NOTICE OF INTENT TO MODIFY A PERMIT TO INCREASE WITHDRAWALS
AND SOURCES OF WATER FOR DEWATERING AND PROCESSING PURPOSES
IN CLAYTON COUNTY, IOWA

Notice is hereby given that pursuant to Iowa Code Chapter 455B, there is now on file with the Iowa Department of Natural Resources, Water Supply Engineering Section, 6200 Park Ave, Suite 200 Des Moines, IA 50321 the application as described below.

Pattison Sand Company, Iowa DNR Log Number 33,483, requests to withdraw water from three Jordan aquifer wells, all between 100 and 665 feet deep, one Jordan/Dresbach aquifer well, approximately 619 feet deep, one mine pond intake; and two proposed quarry/rail track dewatering basin intakes, all located on land generally described as the E ½ of the SE ¼ of Section 12, T93N, R03W, the S ½ and the S ½ of the NW ¼ of Section 2, the N ½ of Section 18, and the NW ¼ of Section 17, T93N, R02W, Clayton County, Iowa, in the maximum quantity of 500 million gallons per year and 3,213 gallons per minute from the Jordan aquifer; 120 million gallons per year at 600 gallons per minute from the Jordan/Dresbach aquifer; 50 million gallons per year and 150 gallons per minute from the mine pond; and 1,600 million gallons per year at 4,800 gallons per minute from the quarry/rail track dewatering basins; in the maximum total quantity of 2,270 million gallons per year at a maximum rate of 8,763 gallons per minute throughout each year, all for dewatering geologic strata for excavation and processing silica sand from an underground mine and surface quarry located on said land.

The Department has determined that this use of water conforms to the relevant criteria (Iowa Code Chapter 455B and Iowa Administrative Code Chapter 567) and recommends the permit be granted. A copy of the summary report for the application is available upon a request to the department at the address listed above. Comments on the report and on this use of water must be received by July 7, 2026, and should be addressed "ATTN: Chad Fields" and should specify the applicant's log number (33,483).

IOWA DEPARTMENT OF NATURAL RESOURCES
WATER USE PERMIT UPDATED SUMMARY REPORT

Applicant: Pattison Sand Company, LLC
23656 Great River Road
Garnavillo, IA 52049-8257

Application Log No.: 33,483

Permit Request

The Applicant, Pattison Sand Company, LLC, Log #33,483, requests a permit modification to withdraw water from two Mississippi River alluvial aquifer wells, approximately 100 feet deep; two Jordan aquifer wells, approximately 100 feet deep; one mine pond intake; one Mississippi River intake; and two proposed quarry/rail track dewatering basins, all located on land generally described as the E ½ of the SE ¼ of Section 12, T93N, R03W, the S ½ and the S ½ of the NW ¼ of Section 2, the N ½ of Section 18, and the NW ¼ of Section 17, T93N, R02W, Clayton County, Iowa, in the maximum quantity of 423 million gallons per year at a maximum rate of 850 gallons per minute from the Mississippi River alluvial aquifer; 1,435 million gallons per year and 2,800 gallons per minute from the Jordan aquifer; 77 million gallons per year and 150 gallons per minute from the mine pond; 564 million gallons per year at 1,100 gallons per minute from the Mississippi River; and 1,244 million gallons per year at 4,800 gallons per minute from the quarry/rail track dewatering basins; in the maximum total quantity of 3,743 million gallons per year at a maximum rate of 9,675 gallons per minute throughout each year, all for processing silica sand from an underground mine located on said land.

The Applicant's sand mine and quarry is located on land owned by Pattison Sand Company, LLC (PSC). The land is located approximately 300 feet west of the Mississippi River at about River Mile Marker 623.44, approximately three miles east of the municipal limits of the city of Garnavillo, Iowa, and five miles north of the municipal limits of the city of Guttenberg, Iowa (See Figure 1 and Figure 2).

Several changes to water sources and withdrawal details have been made since the initial application was submitted to the Department. These changes stem from the public comments (Appendix A) and subsequent investigations, the Iowa Geological Survey's Hydrogeologic Investigation (Appendix B), permitted well connections and corrections to available records with accurate construction information, and discussions with the Applicant regarding historic use, water use trends, and future water needs.

As a result of those efforts and findings, the following source changes have been made to the sources and allocations regarded for this permit application:

- Elimination of the Mississippi River Intake as a water source. Analysis of past water usage by source indicates no withdrawals from Mississippi River have occurred from this facility in the past. Discussions with PSC indicate there are no anticipated withdrawals to occur from this source in the foreseeable future. Both the instantaneous pumping rate and annual allocation amount have been removed from the permit and application.
- Reclassification of two former Mississippi River alluvial aquifer wells. Based on the Iowa Geological Survey's Hydrogeologic Investigation and matching to driller's logs, the designated sources for two wells originally thought to have been sourced by the Mississippi River alluvial aquifer have been corrected to two different sources:
    - Well #PU26 — source changed from the Mississippi River alluvial aquifer to the Jordan (Cambrian-Ordovician) aquifer.
    - Well #PU6 — source changed from the Mississippi River alluvial aquifer to dual Jordan (Cambrian-Ordovician) aquifer and the Dresbach (Mt. Simon) aquifer.
- Based on communication with PSC as well as analysis of historic and forecasted water withdrawals, the overall annual allocation and instantaneous pumping rate changes to reflect current estimated annual water use needs and pumping rates from each permitted water source from wells and intakes.

The table below provides information on the updated water sources, wells and pumps that are included in the requested application.

Table 1. Pattison Sand Company wells and intakes with instantaneous pumping rates and source annual allocation.

Intake/Well Name	Source	Pump Rate (gpm)	Annual Allocation (mgy)
Mine Pond Intake	Surface Water (from surface and Jordan)	150	50
Rail Intake #1		2,400	1,600
Rail Intake #2		2,400	
Well #PU11	Jordan Aquifer	1,400	500
Well #PU12		1,400	
Well #PU26		413	
Well #PU6	Dual Jordan/Dresbach Aquifer	600	120
TOTAL		**8,763**	**2,270**

The updated allocation authorization requests reads as follows:

The Applicant, Log #33,483, requests a permit modification to withdraw water from three Jordan aquifer wells, all between 100 and 665 feet deep, one Jordan/Dresbach aquifer well, approximately 619 feet deep, one mine pond intake; and two proposed quarry/rail track dewatering basin intakes, all located on land generally described as the E ½ of the SE ¼ of Section 12, T93N, R03W, the S ½ and the S ½ of the NW ¼ of Section 2, the N ½ of Section 18, and the NW ¼ of Section 17, T93N, R02W, Clayton County, Iowa, in the maximum quantity of 500 million gallons per year and 3,213 gallons per minute from the Jordan aquifer; 120 million gallons per year at 600 gallons per minute from the Jordan/Dresbach aquifer; 50 million gallons per year and 150 gallons per minute from the mine pond; and 1,600 million gallons per year at 4,800 gallons per minute from the quarry/rail track dewatering basins; in the maximum total quantity of 2,270 million gallons per year at a maximum rate of 8,763 gallons per minute throughout each year, all for dewatering geologic strata for excavation and processing silica sand from an underground mine and surface quarry located on said land.

Permit Application History and Public Comments

The original modification, summary report, and drafted permit language was published and put out for public notice on March 18, 2025 in the Calmar Courier. After publication, the Water Use Program received a written request for an in-person public hearing to be held in the area of Pattison Sand Company (PSC) for additional public input. That request led to a public hearing being held on April 22, 2025 in the Clayton County Office Building Public Meeting Room in Elkader, Iowa.

At the public hearing, 34 attendees made verbal statements of concern regarding the permit modification and aspects of the mining facility itself. During the hearing, speakers raised consistent concerns regarding the lack of adequate scientific study on aquifer impacts, the effect on private wells and municipal water supplies, the absence of any financial charge to Pattison for extracting a public resource (water and earth materials), the company's poor track record of accountability to neighbors, and the suspiciously obscure public notice published in a distant county's newspaper. Many speakers also called for an extended public comment period, more transparency from both the Department and PSC, and urged the Water Use Program to deny the permit modification. Appendix A is the transcript of the public transcript from the hearing.

After the public hearing, the Water Use Program extended the initial application's comment period until May 31, 2025. Throughout the comment period there were 134 public comments submitted to the Water Use Program regarding the PSC water use permit and potential effects of the withdrawals and the facility. Appendix A provides the written public comments submitted to the Water Use Program for consideration with the permit.

All of the public comments have been summarized into eight major topics, listed below:

Risk to Private and Municipal Wells Existing well failures have been attributed to current Pattison withdrawals, with the DNR's own permit summary acknowledging a likely regional cone of depression. The Water Use Program should require a formal well and source inventory, a supervised aquifer pump test before permit issuance, explicit well interference language with a clear complaint pathway, and clarification of who bears financial responsibility when private or municipal wells fail due to interference.

Insufficient Environmental and Hydrological Study No adequate hydrogeological modeling or environmental impact study has been performed. The program should require a full Environmental Impact Study before any permit modification, mandate pump test data sufficient to model the cone of depression, establish baseline aquifer levels, and assess cumulative impacts on Buck Creek, a Class B cold-water trout stream approximately 3.4 miles away.

Compliance with the Jordan Aquifer Rule The draft permit has been criticized for improperly exempting Pattison from the Jordan aquifer rule by claiming the aquifer is "unconfined" at this location. The program should apply Jordan aquifer withdrawal limits without exception, deny withdrawals above the 2,000 gpm threshold and obtain 1978 baseline aquifer data and apply Jordan aquifer rule 'tiered' protections.

Scale of Withdrawal Relative to Need The proposed use represents a 560% increase over Pattison's recent three-year average and would exceed total water use of all Clayton County residents by a factor of 5.7, yet no substantive operational justification has been provided. The program should require Pattison to justify the magnitude of the requested increase, evaluate whether it constitutes a "beneficial use" consistent with Iowa law and recent administrative rulings, and consider phased or conditional permitting tied to demonstrated need.

Threat to Ecological Resources Concerns have been raised about risks to Buck Creek's cold-water ecosystem as well as threats to algific talus slopes harboring state and federally listed threatened and endangered species in one of NE Iowa's most sinkhole-dense areas. The program should consult with DNR Fisheries, the U.S. Fish and Wildlife Service, and the Army Corps of Engineers; assess species risks associated with spring-fed stream networks; require longitudinal biological monitoring of Buck Creek as a permit condition; and evaluate the documented flow reduction from 10 CFS in 2007 to 5.7 CFS in 2022.

Water Train and Out-of-State Water Export Loophole Current permit language could allow Pattison to intercept dewatered groundwater before discharge and ship it out of state due to an ambiguity between "discharge" and "redirection." The program should modify Permit Condition 13 to explicitly require all withdrawn water be discharged to the Mississippi River, resolve the documented disagreement between DNR and Pattison's legal counsel over regulatory authority, and include language explicitly prohibiting off-site sale or transfer of withdrawn water.

Lack of Public Notice Transparency Public notice was published only in a newspaper approximately 58 miles from the mine site and outside Clayton County, effectively limiting public awareness, and the public hearing offered no informational presentation and no answered questions. The program should require publication in local Clayton County media, direct outreach to nearby municipalities and property owners, ensure future hearings include an informational

component from the DNR and applicant, and schedule a follow-up hearing with a larger venue and adequate lead time for meaningful public input.

Monitoring, Compliance, and Accountability Gaps The 2019 permit directed static water level monitoring that was never formalized as a permit condition, resulting in no baseline data, and Pattison's water use records contain gaps for 2013 and 2019. The program should make all monitoring requirements explicit permit conditions with defined reporting schedules, investigate and reconcile the missing records, coordinate with the NPDES program to ensure discharge permits reflect actual withdrawal volumes, and clearly assign monitoring costs and responsibilities rather than placing the burden on the public or nearby well owners.

Effects of Public Comments on the Review

Following the verbal and written comments received by the Water Use Program regarding the issues summarized above, the Water Use Program requested that the Iowa Geological Survey assist in the characterization and analysis by initiating and completing a detailed hydrogeologic investigation of the area. On August 22nd, 2025, staff from the Iowa DNR Water Use Program, the Iowa Geological Survey, and the local field office held an open public forum to discuss the scope, form and function of the Hydrogeologic Investigation, and various considerations for formal complaints of well interference by PSC to surrounding community and private wells.

Following the Public Meeting, the Iowa Geological Survey submitted the “Pattison Sand Company Hydrogeologic Investigation” (Appendix B) to the Water Use Program on February 3, 2026. The Investigation included an extended pump test with analysis, detailed geologic cross sections, water level readings, a well inventory/source analysis, potential regional impacts of water withdrawals to water sources, potential water chemistry impacts, and predictive aquifer testing under different hydrogeologic scenarios. The investigation also included data gaps and limitations for the study.

On April 28, 2026, staff from the Water Use Program met with the city staff from Garnavillo, Clayton, and Elkader, as well as Clayton County staff and a private well owner that submitted a well interference complaint regarding their private well approximately one half mile south of PSC.

On June 9, 2026, staff from the Water Use Program, the Iowa Geological Survey, and the Iowa DNR Field Office held a follow-up public meeting to discuss the results from the Hydrogeologic Investigation, Water Use Program interviews and data gathering, and subsequent decisions and conditions placed on PSC Permit #9126 to address those concerns.

Beneficial Use Analysis

Water withdrawn under this permit, both groundwater and surface water, is used for dewatering and for the production of sandstone and carbonates at Pattison Sand Company (PSC). PSC operates an underground mine and above-ground quarry located in the same authorized area as the water withdrawal points listed in this authorization. Water is withdrawn for this purpose from both wells and surface intakes (Figure 1).

Quarrying of earth materials is a recognized beneficial use under Iowa Code §455B.262 and Iowa Administrative Code 567-Chapter 50.2, which defines quarry water use as the extraction of stone, sand, minerals, or other geologic materials from the earth. The majority of the requested allocation increase is projected to support dewatering of the mined formation and drainage through the quarry and rail track dewatering basins.

No water uses other than dewatering and the washing and processing of earth materials will be authorized under this permit. Water use authorizations are limited to the listed uses within the permit.

Water Sources

The Pattison Sand Company (PSC) sits directly inside and above the Jordan aquifer, also called the Cambrian-Ordovician (C-O) aquifer. This aquifer is made up of three geologic units: from top to bottom these are the St. Peter Formation (sandstone), the Prairie du Chien Group (dolomite), and the Jordan Formation (sandstone) (Figure 6). Above the Jordan aquifer lies the Galena Group aquifer, with the aquitard shales and siltstones of the Decorah, Platteville, and Glenwood formations hydrologically separating the two aquifers. These three formations act together as a regional aquitard (a layer that restricts vertical water movement) and are typically around 100 feet thick in this area (Figures 5 and 6).

According to Iowa Geological Survey (IGS) records, Wells PU6 and PU26 were previously classified in the permit as Mississippi River alluvial wells; however, both wells actually draw exclusively from bedrock aquifers. The IGS investigation treated them as Jordan aquifer wells accordingly. All four groundwater wells, both dewatering basins, and the mine pond draw most of their water from the Jordan aquifer.

Across most of Iowa, the Jordan aquifer is deep and confined, water is bounded above and below by impermeable layers and held under pressure. At the location of PSC, however, the Jordan aquifer is unconfined and exposed at the land surface. In the mining area, the units of the Jordan aquifer are recharged by precipitation and surface infiltration, and likely receives additional recharge from the Mississippi River and connected alluvial aquifers. Water also moves horizontally through the aquifer toward areas of lower hydraulic head (see Appendix B, Figure 7). Because the Jordan aquifer here is unconfined and located adjacent to an extensive recharge source, the Jordan Rules under Iowa Administrative Code 567, Chapter 50.11(2) will not apply to this facility.

Well #PU6 also draws from the Dresbach aquifer (also known as the Mt. Simon aquifer), in addition to the Jordan aquifer. The Dresbach/Mt. Simon aquifers are the deepest of Iowa's major bedrock aquifers, little used outside of extreme eastern Iowa, and scarcely characterized in the state. The Dresbach consists primarily of coarse sandstone, and lies below the Jordan aquifer, separated from it by the siltstone and shales of the St. Lawrence aquitard. Well #PU6 first encountered the Dresbach at approximately 503 feet depth and penetrates it to a total depth of 619 feet. The Dresbach is the terminal aquifer in the well, and likely extends lower than the well depth of 619 feet.

During the drilling of Well #PU6, while still within the Jordan aquifer, static water levels were roughly aligned with the Mississippi River, approximately 19 feet below ground surface. Once drilling penetrated the St. Lawrence confining layers and entered the Dresbach, the well became a flowing artesian well, with water naturally discharging at 60 to 80 gallons per minute without pumping. Wells completed in the Dresbach aquifer elsewhere in Iowa can yield over 3,000 gallons per minute, though such wells are rare and the aquifer remains poorly characterized statewide. There is no source-specific pump test on Well #PU6 to quantify the percentage of water from those two sources. In lieu of more detailed information, the Water Use Program will allocate 50% of water withdrawals between the two aquifers.

The permit application includes three surface water intakes; two (Rail Intake #1 and Rail Intake #2) are part of the modification request. Figure 2, supplied by PSC, illustrates surface water and infiltrated groundwater movement within the quarry site. Because of the strong hydrologic connection between surface and groundwater at the site, water from all three intakes is assumed to draw from multiple sources including natural Jordan aquifer outflow, surface pond infiltration and pumping, well discharge into ponds, and precipitation. A significant portion of water is recycled from previous pumping cycles. For instance, most of the water feeding Rail Intake #1's pond originates from Rail Intake #2, making these withdrawal figures largely duplicative.

The Department's water use permits treat all water withdrawals additively, i.e., water moving through a chain of sources is counted at each step toward the total withdrawal limits. However, the Water Use Program recognizes that much of the water extracted at this facility is recycled.

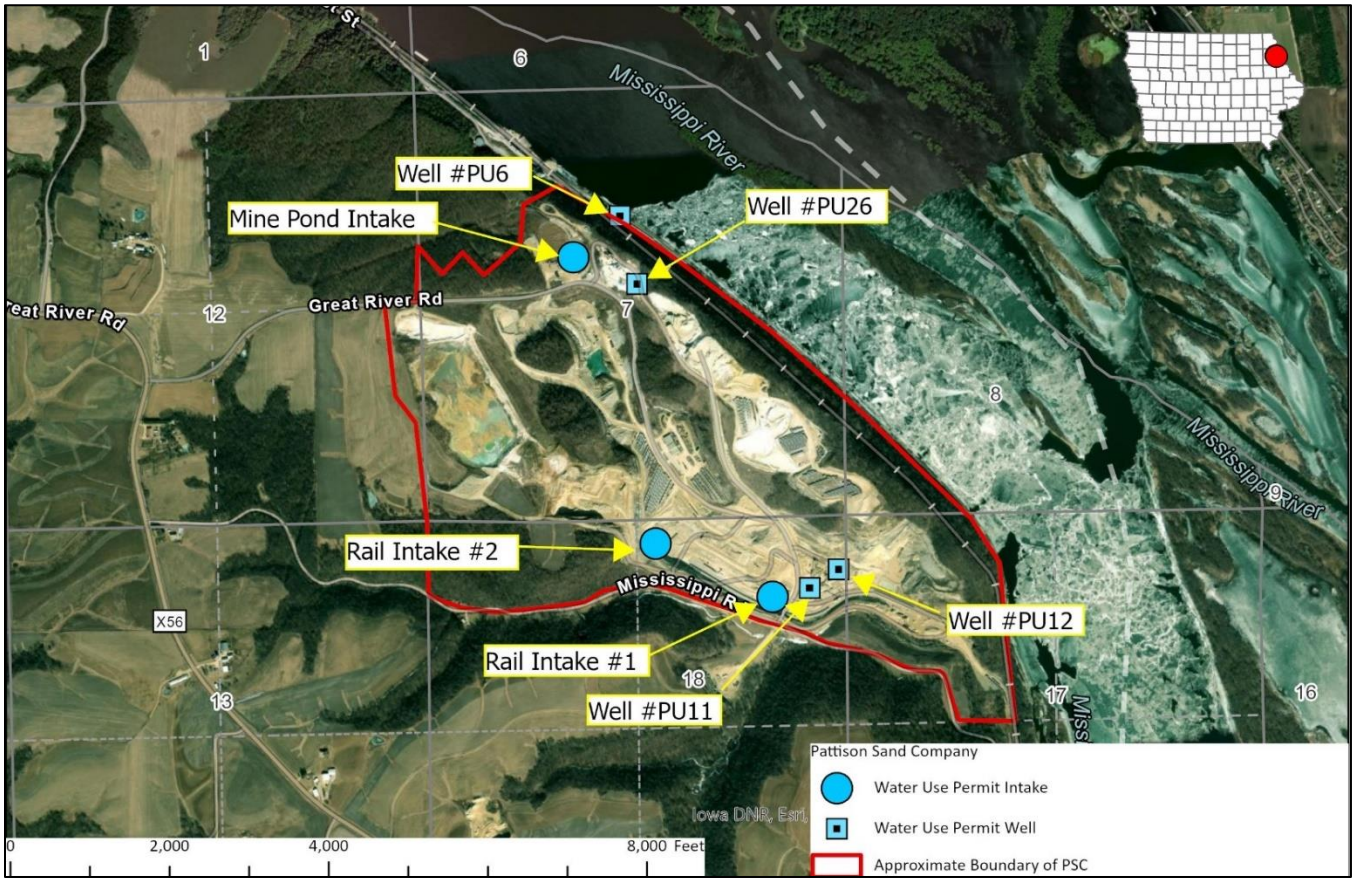

Figure 1. Map of the Pattison Sand Company mining area, with associated wells and intakes.

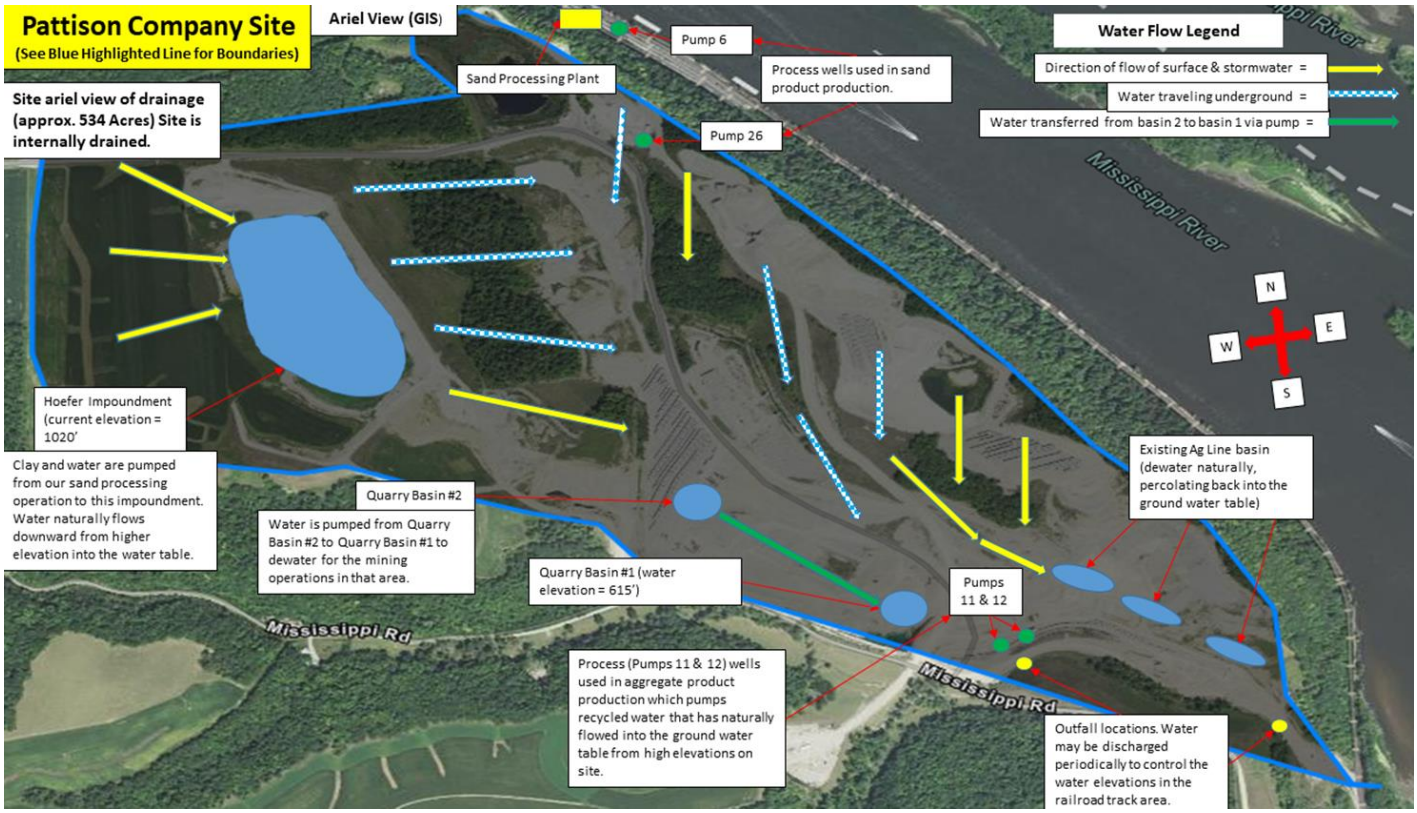

Figure 2. Surface and groundwater pathways and movement in Pattison Sand Company. From IGS report.

IGS Pattison Sand Company Hydrogeologic Investigation

The Iowa Geological Survey conducted a limited hydrogeologic investigation for the Iowa DNR to evaluate Pattison Sand Company's Water Allocation Permit #9126 in Clayton County. The full report is included in Appendix B. PSC operates an underground sandstone mine and surface quarry near the Mississippi River, and was requesting a significant increase in total water withdrawal: to 3,743 million gallons/year from a combination of groundwater wells, dewatering basins, a mine pond, and a Mississippi River surface intake.

PSC draws water almost exclusively from the Jordan (Cambrian-Ordovician) aquifer, a regional bedrock system. A confining layer prevents direct connection between the Jordan aquifer and the Galena, alluvial, and Dresbach aquifers. All groundwater and surface water connected to the Galena and alluvial aquifers is not expected to be impacted by the permit's pumping (Figure 5 and Figure 6). A pumping test completed in September 2025 showed the local aquifer has unusually high hydraulic conductivity (127 ft/day vs. a regional range of 0.6–24 ft/day), likely due to fracturing and weathering at the Jordan outcrop within the PSC site. Three drawdown scenarios were modeled over five years at full permitted pumping rates. The critical unknown factor is whether the Mississippi River alluvial aquifer acts as a recharge boundary for the Jordan aquifer at this location. The presence or absence of that recharge determines whether drawdown spreads regionally, or stays largely localized in the mining area.

The IGS report shows that under the worst case scenario, with no river recharge component to the Jordan aquifer, Jordan aquifer drawdown could reach seven feet at Garnavillo and over 15 feet within two miles of the site within five years. Under the most likely scenario (river recharge plus on-site water recycling), drawdown stays under one foot at Garnavillo and under five feet within a mile of the site.

The IGS Report concluded groundwater and well water quality concerns are slight, but include the possibility of elevated radium in nearby Jordan wells if water levels are depressed in the area.

Historic Water Use

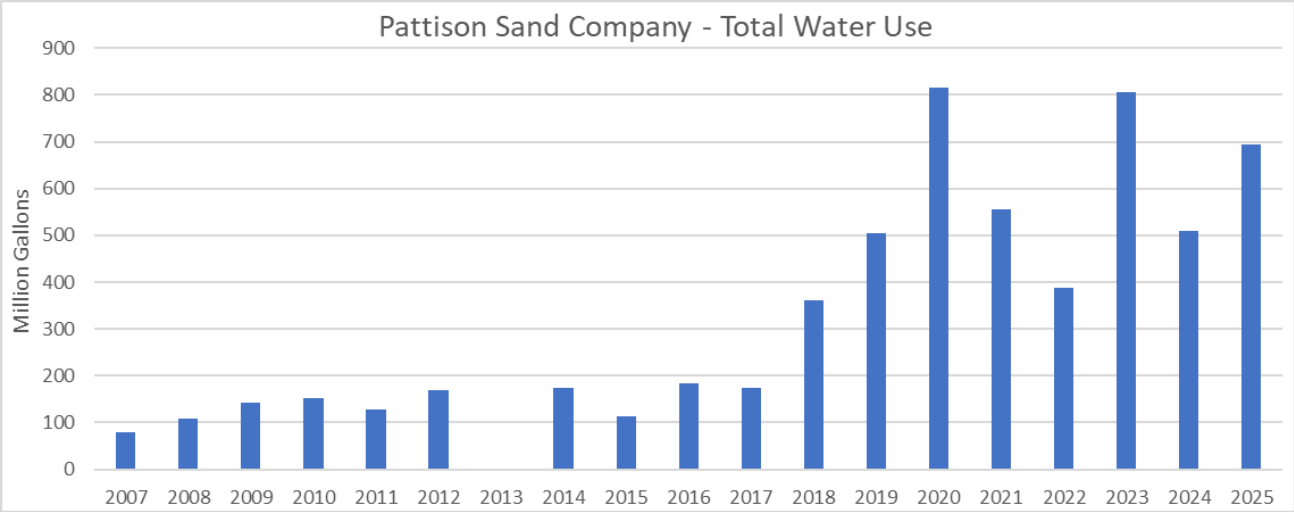

Figure 3. Annual total water withdrawals from Pattison Sand Company.

Figure 3 shows water use from Pattison Sand Company. From when it was first granted in 2007 to 2025, annual water withdrawals from PSC have increased substantially. Water withdrawals from 2007-2017 were all below 200 mgy. From 2018 to 2025, water withdrawals have increased to an average of 590 mgy, with the peak year being 2020. Water use was less during dry years (2022, 2021), when there was less of a need for dewatering. The addition of the Rail Intakes #1 and #2 make up the majority of the increase in allocation, estimated to be 1.6 billion gallons per year. The Rail Intakes are a mix of all sources of water, including surface, Jordan aquifer, and precipitation.

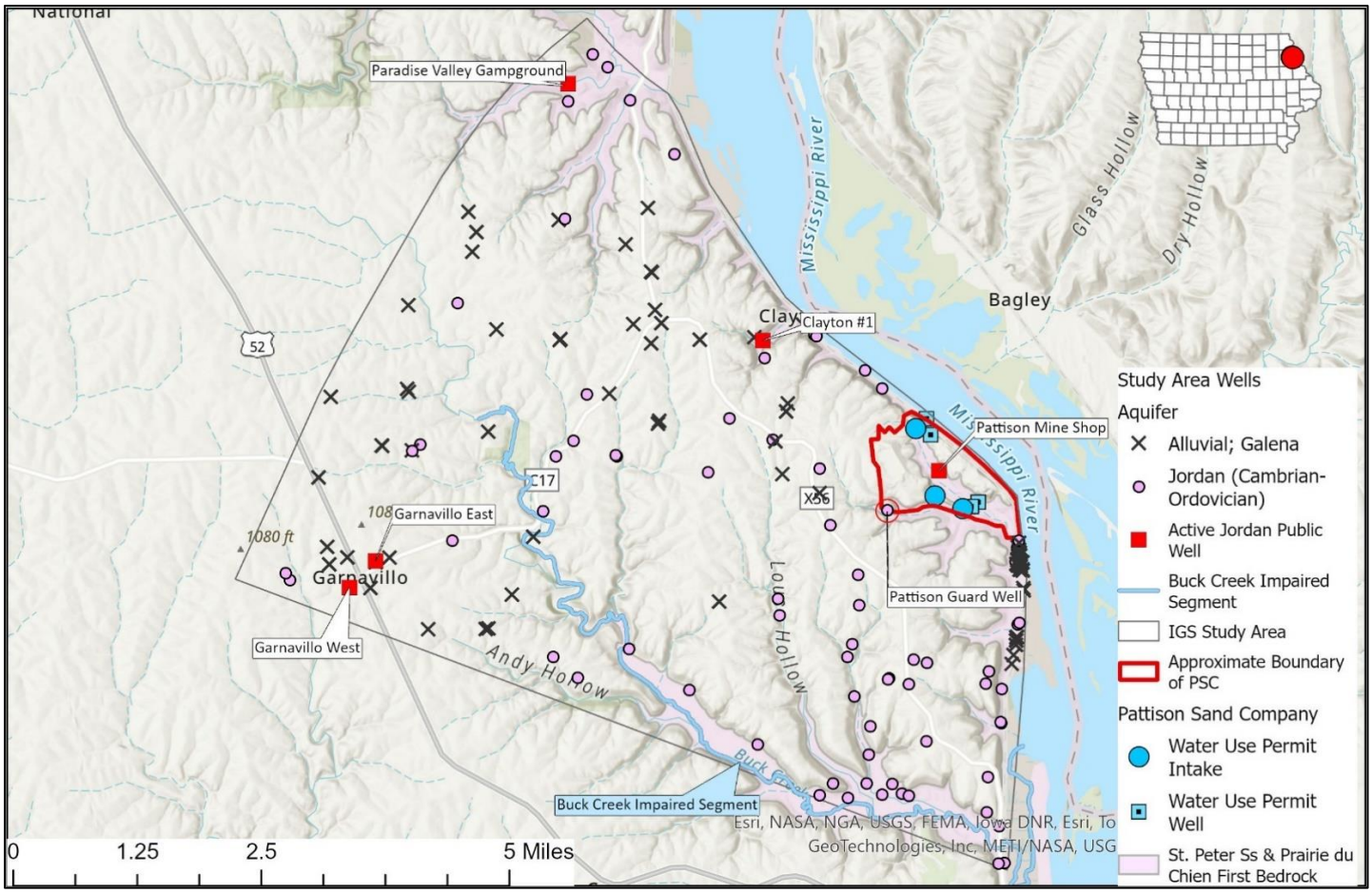

Figure 4. Pattison Sand Company area, IGS study area, local wells (including the permit guard well), surface water bodies.

Guard Well and Public Monitoring Wells

It is recognized that pumping and withdrawals from PSC can and will impact groundwater levels in the Jordan aquifer near the facility. The level of impact depends on the aquifer's connection to surface water and infiltration. Figures 11-13 in the IGS Investigation show mapped drawdowns from the three different scenarios. These groundwater level declines could have significant impact on wells utilizing the Jordan aquifer as a source (Figure 3 in IGS Report – Appendix B). Additionally, significant water level declines could impact stream segments that have the Jordan aquifer as the underlying bedrock, thus contributing a coldwater baseflow component to those streams. This primarily affects Buck Creek, located approximately 3.4 miles to the south of PSC. Buck Creek will be discussed specifically in detail in a later section.

The level of impact from withdrawals from PSC is dependent on the level of recharge provided by the Mississippi River. Without direct evidence from a pump test, and without the ability to extend a full groundwater model and shutdown of the facility, the program has selected a guard well (sentinel well) at the edge of the facility to monitor water levels in the Jordan aquifer. The sentinel monitoring well approach represents one of four options identified by the Iowa Geological Survey for resolving the hydrogeologic uncertainty, and also places a level of real-time security for both well and surface waters that could be affected by the withdrawals from the facility.

The other three options included in the IGS report have various setbacks and flaws: an extended, high-rate pumping test will likely require suspension of quarry operations for more than one month. The construction and calibration of a three-

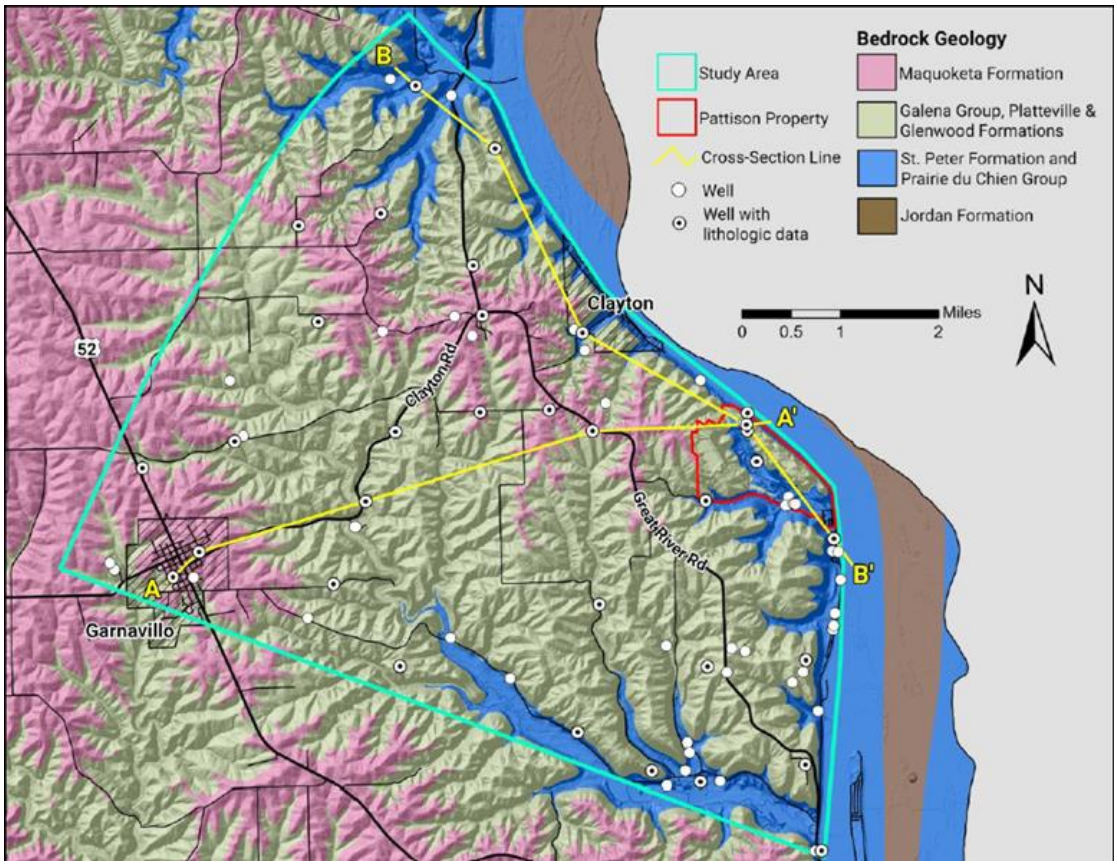

Figure 5. Bedrock geologic map of the study area, with geologic cross-sections. From IGS Report in Appendix B.

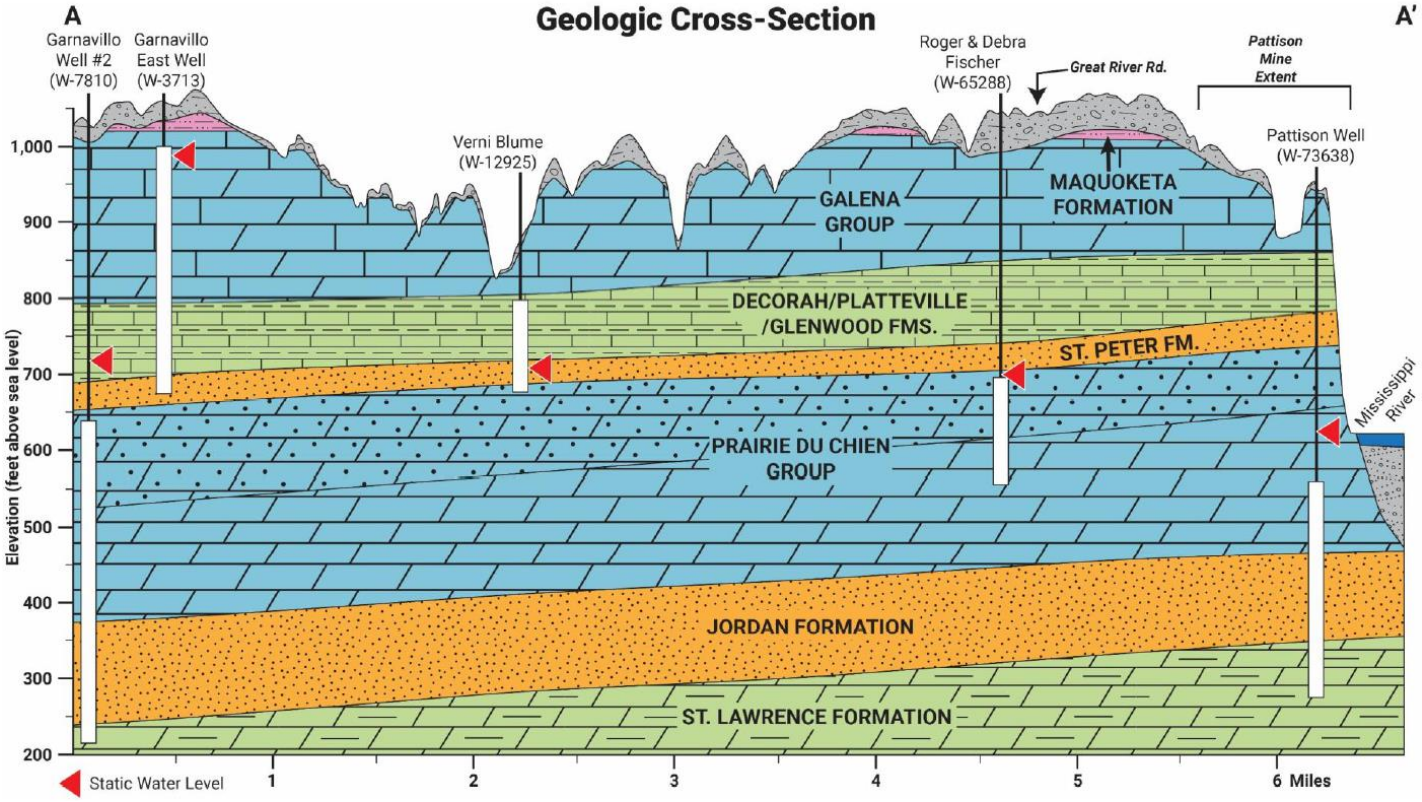

Figure 6. Geologic cross-section of A-A' from Figure 5. From IGS Report in Appendix B.

dimensional transient numerical groundwater flow model will require multiple spatially distributed pumping tests, new monitoring wells, and would not measure water levels in real life. Finally, a geochemical source-tracking study would not estimate the level of connection between the two aquifers. All of these options entail substantially greater operational disruption and data collection burden. The sentinel well approach is the least disruptive of the four provided, and also provides real world water level information from the operation of the facility on the surrounding environment.

Figure 4 shows the selected guard well's location (Pattison Guard Well). The well, inventoried as GeoSam W#32587 was constructed on July 16, 1991. A water level reading of 180 feet depth, 629 feet elevation was taken on July 16, 1991. Another water level reading taken in 2025 for the IGS Report had the groundwater depth at 182.9 feet, or 626.1 feet elevation. It is currently unknown whether the 2.9 feet decline since 1991 is due to natural variation or impacts from PSC withdrawals. See Appendix C for additional details regarding the well, including the driller's log well construction and geologic strip log information.

To help understand both the natural variability of the Jordan aquifer water levels, as well as guard against aquifer water levels declines, the Pattison Guard Well (W#32587) will be required to take monthly water levels readings, provided in feet below ground surface, and submit them electronically to the Water Use Program's shared email address (wateruse@dnr.iowa.gov). Based on modeling predictions, a trigger level of 189 feet below ground surface, or 620 feet elevation is set at that well throughout the five year duration of the permit. If that trigger level is encountered, additional water restrictions, as well as water conservation practices, will be placed on the permit.

As an additional level of safety, the water operators for the city of Garnavillo, located approximately five miles to the west of PSC, have agreed to submit water level readings from monthly operating reports to the program's email address (wateruse@dnr.iowa.gov). These reports will also provide water level readings for every month from an independent source.

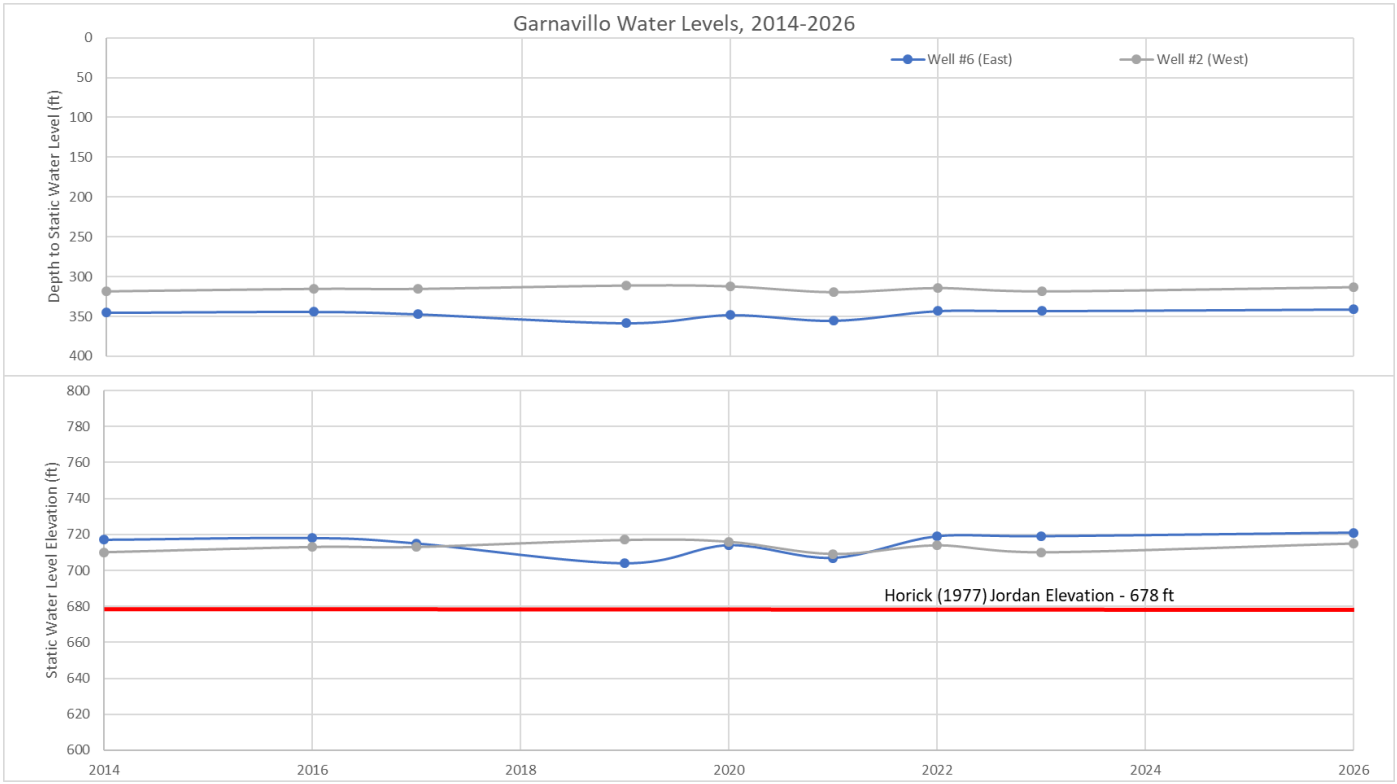

Figure 7. Water level readings from Garnavillo's Jordan aquifer public wells, from 2014 Jordan questionnaire and annual reports. Also included is the Horick Jordan Rule elevation, in Garnavillo it is 678 feet.

Garnavillo's historic water level readings from both active Jordan aquifer wells (Well #6 (East) and Well #2 (West)) submitted to the Water Use Program through annual reports are shown in Figure 7. Water level measurements for Well #6 (East) consistently fall within the range of 345–350 feet below ground surface, while Well #2 (West) consistently falls within 313–318 feet below ground surface. The static water level recorded in the original 1956 driller's log for Well #2 was 312 feet below ground surface, indicating that current water levels in that well are broadly consistent with historic conditions at this location, and there currently is no downward trend in Jordan aquifer water levels in the area. An original well log with water level readings for Well #6 is not available for comparison. The first measured values for this well are from the Water Use Program's 2014 Jordan Questionnaire.

Measurements from 2024 and 2025 were excluded from this analysis, as those values deviate substantially from the remainder of the record and were deemed inconsistent with the broader dataset pending further investigation. Static water level reading from 2026 was included after a site visit in April of 2026.The water level record for both wells shows no evidence of a sustained downward trend. Values are stable across the period of record and fall within a narrow range, suggesting that long-term depletion of the aquifer has not yet occurred at this location.

For regional context and historical comparison, measured water levels at both wells were compared against the 1977 Horick potentiometric surface map of the Jordan aquifer in Iowa, which provides estimated water level elevations across the state for the mid-to-late 1970s. Current water levels at both wells plot above the 1977 Horick surface, indicating that aquifer head at this location has not declined relative to the regional and rule baseline established for the state during that period.

Environmental and Ecological Impacts

PSC is approximately three miles to the north of Buck Creek. Buck Creek is a 13.52-mile river segment located in Clayton County, Iowa, extending from its confluence with the Mississippi River upstream to the western line of Section 9, Township 93 North, Range 3 West, in the vicinity of Garnavillo. The segment is designated for multiple beneficial uses under Iowa water quality standards, including coldwater aquatic life (Class BCW1), human health and fish consumption (Class HH), and both primary and secondary contact recreation (Classes A1 and A2).

Buck Creek is currently assessed as Not Supporting its Class BCW1 coldwater aquatic life designated use, based on low scores on the Coldwater Benthic Index (CBI), a biological assessment metric used to evaluate the condition of macroinvertebrate communities in coldwater stream systems. A total of five CBI samples have been collected from two sites on Buck Creek between 2007 and 2022. Of these, only one sample, collected in 2001, met the coldwater Biological Impairment Threshold (BIT) of 60. The remaining samples, including the earliest sample collected in 2007, fell below the BIT, indicating that conditions unfavorable to the coldwater benthic macroinvertebrate community have been present in Buck Creek for at least the duration of the sampling record. The cause of the biological impairment is presently unknown, and no specific stressor, source, or mechanism has been formally identified. This biological impairment was formally added to Iowa's Impaired Waters list (Section 303(d) list) in 2024. As a result, the segment carries an overall Integrated Report Category of 5, indicating that the waterbody is impaired for one or more designated uses and that development of a Total Maximum Daily Load (TMDL) is required to identify allowable pollutant loading levels and establish a pathway toward attainment of applicable water quality standards.

No impairments are currently listed for the HH, A1, or A2 designated uses. Additional information regarding the assessment record and monitoring data for this segment is available through the Iowa DNR's ADBNet database (https://programs.iowadnr.gov/adbnet/Segments/428).

