The proposed project is part of the same massive RDO irrigated agriculture operation that contributed to these devastating environmental impacts in both Perham and Park Rapids, yet the Department of Natural Resources ("DNR") improperly fails to consider these ongoing environmental effects in the EAW.

In addition to gathering and evaluating substantially more information to properly evaluate the proposed project as a phase in RDO's massive Pineland Sands operation, DNR must complete a more rigorous evaluation of the potential for significant cumulative effects from the proposed project. Specifically, DNR must look much more closely at the deforestation and ground, surface and drinking water quality and quantity harms that will result when the effects of the proposed project are added to RDO's existing and foreseeable future irrigation projects and to effects from other animal and cropland operations in the Pineland Sands Aquifer area.[13] DNR must complete this cumulative effects analysis prior to making a permitting decision and regardless of whether the agency intends, at some future unknown time, to move forward with additional regional studies or a Generic EIS.[14]

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[10] https://www.startribune.com/tainted-drinking-water-costs-minn-taxpayers-millions/301324001/; https://www.perhamfocus.com/news/725214-whats-water-look-citys-drinking-water.

[11] Data from Minnesota Department of Health.

[12] https://www.mprnews.org/story/2014/02/13/ground-level-beneath-the-surface-park-rapids; https://www.grandforksherald.com/business/3731369-potato-growers-move-forest-land-raises-concerns-regions-wildlife-water

[13] Minn. R. 4410.1700, subp. 7.

[14] *Id.;* Minn. R. 4410.2100, subp. 4.

Only a complete analysis of potential groundwater pollution cumulative effects, for example, will enable DNR and other jurisdictional agencies to later take the steps necessary, through permitting or other processes, to protect citizens from the increased risks of cancer, birth defects and thyroid disease associated with consuming nitrate-contaminated drinking water.[15] A thorough cumulative effects analysis is also necessary to keep RDO from yet again shifting exorbitant source water protection and drinking water treatment costs onto citizens, communities and the state of Minnesota.

During nearly 30 years of expanding its irrigated potato fiefdom in the Pineland Sands Aquifer area, including amassing hundreds of permits and thousands of additional farmland acres, RDO, the proclaimed "Sultan of Spuds," has totally and completely evaded environmental review. And, instead of ramping up its efforts in response to RDO's well-practiced evasion tactics, DNR effectively admits, in the EAW, to helping the company continue flying below the environmental review radar:

> The RD Offutt Company did not want their project to be subject to environmental review, so they engaged the DNR to assess what scale of project they could propose that would avoid environmental review. The DNR declined to give any specific recommendation on number or location of water appropriation applications that would compel the DNR not to order an EAW. DNR did provide some general considerations that would factor into the decision, such as need for additional forest clearing, location near sensitive features, and existing density of water appropriations.[16]

Enough is enough. For decades, agency officials have been considering requiring RDO to pay for an EIS.[17] Instead of allowing yet another one of RDO's hundreds of irrigation projects to proceed with no clear understanding of its true risk, it is eminently fair to require the corporate giant to take a step back and accept responsibility for completing an EIS. Responsibility for the EIS should not fall solely on the named project proposer, who is not directing the larger action of which the proposed project is a part. The total cost of an EIS will likely be orders of magnitude less than the source water protection and treatment costs that RDO has already

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[15] Attachment 6 Environmental Working Group, Nitrate in Drinking Water (April 2020).
[16] Environmental Assessment Worksheet for the Nolte Family Irrigation Project Attachment E, 3-4 (April 3, 2020). Available at: https://www.dnr.state.mn.us/input/environmentalreview/timnolte/index.html. [Hereinafter "EAW"].
[17] Wall, *supra* note 3, at 6 (*See* handwritten addendum stating that RDO could be asked to pay money to cover the costs of an EIS for the Triple J Farms irrigation project).

unjustifiably passed on to citizens, communities and the state of Minnesota.[18] Only after RDO provides complete environmental risk information for its extensive operation in the vulnerable Pineland Sands Aquifer area can DNR make an informed permitting decision for the proposed project and take other action necessary to protect human health and the environment.

I. Background on RDO's Phased Expansion of its Irrigated Potato Farming Operation in the Pineland Sands Aquifer Area, Leading up to the Proposed Project

DNR's presentation, in the EAW, of the relevant history of deforestation and irrigated potato farming development in the Pineland Sands Aquifer area, and its discussion of the relationship between the proposed project and this surrounding action, leave out considerable relevant detail.[19] This section of the comment provides missing, critical information regarding RDO's massive operational expansion in the region, leading up to its development of the proposed project. This information is necessary for a complete understanding and evaluation of the proposed project.

a. Triple J Farms: Minnesota Court of Appeals Orders an EIS for an RDO Irrigated Potato Project One-Third the Size of the Proposed Project, and RDO Temporarily and Strategically Retreats

For nearly 30 years, not a mere eight as suggested in the EAW, Minnesota courts and agencies have recognized the potential for significant and irreversible surface water, groundwater and drinking water effects from irrigated farm operations in the vulnerable Pineland Sands Aquifer area.[20] For example, in 1995, in *Trout Unlimited v. Minnesota Department of Agriculture* (hereinafter "*Triple J Farms*"), the Minnesota Court of Appeals held that an EIS was required to assess the potential for significant cumulative surface water and groundwater effects from the Triple J Farms irrigation project.[21] *Triple J Farms* involved a farm manager for RDO who submitted a permit application to irrigate 140 acres (eventually reduced to 97 acres through the EAW

[18] Attachment 7 Paul Burns, MDA, letter to Julian Janke, project proposer in Triple J Farms, (June 8, 1995) (stating "Costs of preparing an EIS are difficult to predict prior to scoping, but several have cost $100,000 or more.").
[19] EAW Attachment E.
[20] EAW at 37.
[21] *Trout Unlimited v. Minnesota Dept. of Ag.*, 528 N.W.2d 903 (Minn. Ct. App.) (1995), *rev. denied*, (Minn. Apr. 27, 1995) (C3-94-1900) [hereinafter *Triple J Farms*].

process) in the Pineland Sands Aquifer area.[22] Accordingly, nearly 30 years ago, the Minnesota Court of Appeals recognized that an irrigation project one-third the size of the proposed project in the vulnerable Pineland Sands Aquifer area had the potential for significant environment effects.

During the EAW process for the proposed Triple J Farms irrigation project, led by the Minnesota Department of Agriculture ("MDA"), the Minnesota Department of Health ("MDH"), the Minnesota Pollution Control Agency ("PCA") and DNR provided comments on the potential for significant groundwater and drinking water contamination from the proposed irrigation project. In addition, the agencies commented on, *inter alia*, insufficient information regarding chemical use, future plans for farming and irrigation in the area, the need for improved monitoring and enforcement of permit conditions and conservation plans, and the potential for contaminants to leak between surficial and deeper aquifers in the Pineland Sands Aquifer area. All of which are issues that similarly plague the proposed project.

Weighing in on potential nitrate groundwater contamination during the development of the Triple J Farms EAW, PCA stated:

> 4. Question 20. Ground Water- Potential for Contamination. Nitrate leaching is likely to be the greatest concern directly related to ground water. Research results show that the potential for major nitrate losses under poorly managed irrigated corn and potatoes is very high. There is a high probability that nitrate concentrations leaching to groundwater under irrigated potatoes, even when BMPs are used, will exceed the drinking water standard of 10 mg/l. All irrigation and nitrogen management BMPs known should be used and monitoring should be conducted to ensure that additional preventative action is taken if nitrate levels exceed state and federal drinking water standards.[23]

PCA again underscored its serious concerns regarding nitrate groundwater contamination after MDA released its EAW for the Triple J project:

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[22] Stolen, *supra* note 8 at 7, ¶J (stating Triple J Farm project proposer "is a farm manager for R.D. Offut [sic] Company"); *See also* Attachment 8 Facsimile from Paul Burns, MDA, to Tom Balcom, PCA (Sept. 4, 1993); Facsimile from Tom Balcom, PCA , to Paul Burns, MDA, (Aug. 23, 1993), (agency documents demonstrating RDO representative participated in Triple J Farms EAW meetings with agencies).

[23] Attachment 9 Memorandum from Dave Wall, Hydrologist, PCA, to Tom Balcom, DNR, 2, ¶4 (June 7, 1993).

> It seems clear to us that the existing land use (grass/brushland with light, if any, grazing) is the most appropriate one for the site.
>
> Although the EAW seems to imply otherwise (item 20, for example), studies we are familiar with have not demonstrated that best management practices exist that would adequately protect shallow aquifers below irrigated potatoes grown in coarse soils. Further information on this issue is needed, as is data on the integrity of subsequent confining layers, so that the potential for impacts to deeper aquifers can be assessed. Our judgment is that, at least in the surficial aquifer, the nitrate recommended allowable limits would be violated as a result of this project. Despite the EAW's statements on the issue, it may not be possible to amend the conservation plan in such a way as to reduce erosion and the surface and ground water contamination potential to acceptable levels.[24]

Despite DNR and PCA's clearly expressed opinions regarding the Triple J irrigation project's potential for significant groundwater and surface water effects, MDA did not require an EIS. After the agency's negative declaration, Trout Unlimited appealed. After losing in the district court, the appeals court reversed and held that the Commissioner of MDA had erred "by failing to consider the potential cumulative effects of the project, and by relying on future permitting or monitoring efforts to control or redress problems."[25] The Court further held that:

> The very purpose of an EIS, however, is to determine the potential for significant environmental effects before they occur. By deferring this issue to later permitting and monitoring decisions, the Commissioner abandoned his duty to require an EIS where there exists a "potential for significant environmental effects." Minn. Stat. §116D.04, subd. 2a. The potential impacts of chemicals should be analyzed during the EIS process, rather than waiting until Triple J has expended time and effort on its irrigation and farming operations only to face the risk of later restriction or withdrawal of its permits."[26]

[24] Attachment 10 Memorandum from Paul Hoff, PCA, to Paul Burns, MDA, 1 (July 22, 1993).
[25] *Triple J Farms* at 905.
[26] *Triple J Farms* at 909.

The court also found that the Commissioner had acted arbitrarily in determining that possible future expansion of irrigated cropland and the impacts therefrom could not be inferred from and considered in connection with a proposed project.[27]

After the appellate court ordered an EIS, Triple J Farms and RDO pulled the irrigation permit applications for the proposed 97-acre irrigation project instead of going through the environmental review process.[28] Accordingly, *Triple J Farms* marks the beginning of a lengthy public record that documents RDO's use of front men, the potential for significant environmental effects from the company's irrigated agriculture projects, and RDO's 30-year effort to expand its massive potato farming operation in the Pineland Sands Aquifer area while evading environmental review.

b. RDO Expands Its Potato Processing Infrastructure, Locks in Its Plan for Potato Farming Expansion and Continues Evading Environmental Review

Public records establish that RDO has been implementing a phased plan to massively expand irrigated potato farming in the vulnerable Pineland Sands Aquifer area for nearly 30 years. For example, at the same time that the Minnesota Court of Appeals was deciding *Triple J Farms,* RDO was working on a $25 million expansion of its potato processing facility in Park Rapids.[29] The processing plant expansion, which increased production capacity from 35,000 to 70,000 pounds of potatoes per hour, locked in place RDO's plan for massive irrigated farmland expansion in the region.

When the state tried to conduct environmental review of the plant expansion, and associated irrigated farmland growth, RDO again did not fully or honestly participate in the process. Instead, the company lied in its Environmental Position Statement to the Minnesota Environmental Quality Board. In response to specific questions about whether RDO would expand irrigated potato farming to meet the new plant's capacity, the company pledged that it would only continue growing its potato farming operations in Hubbard and Becker counties at historical rates of approximately 2 to 3 percent per year.[30] However, less than six months after the agency decided that more thorough environmental review was not needed (based

[27] *Triple J Farms* at 908.
[28] Attachment 11 Memorandum from Paul Swenson, DNR, to Paul Burns, MDA, (Oct. 9, 1996).
[29] Attachment 12 Complaint for Declaratory and Injunctive Relief at 2, ¶ 4, Trout Unlimited, Inc. and Minn. Ctr. For Envtl. Advocacy v. Minn. Envtl. Quality Bd. (Minn. Dist. Ct. 1995).
[30] Attachment 13 Memorandum from B. Andrew Brown to Cindy Jepsen, Chair Envtl. Quality Bd., 1-2 (May 04, 1995).

on RDO's false statement), RDO and its agents applied for no less than 14 additional irrigation permits in Becker and Ottertail Counties.[31] This represented an additional development of nearly 10 percent of RDO's self-reported 15,000-acre land base.[32]

When the state agency later questioned RDO regarding the discrepancy between its growth projections and its permit applications, the company responded by revising upward its original growth forecast to between 2 and 5 percent annual growth, still drastically under the company's actual growth as measured by the subsequent permit applications.[33] DNR must take RDO's past and forecasted future growth in the Pineland Sands Aquifer area into consideration when conducting its assessment of the proposed project. These growth projections provide a rational basis of expectation for future RDO projects in the area.

c. Winnemucca Farm: RDO Cuts Its First Major Deal and Proposes A Small Study To Avoid Environmental Review

In 2012, RDO applied – this time on its own behalf – for seven additional irrigation permits to irrigate 1,459 acres on its Winnemucca Farm site, in Cass County, just next door to the proposed project (approximately 12 miles away).[34] The application triggered a mandatory EAW, and Cass County completed the assessment. As with RDO's Triple J Farm irrigation project, DNR and PCA again commented, *inter alia*, on the EAW's incompleteness and the need for additional cumulative effects assessment. Moreover, PCA specifically identified the potential for significant surface and groundwater impacts from pesticides, fungicides and insecticides and the need for more information regarding chemical use. The agencies also again recommended a project-specific EIS for the proposed project or a delayed decision to gather more information.

