

MISSOURI MINING COMMISSION

STATE OF MISSOURI
P.O. BOX 176
JEFFERSON CITY, MISSOURI 65102
573-751-4041

Permit To Engage in Surface Mining

MISSOURI MINING COMMISSION

ISSUES TO

Nexgen Silica, LLC

Pursuant to 444.760 RSMo, "The Land Reclamation Act," and on conformity with the statements in the application, a permit is hereby granted to engage in surface mining of Sandstone in the state of Missouri.

The extent of the proposed mining operation(s) will be on 115 acres, more or less.

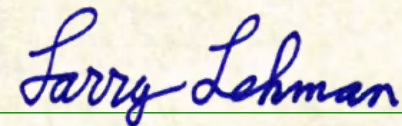
The locations of the operation(s) under this New Permit action is/are as follows:

Site Number	Site/Stream Name	County	Legal Description	Current Acres	Acres New	Acres Released	Total Acres
2840	NexGen Highway 32 Pit	Ste. Genevieve	S5/T36N/R7E, S4/T36N/R7E, S33/T37N/R7E, S32/T37N/R7E	0	115		115

This permit may be suspended or revoked upon violation of any or all of the conditions set forth in 444.760 RSMo, "The Land Reclamation Act," or in such rules and regulations as are promulgated pursuant thereto by the Missouri Mining Commission.

I approve this permit action on June 30, 2022

Permit No.: 1211
Effective Date: 6/30/2022
Expiration Date: 6/29/2023



DIRECTOR OF STAFF
Missouri Mining Commission



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Michael L. Parson
Governor

Dru Buntin
Director

June 30, 2022

Roger Faulkner
PO Box 391
Ste. Genevieve, MO 63670

Re: Nexgen Silica LLC, New Permit Application to mine Sandstone, 249 acres, Highway 32 Pit; Sections 32 & 33, Township 37N, Range 7E; Sections 4 & 5, Township 37N, Range 7E, Ste. Genevieve County

Dear Roger Faulkner:

On March 4, 2022, the Land Reclamation Program of the Missouri Department of Natural Resources received from Nexgen Silica LLC, an application for a new permit to mine sandstone at the Highway 32 Pit located in Ste. Genevieve County. The new permit application is for two hundred and forty-nine acres. Section 444.772.10, RSMo, provides that comments may be made by “any person with a direct, personal interest in one or more of the factors the director may consider in issuing a permit.” A public meeting was held on May 19, 2022, as part of the public notice process.

The permit application has been reviewed within the purview of The Land Reclamation Act and the associated regulations 10 Code of State Regulations Division 40 Chapter 10.

The director does not have jurisdiction over all concerns raised by the public during the review of an application for industrial mineral mining activity. Many of the public’s concerns often involve blasting, noise, private water wells, and property values. This also includes restrictions, planning and zoning, and other agreements/ordinances made at a city or county level. The Missouri Mining Commission permit to engage in surface mining does not supersede nor remove liability of the applicant for compliance with any local, state or federal requirements.

Based upon review of the information, the decision has been made to **issue** the permit to allow mining pursuant to Section 444.773, RSMo. Attachment I is a record of public comments and the responses as a result of the public notice process.



Staff Director Decision
June 30, 2022
Page Two

The Permittee is required to comply with all applicable environmental laws and regulations enforced by the Department. These environmental laws and regulations are administered by the Air Pollution Control Program, Environmental Remediation Program, Land Reclamation Program, Geological Survey Program, Waste Management Program, and Water Protection Program. Failure to comply with these environmental laws and regulations may, in certain circumstances, result in suspending or revoking this Permit and may subject the permit holder to civil or criminal liability.

This decision can be appealed to the Administrative Hearing Commission as provided by Section 621.250.3, RSMo: "If you were adversely affected by this decision, you may be entitled to pursue an appeal before the administrative hearing commission. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission." The mailing address of the Administrative Hearing Commission is:

Administrative Hearing Commission
PO Box 1557
Jefferson City, MO 65102

Additional information about the Administrative Hearing Commission can be found on their website at <https://ahc.mo.gov/>.

If you have any questions concerning the content of this letter, please contact my office by telephone at (573) 751-1740 or email at larry.lehman@dnr.mo.gov.

Sincerely,

LAND RECLAMATION PROGRAM



Larry Lehman
Staff Director

LL:bz:at

Enclosures: Permit Certificate; Attachment I; MGS Memo

c: Tim Duggan, Attorney General's Office

Missouri Department of Natural Resources

Missouri Geological Survey

Land Reclamation Program

Attachment I

Consideration of and responses to public comments received regarding the proposed new permit application of Nexgen Silica, LLC (permit #1211), sandstone mine, Ste. Genevieve County.

The Public Meeting was held at the Progress Sports Complex in Ste. Genevieve, Missouri, starting at 7:00 p.m. on Thursday, May 19, 2022. Public availability session was open from 6:00 p.m. to 7:00 p.m. prior to the meeting and was also available at the conclusion of the meeting.

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Introduction

On March 4, 2022, Nexgen Silica, LLC, (hereafter Nexgen) submitted to the Missouri Department of Natural Resources Land Reclamation Program, an application for a new permit for a sandstone mine in Ste. Genevieve County, the Highway 32 Pit, for a proposed 249 acres. On March 21, 2022, Nexgen received notice the application was deemed complete. Public notification was advertised on March 23, 30, April 6, and 13, 2022, in the *Ste. Genevieve Herald*, which is a newspaper qualified to publish public notices in accordance with 493.050 RSMo., in Ste. Genevieve County. Certified mail was sent to the Ste. Genevieve County Commission, and the first tier of landowners adjacent to the mine plan boundary. During the public notice comment period, eighty-nine (89) people wrote in requesting a public meeting on the proposed transfer. Nexgen held a public meeting on May 19, 2022, starting at 7:00 PM, at the Prospect Sports Complex in Ste. Genevieve, Missouri. One hundred sixty-four (164) people signed in at the public meeting. Public availability session was open from 6:00 p.m. to 7:00 p.m. prior to the meeting and was also available at the conclusion of the meeting.