The Iowa Pleistocene Snail (Discus macclintocki) is listed as a federally endangered species found in Clayton County, and Buck Creek watershed, where it is restricted to rare algific (cold-air) talus slope habitats adjacent to stream valleys. The species is considered a glacial relict, having persisted on these isolated algific talus slopes since the last glacier receded

and temperatures increased approximately 16,500 years ago. The snail survives at a limited number of known locations within the Driftless Area and Buck Creek. Another federally threatened species, the Northern wild monkshood (Aconitum noveboracense Gray; family Ranunculaceae) occurs in areas characterized by cool soil conditions, cold air drainage, or cold groundwater, like algific talus slopes in the Buck Creek watershed.

The thermal integrity of algific talus slope habitats is directly dependent on the availability of subsurface groundwater, which is necessary for summer cold-air production and winter ice reformation. In the region of PSC, these algific talus slopes are formed in the Galena aquifer. The IGS Report lists the Galena aquifer, which is the most closely associated with shallow karst features in the Buck Creek uplands, as hydrologically separated from the Jordan aquifer due to the continuous Decorah/Platteville/Glenwood aquitard formations. The IGS report concludes that pumping at the Pattison Sand Company site is not expected to affect the Galena aquifer under any modeled scenario, due to this regional aquitard. On this understanding, direct hydrologic impacts to algific talus slopes through Galena aquifer water drawdown and decline are not anticipated.

The mouth of Buck Creek at its confluence with the Mississippi River constitutes documented habitat for two Esox species of conservation significance: Grass Pickerel (Esox americanus vermiculatus) and Northern Pike (Esox lucius). Grass pickerel are designated as a Species of Greatest Conservation Need (SGCN) in Iowa. The species occupies a fragmented and dynamically limited distribution, with rare populations restricted to areas of dense aquatic vegetation in slow-moving waters at a small number of locations statewide. The Buck Creek confluence represents essential habitat for this species, supporting feeding, spawning, and nursery functions for juvenile individuals. Northern pike similarly rely on cool tributary mouths as thermal refugia when Mississippi River water temperatures exceed the thermal tolerance of this cool-water species, and utilize riparian and backwater vegetation as spawning habitat during early March. The progressive loss of backwater habitat through siltation along the Mississippi River has contracted the available refuge for northern pike, elevating the ecological significance of thermally suitable tributary mouths such as Buck Creek.
Both species are obligate ambush predators requiring clear, slow-moving, well-vegetated water. Their habitat requirements therefore converge on a specific set of physical and hydrological conditions (stable thermal regime, low turbidity, adequate baseflow, and structural complexity provided by submersed and emergent aquatic vegetation) that are sensitive to alterations in streamflow, groundwater discharge, and particularly water temperature.

The IGS Report notes that streams incised into the Jordan aquifer may experience reduced baseflows if aquifer drawdown at those water bodies exceeds one to two feet, and that springs and headwater reaches incised into the Galena aquifer would not be directly affected given the hydraulic separation between the two aquifer systems. Buck Creek is incised into the Jordan aquifer (St. Peter Fm and Prairie du Chein Group) downstream of Buck Creek Road, for approximately six miles before it enters the Mississippi River (Figure 4). The extent to which Buck Creek derives baseflow from the Jordan aquifer discharge versus Galena aquifer discharge has not been formally characterized.

The consideration for these wildlife is also protected by the guard well and 189 feet depth trigger level set at GeoSam W#32587. The protection for baseflow constributions to the flow of Buck Creek is also protected by the Guard Well. Jordan aquifer water levels are understood to affect baseflow and the coldwater component of Buck Creek for the last six miles, before the stream enters the Mississippi River basin. As PSC could have an effect on water levels in the Jordan aquifer, the guard well with the trigger levels places real information on aquifer declines and drawdowns due to pumping at the facility. These declines should be far less than the one to two feet needed to affect the baseflow component.The permit conditions are also changed with the following addition to help ensure future environmental and ecological security:

"If water withdrawals or uses authorized under this permit are determined by the Department, based on available monitoring data, field observations, or other credible evidence, to be the cause of adverse effects on surface water streams, springs, or ponds, or the ecosystems attached or adjacent thereto, then the Department shall notify the

Permittee in writing and may require the Permittee to reduce withdrawal rates, conduct additional hydrogeologic investigations, or take other corrective measures deemed necessary to protect the ecological integrity of those surface waters. The Permittee shall respond to any such notice within 30 days with a proposed corrective action plan, subject to Department approval. For purposes of this condition, "adverse effects" include but are not limited to reductions in baseflow, degradation of cold-water or other designated uses, or harm to species or their habitat."

Jordan Aquifer Rule Compliance

At the location of PSC, the Jordan aquifer is unconfined and exposed at the land surface. In the mining area, the units of the Jordan aquifer are recharged by precipitation and surface infiltration, and likely receives additional recharge from the Mississippi River and connected alluvial aquifers. Water also moves horizontally through the aquifer toward areas of lower hydraulic head (see Appendix B, Figure 7). Because the Jordan aquifer here is unconfined and located adjacent to an extensive recharge source, the Jordan Rules under Iowa Administrative Code 567, Chapter 50.11(2) will not apply to this facility.

Long-Term Monitoring and Permit Conditions

The following conditions and changes have been made to the Pattison Sand Company permit, Log #33,483 following public comment and IGS investigation:

- The installation of a guard well, W#32587, open in the Jordan aquifer, with monthly monitored water levels measured in feet below ground surface and submitted electronically to the Water Use Program email address (wateruse@dnr.iowa.gov).
- Changed water sources.
- Reduced water allocation.
- Shortened the permit length.
- Phased increase of allocation, dependent on the guard well trigger levels and ambient level trends.
- The addition of an environmental condition to help protect from environmental impact.

Findings

The applicant has demonstrated the ability and intent to use a reasonable quantity of water for beneficial purposes. No evidence suggests the proposed use would:

- Waste water resources.
- Conflict with Iowa's comprehensive water resource plan.
- Interfere with pollution control laws.
- Harm public interests or property owners with prior or superior water rights.

THEREFORE:

The requested water use conforms to Division III, Part 4, Chapter 455B of the Iowa Code and Chapter 50 of Part 567 of the Iowa Administrative Code. No adverse impacts on other water users are anticipated at this time. Subject to public notice and potential revisions based on comments received, a draft permit should be issued for a term of ten years

Water Supply Engineering
Date: June 10, 2026

IOWA DEPARTMENT OF NATURAL RESOURCES

WATER USE PERMIT

Permit issued to:

PATTISON SAND COMPANY, LLC
23656 GREAT RIVER ROAD
GARNAVILLO, IA 52049-8257

Permit Number: 9126-M4

Effective: xx/xx/2026

Expires: xx/xx/2031

The Permittee is authorized to:

withdraw water from three Jordan aquifer wells, all between 100 and 665 feet deep, one Jordan/Dresbach aquifer well, approximately 619 feet deep, one mine pond intake; and two proposed quarry/rail track dewatering basin intakes, all located on land generally described as the E ½ of the SE ¼ of Section 12, T93N, R03W, the S ½ and the S ½ of the NW ¼ of Section 2, the N ½ of Section 18, and the NW ¼ of Section 17, T93N, R02W, Clayton County, Iowa, in the maximum quantity of 500 million gallons per year and 3,213 gallons per minute from the Jordan aquifer; 120 million gallons per year at 600 gallons per minute from the Jordan/Dresbach aquifer; 50 million gallons per year and 150 gallons per minute from the mine pond; and 1,600 million gallons per year at 4,800 gallons per minute from the quarry/rail track dewatering basins; in the maximum total quantity of 2,270 million gallons per year at a maximum rate of 8,763 gallons per minute throughout each year, all for dewatering geologic strata for excavation and processing silica sand from an underground mine and surface quarry located on said land.

This authorization to withdraw water has been granted pursuant to the provisions of Part 4 of Division III of Chapter 455B, Code of Iowa, and Chapter 50, Part 567, Iowa Administrative Code, and is further subject to the general permit conditions within this permit.

Conditions of this permit may be appealed as provided in rule 567--50.8(3), Iowa Administrative Code. Appeal must be in writing and must be received at the Iowa Department of Natural Resources, Water Supply Engineering Section, 6200 Park Ave. Suite 200, Des Moines, Iowa 50321-1371 within thirty days of the date of the certification of the mailing of the permit.

FOR THE DIRECTOR:

By: _____ Date Executed: XXXXXXXX, 2026

cc: Permit File

CERTIFICATE OF MAILING

On the date shown below, a copy of the foregoing permit was mailed to the Permittee and to each person entitled to receive a copy as provided by rule 567--50.8(2), Iowa Administrative Code.

Certified by (initials): _____ Date: _____

PERMIT CONDITIONS

1. Permittee shall maintain accurate and up-to-date records of monthly water use from each authorized source and submit them annually to the Department.

2. Permittee may be required to submit other information related to the regulation of this use of water as directed by the Department.

3. This Permit is issued pursuant to Iowa Code chapter 455B.265(1) to authorize the withdrawal and use of water by the permittee, subject to the terms contained herein and to the laws and rules of the Department that regulate the withdrawal and use of water. Issuance of this permit does not relieve the permittee of the responsibility to comply with applicable local, state and federal laws, ordinances, regulations or other legal requirements.

4. Permittee shall be responsible for notifying the Department when there are changes to any conditions and authorizations given in this permit, including additional water source(s), well(s), intake(s), an expansion of the facility, or any other listed condition.

5. Permittee shall construct, maintain, and monitor observation wells as directed by the Department to define the effects of Permittee's water withdrawals on groundwater resources or on other water users who might be affected by the withdrawals authorized herein.

6. Each well authorized as a source of water in this permit must be constructed to allow for accurate measurement of water levels.

7. Each well and intake authorized as a source of water in this permit must have water metering.

8. Withdrawals from permitted wells may be made only after the Permittee has made the following information available to the Department: well location(s), well log(s), and results of yield tests. Required chip samples shall be submitted to the Iowa Geological Survey.

9. Permittee shall be responsible for accurately measuring depth to water under non-pumping (static) conditions, depth to water under pumping conditions, and pumping rate(s) for all active wells listed in this permit, at a minimum of one measurement per year. These records shall be submitted annually to the Department.

10. As outlined in rule 567 50.11(2), the Permittee may withdraw from the Jordan aquifer only when well pumping levels are above three hundred (300) feet from the baseline, or 50% of the 1978 water level, as determined from available Department records. The following table expresses specific conditions for Jordan aquifer wells listed in this permit: *(The Jordan aquifer is unconfined and at the land surface for this facility, therefore Jordan aquifer rule 567 50.11(2) do not apply).*

11. Water withdrawn pursuant to this permit shall be discharged to area streams and surface waters in accordance with all applicable rules and regulations, shall be of suitable quality, and shall be so discharged as to preclude flooding, erosion, or other adverse effects.

12. Permittee must apply to renew this water use permit using the appropriate DNR form prior to the expiration date of the current permit version.

13. Permittee shall submit to the Department within 90 days of being notified by the Department or no later than the expiration date of this permit, whichever first occurs, a plan for implementing routine day-to-day water conservation measures and for implementing emergency water conservation measures during periods of water shortage. Until such a plan has been submitted to and approved by the Department, Permittee shall implement

those emergency water conservation measures determined to be necessary by the Department pursuant to Iowa Code Sections 455B.265 and 455B.266.

14. If water withdrawals or uses authorized under this permit are determined by the Department, based on available monitoring data, field observations, or other credible evidence, to be the cause of adverse effects on surface water streams, springs, or ponds, or the ecosystems attached or adjacent thereto, then the Department shall notify the Permittee in writing and may require the Permittee to reduce withdrawal rates, conduct additional hydrogeologic investigations, or take other corrective measures deemed necessary to protect the ecological integrity of those surface waters. The Permittee shall respond to any such notice within 30 days with a proposed corrective action plan, subject to Department approval. For purposes of this condition, "adverse effects" include but are not limited to reductions in baseflow, degradation of cold-water or other designated uses, or harm to species or their habitat.

15. The Permittee shall be responsible for measuring and recording the depth to water, expressed to the nearest one-tenth (0.1) of a foot, in GeoSam Well ID No. W#32,587, a well constructed in 1991 to a total depth of two hundred fifty-five (255) feet, situated on lands generally described as the NW ¼ of the NW ¼ of Section 18, Township 93 North, Range 02 West, Clayton County, Iowa. Such measurements shall be taken at intervals of not less than once per calendar month. All water level readings obtained pursuant to this condition shall be submitted electronically to the Department on a monthly basis via the designated email address of the Department's Water Use Program.

16. In the event that water levels recorded in GeoSam Well ID No. W#32,587 decline to a depth exceeding one hundred eighty-nine (189) feet below ground surface, the Department shall provide written notice to the Permittee and may, in its discretion, re-open the Permit for Modification, require the Permittee to reduce withdrawal rates, undertake additional hydrogeologic investigations, or implement such other corrective measures as the Department deems necessary and appropriate.

17. This permit supersedes Water Use Permit No. 9126-M3

CAVEAT

Permittee is advised that pursuant to Section 455B.271, Code of Iowa, the authority to withdraw water provided by this permit may be modified, canceled or suspended in case of any breach of the terms or conditions herein, in case of any violation of state law pertaining to the permit, or if found necessary to prevent substantial injury to private or public interests.

APPENDIX A

Mr. Fields: 5-7-2025

My Name is Brenda Tackman I am resident of Clayton County IA. I'm writing to you about Mr. Kyle Pattison wanting to upgrade his permit of water usage from 976.8 million gallons a year 3.7 billion gallons.

I know Pattison mines provides employment to Clayton County but I look at the big picture a few jobs or the health of north east Iowa as well as the surrounding state counties who also draw from The Jordan aquifer. The farmers need water to keep their livestock and crops thriving . When you start playing with Mother Nature and what the good lord has provides all pf us. I think one is asking for trouble. Before Pattison started mining we as a county did good maybe not the best but we made it, without devastation to the beautiful scenery of our rivers and hillsides. Now when you look east from the Great River road you see piles of white unused sand. When you drive up French town road there is a large earth berm blocking view of the mine, makes one wonder what he is hiding from the public eye as well as the DNR .When I sit at buck creek road and great river road junction watching freight trains go by I count tanker cars going both North and South 60 plus seems to be about average wonder what's in them. Two of my neighbor's well s went dry and had to be re-drilled Wonder why?

At the past Meetings (5 years ago) which I attended all Pattison Said he would check our well depths. My well was checked once also they would call with blasting dates and times. All is in the past. Since then we as residents do not exist.

I have trouble wondering why some people aren't happy with what the good Lord has provided and they always want for more.

If you allow this request to Pattison, I ask that there be stipulations and he be held accountable to them and for routine inspection with follow ups by the DNR and a private citizens group Jointly and routinely.

I am asking you to deny MR. Pattison THIS request for his permit for more water.

Thank you for your time and consideration

Brenda L. Tackman

Brenda L. Tackman

Mrs. Brenda Tackman
25226 Lake Rd.
Garnavillo, IA 52049-8231

RECEIVED
MAY 12 2025

Thursday May 22, 2025

Iowa Department of Natural Resources

Att: Chad Fields

6200 Park Ave.

Des Moines, Iowa 50321

Re: Pattison Sand Company request for an extreme amount of additional water drawn, Log No. 33,483

Dear Mr. Fields

I am writing this letter on my behalf as a homeowner located at the Willie Resort property located within the geographical area of 274 Mallard Lane. Garnavillo, Iowa 52049

My concern is that the DNR is considering letting Pattison Sand Company being able to draw an additional 3.7 billion gallons of water from the Jordan aquifer.

The major problem that can lie ahead if allowed is a depletion of water volume that is required to supply my home as well as hundreds of other homes and businesses that are currently pulling water from the same Jordan aquifer.

This large amount of water will supply Pattison. What negative effect will it have on us homeowners and businesses as well as other required entities? Has there been any studies as to the negative effects? What happens if the aquifer dries up in ten years?

If the aquifer cannot keep up with the additional required supply of water, us homeowners will suffer financially as we could possibly have to dig deeper wells and experience pump surging. Additional power drawn from surging which in turn will cause additional damage to the well pumps and require more frequent replacement.

As we have had experienced draught conditions. This will also add to the shortage of water filtering into the Jordan aquifer. If this occurs, it will have a serious effect against our agricultural needs as well as other required services.

My other concern is the industrial run-off / waste that will be incurred by Pattison Company. What negative effect will this have on our property since it is so close to the Pattison Sand Company borders?

I ask that the DNR take a closer look at the concerns I as well as others have in this matter and consider for the better interests for the citizens involved, not just the financial betterment of one large company.

If this decision is in favor of Pattison. I ask for a requirement be enacted and enforced in writing so that Pattison Sand Company will pay for additional repairs and or well enhancements to us homeowners should the need arise due to the water shortages that will be caused by their additional water requirements. This needs to be enacted and in forced for the period of one hundred years going forward.

Regards,

Gary J Linden

274 Mallard Lane

Garnavillo, Iowa 52049

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

Ellen M Lauricella <[redacted]> Wed, May 21, 2025 at 10:52 AM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Ellen Marie Lauricella
Iowa City, Iowa 52240

IOWA

Fields, Chad <[redacted]>

(no subject)

1 message

Robert Demuth <[redacted]> Wed, May 21, 2025 at 10:39 AM
To: "[redacted]" <[redacted]>

Being a property owner in Clayton County with a well I strongly object to allowing Pattison Sand company's request to drastically increase their water usage. I believe this action will result in many of the residents water supply to be greatly reduced or depleted. This will result in devaluation of their properties. Some people may even have to sell or move. I am requesting that you deny the permit to increase their water usage. Thank You!!
Robert Demuth
25071 Mississippi Rd.

May 26, 2025

Chad Fields, Geologist III
Iowa Department of Natural Resources
Water Supply Engineering Section
6200 Park Avenue - Ste 200
Des Moines, Iowa, 50321

RE: Pattison Sand Company Water
Withdrawal Permit Modification
Log # 33,483

Dear Mr. Fields,

This letter is being submitted to address concerns regarding Pattison Sand Company water permit request. I have a family farm adjacent to Pattison Sand Company. We already had to drill additional well on the farm, as the old well would not keep up with our needs. I have serious concerns that this permit modification request which triples Pattison's current water withdrawal quantity limits, from 976.8 million gallons per year to 3.7 billion gallons per year, may have adverse effects on our wells.

We specifically request that well interference language be included in the permit conditions, that if residents experience continuous or sporadic well interference, they may initiate a claim by sending an email to: [redacted] Without this protection, residents will be financially responsible for drilling a new well or be subjected to costly litigation against Pattison to seek damages.

We are constantly being told to conserve water, and this goes against everything that state and federal agencies are saying. Pumping excessive water from the Jordan aquifer is unacceptable and poses a risk to its sustainability. We hope the right decision is made.

Sincerely,

Daniel Wille
26146 Great River Road
Garnavillo, IA 52049

Fields, Chad <[redacted]>

(no subject)

1 message

Brian Guy <[redacted]> Tue, Apr 22, 2025 at 8:53 PM
To: "[redacted]" <[redacted]>

Mr. Fields,

It is ridiculous to allow a private company to pull 3.7 BILLION gallons out of our state and pay nothing for it. It's ridiculous to allow them to withdraw that much at all much less for free. You trying to turn us into California where the ground is sinking because of all the water being pulled out? There is no explanation that can make sense of this unless there's a whole lot of money involved for someone other than the people of Iowa. You need to stop this! We are watching.

Sincerely,

Brian Guy

Fields, Chad <[redacted]>

(no subject)

1 message

[redacted] <[redacted]> Fri, May 2, 2025 at 12:00 PM
To: [redacted]

Please don’t let Patterson buy you off and take the amount of water they want from the Jordon aquifer! Our water is priceless and they pay nothing for using it!
Please vote NO and don’t let this happen! The public have spoken loud and clear if you are listening they don’t want this to pass! We are counting on the DNR to protect our Jorden water supply!
Thank you for using Picture and Video Messaging by U.S. Cellular. See www.uscellular.com for info.

Fields, Chad <[redacted]>

(no subject)

1 message

dean schultz <[redacted]> Sat, May 24, 2025 at 6:21 AM
To: [redacted]

Mr. Fields,
In various capacities, including the integrity of the Pattison company's information offered to the public, I have become aware of the Pattison company's LACK of integrity with what it says to the public. It is more of a "tell them they wish to hear and do what we want to do" approach." They are in the money making business --- period..... This permit sfor Pattison should not be issued.

Please do not publish my name. I fear possible retaliation.

Fields, Chad <[redacted]>

“Re: Pattison Sand Co. request for water withdrawal, Log. No. 33,483”

1 message

RiJe Dudley <[redacted]> Tue, May 6, 2025 at 11:51 AM
To: [redacted]

We are writing to oppose the permit request from Pattison Sand Co. Log 33,483 regarding increasing the volume of water usage to 3.7 billion gallons annually.

Our water is a finite resource and needs to be considered in perpetuity. While other resources of the state (wildlife, crops) can be regenerated or regulated in the short term, our water resources cannot. We must steward this finite resource differently from other resources—more carefully, more intentionally.

Iowa law makes all water in the state of Iowa publicly owned. We feel no single entity or commercial venture should have control of this resource both (quantitatively and qualitatively) no matter what the amount of the permit requests.

We work to ensure our Iowa resources will be in existence for future generations if we steward them carefully. Oversight of our water resource especially in an area noted for this karst topography and high porosity of underground structure is even more critical.

Please do not permit Pattison Co in Clayton, Iowa, to threaten the future existence of this precious resource. Deny the permit to extract the increased amount requested.

Dave and Rita Dudley
28031 360th St
Garber, IA 52048

Fields, Chad <[redacted]>

Against Clayton county water extraction

1 message

Kelsey Crow <[redacted]> Tue, Apr 29, 2025 at 7:08 AM
To: "[redacted]" <[redacted]>

I am against pattisons well water extraction in Clayton county.

Fields, Chad <[redacted]>

Clayton County and Pattison's Water issue

1 message

Jill Sasse <[redacted]> Sun, May 25, 2025 at 6:45 PM
To: "[redacted]" <[redacted]>

Thank you for your interest in this issue.

We are definitely concerned about this news about the DNR seemingly minimizing the water requested by Pattinson Sand Company.
We hear the concerns and are against this proposal going forward.

Mike and Jill Sasse, Clayton County Residents

Sent from Jill's ipad

Fields, Chad <[redacted]>

Clayton County Water Concern

1 message

Dawn Herrmann <[redacted]> Mon, May 19, 2025 at 12:42 PM
To: [redacted]

Mr. Fields,

We live near the Pattison Sand business and are very concerned that if their request for such a large amount of water from our shared aquifer is granted, we could experience our neighborhood well going dry at some point. We share the well with our ten neighbors on the bluff on the north side of Guttenberg. This would make our homes uninhabitable. What recourse would we have? Would DNR take responsibility in ensuring our access to water is secure for the future?

DNR is the protector of our natural resources, and we trust you to look out for the homeowners and family farms of our county, not only a big business. When the gallons of water they are requesting is far more than the annual usage by the entire towns of Guttenberg and Garnavillo, that's a staggering amount.

I urge the DNR to deny the Pattison request. At the very least, table it for a few years until independent geologists can give well-studied, detailed, educated opinions on the impact it could have for surrounding homeowners and communities.

Thank you for your assistance.

Dawn and Dave Herrmann
276 Grand Ridge Rim Way
Garnavillo, IA 52049

Fields, Chad <[redacted]>

Clayton County Water Concerns

1 message

Will Doeppke <[redacted]> Tue, May 20, 2025 at 3:20 PM
To: [redacted]

To Whom it may concern,

I am a local resident in SE Clayton County IA and am understanding Pattison companies are proposing an enormous water usage increase. My family and I are absolutely against this, and the reasoning should be very clear. We live down river from the company and only a few miles to be exact, close enough to clearly hear them blasting when they do so. My family and I rely on our well for our families survival. Unless there is a large amount of irrefutable proof to show this would not affect the aquifer that we rely on, I am dead set against this action that could affect many families in the surrounding area including myself. I don't claim to know any repercussions but I would like to ask a question. I know and deal with power plants that use bodies of water and other companies use a similar method as well. The question is this, Why could Pattison Company not put up their own water treatment facility that is regulated and checked by the DNR to stay compliant in order to use the Mississippi River as their source and once filtered and treated, have a return go back to the river? Thanks

Will Doeppke
271 Grand Ridge Rim Way
Garnavillo, IA 52049

Fields, Chad <[redacted]>

Comment on Jordan Aquifer

1 message

Forest Hoff <[redacted]> Fri, May 30, 2025 at 5:04 PM
To: "[redacted]" <[redacted]>

Dear Mr. Fields,

Iowa is my home-state, and first love, but I keep leaving because I cannot recon my heart with the depressive state of over-extraction. I spent all of 2024 in Iowa fighting destructive extraction, falling on deaf ears. Please stand strong for Iowa's natural resources and moderate use based in sound science. Do not allow Patterson Sand Mine additional water resources to shelve in their already over-extractive measures pulled from the Jordan Aquifer.

I now live above the Closed Basin Aquifer which has been drained by over-extractive agriculture hundreds and thousands of miles down the Rio Grande. It has left farmers in the San Luis Valley on the brink, with the need for the Government, i.e. the tax-payer, to subsidize their now marginal existence. Iowa ***WILL*** suffer the same fate if over-extraction is continued to be practiced for short term profit. Plan ahead, and thank you for your service.

Sincerely,
Forest Hoff

--
“The power of imagination makes us infinite.” ~ John Muir

IOWA

Fields, Chad <[redacted]>

Concern: Pattison Sand Co request for water withdrawal permit 2025

1 message

April Laufenberg <[redacted]> Tue, May 27, 2025 at 8:09 PM
To: [redacted]

Dear Mr. Fields,

I'm writing this letter in response and concern pertaining to the anticipated increased usage of water by Pattison Sand Co. I am primarily concerned over the vast consumption, unknown depletion, and future state of the Jordan Aquifer that so many residents rely on for their livelihood and family's livelihood for generations to come. I am a fellow biologist graduating from UW-Platteville in 2003 and then furthering my education with an additional degree in Clinical Laboratory Science from UW-LaCrosse in 2005. I can't say I know in depth how the requested water consumption will affect the surrounding lands but I do know from basic natural studies and observations that there is no way that this could not have a major effect on the communities involved. There are always causes and effects. The sheer amount of water requested is concerning for the surrounding communities and when the outcome is mostly unknown, I can't see how this could be an uncontested - accepted request. There are too many unknowns and potential risks to the environment and communities. The affected communities are going to feel the ramifications for centuries to come as climate continues to be an ongoing and most definite issue. Especially in the name of fresh - potable water sources. Our water is precious and needs to be responsibly used and valued. If this permit request is accepted, it is going to eventually strip these communities from their valuable resource, literally from under their feet. I've tried to look at the pros and the cons. I can only see more devastating cons than benefiting pros that this company has brought upon us. I ask "what is this all for?" and "who is benefiting"? It does not benefit this community's future or community members that continue to invest in this community. The ones who send their kids to the community schools and will pay the taxes for a long foreseeable future. Is it worth risking the community's valuable resource for a company that is only going to be here for a few more years, reap its rewards from under the communities feet, then leave? When they leave, so do the jobs that this company is "providing" as a place to work. When they leave, we are left with low aquifers and having to personally pay for digging wells deeper, more money out of the communities pockets. We are left to clean up toxic water supplies and wildlife kill-offs, again more money out of our pockets. The company has already left its mark on this beautiful landscape, do they need to take our safe water resources too? There is no reliable or future investment to our communities from this company. They are going to take the money as fast as it can, run and leave our communities to fend for ourselves. It is in these times that we the people need to stand up for our future. Pattison does not care about our future. The people are asking for support and that support comes from our political constituents and environmental organizations such as the DNR. Please side with the environment and with the people that live in these communities over this concern.

Thanks for your time,
April Laufenberg
Future resident and community member of Garnavillo, IA

Fields, Chad <[redacted]>

Deny Pattinson Sand Permit

1 message

Mary McGee Light <[redacted]> Mon, May 12, 2025 at 6:26 PM
To: [redacted]

Please deny the Patton Sand Permit.
Thank you
Mary McGee Light
Iowa City
[redacted]

Sent from my iPad

Fields, Chad <[redacted]>

Deny Pattison Sand Permit for More Water: Log #33483

1 message

Susan Bryant <[redacted]> Wed, May 21, 2025 at 11:23 AM
Reply-To: Susan Bryant <[redacted]>
To: "[redacted]" <[redacted]>

Dear Mr. Fields:

I am commenting on Log #33483 to urge DNR to reject Pattison Company's permit request to withdraw more water.

Withdrawing billions of gallons of water from a finite water source, at benefit to the State or its citizens, cannot be considered as being in the public interest. The Jordan Aquifer supports communities across Iowa, Johnson County. My community, Iowa City, relies on the Aquifer as our emergency water source. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across Iowa.

The water sources that would be affected by this permit, including the Mississippi, are shared resources. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

Please reject Pattison Sand's permit request for the sake of all of us who call Iowa home.

Sincerely,

Sue
831 Clark Street
Iowa City, IA 52240

512/914-0679 (cell phone)

[redacted]

In times of crisis, the wise build bridges, but the foolish build barriers.
T'Challa, Black Panther

Fields, Chad <[redacted]>

Deny Pattison Sand Permit to Export Iowa Groundwater (# 33,483)

1 message

Martha Norbeck <[redacted]> Tue, May 13, 2025 at 4:26 PM
To: "[redacted]" <[redacted]>

Dear Iowa DNR Officials,
The Jordan Aquifer is not a renewable resource. Not in our lifetime, nor our children's. Drought is again nipping at our heels in SE Iowa. We depend on this aquifer for the well-being of our local community. This is a shared resource. Selling it off for private gain in a region that already squandered its water is wrong and plain bad planning.

I urge the Iowa Department of Natural Resources to deny the permit modification (log number 33,483) requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.
This proposal is not in the public interest. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Martha Norbeck, AIA
906 S. 7th Ave.
Iowa City, IA 52240

IOWA

Fields, Chad <[redacted]>

Don’t sell our aquifer water

1 message

Miriam Timmer-Hackert <[redacted]> Wed, May 7, 2025 at 10:10 AM
To: [redacted]

Please consider that one reason women are no longer having kids is that we doubt that there will be clean water for them in 50 years. I live in Johnson County and would like to conserve our aquifers for people, not corporate profit.

Miriam Timmer-Hackert

she/her
1911 Lynncrest Drive
Coralville IA 52241
319-331-8416
[redacted]

Fields, Chad <[redacted]>

Fwd: Clayton county water sources

1 message

Robert Demuth <[redacted]> Wed, May 21, 2025 at 10:19 AM
To: [redacted]

---------- Forwarded message ---------
From: **Robert Demuth** <[redacted]>
Date: Wed, May 21, 2025, 10:15 AM
Subject: Clayton county water sources
To: <[redacted]>

Being a property owner in Clayton county with a well I strongly object to allowing Pattison Sand company's request to drastically increase their water usage. I believe this action will result in many of the residents water supply to be greatly reduced or depleted. This will result in a devaluation of their properties. Some people may even have to sell and move. I am requesting that you deny the permit to increase their water usage. Thank you.
Robert Demuth
25071 Mississippi Rd.

IOWA

Fields, Chad <[redacted]>

Fwd: I have a well in Clayton County Iowa my water is brown and I used to have a clean water

1 message

Wateruse, DNR <[redacted]> Fri, May 9, 2025 at 9:54 AM
To: Carmily Stone <[redacted]>, Chad Fields <[redacted]>

Attached is what I believe to be a public comment regarding Pattison Sand Company.

Thanks!

Iowa DNR Water Use Program
Water Quality Bureau | Water Supply Engineering Section
Iowa Department of Natural Resources
6200 Park Ave Ste 200, Des Moines, IA 50321-1371 515.725.0341
www.iowadnr.gov/wacop

Manage your permit ONLINE: *https://programs.iowadnr.gov/wacop*

---------- Forwarded message ---------
From: **Friday Trucking** <[redacted]>
Date: Thu, May 8, 2025 at 2:47 PM
Subject: I have a well in Clayton County Iowa my water is brown and I used to have a clean water
To: [redacted] <[redacted]>

I believe this is perhaps related to the Pattison Sand Company situation....

--

Friday Trucking

Friday Trucking LLC MC 989590
website: www.fridaytrucking.com

email: [redacted], [redacted]

Arian Friday dispatch office manager
Kari Mizell dispatch
Tony Lake Maintenance Safety & Compliance
mail address: 607 N 2nd St
Guttenberg, Ia 52052
office: 25720 Great River Road

Garnavillo, Ia 52049

563*252*0120

563*581*6127 cell Arian
563*580*5922 cell Kari
563*880*6104 cell Tony

Fields, Chad <[redacted]>

Fwd: Log # 33,483

1 message

Webmaster, DNR <[redacted]> Tue, May 6, 2025 at 1:36 PM
To: Chad Fields <[redacted]>

Chad, See email below. Thank you

Webmaster
Department of Natural Resources
6200 Park Ave Ste 200, Des Moines IA 50321
515-725-8200 phone
515-725-8201 fax
[redacted]
www.IowaDNR.gov

---------- Forwarded message ---------
From: **Evalee Mickey** <[redacted]>
Date: Tue, May 6, 2025 at 1:29 PM
Subject: Log # 33,483
To: <[redacted]>

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa. I live in Johnson County, and although that is not the only reason I am opposed to this plan, it is something I am very concerned about. It is outrageous to think that this plan would be accomplished.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Evalee Mickey
90 Tartan Drive
North Liberty, Iowa 52317

Fields, Chad <[redacted]>

Fwd: Patterson's water usage

1 message

Webmaster, DNR <[redacted]> Wed, May 21, 2025 at 9:45 AM
To: Chad Fields <[redacted]>

Chad, See email below. Thank you

Webmaster
Department of Natural Resources
6200 Park Ave Ste 200, Des Moines IA 50321
515-725-8200 phone
515-725-8201 fax
[redacted]
www.IowaDNR.gov

---------- Forwarded message ---------
From: **Bonnie Tuecke** <[redacted]>
Date: Wed, May 21, 2025 at 9:44 AM
Subject: Patterson's water usage
To: <[redacted]>

Please vote NO to Patterson's request to use more water from the Jordan Aquifer. This is an amount that could affect all the people for miles around not just Clayton County. He gets all his water free while the rest of in small towns all pay for water usage and waste water. He is up to something and has been dishonest about the water usage in the past. This is on the DNR shoulders to protect our water supply!
Bonnie Tuecke
613 S Washington St
Garnavillo ,Iowa
563-880-1115

Sent from my iPad

Fields, Chad <[redacted]>

Fwd: Pattison Sand Water Permit

1 message

Webmaster, DNR <[redacted]> Mon, Apr 28, 2025 at 7:54 AM
To: Chad Fields <[redacted]>

Chad, See email below. Thank you

Webmaster
Department of Natural Resources
6200 Park Ave Ste 200, Des Moines IA 50321
515-725-8200 phone
515-725-8201 fax
[redacted]
www.IowaDNR.gov

---------- Forwarded message ---------
From: **Christopher Schoen** <[redacted]>
Date: Fri, Apr 25, 2025 at 5:20 PM
Subject: Pattison Sand Water Permit
To: [redacted] <[redacted]>

To the Individuals charged with preserving Water Quality at the Department of Natural Resources:

I am a resident of Clayton County, Iowa with a rural home about 1 1/2 miles southwest of the City of Garnavillo. I am writing to strongly protest the proposed permit to Pattison Sand for drawing billions of gallons of water from extant ponds, the Jordan Aquifer, and the Mississippi River for unspecified mining activities and other purposes.

I attended the information meeting held on April 22, 2025 at the Clayton County Office Building to learn about Pattison's reasons and intentions associated with their proposed water use permit. I was appalled, as were some 70 plus other attendees, that:
(1) no information was to be presented - not even through maps, charts, tables, or leaflets - to describe the scope of permit;
(2) no discussion of the permit was allowed with the DNR representatives;
(3) no representative of Pattison Sand was present to listen to the concerns of residents that would be impacted - positively or negatively - by the proposed drawdown;
(4) there was not indication at an Environmental Assessment had been performed and made available for review and comment by the Public, which I would expect is required given the U.S. Army Corps of Engineers (USACE) would be the federal permitting agency for water drawn from the Mississippi River;
(5) the 90-day comment period was nearly over prior to scheduling the "listening session", which strongly suggests an intentional effort to minimize opportunity for citizens to voice their interests (positively or negatively); and
(6) that the original public notice was published ONLY in the Calmar newspaper, well outside the normal circulation of residents who could be impacted by the permit, and not in ANY of the local newspapers or other media outlets.

While all of this might be technically legal, it does NOT follow the spirit of the law nor the INTENT of the regulations. The regulations and procedures were established to protect the interests, rights, and welfare of the greater Public, not ignore them.

Was there ever a Public Meeting at which the scope of the realistic impacts of the water drawdown? If so, why were EVERY SINGLE ATTENDEE at the April 22, 2025 meeting unaware of it? If such a meeting was held, the public attendance must have been extraordinarily small, which should have indicated that a subsequent, widely publicized second public meeting was necessary.

There are many unaddressed practical questions regarding the reasonably anticipated short and long-term effects of the proposed pumping of billions of gallons of groundwater, several of which were identified by various speakers at the April 22 meeting. I strongly urge the DNR to consider every one of them, collect the relevant information, and prepare a report of findings to be made available to the residents of Clayton County, Iowa for review and comment prior to authorizing the proposed permit.

The Attorney General of the State of Iowa should describe the appropriate procedures for issues such as:
(1) Payment to the residents of Clayton County and elsewhere across the State the fair market value of the water to be taken by Pattison. The resource is worth something - we all pay water bills or purchase bottled water.
(2) Compensation for loss of water in wells.
(3) Compensation for loss of income when livestock and crops are adversely affected by insufficient water.

Finally, I DEMAND that the DNR host another, widely advertised public meeting where the scope of the project is discussed and the DNR and Pattison Sand representative answer questions posed by the Public.

Sincerely,

Christopher M. Schoen
[redacted]
27269 Jigsaw Road
Garnavillo, Iowa 52049

Fields, Chad <[redacted]>

Fwd: water concern

1 message

Dodge, Shane <[redacted]> Mon, Jun 23, 2025 at 9:47 AM
To: Chad Fields <[redacted]>

FYI - I got this over the weekend. I don't think there is anything that we need to do with it now, but this is another address that is concerned about future water use at Pattison. Note the correct address is 25226 Lake Road, Garnavillo. The private well number is #2187361.

Shane

---------- Forwarded message ---------
From: <[redacted]>
Date: Sat, Jun 21, 2025 at 3:29 PM
Subject: water concern
To: <[redacted]>

Hello,

I am writing regarding a concern by Brenda Tackman. She is a relative and friend. She lives at 25454 Lace Avenue, Garnavillo. Brenda has been very upset about the Pattison Sand water permit modification request because she was very active in opposing previous controversial business practices by Kyle Pattison and has been angered by his failure to follow through with things he said he would do. She is not alone. She finds herself with blood pressure issues and is concerned for her heart when she discusses Pattisons. I told her I would write to you about her concern. She sent a letter to Chad Fields during the time of comments.

Brenda has her water tested yearly. She recently had the water level checked by Handke Pump Service and found her water level has dropped 2 feet since it was drilled in 1996. She says she is using the Prairie aquifer, not the Jordan. She is near the Buck Creek.

If you need further information, please contact me and I will let her know.

I am currently working with Kay Vifian on this water issue. I'm sure we will talk at some point regarding the permit or study.

Sincerely,

Kelley Glawe

563-605-0499

--

Shane Dodge

Supervisor - Field Office 1

Field Services & Compliance Bureau

Iowa Department of Natural Resources

1101 Commercial Court, Suite 10, Manchester, IA 52057

Cell 563-929-0463 | Office 563-927-2640 x302

[redacted]

www.iowadnr.gov

Fields, Chad <[redacted]>

Fwd: Water use permit by Pattison Sand in Clayton County

1 message

Webmaster, DNR <[redacted]> Mon, Apr 28, 2025 at 7:54 AM
To: Chad Fields <[redacted]>

Chad, See email below. Thank you

Webmaster
Department of Natural Resources
6200 Park Ave Ste 200, Des Moines IA 50321
515-725-8200 phone
515-725-8201 fax
[redacted]
www.IowaDNR.gov

---------- Forwarded message ---------
From: **Laura Elsinger** <[redacted]>
Date: Sun, Apr 27, 2025 at 10:52 AM
Subject: Water use permit by Pattison Sand in Clayton County
To: <[redacted]>

I live in rural Garnavillo, Clayton County, Iowa. I am writing to strongly protest the proposed permit to Pattison Sand for drawing billions of gallons of water from ponds, the Jordan Aquifer, and the Mississippi River for unspecified mining activities. The DNR hosted an informational meeting on April 22, 2025 at the Clayton County Office Building regarding this permitting process, which I attended. What was offered was woefully inadequate. There was no information. It appeared to be just a way to checkmark a box for the State of Iowa.

My most fundamental objection is that, per Iowa law, Iowa's groundwater is for the people of Iowa. The scientific impact studies have not been done to determine how pumping such an unthinkable volume will affect the availability and safety of well water nearby, nor how far away the potential impact could be, considering that two-thirds of Iowas rely on the Jordan Aquifer for their water. Furthermore, how far into the future might the impact extend? Without these questions addressed, we have only to rely on what is reasonable based on what has happened at other locations with parallel undertakings and also on common sense. The Jordan Aquifer is already providing water at a lower and lower pressure from the current usage. The proposed commercial usage would increase that detrimental impact many times over.

And there is no realistic path to accountability. Several local residents in that meeting shared how they have tried and tried to get Pattison to even reply to their well water issues, much less make amends. They have a shameful track record in dealing fairly with their neighbors. And even if they had a change of heart, since we don't know how far away could be impacted by this operation, an adverse effect could be easily dismissed as due to some other cause. And furthermore, consider the young farmer who takes over the operation from Mom and Dad. They don't know why the well went dry, even if it is ultimately the result of this pumping undertaking, begun years before. There is a disconnect through time.

Clayton county is poor financially, but rich in natural resources and with a farming way of life that has supported the people for generations. Do not sell this land and this life to a company that is ravaging the landscape to extract materials that support a limited resource. Fracking will eventually go away, not necessarily because of mindset or policy change, but because the petroleum resource will - must - eventually run out. Do not allow this land and its residents to be sacrificed for the short-term gain of one company.

Sincerely,
Laura Elsinger
[redacted]
27269 Jigsaw Rd.
Garnavillo, IA 52049

Fields, Chad <[redacted]>

Iowa Water

1 message

Bonnie Peters <[redacted]> Tue, Apr 22, 2025 at 11:06 AM
To: [redacted]

Chad,
I'm writing to Beg you and the DNR to NOT Allow SUMMIT or ANY Additional Private Company access to Our water! Attached is our updated warning from our Regional Rural Water Plant, advising to conserve water because their water levels are so low! And we haven't even begun to get into the Spring and Summer months. And Many farm wells are also at dangerously Low levels.
SUMMIT requires 3.36 BILLION GALLONS of water JUST FOR Phase 1; with no figures available for requirements for Phase 2. These are Outrageous numbers of Gallons of Water!! Farmers are barely hanging on now, to water livestock, etc, not to mention water for our homes.
Please Don't Destroy Our Farmers And Our Iowa residents homelife! Water can Not be Manufactured. When you give it all away to these companies, it's Gone. You can Not bank on the weather supplying enough water to sustain these new outrageous demands of water. Please, Please Deny SUMMIT and others these water permits.
**If and when LLC companies go bankrupt and move on to their new projects… We will be the ones left with the massive destruction caused by the loss of Our Precious Groundwater.
Thank you for listening.
Sincerely,
Bonnie Peters

IMG_8987.PNG
648K

Fields, Chad <[redacted]>

Iowa's water shipped out of state...

1 message

Elinor Levin <[redacted]> Tue, May 6, 2025 at 8:10 AM
To: [redacted]
Cc: Elinor Levin <[redacted]>

Hello, Mr. Fields~

Already, the state lacks knowledge about our deep aquifer resources, but what we do know is that the water is finite, and that it takes centuries to refill when depleted. Iowa's water resources must be studied, mapped, and understood fully before we even **consider** allowing a private corporation to haul our water away to lower their costs and raise their profits.

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

Thank you for your attention to this important decision. I look forward to your response.

~Elinor A. Levin
(She/Her)

Fields, Chad <[redacted]>

Jordan Aquifers

1 message

Mary Starry <[redacted]> Tue, May 20, 2025 at 10:19 AM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,

Mary J Starry
1951 Lake Manor Rd NE
Solon, IA 52333
3195738201

Fields, Chad <[redacted]>

Jordan Aquifiers

1 message

Oliver Langland <[redacted]> Tue, May 6, 2025 at 7:08 AM
To: [redacted]

Mr. Fields,

This is in regard to log number 33,483, and am urging the Iowa DNR to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources, which includes two Jordan Aquifer wells, with the intent to export it out of Iowa.
This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource which replenishes only over thousands of years. The aquifer supports numerous communities across the state, including Johnson County, and is crucial in maintaining water security for future generations. Exporting more than 2 billion gallons of water per year for commercial sale, especially without full transparency about the recipients or long-term impacts, would pose an unacceptable risk to the state's public and environmental health.
Experts which include the state geologist have already raised concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could endanger the supplies for homes, farms, and municipalities across eastern Iowa.
The aquifers affected by this permit are shared resources, and not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.
I strongly urge you to reject this permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Oliver Langland
North Liberty

Fields, Chad <[redacted]>

log # 33,483

1 message

Robert Traer <[redacted]> Fri, May 9, 2025 at 4:57 PM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,

Robert Traer, 311 Woolf Ave, Iowa City, IA 52246

Fields, Chad <[redacted]>

Log #33,483 Pattison Sand

Kevin Kearney <[redacted]> Thu, Mar 20, 2025 at 8:31 AM
To: "[redacted]" <[redacted]>

I saw the attached notice in my local paper and it stated that comments should be sent to you.

I am assuming this is a continuation of Pattison's attempts to sell the water of all Iowan's to western states that have abused their own sources of fresh water. Pattison has been attempting this for years. So far, they have been unsuccessful - Thankfully.
I can't imagine a scenario where this is in the best interest of all of the residents of our state. I am sure it is financially lucrative for them, individually. However, the water resources belong to all Iowans. One (or a handful) of individuals should not be able to sell the resources of everyone. This is not the same as owning a hundred acres of land and cutting down all of your trees to sell. This is more like standing in a swimming pool, the person next to you is peeing in the pool, but tells you: "Don't worry, I'm only peeing in my part of the pool."
I sincerely hope that their application is (and continues to be) denied. Approving this type of application will lead to applications for larger water withdrawals as well as applications from others who are more than willing to exploit the resources of our collective population for their own personal gain.
In the future, we will be the ones buying water from other states.

Thank You,
Kevin and Ruth Ann Kearney
Calmar, IA 52132


Iowa Department of Natural Resources
Notice of Intent to Modify a Permit to Increase Withdrawals and Sources of Water for Dewatering and Processing Purposes in Clayton County, Iowa

481347920_10066230403390094_7937086869013511404_n.jpg
89K

Fields, Chad <[redacted]>

Log 33,483

1 message

Kathleen Cave <[redacted]> Tue, May 6, 2025 at 11:43 AM
To: [redacted]

Sand Permit to Export Iowa Groundwater

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

Our water is already a limited resource. Please DENY this modified permit.

Kathleen Cave
24 Sedona Street
Iowa City, IA 52246
319 400-2065

IOWA

Fields, Chad <[redacted]>

Log number 33,483

1 message

Laura Kastens <[redacted]> Sat, May 17, 2025 at 7:51 AM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources— including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale-especially without full transparency about the recipients or long-term impacts-poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Laura Kastens
TIffin, IA

IOWA

Fields, Chad <[redacted]>

log number 33,483

1 message

Jim Trepka <[redacted]> Tue, May 20, 2025 at 6:48 AM
To: "[redacted]" <[redacted]>

Subject: Request to Deny Pattison Sand Permit to Export Iowa Groundwater

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,

Jim Trepka
242 Highland Drive
Iowa City, IA 52246

319-338-0005

IOWA

Fields, Chad <[redacted]>

log number 33,483

1 message

Martha Cavic <[redacted]> Tue, Jun 3, 2025 at 12:08 PM
To: "[redacted]" <[redacted]>

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

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I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Martha Cavi
Iowa City, Iowa
[redacted]

IOWA

Fields, Chad <[redacted]>

Objection to Pattison Sand Company Water Request

1 message

[redacted] <[redacted]> Fri, May 23, 2025 at 10:32 AM
To: "[redacted]" <[redacted]>

Mr. Fields:

I am a property owner on Esmann Island (382 Riverview Dr, Guttenberg, IA), just south of the Pattison Sand Company mine and I have serious concerns on their application to draw 3.7 billion gallons of water from deep aquifer water wells.

My concerns:

- What is the specific purpose that they need so much water in their operations? Has this been divulged and thoroughly explained to the public? Why did the Pattison company not bother to participate in the public hearing at the Clayton County Board of Supervisors?
- If they truly need so much water for mining operations, how and where will it be discharged after use? Will the water end up in the Mississippi River and foul its water quality?
- If the water is used for some benign industrial purpose why can't they cycle directly from the river, similar to the way power plants draw water for cooling purposes?
- Is this a surreptitious and ongoing attempt by the Pattison Company to ship water in tank cars to Western states as they have proposed in the past?
  No entity, public or private, should be allowed to exploit and export a precious commodity such as our pure water for their own commercial gain.

The Iowa Department of Natural Resources should be the guardian and watchdog for our state resources. I urge you to carefully examine the facts in this application and preserve and protect our aquifers, our environment, and our public health and safety.

Thank you,
Wayne Ahern
601 Plum St.
Solon, IA 52333
563-880-0617

IOWA

Fields, Chad <[redacted]>

Objection to Pattison water withdrawal permit request
1 message

Jeffrey Walters <[redacted]> Tue, May 27, 2025 at 12:37 PM
To: "[redacted]" <[redacted]>

I request that the Iowa Department of Natural Resources deny the request to modify a permit to increase water withdrawals by Pattison Sand Company

I am owner of two rural farm properties in Clayton County both of which have springs and one well which is in the Jordan aquifer and will be negatively impacted if the Pattison request is approved.