Regarding incompleteness of the Cass County EAW for RDO's Winnemucca Farm site, DNR commented:

> We have reviewed the EAW and do not believe the project's potential environmental impacts are adequately disclosed. Our comments indicate the potential for significant impact having to do with both potential water table drawdown effects on wetlands and surface

[31] *Id.* at 3.
[32] *Id.* at 3-4.
[33] *Id.*
[34] Attachment 14 Cass County Environmental Assessment Worksheet for Winnemucca Farms Cass County Potato Farm, ¶ 6a, Figure 7.

> waters, and the potential for nutrient contamination of the drinking water aquifer.[35]

With respect to cumulative effects, DNR commented:

> Records indicate that in Wadena County alone, 676 acres of Potlatch lands were sold to Winnemucca Farms or RD Offutt between the publications of the 1999 and 2012 plat books, and an additional 868 acres of Potlatch lands were sold since the publication of the 2012 plat book and today.
>
> *DNR recommendation:*
> In order to determine whether the additional holdings represent reasonably expected projects that could interact with the current proposal, DNR recommends that the EAW describe other landholdings in the area and their potential for interactions with the proposed project. At a minimum, the distance of the other projects and potential for those projects to affect the sustainability of overlapping resources (*e.g. habitats, aquifers, surface waters within the same watershed)* should be described. (Emphasis in original).[36]

To DNR's concerns regarding nitrates, PCA added comments stating that the EAW needed to address pesticide and fungicide use, expressing particular concern regarding the use of the fungicide chlorothalonil in potato production.[37]

Ultimately, instead of gathering additional information for the EAW or ordering an EIS for RDO's Winnemucca Farm site irrigation project, RDO and DNR struck a deal.[38] RDO received its permits to irrigate nearly 1,500 acres of cropland and, in exchange, agreed to participate in a small, 160-acre study focused on helping stakeholders "better understand the potential for groundwater quality impacts from irrigated agriculture on loamy sands with shallow water tables." Results from the first six years of the groundwater study on RDO's neighboring Winnemucca Farm site, which are ignored in the EAW's incomplete mitigation evaluation, are discussed in more detail below.[39] The study results show reason for significant concern

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[35] Attachment 15 Memorandum from Peter Buesseler, DNR, to John Ringle, Cass County, (Jan. 22, 2013).
[36] *Id.*
[37] Attachment 16 Memorandum from Karen Kromar, Planner Principal Envtl. Rev. Unit PCA, to John Ringle, ESD Director Cass County, (Jan. 23, 2013).
[38] EAW, Attachment E, at 3.
[39] *See below* Section I.h.

regarding the ineffectiveness of nitrate BMPs in the Pineland Sands Aquifer area. These results must be considered as a part of any complete mitigation analysis for the proposed irrigation project.

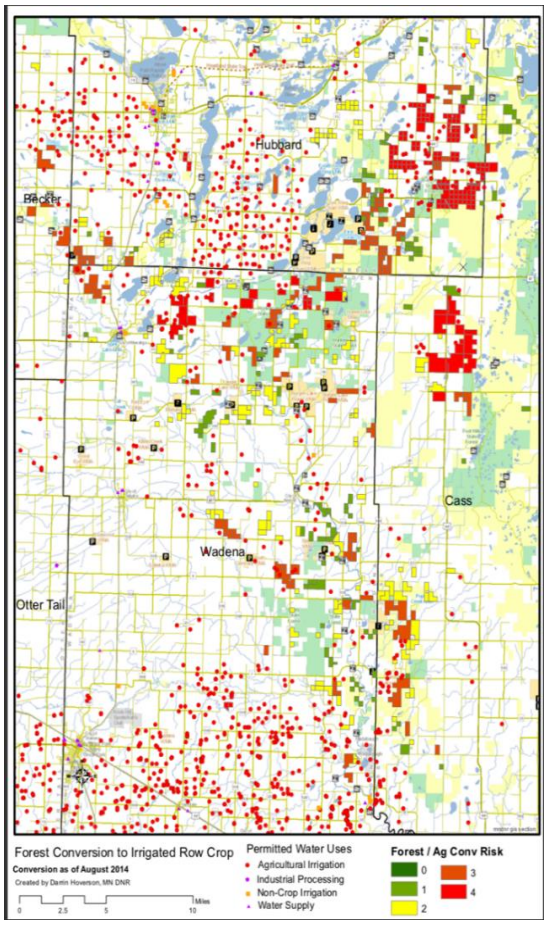
d. RDO Makes a Massive Forestland Purchase, Nearly 8,000 Acres, To Further Expand Irrigated Potato Farming in the Pineland Sands Aquifer area

During the first year of the Winnemucca Farm water quality study, in 2015, DNR officials told reporters that RDO had purchased an additional 12,000 acres of forestland from Potlatch Lumber Company in order to expand its irrigated potato farming operations in the region.[40] Offutt disputed DNR's number and claimed that it had only bought 7,809 acres. At the time, DNR estimated that RDO already farmed approximately 4,000 acres of converted forestland in the region. To assess the novel and rapidly accelerating deforestation risk from expanding irrigated agriculture, including RDO's operations, in the Pineland Sands Aquifer area, DNR conducted a forest to farmland conversion risk assessment, the result of which is shown in Figure 1, below.[41] In the study, DNR found that of Potlatch's remaining 35,000 acres:

> [A]pproximately 7,000 acres are at high risk of conversion to agriculture and approximately 11,000 are at medium risk of conversion to agriculture. Impacts associated with such a conversion include the loss of wildlife habitat, the loss of imperiled jack pine communities, the loss of wetlands, and impacts to groundwater and surface water bodies associated with increased irrigation, agricultural practices, and loss of tree canopy.[42]

[40] https://www.grandforksherald.com/business/3731369-potato-growers-move-forest-land-raises-concerns-regions-wildlife-water
[41] Attachment 17 Darrin Hoverson, DNR Area Hydrologist, Forest to Row Crop Agricultural Conversion Risk Process (2015).
[42] Minnesota Department of Natural Resources, *supra* note 8, at ¶ 81.

Figure 1: DNR Forest to Farmland Conversion Risk Assessment



Although DNR completed this study and, as such, is keenly aware of its relevance to a complete cumulative effects assessment for the proposed project, the agency fails to consider it in the EAW.

e. RDO Applies for 54 Irrigation Permits and Well Assessments To Convert its Newly Purchased 7,000 Forestland Acres to Irrigated Potato Farms and Then Temporarily Whittles Down the Size of Its Application Package To Again Avoid Environmental Review

After its massive forestland purchase in 2015, RDO turned around and applied for another 21 irrigation permits and 33 preliminary well assessments, making clear that the company intended to immediately convert its newly acquired forestland to irrigated potato farms. According to DNR, "[i]f granted, the permits would have

resulted in the conversion of approximately 7,000 acres of pine forest, historically managed for timber production, to irrigated agriculture."[43]

On February 5, 2015, DNR ordered a discretionary EAW for RDO's 54 permit and assessment applications. Not surprisingly, RDO did not comply with DNR's order for environmental review. Instead, the company appealed. However, while the appeal was pending, RDO began a process of temporarily and substantially whittling down its massive application package. First, the company withdrew all but 18 permit applications. When DNR again issued an EAW order for the remaining 18 permit applications, RDO scaled back its permit and assessment requests even more – leaving only 5 of its original 54 applications in place.[44]

The three irrigation permits requested as part of the proposed project were initially submitted by RDO as part of its 2015 application package.[45] It is unclear, because DNR has not specifically addressed this fact in the EAW and declined to clarify requests for additional information, how many of RDO's withdrawn 2015 permit applications, other than the three at issue in this case, have been resubmitted to or approved by DNR. However, the proposed project signals that RDO's withdrawal of its 54 permit and assessment applications in 2015 was temporary. RDO is now moving forward with developing wells that the company proposed as a single phase of development in 2015. Because the wells in the proposed project are indisputably connected to RDO's continued implementation of a larger planned development phase consisting of 54 total applications, in its assessment of the proposed project, DNR must consider the existing or potential future effects from the other 2015 applications.

f. RDO Strikes Its Second Deal and Avoids Environmental Review Yet Again

In 2015, after RDO temporarily whittled down its massive irrigation application package for a second time, DNR vacated its second EAW order. In lieu of environmental review, RDO and DNR reached another agreement. And the second time around, RDO got an even better deal. Unlike with its Winnemucca Farm site study, in the 2016 Memorandum of Understanding ("MOU") between RDO and DNR, RDO did not actually commit to help study anything.

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[43] *Id.* at ¶ 1.
[44] *Id.*
[45] Attachment 18 E-mail from Nathan Kestner, NW Regional Manager Division of Ecological and Water Resources DNR, to Mike Tauber (Jan. 6, 2020).

Instead, the company agreed only to "not oppose" the agencies' push for legislative funding to complete additional study (a push the agencies have now abandoned). In addition to executing the MOU, RDO also scaled back its original permit request one last time. The company's final 2015 project proposal encompassed only two permits to irrigate 195 acres – a small fraction of the 54 applications the company originally submitted but still nearly double the acreage for which the Court of Appeals ordered an EIS in *Triple J Farms*. Yet again, however, DNR allowed RDO to proceed without environmental review.

Ironically, the 2016 MOU clearly lays out the need for additional environmental assessment *prior* to additional irrigation permit approvals in the Pineland Sands region:

> The land overlying the Pineland Sands Aquifer has been experiencing rapid and large-scale conversion to irrigated agriculture. The Potlatch Timber Company is selling off substantial land holdings in the area. Sandy soils that are highly suitable for a variety of irrigated crops mean that much of this land is attractive for conversion to crop land. The Minnesota Department of Natural Resources (DNR) receives water appropriation requests as part of this conversion process, typically after the land has been cleared. Other governmental agencies such as local governments, Minnesota Department of Agriculture (MDA) and the Minnesota Pollution Control Agency (MPCA) may also have some decision-making responsibility. The MDNR believes there may be the potential for significant environmental effects from this land conversion and increases in irrigated crop production. There is not sufficient information about these potential effects at the scale that has the potential for conversion. *This information is needed to inform future permitting decisions, particularly in portions of the Pineland Sands region with high rates of conversion occurring near concentrations of vulnerable resources such as drinking water supplies, surface water bodies or plant and animal species. The intent of this study is to gather additional information about these potential effects and explore options to avoid or mitigate effects so that future permitting decisions are properly informed.* (emphasis added)[46]

[46] Memorandum of Understanding Between the Minnesota Department of Natural Resources and R.D. Offutt Company (Sept. 10, 2015). Available at: https://www.lcc.leg.mn/lwc/Meetings/160426/DNR-RDO%20MOU.pdf.