Background

The new permit application includes one proposed site, named Highway 32 Pit. The site is located in Ste. Genevieve County, Sections 32 and 33, Township 37 North, Range 7 East, and Sections 4 and 5, Township 36 North, Range 7 East. Nexgen proposed 249-acre mine plan area is outlined in dark blue, as seen in Figure 1 on the next page.

The initial proposed reclamation bonded area in the application would be for one hundred fifteen (115) acres, outlined in red on Figure 1. Nexgen submitted both the required application fees and Financial Assurance Instrument (bond) with their other application materials.

NexGen Silica - Proposed Mine Site

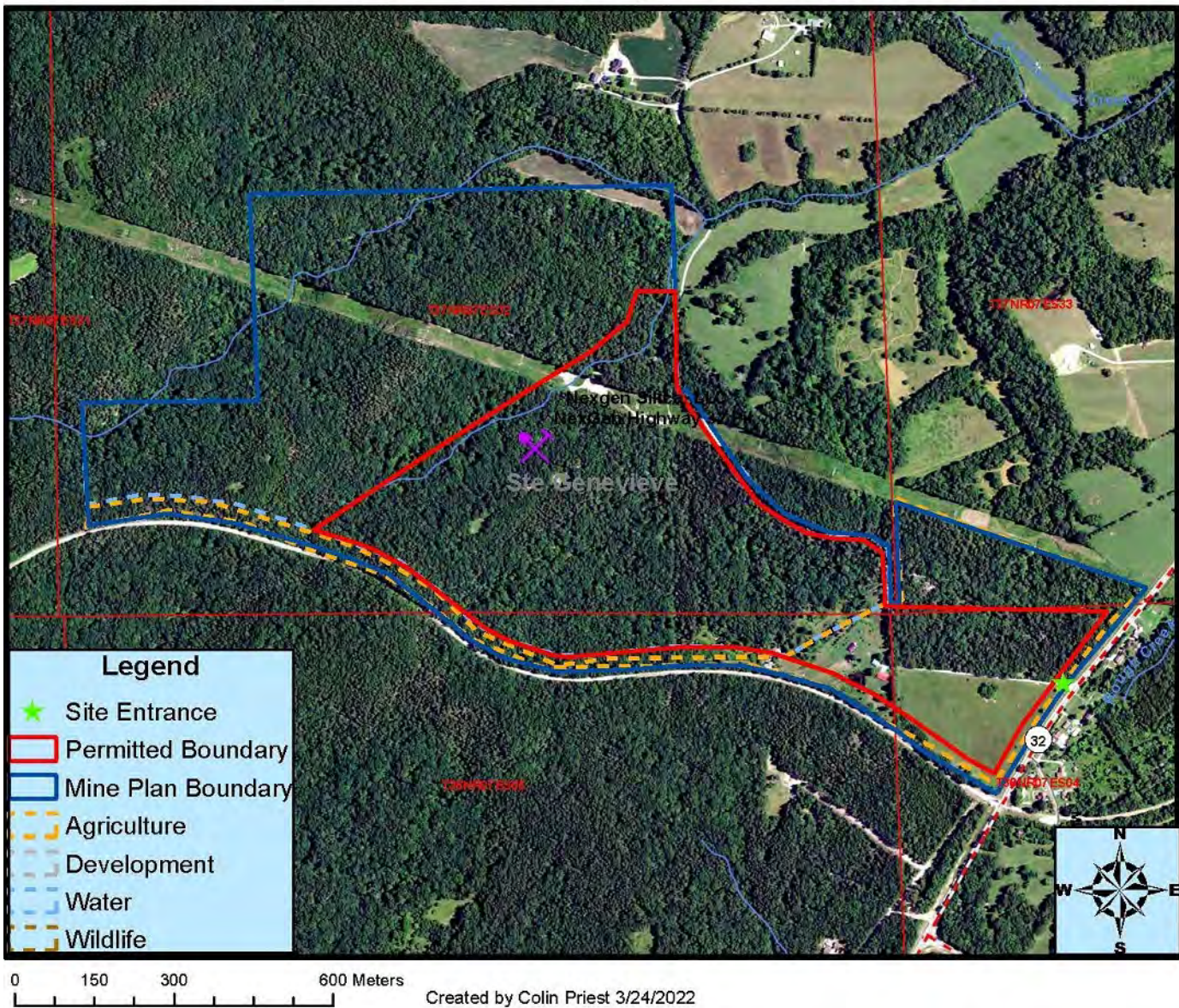


Figure 1. Proposed Long-Term Mine Plan Boundary and Permit Boundary of Highway 32 Pit, Ste. Genevieve County, by Nexgen Silica, LLC

Opening Remarks at Meeting

Larry Lehman, Missouri Department of Natural Resources, Land Reclamation Program Director, began the meeting by introducing himself and explaining the role of the Land Reclamation Program. Bill Zeaman and Colin Priest of the Land Reclamation Program were also present, as were Brad Ledbetter and members of the Southeast Regional Office's Water Protection and Air Pollution Prevention Programs, and Sherri Stoner and Molly Starkey of the Missouri Geological Survey, to answer questions as needed. Mr. Lehman explained Messrs. Zeaman and Priest were taking notes, and the meeting was being audio-recorded to aid in writing this summary.

Mr. Lehman explained the Land Reclamation Program received an application from Nexgen requesting a new permit to mine sandstone, and that any time there is an application for a new permit, the permittee is required to run a public notice and notify adjacent landowners via certified mail. If there is even a single request for a public meeting, the permittee must hold a public meeting to address the public's concerns. He went on to explain that the Program has six weeks from the date of the meeting to decide whether to issue or deny the permit. At the time of that decision, a letter will be sent to everyone who had provided contact information to the Program, notifying them of the decision.

Mr. Lehman discussed the provided handouts, including contact information for various relevant regulatory agencies, both state and federal, as well a map showing the mine plan and permit boundaries requested by Nexgen. The permit application and mine plan submitted by Nexgen as part of their application were also among the handouts. One of the information sheets explained that blasting, and blasting-related concerns, were not regulated by the Land Reclamation Program, but by the Division of Fire Safety in the Department of Public Safety.