The Pattison request for permitted withdrawal of billions of gallons of water per year for 10 years, will cause a substantial drawdown of surface pressure and can easily cause a decline of 250 to 450ft of the water table.

Multiple counties in central Iowa already are experiencing substantial problems with drawdown including: Linn, Cerro Gordo, Webster and Polk. This aquifer is very very slow to recharge, so the rate at which Pattison is requesting is not sustainable.

The Iowa DNR must protect this precious and limited resource and must require Pattison to provide competent hydrologic data to grant any additional water withdrawal permit modification. Additionally the permit holder should be required to post a liability bond to pay for the loss of surface pressure and decline of water tables that causes neighboring property owners suffer loss of their water supply including springs and wells. Additionally Pattison should be required to agree not to sell withdrawn water.

Please deny the requested permit modification and protect our valuable waters.

Jeffrey Walters 10764 Cedar Ridge Ct, Peosta Iowa

Fields, Chad <[redacted]>

oppose 33,483

1 message

Brumm, Margaret A <[redacted]> Tue, May 20, 2025 at 10:54 AM
To: "[redacted]" <[redacted]>

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa. I am amazed you are even thinking of this possibility.

Margaret Brumm
3028 Clover St
Iowa City IA 52245

Fields, Chad <[redacted]>

Oppose Pattison application

1 message

Mike Tramontina <[redacted]> Thu, Apr 24, 2025 at 1:48 PM
To: Chad Fields <[redacted]>

Mr, Fields, I urge you to deny Pattison Sand's application to draw water from aquafers under Iowa. Water every where is a precious resource especially in Iowa. Not only Iowa's agriculture industry but also server farms located in Iowa and the ethanol industry, etc. all use a great deal of fresh water and the demand continues to grow. I urge you not to approve any more water use applications until a comprehensive study is completed and released to the public of the quantity of Iowa's water resources.

Mike Tramontina

(515) 314-7864

"Some white people hate black people, and some white people love black people, some black people hate white people, and some black people love white people. So you see it's not an issue of black and white, it's an issue of Lovers and Haters."

eden ahbez

IOWA

Fields, Chad <[redacted]>

Oppose Pattison Sand Company Water Export Permit

1 message

Paul Deaton <[redacted]> Fri, May 2, 2025 at 11:39 AM
To: [redacted]

Dear Mr. Fields,

I read in the news that Pattison Sand Company is again exploring extracting two billion gallons of water from the Jordan aquifer per year. This water is intended to be rail transported out of state.
Not so fast!
State geologist Keith Schilling of the University of Iowa, who is involved in projects assessing the Jordan Aquifer's ability to meet demand, told Iowa Capital Dispatch the permit application "definitely needs additional study."
Please take the necessary time for the state geologist to study the matter of whether the Jordan Aquifer can support Iowa's future needs before moving forward with a permit for extraction of ground water for export to other states..
Thanks for your consideration.

Regards, Paul
--
Paul Deaton
1664 Camelback Road NE
Solon, Iowa 52333
[redacted]
(319) 331-0899

Fields, Chad <[redacted]>

Oppose to permit

1 message

Tina Houk <[redacted]> Fri, May 2, 2025 at 10:17 AM
To: "[redacted]" <[redacted]>

Hello Mr. Fields,

I'm emailing requesting that you deny the permit to Pattison Sand Co. of Clayton to pump water from the Jordan Aquifer out of state.

I do not believe that without further study pumping water out of state benefits in any way the State of Iowa, its residents, businesses and conservation efforts. More tracking and assessment of the ground water in the state needs to be performed before something like this should be approved.

thank you for your time,
Tina Houk
Anamosa, Iowa

Sent with Proton Mail secure email.

Fields, Chad <[redacted]>

Pattinson Sand Company Permit

1 message

Monica Hamilton <[redacted]> Tue, Apr 22, 2025 at 9:16 PM
To: "[redacted]" <[redacted]>

Hi Chad,

I understand that you are the person who is taking public comments on the Pattinson Sand company permit to take billions of gallons of water out of Iowa and ship it out west.

It's insane to me that this is legal, and completely absurd that I just found out they don't even have to pay for it and then can sell it for profit?

This is a valuable resource, that Iowa will need in the future. So I'm putting in writing that I am against this permit.

I know you're just a geologist for the DNR, so I'm sorry you are the one we are all being directed to.

Thanks for your time.

Monica Hamilton

IOWA

Fields, Chad <[redacted]>

Pattinson Water Permit

1 message

Melody Kipp <[redacted]> Tue, May 27, 2025 at 10:49 AM
To: "[redacted]" <[redacted]>

Dear Mr. Fields,

My name is Melody Kipp, and I live at 518 N Bluff Street in Guttenberg. I have a deep well and am very concerned about the exponential increase in the amount of water requested by Pattison Sand.

I recently saw an article about this in the Guttenberg press, and it was the first I had heard of it. This will directly impact me, and I believe that the impact will be negative. I understand there were no studies to as to how it would impact this area, but common sense says it will have an adverse effect. How can that much water be drained from the aquafer without negative impacts? It doesn't make sense.

The residents of Clayton County deserve to be treated with priority and respect. The time for corporations over citizens must come to an end. I am vehemently against this request.

I appreciate your time and attention to this matter.

Best regards,

Melody Kipp

Fields, Chad <[redacted]>

Pattison Application log #33483

1 message

Paul Doffing <[redacted]> Sat, May 31, 2025 at 9:42 AM
To: [redacted]

Hey Chad,

Thank you for the opportunity to comment on Pattison Sand Company's proposal to drastically increase its withdrawal of water from the Jordan Aquifer.

The Jordan Aquifer is no ordinary water source. It holds some of the last clean, uncontaminated groundwater in Iowa—water that is tens of thousands, even hundreds of thousands of years old. Unlike shallow aquifers that recharge through rainfall, the Jordan recharges at an extremely slow rate, if at all. It is, by most definitions, a fossil aquifer—a finite and irreplaceable resource.

Pattison Sand is seeking to extract 4 billion gallons per year from this aquifer. For sand mining. This isn't just unwise—it's reckless.

Across Iowa, clean water is becoming harder to come by. Many of our shallower groundwater sources have been polluted by agricultural runoff, nitrates, and industrial activity. The Jordan Aquifer remains one of the few sources of reliably clean drinking water. To hand over billions of gallons of this water to a private company, for profit, without full understanding of the aquifer's capacity, is a betrayal of public trust.

We know alarmingly little about the recharge rate of the Jordan. What we do know is that it does not respond quickly to use. Once depleted, it could take thousands of years—if ever—to replenish. That makes this not just a local issue, but a generational one. We are not the rightful owners of this water—we are its stewards.

This proposal raises a fundamental ethical question: should a private entity be allowed to extract billions of gallons from a public resource for commercial gain? The answer must be no. At the very least, any use of water at this scale should come with a serious price tag—such as a per-gallon usage fee—that funds aquifer research and water conservation. But even that doesn't address the larger concern: the irreversible damage that could be done by unchecked withdrawal.

There is a growing tendency to treat groundwater like an unlimited, free commodity. It isn't. It is one of the most precious resources on Earth—and once we exhaust it, no technology, no money, no court ruling can bring it back.

The Jordan Aquifer should be protected, not plundered. It belongs to the people of Iowa, and to future generations. **It is not a subsidy for sand.**

Approving this permit would set a dangerous precedent—that Iowa's deep aquifers are available to the highest bidder, regardless of the long-term consequences. That is not responsible governance. It is resource exploitation, plain and simple.

Please deny this permit. Let's stop treating the Jordan Aquifer as a free-for-all and start treating it with the value, caution, and respect it deserves.

Paul Doffing

Fields, Chad <[redacted]>

Pattison Comment

1 message

Adams, Bradley <[redacted]> Mon, Apr 21, 2025 at 1:40 PM
To: Carmily Stone <[redacted]>, Chad Fields <[redacted]>

This was sent to Tamara:

From: todd link <[redacted]>
Date: Mon, Apr 21, 2025 at 8:23 AM
Subject: Pattison Sand Water Use
To: [redacted] <[redacted]>

Ms. McIntosh
I am a life long resident of Iowa and I am writing to you as a very moderate individual that prides himself on balancing the needs of industry and the environment. However, the application by Pattison Sand in upper NE Iowa for massive increases in water use (either pump to river or pump to rail to export to Western US) should not be permitted.
As you know Iowa drinking water quality continues to decline for shallower wells across our state. This trend is unlikely to reverse itself based on our ag based economy. Thus there is greater and greater reliance on these very deep aquaphors to supply residents stable supply and safe supply of drinkable water.
Allowing one individual entity to remove billions of gallons of water from the system for the sole purpose of extracting fracking sand is an egregious violation on our natural resources and I strong suggest this permit NOT BE APPROVED.
Clean drinking water will define our State's livability FOREVER and a decision today will play host to harmful dividends for decades to come. One need not reach far into the science to see that deep wells recharge at much slower rates than shallow wells. We cannot in good conscience impact future generations with wasteful use of our most precious commodity today.
This is not good for Iowa, not good for future Iowans and would be a decision that will become more impactful every year thereafter.
I respectfully request the DNR position on this application and where we stand in denying this permit.

Todd J Link
2195 Bunker Hill Road
Dubuque IA 52001
563-542-6780
[redacted]

Sent from my iPad

Bradley Adams | Attorney 2
DNR Legal Services Bureau
Iowa Department of Natural Resources
[redacted]
515-664-8894
6200 Park Ave., Suite 200
Des Moines, IA 50321

Department of Natural Resources

Fields, Chad <[redacted]>

Pattison Companys quarry operation permit (log #33,483)

1 message

Sue Meyer <[redacted]> Wed, Apr 23, 2025 at 3:39 PM
To: "[redacted]" <[redacted]>

Mr. Fields,
It is with a resounding NO that I comment on the permit for Pattison to secure a permit to take OUR WATER!
I attended the INFORMATIONAL meeting last evening and concur with all those who spoke in opposition to the permit!
All who spoke had very good evidence as to why this permit should not be granted.
I didn't speak although I did have some information to share. Isn't it very insightful that the information I would share from the Clayton County aquifer sight about the Jordan Aquifer CHANGED FROM YESTERDAY! Yesterday it READ!

Clayton County, Iowa, draws its groundwater from several aquifers, including the **Galena Dolomite, Jordan Aquifer, and other alluvial and sand & gravel aquifers**. The Galena Dolomite is particularly notable as the source of Big Spring, Iowa's largest spring. The Jordan Aquifer is also significant, with wells in Clayton County tapping into it.

Elaboration:

Galena Dolomite:

This formation is known for its karst topography, characterized by sinkholes and cave systems, which influence groundwat flow and recharge. Big Spring, a major sou of water for the Big Spring Trout Hatchery, is fed by the Galena Dolomite.

Jordan Aquifer:

This aquifer is a major groundwater source in

parts of Iowa, including Clayton County, and has been the subject of recent controversy regarding proposed water exports to western states. The Iowa Department of Natural Resources (DNR) has concerns about the sustainability of pumping large volumes from this aquifer.

Clayton County, Iowa, draws its groundwater from several aquifers, including the **Galena Dolomite, Jordan Aquifer, and other alluvial and sand & gravel aquifers**. The Galena Dolomite is particularly notable as the source of Big Spring, Iowa's largest spring. The Jordan Aquifer is also significant, with wells in Clayton County tapping into it.

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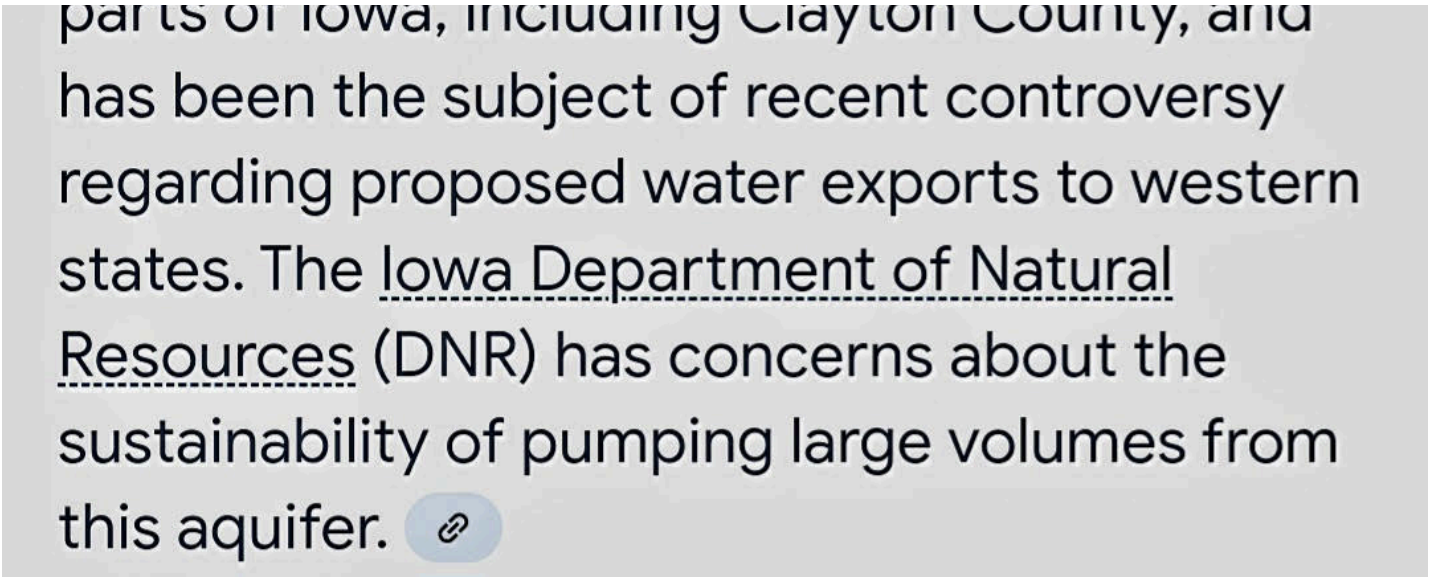


AND TODAY:

Somehow that paragraph on the Jordan Aquifer has completely changed OVERNIGHT!!
That information is NO LONGER AVAILABLE! HUM.

I live in a development outside Guttenberg with a Garnavillo address. I am about 3 miles from the Pattison Mine.
Our well is drilled to 640 + feet. Guess whose well will go first on draw down????

Again, NO IS THE ONLY ANSWER to this permit.

We expect the DNR to protect our water and the people who depend on this resource for survival.

Concerned,

Sue Meyer
278 Grand Ridge Rim Way
Garnavillo, IA 52049
[redacted]

Fields, Chad <[redacted]>

Pattison permit request

1 message

Patti Ruff <[redacted]> Tue, Apr 22, 2025 at 8:58 PM
To: [redacted]

Log number 33483.
How can they draw water out of the Mississippi River without federal approval? It is a national refuge area.

Sincerely,
Patti Ruff

Sent from my iPhone

Fields, Chad <[redacted]>

Pattison Sand Co. request for water withdrawal, Log. No. 33,483

1 message

Carolyn Corbin <[redacted]> Wed, Apr 30, 2025 at 7:58 AM
To: [redacted]
Cc: Jessica Engelking <[redacted]>

Dear Chad Fields,
I ask you and the DNR to protect our water by denying the request for water withdrawal from the Pattison Sand Co. Log. No. 33,483.

Thank you for protecting our land and water.

Sincerely,
Carolyn Corbin
Decorah, Iowa

Fields, Chad <[redacted]>

Pattison Sand Co. request for water withdrawal, Log. No. 33,483

1 message

Christine Ziebold <[redacted]> Sun, May 18, 2025 at 10:34 PM
Reply-To: Christine Ziebold <[redacted]>
To: "[redacted]" <[redacted]>

Dear Mr Fields,

I am opposed to granting Pattison Sand Company permission to increase their water withdrawal permits from 1 billion gallons/year to 3.7 billion gallons/year.
I did not hear about the 4//), the DNR held a mandatory meeting

Viele Grüsse,

Christine Ziebold, MD PhD MPH
1817 Hafor Drive
Iowa City, Iowa 52246
+1 (319) 492 8789

Fields, Chad <[redacted]>

Pattison Sand Co. request for water withdrawal, Log. No. 33,483

1 message

Christine Ziebold <[redacted]> Sun, May 18, 2025 at 10:34 PM
Reply-To: Christine Ziebold <[redacted]>
To: "[redacted]" <[redacted]>

Dear Mr Fields,

I am opposed to granting Pattison Sand Company permission to increase their water withdrawal permits from 1 billion gallons/year to 3.7 billion gallons/year.
I did not hear about the 4//), the DNR held a mandatory meeting

Viele Grüsse,

Christine Ziebold, MD PhD MPH
1817 Hafor Drive
Iowa City, Iowa 52246
+1 (319) 492 8789

Fields, Chad <[redacted]>

Pattison Sand Co

1 message

Douglas Craigmile <[redacted]> Wed, Apr 23, 2025 at 5:02 PM
To: [redacted]

Chad,

If what I'm hearing is true about what this company (Pattison Sand) wants to do with an expanded water withdrawal permit, it simply can not be allowed. Our aquifers and water supply are valued resources that should not be sent to any other state, especially if it's for profit of a private business. Approval of such a thing that would benefit so few should be made illegal let alone disapproved.

Doug Craigmile
Cedar Rapids, IA

Fields, Chad <[redacted]>

Pattison Sand Company application for free water

1 message

Erica Finken <[redacted]> Tue, Apr 22, 2025 at 8:59 PM
To: [redacted]

I urge you to deny the application that Pattison Sand Company submitted to increase their water withdrawal permits from 1 billion gallons/year to 3.7 billion gallons/year.

They pay nothing. Pattison wants to use 3.7 billion gallons of water per year to make money. They will pay 0 dollars per year to do so.

Do you pay for water? What is your water bill? Why are we prioritizing corporations and not helping our people? Not having a water bill would help many families.

At a minimum, ask for more information before signing off on this sacrifice to our water supply.

Erica finken
218 N 7th Ave, Iowa City, IA 52245

IOWA

Fields, Chad <[redacted]>

Pattison Sand Company application for free water

1 message

Erica Finken <[redacted]> Tue, Apr 22, 2025 at 8:59 PM
To: [redacted]

I urge you to deny the application that Pattison Sand Company submitted to increase their water withdrawal permits from 1 billion gallons/year to 3.7 billion gallons/year.

They pay nothing. Pattison wants to use 3.7 billion gallons of water per year to make money. They will pay 0 dollars per year to do so.

Do you pay for water? What is your water bill? Why are we prioritizing corporations and not helping our people? Not having a water bill would help many families.

At a minimum, ask for more information before signing off on this sacrifice to our water supply.

Erica finken
218 N 7th Ave, Iowa City, IA 52245

Fields, Chad <[redacted]>

Pattison Sand Company request

1 message

Lucea Sharp <[redacted]> Mon, May 19, 2025 at 5:12 PM
To: "[redacted]" <[redacted]>

Please read attached letter in protest of the Pattison Sand Company request.

Lucea Sharp

Fields DNR-5-19-2025.pages
289K

Fields, Chad <[redacted]>

Pattison Sand Company 's request for permit modification

1 message

Kay Vifian <[redacted]> Tue, May 27, 2025 at 4:12 PM
To: [redacted]

Dear Mr. Fields,

My husband and I are writing to you to express our concerns about Pattison Sand Company's permit request to dramatically increase water withdrawals and increase sources of water at its sand mining operation near Clayton. Our names are Vic and Kay Vifian. We live in Clayton county, Iowa. Our address is 23784 Great River Road, Garnavillo, Ia 52049. Our 28 acre property is about 1.5 miles from the mine site. We have lived here for 40 years. We bought our property because of the natural beauty of the area. We have worked hard to beautify our farm by planting hundreds of plants including trees, flowers, shrubs and other perennials. We also have two high tunnels and a greenhouse where we grow chemical-free produce to sell. We also raise horses.

We were involved in 2016 when Pattison Sand sought approval from our Board of Supervisors to mine underground. Several of our neighbors agreed to allow Paatison to mine under their property. This required a zoning change from agriculture to heavy industrial. The Board of Supervisors ultimately approved this request after many community meetings. We are now surrounded by land zoned heavy industrial. We spoke to several former employees of Pattison Sand at the time. The information they shared leads us to believe that outside monitoring and testing is essential. There has been no follow through regarding statements made by Kyle Pattison to reassure area residents.
The topic of required Reclamation Fund was discussed at that time. No information has been released about whether such a fund exists. Massive destruction to the area has occurred since that time.

In regard to the current permit modification request, we have many concerns. They are listed below.

1). As of today, there has been very little attempt to address the concerns of area citizens and nearby municipalities. No questions were answered at the Public Hearing on April 22 in Elkader. Kyle Pattison was present, but did not offer any explanations. He did meet with some citizens at the mine site May 17. His explanations were not satisfactory or reassuring. I (Kay) did attend the EPC meeting in Decorah on May 21. I spoke with Lori McDaniel who told me the DNR would delay the permit modification request for a year and come to Clayton county in June to address citizens' concerns. Also that an impact study would be done to assess the impact of such a huge increase in the amount of water that Pattison Sand is allowed to withdraw. This is welcome news.

2). There was no prior testing or consultation with personal well owners or municipal wells who may be affected by this massive increase in water withdrawal. The people who live in very close proximity to the mine at Wiiles Resort(90 residents) or Frenchtown (60+ residents) were not consulted nor were landowners within 3-5 miles from the mine. The permit language says that "the proposed water withdrawal and rate of withdrawal will create an extensive regional cone of depression likely to interfere with water withdrawal from both private wells and municipal wells." Since the Public Hearing, some area residents have shared information about problems they have encountered with their wells.

3). Pattison Sand has made repeated attempts to sell water from his site to western states. The lack of clarification in permit language is very concerning. The letter from his lawyers expresses Pattison's belief that he can do what he wants with water that he has been permitted to withdraw for "dewatering". **THIS IS. OUR WATER SUPPLY.** All waters, both surface and groundwater, are **public waters and public wealth.**

4). There has been very little consideration concerning the current demands on the Jordan Aquifer and the impact of drought conditions throughout the state. We are also concerned about the increased demands on water for new technology(AI), a possible carbon pipeline, new energy needs, and agriculture.

5). There has been no study done to date to determine the impact of such an increase of water withdrawals on agriculture, tourism, water quantity and quality, and Mississippi River activities

6). The lack of any DNR protections from sources of contamination to our water supply is a big concern. (cattle confinement operations and hog confinement operations.). The recent fish kill in Winneshiek county is one example, the cattle confinement operation near Monona, Ia is another.

7). Finally, the lack of transparency in publishing necessary information about this permit modification request in Clayton county is unacceptable. It was only published in Calmar's newspaper in Winneshiek county. It is very disturbing to think that this permit may have been approved without anyone in Clayton county knowing about it.

Thank you for allowing our comment period to be extended until May 27. We look forward to meeting with you in June to share our concerns and hear about your plans for an impact study.

Sincerely,
Vic and Kay Vifian

IOWA

Fields, Chad <[redacted]>

Pattison Sand Company water request

1 message

Sherri Webb <[redacted]> Tue, Apr 22, 2025 at 5:35 PM
To: "[redacted]" <[redacted]>

Dear Mr. Fields,

I am writing to you regarding a permit request from Pattison Sand for the withdrawal of 3.7 billion gallons of water. That, Sir, is an outrageous amount of water and the concern that they wanted to sell water to western states a few years ago and are now asking for this amount makes me suspicious of their real intent. Water is not something that Iowa had to worry about in the past, but it is now a HUGE concern. AI data centers are wasting astronomical amounts of water and the prospect of Summit Carbon wanting 3.36 billion gallons/year for their phase 1 project is just downright scary. These are not sustainable amount of water to be removed and not easily replaced. It's hard to admit that our State is no longer safe from water shortages. The DNR needs to review every permit with due diligence and make their decisions carefully. Last year Kansas farmers were asked to cut back on their crop irrigation. The Iowa Drought Monitor does not look great again, and we are just starting the planting season.

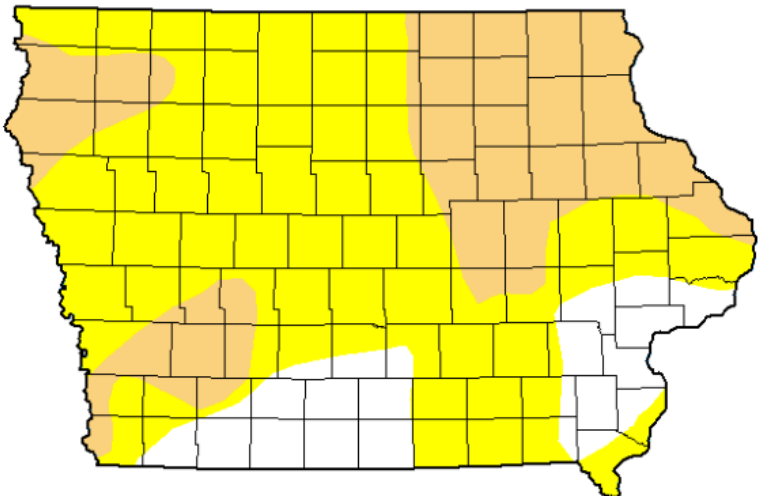
"As of April 15, 2025 approximately 30% (16611 square miles) of Iowa is under drought conditions and 56% (31715 square miles) is Abnormally dry."

https://iowaweather.com/iowa-drought-monitor/

https://www.drought.gov/states/iowa/county/iowa

U.S. Drought Monitor

Iowa



April 15, 2025

(Released Thursday, Apr. 17, 2025)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	14.11	85.89	29.52	0.00	0.00	0.00
Last Week 04-08-2025	21.38	78.62	29.28	0.00	0.00	0.00
3 Months Ago 01-14-2025	20.41	79.59	57.13	1.30	0.00	0.00
Start of Calendar Year 01-07-2025	20.41	79.59	57.13	1.30	0.00	0.00
Start of Water Year 10-01-2024	6.02	93.98	23.20	1.29	0.00	0.00
One Year Ago 04-16-2024	14.71	85.29	66.20	30.68	7.43	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

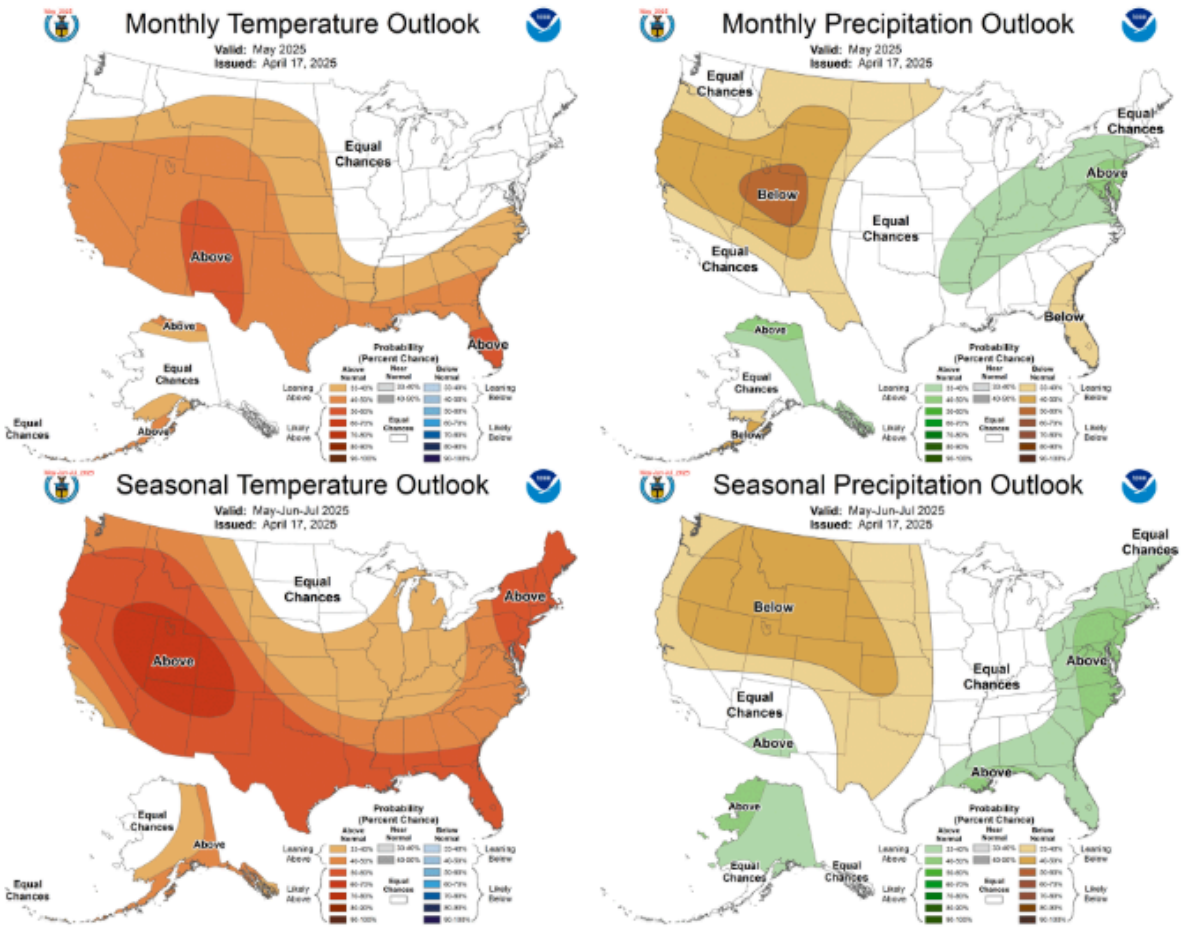
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

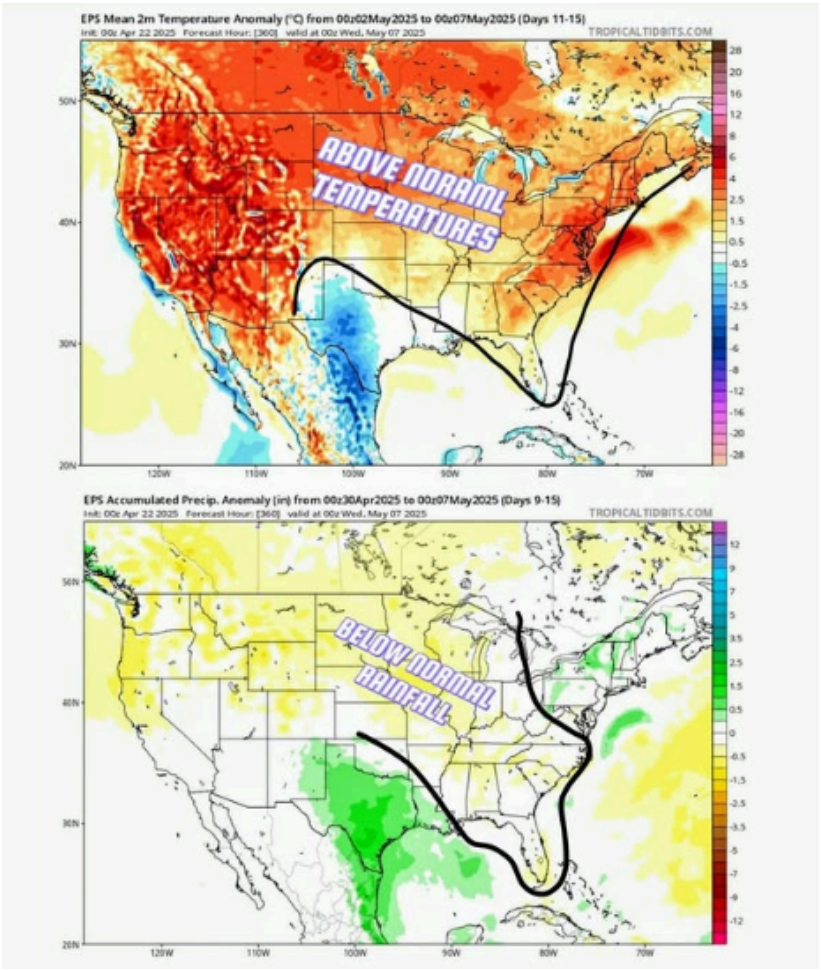
The long-range forecast does not show Iowa receiving a lot of rain over the next 3 months. https://www.weather.gov/ffc/outlooks

30-day and 90-day Outlooks

Disclaimer



Map courtesy Climate Prediction Center.



And then this was in today's newspaper.

TUESDAY, APRIL 22, 2025

Regional Water issues warning about usage

AREA — Officials from Regional Water said upon issuing the Drinking Water Advisory Level Yellow reminder last week, usage continues to rise.

All water towers fed by Regional Water's Avoca Treatment Plant (ATP), are close to losing pressure and being empty. If the towers lose pressure, a Boil Advisory will immediately have to be put in place. Regional Water is pumping the maximum amount of water they can, and staff are doing everything they can to try to maintain pressure in all water towers. However, it is up to the customers at this point to prioritize their water usage and conserve and use alternative water sources as much as possible to not only avoid a system wide boil advisory but also possible intermittent times of not having water at all to flush toilets, shower, cook, etc.

Regional Water's Board of Directors would like to remind the member customers and communities on their ATP System that we are still in Alert Level Yellow – Mandatory Nonessential Water Restrictions. Reminder that this does not include in town or rural customers of Underwood, McClelland, or Weston as they are on a completely separate water system.

Agricultural, commercial, industrial, municipal, and residential users are asked to observe the following reduction measures:

Large volume water users, including livestock confinement facilities and spraying operations should look at alternative water sources, to include their own private wells, Harlan Municipal Utilities and Council Bluffs Water Works retail water points, as well as any other non-potable sources.

No watering of any kind at any time.

Encourage the use of existing private wells where possible.

Commercial water users, including industries, motels, hotels, and eating establishments should conduct a water usage audit to reduce water use accordingly.

All water users should examine their plumbing for leaks, check toilets to ensure they are not running continuously, and install water saving devices in toilets, faucets, and showers. Facilities with automatic flush valves should adjust the valves to double the time between flushes.

Water users should reduce their shower time, use a lower level of water while bathing in a tub, shut off the water while bathing, shaving, brushing their teeth, or preparing food, and only do full loads of laundry and dishes.

For more information, please visit Regional Water's website, rwrwa.org or contact the Regional Water Office at 712-343-2413.

Easter bunny hops into Portsmouth

PORTSMOUTH — Portsmouth children and their families were treated to an Easter egg hunt Saturday at City Park. Attendees received a lot of treats and had the opportunity to visit with The Easter Bunny. *(Connie Juhl, photo)*

Gov. Reynolds approves lowering

There are wells drying up all across Iowa. Water has quite easily become one of the most important precious resources and it is a limited one. WHY would anyone want to antagonize that even more so? PLEASE deny this permit for the unsustainable amount of water Pattison Sand is asking for.

Thank you,

Sherri Webb
1984 Sawyer Trail
Woodbine, IA 51579
712.592.1488

IOWA

Fields, Chad <[redacted]>

Pattison Sand Company Water Withdrawal

1 message

Doris Eckey <[redacted]> Tue, May 6, 2025 at 1:38 PM
To: [redacted]

I am strongly opposed to log number 33,483, the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

Please DO NOT approve this request!! It is completely unacceptable and outrageous and is diametrically opposed to the interests of the people of Iowa.

Water is a public resource. In NO WAY should water usage be privatized! PLEASE STOP THIS!!!

Sincerely,

Doris Eckey
33 Highland Drive
Iowa City, IA 52246

Fields, Chad <[redacted]>

Pattison sand company

1 message

Matt Karnatz <[redacted]> Wed, May 21, 2025 at 1:16 PM
To: "[redacted]" <[redacted]>, "[redacted]" <[redacted]>, "[redacted]" <[redacted]>

May 21, 2025

To whom it may concern:

My name is Matt Karnatz and I have a cabin in Clayton County, Iowa.

My address is 311 Mallard Lane, Garnavillo, IA 52049. It is in the Wille Resort.

I am writing to express my concerns about Pattison Sand Company's permit request to dramatically increase water withdrawals and increase sources of water at its sand mining operation near Clayton.

It is unfortunate that no explanations or questions were answered by either the DNR or Kyle Pattison at the public hearing April 22 regarding the permit modification request. In addition, I understand that there was no prior testing or consultations with personal well owners or municipal wells who could see effects of increasing water withdrawals if allowed up to 3.7 billion gallons of water per year. We are directly below the mine and have a sand point well that could be affected by this withdrawal. In addition, I understand that there has been no study done to determine the impact of such an increase of water withdrawals to agriculture, tourism, water quality and quantity, and Mississippi river activities.

I believe there was a lack of transparency in publishing necessary information about this request in Clayton County, only publishing necessary information about this request in Clayton County. It is also sad to see there was a lack of response by the DNR to address existing concerns regarding problems with wells in the area near the mine and that there is a lack of response by the DNR about any protections from sources of contamination to our water supply.

Finally, if the additional water they are planning on using is pumped into the creek just south of the mine, this might cause flooding in the area. Our house is just down from that creek and if the ground floods in that area we are not able to access our house. It has flooded in the past from snow or rain totals and I'm worried this additional water pumped out will also affect our area. There are many people that have houses there that would be very upset if we are flooded out of our houses because of the additional water pumped out from the mine.

Please do not allow this permit to happen.

Thank you for your time.

Sincerely,

Matt Karnatz

Matt Karnatz

Fields, Chad <[redacted]>

pattison sand guttenberg, #33483

1 message

[redacted] <[redacted]> Tue, Apr 29, 2025 at 11:49 AM
To: "[redacted]" <[redacted]>

Dear Mr Fields,

I would like to state that I am strongly against this huge waste of underground water. I live on the bluff maybe 4 miles south of clayton. Our 10 home subdivision is completely reliant on our well water. If it became unavailable it would be a true disaster for all of us. I have no problem with him drawing river water and assume the DNR can monitor and dictate what is appropriate in that area. To risk the loss of well water is just not logical or acceptable, especially just for the profit of a small company. I expect they are already using way more than what is a safe amount. Please limit them as much as possible. Thanks.

Dave Herrmann
276 Grand Ridge RIm Way
Garnavillo, Ia 52049

Fields, Chad <[redacted]>

Pattison Sand permit application; log no. 33,483

1 message

[redacted] <[redacted]> Tue, Mar 25, 2025 at 10:32 AM
To: "Fields Chad [DNR]" <[redacted]>

Chad:

On behalf of the Iowa Chapter of Sierra Club I am requesting a public hearing on the application described in the notice below. The hearing should be conducted in Clayton County.

I will also be submitting written comments.

Thanks for your attention to this request.

Wally Taylor

Iowa Department of Natural Resources Notice of Intent to Modify a Permit to Increase Withdrawals and Sources of Water for Dewatering and Processing Purposes in Clayton County, Iowa

NOTICE OF INTENT TO MODIFY A PERMIT TO INCREASE WITHDRAWALS AND SOURCES OF WATER FOR DEWATERING AND PROCESSING PURPOSES IN CLAYTON COUNTY, IOWA

Notice is hereby given that pursuant to Iowa Code Chapter 455B, there is now on file with the Iowa Department of Natural Resources, Water Supply Engineering Section, 6200 Park Ave, Suite 200 Des Moines, IA 50321 the application as described below.

Pattison Sand Company, Iowa DNR Log Number 33,483, requests a permit modification to withdraw water from two Mississippi River alluvial aquifer wells, approximately 100 feet deep; two Jordan aquifer wells, approximately 100 feet deep; one mine pond intake; one Mississippi River intake; and two proposed quarry/rail track dewatering basins, all located on land generally described as the E ½ of the SE ¼ of Section 12, T93N, R03W, the S ½ and the S ½ of the NW ¼ of Section 2, the N ½ of Section 18, and the NW ¼ of Section 17, T93N, R02W, Clayton County, Iowa, in the maximum quantity of 423 million gallons per year at a maximum rate of 850 gallons per minute from the Mississippi River alluvial aquifer; 1,435 million gallons per year and 2,800 gallons per minute from the Jordan aquifer; 77 million gallons per year and 150 gallons per minute from the mine pond; 564 million gallons per year at 1,100 gallons per minute from the Mississippi River; and 1,244 million gallons per year at 4,800 gallons per minute from the quarry/rail track dewatering basins; in the maximum total quantity of 3,743 million gallons per year at a maximum rate of 9,675 gallons per minute throughout each year, all for processing silica sand from an underground mine on said land.

The Department has determined that this use of water conforms to the relevant criteria (Iowa Code Chapter 455B and Iowa Administrative Code Chapter 567) and recommends the permit be granted. A copy of the summary report for the application is available upon a request to the department at the address listed above. Comments on the report and on this use of water must be received by April 15, 2025, and should be addressed "ATTN: Chad Fields" and should specify the applicant's log number (33,483).

Published in the Calmar Courier on March 18, 2025

Fields, Chad <[redacted]>

Pattison Sand Permit Modification Request

1 message

Kay Vifian <[redacted]> Sat, May 24, 2025 at 10:13 AM
To: "[redacted]" <[redacted]>

Dear Mr. Fields,

My name is Joan D. Good. I live in Clayton County, Iowa. My address is 922 N. 4th St., Guttenberg, Iowa 52052. I am concerned with the amount of water Pattison Sand Co. is planning to draw from the Jordan aquifer. It seems to be a bit excessive from what they had been taking. This will affect all of us in Clayton County and surrounding counties. Please reconsider this draw for us in Guttenberg, the county and surrounding counties.

Sincerely,
Joan D. Good

Fields, Chad <[redacted]>

Pattison Sand permit request

1 message

Sandy Sutton <[redacted]> Sun, May 11, 2025 at 7:14 PM
To: "[redacted]" <[redacted]>

Dear Mr. Fields,

I am writing to express my opposition to granting the Pattison Company permits to withdraw any more water. I am a native of Clayton County, and my husband and I have chosen to retire here. We have experienced the problem of our well going dry in the past. I believe that the extreme amount of water Pattison's is proposing to use would greatly increase the possibility of wells in the area going dry.

Water is one of our most precious resources, and one company should not be allowed to divert it from many other Iowans who depend on it. I believe denying this request is in the best interest of the current and future residents of Clayton County.

Sincerely,

Sandy Sutton
29604 318th St.
Guttenberg, Iowa

IOWA

Fields, Chad <[redacted]>

Pattison Sand Water Permit and neighboring water usage.

1 message

Rich Kann <[redacted]> Wed, Apr 23, 2025 at 1:21 PM
To: [redacted]
Cc: [redacted]

Brad, Chad

First off thank you for at least hosting a meeting last night in Elkader Iowa about the Pattison Sand water permit. While I was in attendance it gave me some time to capture others opinions, thoughts, questions and comments.

I am writing about my concerns and objections to the increase of the water withdrawal permit for Pattison Sand. Within 3 miles of Pattison sand we either own, rent, or lease out property and have 6 wells and over 40 sand points in that area. The water is used for my family,

Rich Kann
Mobile 563-580-8675

Fields, Chad <[redacted]>

Pattison Sand water use

1 message

Dan Pierce <[redacted]> Fri, May 23, 2025 at 7:56 AM
To: "[redacted]" <[redacted]>

Mr. Fields,

Thank you for speaking with me over the phone briefly a couple weeks ago. I am Dan Pierce, operator in charge of the Guttenberg Water Utility. I just wanted to officially document the City of Guttenberg's concerns regarding the proposal of water use by the Pattison Sand Company.

We work closely with the IDNR for compliance in providing safe drinking water to the residents of the City of Guttenberg. Our main concern is water quality. We trust the IDNR is always working in our best interest to continue to provide safe drinking water to our community.

In the last decade of attending annual water conferences, water operators have learned about potential water shortages in the Jordan aquifer caused by excessive usage of water by corporations. The permit application by Pattison Sand Company is very close to home and the significant water withdrawal amount has many citizens voicing their concerns, wondering how this will affect their water source.

With regard to the proposed permit, I personally do not have enough background and knowledge to prove or theorize the potential effect on our drinking water source. I do know we have decades of daily/monthly/yearly testing that can prove the quality of our water and we will know when our water quality changes. We expect the IDNR to assure we will not feel the effects of changes to our water quality or increases in treatment for any changes that occur in the future due to the proposed permit. As with our own permit, it is expected that any changes that occur will require necessary updates and changes to the Pattison Sand permit.

My questions are these: What will be the repercussions if our water quality does change? Who will take responsibility for those changes? Who will pay for the necessary changes in treatment if changes do occur? I trust the IDNR has taken these issues into account when examining the proposed permit.

Thank you for the opportunity to voice our concerns!

--
Dan Pierce
City of Guttenberg
Public Works Director

Fields, Chad <[redacted]>

Pattison Sand

1 message

Tanner Duncan <[redacted]> Tue, Apr 22, 2025 at 9:40 PM
To: [redacted]

Good evening, I read the article regarding Pattison Sand wanting to take water from Iowa that they don't pay for and sell it out of state. What are the potential environmental consequences of doing this? And why won't they have to pay for this?

Thank you for your time.

Fields, Chad <[redacted]>

Pattison Sand

1 message

Phil Hall <[redacted]> Thu, Apr 24, 2025 at 2:16 PM
To: [redacted]

Pattison Sand wants to take 3.7 billion gallons of our water at zero cost and sell it out of state. To this, any normal human would say "no."

Water is needed here, it is our state's resource. We are in a drought for heaven's sake. But if it cannot be denied, we can charge them for it at a reasonable price, such as 13 cents per 7.5 gallons.

We can't just give our resources to businesses so they may profit off of that which belongs to us!

Yours,
Phil Hall

Fields, Chad <[redacted]>

Pattison Sand

1 message

Emily Sadewasser <[redacted]> Mon, Apr 28, 2025 at 9:29 AM
To: "[redacted]" <[redacted]>
Cc: [redacted] "Gearhart, Jason [LEGIS]" <[redacted]>

Good morning,

We are Clayton County residents, writing this morning with concerns about the request from Pattison Sand to increase their water usage.

With drought conditions in Northeast Iowa in recent years, we're concerned about what the Pattison request will mean. What are the impacts of this huge water usage on residents? On wildlife? On the environment? We have three young sons - what will this massive use of water mean for the future of our community? Have the possible outcomes been studied thoroughly? Doesn't this water belong to those of us who live here and need it? Why does this company require so much additional water?

We as people depend on this water and we hope the DNR will protect it and us.

Thank you,
Emily and Carl Sadewasser

Fields, Chad <[redacted]>

Pattison Sand

1 message

Molly Moser <[redacted]> Wed, Apr 23, 2025 at 8:11 PM
To: [redacted]

Good evening Mr. Fields,

I am a Clayton County resident writing to share my concerns about Pattison Sand's request to more than triple their water usage.

Annual precipitation has been down the past several years, and my yard has turned brown and dusty. It's a trend I expect will continue, and one reason that the request from Pattison gives me pause.

If there were any doubt about the enormity of the request, one need only learn that the 3.7 billion gallon water usage would put this company in the top 10 of water users in the state. To go forward with a request of this magnitude without a serious environmental impact study would be irresponsible. We need accurate data about how this could impact humans and wildlife.

Please put people, not companies, first. Access to clean, plentiful water is our most basic right.

Thank you,
Molly Moser

Sent from Gmail Mobile

Fields, Chad <[redacted]>

Pattison Water Increase

1 message

Sadie Hefel <[redacted]> Thu, May 1, 2025 at 5:06 PM
To: [redacted]

I am NOT in support of this for our community needs. Water is essential to everyday life- using it to wash sand for personal profit and not paying a dime for it.

Mostly I am mostly concerned with that amount of water being used. We need that for our households.
Please deny this request!

Thank you
Sadie Hefel LMT, CYT
Divine Current Wellness
www.divinecurrentwellness.com

Fields, Chad <[redacted]>

Pattison water withdrawal request Log #33483

1 message

Larry Stone <[redacted]> Mon, Mar 24, 2025 at 5:36 PM
To: [redacted]

Mr. Fields:

I request a public hearing in Clayton County regarding the Pattison Sand Company intent to modify a permit to increase withdrawals and sources of water for dewatering and processing purposes in Clayton County, Iowa.
Applicant's log number 33,483

The public needs the opportunity to be better informed, and to comment on, a water permit of this magnitude.

Thank you!
Larry

Larry A. Stone
23312 295th St.
Elkader, IA 52043
563-245-1517
cell 563-419-6742
[redacted]
http://www.LarryStonesIowa.com

Fields, Chad <[redacted]>

permit #9126

1 message

Laura Yindra <[redacted]> Fri, Jun 13, 2025 at 9:18 PM
To: "[redacted]" <[redacted]>

Please deny Pattison Sand Company's request for increased water usage.

I live in Marion Iowa.

Fields, Chad <[redacted]>

permit #9126

1 message

Laura Yindra <[redacted]> Fri, Jun 13, 2025 at 9:18 PM
To: "[redacted]" <[redacted]>

Please deny Pattison Sand Company's request for increased water usage.

I live in Marion Iowa.

Fields, Chad <[redacted]>

please deny Pattison Sand Company's request to increase water use

1 message

Larissa <[redacted]> Tue, Jun 10, 2025 at 8:24 AM
To: "[redacted]" <[redacted]>

Dear Mr. Fields

I am writing in regards to Pattison Sand Company's request to nearly quadruple the amount of water it uses, permit #9126. I ask in no uncertain terms that you deny this permit. Overuse of the Jordan Aquifer would ultimately cause the water table will drop, requiring deeper and more expensive wells to access remaining water. Surface water levels in rivers and streams will also be affected. Water scarcity could impact agriculture, leading to reduced crop yields and potential economic losses. Additionally, communities could face increased water costs and conservation measures. Economic development and job growth would be restricted with water access is reduced. This dystopian outlook is not a situation that any Iowan wants for current and future populations of this state.

The Jordan Aquifer is already being drawn down in some areas of the state faster than it can recharge. This is why it is absolutely imperative that you deny Pattison Sand Company's request for increased water usage.

Thank you for your consideration in this highly important matter.
Larissa Boeck
Cedar Falls

Fields, Chad <[redacted]>

Please Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

[redacted] <[redacted]> Tue, May 6, 2025 at 11:46 AM
To: [redacted]

Dear Iowa DNR Officials,

Regarding log number **33,483,** I urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from two Mississippi River alluvial aquifer wells, two Jordan aquifer wells, one mine pond intake, one Mississippi River intake and two proposed quarry/rail track dewatering basins. The company's intent to export this precious resource out of state is not in the public interest.