After DNR withdrew its second EAW order and entered into the MOU with RDO, concerned citizens filed a petition for environmental assessment of RDO's remaining application package. DNR declined the petition. In its record of decision, the agency noted that it considered the two irrigation permit applications remaining in the RDO project package to be a phased action that would have environmental effects on the same geographic area – the Pineland Sands Area – and noted that the effects were reasonably certain to occur over a limited period of time.[47]

In the same record of decision, DNR again noted the potential for leakiness between deep and shallow aquifers. The agency also discussed existing agricultural nitrate pollution of private and community wells and the pesticides most likely to be found in groundwater in the region. Ultimately, however, DNR concluded that additional negative groundwater impacts, if encountered, could be ameliorated through the normal course of permitting:

> In order to prevent detrimental effects to the environment related to the contamination of groundwater with nitrates from nitrogen-derived fertilizers as a consequence of agricultural production, the DNR conditions permits on responsible water use, implementation of adequate soil and water conservation measures, and adherence to BMPs, including nitrogen BMPs, which have been included in previous water appropriations permits, including water appropriation permit 2014-0678, as mentioned in Finding 10. The DNR could impose these conditions as necessary to protect against potential impacts to land and water resources from the high-nitrogen-need crops, such as corn and potatoes, that Applicant intends to irrigate.[48]

DNR also concluded that because the impact of the proposed 195-acre project was small compared to the total impact from the 448 existing irrigation permits in the area, its additional contribution to cumulative impacts in the area would be "*de minimis*" and could be managed through the Straight River Groundwater Management Area plan and in accordance with findings from the newly established study on RDO's Winnemucca Farm site.[49] As discussed in more detail below, with respect to the proposed project, DNR cannot continue to rely on voluntary BMPs,

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[47] The agency noted that "The act of submitting an application for a water appropriation permit is a strong indicator that the applicant intends to use the permit for its intended purpose once the permit is granted. It is reasonable to assume that RD Offutt intends to use the requested groundwater appropriation permits for crop irrigation in the immediate future should the permits be granted." Minnesota Department of Natural Resources, *supra* note 8, at ¶ 40.
[48] *Id.* at ¶ 73.
[49] *Id.* at 16.

groundwater management plans and future permitting actions to mitigate the potential for significant environment effects from the proposed project.

g. RDO Continues To Play Environmental Review Peek-a-Boo

On January 25, 2018, RDO submitted a request for three new irrigation permits and four permit expansions. Again, DNR notified the company of the agency's intent to issue a discretionary EAW. After receiving notice of the agency's proposed environmental review, RDO – true to form – pulled all three of its new permit applications. In response, the agency rescinded its notice of intent to order an EAW for the project and permitted the requested expansions.[50]

h. MDA Publishes Study Results From RDO's Winnemucca Farm Site in February 2020 and Provides New Evidence of Nitrate BMP Ineffectiveness in the Pineland Sands Aquifer Area

Finally, in February 2020, after nearly six years of monitoring, MDA released its first study results from RDO's Winnemucca Farm site. Since 2014, the study team has collected water samples from the soil and groundwater below irrigated cropland on the Winnemucca Farm site in the Pineland Sands Aquifer area. The graphs below, in Figures 2 and 3, show extremely concerning water sampling results. Specifically, the vast majority of groundwater samples at the study site have tested significantly above the Minnesota and Safe Drinking Water Act standard of 10 mg/L nitrate.

[50] Minnesota Department of Natural Resources Decision on Need for an EAW for the Pineland Sands Nolte/Offutt Water Appropriations ¶ 15 (Aug. 29. 2019). Available at: https://files.dnr.state.mn.us/input/environmentalreview/nolte/rod-2019.pdf.

Figure 2: MDA Soil Pore Water Samples From RDO Winnemucca Farm Site

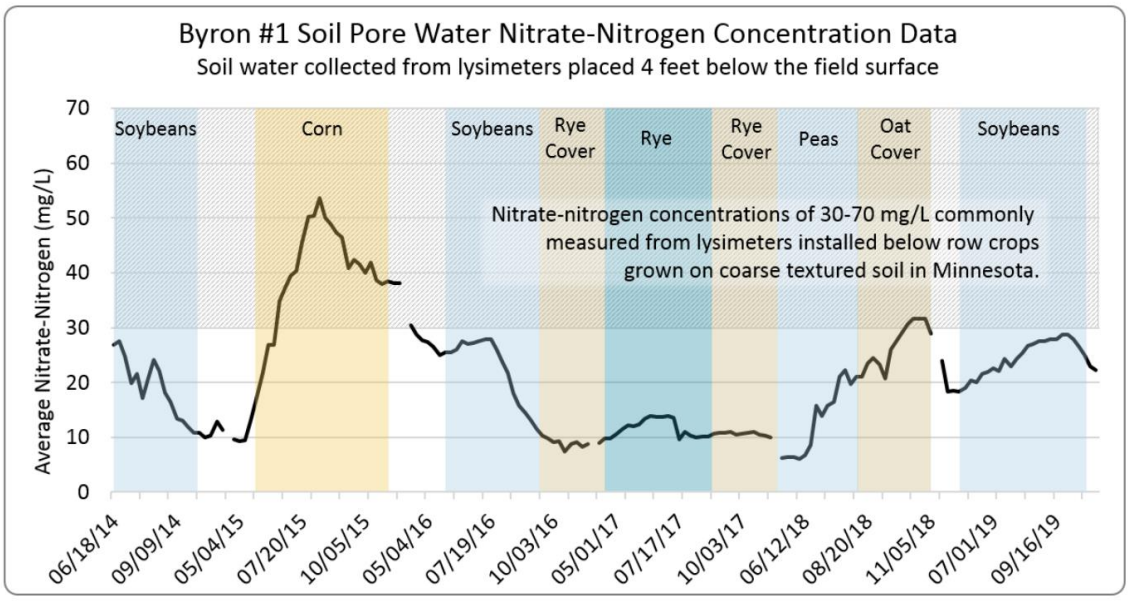
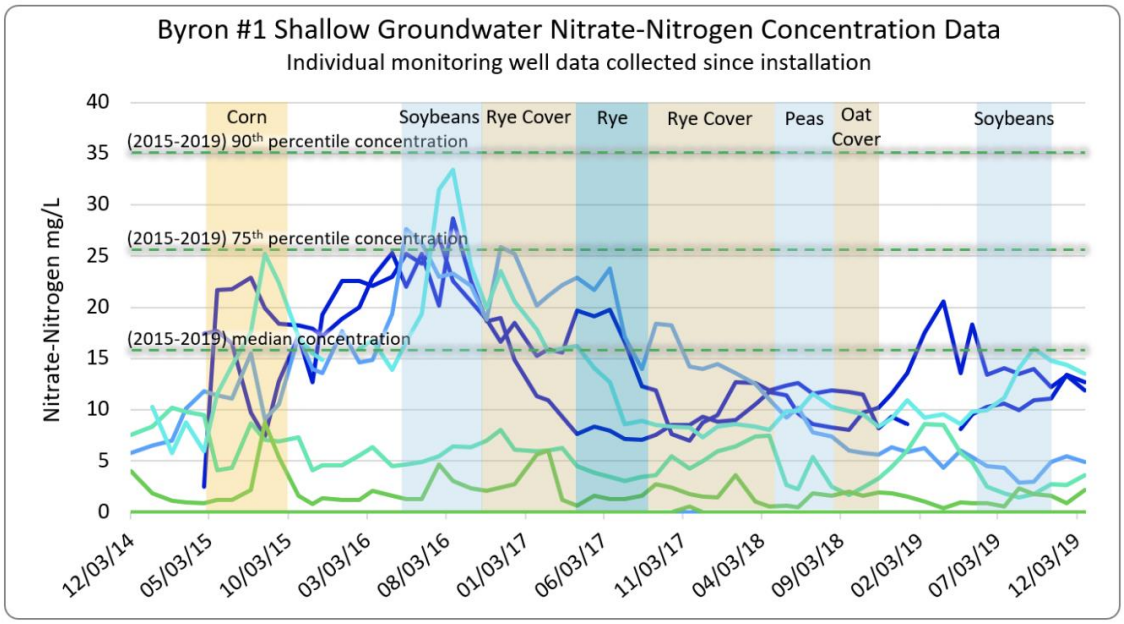


Figure 3: MDA Shallow Groundwater Samples From RDO Winnemucca Farm Site



The RDO Winnemucca Farm site study incorporates BMPs including the split application of nitrogen fertilizer, use of slow release nitrogen fertilizer, and cover crops. Accordingly, the results demonstrate that the nitrate BMPs that DNR currently relies on as mitigation measures, including in the EAW, are ineffective at preventing unsafe nitrate drinking water contamination in the leaky, sandy soils overlying the Pineland Sands Aquifer.[51] The results also confirm agency fears regarding unmitigable nitrate groundwater pollution impacts, which were originally raised during the Triple J EAW process nearly 30 years ago.[52]

Moreover, actual groundwater and drinking water impacts from the proposed project will likely be worse than the troubling results reported by MDA. This is the case because the water monitoring test results on RDO's Winnemucca Farm site do not include water samples below irrigated potato crops, and irrigated potato crops require substantially more nitrate fertilizer during cultivation. Because substantially more nitrate fertilizer is applied during cultivation, irrigated potatoes have a markedly greater potential to contribute more nitrate contamination to groundwater and drinking water. At a minimum, it seems odd that partners working on a study of groundwater contamination at a site devoted to potato production have failed, after nearly six years of study, to gather monitoring data on the pollution effects from potatoes. However, once project leaders do finally measure groundwater pollution occurring under cultivated potatoes, study results will almost certainly show even worse nitrate contamination of water resources, greater ineffectiveness of nitrate BMPs and an even more concerning threat to human health.

The study results from RDO's Winnemucca Farm site directly undercut DNR's ability to continue to rely on nitrate BMPs as mitigation measures for irrigation operations, including the proposed project, in the Pineland Sands Aquifer area.

II. The EAW Is Incomplete Because It Does Not Consider the Phased Nature of the Proposed Project or Fully Consider the Potential for Cumulative Effects

The Minnesota Environmental Policy Act ("MEPA") requires that an EIS "be ordered for projects that have the potential for significant environmental effects."[53] DNR must make a positive declaration regarding the need for an EIS or postpone the decision on the need

[51] Minnesota Department of Agriculture, Byron #1 Field Study Groundwater Monitoring Report (Feb. 2020). Available at: https://wrl.mnpals.net/islandora/object/WRLrepository%3A3521/datastream/PDF/view.
[52] *See* Section III. a.
[53] Minn. R. 4410.1700, subp. 1.

for an EIS if "information necessary to a reasoned decision about the potential for or significance of one or more possible environmental impacts is lacking, but could be reasonably obtained."[54]

In this case, in addition to failing to include and assess information identifying the full scope of the proposed project as part of RDO's phased expansion action, the EAW inadequately addresses the potential for groundwater, drinking water, surface water and other cumulative effects. For example, the EAW almost entirely fails to consider deforestation as well as baseline nitrate loading to groundwater from manure. Failure to include and assess this readily obtainable information renders the EAW incomplete and necessitates that DNR either request additional time to reissue an augmented EAW or make a positive declaration on the need for an EIS. Because 30 days will be insufficient time to develop the missing information required in this case, the agency must make a positive declaration and proceed with a project-specific EIS.[55]

a. The EAW Is Incomplete Because It Fails To Consider the Proposed Project as Part of RDO's Phased Action To Convert 7,000 Acres of Forestland to Irrigated Potato Farming in the Pineland Sands Aquifer Area

To avoid environmental devastation by the chopping of large projects into many smaller ones, the Environmental Quality Board ("EQB") rules implementing MEPA require that multiple stages of a single project (so called "phased actions") be considered together when preparing an EAW and determining the need for an EIS.[56] Moreover, to avoid evasion of environmental review through delegated or transferred project leadership or ownership, the rules also make clear that phased actions include those in which a project proposer directs others to undertake projects.[57]

In this case, as it appears to have done in at least 25 percent of its irrigation projects in Minnesota, RDO entered into a leasing arrangement with the project proposer.[58] Through black and white conditions in a contract for deed, RDO directed the project

[54] Minn. R. 4410.1700, subp. 2a.
[55] *Id.*
[56] Minn. R. 4410.1000, subp. 4.; Minn. R. 4410.2100, subp. 4.
[57] Minn. R. 4410.0200, subp. 60, 68.
[58] Minnesota Department of Natural Resources, *supra* note 8, at ¶ 95-96 (stating that RDO had 168 irrigation permits on land owned by RDO and that there were an additional 40 irrigation permits "known to be connected to RD Offutt through leases and other agreements for the purposes of agricultural production.").

proposer to apply for irrigation permits that the company could not previously obtain for itself without submitting to environmental review. RDO further required the project proposer to lease the land back to the company for potato farming.[59] Indeed, as mentioned previously, all three wells included in the proposed project were a part of RDO's 2015 application package, which included 54 irrigation permit and well assessment applications and which RDO temporarily whittled down in order to avoid environmental review.[60]

Despite the indisputable public record connecting the proposed project to RDO's larger phased operational expansion in the Pineland Sands Aquifer area, the EAW mischaracterizes the proposed project as a separate and limited undertaking, with no previous or future related actions. Specifically, the EAW provides:

> The purpose of the proposed irrigation project is to expand and enhance current farming and cattle grazing operations of the Nolte Family Farm.[61]

Starting from this untenable, narrow characterization of the proposed project, the EAW necessarily fails to consider the full environmental effects associated with RDO's massive plan, including the proposed project, to convert nearly 7,000 acres of forestland to irrigated potato farms.