He also addressed the health ordinance regarding silica sand mining instituted by Ste. Genevieve County earlier that week. Mr. Lehman explained that while the ordinance had no bearing on whether the Land Reclamation Program issued a permit to Nexgen, a Land Reclamation Program permit did not exempt its holder from any relevant federal, state or local laws and regulations, including the health ordinance.

Mr. Lehman ceded the floor to Nexgen. Roger Faulkner first introduced the ownership team and their intentions, as well as how they hoped to address concerns about traffic on Highway 32. Following that, Nexgen's site manager, Clark Bollinger, introduced several people working for or consulting with Nexgen to explain how the proposed mine site was to be laid out with a series of PowerPoint presentations. Stan Schultz discussed which watershed the property was located in and where Nexgen planned to get the water for their processing facilities. Mike Carlson of Gredell Engineering discussed characteristics of the geology and groundwater movement with regards to La Motte Sandstone and the St. Francois Aquifer. Keith Henderson of Buckley Powder, which would be contracted to handle any blasting on the proposed site, described the regulations for blasting, how the standards for what is considered acceptable vibration and air overpressure were established, and how Buckley Powder intends to meet those standards. Jason Spangler of CRS described how the wet plant process would work to reduce water use and prevent sediment from leaving the property. The floor was then opened for questions and comments from the public.

Concerns Raised During Public Meeting

Subject #1: Potential Damage to State Parks, Conservation Areas, and Local Ecology

Concern: For the love of Missouri Conservation please stop this.

I would like to know the impact on wildlife near my house, and the creek below my house my cattle drink from. We also have a well and are very concerned about this.

Attachment I: Proposed new permit for Nexgen Silica, LLC

Are there endangered species in the area that will be eliminated or displaced? Will a conservation agent assess the area to determine potential impacts on hunting and fishing in the area? What does this mean for these preserved wildlife areas?

Hawn is the most beautiful park I have been to in Missouri. Please help save it for future generations.

I have spent hours hiking, exploring and volunteering at Hawn Park. It is a treasure. I feel a silica mine operating for 50 years nearby will denigrate the watershed and the park itself.

Horton Farms Conservation Area, Hawn State Park, and Hickory Canyon Natural Area are all within a few miles of the 240-acre silica mine. Species of concern have been listed in Rough Creek, which lies extremely close to the site. For the sake of those fragile habitats and the bordering lands, we have to stop the proposed mine.

As a local of beautiful Hawn State Park, this would be devastating for those who live nearby and preservation of the wildlife. Stop the mine!

We feel the mine's proximity to Hawn State Park would more than likely have significant implications for the integrity and long-term health of the park.

While the actual mining will occur on private land, the surrounding area will be affected by the mining process. Dust particles can inhibit the photosynthesis of native plants and build up in local animal's lungs. Hawn State Park is an absolutely beautiful place, and a true Missouri treasure. It would break my heart to see trails where I found my love for nature deteriorated due to a capitalist plot.

Many of our members are concerned about the effects this proposed silica mine could bring to our beloved Hawn State Park and the area's watershed.

I'm very concerned about the proposal for a silica mine across from Hawn State Park.

Don't ruin Hawn State Park.

I cannot support the mine due to watershed issues and its closeness to many State Parks, Conservation Areas and other Natural Areas.

The impacts to the landscape and wildlife in nearby Hawn State Park and Hickory Canyons Natural Area would be irreversible. The natural beauty of our state has long been exploited for the gain of corporations at the expense of our land, this must stop.

As a friend of Hawn State Park, I have significant concerns about the location for this proposed mine.

I am concerned about the potential of Nexgen Silica mine and its impact on the environment and specifically Hawn State Park.

This area is home to spectacular migratory birds from Central and South America called the Summer Tanager and Indigo Bunting, which seem to prefer thick, uninterrupted pine woods found in this area during their seasonal visit.

The mine will ruin Hawn State Park and adjacent public lands, period. Noise pollution alone will kill the parks. I am sure people will be able to hear the obnoxious mining operation with giant dump trucks backing up, equipped with screaming reverse alarms at 150-200 decibels, all the way in the backcountry on the Whispering Pines South Loop even at night because it will be a 24/7 operation.

Dark Sky Parks are very popular recently in the United States. Hawn will never be a Dark Sky Park, thanks to the mine.

Attachment I: Proposed new permit for Nexgen Silica, LLC

Make no mistake, a silica sand mine adjacent to state parks and natural areas would have an enormous negative impact on wildlife as well. Wildlife will breathe in the same dust and carcinogens. The displacement of wildlife on this property would cause overcrowding in neighboring woods, in a county where CWD is a known concern for whitetail deer.

The pristine area of Hawn State Park, Horton Farm Conservation Area and Hickory Canyons will be impacted by the dust the mine will create. Noise and light pollution will also impact the quiet solitude visitors expect when they visit these wild areas.

Please advocate for the preservation of our state parks and aquifers. Our ecosystems are unique and deserve protection.

Please do not allow a silica mine permit for the wonderful nature and hiking areas in Ste. Genevieve County. The damage a silica mine would do to the air and water quality in this area would be irreparable and irresponsible.

The proposed silica mine is very close to Hawn State Park and Hickory Canyon. Hawn State Park is one of the gems of the area and must be protected.

It will cause severe and permanent damage to Hawn State Park, Pickle Springs and Hickory Canyon. These do not just belong to Missourians of today, but are a legacy to Missourians of tomorrow.

Any impact the mine and its functions would have on Hawn, Horton, Hickory Canyons and Pickle Springs would be terrible.

This will ruin the health of surrounding residents, along with the natural beauty we enjoy living in this area. The noise pollution and utter destruction of our amazing parks and nature areas is disgusting.

I oppose the installation of this mine for numerous reasons, including the health of Ste. Genevieve residents, area visitors, wildlife, plants and the tranquil beauty and peacefulness that the area brings to persons of all walks of life.

I'm concerned about the health and water implications for the people, plants and animals living in the area. Silica health concerns and the water impacts of mining are well documented. This mine would pose a huge threat to wonderful natural areas around Ste. Genevieve.

I'm concerned about endangered species in pickle creek being affected by the style of mining they're going to use.