The state geologist and other qualified experts have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa

The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,

Marcia L. Cordts, Ph.D.

Oxford, Iowa

Fields, Chad <[redacted]>

Re: Clayton county public meeting

1 message

Steve Veysey <[redacted]> Mon, May 18, 2026 at 12:10 PM
To: Chad Fields <[redacted]>, "Stone, Carmily" <[redacted]>, "McDaniel, Lori [DNR]" <[redacted]>
Cc: Greg Kelley Glawe <[redacted]>, MJ Smith <[redacted]>, Larry Stone <[redacted]>, eugene wehrheim <[redacted]>, [redacted], [redacted], Kay Vifian <[redacted]>

Hello Chad,

On April 7 you responded to Kay that a public review of the IGS report on Pattison Sand water withdrawal might happen in May. I received that report from you on March 17. Has the meeting been scheduled yet? Please keep me on your contact list for all activity related to the Pattison Sand water use permit. Thanks. My initial review of the IGS report was sent to Kay and others some time ago. Here are some of my observations regarding the report.

> It's good work by the IGS, as far as it goes, and the bottom line is that IGS presents three pump/recharge scenarios. I'm summarizing them, but they are described in detail in the *Predictive Aquifer Modelling* section beginning on page 19 and then the *Regional Impacts to Water Sources* beginning on page 24.
>
> **Scenario1 would cause serious impacts to wells as far west as Garnavillo.** Scenario 2 assumes significant and almost instant recharge from the Mississippi. Impacts on local wells would be moderate and would be minimal at Garnavillo. Scenario 3 assumes significant and almost instant recharge from the Mississippi and less actual "new" water withdrawal at the site. Impacts on local wells would be minimal and no impacts at Garnavillo.
>
> While IGS conceptually favors Scenario 2 or Scenario 3 as likely, t**hey affirm that they have no data to refute Scenario 1**, which would be extremely damaging. The drawdown study they did perform (Figures 9 and 10) showed **no evidence to reject Scenario 1 or support Scenario 2 or 3.** They assert that the study was not extensive enough to differentiate Scenarios 1, 2, and 3. They suggest various additional studies that could be done. In my opinion, most of those studies could have been required of Pattison when the permit was last expanded in 2019. DNR has that authority in all situations. As I recall, DNR's protocol pertaining to high capacity well withdrawal, requires those studies.
>
> IGS does not believe that drawdown at Pattison from the Cambrian Ordovician (C-O) strata will affect springs or water levels in small feeder streams, a major concern of mine since it would affect algific talus slopes and possibly the Buck Creek trout stream. The assumption in the report is that if those springs and small streams are sourced from the Galena formation, and do not penetrate the C-O strata, the impact would be minimal. They have not presented specific information about the strata present at the documented AT sites just west of Pattison or at Buck Creek, but the Figure 5 and Figure 6 projections suggest springs and seeps and Buck Creek are in the Galena strata or the D/P/G aquitard, so might not be affected substantially by the withdrawal.
>
> There is no statement in the report that IGS consulted with Fisheries about Buck Creek, or with USFWS about the algific talus slopes.
>
> Although they summarize well information and potential drawdowns for the three scenarios for more than 100 wells, there is no statement that they queried these well owners about well issues experienced but not reported post the 2019 permit expansion.

In my opinion, this report confirms the immediate need for strict well monitoring protocols and significant conditional limits on the Pattison Sand water withdrawal at this site. The request for an increased withdrawal should not be granted until there is a scientifically defensible body of measurements to preclude Scenario 1 and properly quantify the nature of Scenario 2 or Scenario 3.

Best Wishes,

Steve Veysey

Protecting Outstanding Iowa Waters

Ames, IA

On Tue, Apr 7, 2026 at 4:17 PM Kay Vifian <[redacted]> wrote:

---------- Forwarded message ---------
From: **Fields, Chad** <[redacted]>
Date: Tue, Apr 7, 2026 at 2:36 PM
Subject: Re: Clayton county public meeting
To: Kay Vifian <[redacted]>

Hi Kay,

We are still working on setting a date for the public meeting, likely will be May now. I'll let you know as soon as we nail down the location and time. Garnavillo is definitely on the list of possibilities.

Thanks,

On Mon, Apr 6, 2026 at 2:20 PM Kay Vifian <[redacted]> wrote:

> Hi Chad,
> I am wondering if you know when the meeting to discuss the Environmental Impact study results will be scheduled? I was thinking you said early April. If you have any interest in holding it in Garnavillo, please let me know.
>
> Thank you,
> Kay Vifian

--
Chad Levi Fields
Geologist III
Water Supply Engineering Section
Department of Natural Resources
6200 Park Ave, Suite 200
Des Moines, IA 50321
ph. 515-725-3407
[redacted]
www.iowadnr.gov

Fields, Chad <[redacted]>

Re: Current Pattison Sand permit comments

1 message

Steve Veysey <[redacted]> Sat, May 3, 2025 at 9:18 PM
To: "Wateruse, DNR" <[redacted]>, Chad Fields <[redacted]>, "Stone, Carmily" <[redacted]>

Hello,

CORRECTION

In the comments regarding Draft Permit 9126-M4 log# 33483, I refer on page 11 several times to "radon levels". That is incorrect. I am presenting "radium levels".

Radium and radon are both radioactive and can cause harm, but their toxicity differs. Radium, when ingested, can accumulate in bones, potentially leading to bone cancer and other health issues. Radon derives from the decay of radium. As a gas, it is primarily a respiratory hazard, increasing the risk of lung cancer when inhaled over time.

EPA has set the action level for radon at 4 pCi/L in ambient air, with the caveat that there are no safe levels for radon. The EPA MCL level for radium in drinking water is 5pCi/L. The Garnavillo wells were measured near and above 3 pCi/L in 2023 testing. This is a situation where the precautionary principle applies.

Please attach this correction to my comments. Thank you.

Steve Veysey

On Wed, Apr 23, 2025 at 11:11 AM Steve Veysey <[redacted]> wrote:

> Hello,
>
> I am attaching a copy of the written comments I gave to Mr. Fields last night at the public hearing in Elkader. I may submit additional public comments as more information becomes available to me or additional arguments develop.
>
> There is more information I wish to obtain. Should I file an Open Records request, or request the information directly from you as part of the on-going public process? Please notify me of additional meetings or hearings on this topic, and any public comment timeline decisions. Thank you.
>
> Respectfully,
>
> Steve Veysey

IOWA

Fields, Chad <[redacted]>

RE: Pattison Application log#33483

1 message

Gary Siegwarth <[redacted]> Fri, May 30, 2025 at 12:38 PM
To: "[redacted]" <[redacted]>

Dear Chad,

Thanks for the opportunity to provide comment on Pattison Sand's application to increase withdrawal of water from the Jordan Aquifer.

After nearly 25 years managing Big Spring Trout Hatchery and living next to Iowa's largest coldwater spring, which supplies water to the hatchery, I have become well acquainted with the impacts and importance of groundwater. In the case of Big Spring, which is a shallow water aquifer, we know quite a bit about it's watershed, recharge rate, impacts from surface water contamination, and below surface travel rates, from years of research and mapping.

When it comes to the much deeper and uncontaminated (yet) Jordan Aquifer, and Pattison Sand's permit application to pump out 4,000,000,000 gallons annually, we know much less. What I do know (or think I know), is the water of the Jordan is very old, with some estimates ranging from ten to hundreds of thousands of years old, suggesting a slow or nonexistant recharge process, with little or no information on exactly how that happens or at what rate. Clean uncontaminated drinking water seems very difficult to find in Iowa outside of the Jordan because most of our other more easily accessible sources have already been contaminated or have dried up since European settlement. This leaves the yet uncontaminated Jordan Aquifer as possibly the most valuable public resource on the planet, and quite possibly the most valuable resource in the universe.

With all the unknowns, coupled with the relative value of this resource, it would seem unwise to simply give away this valuable public resource in this quantity even if the only consideration was that availability of a long-term clean and dependable drinkable water source is more valuable than sand, or for a private entity to be looking to profit millions from a limited free and relatively unknown public resource. At the very least, there should be a charge for wasting that amount of water (.05 per gallon?). This fund could go back into Jordan Aquifer research leading to more informed decisions related to it's rapid withdrawal by for-profit commercial, agricultural or ethanol entities across the state. It would also lead to wiser and more efficient use of that resource rather than considering it a free and unlimited resource for the taking.

Thanks for your time Chad, and I look forward to learning more about the possible impacts or concerns related to the Jordan Aquifer and the Pattison Sand permit application.

Gary Siegwarth

Fields, Chad <[redacted]>

RE: Pattison Sand Co water request, Log No. 33,483

1 message

Candice Brandau Larson <[redacted]> Fri, Apr 25, 2025 at 7:36 PM
To: "[redacted]" <[redacted]>

Mr Fields,

I strongly encourage the DNR to deny Pattison Sands request for more water.

Pattison is clearly planning to ship OUR WATER away to sell it to other states. Why would they need 3.7 billion gallons of water when they aren't using all the water currently permitted.??

I can't believe the DNR would actually consider this permit when Iowa is in an ongoing DROUGHT.

Wake up and realize this is not a resource that is endless before it is to late.

Candice Brandau Larson
Floyd County IOWA

IOWA

Fields, Chad <[redacted]>

Re: Pattison Sand Co. request for water withdrawal, Log. No. 33,483

1 message

James Hefel <[redacted]> Wed, Apr 23, 2025 at 3:01 PM
To: [redacted]

Good afternoon,

I am requesting that this permit be denied due to insufficient justification on the part of Pattinson Sand for the use of this water. There is also insufficient investigation for the DNR as to how this request, if granted, would affect local water distribution. There is, however, documentation stating that the request would negatively impact the city of Garnavillo's public and private sources. The fact that negative impacts are predicted in at least one area should be cause in itself to reject the request. Iowa has already been experiencing drought the past several years. This request would only exacerbate it in at least the city of Garnavillo, and likely elsewhere. We should instead be focusing on determining how much water we have as a state, how quickly it's depleting vs being replenished, and work on preserving the quality of our water. We should be more selective of permits such as these and in this case, it should not be granted.

Thank you for reading.

Sincerely,
-James Hefel
Cedar Rapids

Fields, Chad <[redacted]>

Re: Pattison Sand Co. request for water withdrawal, Log. No. 33,483

1 message

Hogg <[redacted]> Wed, Apr 23, 2025 at 7:30 PM
To: [redacted]

Re: Pattison Sand Co. request for water withdrawal, Log. No. 33,483

Please protect our aquifer for the common good. Our water is a precious resource. Why is Pattison requesting so much more water when it is not using up to the current limit? The current limit appears to be sufficient. Please do not quadruple the allowable water use.

Kate Hogg
2750 Otis Rd. SE
Cedar Rapids IA 52403

Fields, Chad <[redacted]>

Re: Pattison Sand Co. request for water withdrawal, Log. No. 33,483

1 message

Chelsea Cozad <[redacted]> Mon, Apr 28, 2025 at 8:55 PM
To: [redacted]

Hello,

I hope it is not too late to submit a comment about this issue. As a lifelong Iowan citizen, I do not approve of permitting Pattison Sand Co. to withdraw their most recent request of 3.7 billion gallons of water from the Jordan Aquifer (or *any* aquifer). Much of the state has been in a drought for the past several years, and due to changes in the hydrology of the state, aquifers are likely not recharging as quickly as they are being withdrawn from. In a class I took at the University of Iowa one of my professors told us that one of the aquifers we rely on for water is dropping by about one foot per year. That is horrifying. Please consider denying Pattison Sand Co.'s permit in order to conserve Iowa water for Iowans' needs.

Thank you,
Chelsea Cozad
resident of North Liberty, Iowa, 52317

Fields, Chad <[redacted]>

Re: Pattison Sand Co. request for water withdrawal, Log. No. 33,483

1 message

Laura Elsinger <[redacted]> Fri, May 2, 2025 at 11:07 AM
To: [redacted]

I live in rural Garnavillo, Clayton County, Iowa. I am writing to strongly protest the proposed permit to Pattison Sand for drawing billions of gallons of water from ponds, the Jordan Aquifer, and the Mississippi River for unspecified mining activities. The DNR hosted an informational meeting on April 22, 2025 at the Clayton County Office Building regarding this permitting process, which I attended. What was offered was woefully inadequate. There was no information. It appeared to be just a way to checkmark a box for the State of Iowa.

My most fundamental objection is that, per Iowa law, Iowa's groundwater is for the people of Iowa. The scientific impact studies have not been done to determine how pumping such an unthinkable volume will affect the availability and safety of well water nearby, nor how far away the potential impact could be, considering that two-thirds of Iowas rely on the Jordan Aquifer for their water. Furthermore, how far into the future might the impact extend? Without these questions addressed, we have only to rely on what is reasonable based on what has happened at other locations with parallel undertakings and also on common sense. The Jordan Aquifer is already providing water at a lower and lower pressure from the current usage. The proposed commercial usage would increase that detrimental impact many times over.

And there is no realistic path to accountability. Several local residents in that meeting shared how they have tried and tried to get Pattison to even reply to their well water issues, much less make amends. They have a shameful track record in dealing fairly with their neighbors. And even if they had a change of heart, since we don't know how far away could be impacted by this operation, an adverse effect could be easily dismissed as due to some other cause. And furthermore, consider the young farmer who takes over the operation from Mom and Dad. They don't know why the well went dry, even if it is ultimately the result of this pumping undertaking, begun years before. There is a disconnect through time.

Clayton county is poor financially, but rich in natural resources and with a farming way of life that has supported the people for generations. Do not sell this land and this life to a company that is ravaging the landscape to extract materials that support a limited resource. Fracking will eventually go away, not necessarily because of mindset or policy change, but because the petroleum resource will - must - eventually run out. Do not allow this land and its residents to be sacrificed for the short-term gain of one company.

Sincerely,
Laura Elsinger
[redacted]
27269 Jigsaw Rd.
Garnavillo, IA 52049

IOWA

Fields, Chad <[redacted]>

Re: Pattison Sand Co. request for water withdrawal, Log. No. 33,483

1 message

Christopher Schoen <[redacted]> Fri, May 2, 2025 at 11:09 AM
To: [redacted]

To the Individuals charged with preserving Water Quality at the Department of Natural Resources:

I am a resident of Clayton County, Iowa with a rural home about 1 1/2 miles southwest of the City of Garnavillo. I am writing to strongly protest the proposed permit to Pattison Sand for drawing billions of gallons of water from extant ponds, the Jordan Aquifer, and the Mississippi River for unspecified mining activities and other purposes.

I attended the information meeting held on April 22, 2025 at the Clayton County Office Building to learn about Pattison's reasons and intentions associated with their proposed water use permit. I was appalled, as were some 70 plus other attendees, that:
(1) no information was to be presented - not even through maps, charts, tables, or leaflets - to describe the scope of permit;
(2) no discussion of the permit was allowed with the DNR representatives;
(3) no representative of Pattison Sand was present to listen to the concerns of residents that would be impacted - positively or negatively - by the proposed drawdown;
(4) there was not indication at an Environmental Assessment had been performed and made available for review and comment by the Public, which I would expect is required given the U.S. Army Corps of Engineers (USACE) would be the federal permitting agency for water drawn from the Mississippi River;
(5) the 90-day comment period was nearly over prior to scheduling the "listening session", which strongly suggests an intentional effort to minimize opportunity for citizens to voice their interests (positively or negatively); and
(6) that the original public notice was published ONLY in the Calmar newspaper, well outside the normal circulation of residents who could be impacted by the permit, and not in ANY of the local newspapers or other media outlets.

While all of this might be technically legal, it does NOT follow the spirit of the law nor the INTENT of the regulations. The regulations and procedures were established to protect the interests, rights, and welfare of the greater Public, not ignore them.

Was there ever a Public Meeting at which the scope of the realistic impacts of the water drawdown? If so, why were EVERY SINGLE ATTENDEE at the April 22, 2025 meeting unaware of it? If such a meeting was held, the public attendance must have been extraordinarily small, which should have indicated that a subsequent, widely publicized second public meeting was necessary.

There are many unaddressed practical questions regarding the reasonably anticipated short and long-term effects of the proposed pumping of billions of gallons of groundwater, several of which were identified by various speakers at the April 22 meeting. I strongly urge the DNR to consider every one of them, collect the relevant information, and prepare a report of findings to be made available to the residents of Clayton County, Iowa for review and comment prior to authorizing the proposed permit.

The Attorney General of the State of Iowa should describe the appropriate procedures for issues such as:
(1) Payment to the residents of Clayton County and elsewhere across the State the fair market value of the water to be taken by Pattison. The resource is worth something - we all pay water bills or purchase bottled water.
(2) Compensation for loss of water in wells.
(3) Compensation for loss of income when livestock and crops are adversely affected by insufficient water.

Finally, I DEMAND that the DNR host another, widely advertised public meeting where the scope of the project is discussed and the DNR and Pattison Sand representative answer questions posed by the Public.

Sincerely,

Christopher M. Schoen
[redacted]
27269 Jigsaw Road
Garnavillo, Iowa 52049

IOWA

Fields, Chad <[redacted]>

Re: Pattison Sand Co. request for water withdrawal, Log. No. 33,483

1 message

Beth Ulbrich <[redacted]> Tue, May 13, 2025 at 7:02 PM
To: [redacted]

Dear Chad,

Please do not grant Pattison Sand Co any additional water from the Jordan Aquifer or the Mississippi River. With the droughts and low amounts of snow for the last several years we need to protect our water sources. I do not feel that Pattison is mindful of their use of water especially when they wanted a few years back to sell water from the Mississippi River/Aquifer to other states. We are fortunate to still have a good source of water but we should not waste the water for a company's further profits.

As you know Pattison currently has a permit to withdraw 976.8 million gallons of water per year for its mining operation. Most of this water comes from the Jordan Aquifer. They have yet to show they use the amount of water they are permitted to withdraw but now want to withdraw 3.7 billion gallons of water per year from several sources, including the Jordan Aquifer. The water will allegedly be used for Pattison's mining operation. But the application does not explain why almost four times the amount of the current withdrawal limit is necessary for the mining operation. This is especially puzzling when Pattison's water withdrawal records show that Pattison has not even been using as much water as allowed by its present permit.

PLEASE DO NOT ALLOW THIS TO HAPPEN. The city of Garnavillo will be impacted the most with a possibility of WELLS and The City water not only to be contaminated but severely impacted!!!

Iowa Code Section 455B.262 establishes the basis for how the DNR must evaluate permit applications, "The general welfare of the people of the state requires that the water resources of the state be put to beneficial use which includes insuring that the waste or unreasonable use, or unreasonable methods of use of water be prevented, and that the conservation and protection of water resources be required with the view to their reasonable and beneficial use in the interest of the people."

Please Protect this VITAL Resource!

Sincerely,
Beth Ulbrich
563-880-4685

Fields, Chad <[redacted]>

Re: Pattison Sand Co., request for water withdrawal, Log. No. 33,483

1 message

Linda Simonton <[redacted]> Thu, Apr 24, 2025 at 11:11 AM
To: [redacted]

Pattison's permit request should be denied. Iowa is in a drought with no end in sight. Production of sand for fracking is not a justification putting Iowa's water supply at risk. There are no grounds for the DNR to support this. Your job is to protect Iowans, not Pattison.

Linda Simonton

Fields, Chad <[redacted]>

Re: Pattison Sand Company

1 message

Nels Dovre <[redacted]> Wed, Apr 23, 2025 at 2:50 PM
To: "[redacted]" <[redacted]>

My position: This company needs to pay their fair share for our water that they use.

What is your position?

Who else would it be meaningful for me to contact before this decision is made?

Thank you for your time and conservation.

Our natural resources are our greatest wealth,

Nels Davig Dovre
319.331.7368

Fields, Chad <[redacted]>

Re: Pattison Sand Water Permit and neighboring water usage.

1 message

Rich Kann <[redacted]> Wed, Apr 23, 2025 at 1:48 PM
To: [redacted]
Cc: [redacted]

> Brad, Chad
>
> First off thank you for at least hosting a meeting last night in Elkader Iowa about the Pattison Sand water permit. While I was in attendance it gave me some time to capture others opinions, thoughts, questions and comments.
>
> I am writing about my concerns and objections to the increase of the water withdrawal permit for Pattison Sand. Within 3 miles of Pattison sand we either own, rent, or lease out property and have 6 wells and over 40 sand points in that area. The water is used for my family, for our renters that come up to northeast Iowa - Frenchtown to enjoy their cabins with their family and have been coming up for generations, and for our livestock and agricultural operations.

We work hard to improve everything we do in every way possible, to be the best stewards of the land that we can be, and to leave the land better than we found it. We work to improve the water quality in every agricultural practice we implement.

I never fought the opening of the mine or the expansion of the mine as I believe in business success and that they are entitled to do with the land that they own or lease as they want but when it comes to the most valuable(or undervalued) resource that we have and something that could significantly affect our lives and so many others as well as our business I am going to fight and disapprove.

Can there be any guarantees that it will not affect any of my (or everyone's) water resources? Who pays for the drilling of new wells if it does? What about the 5, 10, 20, 50 year outlook? Who pays for the investment we have lost without water?

You do not know the value of water until the well has run dry and that proverb could not be more meaningful at this moment.

Sincerely
Rich Kann

Fields, Chad <[redacted]>

RE: Water Withdrawal Permit

1 message

Kyle Pattison <[redacted]> Fri, May 2, 2025 at 7:00 AM
To: Sarah Dugan <[redacted]>, "[redacted]" <[redacted]>, "[redacted]" <[redacted]>
Cc: Carl Orr <[redacted]>, "[redacted]" <[redacted]>, Company <[redacted]>

All,

If you would pass on my thoughts – review of our request and the public meeting.

I was at the public meeting and should have spoken to help other better understand.

If we did not pump the water we use, it would end up in the Mississippi River in a short time.

If we did not pump, at times our rail tracks would be under water.

All of the water we use goes back into the ground and or is pumped into a creek that runs into the Mississippi River, other than the water that evaporates.

With this our impact on ground water and the river is very little.

From past pump tests and observations, draw down will not impact any wells including our own.

Much of the water pumped is from rain water and our own previously pumped water. This is because we are for the most part all internally drained.

The reason for the request of additional water to be pumped is to quarry limestone below the water table. There is a massive flow of water in this area and this much water may be needed to dewater the quarry.

We employ 175 people from the area. Being able to pump water as needed is important to all of us.

I apologize for not doing a better job of informing the public.

For those that would like me to explain in more detail, we can set a date to meet in person at our site during a weekend. If you have interest, leave your name and number at 563-964-2860 and what days of the follow would work at 8am to meet at Mississippi Road our driveway. 5/10, 11, 17 or 18.

Thanks,

Kyle

Article in Gazette was pretty accurate – thanks.

I was not able to read the other.

If you have question - your welcome to call me at 563-880-1013.

From: Sarah Dugan <[redacted]>
Sent: Thursday, April 24, 2025 9:16 AM

To: Kyle Pattison <[redacted]>
Cc: Carl Orr <[redacted]>
Subject: FW: Water Withdrawal Permit
Importance: High

Kyle,

As we talked about on the phone last night, here is the email from a local paper asking about the water permit.

Thanks,

From: Times-Register <[redacted]>
Sent: Wednesday, April 23, 2025 3:12 PM
To: info <[redacted]>
Subject: Water Withdrawal Permit

Hello,

I am reaching out regarding Pattison Sand Company's request to modify a permit in order to increase water withdrawals. The application states the water will be used for the quarrying and production of silica sand, including dewatering of the mined formation and in the quarry/rail track dewatering basins. Would the company be willing to provide more details? Is there an increase in production or change in operations that necessitates more water? How would operations be affected if the water increase is not approved?

Thank you for your consideration.

Audrey Posten

Editor, North Iowa Times-Clayton County Register

P.O. Box 512 | 220 Main St., McGregor, IA 52157

Phone: (563) 873-2210 | Email: [redacted]

www.times-register.com

Facebook: Times-Register

Instagram: @times_register

Fields, Chad <[redacted]>

Reject Pattison Sand Company's permit modification request

1 message

Kate Cowles <[redacted]> Wed, May 7, 2025 at 1:11 PM
To: "[redacted]" <[redacted]>

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Mary Kathryn Cowles
Coralville, IA
[redacted]

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

Beth Bryce <[redacted]> Tue, May 6, 2025 at 7:07 AM
To: [redacted]

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Beth Bryce
Iowa City, IA

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

Jason Millsap <[redacted]> Tue, May 6, 2025 at 8:34 AM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Jason Millsap
Coralville, IA

--
Jason Millsap (he/him/his)
Cell: (319) 541-5392

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

Joe Barry <[redacted]> Tue, May 6, 2025 at 8:35 AM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,

Joe Barry
2050 Forest Hill Trace
Coralville, IA. 52241
319-855-2759

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

[redacted] <[redacted]> Mon, May 12, 2025 at 7:15 PM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Nancy Davin

1402 Compton Pl

Iowa City, IA 52240

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

Tom Blum <[redacted]> Tue, May 6, 2025 at 9:28 AM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Thomas Blum
Iowa City, IA
Sent from my iPhone

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

Chelsea Sims <[redacted]> Tue, May 6, 2025 at 4:20 PM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts, including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,

Chelsea Sims
Iowa City, IA

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

Julie Damiano <[redacted]> Wed, May 7, 2025 at 7:05 AM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,

Julie Damiano
1470 Grand Ave
Iowa City, IA 52246

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

[redacted] <[redacted]> Wed, May 14, 2025 at 8:51 AM
To: "[redacted]" <[redacted]>

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits. Do not allow private corporate interests to exploit and extract Iowa's natural wealth which you are ethically, morally, and legally charged to protect in the public interest.

Sincerely,
David G. Gerleman
Swisher, IA 52338

IOWA

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

Amy Green <[redacted]> Tue, May 20, 2025 at 9:56 AM
To: [redacted]

Dear Iowa DNR Officials,

I am writing to you concerning log number 33,483, to express my strong opposition to the permit modification requested by Pattison Sand Company. They are seeking approval to withdraw water from multiple sources, including two Jordan Aquifer wells, with the intention of exporting it out of state.

This proposal is not in the public interest. The Jordan Aquifer is a finite, ancient resource that takes thousands of years to replenish. It supports numerous communities across Iowa, including Johnson County, and plays a vital role in ensuring water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts, including the state geologist, have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize the supply for homes, farms, and municipalities across eastern Iowa.

The aquifers impacted by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Amy Green
108 Carmi-Pat Dr
Lone Tree, IA

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

Joe Barry <[redacted]> Thu, Jun 5, 2025 at 4:58 AM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Thank you,

Joe Barry
Coralville, Iowa
319-855-2759

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

laura zieglowsky <[redacted]> Tue, Jun 3, 2025 at 7:59 AM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

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I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Laura Zieglowsky, PhD

Fields, Chad <[redacted]>

Say No to Pattison Sand Permit

1 message

Darla Ellickson <[redacted]> Wed, Apr 23, 2025 at 9:00 AM
To: [redacted]

Hello,

I am asking you to say NO to the Pattison Sand permit asking to increase their water draw for personal profit.

Regards,
Darla Ellickson

--
Darla Ellickson
Ellickson Jewelry Collection Studio & Gallery
3175 Middle Sattre Rd.
Decorah, IA 52101-7416
563.382.2295
<><><>
www.earloops.com
Creator of quality contemporary designs
in silver and gold... since 1979
<><><>
Ellickson Organics
Organically grown farm in the scenic driftless area of NE Iowa, with fruit trees, garlic, asparagus, aronia berries, shiitake and oyster mushrooms.
<><><>
Northeast Iowa Artists' Studio Tour (NIAST INC.), Director
www.iowaarttour.com

Fields, Chad <[redacted]>

Say No to Pattison Sand Permit

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Darla Ellickson <[redacted]> Wed, Apr 23, 2025 at 9:00 AM
To: [redacted]

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www.iowaarttour.com

IOWA

Fields, Chad <[redacted]>

Say No to Selling our Water

1 message

Walke, Brett <[redacted]> Wed, Apr 23, 2025 at 10:17 AM
To: "[redacted]" <[redacted]>

Hi Chad,

It is with kindest regards that I ask you to say NO to allowing private companies selling our well water for profit outside of the state.

I live outside of Garber, IA and rely on quality well water for my family and our homestead.

The future is uncertain, you never know how much rain we will get in the years to come. It seems unfeasible that the Department of Natural Resources would allow a private company to abuse one of our most precious resources, clean water!

The DNR has many rules and regulations that I may not necessary agree with, but this one seems like a no brainer compared to other policies!

Again, please do not allow Pattison Sand Co to sell any more of our precious water!

Thank you!

Brett Walke

Principal, Software Security Group

Application Management Services (AMS), MMC Tech

Marsh McLennan

www.mmc.com

other purpose without our prior written consent.

Fields, Chad <[redacted]>

Selling Of Our State's Natural Resources

1 message

Xavier Jiacinto <[redacted]> Fri, May 2, 2025 at 2:30 PM
To: [redacted]

Good afternoon,

Earlier today I read an unsettling report that showed a plan for a company, Pattison Sand Co. of Clayton, to sell roughly two billion gallons of Iowa groundwater to other states every year.

I question the ethics and safety of such an operation, especially since our groundwater is vital to so many rural communities and homes. I live in the countryside, and I can tell you, without our well water we would not be able to live here.

As a resident of Iowa, specifically Linn County, there's no debate that the farming industry has irreversibly changed the local ecosystem of our state in the last century. One of the many consequences of that is the continued pollution of our land and water ways due to excessive chemical pesticides and animal waste.

Iowa already has multiple alarming environmental issues that need to be addressed and dealt with. Why then, would it be in any Iowan's best interest to export our State's limited supply of relatively clean groundwater?

I'm frustrated and fearful of the consequences this out-of-state business proposal could cause our already hurting state. I hope that you can address this issue, or at least pass on my concerns to those in decision making positions.

Please think of our continued well-being,

Xavier Jiacinto

Fields, Chad <[redacted]>

Subject: Log Number 33, 483

1 message

Melissa Arp <[redacted]> Fri, May 16, 2025 at 8:51 AM
To: "[redacted]" <[redacted]>

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Melissa Arp
Iowa City
221 Taft Ave, Iowa City, IA, 52245
319-594-1298

IOWA

Fields, Chad <[redacted]>

Subject: Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

laura zieglowsky <[redacted]> Tue, May 20, 2025 at 8:01 AM
To: [redacted]

Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Laura Zieglowsky
Iowa City

Fields, Chad <[redacted]>

Urgent Request to Deny Pattison Sand Permit to Export Iowa Groundwate

1 message

Smith <[redacted]> Tue, May 6, 2025 at 4:21 AM
To: [redacted]

Dear Mr. Fields,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa. It's treating the gifts of this earth given by God as commodities rather than precious resources to be carefully tended.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Lisa Smith
North Liberty, Iowa
319-743-8484

Fields, Chad <[redacted]>

Water issues

1 message

Melanie Alberts <[redacted]> Tue, May 6, 2025 at 7:34 AM
To: [redacted]

Hi -

There has to be another way to help Western Iowa's water issues rather than turn both eastern and western Iowa into drought stricken desserts. The DNR has changed greatly in the last 5 years and while I appreciate all you do with limited resources, it's time to be fair and not make one problem, two.

Respectfully,

Melanie Alberts
Iowa City

Fields, Chad <[redacted]>

Water permit for Pattison

1 message

[redacted] <[redacted]> Fri, Apr 25, 2025 at 10:10 AM
To: [redacted]

Mr. Fields,

The application for a water permit of 3.7 billion gallons of water per year for Pattison Mining should be denied. If you grant this permit, you are basically stealing the water from the rightful owners of this water "THE PEOPLE OF IOWA" to increase the profits of a large corporation over the needs of Iowans. In the paperwork I saw, Pattison doesn't have to prove their use of the water while a city in Iowa "Garnavillo" and the surrounding residents would have to prove that it will adversely affect them... so, when they run out of water--they will be able to prove their point-- but the water will be gone!

Iowa Code Section 455.265 gives the DNR the authority to issues permits for the withdrawal of water from the ground water. Iowa Code Section 455B.262 establishes the basis for how the DNR must evaluate permit applications. "THE GENERAL WELFARE OF THE PEOPLE OF THE STATE" It is not in the best interest of the people of Garnavillo to have their wells run dry or the rest of the residents of Iowa to have this huge draw taken from the aquifer that provides water for a large portion of the state.

I have sent emails to the Legislators that sponsored Bill HF480 renumbered as HF861 and asked that the bring this bill to vote and have explained the nature of this request that was made by Pattison.

PLEASE protect the water resources of Iowans! Put people over Profits!

Roxanne Jackson

Hanlontown, Ia

[redacted]

Fields, Chad <[redacted]>

Water permitting Patterson Sand and Summit LLCs

1 message

Deb Freeman <[redacted]> Fri, Aug 22, 2025 at 6:41 AM
To: [redacted]
Cc: Deb Freeman <[redacted]>, Lisa Ritzert <[redacted]>

I have concerns about the amount of water being requested by various mega private companies .
*What is the total amount of water in the Jordan Aquifer under Iowa?
*What is the total amount of water in the Devonian Aquifer under Iowa?
*Private companies that use more than the average household use of 100 gallons a day, should PAY a price per gallon for water use.

It is important to know the amount of water in the Aquifers before it is taken from Iowa!

We have just come out of a severe drought. Water connects all people in our state, the lack of it will also!!
Debra Freeman

Fields, Chad <[redacted]>

Water withdrawal limits

1 message

Jennifer Pohl <[redacted]> Fri, Apr 25, 2025 at 6:19 AM
To: [redacted]

I do not think we should be sending our limited water supply elsewhere, at the very least without charging for it. Please give this more consideration before signing off on this. Thank you

Fields, Chad <[redacted]>

Water

1 message

Fuortes <[redacted]> Tue, May 20, 2025 at 9:31 AM
To: [redacted]

Subject: Request to Deny Pattison Sand Permit to Export Iowa Groundwater

Dear Iowa DNR Officials,

I am writing in regard to log number 33,483 and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

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Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely
Sue Fuortes
1119 E Court St
Iowa City, IA

Sent from my iPhone

IOWA

Fields, Chad <[redacted]>

Request to Deny Pattison Sand Permit to Export Iowa Groundwater

1 message

Julia Wasson <[redacted]> Mon, Jun 2, 2025 at 8:38 PM
To: [redacted]

Dear Iowa DNR Officials,

I am writing in regard to log number **33,483** and to urge the Iowa Department of Natural Resources to deny the permit modification requested by Pattison Sand Company to withdraw water from multiple sources—including two Jordan Aquifer wells—with the intent to export it out of state.

This proposal is not in the public interest. The water in the Jordan Aquifer is a finite, ancient resource that replenishes only over thousands of years. The aquifer supports countless communities across Iowa, including Johnson County, and plays a critical role in maintaining water security for future generations. Exporting more than 2 billion gallons per year for commercial sale—especially without full transparency about the recipients or long-term impacts—poses an unacceptable risk to Iowa's environmental and public health.

Experts including the state geologist have raised serious concerns about this application. The scale of the proposed withdrawal would match nearly all of Polk County's annual water usage and could jeopardize supply for homes, farms, and municipalities across eastern Iowa.

The aquifers affected by this permit are shared resources, not commodities to be sold for private gain at public cost. Approving this application would set a dangerous precedent and potentially undermine decades of responsible water stewardship in Iowa.

I strongly urge you to reject Pattison Sand's permit request and prioritize the long-term sustainability of our water resources over short-term corporate profits.

Sincerely,
Julia Wasson
Iowa City, IA
319-541-7653

Bradley Adams: Alright everybody, if I could have your attention. We're gonna go ahead and get started. So, this public hearing is held for DNR to receive public comments for the Water Use Permit number 9126. DNR will not be making a statement tonight, or taking any questions, however feel free to forward any questions, by email or phone call, that you might have following this meeting. As you can see here tonight, it looks like we have well over 50 people, and we are scheduled until 7 o'clock. We're not gonna hit that 7 o'clock deadline, there's too much to do, so we are asking everyone to limit their comments to two minutes per comment, hit your highlighted points and then you can submit any materials, anything else like that, to us electronically, or through hard mail. If anybody feels like they didn't get a fair chance to speak and say everything that they wanted to say we are willing to hold a second hearing, perhaps virtually, so that everybody has as much time as they feel they need to talk, just reach out to us and we'd be willing to make those accommodations for you. With that we'll go ahead and get going, I think what we're gonna do is start off going left to right in the front row, anybody who wants to comment, move back to the second row, and do that as appropriate.

Chad Fields: And we are recording, so.

Unknown 1: Can you tell us who you are and what your positions are?

BA: Yes, I'm Bradley Adams, I'm the attorney for the Water Quality Bureau at the Department of Natural Resources.

CF: My name is Chad Fields, I'm a geologist with the Water Use Program at the Department of Natural Resources.

BA: I guess we're taking a few questions.

CF: And then also, state your name, so we have everybody name on this, but we do want to put in comments with names, and we're recording you, so state your name so we can link it up with the handwritten names on here.

BA: With that we can go ahead and get started, if we want to we can start in this row.

Ben Hoksch: I've got to get back to work here, we're burning prairies out here. I work on the land and I'm here to speak. I'm Ben Hoksch, I live in Elkader, I'm not in support of increasing the amount of water that they can be pumping out of the aquifer and the Mississippi. Iowa has enough water issues with surface tile, and wells, to start with. We're not recharging these aquifers and we don't have enough data to know whether or not this is a sustainable thing. There's people in here who's wells and springs are being affected by this. Iowa used to be at the forefront in conservation as a state, we've been slipping for a very long time, so this is something I'm not support of and we need hard science if people are gonna, if we're gonna be doing like this we need hard science to say it's okay. I also want to say that corporations shouldn't be allowed to pull water out of a public resource and not be charge for it. So, right now it's nearly a billion gallons and they're doing that for free, they're not being charged to pull this water out, this is our water. It's not their water to try and file lawsuits against the state to sell out west or to continue to mine these areas, we don't have a lot of it left in the state. So, I'm getting back to burning prairies, love you guys.

Kenny Slocum: And I'll keep it super short and sweet. My name is Kenny Slocum, I live in McGregor, I work in conservation as well, just to add to what Ben was saying, that's not their water, it's also not our water, four billion gallons is a lot, a lot of us will be dead by the time these impacts are still happening to everybody else, so I hope that's been taken into consideration. I hope the volume of people here, in this room, I know a lot of them, I know a lot of them here are not in support of this, I hope that's being taken into consideration as we move forward, or hopefully, don't.

Abby Turner (AT): So, I'm Abby Turner, sorry I'm a little nervous, I don't like speaking in front of crowds. But, so I live right across from Pattison Sand Company, and I am way down deep in the valley, so I can tell you, I don't know all the data, I don't know all the research, I haven't looked that up, but I can tell you, for farmers everywhere, you see your land, right, you see what happens to it, you know when your springs break loose in the spring, you know what order they do it. I used to have 10 plus springs running, consistently, all year long at my house. Now I'm down to one, one that feeds my pond, and my pond is at least two foot low, this year my well went dry. I've never had that happen before. So, I do know whether it's Pattison's fault or not, we don't have enough water, and I am way down low, I know a lot of you farmers are up on top, but I am seeing it, and what is happening at the first level of that. Also, I want to know who's holding Pattison's accountable? Because they told me when we industrialized that they were gonna test my well every six months, they called me, told me that, they came that week and they have never came again. So, who's holding them accountable, and yes, I saw, I read in the Gazette, that they were gonna test and see the levels of the wells, but who's gonna pay for my well when I have to dig it deeper, right? Because there's so many environmental factors that also affect our wells that, how are we gonna legally hold them responsible for the fact that they did this. I'm sorry, but I'm a little frustrated because I've been down there for 25 years and this is very impactful to my property, my family, my children, nobody has tested my well. And yes, I can call the county and do it for free, I

know that, but they said they were gonna do it, and nobody held them accountable to it, so who is gonna hold them accountable when our wells go dry?

Steve Latner: Yeah, Steve Latner, and I live right up over the hill from Abby, and the same thing, when they were gonna do that, there was, I think, three people came and put a GPS unit right on my well head, within an inch they told me, and they would be back and check it on a periodic basis. Have not seen anything since. I got ahold of Pattison's, I would call up and whoever answered the phone, okay, I'll put you on so-and-so, no, his inbox is full, whatever the hell that is, he'll call you back. Well one day, I get frustrated, nobody ever called, I called again, well he's on the road, well then give me his cell phone number, okay, so I called him, well I'm on the road right now, I'll call you when I get back to the office. Must be one hell of a long road trip, 'cause he ain't called back yet, four years ago. You know, and I'm worried too, it's the same way with our well, 43 years ago it cost me $18,000 to drill that well, what would that cost today? So, that's what I'm real concerned about.

Jane Metcalfe: I'm Jane Metcalfe, I'm a resident of Elkader, I would just tag onto what Kenny and Ben said. I don't have that knowledge, but I do know that it's been a dang dry winter, and we've had periods of drought, and I've talked to my friends, like are you concerned about this, no it's another nice day, what's filling our aquifer? How are those wells gonna get filled? And then to give someone three times as much free water as they're already getting? It's just, I'm opposed, simply opposed.

BA: Anybody else in the very front row? Back to the second row.

Phil Specht: Phil Specht, from McGregor. My concern is that we don't know how much water we have, where is this, there's not been any science of the aquifers in Clayton County, and my concern is the livestock industry. I spent about $20,000 to get water to pastures, to graze cattle correctly. My well, if it goes dry, what's gonna be the use of that land? It's, agriculture is a big business in this county and we need water for livestock. That's my statement.

Jim Larew: My name is Jim Larew, I'm an attorney, I represent the board of directors of the Driftless Water Defenders, a group started about 10 months ago by people who are concerned that the quality and quantity of water in the driftless area is at risk. Less than 10 months later we had more than 250 members who are involved in litigation in a number of places, sometimes against our friends at DNR. The people who belong to the Driftless Water Defenders believe that it is a fundamental right of Iowans to have access to clean water. A fundamental right, not yet formally recognized in the constitution of Iowa, but someday it will be, is a right that preceded all of us, and when you look at the journals of the people who first came to Clayton County you'll find them writing home, whether it be to eastern states or Europe, talking about the incredible abundance and clarity of Iowa's water. The water preceded us, it's our goal to keep it as a right. The statutes of the State of Iowa say that water is the wealth of the people, the wealth of the people, therefore if it's not protected it's going to be taken from those who's wealth it is. We believe that with the support of people the DNR will do a better job, this is a government of the people, by the people, for the people. When a question was asked who is accountable, I have a clue, we had litigation that involved a careful examination of the last Pattison Sand case, one in which they attempted to take water to the western part of the United States, who where threatened with drought. DNR never denied it, it simply didn't approve it, and the application was withdrawn, but in the meantime the emails from Mr. Pattison, he has a right to speak, but when we speaks to the government he says, dear Dan, that's the lieutenant governor of Iowa, dear first name, administrators of the DNR, and when he contributes money, which is his right to do, I count more than $9,000 to the governor who just said she's not gonna run again, and that's just where the contributions begin. There's a public here who's rights need to be respected, we hope the DNR will recognize the right and an admonition given to them by the administrative law judge reviewing their water use permit, when the department said it's only the quantity of water that counts, and the administrative law judge said no. It's the quality of water, it's the environment, it's not just the quantity of water that is at stake. We'll see, in this proceeding, if the DNR has taken the judges order seriously. Thank you.

BA: Anybody left in this section?

Kay Vifian: Hi, my name is Kay Vifian, my husband is over there by the door, we live very close to the sand mine, and through all of this it has seemed to us that if other people hadn't brought this to our attention this might have gotten approved without anybody knowing about it, because it came out in the Calmar paper, not anywhere here, and so luckily we were able to learn some more about it. And our concern is, like we heard from a few other people here, just the affect on the local wells, the municipalities, especially Garnavillo and Clayton, who draw from the same area of the Jordan Aquifer, and from what I understand, the quantity of water, even before this increase, what I read is that it creates a zone of depression, cone of depression, around that area that's being withdrawn from Pattison's, and no, at least I haven't seen it, to be able to tell us for sure, exactly where that cone is, and how much is affects, and that's just on the existing water removal right now. And so, if you all triple, quadruple, the amount of water that's gonna be

withdrawn, potentially, through this permit, it really causes concern for what that will do to the communities of Garnavillo, Guttenberg, Elk, not Elkader, but Clayton, and then all the private wells that are in that area, that water is withdrawn from. It's not just the quantity of water, but what I've read it's also the quality, and there's rising levels, and water testing in Garnavillo, increased radon in the water, and I know we have something that takes the radon out at our house, but you really have to think about what that's going to do to your water supply and the quality of the water, and it seems that there needs to be a lot more testing, requiring documentation of where the, how much water is coming out of each individual source, and when I looked at some materials I saw several of the things for the table was, like this particular well site, unable to determine, so I don't know how much oversight there is. That's just a big question for us, and I would, you know, we support the DNR, but we really would like to see more oversight and feedback to the communities that are going to be affected by this permit, if it would be approved, and it seems like, to go from, you know, what it is now to that huge increase, without any other possible checking after so much is out, and see what's happened, it doesn't make sense to us, and so that's my feeling.

BA: Anybody else in this section near the entryway want to speak? Anyone in this row or section want to speak, please come up.

Anita Grunder: I'm short, so if you can't see me, sorry, but I am standing up. Anyway, I live in Clayton, my name is Anita Grunder. I am very disappointed that the DNR is actually even considering this, or anybody would consider it, considering the fact that they do state, in the article that I ended up getting, that they would possibly be drawing from several options, several wells, the Mississippi, several different aqui, one aquifer but several different issues. Okay, so if they've got the ponds down there at Clayton, at the sand mine, which they do, okay, if they're gonna draw out of those ponds, and they're gonna draw out of the Mississippi, and they're gonna draw out of our aquifer, and then all of a sudden we are low in rain, we are low in snow, we don't have the water that's going down in, filtering, refilling the aquifer. So, what happens? These ponds don't have water in them, it doesn't state in here that they're gonna take just a small amount of water out of our aquifer, they're gonna take the water from all of them, what if those get dry, they're gonna take it all out of the aquifer, because that is the biggest one. So, to me, there's no regulation on that, and they don't say that they're gonna stop if something happens to our wells, they don't say that they will pay for our wells if they go dry, they don't say that, okay, we're not gonna sell this water to Nebraska, or wherever, we're just gonna use it ourselves, why do they need to use more, if they're gonna increase their process, and what's happening down there, it's causing a lot of dust in the air that we're breathing, everyday it's gonna get worse, if they're gonna be using it. That's part of the issue too, it's not just taking the water out right now, it's the whole effect that gonna happen to us, and it's our lives, and they didn't say, okay, we're gonna take all this water out, but we're gonna pay everybody in the County for it, no, they're getting it free, they're not helping us in any way, they're harming us, now they're concerned only with making money themselves. And yes, money talks, we know that in the government right now, money talks, if you have money you can get just about anything that you want, and anything you want done, and that's, I hate to see them being, DNR being paid off, to tell you the truth. So, thank you.

BA: We'll come back here to the third row.

Randy Ruehs: I'm Randy Ruehs, I actually live in Raymond, Iowa, but we have a place down by Frenchtown and I got, I did the mine tour and all I got to say is, he doesn't give a crap about anybody. He's worried about his bottom dollar, and he doesn't care. That's all I've got.

Steve Veysey (SV): Please don't start the clock until I get my props. I contacted DNR in advance of, what are the ground rules, and they gave me some, none of which was that I'd only have two minutes to talk, but that's okay, you're kind of in a bind, I understand. These are some diagrams that I put together, I have a 25-page report, where I've analyzed the permit and come up with at least eight different areas where I had serious issues. Most of them you've addressed. This shows all of the wells, or at least some of the wells.

Unknown 2: Say your name please.

SV: Steve Veysey. I have five copies of my comments, if there are members of the press who wants them, otherwise I will be standing right here at the end, write down your email address if you want me to email you tonight, my 25-page comments, so you can read them and use them in your written comments, because if you spoke tonight, write comments and submit written comments, please. So, I have, I show all of the wells within a certain radius of Pattison Sand, this chart simply shows, this is all of the 12 communities in Clayton County, what they use, this is Pattison Sand.

Unknown 3: Wow.

SV: This is what they currently use, this is what they're proposing to use.

Unknown 4: Oh, my god.

SV: So, it's interesting, it's a dilemma, DNR, on their website, says, and the gentleman mentioned this, the state's mission is to protect public health and welfare, public waters and public wells, but then from DNR's permit summary they end the document saying, the requested amount of water use is also justified by law, barring compelling circumstances that mitigate to the contrary. Barring compelling circumstances. Well, that just doesn't agree with what they say on their website. And so, I Googled 'barring compelling circumstances', I did a word search, and all five chapters that pertain to water withdrawal, chapters 50-55, you'll never find compelling circumstances mentioned, it's not there. I searched for chapter 17, which is the Administrative Procedures Act, it's not there, they're making this 'barring compelling circumstances', they're making that up out of whole cloth, alright. So, hold them to task, submit written comments, as I say I go through eight different areas, I'm not gonna have time to cover it, I want to cover something you've already mentioned, which is well interference claims, because in their permit rationale they state, DNR knows nothing of any well interference caused by Pattison Sand, we know nothing, and it's literally, this, this, this, it literally is. There is a procedure for filing a well interference claim, good luck trying to find it doing a Google search, it took me an hour to get to it. I finally dug it out, and it's something called 'Technical Bulletin 23' written in 1986, and never once edited or updated, and no where is there an electronic form called 'Well Interference Claim', but there is a form, it's right here, it's one little page, hand write it in, submit it to DNR saying there's something wrong going on with my well, I think it's Pattison Sand. You send that form to these guys, they are legally responsible to assist you, assist you in completing your well interference plan, and that's what you all need to do. Now, there's 15 copies of this up here, I'll put it back on this table, I'll put my diagrams back on this table, and I will stand here at the end of the meeting, and write down your email address if you want a copy of my 25-page written summary, so you can use it, or not, when you submit written comments, and they have not yet told us what the due date is for written comments. What is the due date for written comments?

BA: We will accept written comments on this for an addition week after this date.

Unknown 5: One week?

SV: That's fine, if you give me your email address you will have this.

BA: I want to be forethright with everybody, this is why I said I didn't want to answer questions, I don't have time, but,

AT: You have time.

Unknown 6: You just said you'd have a second hearing.

AT: I don't have time to run out of water, you have time to answer questions.