Given the conditions RDO placed in the original contract for deed, and the paper trail showing the requested permits were originally part of RDO's much larger 2015 application package, the proposed project can only fairly be evaluated as a part of RDO's 2015 development phase. That phase, including the proposed project, would convert 7,000 acres in the vulnerable Pineland Sands Aquifer area to irrigated potato farms, a project footprint substantially larger than the 303 acres discussed in the EAW. Accordingly, DNR must make a positive declaration on the need for an EIS in order to gather missing information for the much larger RDO development phase, of which this project is just one part. If DNR fails to properly exercise its authority and review fully the phased action at issue in this case, forestland, groundwater, drinking water, surface water and other environmental resources in the Pineland Sands Aquifer area will continue to suffer death by a thousand cuts.

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[59] Contract for Deed, *supra* note 9, at ¶ 21e (May 1, 2017)(requiring project proposer to apply for irrigation permits and lease the land back to RDO for potato farming as a condition of contract for deed sale).
[60] Nathan Kestner, *supra* note 45.
[61] EAW at 8.

b. The EAW Is Incomplete Because It Uses an Arbitrary and Overly Narrow Geographic Area of Concern, Excluding 99 Percent of Relevant Surrounding Irrigation Projects from the Cumulative Effects Analysis

Even if DNR does not find this project to be part of RDO's ongoing 7,000-acre land conversion action, the agency must complete a project-specific EIS to adequately evaluate the potential for extensive and irreversible deforestation, groundwater, drinking water and surface water cumulative effects.

The first step in deciding whether a project has the potential for significant cumulative environmental effects is identifying the relevant area within which effects will be considered. Specifically, environmental review regulations provide that "[c]umulative potential effects" means the effect on the environment that results from incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources..."[62] Regulations further require that a consideration of cumulative potential effects include "future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects." Regulations also provide for the consideration of "the current aggregate effects of past actions."

In determining whether a basis of expectation has been laid for a future project, a reviewing agency must consider "whether any applications for permits have been filed with any unit of government" and "whether future development is indicated by historic or forecasted trends." A reviewing agency must also consider "whether sufficiently detailed information is available about the project to contribute to the understanding of cumulative potential effects."[63]

In the EAW, DNR arbitrarily narrows by 98 percent the scope of the environmentally relevant area that the agency originally used in 2015 for its groundwater pollution cumulative effects analysis:

> Initially, the Pineland Sands Area (Helgeson, 1977) was used as an area to approximate a homogenous area that would potentially serve as scope of the geographic area for analysis. As discussed in Attachment E: Pineland Sands Regional Environmental Topics, the Pineland Sands Area was initially defined in a 2015 discretionary

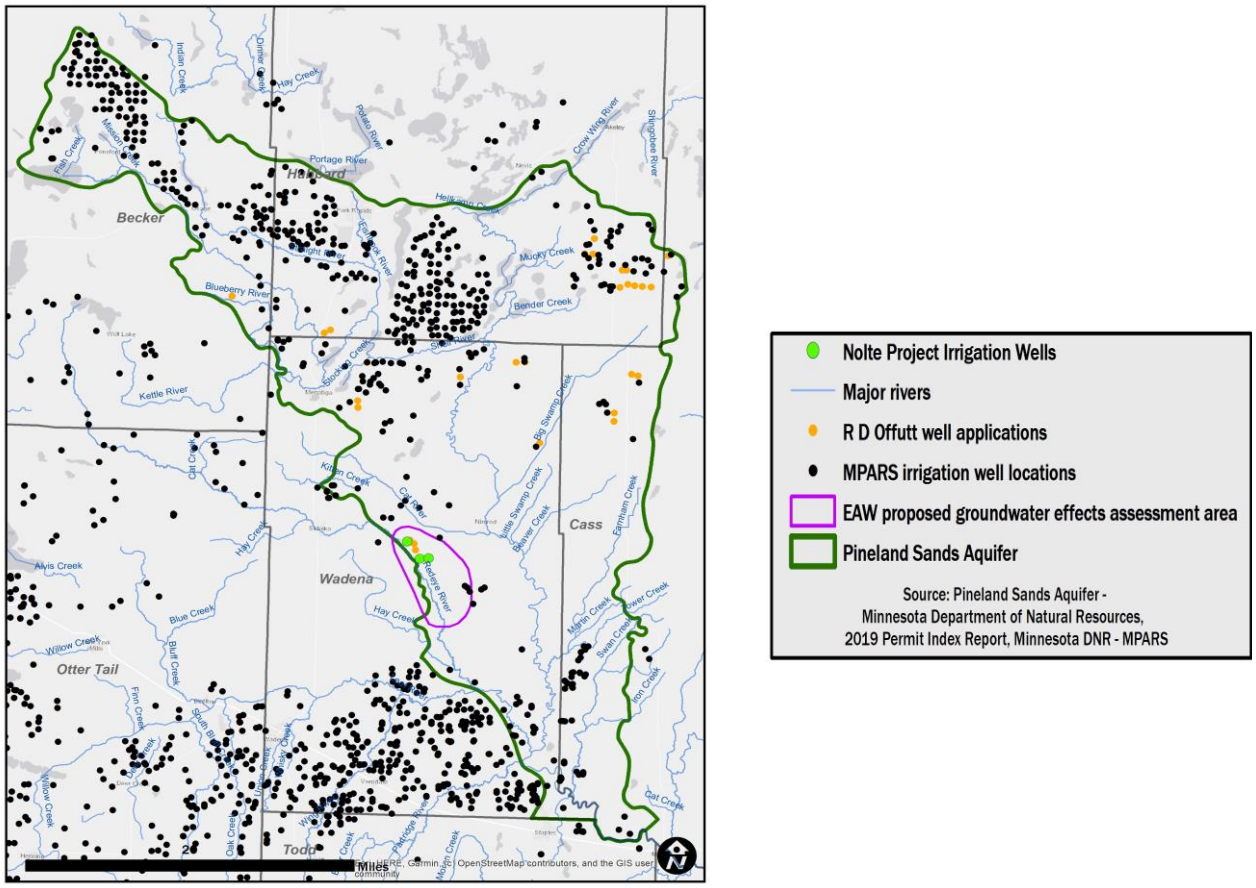
[62] Minn. R. 4410.0200, subp. 11a.
[63] Minn. R. 4410.0200, subp. 11a.

> EAW ordered by DNR to define a boundary for assessment of the R.D. Offutt company's initial project proposal of approximately 50 different new wells and agricultural irrigation fields. The Pineland Sands Area is a large geographic area, which encompasses the Straight River Groundwater Management Area. There is variability within the Pineland Sands aquifer, which means that it might be an appropriate geographic scope for analyzing the cumulative potential of some environmental effects, but is not an appropriate boundary for the proposed project-specific analysis of cumulative environmental effects.[64]

As noted previously, all three wells included in the proposed project were a part of RDO's 2015 application package for which DNR defined the environmentally relevant area as the entire Pineland Sands Aquifer area.[65] The orange dots in Figure 4 below show the geographic extent of 2015 RDO irrigation applications (excluding 22 wells from the 2015 application package for which DNR failed to provide locational information before the close of the comment period).
And, the below figure makes clear why such a wide geographic scope is necessary for a sufficient cumulative effects assessment.

[64] EAW at 39.
[65] Nathan Kestner, *supra* note 45.

Figure 4: 2015 Irrigation Well Applications in the Pineland Sands Aquifer Area Submitted by RDO[66]



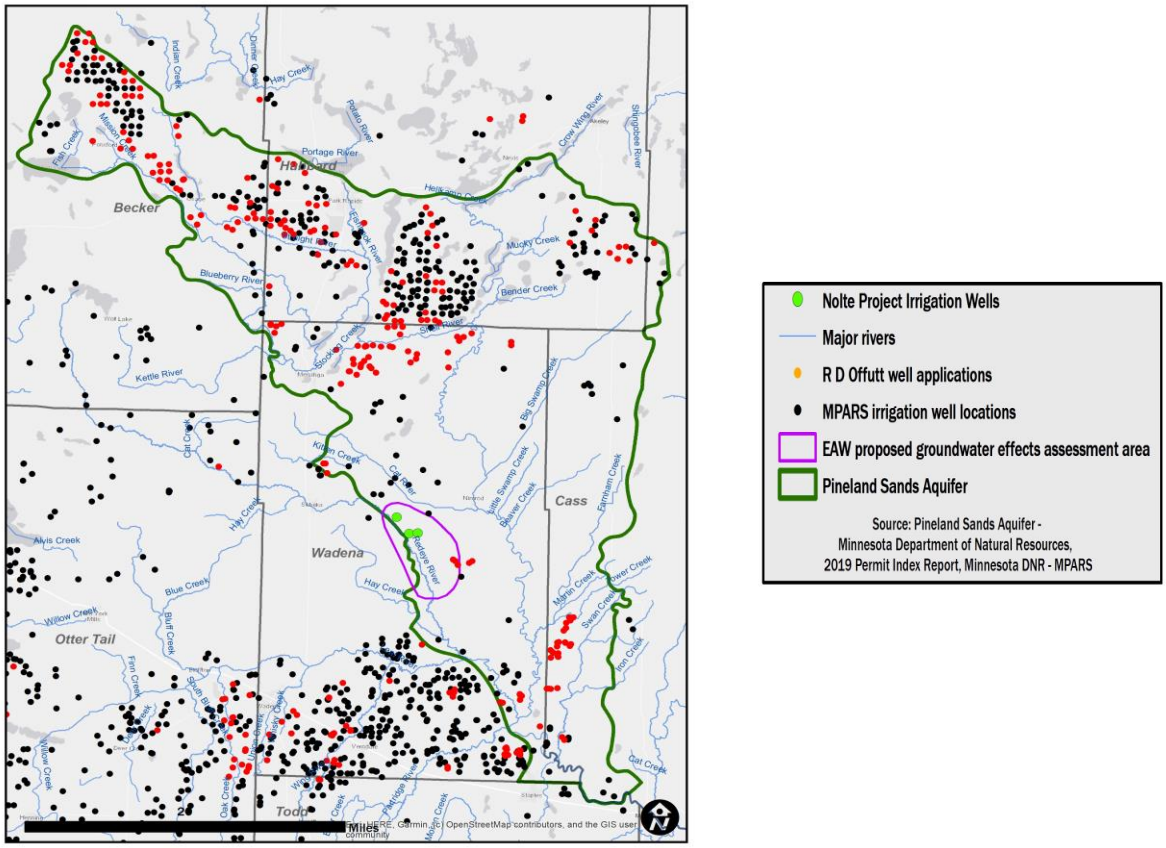
Even with the limited information available, it is apparent that DNR's new groundwater cumulative effects boundary area, shown in purple, inappropriately excludes the majority of wells included in RDO's 2015 application package. Moreover, RDO may be moving forward with the development of other wells included in its 2015 application package, in addition to those at issue in the proposed project. DNR's own records indicate that at least 21 of the total applications included in RDO's 2015 package, including those at issue in this case, are complete.[67] Nonetheless, without any discussion of the current status of these

[66] GIS map created by Soren Rundquist, Environmental Working Group (April 31, 2020).
[67] E-mail from Jill Townley, Environmental Review Unit Supervisor, DNR, to Jamie Konopacky (April 1, 2020).

related projects, DNR, in the EAW, has unjustifiably shrunk by 98 percent the scope of its cumulative effects analysis.

In addition to excluding RDO projects that are part of the same recent RDO application package, Figure 6, below, shows that the new overly narrow cumulative effects assessment eliminates consideration of the majority of the 521 active wells, including 205 active RDO wells, in the Pineland Sands Aquifer area.[68]

Figure 5: Currently Known Extent of RDO Irrigation Wells in the Pineland Sands Aquifer Area[69]



[68] DNR and RDO have indicated that between 24 and 50% of RDO's operations may be implemented through leasing or other arrangements with various entities or individuals. Accordingly, this map likely underestimates the full extent of RDO operations in the Pineland Sands Aquifer area.

[69] GIS map created by Soren Rundquist, Environmental Working Group (April 31, 2020).

In total, DNR's newly proposed relevant geographic area for cumulative effects analysis excludes consideration of pollution contributions from 99 percent of RDO's existing irrigation projects and 99 percent of other irrigation projects in the aquifer area.

In the EAW, DNR cites aquifer variability as its reason for shrinking the scope of its cumulative effects assessment. However, DNR cannot rely on aquifer variability, without more, as its justification for shrinking by 98 percent the scope of its assessment. As far back as the 1993 Triple J Farms environmental review process, relevant agencies have raised and considered the topic of aquifer variability.