Aside from the environmental damage this mine would create, the area is such an important part of the ecological system of this area. This would be an environmental disaster for the area.

This will ruin Hawn State Park and the surrounding area.

The proposed location west of Hawn State Park, Hickory Canyon, and Pickle Springs is one of the most highly used outdoors locations in the state. The biodiversity that exists in the area is well-documented and supported by natural area designations.

The area is a major tourist destination and such a mine will disrupt the area's rural beauty. The inevitable habitat destruction will also imperil local flora and fauna. Finally many local small farmers and landowners oppose the move as it could destroy their way of life.

I would mainly like to state the underground water pockets should be left alone. This region still has much natural beauty and needs to remain untouched by machinery and mining. Adding another mining project such as this one will only lead to continuing damages of the earth's precious environment. The mining would bring detrimental effects within the air, land, and water supplies for our future generations.

Attachment I: Proposed new permit for Nexgen Silica, LLC

The proposed silica mine is very close to Hawn State Park and Hickory Canyon. Hawn State Park is one of the gems of the area and must be protected. The effects of the mine on groundwater can affect other parks (such as Pickle Springs) and the health of the surrounding residents that rely on well water.

Hawn State Park is a precious and unique resource that should be protected and preserved for the people today and those in the future.

I implore you to reject the request of Nexgen Silica to destroy 249 acres of Missouri's precious deciduous forest near Ste. Genevieve and every living thing therein. This horrifying, gratuitous quantity of destruction is abjectly and violently incompatible with the interests of Missouri and all human beings in a habitable planet, with the mandate of the DNR, and with the rights of creatures whose presence here predates any human claims upon the sand underneath.

Our park is irreplaceable.

Please consider the peace and beauty of Hawn State Park and Hickory Canyons Natural Area that give so many people respite from the noise, light pollution and stress of daily city life since we are so close to St. Louis.

Ultimately I don't support this mine location because it is too close to Hawn State Park, Hickory Canyons and Pickle Springs. The DNR describes this area as, 'one of the most significant and scenic landscapes in Missouri.'

It's obvious you know how to mine silica, and how to follow state and federal guidelines. But you really did not address the protection of a special piece of land called Hawn State Park. We know those regulations are based on economy, on human health, on protecting property, but they're not based on anything relating to the environmental quality of a very special land. There's no law in Missouri I know of that protects against light or noise pollution or how they will impact wildlife.

As someone who lives in Ste. Genevieve County I have enjoyed the nature areas near this proposed mine many times through the years. One of the things I most appreciate is the absence of manmade/mechanical sounds. Being at Hawn State Park, Pickle Springs and Hickory Canyons nature areas is a sweet and precious relief from mechanical noise pollution.

The proposed mine is in the middle of a 5-mile radius of state parks, conservation areas and natural wildlife preservations. Since the owners admitted having not conducted any kinds of studies, including geological, air quality, light emissions, blasting impacts on noise as well as how the mining will affect nearby wildlife, it's irresponsible and premature to give a stamp of approval.

You may have heard this earth is in a biological meltdown, often because of activities like removing overburden, and often done by those employing euphemisms like that. I'm very deeply curious about by what calculus you have determined the eradication of that, and the loss of that, is worth less than your sand?

Has Nexgen performed a baseline of wildlife in the area? Has Nexgen performed a baseline of the number of eagles in the area?

Our community recently celebrated our long-awaited status with the National Park Service. The gift of Hawn State Park and Pickle Springs, and the entire Weingarten area, were given to us to protect and preserve. It would be an offense to God, and a violation of our duty to demonstrate good stewardship of creation entrusted to us to allow this mine to take advantage of the land, which will leave a null mark on the landscape forever.

According to the USGS water monitoring website, Pickle Creek has a drainage area of 64 square miles. Rainwater runoff feeds through these drainage ditches and into Pickle Creek. Nexgen Silica is within this 64-square mile drainage area. DNR spent years protecting Pickle Creek and the aquatic and plant life that live in and around the area. Many plant

Attachment I: Proposed new permit for Nexgen Silica, LLC

species found here are more common in the eastern U.S. including several considered to be relicts of Pleistocene glaciation. Several of these are species of conservation concern. If runoff from the silica mine ends up in Pickle Creek it will disrupt the fragile ecosystem there. Silica dust will dry out the soil and many of the plants that form the riparian area surrounding the creek will disappear.

A study from the 1990s shows Hawn State Park to have the most educated and highest income visitors of any park in the state. Do you think they want to camp in a park where they can see, hear, and feel a mining operation? Do you think they will discuss it with their friends and colleagues? Do you think taxpayers that fund Missouri State Parks will be happy when the investment the DNR made with their money could possibly be destroyed because of a mine DNR gave a permit for?

I am opposed to this development as there is great potential to contaminate the ecosystems in the area the public has enjoyed for many years.

How does this permit protect our land? It most certainly does not in any way protect our land on the contrary it strips our land in the area of its natural beauty. This area and the surrounding areas are most certainly some of the most unique natural areas in our country as well as in our state.

The proposed silica sand mine threatens air and water pollution at our state's beloved Hawn State Park and the Hickory Canyons Natural Area, the area's watershed, and one of Missouri's finest natural area corridors.

Pickle Springs, located near the proposed mining site, is a very important and uniquely sensitive ecological area, with high biodiversity and stream quality. Many visitors come to Pickle Springs, as well as Hawn State Park and Hickory Canyons Natural Area to appreciate these qualities, and it is crucial that we do not destroy with a silica sand mine.

This proposed mine could negatively impact Missouri's people and wildlife by impacting the environment in and around Hawn State Park, Hickory Canyons Conservation Area and Horton Farm Conservation Area.

The potential Nexgen Silica mining project will endanger our alligator snapping turtle population. These turtles rely on fresh water to survive. The noise level will cause the turtles to lose their hearing according to Science Daily. According to Wildlife Round-Up, a 2-mile radius buffer is needed to protect the alligator snapping turtles from the impact of blasting and other loud, non-regular activities.

Hawn Park and other nearby conservation areas will have their ecosystems impacted by this industrial operation. Why even have a park if you are going to allow a mine nearby that will impact it, the wildlife, the ecosystems and the people who enjoy it?