BA: A typical permit review period goes 90-days, we can extend that period, we can extend the period while we receive written comments as long as is reasonable for everybody to submit them. If we get a comment in four weeks we will probably consider that.

CF: The other thing is you can always, what Steve Veysey said about the well interference plan, that is valid any time with a permit, so the well interference plan.

Unknown 7: How do you know if you got well interference?

BA: We're not gonna go into any more questions, we've given enough detail.

AT: That's what this is for.

Unknown 8: That's what this is for.

AT: Because there's a million different environmental factors that Pattison's could claim effected our well, so what are we supposed to do? Hire a lawyer when our wells go dry, and fight them over, when they can claim it's several different environmental factors, when there's a specific pattern to what is happening to our land, since Pattison has been there. So, we're all screwed.

BA: We'll take the next commenter now. We're working in this third row, going over this way.

Unknown 9: I'd like to hear from you, actually. How DNR justified the approval of the application.

BA: All I will speak to is what the DNR is legally required to do in a public hearing, that is to receive comments from the public. So, the next commenter is?

Laurie Klosterboer: I'm Laurie Klosterboer, from McGregor, and there are a lot of facts and figures and science behind all this, which you know, I don't want to give all the numbers because that would take hours. But, the question on the table is whether to grant Pattison Sand permission to use up to 3.7 billion gallons of water per year, from sources that the State of Iowa has not inventoried or studied in recent memory, and are at premium desirability for industries coming into our state. If the availability of this same water source for human consumption, that is survival of most of the Iowans, residents, is hardly mentioned. Aquifer recharge for deep aquifers is painstakingly slow, the Wisconsin geologist said it's 5-12 inches per year, we're draining a whole lot more than five inches per year, and those deep aquifers will take maybe 6,000 years to fully fill up again, we're not doing that. Iowa's been in its deepest, continuing

drought, since 1950, meaning they're even slower in filling. Estimates in various parts of Iowa report that Jordan Aquifer, the deep one, which goes under two-thirds of Iowa has dropped 50-150 feet in places. Chad Fields says that 25 billion gallons are taken out of the Jordan Aquifer per year and the use has increased 8% per year, and it's only gonna get worse. The DNR, charged with the duty and authority to assess the water needs of all water users, including ethanol plants, one plant alone asked for 55 million gallons a year, we have 42 ethanol plants. Summit wants to add to that with the carbon pipeline, and that is why they increase it, like we can't even imagine how much water they need for every step of construction, and transportation, and cooling, it would use enough, as much water as 520,000, 529,000 Iowans, 61% of the total water use for cities and plants within a 10-mile radius of that carbon pipeline. They want a lot of water, in addition to massive amounts of electricity, natural gas, so that's, the ethanol industry, large animal feeding operations, of which we have 5,800 in Iowa, times how many gallons of water, per cow, per day, that's a few billion gallons a year, Pattison Sand has a couple billion. Computer data centers, which we have a handful of now, we'll be getting more, because they like to put them in Iowa, they use up to a million gallons a day. So, industry wants our water, who pays for this? Who builds new wells? Your town and mine, and we pay for it, so Lake Osceola had to restrict water usage, one computer center in Altoona uses 20% of that cities water, annually, and they're paying for it. So, I'm a resident in Clayton County, and are not willing to give away our water supply and risk shortages because of over use for one business. Pattison's connected all his businesses on that end of the state, and it's the same debacle. Okay, in conclusion, Iowa cannot automatically approve such large-scale requests for our most precious and irreplaceable resource for unrestrained industrial progress without considerable study, and a plan, for the future of Iowa's drinking water supply.

BA: Kaitlyn, would you, we have our recording equipment up here, we'd like to hear you, if you don't mind coming up.

Kaitlyn Kuehl-Berns: My name is Kaitlyn Kuehl-Berns, I'm a resident of Clayton, I just wanted to share my views, opposing it, based on the lack of investigation and transparency on impact to residents and other businesses in our community. The same sentiment that's been shared by a lot of other people here. Thank you.

Laura Elsinger: Hi, I'm Laura Elsinger of rural Garnavillo and I want to just add a brief comment to these primary and valid comments that you folks have all made. The comment about accountability, this company has demonstrated that they do not adhere to being accountable to the people they affect. That's been purely demonstrated over and again, from this group here and many other stories. But I want to say that even if they had a change of heart, you know their heart grew six sizes that day, right? Even if they had a change of heart and really wanted to be accountable to the people they're affecting the science is not there to allow that to happen. How far is this cone of affect? How deep? Fifteen years from now, 30, 50 years from now, when there are people who are farming or living the land that don't have a memory of when this took place. They don't know that their wells have gone dry because of, because of these actions, there's a disconnect between those two that it is not practical to say that there can be accountability going into the future, and we already know this company has no intent anyway. It is irresponsible for the government to approve this action.

BA: Moving back to the fourth row. Please come up.

Jessica Engelking: Hi everyone, my name is Jessica Engelking, I've been living here in Elkader for about five or six years now. I work for an Indigenous non-profit called the Great Plains Action Society, we've been engaged in land defense across the states of Iowa, Nebraska, and South Dakota for about 10 years now. I, I don't have anything prepared, as someone mentioned this wasn't a very well-advertised event, so I'm just happy that I found out about it and I'm able to be here. And again, I don't really have anything to add, we've heard very well researched presentations, we've heard very heartfelt testimony from people who are most effected. We all know that giving massive amounts of water to a corporation for free isn't good, it's not good for the environment, it's not good for the people, the land, the residents, it's a horrible idea, and I just want to say that I'm just so heartened to see such a wonderful turnout. What it's gonna take to stop land and resource grabs like this is people showing up, and you all showed up tonight, and I'm very proud of the town, and the community, the county that I live in because we know, we know that this is a terrible idea, we know its bullshit that the DNR aren't taking questions, we know. So, I don't have anything to impart on you that you don't already know, I just wanted to take this time to say thank you to each and every one of you for showing up, because this is what it takes, it takes bodies in the seats, saying, no, we're not gonna stand for this.

BA: Fourth row, down here. Middle of the fourth row? Yes, please.

Charlie Koeger: Hi, Charlie Koeger from McGregor, I farm south of McGregor and about seven miles from Pattison. I guess first I'd like to address the transparency of this, I just happened to read about it Saturday, in an article in the Gazette, so I guess one issue I wish you'd take up to the DNR, and all the higher up staff, that the process for this needs to change. I mean, this is, you just find out about this and then now all of a sudden you're giving us, not even

another whole week for comments, and I guess it's been 90 days, but you tell me where it was notified 90 days ago that you started this process. So, I would hope you take down some notes here and that you look at changing this process, how it's meant to be, for public opinion on this. Secondly, I'd just like, again on the transparency thing, I would like to see some studies on this, and you go back to when you're in first grade, kindergarten, you're playing around in puddles, and you take a stick and you draw a line from one to the other, then down to the other, and you let that water out of that lowest one, what happens to that water up above, it's empty. I mean this is first grade science, so I'd like to see some science out there that says if Pattison drains this aquifer it's only going to effect right there on their property, can you answer that question? Is that gonna effect five miles away, 10 miles away, 25 miles away, 30 miles away? I think you don't know, and you know that waters gonna go to the lowest part, so it could be even 50 miles away, you're effecting the water out there.

AT: Well, they promised to test it, after it gets approved.

BA: Middle of the fourth row, please.

Steve Richardson: My name is Steven Richardson, I moved here from Texas about two and half years ago and I've been, it's a long story, but I've been extremely impressed with this part of Iowa and I've really come to like it. These types of issues concern me. I'm a little disturbed that Pattison Sand does not have a representative, other than the DNR, here. Because I have a question, how do you facilitize almost four times the amount of water that you currently have? How do you increase your production of whatever you're doing with your water? So, it smells to me, since the past experience they have requested to ship this west, that's what they intend to do. And the, they say, well they didn't ask for it this time, we don't think it's gonna happen, I don't believe that.

Larry Stone: My name is Larry Stone, I live south of Elkader, southwest of, east of Elkader near Motor Mill. I urge the DNR to deny Pattison Sand's request. Pattison has not justified the need for 3.7 billion gallons of water, they're not using all the water that they now have a permit for, why do they want such an increase? Does Pattison expect to increase the frack sand mining that much? Geologist tell me that fracking for petroleum wells is moving to west Texas and New Mexico, farther from the Pattison mines, will it be feasible, or profitable to ship the sand that far? Despite the current administration's dismissal of that trend, the world is moving away from fossil fuels toward wind, solar, geothermal, and green energy. Frack sand mining may be a dying industry. Iowa law allows the withdrawal for beneficial use, as all of us said, that beneficial use should be interpreted to mean beneficial for the people and environment without the negative impacts on the quality or quantity of water for other Iowans. The permit language admits up front that the DNR does not know whether Pattison's use of the water will impact others. The DNR urges the city of Garnavillo, and private well owners, to monitor their wells, just in case Pattison's massive withdrawals reduce the amount of water available elsewhere, it should be Pattison's obligation to do the monitoring. We should also be concerned about the water being discharged back to the Mississippi River, there seems to be no insurance, assurance that that water will not contaminate the Mississippi. Yes, Pattison may be important to the economy in northeast Iowa, but that does not give them the privilege to use and abuse our natural resource without regard to the effects on the others in the community. I ask the DNR to deny this permit.

BA: Okay, in row four, anybody else?

Eugene Wehrhaim (EW): Can I speak, I'm in row two, did row two come up?

BA: Yes, absolutely, please.

EW: My name is Gene Wehrhaim, and I know some of the people in the room and I will echo the comments that have been made, and the eloquent talk people have given, with the scientific talk. I would say, in my life, I have done a lot with marketing and I think this room needs some marketing agents. You need to use the resources of the media, we've got some KCRG people here, I saw the truck was out there, and you need to put the pressure on, that you can put on, to get this done. So, I would say that when the DNR leaves, and takes their stuff with them, people who want to form an organization to further this should stick around. My great, great grandfather was one of the first settlers in Garnavillo, when Clayton County, near Garnavillo, he lived in (unknown) out near Fort Atkinson, his burial plot is the first two burial sites in the Catholic cemetery outside of Garnavillo. His family was through this area for many, many years, that's why I bought a place up by Littleport, and I enjoy it up here, I've always felt good in this area, it's god's country here. So, I'd be real happy to stick around with Jim, or the fellow, Steve was it, who presented, and see if we can organize something, so we don't just sit here and bitch all of tonight, we get something done. Thank you.

BA: Let's go back to the fourth row, if no one else.

William Burke (WB): Hi, my name is Bill Burke and I'm a summer resident at Willie's Resort, I don't know how many of you might be familiar with Willie's, but there, my lot number is 80, so there's at least 90, I would say, people there that have wells, and probably 80% of them are sand points. So, like our sand point's 19 feet down, so if there's much

drop in the water level I'm sure we're gonna be in big trouble, and our original sand point was driven in the 1960s by my wife's grandparents, so it's been a dependable water source for all this time. So, I guess I would, was there any kind of survey that was done that would, you know, predict.

BA: If you would forward that question to us.

WB: Because we're within, half mile of the mine, and, not over a mile, in any case, and you know, I think we'd probably be affected quickly.

Unknown 10: Next week.

WB: Thank you.

BA: Anybody else in row four. Okay, we'll move back to row five.

Peggy Lane (PL): My name is Peggy Lane, and I live here in Clayton County and contrary to popular belief, the most valuable resource on this planet is not oil, it is water, and you cannot tell me, you cannot tell me that you can take that much water out of an area and not have it have an affect on the people that live there. And once the damage is done you can't undo it. I echo everyone who has spoken so far in their opposition to this request, and I don't know what the process is, and you won't answer my question, but I formally request an extension of the public comment on this issue. Whatever that takes, we need more time because, as has been stated, this has been a little bit under the radar for most people, and all of a sudden, we're a week out, and that's not enough time. That's my request.

BA: Anybody else in row five?

Jolene Jansen: Hi everyone, I'm Jolene Jansen, and my husband, Jim, and I live in Read township, just by Communia, just by Motor Mill, neighbors to Larry Stone. We, like the Stone's, and many of the people who are rural water users, are into the Jordan Aquifer, and the only thing that I have to say, because everybody has been very eloquent here, and I didn't know if I was gonna say anything at all. I just want to say that DNR is really, this does not make a lot of common sense, and the DNR, we rely on the Department of Natural Resources to support the common good. There is no way that the common good is being supported by allowing a company to extract that much water out of the Jordan Aquifer, that is being used by people, all, two-thirds of Iowans are using the Jordan Aquifer, so I stand opposed to this and I hope that common sense will prevail here.

Brian Bruening: Hello, my name is Brian Bruening, I live in Elkader, along the Turkey River. A couple of things I just wanted to echo, one of my biggest concerns about this entire thing is that, according to the press, they are intending, Pattison is stating an intent to withdraw water from two Mississippi River alluvial aquifer wells, two Jordan Aquifer wells, one mine pond intake, one Mississippi River intake, and two proposed quarry track dewatering basins. That is eight sources of water, all lumped into one permit. I would think that the quantity of the water, at the very least, would demand a permit review for each source of water intake. That seems the very least that we could do. And I think it is, it really, the onus falls on Pattison to, first of all demonstrate why they need that water, and how they are going to make sure each one of those water sources are protected, and followed along those guidelines. So, the other thing that I cannot stress enough, how, it really shakes my faith in Pattison the fact that they posted this notice in the Calmar newspaper, which is a small town in Winneshiek County, it is because of hard work from our local newspapers, Audrey particularly, for putting that article in the Clayton County Register, or a lot of us wouldn't have heard about it in the first place. The fact that Pattison is even able to get away with that kind of shady underhandedness should be reason enough to deny the permit to begin with. The final thing that I will say is that the DNR works for us, as citizens of this county, because the state government has taken away a lot of our local control on these kinds of matters, and they keep saying that, you what, it's fine, the DNR will have your back. Well, damn it, the DNR better have our back on this, because we do not want this, I urge you to deny this permit. Thank you.

Frederic Boudonri (FB): Good evening everybody, my name is Frederic Boudonri Bruening, my partner and I moved to Elkader about 20 years ago, I'm a proud American citizen, naturalized American citizen, just incase ICE is in the room, I don't want to end up in El Salvador. You guys are representative of the DNR, I have that Mediterranean blood, so I, kind of, speak loudly and gesticulate a lot, so don't take it personally. But I would like you to convey it to your organization. I agree with everybody that came before me, and their points. I look at statistics, I have a science and engineering background, not that science matters anymore, because these days the Secretary of Health and Human Services runs over bears, and, that's a whole different story. Iowa is the second cancer rates in the country, that is a problem, the fact that this multi-million-dollar corporation looks for a loophole, and finds, nothing against Calmar, but if you drove through Calmar, don't blink, because you're out of Calmar. Finding this loophole that, you people in Clayton County are the first people that are gonna be affected by this, yet let's find a loophole to some podunk newspaper somewhere, just so we can meet the criteria. That's nonsense, you folks work for us, I hold you personally, as a taxpayer of this state, and this county, responsible. You are working here for us. Honestly, the fact that I was, the

sketchiness, this is sketchy AF, that it was done in such a manner. That's on its own ground for denial as far as I'm concerned. This corporation has had an abysmal track record, and because of that it should, this permit should be denied right off the bat, they're not being genuine, they're not being forthcoming with the citizens of this county, the first people that are gonna be affected by this crazy idea. And the last thing I'm gonna say, I believe in the values of this country, I believe in the rule of law, that fact that me and my partner have a restaurant, in a town of 1,200 people, our water bill in the summer months is $350 on average, speaking of fairness, we'd gladly pay that because we believe that we have to contribute, because we live in a civil society, the fact that a corporation get this billions of gallons of water for free is obscene.

Dave Dudley: My name's Dave Dudley, I live on a farm, retired, on a farm, by Garber, but I have a very deep interest in northeast Iowa, it's beautiful, we've got the best water and the best resources in the world here. And, I gotta tell you that water is a finite resource, it's not infinite, it's finite. It runs out, oil is a finite resource, eventually we'll live without oil, we'll never live without water. I gotta tell you, I think the DNRs been the whipping boy tonight, but they get their marching orders, you know where the marching orders come from, it comes from our state legislators. We found that out when Select Beef got their permits to build up in northeast Iowa, and they have a dismal record on our environment, our environmental issues. But it's not acceptable to our people, like what was said tonight, those resources belong to the people of the State of Iowa, it's our right, and I firmly oppose granting this permit to Pattison. It's a big mistake, and I hope that we can stand up, we need to voice our opinions and stand up to the DNR, which I know they have people they have to answer to, and I think that's what happening, is that they're taking the heat, but it's not right. So, we demand, we demand to be heard.

Rita Dudley: Hi, I'm Rita Dudley, I'm with him, we live on the farm in Garber, we moved up here intentionally because of this area, it's a beautiful area, we're conservationists, we have our land in non-erodible crops, and we've worked very hard to turn a row crop farm into prairie grass, so that's where we are, we're both master conservationists. I want to tell you a story about the future, because we've seen it happen in Florida, where we live in the winter time. We live north of Tampa, for a few months, in the area called the Nature Coast, in Florida, and it has beautiful clear water springs, and the springs pump billions of gallons of water every day, and we kayak those springs, you can look 20 feet down, to the bottom of the springs and see the rocks on the bottom, it's that beautiful. Well, what's happened is, the Nestle company has gone in and gotten a permit from the State of Florida to pump water out of these springs and put it in nice little plastic bottles, to sell. So, they sell the spring water, the permit cost them $50 a year, to sell this water. We took a ride with the conservation director, for the Nature Coast, on an airboat one time, and he told us about the Nature Coast, the changes that are happening, because the spring water, that Nestle is taking, is pulling water out of the aquifer fast enough that that water, on that coast, is being replaced with saltwater, and he showed us the results of that, on this airboat ride. All of the natural swamp land along this coast is dying off because freshwater is being replaced with saltwater, and the trees are dying and the whole ecology of that area is changing, because that aquifer is pulling saltwater in from the ocean. That's the reality in Florida now, we don't know what might happen to our aquifer here if not only it dries up, but it pulls in contaminates that destroy the land above. So, I oppose any kind of permit that would allow that to happen, because I want my children and grandchildren to be able to enjoy this part of Iowa, the way it's supposed to be. Thank you.

FB: I'm sorry, mister attorney, I didn't catch your name, I would like the DNR to also take into consideration that every single person in this room spoke against, there wasn't a single person speaking for this permit. And in case anybody was in doubt I urge you to deny this permit as well.

BA: Middle of row five.

Daryl Bruxvoort (DB): I'm Daryl Bruxvoort, I'm from Elkader, member of Clayton County Conservation Awareness Network, I've spent 40 years in the business world, so I might come at this a little bit differently with a series of questions. First, who owns the water in that Jordan Aquifer?

Unknown 11: We do!

DB: That's right, I mean that one I think we can answer, right off the bat. Second, what criteria is used to determine whether private businesses can extract a public resource? What's the criteria? Has there been an economic impact study of any kind? What's gonna be brought to the citizens of Iowa? To the Clayton County citizens? At what rate is water being extracted? And at what rate is water being replenished? We've heard that over and over here tonight, and apparently, we don't know that, from what I'm hearing here, disturbing. How is economic good calculated? By an independent agency that comes in and says, okay this is the plus and this is the minus of this, and there's gonna be plusses and minuses in everything, we know that, but what are the plusses and minuses, can we quantify those things? How much of that impact benefits Iowa, not Wisconsin, not Illinois, Iowa, money spent in Illinois or Wisconsin

isn't gonna help us here in Clayton County, won't help us down at Wilke's Grocery Store. What are the costs and risks associated with removal of billions of gallons of water, per year, from the aquifer, cost and risk? What mitigations have been identified to address a drawdown of the aquifer? I mean these are basic, simple questions, I think, these are questions that have to be answered before you'd want to proceed on something like this. A natural resource is a finite entity, as somebody just, this gentleman just said. Have long-term studies been conducted to ensure water will be available to future generations? Finally, if Iowa citizens own this natural resource, and we rely on the Department of Natural Resources to ask and answer these types of questions to determine the future of this critical natural resource.

BA: Anybody else in the middle of row five? On the right side, row five, my right. Row six?

Gene Tinker (GT): My name's Gene Tinker, I was released from the DNR for doing my job of educating the public on what their rights were. The Farm Bureau didn't like that, and so I was released. I understand the legalities of the public comment, I understand your legalities, but the public wants information. I advise you, to your next public hearing, start with an educational session, educate your public. They want to know what's going on, and once you educate your public, then start your public hearing and you'll get a lot better comments, you'll get educated comments, which is what you want. Our governor talks about wanting STEM, I would advise you to take that back to Ed Tormey and have Ed share that with the Director, STEM is science, science is power. Right now, the DNR obviously ignores science. All of the court cases, the judge's determinations have basically proven that. Because of that I went to your website to find out what can the DNR do, it says one of the requirements is water conservation is expected. If this permit is approved, which I suspect it will, because I suspect you're gonna ignore all the comments you're getting tonight, I would like to see the permit describe how water conservation is being utilized, because it says right on your website water conservation is expected. So, it would be nice to know how water conservation is being utilized, if this permit is approved. I also went back, it talks about, on your website, we must continually plan for the long-term needs, long-term water needs in the state, when's the last plan? 1987 So, we know we're gonna have more large livestock operations, because they took the upper limit off for large confinements. If the carbon pipelines are approved we know there's gonna be tremendous demand for cooling, when the carbon is prepared for transport. If we're gonna have more data centers in the state, we know we're gonna have tremendous water needs for those. None of that's addressed in here. The state says that they know we need to have long-term plans, but I don't see that any of it's being addressed. I would like to see that addressed. That is the DNR's requirement, that's what they should be doing. The DNR's got increased oversight, which is obvious because of the recent rules that have been made. We need better decision making from the DNR, we need to protect the people not just the industry that they always have. I've sat in those meeting rooms, I know how the decisions are made, the public doesn't matter, it's time for the DNR to make decisions to support the public. STEM is powerful, let's use STEM, let's use science, just like people have talked, address the concerns of the public, share with them why decisions are made. If the permit is approved tell them why it's approved, how is it gonna benefit the public. We've got high paid engineers at the DNR, let them be engineers, don't have them cut and paste permits, like they do, have them be engineers.

Unknown 12: Fire them.

GT: Let's get some innovation, if we're gonna dump all this water coming out of the mine, instead of dumping it, why don't we put that to the big feedlot at Monona, we've got a big issue with water, you've probably got to deal with that yourself, and you were told you were wrong at which you'd done, I think that's what a district court judge told you. So, let's get some innovation, instead of dumping this water from the mines, ship it over to that big feedlot so they don't have to draw as much. Thank you.

BA: Next in row six.

Jack Knight: My name's Jack Knight, I'm from rural Luana. I've lived here for 71 years, this isn't my first go-around with Pattison Company, it's all in the past. Most of these remarks have been said, just to pile on to how bad it is to suck the Jordan Aquifer, the lead and the arsenic show up long before your wells are dry. And the Jordan is considered a fossil aquifer that was deposited at some point, 10, or 20, or they don't even know how many thousands of years ago. And if it's going down, in some places 150 feet, and it's being replenished at five inches, I don't, some geologists don't think it gets replenished at all, thus a fossil aquifer, so I just wanted to pile that on, as if it didn't sound bad enough. And, as far as the DNR goes, I had a long, long career working with DNR people, mostly in forestry, but also in soil conservation, and every single DNR person I ever worked with, these are the people that are just on the ground, and frankly group, I'm just a tiny bit disappointed in how we've come at these folks. They're not the enemy, they get directives, I've got to be careful not to speak for you, they get directives, sometimes, that they don't like, and they

can't talk about it. So, we need to try to influence their bosses, and the political force that's on them. Everything else has been said.

BA: Next in row six.

Pam Holfer (PH): My name is Pam Holfer and I just came up here to say that I'm really disappointed. I am an adjoining property owner. I was hoping to come here, to this meeting, to become informed. How did I not know? 90 days. If it weren't for Facebook, within the last few days, and I live right next door, fence line, okay. I don't live under a rock. How did I not know, and all you people know? Facebook. My farm is right next door, water is a big deal, it is a big deal. This was a pretty big secret. I would like to know facts, not from writing, not from Facebook, I would like to know the facts from the DNR. The fact that there's no Pattison person here, I'm, again, disappointed. Kyle and I, Kyle Pattison and I are on a first name basis, I talk to him often, and he has never brought this up. We need more information. We need more information and we need the truth, before we can say yes or no. A lot of folks brought up some really good comments about, give us some facts, about the water, where it's coming from, how much is he using, how much is he reusing, what's he using it for? This is very disturbing, if you live, if your next-door neighbor was doing something that was gonna greatly affect you, would you not be disappointed? 90 days, and now it's down to a week? I'm disappointed that I didn't come here to be informed, it would have been much easier if I would have been presented with some facts, it'd be easier to swallow if we were told what this was going to be used for, and how, and how much, and how it was going to affect, but quite honestly, does anybody really know? Does anybody really know how it's gonna affect us?

Unknown 13: It'll affect how much money he's gonna be making, without the water.

PH: I just want to be informed as well as a lot of other people, I want to know what is being proposed, how they're gonna use it, and give us the facts. I don't want, how do I know what I read in the paper, what I read on Facebook, is true, and I would like, again, like someone else said, another presentation, but next time with facts and a representative.

BA: Anyone else in row six. Anyone else not have an opportunity to speak that wishes to?

Adam Eilers: Yeah, I'll speak. I'm Adam Eilers, I'm a combat veteran, I've been to four continents, 12 different countries, and out of all that I would say northeast Iowa is the best place to live. So, I oppose this, I think it's bullshit, and looking at you, you look like you're pissed off all the time, I don't know if you're gonna cry or punch somebody, I don't know which one.

Unknown 14: That's called blowing smoke up your ass.

BA: Does anybody else want to speak, who hasn't had the opportunity?

Patti Ruff: My name is Patti Ruff and I am now speaking as a private citizen, not as an employee of this county. One thing that has not been mentioned, back when Pattison's tried pulling water to ship out west, that was approximately nine years ago, eight or nine years ago. Not a single legislator representing this county, or anywhere else in the state, who knew about this, did anything to fix the laws. Currently in Iowa we own our rights, all the way to the center of the earth, in other states they don't have that privilege. The legislature works for all of you, if you feel that the DNR's regulations are not working for you, you not only need to write your comments to these folks, but you also need to let your legislators know that the water rights need to go for the good of the people of Iowa, and not for private corporations.

BA: Anybody else like an opportunity to speak?

PL: Just as a visual, raise your hand if you're in opposition to this permit.

BA: Thank you everyone, that will conclude the public comment period and the meeting is now over.

Dianne Whitney (DW): No, no!

BA: Sorry, I didn't see you.

DW: My name is Dianne Whitney and I live in Allamakee County, and when, 30 years ago, I had a dream, and I'm gonna use that phrase because you're all familiar with it. I wanted to have a bed and breakfast, and I found some land, it was an overgrazed wood lot, it was a highly-erodible, tillable land, that was washing away. I had the opportunity to buy that, in 1995, with a plan of building a bed and breakfast, and I became a master woodland manager, worked on my wood lot, improved it, planted a prairie around the house. Built the house in '99, moved in in 2000. As we were building the house we drilled the well and they told me, estimated it'd be maybe 500 feet, 350 to 500, I went out, it was supposed to be done being drilled and it was 725 feet, that was the only thing in the whole house plan that was over, went over budget. I called up the driller and I said, how long have you been drilling wells, and he said 30 years, ma'am, and I still get surprises. And I said, where in the world is this water coming from? The Jordan Aquifer. He said it's ancient water, and I'm like, well that's really cool, ancient water. It's from the glacial melt, now that is really cool. I

don't want anything to happen to that aquifer. We've been in business now over 25 years, we have a successful business, we're one of the only B&B's left in Allamakee County, everybody else is Airbnb's, we like to visit with people, talk to people, and that's what we do, and I want that water fresh and clean as it has been for all this time. I'm totally against pumping that water out of there.

BA: Last call for commenters.

Jenna VanMeeteren (JV): Good evening, my name is Jenna VanMeeteren, I'm the director of Clayton County Conservation, and so I actually feel it is my job to speak on behalf of Natural Resources. Thank you to all the partners in the room that have so eloquently already done that. I really just wanted to be able to document, for your audio a lot of the visual that's not being recorded in this room. So, I know, Peggy just asked, by a show a hands who was opposed, I guess I'm gonna ask the opposite question, is there anyone in the room in support of this permit?

Unknown 15: No!

JV: Ok, just for the audio, there is no one in this room of, probably over 120-ish people, that are in support of this permit. That's really all I just wanted to say, is that all of you have really said eloquent things, a big part of our job is education and a lot of the time we get misconstrued for being the Iowa Department of Natural Resources, now you understand why we take a little offence at that. But we are here seeking additional information as well, so I join you in your frustrations, that that information wasn't shared here tonight, but thank you all for helping educate me as well. A lot of good folks in Clayton County and surrounding areas work for Pattison Sand Company, so I just want to give some kudos to those people as well, we are not opposed to you and your work, we are just concerned that the limited natural resources available to us, that make Clayton County so unique, that draw visitors to our region, and that help boost our economy locally, would be turned away if we put this resource at risk. So, I vehemently oppose this permit and thank you for the time.

(End of file: 1:22:22)

APPENDIX B

Pattison Sand Company Hydrogeologic Investigation

Prepared for Iowa Department of Natural Resources

February 3, 2026

IOWA | Iowa Geological Survey

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Appendix B – Simulated Drawdown of Wells in the Study Area Excluding Pattison-Owned Wells

Purpose

The Iowa Geological Survey (IGS) was requested by the Iowa Department of Natural Resources (DNR) Water Supply Engineering Section to assist with the evaluation of Water Allocation Permit #9126 for the Pattison Sand Company LLC in Clayton County, Iowa. A limited hydrogeologic investigation was conducted by IGS in a focused area around the Pattison mine as outlined in Figure 1. The primary objectives of the investigation were to:

- Investigate the properties of relevant hydrogeologic units in the study area, including the hydrologic connection between the units, their distribution, and regional hydraulic gradients.
- Determine how proposed pumping rates at the permit site may impact surface water and groundwater levels.
- Use existing GeoSam and Iowa Water Information System (IWIS) datasets to inventory wells and analyze how they may be impacted by pumping at the permit site.
- Investigate potential impacts to water quality under the proposed pumping rates.

Results from the hydrogeologic investigation are intended to assist the DNR in evaluating the permit. The report does not include recommendations for actions with respect to permit approval or permit conditions but rather outlines options available for DNR consideration based on data gaps and uncertainties.

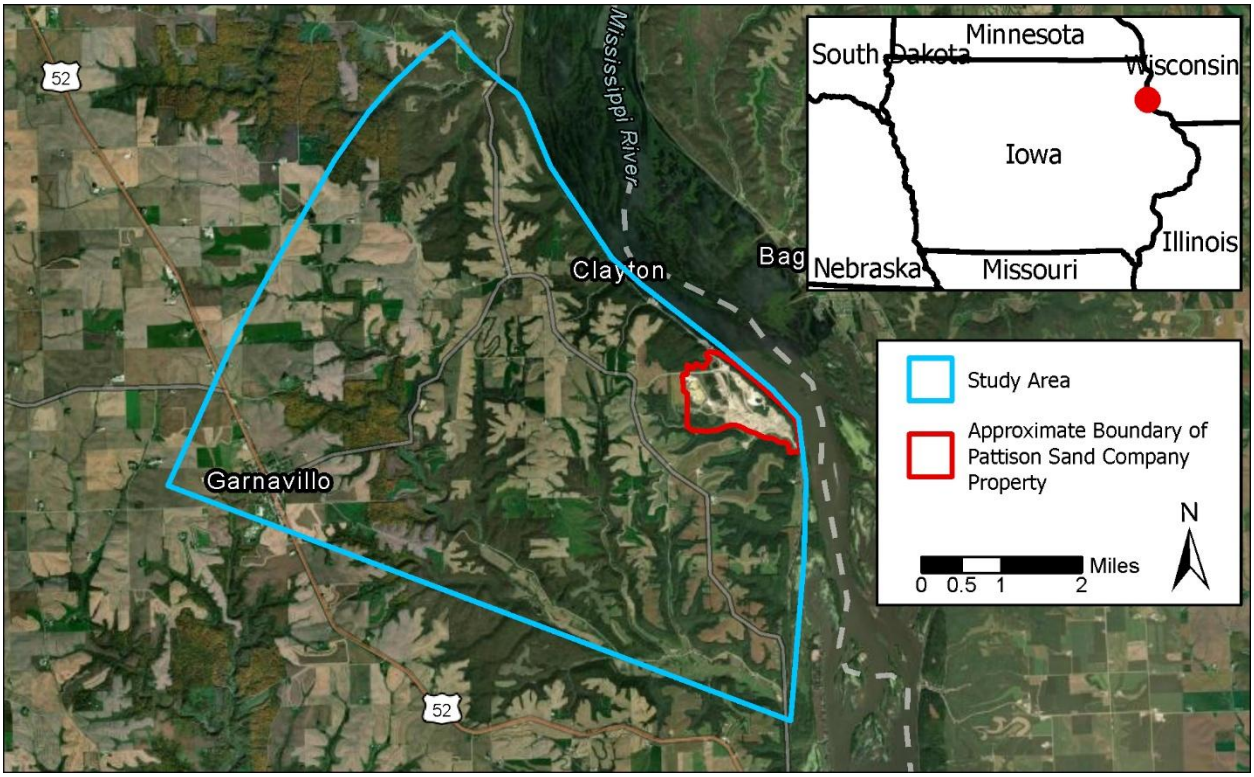

Figure 1. Study area for this investigation.

Background

Site Details and Water Use

Pattison Sand Company (PSC) operates an underground sandstone mine and surface aggregate quarry in Clayton County, Iowa, near the Mississippi River (Figure 2). Nearby communities include the towns of Clayton 4.5 miles to the northwest, Garnavillo 5.5 miles to the west, and Willes Resort, an unincorporated community bordering PSC to the southeast. The region includes numerous farmsteads and private residences located within several miles of the quarry.

Based on conversation with Pattison mine staff, the two main purposes of pumping on site include processing quarried material and dewatering. The current water allocation permit under review lists four groundwater well sources (Table 1), two dewatering basin sources, one mine pond source, and a surface water intake from the Mississippi River. According to the Water Use Summary Report (Appendix A), two of the wells are listed as alluvial wells. However, IGS records indicate that these wells exclusively access bedrock aquifers.

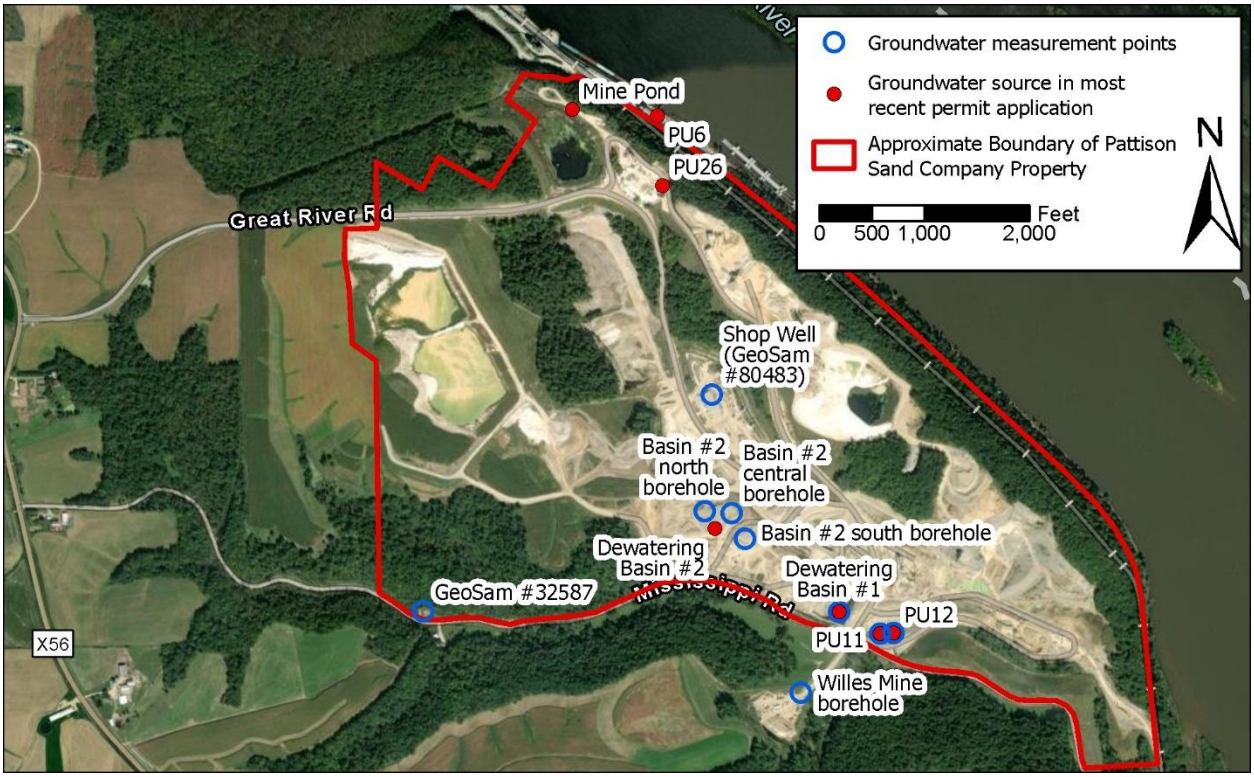

Figure 2. Pattison sand company site view with pumping and monitoring locations.

Details associated with Permit #9126 begin in 2007 in the DNR's Water Allocation Compliance and Online Permitting (WACOP) application. For the current permit under review, requested annual pumping amounts from each source and maximum pumping rates in gallons per minute (gpm) were obtained from the DNR Water Use Permit Summary Report (Appendix A) and are shown in Table 2.

Table 1. Details of pumping wells at the permit site.

Well	GeoSam Well ID #	Well Elevation (ft above sea level)	Well Depth (ft)
PU6	63834	630	619
PU11	90726	628	100
PU12	N/A	627	100
PU26	73638	936	665

Table 2. Pattison Sand Company requested allocations.

Source	Annual requested allocation (millions of gallons)	Maximum pumping rate requested (gpm)	Notes
Mississippi River	564	1,100	Surface water source
Mississippi River Alluvial Aquifer (Wells PU6 and PU26)	423	850	Well PU26 is a Cambrian-Ordovician well per its strip log. Well PU6 is open to the Dresbach and Cambrian-Ordovician aquifer. Both wells are treated as Cambrian-Ordovician wells in this report.
Jordan Aquifer (Wells PU11 and PU12)	1,435	2,800	Treated as Cambrian-Ordovician aquifer source in this report.
Mine Pond	77	150	Treated as Cambrian-Ordovician aquifer source in this report.
Dewatering Basins (#1 and #2)	1,244	4,800	Treated as Cambrian-Ordovician aquifer source in this report.
Total (all sources)	3,743	9,700	
Total (groundwater sources only)	3,179	8,600	

It is important to note that within the DNR well permitting system, any movement of water that is pumped from one location to another within the permit extent is counted toward the volume of water requested for the permit. Per conversations with DNR staff, assessing water use allocations in this way may double count the amount of water that is pumped between locations on a site. For example, if a permit site pumps 10,000,000 gallons from a groundwater well into a storage pond, and 5,000,000 gallons of the pond water is subsequently pumped to a discharge point, the site would need a permit for 15,000,000 gallons even though five million gallons of the pumped water was simply moved from one location to another within the same site.

Based on information provided by PSC staff, there are several instances within the mine extent where groundwater is pumped from one location and used in a different location for material processing (Figure 3). During its transit and use on-site, a considerable amount of water likely reinfiltrates back into the local aquifer (Figure 3). For example, water pumped from wells PU6, PU11, PU12, and PU26 is used for sand processing and has potential to reinfiltrate back into the

ground after being used. Due to the unconfined nature of the aquifer at the permit site, water that infiltrates into the ground can quickly reach the water table and recharge the aquifer, where it may then be taken up by a different pumping source on site. Infiltration rates are likely to be high throughout most of the permit site due to the presence of exposed and permeable bedrock. Hence, water used in rock processing that is not immediately evaporated can soak into the ground and recharge shallow groundwater. Any water in the ponds on the permit site also has a similar potential to infiltrate to the underlying aquifer, allowing for the possibility of pumped water to also be reintroduced to the groundwater system at the settling basins and the dewatering basins.

Without additional study and detailed measurements, it is not possible to precisely quantify how much water is recycled back to the groundwater system via infiltration. However, one instance where water recycling can be semi-quantified is at dewatering basin #1. According to PSC staff, dewatering basin #1 acts as a temporary holding cell for water pumped out of dewatering basin #2. As long as discharge from basin #2 is routed into basin #1 and the pumping rate in basin #1 does not exceed basin #2, nearly all water pumped from basin #1 should be recycled water.

Due to the high infiltration rates in the fractured limestone at the ground surface, precipitation recharge rates to the aquifer at the permit site are likely higher than in much of the surrounding area where the aquifer is confined to some extent. Pumping at the site will likely consist of a greater proportion of recent precipitation recharge water than it would if conditions limited infiltration. Unfortunately, there is not enough information to estimate how much precipitation recharge occurs to the aquifer at the permit site.

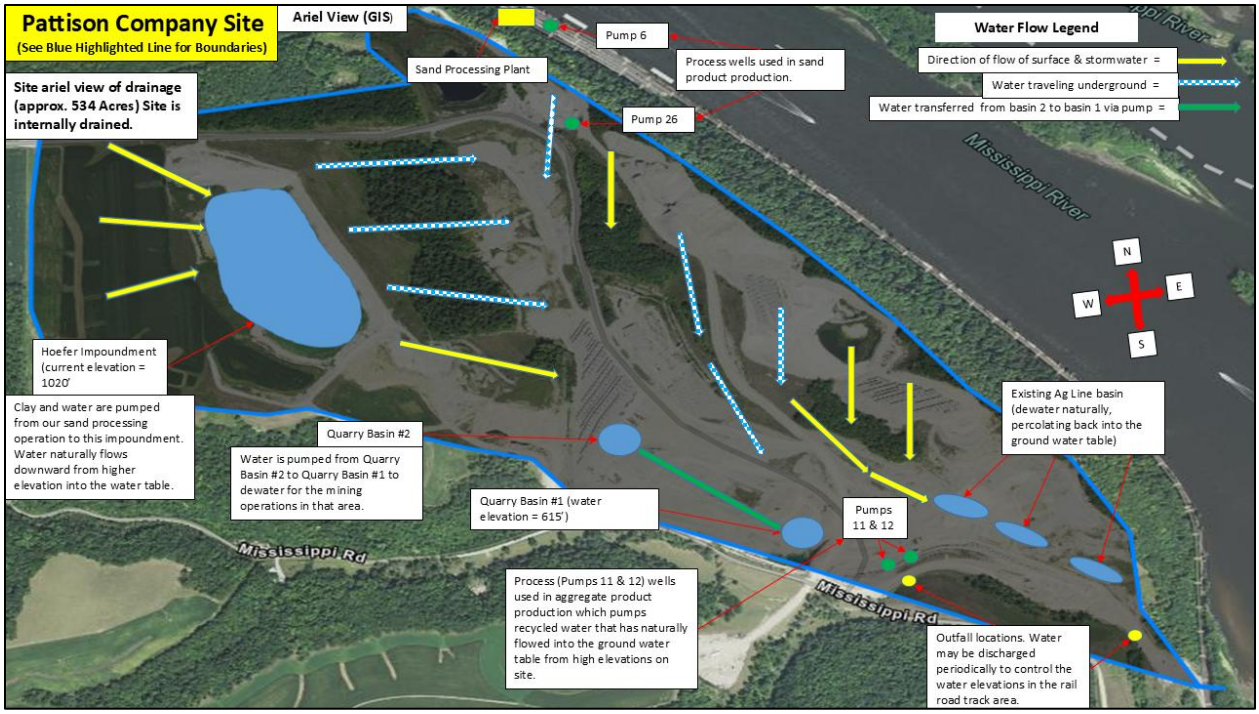

Figure 3. Map provided by PSC staff showing general pathways of water movement on the permit site.

Geology

The study area is characterized by thin (< 50 feet) unconsolidated glacial sediments overlying Ordovician-aged bedrock (Figures 4–6). The uppermost bedrock unit within the study area belongs to the Maquoketa Formation (Fm), which consists of shale and dolostone restricted to the upland portions of the region. The underlying Galena Group (Gp) includes, in descending order, the Dubuque, Wise Lake, Dunleith, and Decorah formations. The upper three formations represent a thick package of carbonates (limestone and dolostone) that are prone to hosting fractures and voids resulting from dissolution by slightly acidic groundwater (i.e. karst). The Decorah Fm is typically grouped with the underlying Platteville and Glenwood formations as they constitute a succession of interbedded carbonates and shales that form a regional aquitard between the Galena Gp aquifer above and the Cambrian-Ordovician (C-O) aquifer below. The uppermost unit of the C-O aquifer is the St. Peter Fm, a distinctly pure, fine to medium-grained quartz sandstone unit that is mined at PSC. The St. Peter Fm is typically 30 to 60 feet thick but can expand to over 100 feet thick where it fills paleovalleys or tower karsts carved into the underlying Prairie du Chien Gp. The Prairie du Chien Gp is a thick package of sandy dolostone that represents the main portion of the C-O aquifer. The lower unit of the C-O aquifer is the Jordan Fm, an approximately 120 feet thick fine to coarse grained sandstone with interbedded dolostone. The underlying St. Lawrence Fm is a silty, glauconitic dolostone that is approximately 75 feet thick. The Lone Rock Fm is a very glauconitic siltstone to fine sandstone, with thin interbedded shales, that is approximately 100 feet thick. Together, the St. Lawrence and Lone Rock formations form the aquitard separating the C-O aquifer above from the Wonewoc Fm

(Dresbach) aquifer below. The Wonewoc Fm is a fine to coarse grained, pure quartz sandstone with an average thickness of 100 feet.

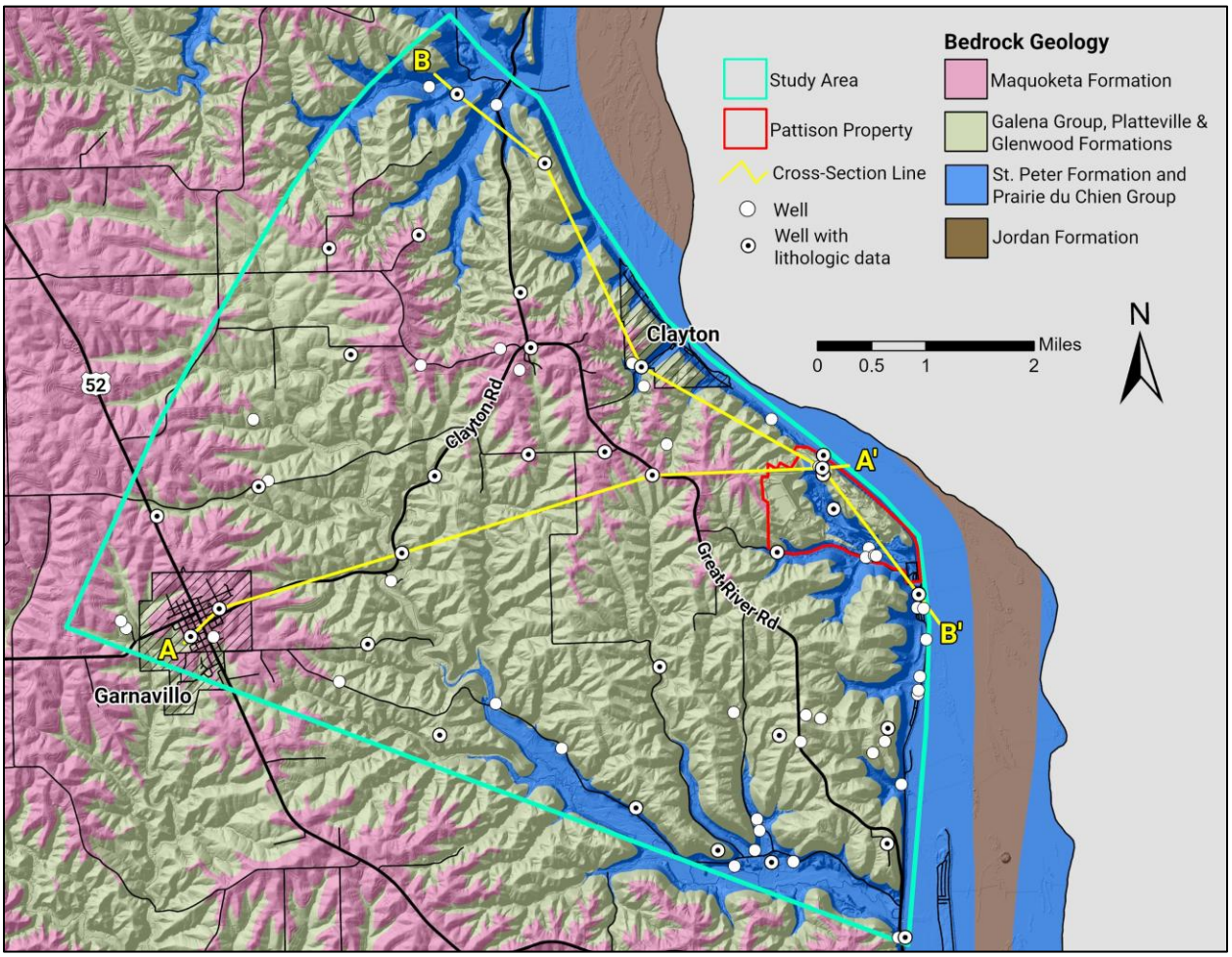

Figure 4. Bedrock geologic map of the study area, at 40% transparency, draped over surface elevation hill shade raster image. Geologic mapping units from Bedrock Geologic Map of Iowa (Witzke et al., 2010). Yellow lines indicate where cross-sections are drawn (see Figures 5 and 6).