For example, PCA commented on variability during the development of the Triple J EAW:

> The draft EAW indicates that little surface and surficial aquifer interaction with the deep aquifer is expected. We believe that the potential for significant interaction is present. Without more information regarding the lateral extent and permeability of the till layers, we do not know what the impact of pumping irrigation wells will be on the water levels, temperature and trout viability in Dead Horse Creek. Further study is needed to determine the interaction between the surficial and buried aquifers under long term pumping conditions.[70]

And PCA commented on variability again after MDA had completed the Triple J EAW:

> The direction of groundwater flow and the lateral continuity of clay layers needs to be better defined in order to determine the potential for lateral and vertical migration of leached chemicals to other areas. Installation of piezometers and deep soil borings would be needed to define these parameters.[71]

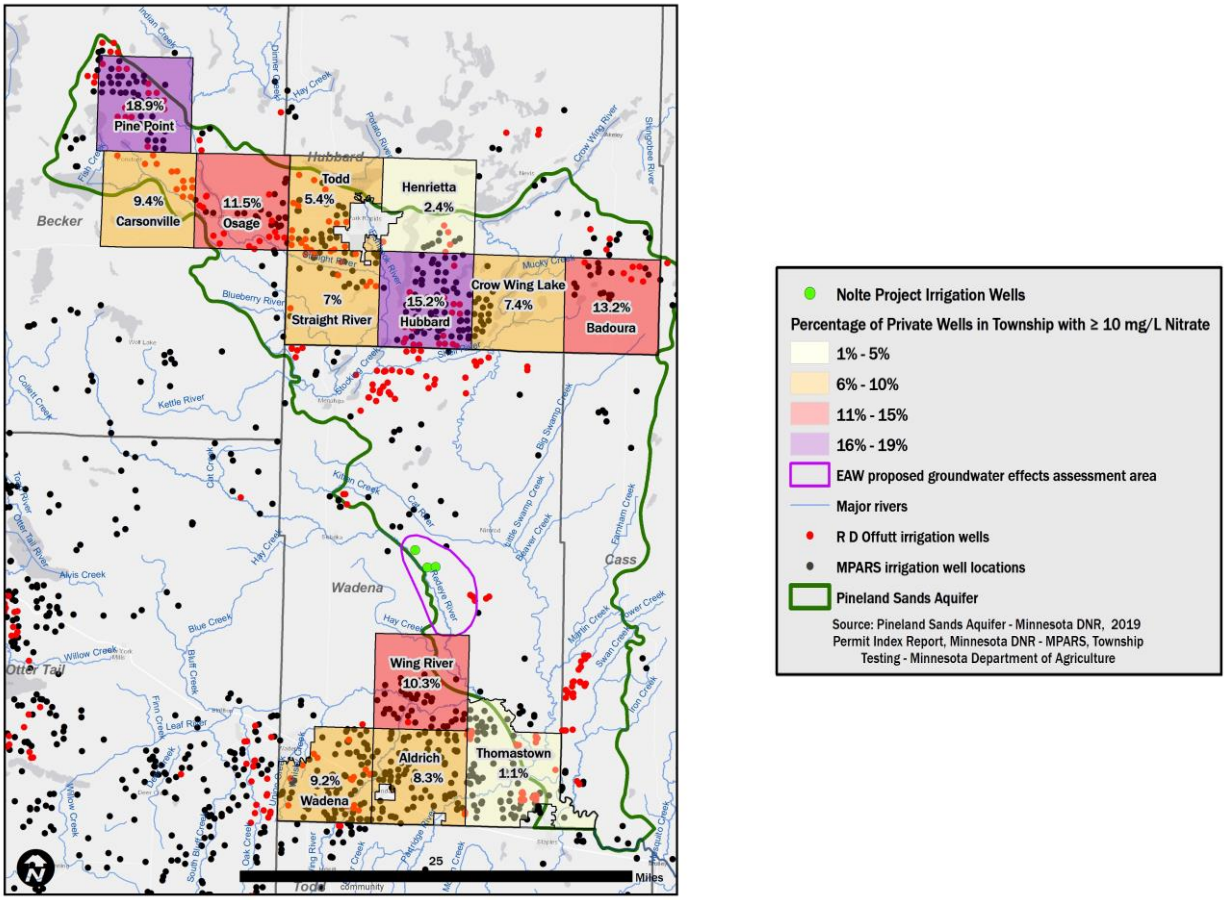
Given that aquifer variability was a well-known fact long before DNR, in 2015, defined the environmentally relevant area as the entire Pineland Sands Aquifer area, the agency cannot now attempt to use variability as a novel justification for shrinking the scope of its cumulative effects analysis by 98 percent.

[70] Wall, *supra* note 23, at 1, ¶1.
[71] Wall, *supra* note 3, at 1.

Moreover, both land use and aquifer variability actually weigh in favor of continuing to consider the entire Pineland Sands region as the environmentally relevant area for cumulative effects analysis. A more limited scope creates a substantial risk of omitting already contaminated areas that have the potential to substantially and disproportionately contribute, along with the proposed project, to cumulative groundwater and surface water pollution effects in the Pineland Sands Aquifer and connected surface waterbodies. For example, Figure 5, below, shows areas of significant groundwater and drinking water nitrate contamination in highly irrigated areas, with high concentrations of RDO wells, in northern Wadena and southern Hubbard counties.

Because of the direction of groundwater flow in the surficial aquifer, the potential for increased groundwater flow rate due to extensive irrigation and the well-documented interconnectedness of the surficial aquifer and river systems in the area, contamination from these areas, together with the proposed project, has the potential to exacerbate cumulative contamination effects. Despite this clear threat, the absurdly narrow confines of DNR's new environmentally relevant area exclude these already highly polluted groundwater areas, to which RDO contributes a disproportionate amount of pollution, further rendering the assessment of groundwater and drinking water cumulative effects arbitrary and incomplete.

Figure 6: RDO Well Concentration in Townships With Elevated Levels of Nitrate in Private Wells as Measured Through MDA Township Testing Program[72]



Although the proposed project, together with the existing irrigation projects and associated drinking water contamination shown in Figure 6, present substantial cumulative groundwater and surface water pollution threats to the same environmental resources – the Pineland Sands Aquifer and the connected river system – DNR has failed to consider these existing drinking water pollution effects in its cumulative effects analysis.

In place of the Pineland Sands Aquifer area, DNR has substituted an arbitrary boundary for cumulative effects analysis:

[72] GIS map created by Soren Rundquist, Environmental Working Group, (April 31, 2020).

> The scoping boundary was drawn to include a buffered area around the proposed irrigation fields, the watershed boundary, and topographic boundaries to the east and west. This buffered area is intended to provide a conservative estimate for the extent of environmental effects to groundwater sources, including shallow groundwater sources. This scoping boundary was then generalized to these features and extended downstream to the physical infrastructure of County Highway 8 to capture possible groundwater discharge to, and transport in, the Redeye River.[73]

The limits of the agency's new environmentally relevant area boundary are unreasonable for several reasons. First, as the EAW itself notes, watershed maps denote the drainage area for surface waters. Watersheds do not necessarily identify the area where land uses could potentially contribute pollution to groundwater and, as such, are an inappropriate way to define the environmentally relevant area for consideration of groundwater effects. Second, topographic land features generally correlate with watershed boundaries and surface water impacts, not groundwater impacts. Third, DNR references, but does not include a completed pollution sensitivity map covering the proposed project area. Fourth, the new boundary disregards surface and groundwater connectedness in the area. And lastly, the new environmentally relevant area boundary excludes almost all of the wells identified in RDO's 2015 application package, despite the fact that the proposed project is part of that original RDO application package.

DNR has not provided sufficient justification for shrinking by 98 percent the scope of its cumulative effects assessment. And the agency's action has led to an absurd result. DNR has eliminated 99 percent of RDO and other irrigation projects in the Pineland Sands Aquifer area from its cumulative effects analysis. To adequately assess cumulative effects, DNR must redraw the boundary of the environmentally relevant area so that the agency can evaluate the extent to which groundwater pollution from the proposed project will add to pollution from the 521 existing irrigation projects, including 205 RDO irrigation projects, in the Pineland Sands Aquifer area. As part of its cumulative effects analysis, DNR must also explicitly consider the effects of the 54 permit and assessment applications, which RDO previously submitted and which may now be in different stages of development or agency review. RDO's existing cropland operations provide a sufficient basis for projecting environmental effects from these potential future projects.

[73] EAW at 40.

c. The EAW Is Incomplete Because the Cumulative Effects Analysis Omits an Assessment of Baseline Nitrate Loading From Manure in the Pineland Sands Aquifer Area

Manure and commercial nitrate fertilizer applied on farm fields together pose a substantial nitrate contamination risk to groundwater and drinking water.[74] And in some cases, manure may pose an even greater pollution threat, if it is mineralized during times of the year when plant uptake is small.[75] Despite this fact, the EAW contains a woefully insufficient analysis of animal agriculture operations and potential nitrate groundwater contamination from land-applied manure. The EAW cites only one proposed Concentrated Animal Feeding Operation development and cursorily concludes that it does not have the potential to contribute to cumulative nitrate groundwater pollution effects.[76]

To demonstrate the potential significant contributions of manure to cumulative groundwater nitrate contamination effects, EWG used its manure assessment tool to identify and map feedlots and potential manure application sites in the Pineland Sands Aquifer area. EWG's analysis quantifies the baseline risk of nitrate groundwater pollution from manure application. Our analysis found that there are currently 63 feedlots in the area, and collectively, these feedlots produce 221,448 tons of manure annually. After taking into account losses to the atmosphere, land-applied manure from these operations has the potential to contribute 1,111 tons of nitrate pollution to groundwater each year.

Figure 7, below, shows the location and size of feedlots and also shows, in orange, areas where 100 percent of crop nitrate needs could be met using manure alone. In many of these areas, commercial fertilizer may be applied in addition to manure, compounding the potential for excess nitrate to leak below crop root systems and into groundwater and drinking water.[77] To complete its groundwater cumulative effects analysis, DNR must consider pollution effects from the project in addition to baseline nitrate loading to groundwater from animal agriculture in the aquifer area.

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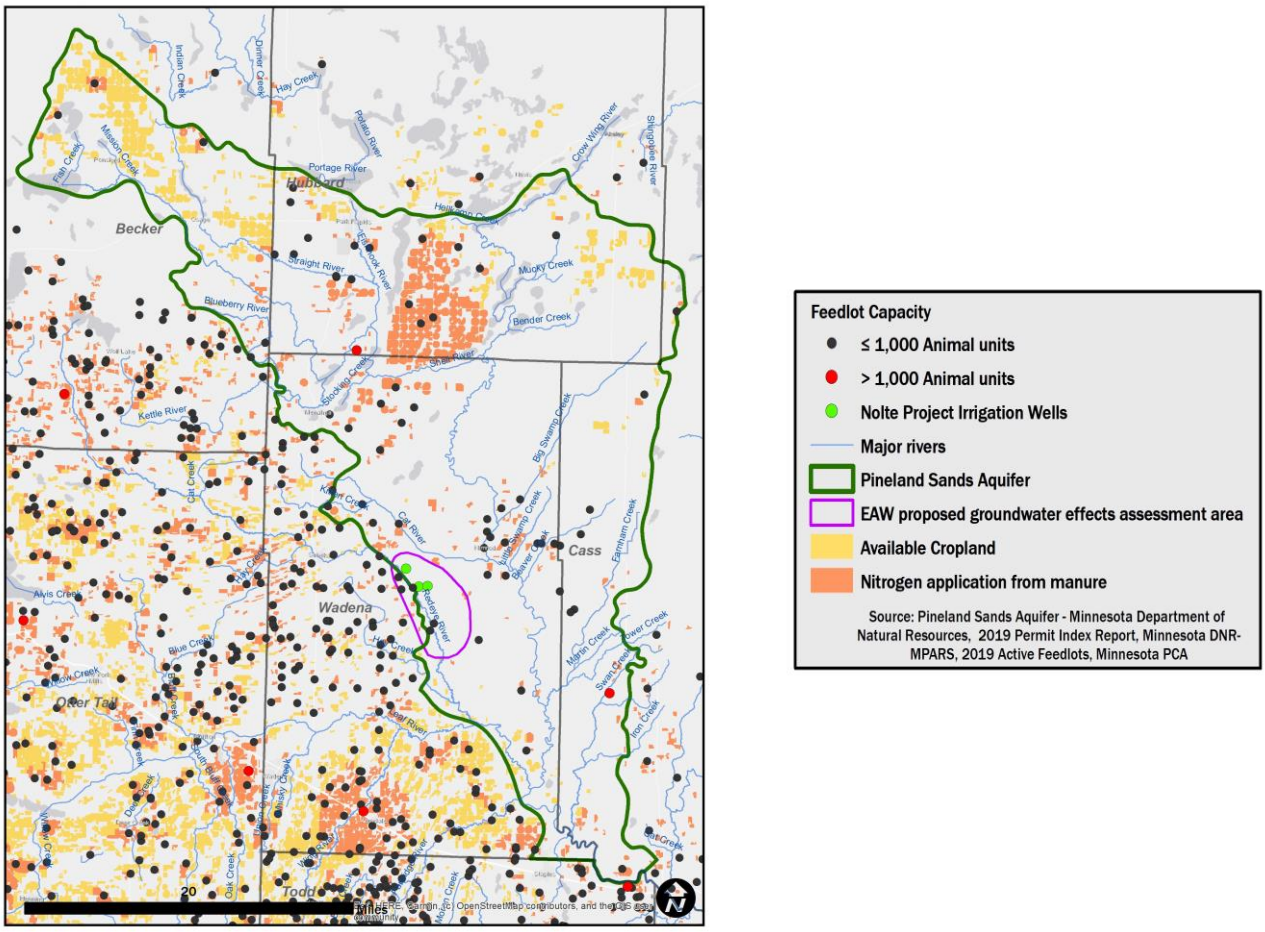
[74] MDA Pesticide and Fertilizer Management Division, *supra* note 2, at 14, 15, 49, 51, 52, 54, 55, 58.
[75] Kraft, *supra* note 4.
[76] EAW at 57.
[77] MDA Pesticide and Fertilizer Management Division, *supra* note 2, at 14, 15, 49, 51, 52, 54, 55, 58.