The mine is in close proximity to Horton Tract Conservation Area, Hickory Canyons Natural Area, Hawn State Park, Whispering Pines Wild Area, and Pickle Creek. All of these publicly owned lands contain species of conservation concern including glacial relict plants species that could be negatively impacted by this project.

This is adjacent to two Missouri Department of Conservation areas, and near the Pickle Springs Natural Area. DNR should deny permits that have a high likelihood of allowing negative impacts to the environment and recreational opportunities on public land enjoyed by so many. This proposed permit is also near Hawn State Park, which is an ecological gem. The noise, light and air pollution that could impact this park should not be permitted.

The proposed mine sits directly in the middle of an important area for biodiversity, and the proposed activities are incompatible with the conservation needs of the region. We recommend the site be inventoried for species of conservation concern by a qualified professional before DNR makes a final decision on the permit application.

Attachment I: Proposed new permit for Nexgen Silica, LLC

The mine is too close to Hawn State Park and giving a permit to Nexgen contradicts everything about the State Park Mission.

Response: The Missouri Department of Conservation (MDC) has provided the Land Reclamation Program (LRP) with a Heritage Review Report of the proposed mine site. There are no records of any federally endangered species within the proposed project area, or in the public land survey sections or sections adjacent. There are also no records of any state endangered species within the proposed area. No records is not the same as not present, but it is what information is available at this time.

MDC does have records for 53 species within 5 miles of the proposed mine site that are listed as anywhere from rank S4 (uncommon but not rare) to S1 (Critically imperiled in the state). Again, this does not indicate these species are also present on the site, but it is not certain they aren't. Protection of endangered species would typically fall under the control of the U.S. Fish and Wildlife Service.

Nexgen has not performed a baseline study of wildlife present on the site, or the number of eagles present. The Land Reclamation Act does not require applicants to supply information on endangered species that may exist in the area. If there were endangered species on the property, and U.S. Fish and Wildlife imposed restrictions on Nexgen, Nexgen would be expected to abide by those restrictions. An example would be no removal of trees above a certain diameter during the breeding and brood rearing season of endangered bat species.

Nexgen's proposed site sits within the Establishment Creek Watershed, as does Hickory Canyons Natural Area. Pickle Springs, Hawn State Park and Horton Farms Conservation Area are all within the River Aux Vases Watershed. This should mean water on Nexgen's property will not drain towards Pickle Springs or Hawn. While Hickory Canyons is within the same watershed, there is a ridge that separates the two properties. Runoff from each property should flow to their own individual branches of Establishment Creek (see Figure 2).

Part of the Land Reclamation Act is that an entity with a permit to mine may not affect land outside their permit boundary. If these regulations are followed, there should not be impact to the state parks or conservation areas nearby. Land Reclamation Program does conduct regular inspections to make certain the regulations are being followed, that mining is not taking place outside the permitted areas, that no sediment is leaving the site or entering any streams, that erosion is being controlled and eventually, that reclamation of affected land is completed within the requirements of the Act.

The Land Reclamation Program follows a policy of Conference, Conciliation, and Persuasion (CC&P). If an inspection revealed any non-compliance of the mining regulations, Nexgen would be expected to address these problems within a set period of time. There would be follow-up inspections or documentation to confirm compliance. If Nexgen failed to address the concern, they would be issued a Notice of Violation, potentially more than one depending on the number of concerns. This could result in fines of up to \$1,000 per day per violation, to be paid to the Ste. Genevieve County School Fund, until the concern had been addressed.

At present, there is no restriction in The Land Reclamation Act preventing a mine site based solely on proximity to a state park or conservation area. The Land Reclamation Program can only enforce what laws and regulations pertaining to The Land Reclamation Act.