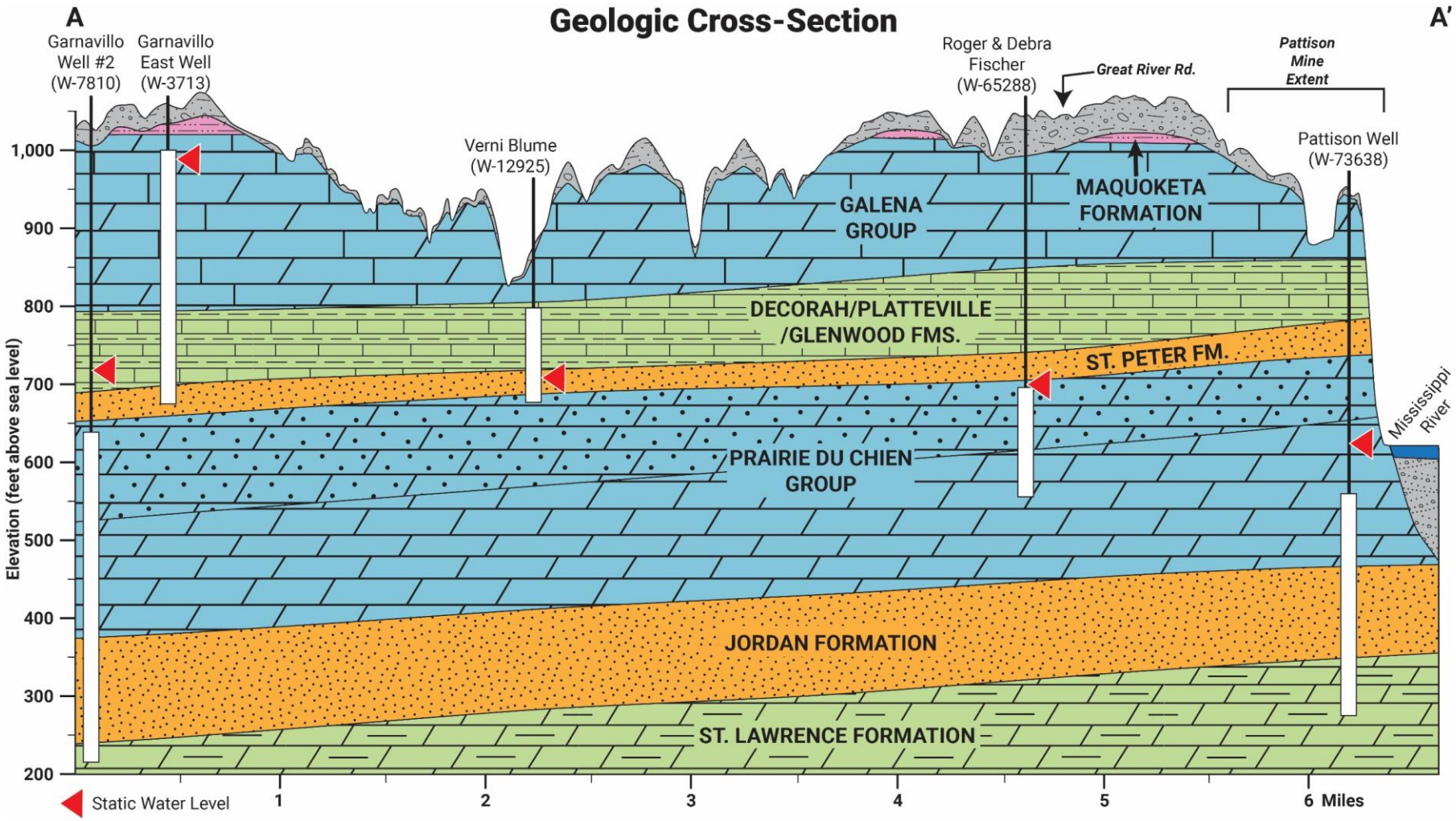

Figure 5. Geologic cross-section oriented from west to east through the study area.

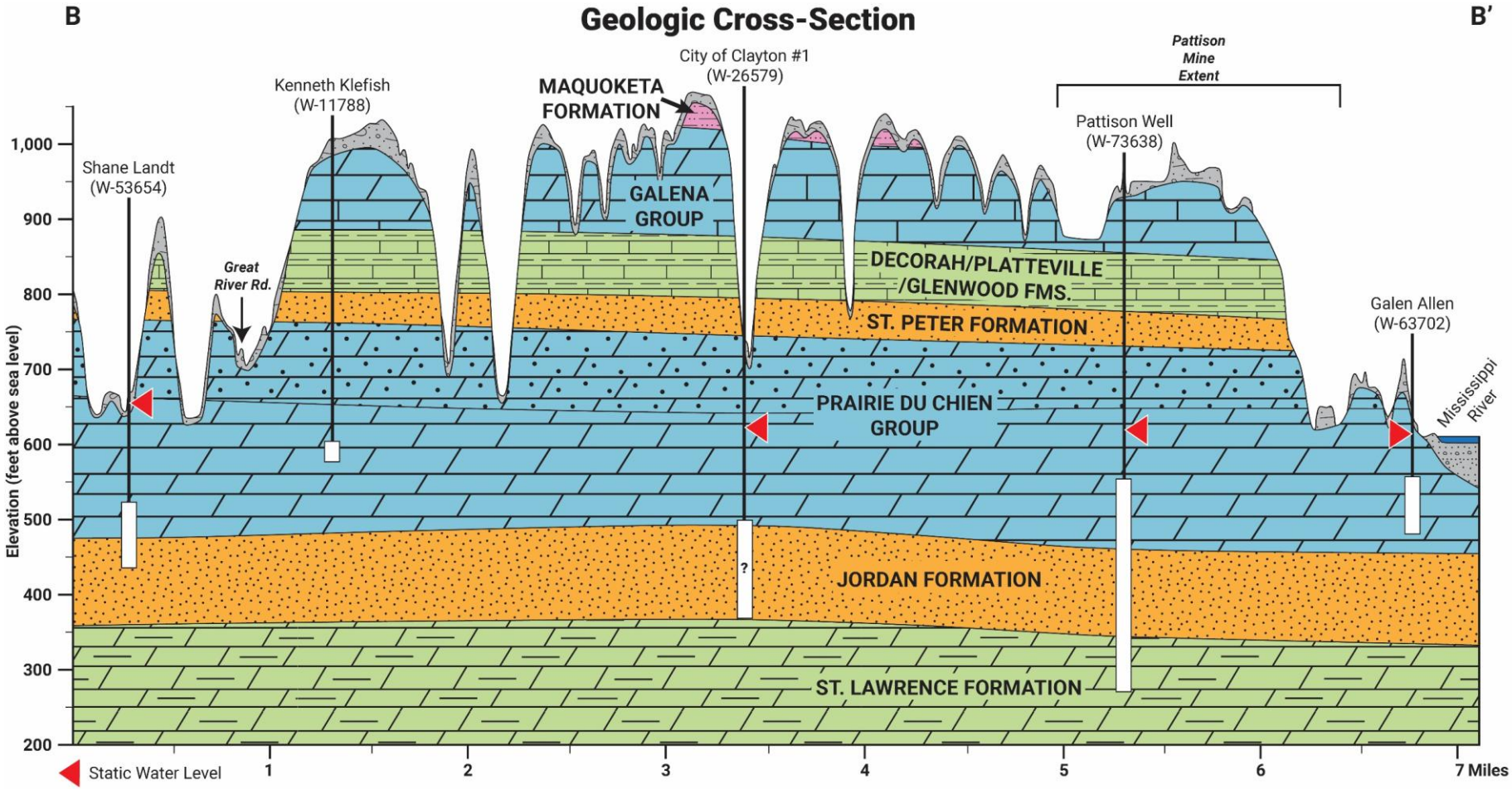

Figure 6. Geologic cross-section oriented from northwest to southeast through the study area.

Table 3. Summary of bedrock formations withing the study area based on data from existing wells. Porosity and permeability designations are based on rock properties observed from examination of drill chip samples from wells, outcrops, and aquifer data inferred from drilling logs.

Stratigraphic Unit	**Hydrogeologic Classification**	**Thickness (feet)**	**Lithology**	**Porosity/ Permeability**
Maquoketa Formation	Aquitard	< 50	Shale to shaly dolostone	Low
Galena Group (Dubuque, Wise Lake, and Dunleith Formations)	Aquifer (Galena)	< 220	Dolostone, vuggy and often fractured	Variable
Decorah, Platteville, and Glenwood Formations	Aquitard	< 110	Interbedded limestone, dolostone, and shale	Low
St Peter Formation	Aquifer (Cambrian-Ordovician)	30 – 60 (up to 120)	Sandstone, fine to medium grained, poorly cemented	Medium to High
Prairie du Chien Group (Shakopee and Oneota Formations)	Aquifer (Cambrian-Ordovician)	< 300	Dolostone, sandy with interbedded sandstone units, vuggy, fractured	Medium to Very High
Jordan Formation	Aquifer (Cambrian-Ordovician)	< 140	Sandstone and dolostone	High
St. Lawrence Formation	Aquitard	< 85	Dolostone, silty, glauconitic	Low to Medium
Lone Rock Formation	Aquitard (Franconia)	<130	Siltstone to fine sandstone, part shaly, glauconitic	Low to Medium
Wonewoc Formation	Aquifer (Dresbach)	<120	Sandstone, fine to coarse grained	High

Hydrogeology

The Galena aquifer is the uppermost bedrock aquifer utilized in the study area. The potentiometric surface (water level) of the Galena aquifer generally follows local topography, discharging to local streams and rivers. Locally, where the Galena is thick enough it is generally used as the preferred source aquifer for private wells instead of the C-O because it does not require drilling as deep. There are some Galena wells that extend into the St. Peter Fm but appear to use the Galena aquifer as their primary water source.

The Galena aquifer is separated from the underlying C-O aquifer by the shale-rich composition of the Decorah, Platteville, and Glenwood formations, which act as a regional aquitard (Horick & Soenksen, 1989). The Galena is occasionally overlain by the Maquoketa Fm locally; however, the distribution of the Maquoketa shale is limited to upland areas, where it may act as an overlying aquitard to the Galena aquifer.

Based on available water levels in GeoSam, there is a zone along the Mississippi River where the Galena aquifer is perched, meaning there is an unsaturated zone between it and the underlying C-O aquifer. This is indicated in Figures 5 and 6 where C-O aquifer water levels plot below the bottom of the Decorah/Platteville/Glenwood aquitard. This hydraulic condition means that water

levels in the Galena Group along the river are not impacted by fluctuations in the underlying C-O aquifer. While the Galena aquifer is not perched further to the west, there is still a distinct hydraulic separation between the two aquifers, evidenced by the Galena aquifer potentiometric surface more than 200 feet higher in the Garnavillo East well (Galena aquifer) than the Garnavillo #2 well (C-O aquifer) (Figure 5).

The C-O aquifer, consisting of the St Peter Fm, Prairie du Chien Gp, and Jordan Fm, lies below the lower bounding aquitards of the Galena aquifer in most of the study area. In some areas, such as the permit site and in river valleys, the Galena has been eroded and the C-O is the uppermost aquifer. While the three units making up the C-O aquifer can be considered as three separate aquifers (Horick & Soenksen, 1989), no such differentiation was made for this report because most C-O wells locally are open to all three formations and there are no major aquitards separating the units. Based on water levels recorded in drillers logs, the C-O aquifer in Clayton County flows to the east or southeast (Figure 7).

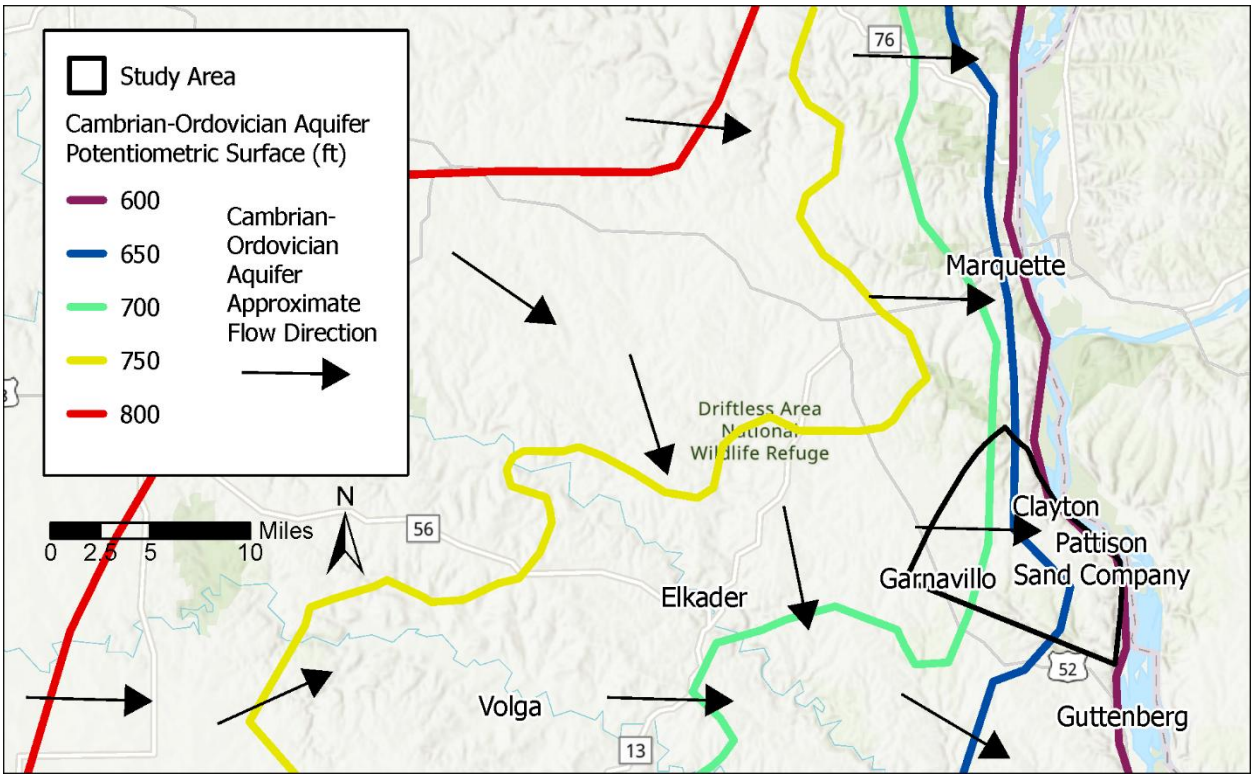

Figure 7. Regional potentiometric surface of the C-O aquifer assembled using drillers log water levels.

Elsewhere in the state, the C-O aquifer is overlain by thick confining units, and its potentiometric surface has fallen up to hundreds of feet in areas where it has been used heavily (Gannon et al., 2009). However, it is important to note that previous studies of the C-O aquifer in Iowa have not included the region in northeast Iowa. Based on observed hydraulic gradients, there is a groundwater flow divide in the C-O aquifer in northeast Iowa. West of the divide, groundwater enters the regional statewide aquifer but east of the divide, groundwater in the C-O is part of a local groundwater flow system and discharges to the Mississippi and Turkey Rivers.

Both dewatering basins, the mine pond, and all but one well at Pattison Sand Company draw water exclusively from the C-O aquifer. The C-O is underlain by an aquitard consisting of the Lone Rock and St. Lawrence formations. The hydraulic conductivity (K) of the C-O aquifer in Clayton and surrounding counties calculated from existing pump tests (Table 4) ranges from less than one foot per day to over 20 feet per day.

Table 4. Hydraulic conductivities from C-O wells in the IGS Pump Test database. Clayton and adjacent counties only.

GeoSam Well #	K (ft/d)	Nearest City, County
974	5.6	Dubuque, Dubuque
994	6.9	Farmersburg, Clayton
1511	1.1	Oelwein, Fayette
7201	1.3	Arlington, Fayette
10635	14.7	Postville, Clinton
23398	2.8	Postville, Clinton
26579	8.5	Clayton, Clayton
27527	0.9	Edgewood, Delaware
31138	0.6	Fayette, Fayette
37929	9.3	Dyersville, Dubuque
56720	8.1	Peosta, Dubuque
57877	24.3	Peosta, Dubuque
61790	3.3	Postville, Clinton
62661	13.1	Elkader, Clayton
62662	20.8	Elkader, Clayton
63719	2.6	Farley, Dubuque
86249	2.0	Farmersburg, Clayton
88825	1.1	Garber, Clayton
88953	2.2	Sageville, Dubuque

One well at the permit site (GeoSam #63843, permit well PU6) extends below the C-O aquifer, through the Lone Rock and St. Lawrence aquitards, and into the Dresbach aquifer. This aquifer is seldomly used in Iowa, with no known users within ten miles of the permit site. Due to the limited use of this aquifer, little is known about its properties in the study area. The drillers log for well #63843 indicated artesian conditions (water level above ground surface), so the aquitard between the C-O and Dresbach aquifers appears to provide some degree of hydrologic separation between the two aquifers.

The third major aquifer in the region is the Mississippi River alluvial aquifer. This aquifer consists of sand, gravel, and occasional fine-textured silty units and is used by several municipalities and private residences near the Mississippi. Well 8DY047 in the Wisconsin well database, located across the river from the permit site, shows an alluvial aquifer thickness of over 150 feet, whereas the alluvial aquifer thickness is greater than 120 feet on Mays Island, approximately four miles downstream of the permit site (GeoSam well #101862). Hydraulic conductivity of this aquifer estimated from a pump test from GeoSam well # 67802 in Dubuque was 294 ft/d, indicative of a productive aquifer.

The Mississippi River alluvial aquifer sits in a bedrock valley incised over 100 feet into the units that make up the C-O aquifer (Figure 5). We were not able to find any investigations of the hydraulic relationship between the Mississippi River alluvial aquifer and the C-O aquifer in the region. However, based on the geologic data available and hydraulic heads in the C-O aquifer, it is likely that the two are hydrologically connected. Geologic conditions that support the existence of a connection are the presence of high hydraulic conductivity alluvial aquifer materials adjacent to and overlying the C-O aquifer. The contact between the alluvial aquifer and C-O aquifer appears to stretch the width of the Mississippi River floodplain which is over one mile wide at the permit site. Occasional fine-textured units present in the alluvial aquifer are not consistently noted in drillers logs, so they are unlikely to form a consistent hydrologic boundary between the alluvial aquifer and the C-O aquifer. Regional hydraulic heads of the C-O aquifer (Figure 7) approach the level of the Mississippi River from west to east, suggesting that the C-O aquifer discharges into the Mississippi River or Mississippi River alluvial aquifer.

A hydrologic connection between these systems would allow for induced river infiltration to occur if the C-O aquifer were pumped enough to reverse the current hydraulic gradient. Induced infiltration is the process by which hydraulic gradient changes from pumping cause surface water to be drawn into a groundwater system. This process is important for several water supplies across the state (e.g., Muscatine Power and Water, City of Iowa City, City of Cedar Rapids), as it allows for increased production from wells near rivers without causing excessive drawdown to the aquifer.

Site Hydrologic Conditions

Average reported pumping over the last five years at the permit site in WACOP was 614 million gallons per year. Water levels gathered by PSC and the IGS in summer and fall of 2025 are summarized in Table 5. Based on available water levels, there is a cone of depression at the permit site around dewatering basin #2; however, the influence of pumping in the basin falls quickly as evidenced by the steep horizontal hydraulic gradients (0.04–0.10) between dewatering basin #2 and the surrounding boreholes. Except for the cone of depression around dewatering basin #2, there is a general hydraulic gradient from west to east, with an apparent natural discharge along the Mississippi River. This west-east hydraulic gradient is consistent with the regional gradient of the C-O aquifer.

The July 2025 water level of well #32587 was 2.9 feet lower than the original level reported in the 1990 drillers log. However, without a more robust set of historical water levels it is not possible to determine whether this decrease is the result of seasonal trends, long-term trends or well interference from the permit site. Well #32587 is one of the closest known private wells to pumping operations at the permit site, so even if the head drop observed at this well was the result of well interference it is unlikely that other private wells in the area have declined by more than a few feet from historical pumping at the permit site.

No surface water discharge from the site was noted by IGS staff during site visits in summer 2025, and PSC staff indicated that surface water discharge from the site was generally low. This can be explained by high infiltration rates of the exposed bedrock at the permit site allowing pumped water to infiltrate before leaving the site as runoff.

Table 5. Water levels gathered near the permit site. All water levels presented except the Mississippi River are assumed to represent conditions in the C-O aquifer.

Location	Range of measured hydraulic heads (ft)	Drillers log hydraulic head (ft)	Notes
PU12	610.6–614.5		Minimum represents June 2025 average, maximum is July 2025 average
Dewatering basin #1	618.6–622.6		Measurements taken 7/2/2025 and 7/14/2025
Dewatering basin #2	589.3–597.7		Measurements taken 7/2/2025, 7/8/2025, and 7/14/2025
Dewatering basin #2 north borehole	610.5–614.9		Measurements taken 7/8/2025, 7/14/2025, and 7/25/2025
Dewatering basin #2 central borehole	608.0–611.4		Measurements taken 7/8/2025, 7/14/2025, and 7/15/2025
Dewatering basin #2 south borehole	615.6–616.3		Measurements taken 7/8/2025, 7/14/2025, and 7/15/2025
Shop well	618.2	622.3	Drillers log from 7/26/2010, other measurement taken 7/2/2025
Well #32587	626.1	629	Drillers log from 7/16/1991, other measurement from 7/2/2025
Willes Mine	614.1		Measurement taken 9/25/2025
Mississippi River	611.5		Measurement taken 9/25/2025

Investigation Methodology and Data Collection

Existing information available to IGS through well logs, local and regional water levels and mine operations was not sufficient to evaluate the hydrogeology associated with Water Allocation Permit #9126 for the Pattison Sand Company. A limited investigation was conducted to obtain site-specific hydrogeologic properties of the aquifer and model potential regional drawdown scenarios. Geologic conditions were assessed by analyzing GeoSam well logs and well cuttings collected in the area. Cross-sections (shown in Figures 5 and 6) were developed to shed light on local geology in the mine area. GeoSam well logs and historical water levels provided by Pattison Sand Company were used for background information and preliminary understanding of local hydrogeology.

At the request of IGS, a new 124-ft deep borehole (Willes Mine Borehole, Figure 2) was drilled into the aquifer by Pattison to serve as a groundwater monitoring location for a pumping test. This borehole was drilled down to an elevation of approximately 614 feet above sea level which corresponds to the Prairie du Chien Group within the C-O aquifer. Hydraulic head data were

collected at a frequency of 1/minute for the duration of the pumping test at the Willes Mine Borehole, PU11, PU12, dewatering basin #2, and a borehole near dewatering basin #1. Manual measurements were also collected at GeoSam well #80483 (Pattison shop well) and #32587. The pumping test was run for 36 hours. PU12 was pumped at a rate between 1,300- and 1,400-gallons/minute while PU11 remained offline. Wells PU11 and PU12 were not pumped in the 67 hours leading up to the test to allow water levels to stabilize. Pumping from dewatering basin #2, PU6, or PU26 were not stopped prior to, or during the pumping test. The closest source of potential interference during the test, dewatering basin #2, was pumped at a constant rate of approximately 1,300 gpm in the days leading up to and during the test. Because dewatering basin #2's pumping rate was held constant, it likely caused a negligible amount of interference to the pump test.

Using the newly collected hydrogeologic data, local drawdown scenarios were evaluated to assess potential local and regional drawdowns from Pattison mine pumping. Hypothetical drawdowns were derived using Waterloo Hydrogeologic's Aquifer Test™ Pro version 13.0 software using parameters derived from the 9/29/25 pumping test. Further details on the pumping test and Aquifer Test inputs can be found in the respective results sections for these items. Wells used in the predictive analysis included GeoSam points and IWIS wells located within the study area. GeoSam points that were not wells (e.g., exploratory boreholes) and wells owned by Pattison Sand Company within the active mine area were not included. An attempt was made to locate GeoSam wells accurately using available information such as property ownership from the county assessor; however, no guarantee can be made that all wells used in this study are located correctly.

Pumping Test Results

Groundwater level responses to the pumping test were observed at wells PU11 and PU12, Willes Mine Borehole, and dewatering basin #2 (Figure 8). No change was noted in any of the manual water level measurement locations or the dewatering basin #1 borehole. Water levels in the dewatering basin #1 borehole were only a couple feet above the bottom of the borehole so it is possible that the transducer in the borehole was suspended above the water level and therefore not collecting meaningful data. A stepped response was observed in the pond (Figure 8), this may have been a result of the transducer shifting on the slope of the pond or other water sources entering the pond. PU11 and the Willes Mine Borehole were the only locations with a clean response to the pumping test that could be used to estimate hydrogeologic parameters.

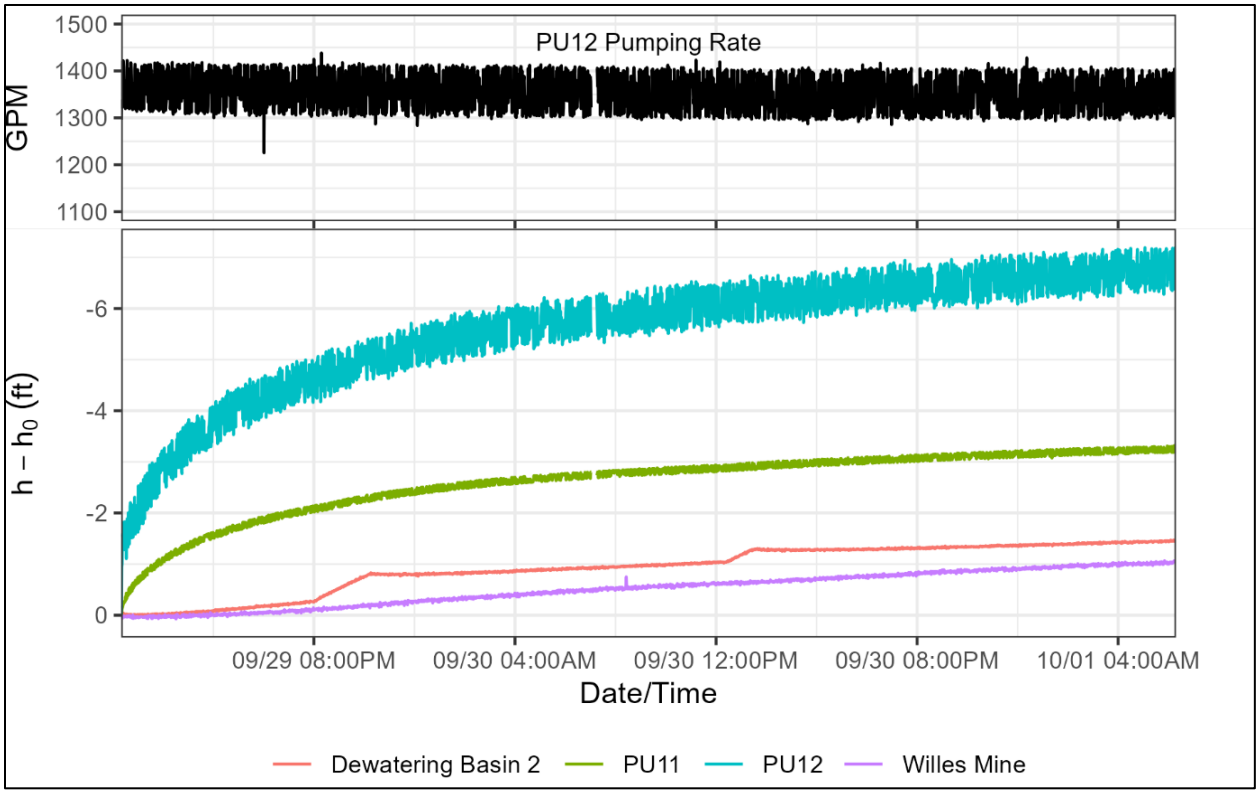

Figure 8. Pump test drawdowns and pumping rates.

Microsoft Excel was used to apply the Cooper-Jacob straight-line fit analytic analysis method for the pumping test solution (Cooper and Jacob, 1946). This method was selected because the drawdown response curve follows the classic confined to semi-confined aquifer response. This is indicated by the good linear regression fits of the late-time test data when plotted as a time-drawdown relationship for each observation well (Figure 9). The average calculated aquifer parameters for hydraulic conductivity (K), transmissivity (T), and storage coefficient (S) are 34,900 feet^2/day (ft^2/day), 127 feet/day (ft/d), and 0.02 (unitless), respectively. The K values derived from the pump test are higher than regional values (Table 4). The likely reason for this is the permit site lies within the C-O outcrop belt, where the aquifer is more prone to weathering processes that can lead to increases in hydraulic conductivity.

The late-time data trend does not reflect the presence of a nearby hydrologic boundary, but such a presence cannot ruled out. The connection of the bedrock aquifer to the incised Mississippi River alluvial channel strongly suggests that there would be hydrologic communication between the bedrock and alluvial aquifers. If this were to be the case, a long-term pumping test (on the order of weeks to months) would show well drawdowns that stabilize (flatten) over time. In this case, the Mississippi River alluvial aquifer would function as a recharge boundary due to the extensive contact of the alluvial aquifer and the bedrock units being pumped. When this occurs, the growth of the cone of drawdown would decelerate, and greater than 50% of the quarry dewatering volume would likely be comprised of induced recharge of river water.

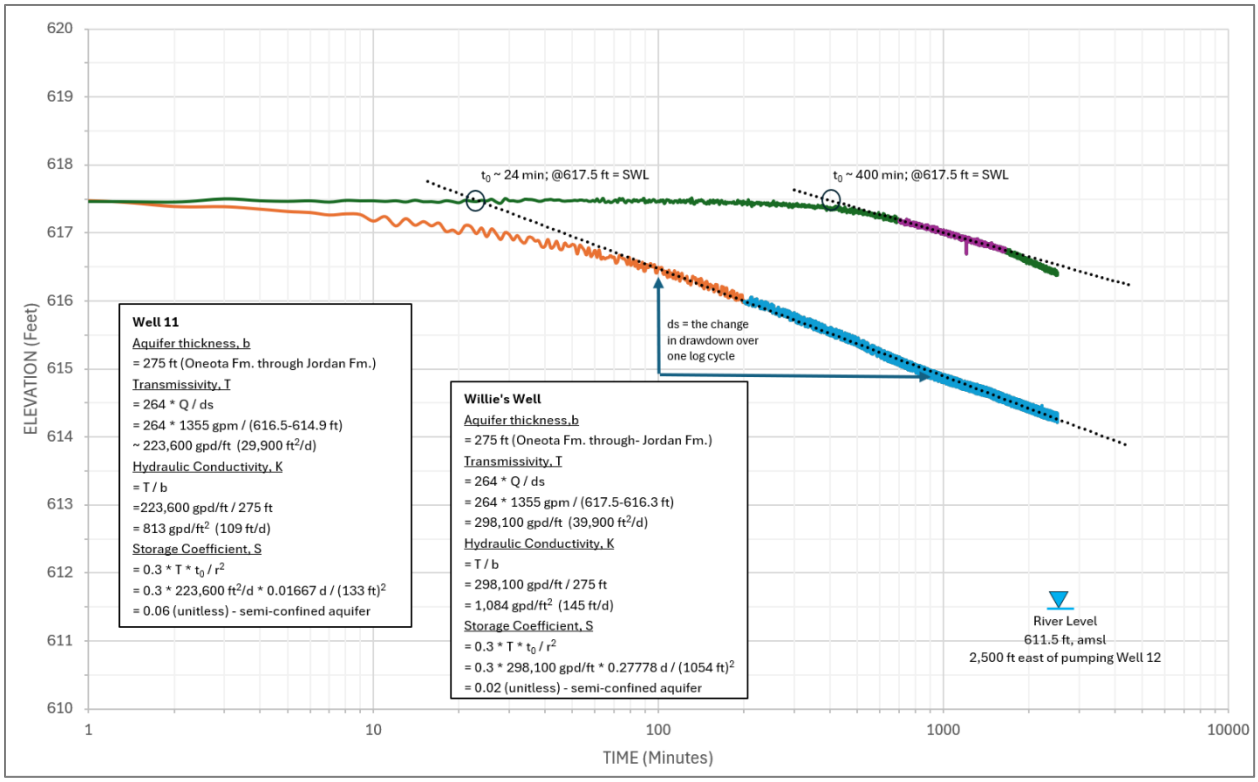

Figure 9. Pumping test analysis for a confined aquifer using the Time-Drawdown, Theis (1935) analytic method.

The pumping data were also plotted as a distance-drawdown relationship, where the trend line between PU11 and Willie's well is extrapolated to the zero-drawdown intercept to estimate the distance of pumping influence at the end of the pumping test (Figure 10). This radius of influence (ROI) is 3,000 feet. The trend line can also be used as an alternate method for calculating the aquifer parameters. In this case, K, T, and S all agree with the earlier calculations from the time-drawdown data.

The linear trend was extrapolated back to the pumping well where it intersects the well casing at a level about three feet above the measured pumping water level inside the well casing. This indicates inefficient well performance caused by turbulent flow of groundwater entering the well through fractures in the rock. This supports the interpretation of the dominance of fracture flow (pseudo uniform) to the well and the fractured nature of the bedrock aquifer.

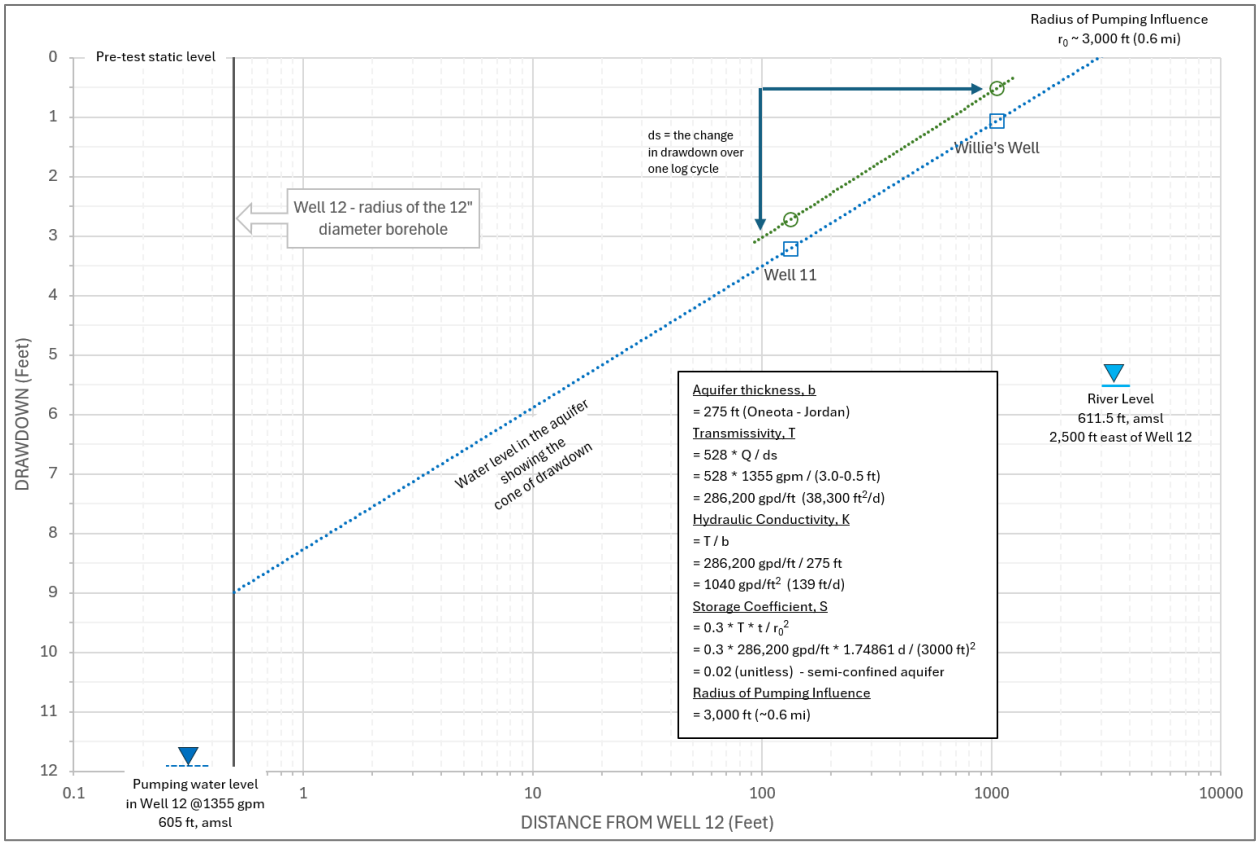

Figure 10. Pumping test analysis for a confined aquifer using the Distance-Drawdown analytic method.

The above analytical methods of aquifer flow and recharge conditions are a traditional interpretation using a single pump test well. If additional three-dimensional (3D) understanding is needed to evaluate river-aquifer interactions, a numerical, transient, 3D groundwater flow model would be needed. At this point, sufficient data is not currently available for the construction and calibration of such a model.

Predictive Aquifer Testing

Three scenarios were modeled using the Aquifer Test software. For all scenarios, hydraulic parameters used were a hydraulic conductivity of 109 ft/d and a storage coefficient of 0.02. The selected hydraulic conductivity and storage coefficients were the lower of the two values derived from the pump test time-drawdown method based on the assumption that, west of the permit site, hydraulic conductivity decreases as the aquifer is less exposed to weathering, and the storage coefficient falls as the aquifer becomes more confined. All groundwater sources (including dewatering basins) were assumed to be pumping from the entire thickness of the Prairie du Chien Group and Jordan Formation at the site (275 feet). The thickness of the St Peter Formation was not included in the overall C-O thickness because it is unsaturated at the permit site (Figure 5). Pumping rates for each scenario can be found in Table 6, pumping rates for the pumping sources

were determined by converting the annual requested allocation for each source type (Table 2) to a pumping rate in gallons per minute and evenly distributing the pumping rate between any individual wells/basins making up the source. The use of image wells is a standard method to evaluate the impact of hydrogeologic boundary conditions on water level drawdown. Image wells are not real wells but are simulated as such, used in this case to simulate induced river recharge for scenarios 2 and 3.

Table 6. Pumping rates used for predictive aquifer testing.

Pumping Location	**Modelled Pumping Rate (gpm)**		
	Scenario 1	**Scenario 2**	**Scenario 3**
PU6	403	403	403
PU26	403	403	403
PU11	1,366	1,366	1,366
PU12	1,366	1,366	1,366
Dewatering Basin #1	1,184	1,184	1,184
Dewatering Basin #2	1,184	1,184	0
Mine Pond	147	147	147
Image recharge well #1	0	-2,018	-1,623
Image recharge well #2	0	-2,018	-1,623
Image recharge well #3	0	-2,018	-1,623

In scenario 1, the pumping rate used was the full requested annual allocation from all groundwater sources. To estimate the most conservative (severe) drawdown impact, no boundary conditions were used for this scenario to simulate conditions where the C-O aquifer does not interact with the Mississippi River alluvial aquifer. The cone of depression from this scenario was the largest of the three investigated, with drawdown of seven feet at Garnavillo (Figure 11). Drawdown was over 15 feet within two miles of the permit site.

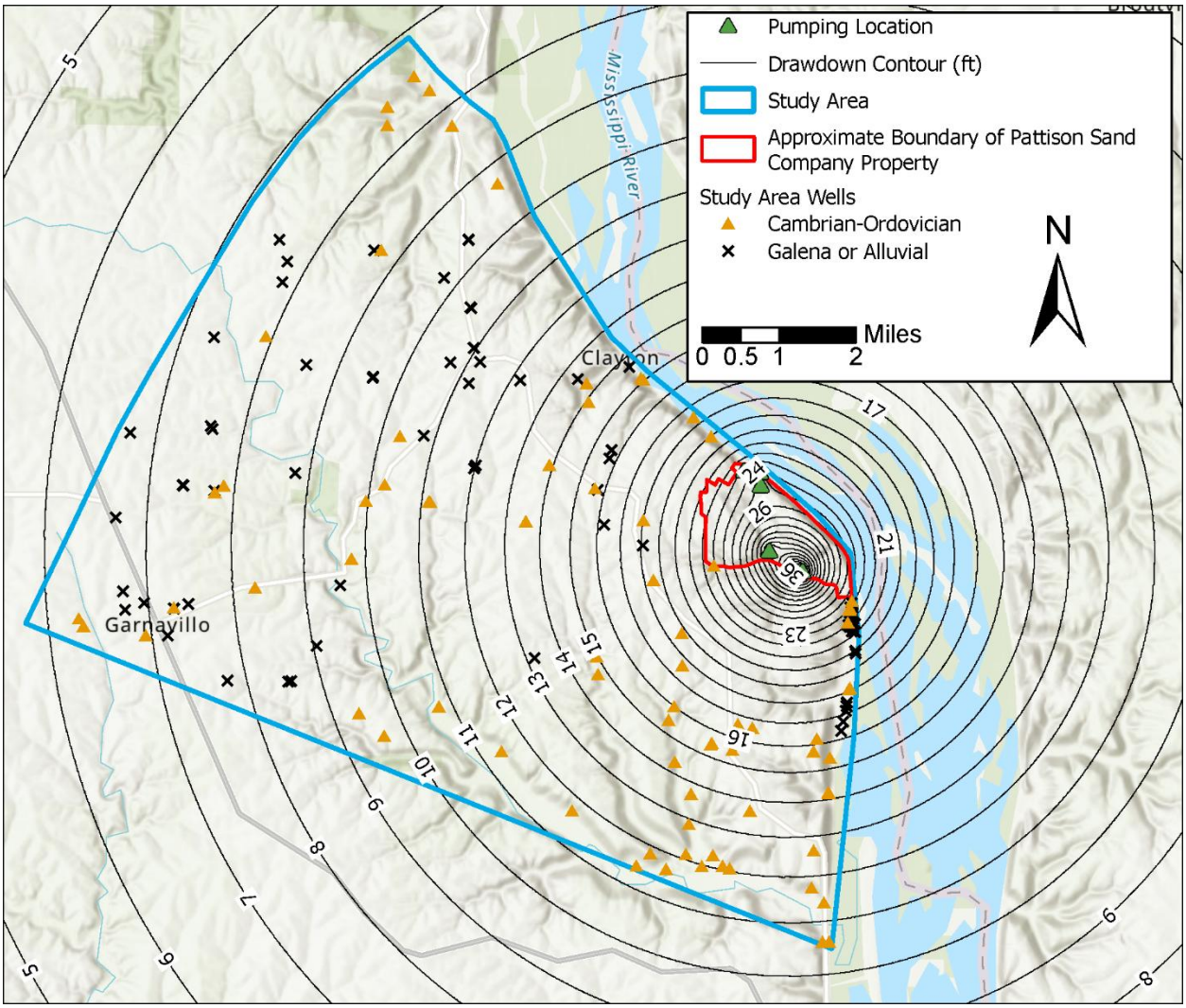

Figure 11. Predicted drawdown after five years of pumping with scenario 1 conditions.

Scenario 2 used the same pumping rates as scenario 1, but a recharge boundary condition was modeled by adding three image wells in the Mississippi River that input water into the system at the same rate that water was removed. This is classic image well analysis in the presence of a hydrologic boundary. This hydrologic boundary represents an interface where the Mississippi River alluvial aquifer can supply water to the C-O aquifer via induced infiltration. Drawdown from this scenario was substantially lower than scenario one, with less than one foot of drawdown at Garnavillo and approximately five feet of drawdown one mile west of the permit site (Figure 12).

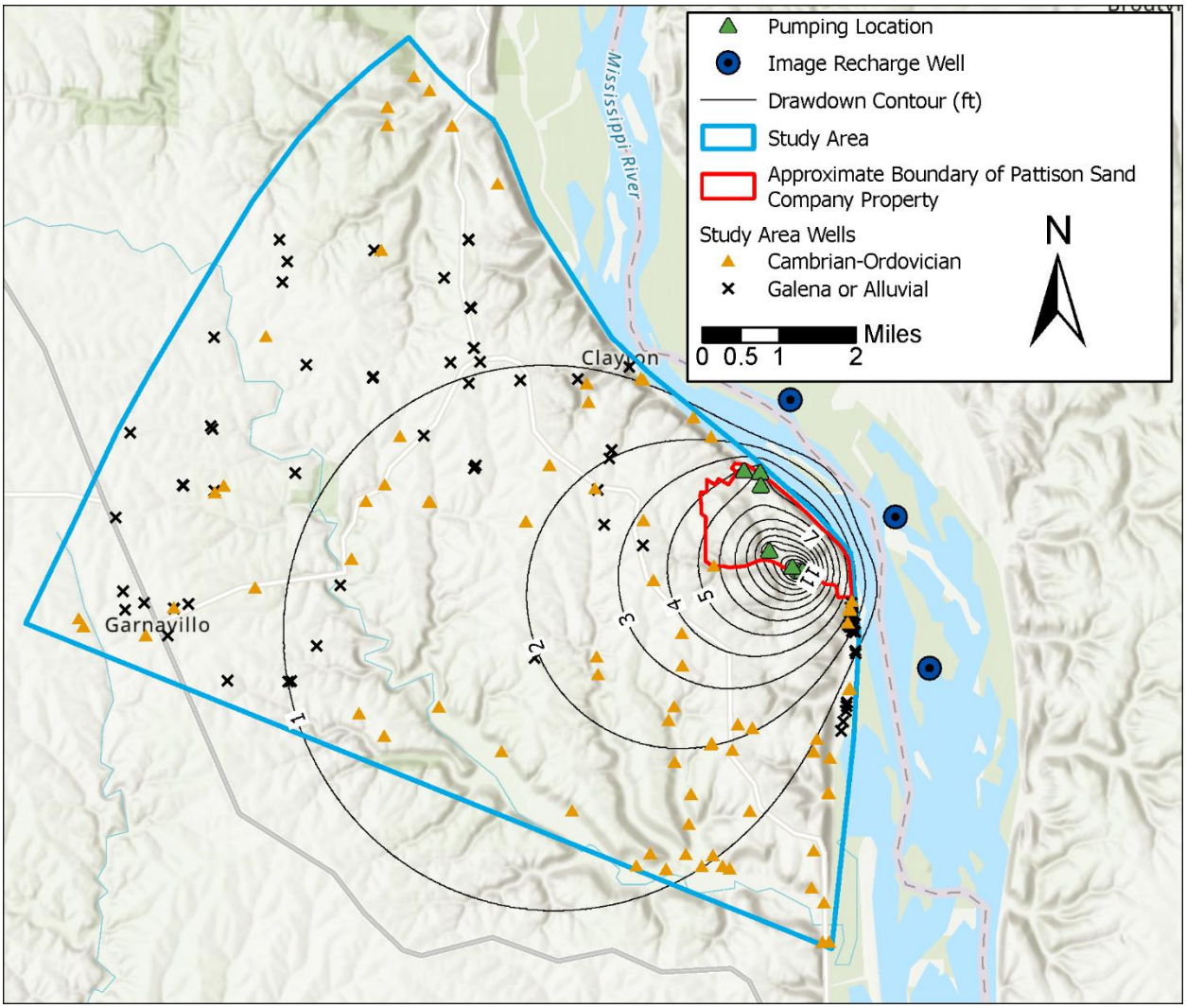

Figure 12. Predicted drawdown after five years of pumping with scenario 2 conditions.

Scenario 3 was identical to scenario 2, but the pumping rate at dewatering basin #1 was reduced to zero based on the assumption that all water pumped from dewatering basin #1 originated from dewatering basin #2. Drawdowns from this scenario were comparable to scenario 2, but with slightly reduced magnitude (Figure 13).

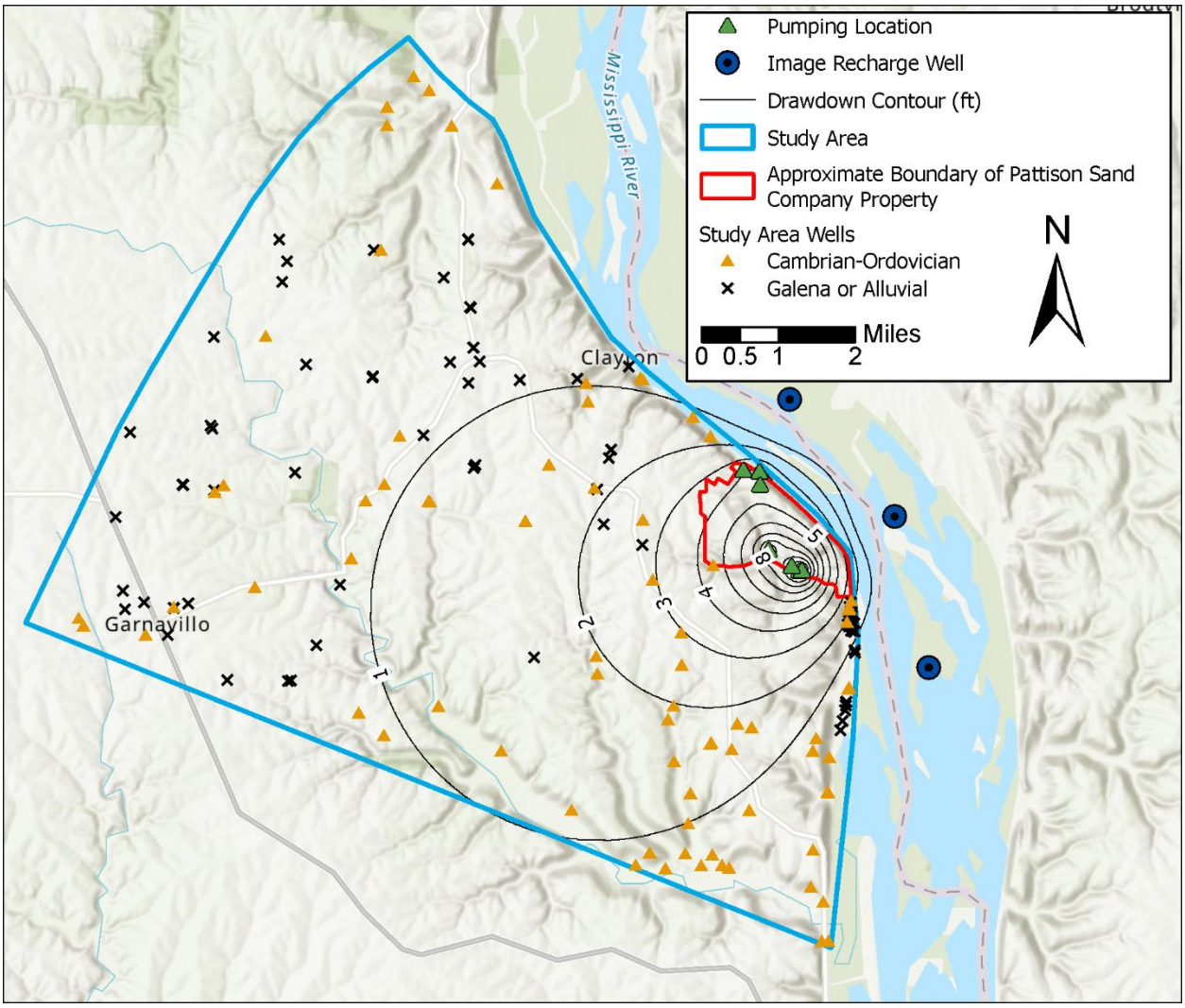

Figure 13. Predicted drawdown after five years of pumping with scenario three conditions.