Figure 7: Manure Application Areas Potentially Contributing to Nitrate Loading[78]



d. The EAW Is Incomplete Because the Cumulative Effects Analysis Fails To Sufficiently Address Deforestation

As noted previously, in 2015, DNR forecasted that, if permitted, RDO's 2015 irrigation permit and well assessment application package would cause 7,000 acres of additional deforestation in the Pineland Sands Aquifer area.[79] The agency also previously conducted an extensive forestland conversion risk analysis for Potlatch lands. Despite the agency's clear understanding of cumulative deforestation risk, the

[78] GIS map created by Sarah Porter and Soren Rundquist, Environmental Working Group, (April 31, 2020).
[79] Minnesota Department of Natural Resources, *supra* note 8, at ¶ 1.

current EAW fails to discuss the potential for significant cumulative deforestation effects associated with the proposed project.

With respect to the 303 acres that the project proposers plan to irrigate, the EAW states:

> Mr. Timothy Nolte proposes to convert 303 acres of formerly privately owned and managed timberland to irrigated agriculture for livestock grazing and commodity/staple crop production. The land is currently used as non-irrigated crop and livestock grazing land. *The conversion would consist of the removal of remaining standing timber and associated stumps,* land cultivation and the operation of three groundwater-supplied center pivot irrigation systems. (Emphasis added).[80]

The agency's portrayal, in the EAW, of total associated deforestation effects for the proposed project merely consisting of the removal of straggler trees and stumps implies that previous clear-cutting on the site and additional clear-cutting on thousands of acres of RDO farmland is unrelated to the proposed project. This characterization is incomplete, disingenuous and inaccurate for two reasons. First, as discussed at the outset of this comment, DNR explicitly counseled RDO to clear-cut land in advance of submitting applications, so that the company would be less likely to trigger environmental review during the permitting process. Given this instruction from DNR, it is unsurprising that RDO deforested the project site before submitting permit applications, and it is wholly inappropriate for DNR to now discount the previous deforestation in its analysis.

Secondly, EWG's independent forest loss analysis, prepared for this comment, objectively demonstrates that nearly all deforestation in the Pinelands Sands Aquifer area, including that which took place on the proposed project site before permit application submittal, occurs because of irrigation project development.

To conduct its deforestation analysis, EWG reviewed the most recent National Land Cover Dataset ("NLCD") and aerial photography for the Pineland Sands Aquifer area. (See below Figure 8, which is an example of aerial photography displaying the total deforestation that occurred on the proposed project site in preparation for the irrigated farming land use.) EWG found approximately 154,000 acres of forest within the Pineland Sands Aquifer area and identified that between 2004 and 2019, 5,800 acres of forest loss occurred in the region. Fully 88 percent of the recent clear-cutting – 5,163 acres – occurred in areas directly adjacent to irrigation wells identified in Minnesota's Water Permitting and Reporting System (Table 1).

[80] EAW at 3.

Figure 8: Forest Loss Around Proposed Project Area 2014-2019

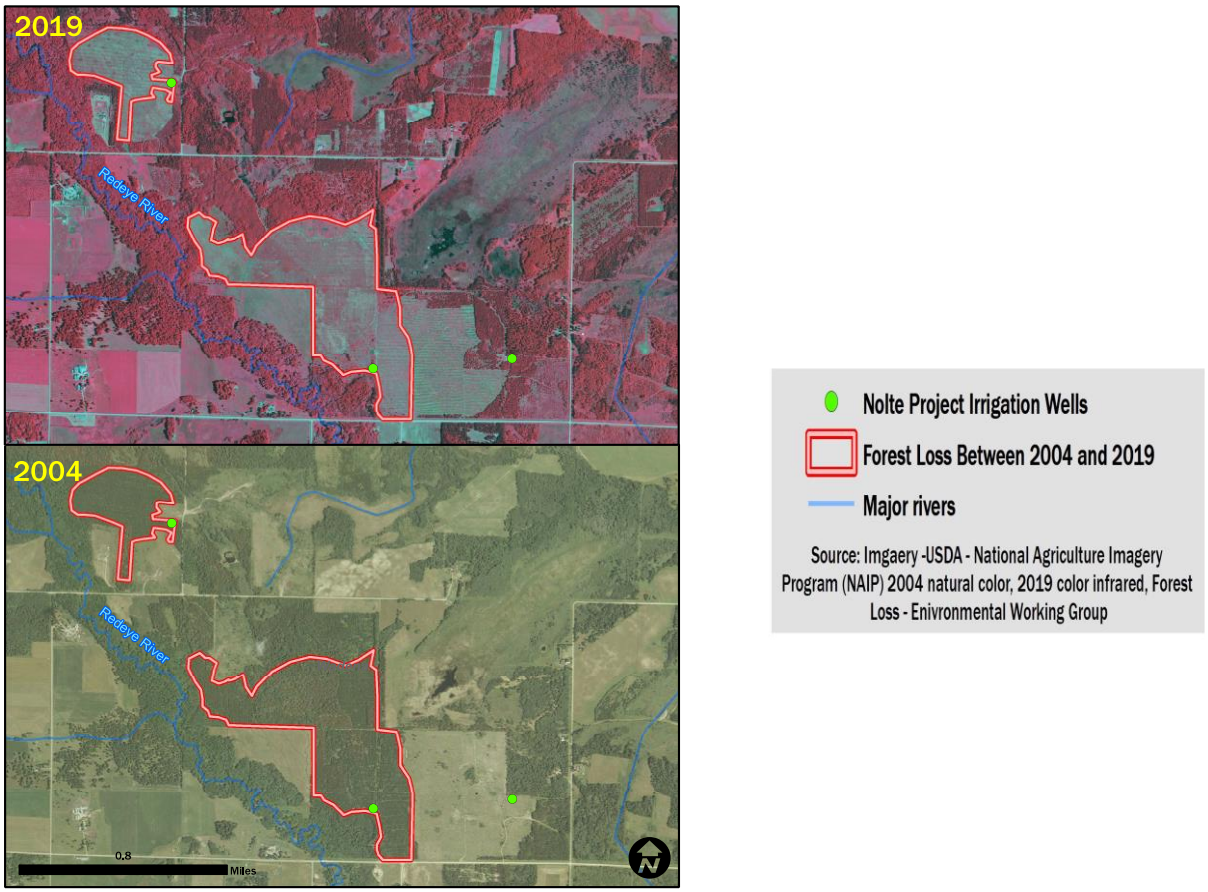


Table 1: Forest Loss in Pineland Sands Aquifer Area Associated With Irrigation Wells

County	Forested Area[1] (acres)	Forest Loss Between 2004-2019[2] (acres)	Forest Loss[2] Nearby Well Location[3] (acres)	Percent of Forest Loss[2] Nearby Well Location[3]
Becker	27,710	198	129	65%
Cass	26,722	1,595	1,538	96%
Hubbard	52,753	2,377	2,034	86%
Wadena	47,466	1,686	1,462	87%
Total	**154,651**	**5,855**	**5,163**	**88%**

Forest - [1]The U.S. Geological Survey, 2016 National Land Cover Database (NLCD), [2]Forest Loss - Enivronmental Working Group analysis of aerial photography 2004 -2019, [3]Wells - Minnesota DNR Water Use Data, Irrigation wells intended for agricultural use, *Nearby within 1,400 ft of well location point

Based on EWG's findings in its cumulative effects analysis, DNR should consider potential significant deforestation effects including the previous deforestation of the full 303 acres on the proposed project site, acreage lost in developing other existing irrigation projects in the Pineland Sands Aquifer area, and acreage that will be lost if DNR permits the wells included in RDO's 2015 application package.

e. Future, Speculative Regional Studies Do Not Supplant the Requirement for a Complete Cumulative Effects Analysis of the Proposed Project

Minnesota's environmental review law incorporates distinct generic and project-specific environmental review processes with unique accompanying methods for evaluating potential cumulative environmental consequences.[81] MEPA regulations permit agencies to consider "the extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the proposer, including other EISs."[82] However, applicable law also mandates appropriately extensive cumulative effects analysis as a part of project-specific environmental review. Relevant law also makes clear that "preparation of a generic EIS does not exempt specific activities from project-specific environmental review."[83]

In this case, because the proposed project is part of RDO's massive operational expansion, which covers nearly 7,000 acres of the Pineland Sands Aquifer area, no meaningful distinction exists between cumulative effects associated with the proposed project and regional cumulative impacts. Cumulative effects and cumulative impacts are one in the same. Nonetheless, DNR has drawn a dangerous and unfounded imaginary line in order to avoid assessing other relevant irrigation projects and animal agricultural operations as part of its cumulative effects assessment.

After discussing significant forestland, water quantity and quality and habitat effects, in Attachment E to the EAW, DNR states that the "cumulative nature of these issues are not conducive to a project specific assessment and need to be considered and addressed at a broader scale."[84] In drawing an arbitrary line and punting, yet again, on requiring an appropriately extensive project-specific environmental review for RDO's operation, DNR risks the immediate deforestation of thousands

[81] *Citizens Advocating Responsible Dev. v. Kandiyohi County Bd. Of Comm'rs,* 713 N.W.2d 817, 827 (Minn. 2006) [hereinafter *CARD*].
[82] Minn. R. 4410.3800, subp. 5., 4410.1700 subp. 7D.
[83] Minn. R. 4410.3800, subp. 8.
[84] EAW, Attachment E, at 1.

more acres of forestland and exacerbation of already extensive nitrate drinking water contamination. In turn, worsening drinking water contamination threatens public health and portends major additional economic costs for individual citizens, communities and the state of Minnesota.

DNR has no rational basis for pointing to generic environmental review or other regional studies as a path forward for addressing or controlling significant environmental effects associated with the proposed project. In the EAW, the agency has done nothing more than express a vague desire to conduct a broader, regional study at some later time. Moreover, the agency makes clear that it has abandoned efforts to fund its previously proposed regional study, and it has never formally proposed a generic EIS.[85] What is more, after six years, the only study to ever be funded in the region, the study on RDO's Winnemucca Farm site, has produced results showing that nitrate BMPs are ineffective at protecting groundwater and drinking water from dangerous nitrate contamination in the Pineland Sands Aquifer area, underscoring decades-old agency concerns that groundwater contamination from irrigated agriculture in the region's sandy soils may, in fact, be unmitigable.[86] Given the grave potential human health and the environmental effects from the proposed project, the agency has every reason to conduct more extensive project-specific environmental review now and absolutely no justification for continuing to kick the can down the road.

III. The EAW Is Incomplete Because DNR Fails To Include Information and Analysis on Critical Topics

In addition to completing no analysis of the phased nature of the project and failing to sufficiently address cumulative effects, the EAW contains incomplete information on several specific key topics, making it impossible to fully evaluate the proposed project's potential for significant environmental effects. For example, the EAW omits a discussion of MDA's recent study results on RDO's Winnemucca Farm site, which show the ineffectiveness of nitrate BMPs in the Pinelands Sands Aquifer area. The EAW further fails to include results of a pump study necessary to evaluate groundwater pollution impacts, private well impacts, surface water impacts, and the potential for unknown inter-aquifer impacts, or "leakiness." And lastly, the EAW fails even to identify, let alone provide a reasoned analysis of, the specific type and quantities of fertilizers, pesticides, fungicides and insecticides that will be used in the proposed project. The omission of this critical information in the EAW necessitates that DNR complete a project-specific EIS.