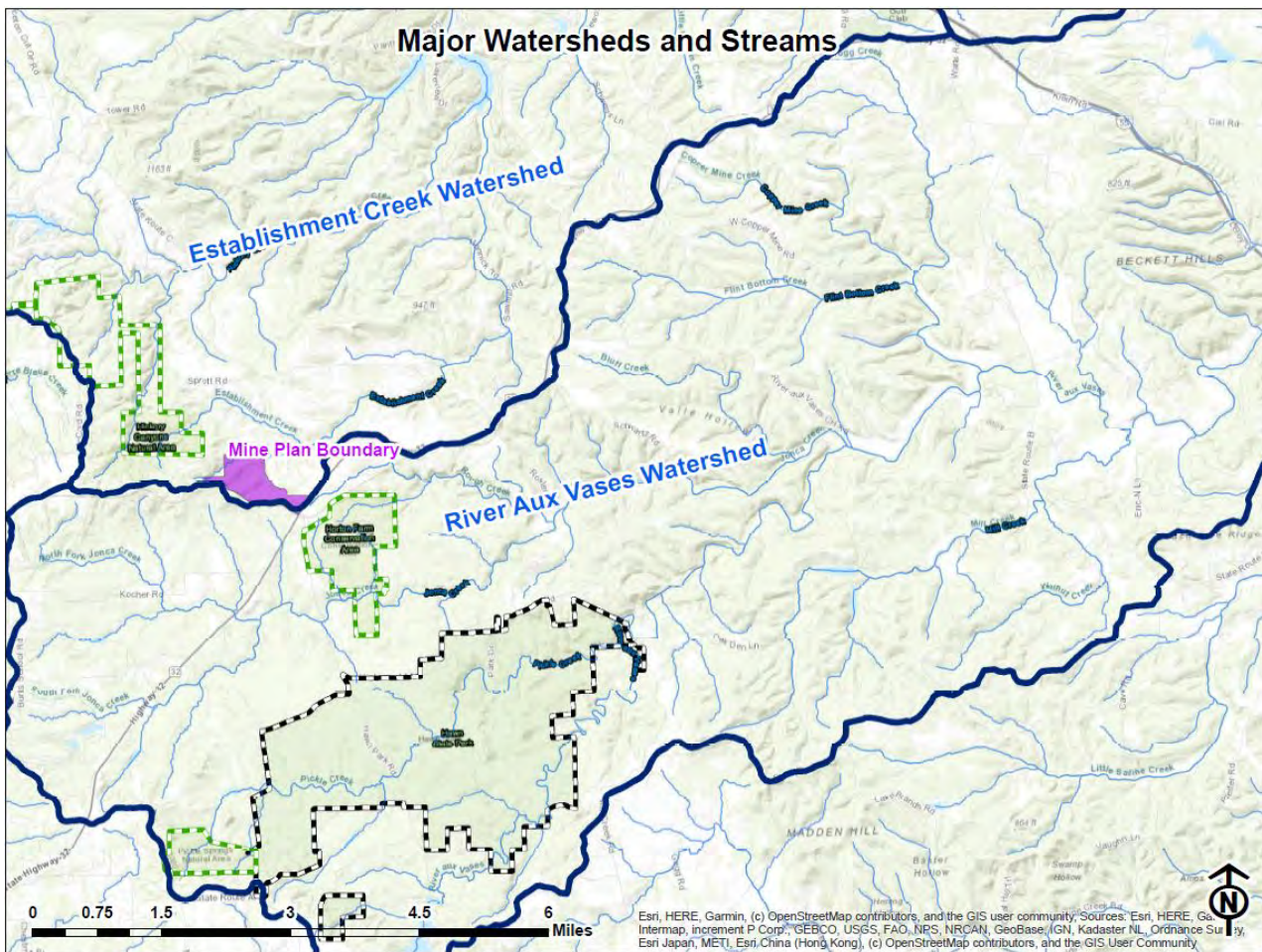


Figure 2. Map showing relevant watershed for both the Nexgen Silica mine site and nearby natural areas of concern.

Subject #2: Permitting Process and Regulatory Authority

Concern: Is there a DNR link to information about this proposed mine in Ste. Genevieve County? How can the public stay informed about comment periods and meeting dates? Is the company's application available?

Have Hawn State Park and Horton Farm Conservation Area been informed about the installation of this mine?

I believe some wrong has been done in the notification of this mine start-up. It seems some landowners who live within the 2,640 ft. boundary have not received a certified letter. I also do not believe proper studies have been performed as to influence the mine will have on water/air quality or the hazard it could cause for daily traffic.

Is there a reason why my family did not receive a letter about this mine? I own property at 9787 Byrd Lane and my late parents' property are right next to me at 9835 Highway 32. They never received it either, they have a 5-month old and a 9-year old living here that should have been notified.

I live 14 yards from the proposed mine and I did not receive the letter for the landowners.

I am writing in concern of the silica sand mine Nexgen Silica LLC is trying to get permits for. I did not receive a letter as other neighbors have and I am closer to the mine site than they are.

Attachment I: Proposed new permit for Nexgen Silica, LLC

I didn't receive a letter and I live right across the tracks. If it wasn't for my daughter I would have never known.

My wife's family has lived in this area for many generations and has a large farm 1 mile from the proposed site. No one from Nexgen has ever contacted them about this proposed mine.

It is my understanding some residents directly across the street did not receive the official letter notifying them of the mine. Please provide exact details of the rule around the notifications and a link to the exact document with page number. It sounds to me like Nexgen found the same loophole Summit Proppants did when they started up their mine. How does this keep happening? Why was the loophole not corrected from that incident? This does not generate a lot of trust that Nexgen will be an honest business and conduct honest and safe practices. This should be part of your consideration of their permit.

I was under the understanding it was required for Nexgen to send out certified letters to any land owners within a half-mile radius of the proposed mine. Many people did not receive letters and were left out for some reason. At the meeting an apology was offered to those who were somehow missed or overlooked? I'm pretty certain those directly across the train tracks from the mine and directly across the highway should not have been overlooked or missed. Some received letters and then the next person over, closer to the proposed mine, did not receive anything.

It is my understanding this mine has been in the works for two years, why are we only hearing about this in the last few months?

I'm concerned about turning a large part of this park into a mine. How is this decided? Who would benefit? Certainly not us taxpayers.

With so many failed mines in the area, and an overabundance of sand coming from established quarries, there is no need for another mine in a rural residential area of Ste. Genevieve County.

The layer of St. Peters sandstone is evident from southern Missouri north to across southern Iowa. There are many, many locations that would offer less impactful extraction sites.

Are there other, better areas where this or a similar geological silica sandstone feature surfaces that would be closer and better located to the processing location?

How did you people decide on this area to drill?

There are already four sand mines that have opened and quickly failed within 30 miles of Ste. Genevieve. With so many failed mines in the area, and an overabundance of sand coming from established quarries, there is no need for another mine in a rural residential area of Ste. Genevieve County.

Why do we need yet another silica mine in an area that may too leave behind destroyed land?

How deep will they mine? How deep is the La Motte sandstone deposit at the site? Are lower mine levels bordered by sandstone or granite? Will retention ponds shown on the rendering be sealed? A steel tank can be watertight and observed, but it is difficult to guarantee no sediment will seep through with groundwater to initially contaminate the groundwater and potentially at a later stage, local wells and waterways.

The presentation said it takes water particles 91 years to move, which is almost double the time of your lease, so I'm wondering if this is just a matter of you passing that off down the line or if you're going to put some sort of fund to protect properties in case of an accident? DNR said they can't 100% guarantee nothing will happen, so you'd be a fool to 100% guarantee us nothing will happen.

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It seems like all you're offering to pay for are testing results or a meeting once in a while, as opposed to setting up a fund to purposefully have money ready for when you make a mistake. How much are you gonna make off this mine, you can't set aside a little to take care of the people it affects?

The State of Missouri has money (from NEXGEN). Is it our money, or Nexgen's money? How is it funded? Is that money given to people, and how much is it? Is it proportionate to the amount they're expecting to make?

Will we have another Summit Proppants Sand Quarry that tried to have a mine in Ste. Genevieve and failed? Who pays when the mine fails? I'll tell you who – the four natural conservation areas, the community, etc. We will be left with devastation and destruction – whether that's damaged land, water, residents' homes, wells, etc. The bond Nexgen must pay does not even come close to what the land is worth. Not even enough for reclamation. How is it the residents pay the true value of the land, yet a company comes in and pays way less when they can potentially do millions in damage?