The regional extent of predicted drawdown from pumping at the permit site is highly dependent upon whether or not the Mississippi River alluvium is a recharge boundary for the C-O aquifer. Although there was no direct evidence of the recharge boundary from this limited investigation, the proximity, depth, and extent of the Mississippi River Alluvial aquifer immediately adjacent and incised into the C-O aquifer at the permit site strongly suggests that there would be hydrologic communication and induced recharge. The pumping test conducted for this report showed no evidence to support or reject the existence of a recharge boundary condition, but this was not unexpected because pumping rates would need to be higher over a longer time to detect

the boundary condition. Further, although scenario 3 accounted for some level of groundwater recycling at the permit site, the amount of water pumped and infiltrated back into the aquifer during normal operations was likely more than simply recycling water from dewatering basin #1. It is probable that pumping of new groundwater from the permit site (that is, not recycled from previous pumping) will be less than the requested amounts due to water recycling. However, quantifying other sources of recycled water was not feasible given the available data.

Based on the likely recharge boundary with the Mississippi River alluvium and the amount of water recycling within the quarry operations that reduces the amount of new groundwater actually pumped, scenario 3 is believed to be the most representative of hydrologic conditions that would occur if the water allocation permit were authorized.

Regional Impacts to Water Resources

Predicted Impacts to Aquifers

Regardless of the scenario evaluated, pumping at the permit site would be expected to have minimal impact to the Galena, Mississippi River Alluvial, and Dresbach aquifers. The Galena aquifer is separated from the C-O aquifer by an aquitard that restricts water movement between the two aquifers enough to create perched conditions in the Galena near the permit site and hydraulic head differences between the two aquifers of over 150 feet near Garnavillo. These hydraulic conditions limit indirect impacts to the Galena via pumping the C-O aquifer and no direct impacts are expected due to the lack of any wells pumping from the Galena at the permit site.

Similarly, no direct impacts are expected to the Mississippi River alluvial aquifer due to the lack of any pumping from this aquifer at the permit site. If alluvial aquifer water is drawn into the C-O aquifer via induced infiltration (modeled by scenario 1 and 2), any drawdown in the alluvial aquifer is expected to be rapidly recharged by the Mississippi River, minimizing any indirect effects to of pumping at the permit site to the alluvial aquifer.

While the Dresbach aquifer is pumped at the permit site, there are no known users of the Dresbach within the study area that could be impacted. Indirect effects to the Dresbach are expected to be minimal due to the presence of an aquitard separating it from the C-O aquifer.

Drawdown in the C-O aquifer will occur due to pumping at the mine site, but the impacts are dependent on the Mississippi River recharge boundary and the degree of water recycling. Under scenario 1 with no recharge or water recycling, drawdowns greater than 10 feet would be possible within four miles of the permit site. Under the more likely scenarios 2 and 3, drawdowns greater than five feet would only occur within a mile of the permit site. In wells open to both the Galena and C-O aquifers, impacts may be evident depending on how deeply the C-O is penetrated. Predicted five-year drawdown for individual wells in the study area can be found in Appendix B. Due to the natural hydraulic gradient of the C-O aquifer in northeast Iowa toward

the east (Figure 7), even under scenario 1 no impacts to statewide C-O aquifer recharge are expected.

Predicted Impacts to Surface Water

The Mississippi River is the nearest major water body to the permit site. Regardless of the conditions on site, pumping will have a negligible impact on Mississippi River discharge. Using USGS gage 05389500 (~10 miles upstream of PSC), the 95th percentile flow exceedance for the Mississippi River (discharge that the river exceeds 95% of the time) was 5.3 million gpm. The total requested maximum pumping rate from all sources at the permit site (9,700 gpm) would be 0.14% of low flow discharge of the Mississippi.

The Turkey River is the next largest River in the region. No impacts are expected to the Turkey River under scenario 2 and 3 conditions because there is nowhere in its watershed where C-O drawdown exceeds one foot. Several feet of C-O aquifer drawdown may occur in the Turkey River watershed under scenario 1 conditions; however, it is difficult to quantify what impacts this may have on the river's discharge. If one fourth of water pumped from the permit site in scenario 1 would have otherwise discharged to the Turkey River, this would cause the Turkey River's low flow discharge to fall by approximately 3% using the 95th percentile flow exceedance for USGS gage 05412500 located 10 miles southwest of permit site.

Headwaters of smaller streams and rivers that are incised into the Galena aquifer but do not penetrate the C-O aquifer would not be impacted by pumping at the permit site, regardless of scenario, because of the hydrogeologic separation (aquitard) between the Galena and C-O aquifers. If sections of streams are incised into the C-O aquifer, they may have reduced baseflows if aquifer drawdown measured at these water bodies exceeds one–two feet. As noted by Horick and Soenksen (1989), most springs in northeast Iowa originate from the Galena aquifer and would therefore not be impacted by pumping on the permit site.

Predicted Impacts to Water Quality

It is highly unlikely that any contaminants introduced to groundwater at the permit site will impact the water quality of nearby private wells. Hydraulic gradients under all modeled scenarios indicate the presence of a cone of depression centered on the permit site which will prevent migration of contaminants away from the permit site. Surface water discharges from the permit site are regulated by a National Pollutant Discharge Elimination System General Permit No. 1 (authorization number: 13256-13044) and are not considered in this report.

Several municipalities in Upper Midwest states using the C-O aquifer have encountered levels of combined radium that exceed the Environmental Protection Agency's Maximum Contaminant level of 5 pCi/L. While the C-O aquifer naturally has combined radium concentrations higher than most aquifers in the Midwest, some municipalities in Wisconsin have documented an increase in these levels over time (Dematatis et al., 2020). A likely reason for the radium

increases is that hydraulic gradients change as a result of pumping and cause more water to be supplied from lithologic units with higher radium levels (Wiersma, 2023).

Under scenario 1 conditions, noticeable drawdown will occur in the region. If this were to occur, shifting hydraulic gradients could change the proportions that certain lithologic units supply to wells and change combined radium levels in wells over time. However, there is not enough information available to estimate how radium levels may change. If increases in radium are detected, it will also be difficult to determine whether the increases would have occurred regardless of pumping at the permit site. Due to limited drawdown under scenarios 2 and 3, it is unlikely that radium concentrations in the C-O would be noticeably impacted by the permit site under these modeled conditions.

Data Gaps/Limitations

Because the investigation was limited in scope and largely limited to existing hydrogeologic data and a single pumping test, there are several data gaps in the analysis that should be acknowledged. Historic water levels were primarily sourced from drillers logs. These levels often taken at the time of drilling may not be accurate and do not provide a time series of water levels that would allow for the assessment of long-term or seasonal water level trends. For this investigation, hydraulic parameters were estimated from a single pump test, so it is unknown if results from the pump test are applicable to the C-O aquifer in the surrounding area. The general lack of hydrogeologic data available necessitated the use of a simple predictive model.

While we have confidence in the overall results of the aquifer pumping test, there were several assumptions that were used in the predictive modelling analyses. The software used for the predictive modelling does not account for different hydrogeologic units and uses the assumptions that the aquifer has uniform thickness and hydraulic properties, is isotropic, and does not interact with overlying or underlying systems. Without data to calibrate the model, it is difficult to predict how these assumptions may bias results. Besides pumping from dewatering basin #1, the impacts of water recycling at the permit site could not be incorporated into the model due to the lack of data. This likely lead to a general overestimation of drawdown in the prediction scenarios, although the magnitude of this overestimation cannot be assessed without the collection of additional data to validate the model.

The most important gap in the data is the lack of direct hydrogeologic evidence of a recharge boundary at the Mississippi River. From the results of the modeled scenarios, the presence or absence of the recharge boundary condition clearly determines the magnitude of drawdown from the requested pumping rates. To address this limitation in the evaluation, additional investigation activities could be conducted to confirm the presence or absence of the recharge boundary. Possible actions could include:

- Conduct a larger, longer and more focused pumping test. This test would require a higher pumping rate than was used in the 9/29/25 pumping test, pumping for a longer interval, and more control of the pumping sources on the site. This option would result in disruption of quarry activities for an undetermined amount of time, likely longer than a month.

- Create a detailed hydrogeologic model. The scenarios modeled for this report used a simple model that did not consider hydrogeologic variability between the St Peter Fm, Prairie du Chien Gp, and Jordan Fm nor how these units may differ further away from the permit site. A detailed model may provide more accurate results but would require several more geographically distributed pumping tests, new monitoring wells, and additional data collection.

- Conduct a geochemical study of water sources. Water quality can be used to confirm the presence of a recharge boundary if the water chemistry between the C-O aquifer and Mississippi River is sufficiently different. For this approach, samples should be collected from the Mississippi River, C-O wells west of the permit site, a C-O well between the main pumping areas on site and Mississippi River, and one of the main pumping sources on site. Water chemistry will be different depending on whether water originates from the Mississippi River or the C-O aquifer. Potential parameters to test include nitrate, chloride, and sulfate, however other parameters could also be useful. This approach could supplement the findings of an extended pumping test. However, the successful application of a water quality source tracking approach to assess the recharge boundary is unknown. The most important consideration is whether or not the water sources are sufficiently different to assess relative contributions, or if the blending of water sources in the area is detectable against normal background variations.

- If the recharge boundary were to be left unknown, sentinel monitoring wells could be installed west of the site to closely monitor groundwater levels as pumping rates increase. Due to the difference between drawdown with and without a recharge boundary, the response of water levels in monitoring wells should clearly show whether the boundary is present. If the recharge boundary is absent, drawdown in excess of several feet would be anticipated within a mile of the permit site within a couple months of pumping at the requested amount. Drawdown amounts at selected locations are shown in Table 7. If using monitoring wells, it will be important to install them prior to pumping rates increasing substantially at the permit site so background trends in water levels can be noted and any responses from pumping can be observed. Groundwater levels should be measured at least once a month until there is enough data to understand ambient fluctuations in water levels and the presence/absence of a recharge boundary has been determined.

Table 7. Drawdown at select locations under the three prediction scenarios.

Scenario, Location	Predicted Drawdown (ft)		
	1 month	6 months	5 years
Scenario 1, 0.5 miles West of permit site on Mississippi Rd (near GeoSam well #32587)	7.0	14.0	23.0
Scenario 2, 0.5 miles West of permit site on Mississippi Rd (near GeoSam well #32587)	4.5	5.5	5.5
Scenario 3, 0.5 miles West of permit site on Mississippi Rd (near GeoSam well #32587)	3.5	4.5	4.5
Scenario 1, 1.25 miles West of permit site (intersection of X56 and Mississippi Rd)	3.0	9.0	18.0
Scenario 2, 1.25 miles West of permit site (intersection of X56 and Mississippi Rd)	2.0	3.0	3.5
Scenario 3, 1.25 miles West of permit site (intersection of X56 and Mississippi Rd)	1.5	2.5	3

Conclusions

This report details the results of a limited hydrogeologic investigation at Pattison Sand Company conducted for the Iowa DNR as part of a review of WACOP permit #9126. Existing well and strip logs were used to build a geologic and hydrogeologic framework for the site and surrounding study area. A successful pumping test was performed on-site that included a new borehole installed to measure localized drawdowns. Site-specific aquifer parameters for hydraulic conductivity, transmissivity, and storage coefficient were determined to be 34,900 $feet^2$/day, 127 feet/day, and 0.02 (unitless), respectively. Based on geologic and hydrogeologic data, predictive drawdown modelling was conducted to evaluate potential regional drawdown scenarios. Results indicated that drawdown under requested pumping rates could vary considerably depending on whether or not a recharge boundary exists at the interface of the C-O aquifer and Mississippi River alluvial aquifer. Under the most likely hydrologic conditions that included a recharge boundary and some pumped water recycled on-site (scenario 3), drawdown in the C-O aquifer after five years at the requested annual pumping rate would be less than one foot at Garnavillo and approximately two feet two miles west of the permit site. If the recharge boundary was not present, drawdown after five years could reach seven feet at Garnavillo and over 15 feet within two miles of the permit site (scenario 1).

No impacts to users of the Galena, Mississippi alluvial, or Dresbach aquifers are anticipated regardless of which scenario most accurately reflects the hydrologic conditions at the site. Similarly, no or minimal impacts to the Mississippi River or Turkey River are expected. Springs and headwaters of smaller streams only have the potential to be impacted if they are incised into the C-O aquifer. There is limited potential for pumping at the permit site to impact water quality with scenarios 2 and 3, but under scenario 1 conditions, changes in hydraulic gradients could

potentially contribute to changes in radium levels. However, there is not enough data available about the system to determine how much radium levels could change as a result of pumping.

Several hydrogeologic data gaps were identified in this investigation. Most importantly, no direct hydrogeologic evidence was available to support or reject the presence of a recharge boundary at the Mississippi River. Conceptual understanding of well-understood groundwater flow dynamics and the local stratigraphy suggest that induced recharge from the alluvium to the C-O aquifer can occur at the site. If additional confirmation is needed, potential options to address this data gap would include further hydrogeologic testing at the permit site, assembly of data for a more detailed groundwater flow model or conducting a water quality source-tracking study. If the recharge boundary were to be left unexplored, additional approaches to evaluating the potential for localized drawdown impacts could include the installation of sentinel monitoring wells west of the Pattison property to track water level trends over time.

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Appendix A – Water Use Summary Report

IOWA DEPARTMENT OF NATURAL RESOURCES
WATER USE PERMIT SUMMARY REPORT

Applicant: Pattison Sand Company, LLC
Attn: Carl Orr
23656 Great River Road
Garnavillo, IA 52049-8257

Application Log #: 33,483

1. The Applicant requests a permit modification to withdraw water from two Mississippi River alluvial aquifer wells, approximately 100 feet deep; two Jordan aquifer wells, approximately 100 feet deep; one mine pond intake; one Mississippi River intake; and two proposed quarry/rail track dewatering basins, all located on land generally described as the E ½ of the SE ¼ of Section 12, T93N, R03W, the S ½ and the S ½ of the NW ¼ of Section 2, the N ½ of Section 18, and the NW ¼ of Section 17, T93N, R02W, Clayton County, Iowa, in the maximum quantity of 423 million gallons per year at a maximum rate of 850 gallons per minute from the Mississippi River alluvial aquifer; 1,435 million gallons per year and 2,800 gallons per minute from the Jordan aquifer; 77 million gallons per year and 150 gallons per minute from the mine pond; 564 million gallons per year at 1,100 gallons per minute from the Mississippi River; and 1,244 million gallons per year at 4,800 gallons per minute from the quarry/rail track dewatering basins; in the maximum total quantity of 3,743 million gallons per year at a maximum rate of 9,675 gallons per minute throughout each year, all for processing silica sand from an underground mine on said land.

2. The water withdrawn for this permit is used for the quarrying and production of sand from an underground St. Peter sandstone mine located at the same area as the water withdrawals. Quarrying of earth materials is a priority allocation beneficial use as determined by Iowa Code 455B.266. The majority of the requested increase in allocation for the permit is projected for dewatering of the mined formation and through the quarry/rail track dewatering basins.

3. The Applicant's sand mine is located on land owned by Pattison Sand Company, LLC and Pattison Brothers Mississippi River Terminal, Inc. The land is located approximately 300 feet west of the Mississippi River at about River Mile Marker 623.44, approximately ½ miles southwest of the Municipal Limits of the city of Garnavillo, Iowa, and north-northwest of the municipal limits of the city of Guttenberg, Iowa. Water is withdrawn to dewater and wash silica sand for industrial use. Wash water will be discharged to settling basins.

4. The current permitted maximum withdrawal quantity is 976.8 million gallons per year (mgy) at a maximum total instantaneous rate of 3,700 gallons per minute (gpm) from a variety of sources.

5. The Applicant wishes to increase their maximum annual allocation withdrawal amount to 3,743 mgy from increasing multiple groundwater and surface water sources. The additional sources are for intakes dewatering the track/rail car basins.

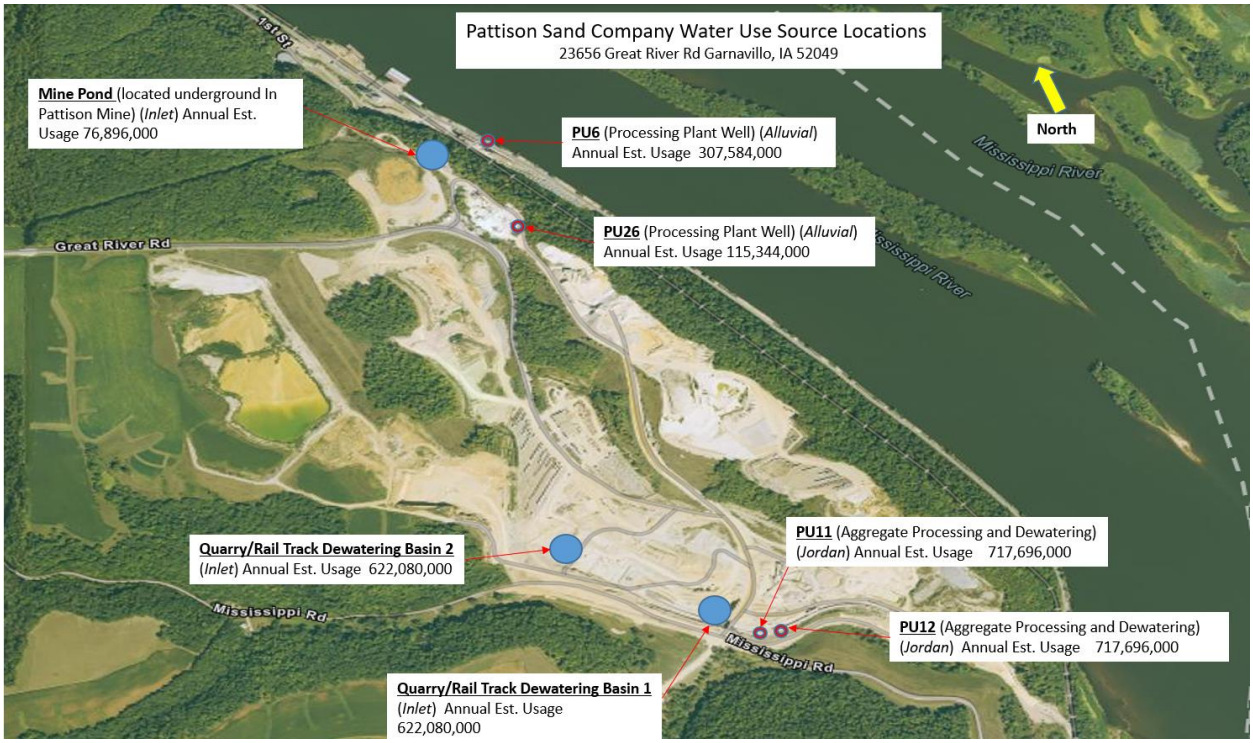


Figure 1. Pattison Sand Company modification requested wells, intakes, with sources and annual usage amount. Figure from Pattison Sand Company.

6. Table 1 shows anticipated well construction, geology, and water levels from Pattison Sand Company LLC's Jordan aquifer wells.

Table 1. Jordan aquifer water level predictions from available digital models.

Pattison Sand [9126] Jordan Tier Levels		
Local Name	**PU11**	**PU12**
Drill Date	2018	2019
Well Elevation (ft)	631	633
Total Well Depth (ft)	100	100
Total Casing Depth (ft)	99	unk.
Est Static Water Level Depth (ft)	unk.	unk.
Est. Pumping Water Level Depth (ft)	unk.	unk.
Jordan Tier 2 Depth (50% 1978 level)	n.a.	n.a.
Jordan Tier 3 Depth (75% 1978 level)	n.a.	n.a.

7. Because the Jordan aquifer in this area is unconfined at this location, and at the land surface, the compliance provisions of the Jordan rule do not apply to the permit.

8. There are two water use withdrawal permits that utilize wells open in the Jordan aquifer located near Pattison Sand Company Jordan wells. These two permits are for the city of Garnavillo, water use permit # 3871 for 39.8 mgy, approximately 5.7 miles to the west of Pattison's Jordan wells, and the city of Clayton, water use permit #5644 for 11.5 mgy, approximately 2.4 miles to the northwest of the applicant's Jordan wells. The lateral distance between these locations prevents significant instantaneous well interference between the permitted wells from occurring.

9. The Jordan aquifer is assumed to be confined to the west of the mine in the region, separated by the land surface by Glenwood shale, approximately 25 feet thick in the area. Wells open in aquifers above the confining layer should not be impacted by mining dewatering operations.

10. Dewatering of the Jordan aquifer for mining purposes in the area will establish a regional cone of depression in the Jordan aquifer around the Pattison Sand Company's mining footprint, depending on the dewatering depth and extent utilized for mining the silica sand. Jordan aquifer water levels should be measured in Garnavillo city wells to determine the influence.

11. Many private wells utilize the Jordan aquifer in the area. Mining and dewatering of the mine could cause private wells to encounter well interference. At this point, no direct evidence of well interference has occurred due to dewatering or mining of the facility. In a future well interference event, the interests of individuals using water for domestic purposes, as well as those persons benefiting from the permits mentioned above, are amply protected in the event of substantial injury pursuant to Section 455B.271, Code of Iowa.

12. The ability and intent of the applicant to devote a reasonable amount of water to a beneficial use seems evident. There is no evidence that the use of water pursuant to a permit granted in accordance with the conclusions contained herein will constitute a waste of the water resources of the State, will be incompatible with the state comprehensive plan for water resources, will impair the effect of pollution control laws of this State or the navigability of and navigable watercourse, or will be detrimental to the public interest or to the interests of property owners with prior or superior rights who might be affected. The requested amount of water use is also justified by law, barring compelling circumstances that mitigate to the contrary.

THEREFORE:

The requested use of water conforms to the relevant criteria in Division III, Part 4, Chapter 455B, Code of Iowa and Chapter 52 of Part 567, Iowa Administrative Code. No substantial adverse effect upon other water users is foreseen at this time. Following publication of notice and subject to revisions in response to comments that may be submitted, the attached draft permit should be issued for a period of ten years.

_____
Water Supply Engineering Section

Date: _____

Appendix B – Simulated Drawdown of Wells in the Study Area Excluding Pattison-Owned Wells

GeoSam ID	IWIS ID	Primary Aquifer	Latitude	Longitude	Predicted Drawdown (ft)		
					Scenario 1	Scenario 2	Scenario 3
3713		Galena	42.86902	-91.2318	0	0	0
7810		Cambrian-Ordovician	42.86538	-91.2371	7	1	1
11788	2025291	Cambrian-Ordovician	42.92768	-91.1708	9	<1	<1
12925	2026194	Cambrian-Ordovician	42.87594	-91.1983	10	1	1
15711		Cambrian-Ordovician	42.82306	-91.1083	11	<1	<1
16006	2027943	Galena	42.91046	-91.1757	0	0	0
18443		Cambrian-Ordovician*	42.82306	-91.1095	11	<1	<1
21120	2031064	Galena	42.90305	-91.1741	0	0	0
22271	2031843	Cambrian-Ordovician	42.93566	-91.1794	8	<1	<1
26579		Cambrian-Ordovician	42.90016	-91.154	14	1	1
28909	2015095	Galena	42.91692	-91.2104	0	0	0
32586	2012682	Cambrian-Ordovician	42.85554	-91.1819	11	2	1
32587	2012683	Cambrian-Ordovician	42.87496	-91.13	23	6	5
35620	2010898	Cambrian-Ordovician	42.84348	-91.1343	14	2	1
37758		Cambrian-Ordovician*	42.93828	-91.1916	8	<1	<1
38096		Galena*	42.90069	-91.1557	0	0	0
39159	2187361	Cambrian-Ordovician	42.85999	-91.1519	15	2	2
39911		Cambrian-Ordovician*	42.86919	-91.2318	7	1	1
39912		Galena*	42.86526	-91.2329	0	0	0
44201	2007339	Cambrian-Ordovician	42.85789	-91.1046	18	1	<1
45838		Cambrian-Ordovician*	42.8928	-91.1305	19	2	2
49637	2004031	Cambrian-Ordovician	42.8526	-91.1228	17	2	2
49657	2004050	Cambrian-Ordovician	42.88604	-91.2224	8	1	1
50156		Galena*	42.90011	-91.1762	0	0	0
53654		Cambrian-Ordovician	42.93573	-91.1916	8	<1	<1
54541	2000279	Cambrian-Ordovician	42.8515	-91.1922	10	1	1
54698	2077439	Cambrian-Ordovician	42.89757	-91.1537	14	1	1
55028	2077329	Cambrian-Ordovician	42.83354	-91.1284	12	1	1
55046	2077319	Galena	42.89424	-91.2248	0	0	0
56616	2087449	Cambrian-Ordovician	42.84954	-91.1265	16	2	1
57132	2092977	Cambrian-Ordovician	42.84117	-91.1567	12	2	1
58005	2095007	Galena	42.85892	-91.2102	0	0	0
61181	2114306	Galena	42.88974	-91.1497	0	0	0
63702	2125579	Cambrian-Ordovician	42.8689	-91.1044	23	3	2
63889	2126498	Cambrian-Ordovician	42.85367	-91.1386	15	2	2
63972	2127718	Cambrian-Ordovician	42.8335	-91.1323	12	1	1
65288	2135178	Cambrian-Ordovician	42.88565	-91.1524	16	2	2
65447	2136359	Cambrian-Ordovician	42.83516	-91.1353	12	1	1
65448	2134845	Cambrian-Ordovician	42.83526	-91.142	12	1	1
65456	2136492	Galena	42.88877	-91.1749	0	0	0
66908	2141381	Galena	42.90102	-91.1942	0	0	0
72302	2146475	Cambrian-Ordovician	42.85046	-91.1304	16	2	2
72773	2148823	Galena	42.86386	-91.2049	0	0	0
73484	2140368	Galena	42.91844	-91.194	0	0	0
73851	2155753	Cambrian-Ordovician	42.86713	-91.1048	22	3	2
74327	2157948	Galena	42.88158	-91.2428	0	0	0
74967	2160873	Cambrian-Ordovician	42.8331	-91.139	12	1	1
75389	2160506	Cambrian-Ordovician	42.86913	-91.1044	23	3	2
75874	2167469	Galena	42.90264	-91.2068	0	0	0
76152	2169788	Galena	42.90298	-91.1796	0	0	0

77556	2175062	Cambrian-Ordovician	42.8889	-91.161	14	2	2
80080		Galena	42.87224	-91.2004	0	0	0
82989	2188591	Cambrian-Ordovician	42.83933	-91.1348	13	1	1
86988	2184547	Cambrian-Ordovician	42.84355	-91.1084	14	<1	<1
88020	2152123	Cambrian-Ordovician	42.86665	-91.2488	6	1	1
88032	2154481	Alluvial	42.86284	-91.1033	0	0	0
88050	2166034	Cambrian-Ordovician	42.84935	-91.17	11	2	1
88081	2176450	Alluvial	42.85555	-91.105	0	0	0
88082	2176764	Alluvial	42.85608	-91.1049	0	0	0
88682	2198703	Galena	42.88525	-91.2241	0	0	0
88887	2199775	Cambrian-Ordovician	42.88616	-91.1921	10	1	1
92380	2208492	Cambrian-Ordovician	42.86767	-91.2497	6	1	1
96135	2216332	Cambrian-Ordovician	42.85109	-91.1106	16	1	1
96251	2223372	Cambrian-Ordovician	42.85309	-91.1255	17	2	2
96424	2217452	Alluvial	42.86699	-91.1036	0	0	0
100615	2222617	Cambrian-Ordovician	42.84935	-91.1112	16	1	1
102376	2194379	Cambrian-Ordovician*	42.83565	-91.1112	13	<1	<1
	2009105	Cambrian-Ordovician*	42.86244	-91.1521	15	3	2
	2028574	Cambrian-Ordovician*	42.88111	-91.1655	14	2	2
	2076076	Galena*	42.886	-91.23	0	0	0
	2077606	Cambrian-Ordovician*	42.835	-91.1302	12	1	1
	2079554	Galena*	42.8929	-91.1847	0	0	0
	2085942	Cambrian-Ordovician*	42.8503	-91.1306	15	2	2
	2086563	Galena*	42.8938	-91.2245	0	0	0
	2088405	Cambrian-Ordovician*	42.8701	-91.104	23	3	2
	2088406	Alluvial*	42.8698	-91.104	0	0	0
	2094420	Galena*	42.9005	-91.1665	0	0	0
	2098015	Galena*	42.859	-91.2097	0	0	0
	2098228	Cambrian-Ordovician*	42.8839	-91.1956	10	1	1
	2100977	Galena*	42.9199	-91.2119	0	0	0
	2106345	Galena*	42.8806	-91.1507	0	0	0
	2113392	Galena*	42.91059	-91.1759	0	0	0
	2113515	Galena*	42.90499	-91.1753	0	0	0
	2113521	Alluvial*	42.86809	-91.104	0	0	0
	2115165	Galena*	42.8909	-91.1493	0	0	0
	2115179	Galena*	42.91991	-91.1762	0	0	0
	2117165	Galena*	42.88605	-91.2301	0	0	0
	2117264	Alluvial*	42.85343	-91.1056	0	0	0
	2124471	Cambrian-Ordovician*	42.8546	-91.1969	9	1	1
	2125645	Cambrian-Ordovician	42.8479	-91.1374	14	2	2
	2127330	Galena*	42.8933	-91.24	0	0	0
	2129811	Galena*	42.86884	-91.241	0	0	0
	2135760	Cambrian-Ordovician*	42.91855	-91.1927	9	1	1
	2136034	Alluvial*	42.8664	-91.1038	0	0	0
	2136036	Alluvial*	42.86724	-91.1039	0	0	0
	2136037	Alluvial*	42.86725	-91.1041	0	0	0
	2136044	Alluvial*	42.86694	-91.1034	0	0	0
	2136050	Alluvial*	42.86577	-91.1035	0	0	0
	2136052	Alluvial*	42.86836	-91.1039	0	0	0
	2136053	Alluvial*	42.86669	-91.1044	0	0	0
	2136085	Alluvial*	42.86652	-91.1044	0	0	0
	2136087	Alluvial*	42.86672	-91.1047	0	0	0

	2138998	Cambrian-Ordovician*	42.83355	-91.1446	11	1	1
	2139001	Alluvial*	42.86675	-91.1038	0	0	0
	2139002	Alluvial*	42.86648	-91.1039	0	0	0
	2139019	Galena*	42.88541	-91.1519	0	0	0
	2140163	Galena*	42.88837	-91.1752	0	0	0
	2140295	Galena*	42.8714	-91.2414	0	0	0
	2142895	Cambrian-Ordovician*	42.88126	-91.1433	18	3	3
	2143605	Alluvial*	42.86678	-91.1037	0	0	0
	2143606	Alluvial*	42.86693	-91.1039	0	0	0
	2143607	Alluvial*	42.8667	-91.1043	0	0	0
	2143608	Alluvial*	42.86727	-91.1044	0	0	0
	2143630	Alluvial*	42.86879	-91.104	0	0	0
	2143631	Alluvial*	42.8692	-91.1043	0	0	0
	2143800	Alluvial*	42.86794	-91.1039	0	0	0
	2144102	Alluvial*	42.86586	-91.104	0	0	0
	2145977	Galena*	42.90088	-91.1943	0	0	0
	2147010	Cambrian-Ordovician*	42.84115	-91.1232	14	1	1
	2147018	Alluvial*	42.85491	-91.1051	0	0	0
	2149791	Cambrian-Ordovician*	42.89285	-91.1892	10	1	1
	2150448	Cambrian-Ordovician*	42.90662	-91.2145	8	1	1
	2150454	Galena*	42.90645	-91.2242	0	0	0
	2152541	Cambrian-Ordovician*	42.84371	-91.1084	14	<1	<1
	2156977	Cambrian-Ordovician*	42.83053	-91.1116	12	<1	<1
	2158020	Cambrian-Ordovician*	42.87196	-91.2165	8	1	1
	2158900	Cambrian-Ordovician*	42.86566	-91.1361	19	4	3
	2161807	Cambrian-Ordovician*	42.90086	-91.1438	15	1	1
	2168757	Galena*	42.86219	-91.1638	0	0	0
	2169226	Cambrian-Ordovician*	42.89548	-91.1338	18	1	1
	2169723	Cambrian-Ordovician*	42.82846	-91.1093	11	<1	<1
	2176965	Cambrian-Ordovician*	42.90063	-91.1433	15	1	1
	2177877	Alluvial*	42.85598	-91.105	0	0	0
	2177878	Alluvial*	42.85598	-91.105	0	0	0
	2178104	Galena*	42.87772	-91.1434	0	0	0
	2179384	Alluvial*	42.86574	-91.1034	0	0	0
	2183684	Cambrian-Ordovician*	42.94247	-91.1865	7	<1	<1
	2186312	Cambrian-Ordovician*	42.8332	-91.1271	12	1	1
	2187360	Cambrian-Ordovician*	42.86122	-91.136	18	3	3
	2187459	Alluvial*	42.85214	-91.106	0	0	0
	2192455	Alluvial*	42.8659	-91.1035	0	0	0
	2198327	Cambrian-Ordovician*	42.88513	-91.2241	8	1	1
	2202057	Galena*	42.88773	-91.2089	0	0	0
	2205690	Cambrian-Ordovician*	42.94055	-91.1836	8	<1	<1
	2206862	Cambrian-Ordovician*	42.88375	-91.1835	11	1	1
	2207340	Galena	42.91406	-91.2113	0	0	0
	2211593	Galena*	42.91466	-91.1808	0	0	0
	2211596	Cambrian-Ordovician*	42.84848	-91.1082	15	1	<1
	2220667	Galena*	42.86965	-91.229	0	0	0
	2229207	Alluvial*	42.90237	-91.1459	0	0	0
	2229238	Cambrian-Ordovician*	42.87301	-91.1414	18	4	3
	2230245	Cambrian-Ordovician	42.88386	-91.1837	11	1	1
	2230762	Cambrian-Ordovician*	42.85556	-91.1375	16	3	2
	2233300	Galena*	42.85907	-91.2217	0	0	0

	2235318	Alluvial*	42.86635	-91.1039	0	0	0
	2235412	Galena*	42.86981	-91.2374	0	0	0
	2237048	Alluvial*	42.86317	-91.1034	0	0	0
	2237049	Cambrian-Ordovician*	42.85809	-91.1044	18	1	<1

*No lithology data available, aquifer pick made using only elevation at bottom of well

APPENDIX C

REIMER, LAURA
RR #2
Garnavillo, 52049

Clayton, Clayton, Sec 18S NWNWNW
July 12 - 16, 1991
NITRATE LEVEL:

Clayton # 32587
93-2W-18 BBB

LOG OF WELL

0'	to	23'	Brown clay with broken rock
23'	to	28'	Limerock
28'	to	31'	Broken rock(Made water)
31'	to	40'	Limerock
40'	to	44'	Shale
44'	to	162'	Sandstone
162'	to	165'	Shale
165'	to	250'	Gray limerock(Made water 230')

The well is cased to 197' with 7" O.D. steel x .317 wall P.E. casing. A 9 7/8" hole was drilled to 170' and bentonite grout was pumped in the annular space.

The static water level is 180'.
The recommended pump setting is 195' at 60 gallons/minute.

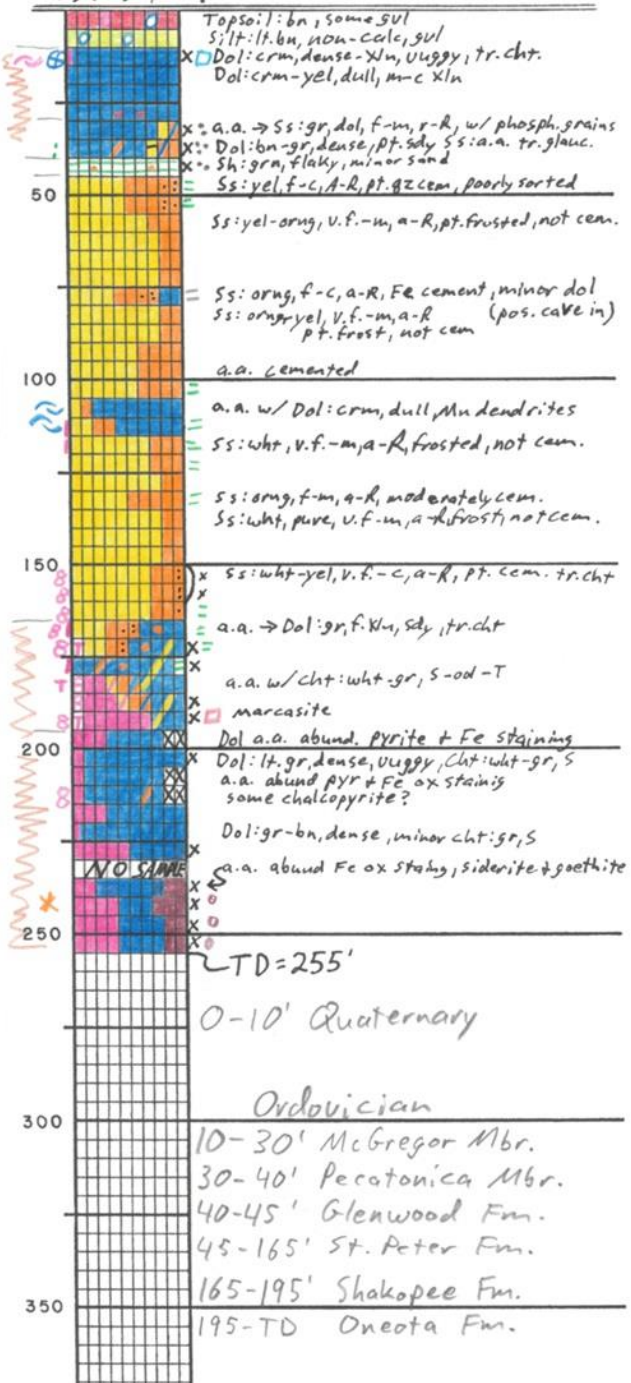
BORE HOLE SIZE DATA

0'	to	23'	12 ¼ " diameter
23'	to	170'	9 7/8 " diameter
170'	to	250'	6 ¼ " diameter

NEIL

IOWA GEOLOGICAL SURVEY W-32587

STATE: Iowa	TOWN: Garnavillo; COUNTY: Clayton
SW, NW, NW	OWNER: Reimer, Laura
SEC.: 18	
TWP.: 93N; RGE.: 2W	COMMENCED: 7/12/1991; COMPLETED: 7/16/1991
	DRILLER: Shawver Well Co.
	CASING RECORD: 7" steel to 197'
	LOGGED: 8/8/2025; BY: Ryan Clark
EL.: 809'	SWL: 180' PL: ____ @ 60 GPM
T.D.: 255'	MAIN WATER: 230'
	REMARKS: No Sample 230-235'
S.N.: OD7-311	



0-10' Quaternary

Ordovician

300

10-30' McGregor Mbr.

30-40' Pecatonica Mbr.

40-45' Glenwood Fm.

45-165' St. Peter Fm.

165-195' Shakopee Fm.

350

195-TD Oneota Fm.

Pattison Presentation: 6-9-2026

IOWA DEPARTMENT OF NATURAL RESOURCES

Leading Iowans in Caring For Our Natural Resources

Water Use Permit Application Process

- New permit requirement: Usage of more than 25,000 gallons of water in a single day during the year
  - Issued for period of up to 10 years (Jordan Aquifer is 5 years)
  - Application fee is $350
  - Once received, they are assigned and the review process begins
  - Each application must go through a 20-day public comment period
- Major modification requirement: Any additions to sources or increase in usage
  - Issued for period of up to 10 years (Jordan Aquifer is 5 years)
  - Application fee is $350
  - Once received, they are assigned and the review process begins
  - Each application must go through a 20-day public comment period

Water Use Permit Requirements

- Annual permit requirements include: annual fee and annual reporting
  - The annual fee is due by December 1st of every year
    - The fee amount is set every year; calculated based off of program staff needs and number of permittees
  - The annual reporting is due by January 31st of every year
    - The reports include all the sources listed for the permit to report for the 12 months, and the well level measurements as well
    - Staff enter the forms received via email and mail, otherwise permittees submit usage online
- Renewal period depends on when the original or modified application was approved
  - Most permits cycle a 10 year period
    - The Jordan aquifer is based on a 5 year period
  - Renewal applications are sent in the mail 3 months in advance; once received they are reviewed and the permit document and database are updated

2024 Water Usage

All Active Water Use Permits - SFY2025

Use Type	2024 Use MGY	# of Permits	% of Total Use	% of Total Permits
Animal Feeding Operation	4,911	146	0.6	4.3
Ethanol Production	8,108	32	1.1	1.0
Heating/Cooling	8,030	114	1.0	3.4
Industrial/Commercial	93,489	133	12.2	4.0
Irrigation	26,273	1810	3.4	53.8
Other	247	20	0.0	0.6
Power Generation	430,414	20	56.3	0.6
Public Water System	158,955	663	20.8	19.7
Quarry	25,622	327	3.3	9.7
Recreational	9,091	102	1.2	3.0
Total	**765,139**	**3367**		100.0

IOWA DNR

2024 Water Usage

2024 Water Use Summary

Use Type	2023 (MGY)	2024 (MGY)	% Change
Animal Feeding Operation	4,921	4,911	-0.2
Ethanol Production	8,091	8,108	0.2
Heating/Cooling	7,653	8,030	4.9
Industrial/Commercial	92,529	93,489	1.0
Irrigation - Corn & Soybean	31,067	20,935	-32.6
Irrigation - Golf Course	3,157	2,771	-12.2
Irrigation - Speciality Crops	2,987	2,567	-14.1
Other	344	247	-28.3
Power Generation	457,059	430,414	-5.8
Public Water System	161,913	158,955	-1.8
Quarry	27,297	25,622	-6.1
Recreational	6,763	9091	34.4
Total	803,781	765,139	-4.8

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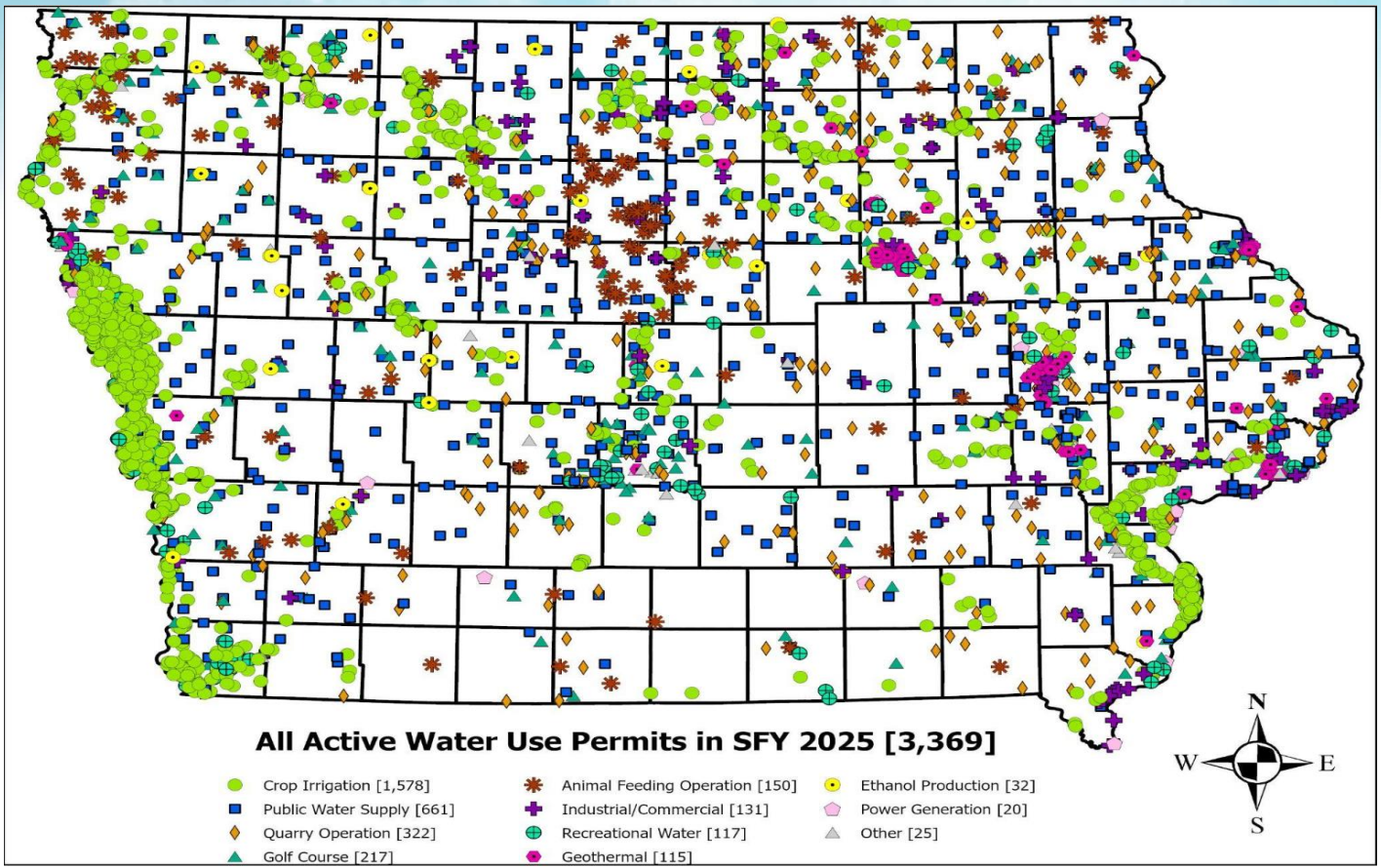
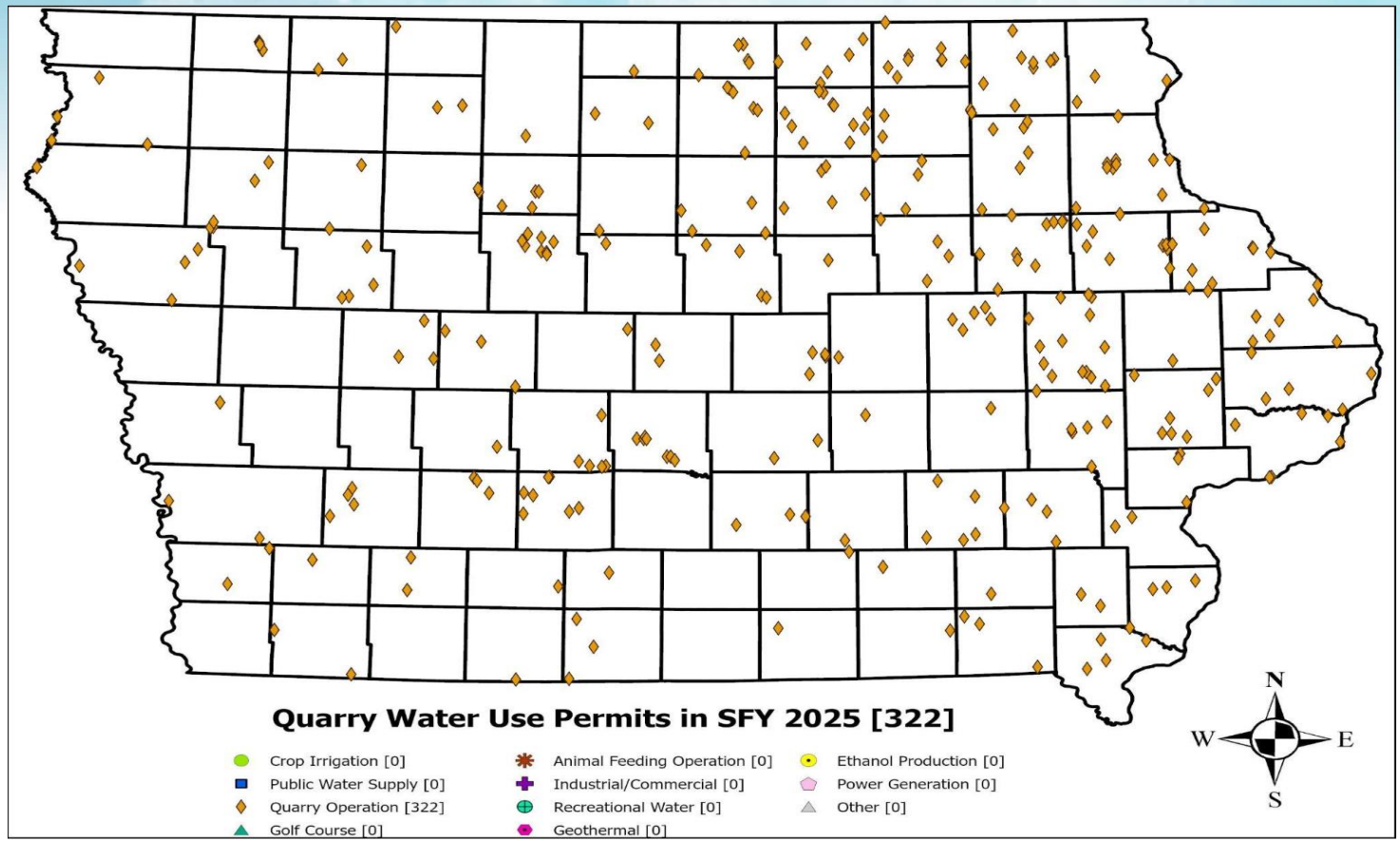
All Active Water Use Permits - SFY2025



IOWA DNR

All Active Quarry Permits - SFY2025



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Questions??

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Quarry Water Use

Purposes of Water Use in Quarries

- **Site dewatering** – pumping groundwater to keep area dry and safe for mining.
- **Dust suppression** – spraying haul roads, crushing areas, and stockpiles.
- **Aggregate washing/processing** – cleaning sand, gravel, and crushed stone to meet quality standards.
- **Slurry transport** – moving fine materials as a water-sand mix.
- **Drilling support** – water may be used to cool equipment.
- **Worker facilities** – restrooms, showers, and drinking water.