[85] EAW, Attachment E, at 18.
[86] Wall, *supra* note 3 at 4.

a. The EAW Includes an Arbitrary Analysis of Mitigation: Fails To Incorporate Assessment of the New MDA Study Demonstrating Nitrate BMP Ineffectiveness, Fails To Include a Discussion of Mandatory Monitoring, Improperly Relies on Incomplete Permits and Voluntary Conservation Planning, and Arbitrarily Relies on an Inapplicable Certification Plan

In conducting environmental review, an agency may consider "the extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority."[87] MEPA's implementing rules clarify, however, that a reviewing agency may only rely on "mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project."[88] Moreover, in *Triple J Farms,* the Court of appeals further elucidated what constitutes appropriate consideration of future mitigation actions, holding that reviewing agencies cannot "rely[] on future permitting or monitoring efforts to control or redress problems" if the potential for significant environmental effects has not yet been evaluated in an EIS.[89] And the Court in *CARD* held that agencies cannot rely on voluntary assurances of mitigation from project proposers.[90]

Any assessment of the potential for mitigating nitrate groundwater and drinking water effects from a proposed irrigation project in the Pineland Sands Aquifer area must start by contending with the sobering statement first made by PCA during the evaluation of RDO's Triple J irrigation project in 1993:

> There are a number of effects that have been identified thus far which would not seem mitigable:
>
> 1. Groundwater contamination by nitrates seems a certainty, we can argue about what levels of nitrates but this is an unmitigable effect.[91]

In 2015, when DNR approved two additional RDO permits to irrigate 195 acres, the agency contended that it could prevent potential nitrate groundwater contamination from fertilizers applied to high-nitrogen-need crops such as corn and potatoes through the inclusion of nitrate BMP mitigation measures in irrigation permits. The agency further concluded that nitrate groundwater pollution could be managed through the Straight River Groundwater Management Area Plan and in

[87] Minn. R. 4410.1700, subp. 7C.
[88] Minn. R. 4410.1700, subp. 7C.
[89] *Triple J Farms* 528 N.W.2d 903, 905; *See also CARD* 713 N.W.2d 817, 835.
[90] *CARD*, 713 N.W.2d 817, 835.
[91] Wall, *supra* note 3 at 4.

accordance with future findings from the RDO Winnemucca Farm site study.[92] The same conclusions regarding sufficient mitigation do not apply in this case.

Study results from RDO's Winnemucca Farm site are now in and confirm decades-old agency concerns regarding unmitigable nitrate contamination from irrigated agriculture in the Pineland Sands. The study also provides critical insight into the obscene level of contamination occurring below irrigated cropland in the sands, data about which agencies could only surmise in 1993. Despite this glaring new evidence, which DNR fails to discuss in the EAW, the agency continues to arbitrarily rely on the use of nitrate BMPs in future irrigation permits and voluntary conservation plans as an effective means of mitigating groundwater and drinking water nitrate pollution:

> The irrigated cropland would be under a four- to five-year crop rotation. The proposed five-year rotation includes the following:
>
> - 1st year: Corn interseeded with annual rye grass and clover. Upon harvest, the cover crop would be available for grazing and the corn stock stubble would remain in the fields until it is disked in prior to planting the following growing season.
> - 2nd year: Oats crop; followed by cover crop of alfalfa and fescue interseeded with oats regrowth.
> - 3rd year: Alfalfa and fescue.
> - 4th year: Alfalfa and fescue.
> - 5th year: Potatoes or edible beans, either interseeded with cover crop or followed by cover crop depending on crop grown.
>
> To protect water resources, the proposer would utilize University of Minnesota recommended nitrogen BMPs focusing on using the lowest recommended inputs and timing of application. Other practices the proposer would implement to reduce nitrogen losses such as the inclusion of a perennial crop in the rotation, extensive use of cover crops and bringing livestock into the rotation.[93]

The utter inappropriateness of DNR's reliance on generic BMPs is underscored by the attached expert report from Dr. George Kraft, which projects nitrate loading at

[92] Minnesota Department of Natural Resources, *supra* note 8 at ¶ 73.
[93] EAW at 28.

levels double to quadruple those consistent with keeping groundwater contamination below the Minnesota and Safe Drinking Water Act limit of 10 mg/L. According to Dr. Kraft, the generic BMPs discussed in the EAW should be wholly ignored, as they will not effectively mitigate the proposed project's significant nitrate contamination of groundwater.[94]

Notably, DNR has also not discussed including mandatory water quality monitoring requirements as potential mitigation measures for the proposed project. In failing to do so, it diverges substantially from the mitigation approach it, working with PCA, proposed during environmental review of the Triple J Irrigation project. In Triple J, DNR proposed the following draft water quantity and quality monitoring requirements:

> 7. Groundwater Monitoring. The permittee must construct a well for monitoring water levels and water quality. Well specifications Permits 93-1135 and 93-1136 are defined in Attachment B. Water levels must be taken each time the irrigation system is turned on or off and once per month, except January and February, when the system is not in operation. Water Quality samples must be collected ___ times each year (dates). Water samples shall be collected by a certified contractor and tested for _____. Water level data must be submitted to the Division of Waters Observation Well Manager by January 1, each year or upon request. Water Quality testing results must be submitted to the Area Hydrologist in Detroit Lakes as soon as the data aare [sic] available. The permittee is responsible for all well construction and monitoring costs.
>
> 8. Temporary Permit. This permit is valid for a two year period ending September 30, 1995. Extension of the permit will be based on compliance with the soil and water conservation plan and any impacts to Dead Horse Creek and groundwater resources resulting from the use of agricultural chemicals and practices.[95]

As noted at the outset of this comment, PCA identified water quality monitoring for irrigation projects in the Pineland Sands Aquifer area as a critical mitigation measure necessary to "ensure that additional preventative action is taken if nitrate

[94] Kraft, *supra* note 4.
[95] Attachment 19 Memorandum from Jim Japs, Division of Waters DNR, to Pete Otterson, ¶ 7,8 (Aug. 19, 1993).

levels exceed state and federal drinking water standards."[96] Despite the agencies' clear recognition previously that effective mitigation of nitrate groundwater contamination, if possible, requires mandatory water quality monitoring requirements, DNR has failed to include the same as proposed mitigation measures in the EAW.

In addition to nitrate BMPs, the agency, in the EAW, also references an unfinished Soil and Water Conservation Plan and the project proposer's wholly inapposite Minnesota Agricultural Water Quality Certification Program ("MAWQCP") agreement as groundwater pollution mitigation tools.[97] However, DNR cannot rely on these voluntary plans to mitigate the groundwater pollution threat posed by the proposed project for at least two very clear reasons.

First, the agency cannot rely on the referenced Soil and Water Conservation Plan, because incomplete, draft documents lack any specific guarantee of pollution mitigation. Moreover, soil and water conservation planning documents have historically focused on reducing, through voluntary, generic provisions, soil erosion and overland runoff to surface waterbodies, not groundwater contamination.[98] And additionally, the DNR is unjustifiably ignoring its own previously expressed concerns regarding the monitoring and enforceability of soil and water conservation plans.
Regarding the use of a soil and water conservation plan to mitigate negative water quality effects associated with the Triple J project, DNR stated, "[t]he utility and practicality of the conservation plan needs addressing in an EIS because of the uncertainties surrounding it." And the agency went on to note:

> It is likely to be the applicant's contention that a Conservation Plan developed by the Soil and Water Conservation District will reduce these impacts to an acceptable level. There are a number of reasons why this contention is not valid. These include the substantive parts of the plan itself, but also the fact that there are no institutional structures in place to monitor the kind of detailed plan that is necessitated by the sensitivity of the site.

[96] Wall, *supra* note 23 at 2, ¶4.
[97] EAW at 9, 13.
[98] Attachment 20 Memorandum from Thomas Balcom, Natural Resources Environmental Review Section Supervisor, DNR, to Paul Burns, Planner, MDA, p 2-3 (July 21,1993).

DNR went on and concluded that "[a]ny plan involving such a sensitive area would have to be mandatory and would need frequent monitoring. Otherwise it is only a meaningless exercise."[99]

PCA has been similarly critical regarding the use of soil and water conservation plans as mitigation measures for addressing nitrate groundwater contamination:

> 6. Assuming BMP's were available which would protect groundwater at the 10 mg/l RAL for nitrates "ongoing regulatory authority" is not in place which would make BMP's mandatory under the Agriculture Department's Groundwater Act responsibilities. It is my understanding that there must be a demonstration that voluntary BMP's are not sufficient to protect groundwater before voluntary BMP's can be enacted.[100]

Indeed, MDA recently confirmed PCA's concern regarding MDA's own view of its BMP implementation and enforcement responsibility. Specifically, during MDA's rollout of its new Nitrate Groundwater Protection Rule, the agency made clear that it will not use its authority under Minnesota's Groundwater Protection Act to immediately require BMP implementation, even in highly contaminated source water protection areas surrounding public water supplies. In these areas where voluntary BMPs have not succeeded in keeping unsafe levels of nitrates out of public water supplies, MDA intends to continue working with producers on implementing additional measures on a purely voluntary basis. MDA is taking an even more delayed, completely voluntary approach in areas where nitrate pollution from farms has already substantially contaminated private wells.[101] Accordingly, before DNR can rely on BMPs in conservation plans, the agency must address its own and PCA's valid concerns regarding implementation, monitoring and enforcement of BMPs contained in these plans.

Second, DNR has arbitrarily relied on an MAWQCP agreement that clearly does not apply to the newly proposed irrigated farming operation. The MAWQCP that DNR cites repeatedly as a mitigation tool in the EAW covers the project proposer's historic family grazing operation, not the proposed irrigated farming operation. The farm operation description at the beginning of the MAWQCP agreement makes

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[99] Stolen, *supra* note 8 at ¶K; *See also* Attachment 21 Memorandum from Paul Stolen, DNR, to Tom Balcom, DNR, 6 ¶6 (Sept. 16, 1993).
[100] Wall, *supra* note 3 at 5 ¶6.
[101] MDA Pesticide and Fertilizer Management Division, *supra* note 2, at 110-113.

crystal clear that the agreement and BMPs contained therein cover the historic operation and not the proposed irrigated farming operation:

> The Nolte's described that they have:
> 2,000 acres in long-term hay production
> 500 acres in permanent pasture
> 200 acres in corn production each year
> The remaining 'farmland' is in forest or other land not utilized for pasture, hay, or crops.
>
> The common crop rotation of the Nolte farmland is:
>
> | | |
> |---|---|
> | Year 1 | Corn Silage |
> | Year 2 | Corn Silage |
> | Year 3 | Oats with under-seeding of Hay |
> | Year 4 to Years 9-19 | Long-term Hay |

(formatting changed from original).[102]

In relying on the MAWQCP agreement as a mitigation tool, DNR has arbitrarily relied on inapplicable BMPs developed for a completely different farming operation, composed primarily of pastureland and hay, not irrigated corn and potatoes. The MAWQCP-certified operation bears no resemblance to the farm operation and rotation discussed in the EAW. Moreover, the certification agreement contains zero BMPs meant to address the groundwater pollution risk posed by the proposed irrigation project. Accordingly, DNR cannot rationally rely on the agreement as a mitigation tool.

Additionally, it is worth noting that the project proposer's certification through the MAWQCP may no longer be valid. To maintain certification, farmers are required to obtain certification for newly purchased land within one year of purchase.[103] In this case, the project proposer purchased land from RDO and agreed to lease it back to RDO for potato farming in May of 2017 and then signed the MAWQCP agreement, which does not cover the proposed operations on the RDO-purchased land, in September 2019. Given these facts, it appears that the project proposer may have never executed a valid MAWQCP agreement, may be in violation of the same or may no longer be certified under the program. For these reasons as well, DNR cannot

[102] Attachment 22 Minnesota Agricultural Water Quality Certification Agreement for Timothy Nolte (Sept. 30, 2019).
[103] Minn. Stat. § 17.9896 subd. 2.

rationally rely on the MAWQCP agreement as a groundwater pollution mitigation tool for the proposed project.

Finally, even if the project proposer and MDA were to update the MAWQCP agreement, it would continue to be an ineffective nitrate groundwater pollution mitigation tool for three reasons. First, the project proposer's participation in the MAWQCP is completely voluntary. Second, MDA's study results from the RDO Winnemucca Farm site demonstrate that nitrate BMPs that could be included in the agreement will not protect against unsafe levels of nitrate groundwater contamination in the Pineland Sands Aquifer area – a conclusion strongly echoed in the attached expert report of Dr. George Kraft.[104] And third, significant evidence exists that the surface water pollutant loading tool used to calculate certification scores for farms in the MAWQCP program does not accurately measure, prevent or mitigate nitrate groundwater contamination.