When Holcim came to Ste. Genevieve to mine limestone, they had a very extensive reclamation plan to quarry in small parcels and to reclaim as they went to keep dust down. Since silica dust is a known carcinogen and the cause of silicosis, I would require Nexgen to have a similar plan. I would force Nexgen, by their regs and BMPs, to be proactively anti-dust, let the nearest neighbors know when they blast and so forth. I would also require the area be reclaimed at cessation of mining – no gaping hole as an attractive kid nuisance or landfill site to attract pollution. I would require a funded cleanup escrow from the company, to ensure the mess gets cleaned up by the firm that made it, not on the back of the taxpayers.

People are wondering what happens when the mine shuts down?

These mines leave our land stripped and the reclamation doesn't seem to be followed. I know of three of these mines that have failed within a 25-mile radius of this area and all are abandoned and the land lays there destroyed, no reclamation.

How does reclamation work?

When you refer to "removing the overburden", that expresses what most human beings would call the soil and the eradication of all living beings that exist in it?

Is there some idea that reclamation would involve restoration of the forest? Because America has seen a couple of million acres of reclamation of forest into what looks like terraced golf courses.

After the mining operation is complete, 4/5ths of the land will have been cleared of its natural ecosystem, leaving a nearly 200-acre pit in the aftermath. The conversion of the remaining of land from biodiverse hardwoods and pines to a pasture is a degradation of the landscape. At the very least mining enterprises should be required to restore most of the land disturbed to its former landscape. The company should have an ample reservoir of dedicated funds, insurance and expertise to complete this. Has this been documented in the current application?

While everyone with this operation assures that the site will be reclaimed, one has only to look at the state of the former sand mine at Brewer in Perry County to see what reclamation means. The site is a disgrace and an eyesore. Piles of rubble and rusty old equipment remain on-site. If this is what reclaiming a mine is all about, you need to find a new term for the process.

How long does this mine intend to operate and are there plans to restore the area before the land is sold to another owner? Would the Department of Natural Resources want an option to buy this land to add to the nature preserves in this area?

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I have a home in Fredericktown and go to Hawn State Park frequently. You are effectively allowing this company to destroy this amazing resource in order to pad their wallets? Why?? I do expect a response that describes and provides clarity on why the MODNR is approving this mine. I would also like any details you might provide on studies you completed of how this mine will affect local families, their land, and the surrounding parks.

I implore you to reject the request of Nexgen Silica to destroy 249 acres of Missouri's precious deciduous forest near Ste. Genevieve and every living thing therein. This horrifying, gratuitous quantity of destruction is abjectly and violently incompatible with the interests of Missouri and all human beings in a habitable planet, with the mandate of the DNR, and with the rights of creatures whose presence here predates any human claims upon the sand underneath. The purpose of a regulatory agency like DNR is to defend the interests of state residents against confiscation and commandeering by outside financial interests, not to facilitate it.

Are there protections to keep this company from bringing and storing toxic waste?

The Ste. Genevieve County Commission and Health Department prohibit such an operation as described in their recently drafted ordinances.

I would also like to comment that the permit should be denied given Joint Health Ordinance 05162022 which is currently in effect. Nexgen will not be able to mine lawfully, so their permit should be denied.

The people, the commissioners and the health board of this county have shown a united front on this issue and passed an ordinance which this mine in particular will go against. I would hope DNR would respect that by denying the permit outright.

Ste. Genevieve County has an ordinance against developments like this mine. I ask the DNR honor that ordinance and deny the permit for Nexgen.

Ste. Genevieve County has taken steps to deny Nexgen mining within their county. DNR should partner with the county and uphold or at least support the county's decision to protect the air and aquatic environment within their boundaries.

Are you going to fight against the ordinance the county passed?

What, and how many, permits are required to begin mine operations? Can the company describe what permits they plan on getting? Will each permit go through a meeting or is this the only one?

Is the Nexgen mine required to obtain water and air permits before it can commence operation? Can it break ground prior to obtaining these permits? Assuming those permits are required, will DNR allow more than 10 days for comment?

So once this meeting is complete, within six weeks DNR either approves or denies the permit?

How does this group of people provide input to DNR outside this public meeting?

So we all have 10 days after this meeting to provide additional comments, then DNR has 6 weeks to make a decision, then the landowners have an appeal process if we don't agree with the decision?

What are the items that would prevent a permit from being granted?

Does Nexgen as a holding company, or any company, ever had a violation?

I think we should be very clear about the moral implications of what you're proposing, particularly in light of the very low value of sand in general, as well as what appears to be the end use for this sand, which is hydraulic fracking, which you may have also heard scientists are begging us to stop doing.

There were mentions of phases in your presentation. Phase 1, Phase 2. What are those, and how do we know there won't be a Phase 3?

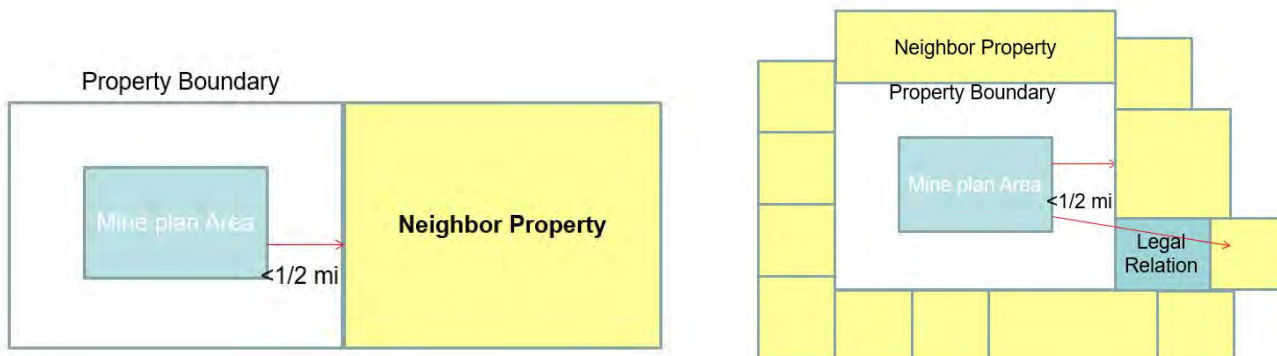
I think of the mission of the DNR is that of protecting Missouri's environment and natural resources, so it seems to me it should be a given DNR would deny any silica mine and particularly one that could affect Hawn State Park. Hawn is a treasured place I and my family have had the good fortune to experience.