Iowa's **327** quarry water use permits range from a low of **one million gallons per year** to a high of **5.6 billion gallons per year (Cerro Gordo County)**.

IOWA DNR

Pattison Sand Company

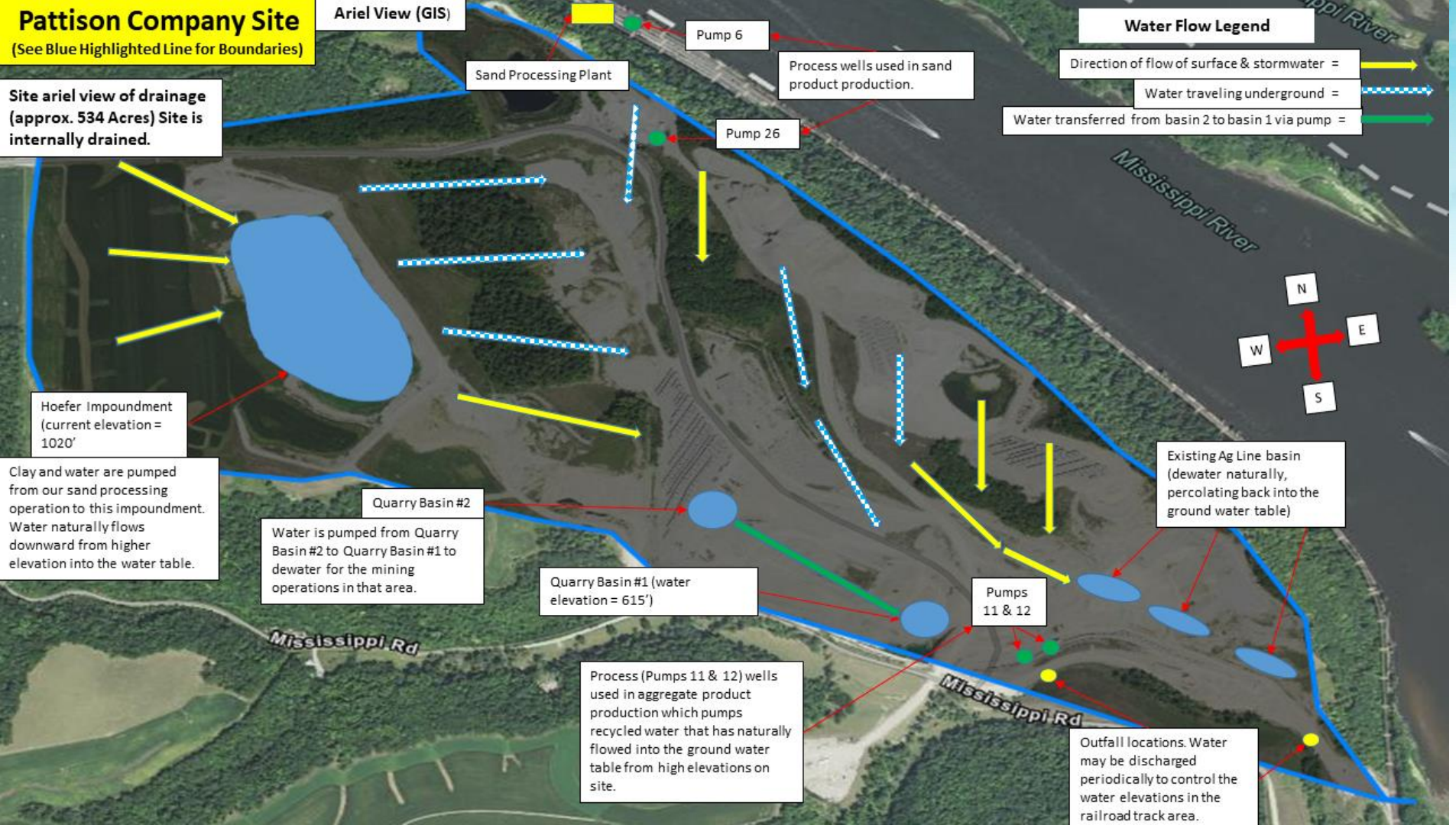
- Iowa Water Use Permit since 2007
- Expanded use in 2017 – two new “Jordan Aquifer” wells
- In 2025, Pattison Sand Company completed a modification application that added **two new sources** (railcar surface water dewatering)
- Increase annual allocation limit from all sources to 3.7 billion gallons per year
- Study used for analysis was completed in 2016 by LBG, Inc.
- After public notice, multiple comments received
- A public hearing was held in April of 2025i – extended public comments
- Public comments requested further investigation by the program

IOWA DNR


Well #PU6
Mine Pond Intake
Well #PU26
Great River Rd
Rail Intake #2
Mississippi River
Well #PU12
Rail Intake #1
Well #PU11
X56
1
6
12
7
8
9
13
18
17
16
0
2,000
4,000
8,000 Feet
Pattison Sand Company
Water Use Permit Intake
Water Use Permit Well

Pattison Company Site

(See Blue Highlighted Line for Boundaries)



Public Comments

- **Water Train and Out-of-State Water Export:**
  - The program should modify Permit Condition 13 to explicitly require all withdrawn water be discharged to the Mississippi River.
- **Lack of Transparency:**
  - Need outreach to nearby municipalities and property owners.
  - Ensure future hearings include an informational component from the DNR/Water Use Program.
  - Schedule a follow-up hearing with a larger venue and adequate lead time for meaningful public input.
- **Monitoring, Compliance Gaps:**
  - The program should make all monitoring requirements explicit permit conditions with defined reporting schedules.
  - Investigate and reconcile the missing records.
- **Scale of Withdrawal Relative to Need**
  - The proposed use represents a large increase over previous use.

IOWA DNR

Public Comments

- **Water Train/Water Export is not a permitted use.**
  - The permitted use(s) are only for quarrying (dewatering, etc.)
- The IGS delivered its **Pattison Sand Company Hydrogeologic Investigation** on February 3, 2026,
  - extended pump test
  - geologic cross-sections
  - water level data
  - private well inventory
  - regional impact analysis with predictive aquifer modeling
  - data gaps
- Iowa Water Use Program staff met with officials from the cities of **Garnavillo, Clayton, and Elkader**,
- Water Use Staff met with the Clayton County Sanitarian (in charge of private wells)
- A private well owner with a formal interference complaint in April 2026.
- Followed by this meeting to present findings and announce updated conditions and allocation limits on PSC Permit #9126.

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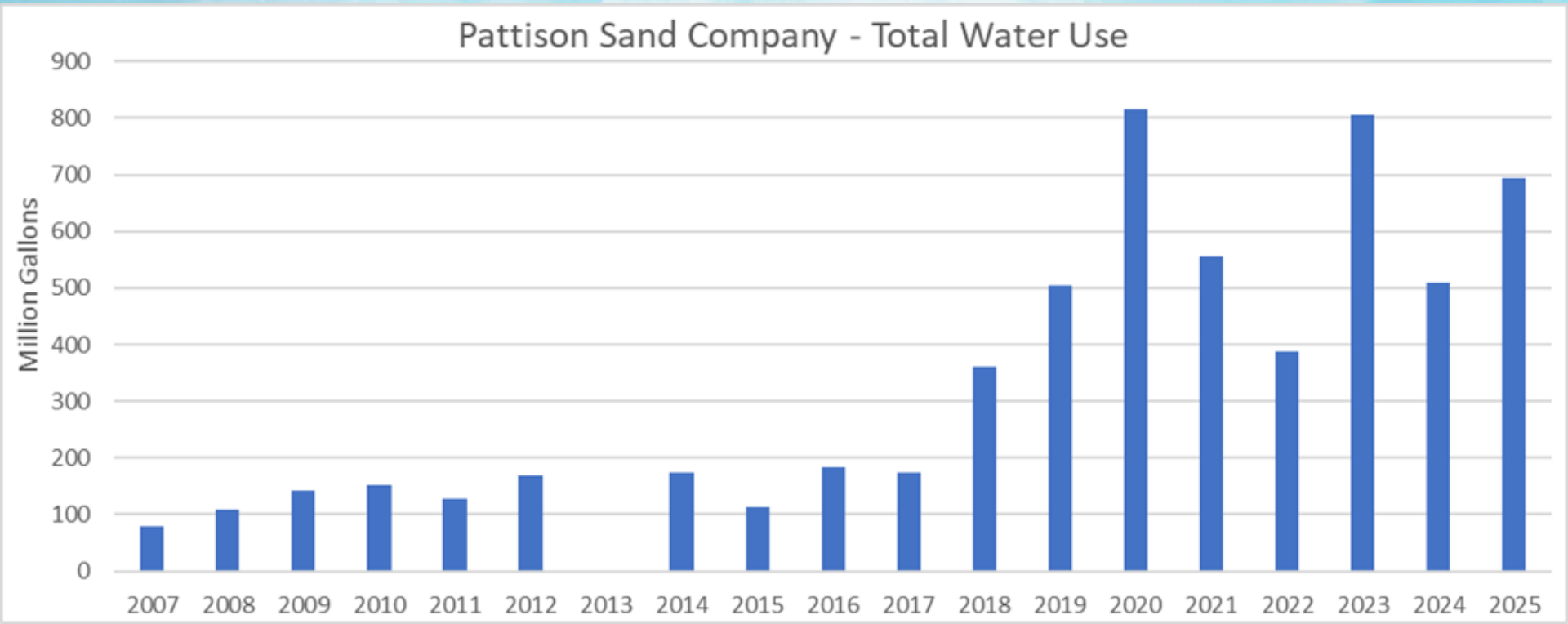
Scale of Withdrawal



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Source	Annual requested allocation (millions of gallons)	Maximum pumping rate requested (gpm)	Notes
Mississippi River	564	1,100	Surface water source
Mississippi River Alluvial Aquifer (Wells PU6 and PU26)	423	850	Well PU26 is a Cambrian-Ordovician well per its strip log. Well PU6 is open to the Dresbach and Cambrian-Ordovician aquifer. Both wells are treated as Cambrian-Ordovician wells in this report.
Jordan Aquifer (Wells PU11 and PU12)	1,435	2,800	Treated as Cambrian-Ordovician aquifer source in this report.
Mine Pond	77	150	Treated as Cambrian-Ordovician aquifer source in this report.
Dewatering Basins (#1 and #2)	1,244	4,800	Treated as Cambrian-Ordovician aquifer source in this report.
Total (all sources)	3,743	9,700	
Total (groundwater sources only)	3,179	8,600	

Intake/Well Name	Source	Pump Rate (gpm)	Annual Allocation (mgy)
Mine Pond Intake	Surface Water (mix)	150	50
Rail Intake #1		2,400	1,600
Rail Intake #2		2,400	
Well #PU11	Jordan Aquifer (mix)	1,400	500
Well #PU12		1,400	
Well #PU26*		413	
Well #PU6*	Dual Jordan/Dresbach Aquifer	600	120
TOTAL		**8,763**	**2,270**

*Wells PU6 and PU26 previously “Mississippi River alluvial aquifer”

IOWA DNR

Public Comments

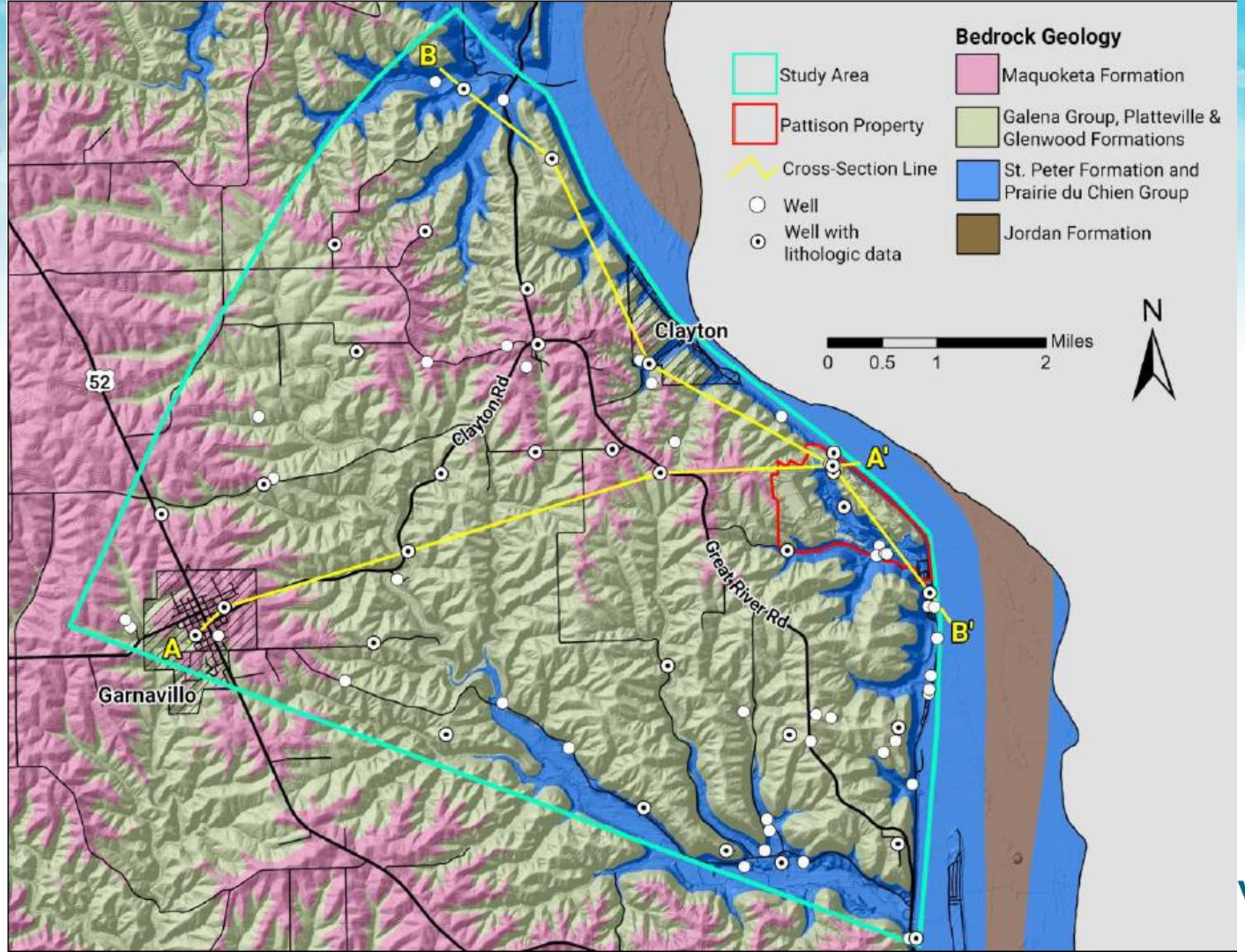
- **Risk to Private and Municipal Wells**
  - Existing well failures have been attributed to current Pattison withdrawals.
  - Well and source inventory.
  - A supervised aquifer pump test before permit issuance, explicit well interference language with a clear complaint pathway.
- **Risk to Environment**
  - Impacts on Buck Creek, a Class B cold-water trout stream.
  - Impacts to springs and streams
  - Consult with DNR Fisheries, the U.S. Fish and Wildlife Service.
- **Compliance with the Jordan Aquifer Rule**

Risk To Environment and Area Wells

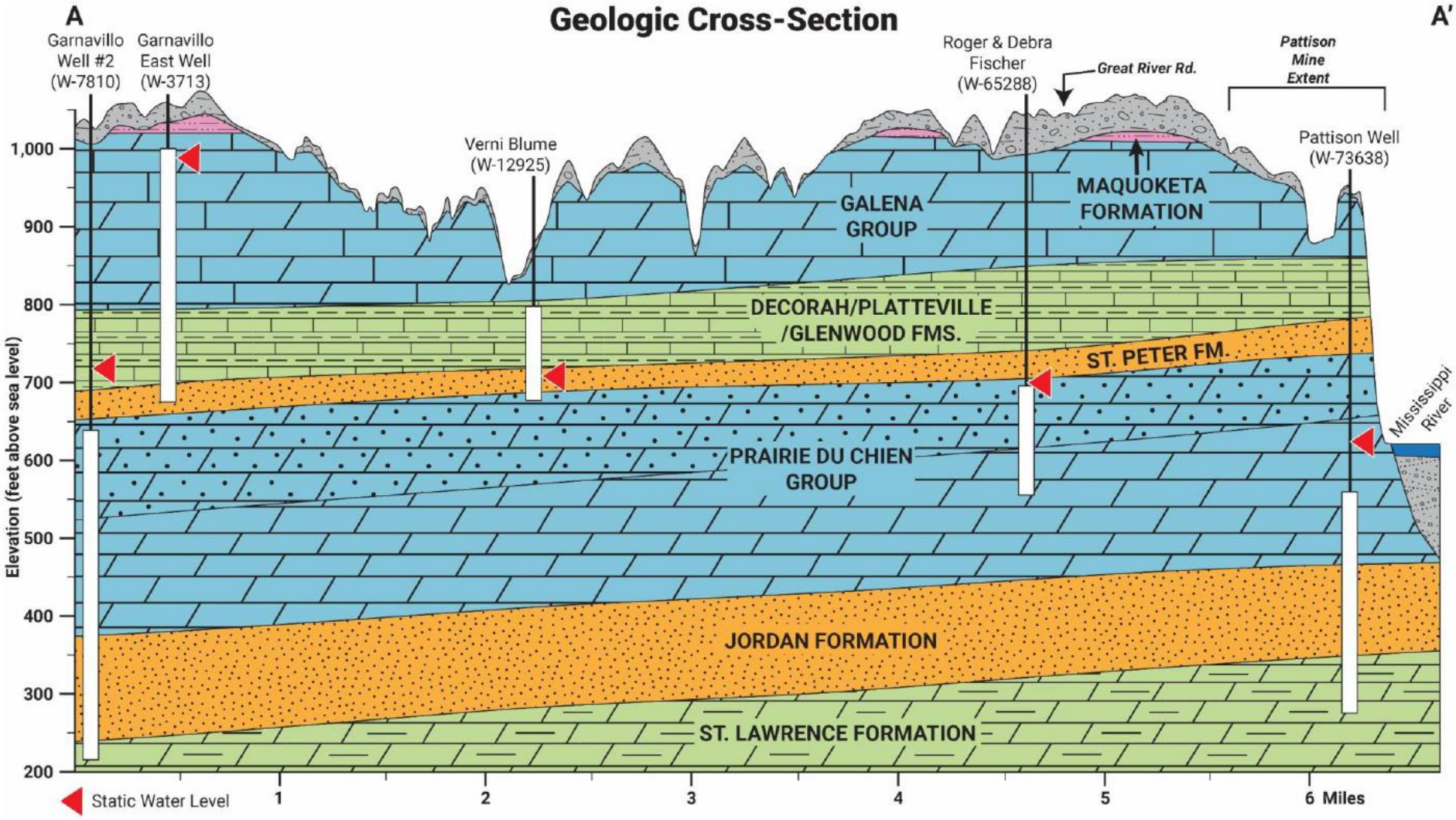
IGS Completed and submitted a Hydrogeological Investigation on February 3rd, 2026.

- Elimination of the Mississippi River Intake as a water source.
- Reclassification of two former Mississippi River alluvial aquifer wells.
  - Well #PU26 — source changed from the Mississippi River alluvial aquifer to the Jordan (Cambrian-Ordovician) aquifer.
  - Well #PU6 — source changed from the Mississippi River alluvial aquifer to dual Jordan (Cambrian-Ordovician) aquifer and the Dresbach (Mt. Simon) aquifer.
- Instantaneous pumping rate changes to reflect current estimated annual water use needs and pumping rates from each permitted water source from wells and intakes.
- Water is from a ‘mix’ of sources - **Jordan/surface/infiltration/recycled**
- Pump test was inconclusive on the connection to Mississippi River

IOWA DNR

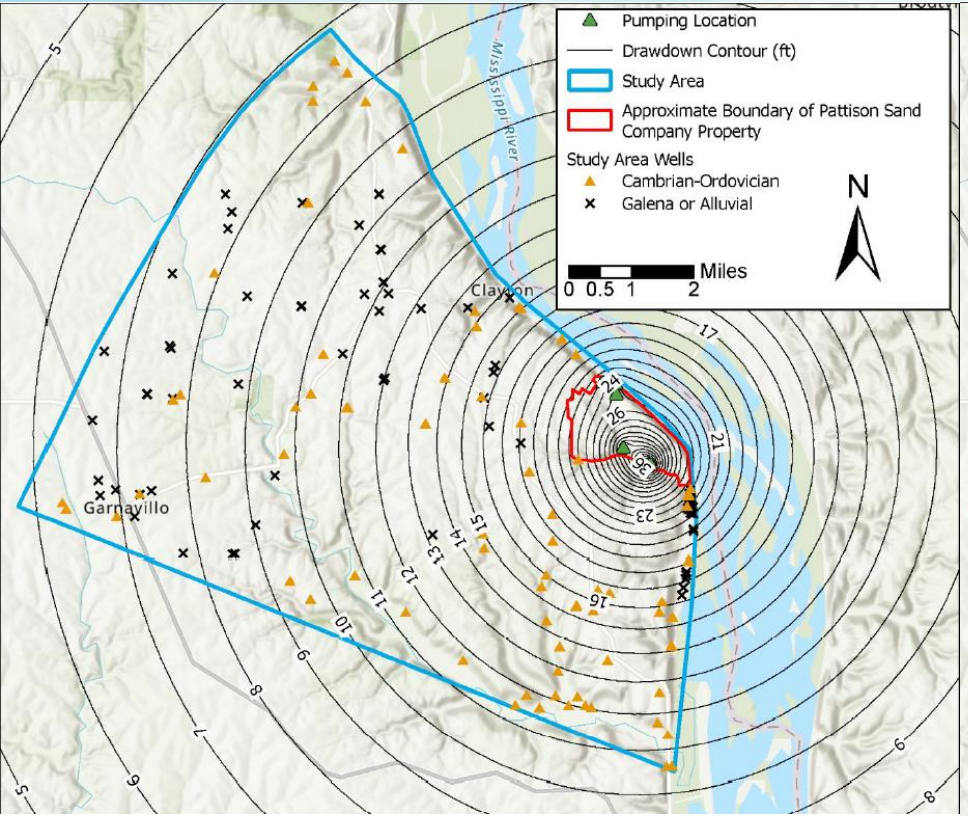

Bedrock Geology
Study Area
Pattison Property
Cross-Section Line
Well
Well with lithologic data
Maquoketa Formation
Galena Group, Platteville & Glenwood Formations
St. Peter Formation and Prairie du Chien Group
Jordan Formation
N
Miles
0
0.5
1
2
Clayton
52
Clayton Rd
Great River Rd
A
A'
B
B'
Garnavillo

WA | DNR

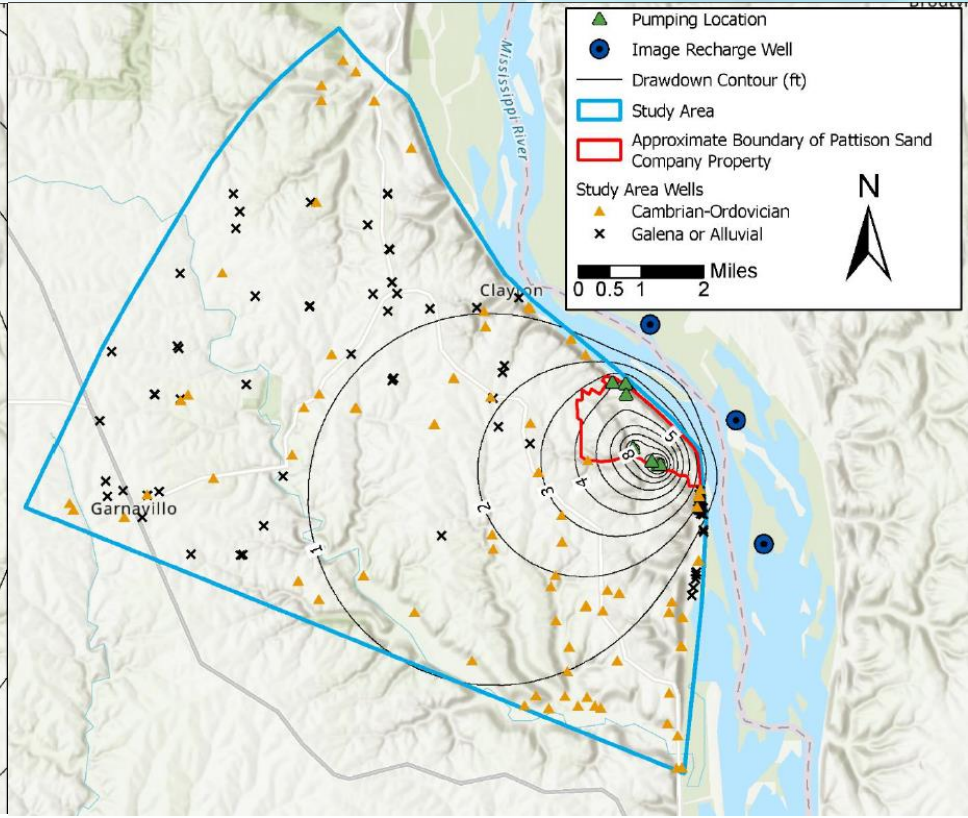

A
Geologic Cross-Section
A'
Garnavillo Well #2 (W-7810)
Garnavillo East Well (W-3713)
Verni Blume (W-12925)
Roger & Debra Fischer (W-65288)
Great River Rd.
Pattison Mine Extent
Pattison Well (W-73638)
GALENA GROUP
MAQUOKETA FORMATION
DECORAH/PLATTEVILLE /GLENWOOD FMS.
ST. PETER FM.
PRAIRIE DU CHIEN GROUP
JORDAN FORMATION
ST. LAWRENCE FORMATION
Mississippi River
Elevation (feet above sea level)
1,000
900
800
700
600
500
400
300
200
Static Water Level
1
2
3
4
5
6 Miles

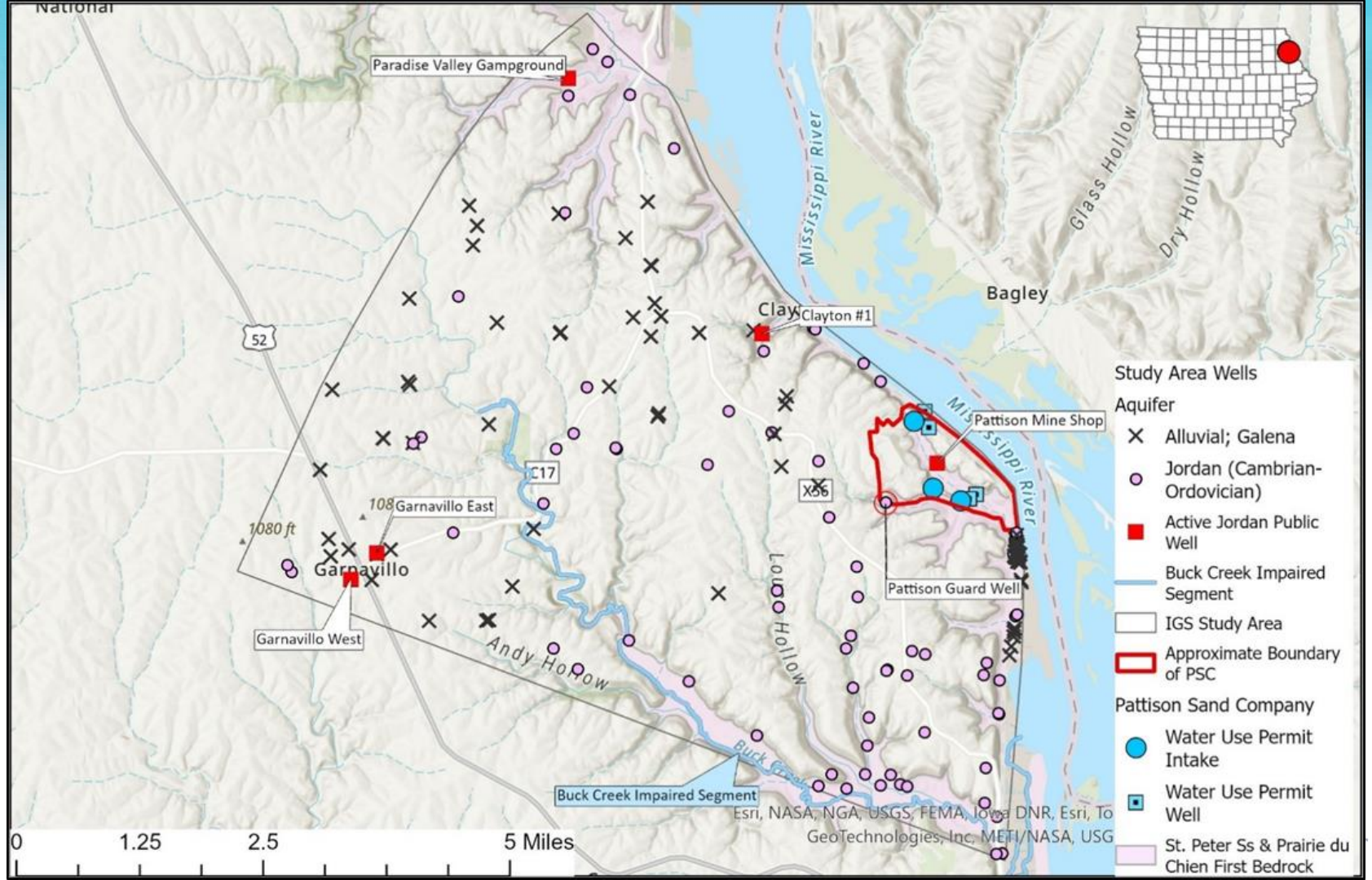
Risk To Environment and Area Wells

Scenario 1



Scenario 3

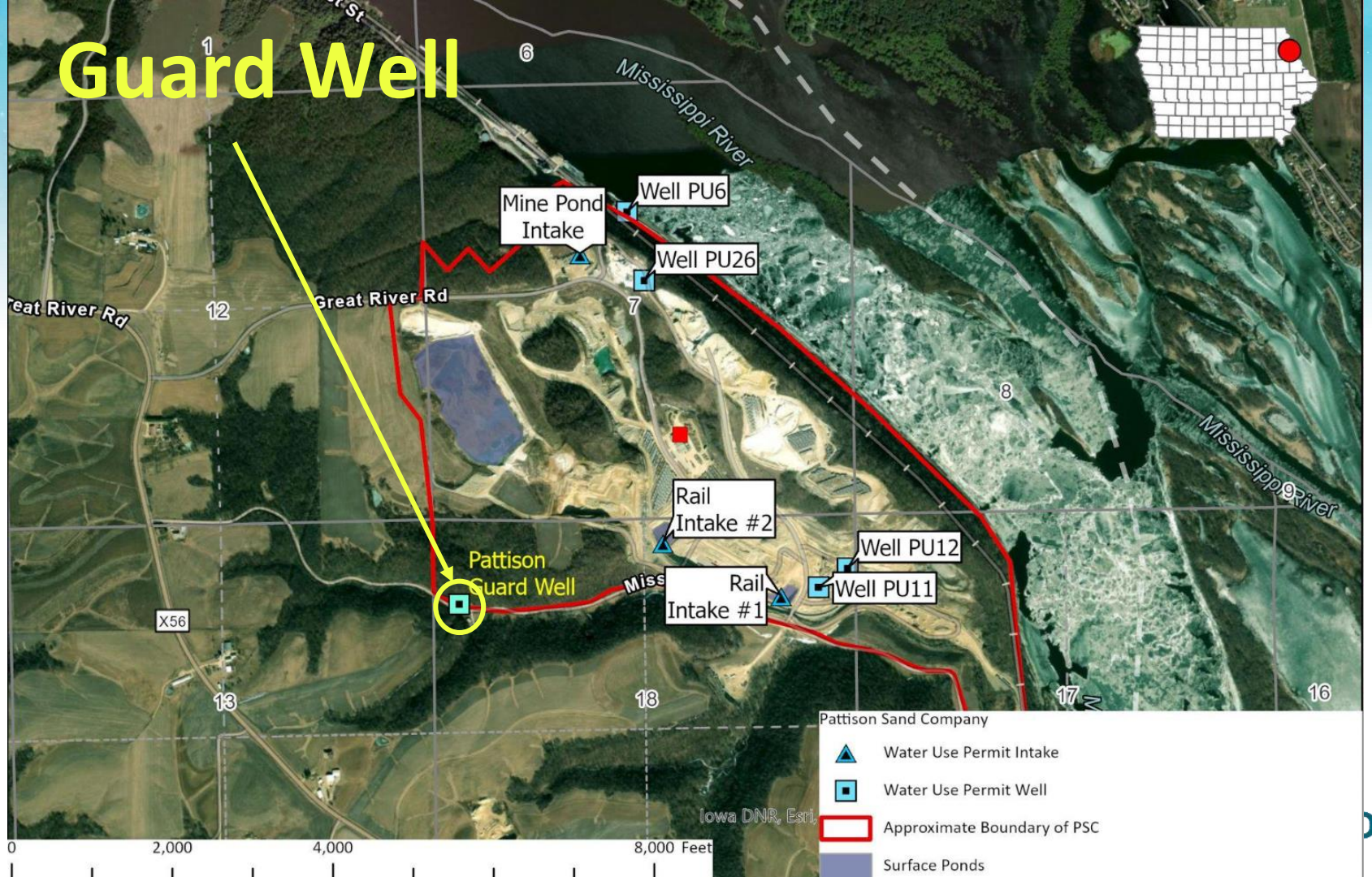



Paradise Valley Gampground
Clayton #1
Clay
Bagley
Mississippi River
Glass Hollow
Dry Hollow
52
C17
X56
108
Garnavillo East
1080 ft
Garnavillo
Garnavillo West
Andy Hollow
Loco Hollow
Pattison Mine Shop
Pattison Guard Well
Buck Creek Impaired Segment
Esri, NASA, NGA, USGS, FEMA, Iowa DNR, Esri, To
GeoTechnologies, Inc, METI/NASA, USG
0
1.25
2.5
5 Miles
Study Area Wells
Aquifer
Alluvial; Galena
Jordan (Cambrian-Ordovician)
Active Jordan Public Well
Buck Creek Impaired Segment
IGS Study Area
Approximate Boundary of PSC
Pattison Sand Company
Water Use Permit Intake
Water Use Permit Well
St. Peter Ss & Prairie du Chien First Bedrock

DNR

Risk To Environment and Area Wells

- Most area surface water and wells are protected due to the presence of the Decorah/Platteville/Glenwood confining layers, separating the Jordan aquifer from the area surface.
- There are wells and areas that are open to the Jordan aquifer. Specifically the last 5 miles of Buck Creek, and some private wells nearby.
- Three factors to address these concerns in the permit:
  - Place a guard well, installed in 1991, monthly monitoring of water levels by Pattison Staff
  - Guard well places near the facility. Guard well original water levels were 180 ft depth, Now 182.9 ft. Trigger set at **189 ft**
  - Independent monitoring of water levels by City of Garnavillo, through Monthly Operating Reports.
  - Added Environmental Condition.Language


Guard Well
Mine Pond Intake
Well PU6
Well PU26
Great River Rd
Great River Rd
Mississippi River
Mississippi River
Rail Intake #2
Well PU12
Well PU11
Rail Intake #1
Pattison Guard Well
X56
1
6
12
7
8
9
13
18
17
16
Pattison Sand Company
Water Use Permit Intake
Water Use Permit Well
Approximate Boundary of PSC
Surface Ponds
Iowa DNR, Esri
0
2,000
4,000
8,000 Feet

REIMER, LAURA
RR #2
Garnavillo, 52049

Clayton, Clayton, Sec 18S NWNWNW
July 12 - 16, 1991
NITRATE LEVEL:

Clayton
93-2W

LOG OF WELL

0'	to	23'	Brown clay with broken rock
23'	to	28'	Limerock
28'	to	31'	Broken rock(Made water)
31'	to	40'	Limerock
40'	to	44'	Shale
44'	to	162'	Sandstone
162'	to	165'	Shale
165'	to	250'	Gray limerock(Made water 230')

The well is cased to 197' with 7" O.D. steel x .317 wall P.E. casing. A 9 7/8" hole was drilled to 170' and bentonite grout was pumped in the annular space.

The static water level is 180'.
The recommended pump setting is 195' at 60 gallons/minute.

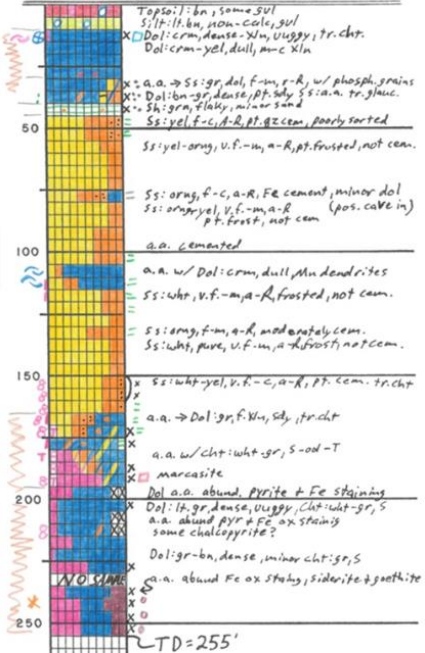
BORE HOLE SIZE DATA

0'	to	23'	12 ¼ " diameter
23'	to	170'	9 7/8 " diameter
170'	to	250'	6 ¼ " diameter

NEIL

IOWA GEOLOGICAL SURVEY W-32587

STATE: Iowa
TOWN: Garnavillo
COUNTY: Clayton
SEC.: SW, NW, NW — 18
OWNER: Reimer, Laura
TWP.: 93N
RGE.: 2W
COMMENCED: 7/12/1991
COMPLETED: 7/16/1991
DRILLER: Shawver Well Co.
CASING RECORD: 7" steel to 197'
LOGGED: 8/8/2025 BY Ryan Clarke
EL.: 809'
T.D.: 255'
SWL: 180' PL: @ 60 GPM
MAIN WATER: 230'
REMARKS: No Sample 230-235'
S.N.: OD7-311



Garnavillo 2234074

Cambrian-Ordovician Aquifer - Source Water Protection Area

Public Wells

- Active
- Not Used
- Standby

Contaminant Sources

- Underground storage tank
- Leaking USTs
- Water Use Permit Wells

Source Water Areas

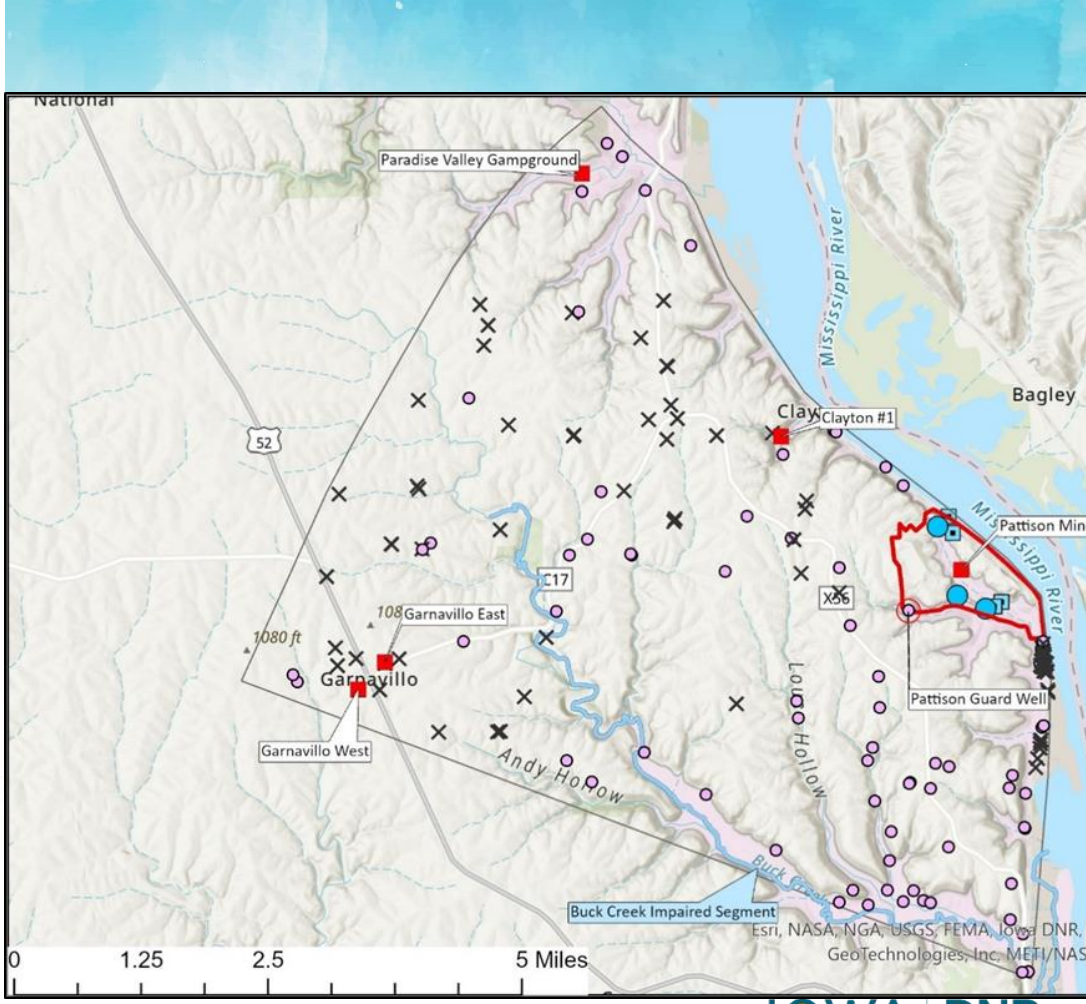
- 2-Year Capture Zone
- 5-Year Capture Zone
- 10-Year Capture Zone

0 0.15 Miles

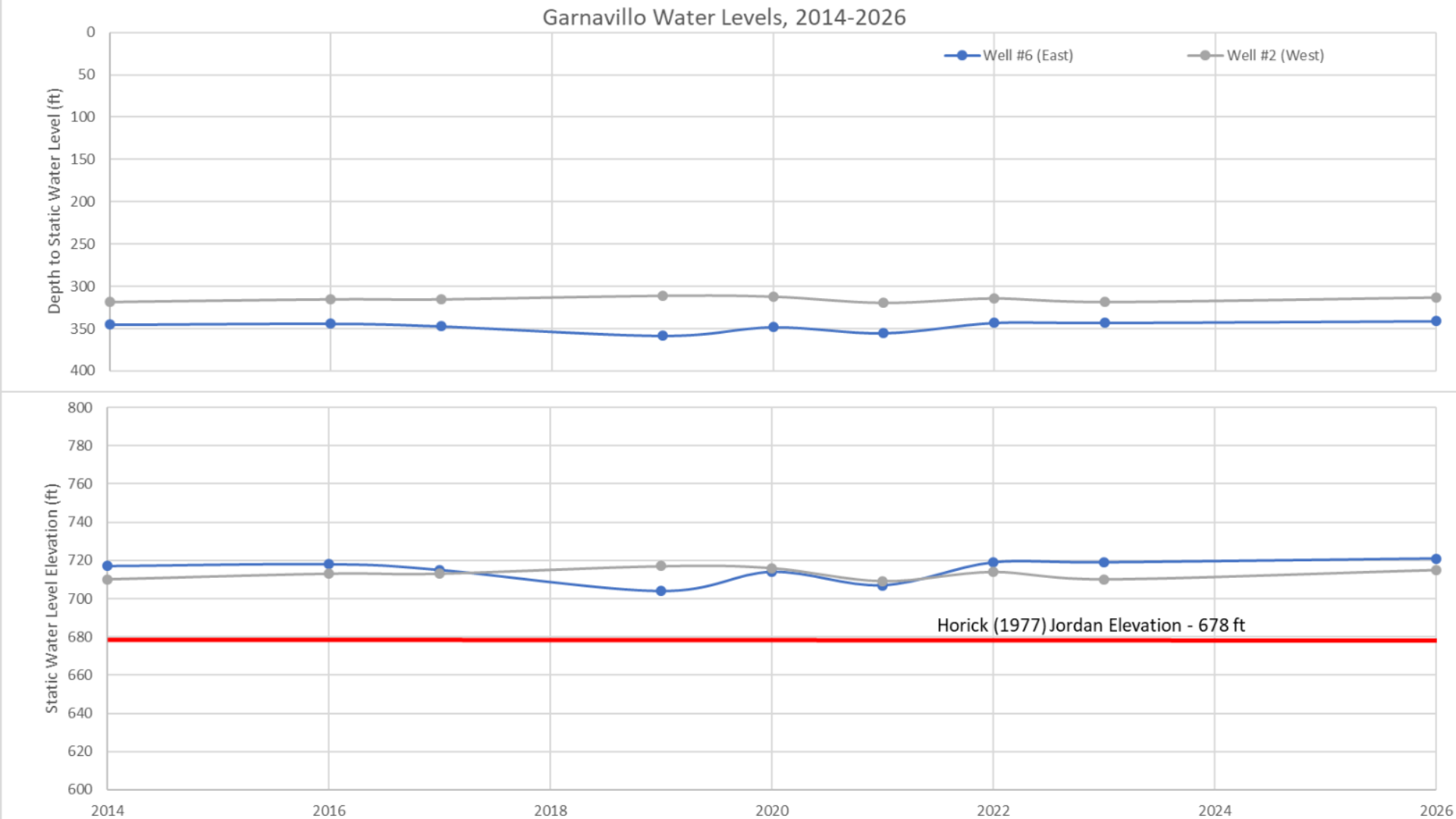
N W E S

Iowa SOURCE WATER Protection

Report Created: 2/5/2018



IOWA DNR


Garnavillo Water Levels, 2014-2026
Depth to Static Water Level (ft)
0
50
100
150
200
250
300
350
400
Well #6 (East)
Well #2 (West)
Static Water Level Elevation (ft)
800
780
760
740
720
700
680
660
640
620
600
Horick (1977) Jordan Elevation - 678 ft
2014
2016
2018
2020
2022
2024
2026

Risk To Environment and Area Wells

- Buck Creek has failed its coldwater aquatic life standard in 4 of 5 biological samples taken between 2007–2022, with impairment likely predating the sampling record and the cause still **unknown**.
- The creek was formally added to Iowa's Impaired Waters list in 2024, triggering a requirement for a Total Maximum Daily Load (TMDL) study to determine allowable pollutant levels and a path to recovery.
- It carries an Integrated Report Category 5 designation — the most serious classification — meaning it is impaired for one or more designated uses and mandates regulatory action.

Risk To Environment and Area Wells

Buck Creek Ecology

- Two federally listed species depend on the Buck Creek watershed: the **Iowa Pleistocene Snail** (endangered) and **Northern Wild Monkshood** (threatened), both restricted to **algific talus slopes** whose cold-air production relies on subsurface groundwater. Direct impacts via Galena aquifer drawdown are *not anticipated due to a regional aquitard separating it from the Jordan aquifer*.
- The Buck Creek–Mississippi confluence is critical habitat for **grass pickerel** (a state Species of Greatest Conservation Need) and **northern pike**, both of which require stable thermal conditions, adequate baseflow, low turbidity, and vegetated water — conditions sensitive to changes in streamflow and groundwater discharge.
- Buck Creek flows over units of the Jordan aquifer for roughly six miles before reaching the Mississippi, meaning Pattison pumping could affect baseflows.
- The **guard well** with established trigger levels is also to monitor Jordan aquifer drawdown and provide early warning of impacts to Buck Creek's coldwater character.

Risk To Environment Condition

"If water withdrawals or uses authorized under this permit are determined by the Department, based on available monitoring data, field observations, or other credible evidence, to be the cause of adverse effects on surface water streams, springs, or ponds, or the ecosystems attached or adjacent thereto, then the Department shall notify the Permittee in writing and may require the Permittee to reduce withdrawal rates, conduct additional hydrogeologic investigations, or take other corrective measures deemed necessary to protect the ecological integrity of those surface waters. The Permittee shall respond to any such notice within 30 days with a proposed corrective action plan, subject to Department approval. For purposes of this condition, "adverse effects" include but are not limited to reductions in baseflow, degradation of cold-water or other designated uses, or harm to species or their habitat."

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Other Comments

- At the PSC site, the Jordan aquifer is **unconfined and exposed at the land surface**, recharged by precipitation, surface infiltration, and likely the Mississippi River and connected alluvial aquifers.
- Water moves horizontally through the aquifer toward areas of lower hydraulic head, consistent with an open, dynamic system rather than a confined, depletable one.
- Because the Jordan aquifer is unconfined at this location and adjacent to an extensive recharge source, the **Jordan Rules under Iowa Administrative Code 567, Chapter 50.11(2) do not apply** to this facility.
- **Water meters** are required for intakes and wells.
- Annual water allocation was reduced by 1.4 billion gallons per year: from 3.7 to 2.27 billion gallons.

Permit Changes and Safety Overview

- **Reduction of water allocation.** Annual Water Use Approved for 2.27 billion gallons. Rail car dewatering pond intakes are the major new sources.
- **Changed Water Sources.** IGS Investigation matched wells.
- **Removal of Mississippi River source.** No use allocated.
- **Guard well with monthly monitoring.** Pattison has purchased and will monitor Guard Well (GeoSam ID #32,587), open in the Jordan aquifer and constructed in 1991.
  - Water level trigger decline in well capped at six feet from current levels (189 feet deep)
  - Water levels submitted monthly via email (wateruse@dnr.iowa.gov)
  - Water use permit modification/withdrawal rate decline if trigger level encountered.
- **Independent validation** of Jordan aquifer water levels via Garnavillo
- **General Permit Condition** added for potential environmental impact
- **Five-Year Permit**
- **Water use is only permitted for quarrying** - *no export or shipment*

IOWA DNR

PSC Water Use Permit Timeline

1. Finalize Summary Report Drafted Permit - **6/15/2026**
2. Publish Public Notice with all reports, comments, drafts - **6/16/2026**
   - Public comments
   - Public Hearing Transcripts
   - IGS Groundwater Investigation
   - Guard Well Details
   - Summary Report
   - Draft Permit
   - Public comments are now published through Econewswire email (sign up)
   - 21-day review and to receive more public comments
3. Take additional comments through public comment period - **7/7/2026**
4. Update/change permit and/or finalize PSC Permit - **7/8/2026**

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Questions?