This last point is addressed in the Minnesota Center for Environmental Advocacy's independent evaluation of the MAWQCP program.[105] In its 2015 assessment, MCEA analyzed nitrate drain tile water monitoring data from farms certified through the MAWQCP program and found that farms with nitrate pollution 1.5 to 5 times the Safe Drinking Water Act standard had been certified as effectively protecting water quality.[106] Although MDA made some changes to the program after this assessment, unresolved concerns regarding the MAWQCP's accuracy in assessing reduced nitrate groundwater contamination risk underscore the inappropriateness of relying on MAWQCP certification as a mitigation tool.

In this case, DNR has presented no evidence from which a rational individual could conclude that appropriate mitigation tools exist that can effectively reduce the proposed project's certain and significant nitrate groundwater pollution effects. New evidence from MDA demonstrates that nitrate BMPs are ineffective groundwater pollution mitigation tools in the Pineland Sands Aquifer area, and Dr. Kraft's attached expert report strongly supports the same conclusion.[107] And no mandatory conservation or monitoring plans that adequately address the proposed

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[104] Kraft, *supra* note 4.
[105] Kris Sigford, Minnesota Center For Environmental Advocacy, "Minnesota Agricultural Certainty Program: Is It Working for Water Quality? An Assessment of Minnesota's Agricultural Water Quality Certification Program, 6 (Dec. 2015). Available at: http://www.mncenter.org/uploads/7/9/3/5/79357940/ag_certainty_in_mn_final.pdf.
[106] *Id.*
[107] Kraft, *supra* note 4.

project's potential for significant groundwater and surface water contamination have been developed or shown to be enforceable.

b. The EAW Fails To Include a Pump Study Necessary To Assess the Potential for Significant Groundwater, Surface Water, Drinking Water and Wetland Effects

MEPA's implementing regulations provide that "[e]nvironmental review documents shall be used as guides in issuing, amending, and denying permits and carrying out other responsibilities of governmental units to avoid or minimize adverse environmental effects and to restore and enhance environmental quality."[108] Moreover, MEPA provides that, to the extent practicable, duplication should be avoided and coordination ensured, between environmental review and permitting, and "[w]henever practical, information needed by a governmental unit for making final decisions on permits or other actions required for a proposed project must be developed in conjunction with the preparation of an environmental impact statement."[109]

Throughout the project proposer's EAW data submission process, DNR repeatedly referenced the need for an aquifer test to adequately evaluate potential water quantity and quality effects from the proposed project.[110] Ultimately, however, the project proposer failed to submit the requested test. In the EAW, the DNR continues to cite the need for an aquifer test in order to fully evaluate potential significant groundwater and surface water effects including private well interference, impacts on buried aquifers, sustainable pumping volume and impacts to wetlands and streams connected to the surficial aquifer. Despite the clear need for an aquifer test to fully evaluate the potential for significant environmental effects from the proposed project, DNR concludes, in the EAW, that the test will be completed as part of the permitting process:

> It is challenging to determine the potential for adverse well interference with nearby domestic wells without an aquifer test, which will be required during the permit application process. As shown in the Wadena County geologic atlas, the geology in this area changes significantly within a short distance, therefore an aquifer test with nested monitoring wells will be needed at this site. This will help determine the leakage between systems

[108] Minn. R. 4410.0300, subp. 3.
[109] Minn. Stat. § 116D.04, subd. 2a (i).
[110] Attachment 23 DNR Nolte Family Irrigation Project EAW Data Submittal #1, 9-10 (Nov. 1, 2019).

and provide the data needed to evaluate impacts from pumping the deeper confined aquifer(s) on the other aquifers and the surficial resources.[111]

There is no nearby testing of the proposed pumped aquifer; therefore, information on how the aquifer responds to pumping is not known. In addition, recharge to the Pineland sands confined aquifers within the area of the proposed project has not been studied directly. However, recharge is expected to be similar to other areas of glacial deposition and will likely occur from direct hydrologic connections to or by leakage from surface water features and other aquifers. An aquifer test with nested monitoring wells will be conducted at this site as part of the permitting process. The results from this test will help evaluate the impacts from pumping the three proposed irrigation wells on the aquifer systems.[112]

[T]here is no information on the confined aquifer systems which are the source of water for the proposed irrigation wells. Therefore, the aquifer test that will be conducted as part of the permitting requirements will help this understanding of the source aquifer(s) for the irrigation wells. Any evaluation of the total volume of sustainable pumping would need to involve construction of a groundwater model.[113]

The connectivity of the water table system to the source aquifer for the pumped wells is not known.[114]

The aquifer test conducted as part of the water appropriation permitting process can be used to evaluate pumping impacts on nearby wetlands outside the proposer's land that are connected to the surficial aquifer.[115]

In order to evaluate pumping impacts on wetlands and streams near the site, DNR recommends an aquifer test to determine any potential impacts from pumping the confined aquifer on surficial aquifers. The proposer is aware that an aquifer test would be required during

[111] EAW at 25.
[112] EAW at 25.
[113] EAW at 25.
[114] EAW at 26.
[115] EAW at 26.

> permitting and that DNR would reevaluate any impacts following the aquifer test in the permitting process.[116]
>
> The aquifer test conducted as part of the water appropriation permitting process will be used to evaluate pumping impacts on nearby streams, including the Redeye River, that are connected to the surficial aquifer.[117]

In failing to require and assess the results of an aquifer test in the EAW, the agency has unjustifiably reversed the order of operations for environmental review. Dr. Kraft's attached expert report makes clear that the project has the potential to significantly impact water quantity in aquifers and connected wetlands and to reduce stream flow in the Redeye River. Moreover, the report cautions against the misconception that completion of wells in a confined aquifer protects against these potentially significant water quantity impacts.[118] If the DNR has concluded that an aquifer test lies outside the scope of a preliminary EAW assessment, then it must obtain critical information regarding the potential for significant water quantity effects from the proposed project through an EIS. The agency cannot wait and conduct necessary environmental review during the permitting process.

c. The EAW Fails To Include and Evaluate Sufficient Information Regarding Fertilizer and Pesticide, Fungicide and Insecticide Chemical Use

Like nitrate, pesticide, fungicide and insecticide chemicals are water soluble and can leak below crops into ground and drinking water and runoff or drift into surface water, presenting serious public health risks.[119] During the Triple J Farms environmental review process, DNR, MDH and MDA rightly identified that information regarding the type and quantity of chemicals to be applied was necessary in order to evaluate the potential for significant environmental effects from the proposed project. In analyzing the Triple J proposal, DNR concluded:

> Item 8 in the EAW indicates that a potential exists for the future use of chemigation and fertigation techniques as a component of agricultural water management. The EAW does not indicate the expected types or use-levels of nutrients and pesticides, whether herbicides, insecticides

[116] EAW at 30.
[117] EAW at 27.
[118] Kraft, *supra* note 4.
[119] *Id.*

> or fungicides. … The coarse soils and heavy applications of fertilizers required for the proposed crop rotation could lead to elevated nitrate levels in the upper aquifers and may potentially lead to down-gradient migration of this and other chemicals. Such an occurrence would potentially threaten the local groundwater and surface water quality. The EAW does not detail whether water chemistry monitoring will be a component of this project or how this will be accomplished. In addition, remediation measures are not explicitly detailed.[120]

DNR later reiterated the need for specific fertilizer and chemical application information in followup memoranda to MDA. DNR also noted the potential for chemical contamination of the adjacent stream via underground, near-surface groundwater flow through the surficial aquifer.[121]

In reviewing the Triple J irrigation proposal, MDH concluded that "[t]he project appears to have the potential for contamination of groundwater and surface water, with resultant negative impacts on drinking water and public health."[122] As a result, MDH also informed MDA that additional information on the types and quantities of pesticides and herbicides to be used was needed before the irrigation project could proceed to permitting.[123]

Partly in response to DNR and MDH's requests for specific fertilizer and chemical use information, MDA, acting as the reviewing agency, requested and received an EAW extension from the EQB.[124] After receiving additional time for environmental assessment, MDA sent a letter to the project proposer requiring him to provide information on the "types and extent of chemical inputs" to be used in the irrigated farming operation, so the agency could determine whether an EIS was required.[125]

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[120] Balcom, *supra* note 98, at 1.
[121] Stolen, *supra* note 99, at 5 ¶3.
[122] Attachment 24 Memorandum from Patricia A. Bloomgren, Director MDH, to Paul Burns, Asst. Director Agriculture Planning & Development Division MDA 1 (July 21, 1993).
[123] Attachment 25 Memorandum from Patricia A. Bloomgren, Director MDH, to Paul Burns, Asst. Director Agriculture Planning & Development Division MDA, (Sept. 14, 1993).
[124] Attachment 26 Memorandum from Gregg Downing, Coordinatory EQB Environmental Review Program, to Paul Burns, Asst. Director Programs and Management Support Division MDA, (Aug. 18, 1993).
[125] Attachment 27 Memorandum from Paul Burns, Asst. Director Agriculture Planning and Development MDA, to Mr. Julian Janke, Triple J Farms, (Sept. 1, 1993).

Similarly, in 2012, during its review of the Winnemucca irrigation project proposal, PCA again weighed in on the need for specific information regarding the use of pesticides and fungicides:

> The EAW does not identify or discuss the use of pesticides or fungicides, or potential environmental effects resulting from pesticide or fungicide use, in potato production. In particular, the high likelihood of fungicide use for as long as this land is in potato production should be discussed at some level in several parts of this document in order for the EAW to be complete. The majority of all Minnesota potato farms use applications of fungicide and a high majority of these use chlorothalonil specifically. The application of chorothalonil, presumably via crop dusting, should be a consideration when discussing, at a minimum, items 11, 17, 20, 23, or 30. Chlorothalonil is classified by the Environmental Protection Agency (EPA) as "very highly toxic" or "highly toxic" to aquatic invertebrates. The EPA Reregistration Eligibility Decision (RED) fact sheet also states that "Chorothalonil can contaminate surface water via spray drift or through runoff and erosion. Chlorothalonil can be dissolved in runoff and adsorbed to sediment in the runoff." As this proposed agricultural site has both wetlands and a stream that drains to the Crow Wing River, the potential for surface and groundwater contamination resulting from the use of pesticides and fungicides should be addressed in this environmental review.[126]

During both the Triple J and Winnemucca environmental review processes, state agencies established a clear precedent requiring irrigation project proposers to submit chemical type and quantity information during environmental review. Despite this fact, however, the DNR now arbitrarily concludes that a generic laundry list of every known chemical that could potentially be used in the proposed project provides sufficient information for evaluating groundwater pollution risk:

> Exact chemical usage at the proposed project location is uncertain based upon crop rotation, pests and field requirements. A list of all pesticides available for use for the proposed project are listed in Attachment D, arranged by the proposer's planned crops (corn, rye grass and clover; oats, alfalfa and fescue; potatoes).[127]

[126] Kromar, *supra* note 37.
[127] EAW at 29.

The justification the agency provides for failing to require project-specific chemical use borders on ridiculous. Although it is fair to state that unforeseen pest issues may arise and require the use of additional, unanticipated pesticides, it is untenable to suggest that switching between a four and five-year crop rotation, or switching out beans for potatoes in any given crop year, renders impossible a more specific evaluation of chemicals to be used in the proposed project. Instead of ignoring the critical fertilizer and chemical use evaluation completely, an obvious and reasonable solution would be to identify the chemicals to be used on all identified crops individually and then evaluate the different potential aggregate pollution effects from the proposed alternative four and five-year crop rotations and the proposed alternative fifth-year crops.

Failure to include any specific fertilizer and chemical information in the EAW renders the environmental assessment incomplete. As with the other key information gaps identified above, the complete omission of chemical information prevents meaningful public engagement in the environmental review process and undermines the DNR's ability to make informed and appropriate permitting decisions.

Conclusion

In conclusion, the EAW is substantially incomplete and fails to sufficiently evaluate the proposed project's potential for significant environmental effects. First, the EAW fails to adequately evaluate certain and unmitigable groundwater and surface water nitrate fertilizer pollution effects in and around the narrowly defined 303-acre proposed project site. Second, the EAW fails to accurately identify and consider the proposed project as part of RDO's massive phased deforestation and irrigated agriculture development action in the Pineland Sands Aquifer area. Third, the cumulative effects assessment in the EAW fails to evaluate the proposed project's contribution to already significant deforestation effects as well as to ground and surface water contamination effects from existing and future irrigation projects and animal agriculture in the Pineland Sands Aquifer area. And finally, the EAW includes an arbitrary analysis of mitigation measures and no analysis at all of aquifer test results and fertilizer and chemical inputs. In addition to identifying an enormous amount of missing critical information, this comment has provided – through expert reports and historical agency documentation – copious affirmative evidence of the proposed project's potential for significant environmental effects. The sheer abundance of additional information required for complete assessment of the proposed project, as well as the proposed project's already well-documented potential for significant and irreversible environmental effects, requires DNR to make a positive declaration on the need for an EIS.

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