Response: The Land Reclamation Program does not have links to public notices on their website, as the notice is run by the applicant. If a member of the public contacts Land Reclamation Program and requests a public meeting, the program will notify them once the time, date, and location of a meeting has been set. The permit application materials can be obtained through a Sunshine Law request.

Both the Missouri State Parks and Missouri Department of Conservation were made aware of the permit application during the public notification period. As neither Hawn State Park nor Horton Farms Conservation are among the first tier of adjacent landowners, Nexgen was not required to send them a notification letter.

The regulations regarding public notification were changed in 2014. The current requirements on who must receive notification letters from an applicant are defined in the Rules at, 10 CSR 40-10.020(2)(1)1. B. as;

“ . . .all first tier record landowners whose property is within two thousand six hundred forty feet (2,640'), or one-half mile from the border of the proposed mine plan area, and adjacent to the proposed mine plan area, land upon which the mine plan area is located, or adjacent land having a legal relationship with either the applicant or the owner of the land upon which the mine plan area is located.”



Figures 2 and 3. Diagrams explaining who is considered an adjacent landowner for the purpose of receiving notification letters during the public comment period.

“First tier” refers to landowners whose property is directly adjacent to the properties on which the applicant’s mine plan sits (Fig. 2). For these purposes, a road (such as Highway 32) which separates the two properties is considered to act as the boundary. In this specific case, some adjacent properties are owned by the same people granting Nexgen Silica the right to mine on their property. Those properties are considered legal relations, and the landowners that border them are therefore considered adjacent (see Fig. 3).

Notification letters are only required to be sent to every landowner within one-half mile of the mine plan if all those landowners’ properties are considered first-tier adjacent. If a landowner’s property boundary is over one-half mile from the mine plan boundary, whether they are first-tier adjacent or not, the applicant is not required to send them a notification letter.

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If an applicant did not send a notification letter to a landowner via certified mail who should have received one, said applicant failed to meet the requirements of the notification process. Their permit application would either be denied, or placed on hold until this was corrected. Note that the applicant is only required to send the certified mail, and cannot force a landowner to accept it. If the piece of certified mail is returned as refused, or was simply not picked up, the applicant has still met the requirements of The Land Reclamation Act.

Until an applicant has submitted an application and that application has been deemed complete, the applicant is not approved to begin the public notification process. Until the application is received, there would be nothing for Land Reclamation Program to provide information about. Whether an applicant chooses to announce to the public their intention to mine prior to submitting an application is their decision.

The proposed mine site is not within Hawn State Park, Hickory Canyons, or Horton Farms Conservation Area. Nexgen does not have consent to mine or affect land by mining, any of those locations, or the property of any private citizen who has not granted them permission to mine. However, there is no regulation in The Land Reclamation Act which directly restricts how close to a state park a mine site can be located. At present, there are 7 permitted quarry sites on properties adjacent to a state park, and at least one more whose mine plan is within one-tenth of a mile of a state park.

Clark Bollinger stated Nexgen selected this location based on the quality of the sandstone and how close it is to the surface, as well as the proximity of the railroad to the site. A mine can only exist where both the mineral commodity exists, and the person who owns the mineral rights will grant permission to mine. A private citizen who owns the mineral rights to their property has the right to either apply to mine the property themselves, or to negotiate an agreement with someone else to mine. There is no guarantee their mine will be successful as a commercial enterprise. Land Reclamation Program cannot reject a permit application on the grounds other companies tried and failed to experience commercial success mining in that area.

The Land Reclamation Act requires a permitted operator to reclaim any land considered affected by mining. Affected land is any land where overburden is removed to access the mineral commodity, and anywhere that overburden is placed on the property. An operator may sell overburden and topsoil, so long as a sufficient amount of topsoil is retained for reclamation. An operator may reclaim affected land to any of four post-mining land uses: Agriculture, Wildlife, Water Impoundment, or Development. As a general rule, reclaimed land should be at a stable slope traversable by farm machinery (3:1 at the steepest), and covered with vegetation sufficient to control erosion. There are exceptions – areas under water do not need to be covered by vegetation, a consolidated highwall can be left at a slope greater than 3:1 – but there may be additional restrictions. Acreage reclaimed to Agriculture must have the top 12 inches of topsoil replaced. Nexgen's listed post-mining land uses are Agriculture and Water Impoundment.

If affected acres have not been reclaimed, an operator must keep a current permit and the required amount of financial assurance. This is the case whether the operator is active on the site or not. If an operator fails to maintain their permit or follow the rules, the permit can be revoked. At this point, the State of Missouri would seize the financial assurance and use it to reclaim the affected acres as best as possible. Furthermore the Missouri Mining Commission shall not issue any permits to any person who has had a permit revoked. The rate at which mine companies are required to bond is set by The Land Reclamation Act.

Overburden refers to all of the earth and other materials which lie above the mineral commodity that is to be mined. This would include topsoil, however, the rules require an operator take steps to prevent the erosion of topsoil and overburden both off the property or into any waters of the state. This can be achieved through a variety of methods, including but not limited to, covering the soil with straw, mulch or seeding it, constructing berms around the stockpiles to contain them, or sediment catch ponds.

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The Land Reclamation Act's promulgated rules in 10 CSR 40-10.050(10), that grading of affected areas is to be completed within 12 months after mining of viable mineral reserves is complete in that portion of the permit area. Likewise, seeding and planting is to be complete within 24 months after mining of viable mineral reserves is complete within a given portion of the permit area. If the operator wishes to extend that timeline, they must provide written evidence that viable mineral reserves still exist in that area.

The Land Reclamation Program permit only grants an applicant the right to commercially mine a mineral commodity. It does not grant them the right to store toxic waste. That would require separate permits from the Department of Natural Resources, along with any other relevant local, state, or federal authorities.

The Land Reclamation Program permit does not override or nullify any federal, state, or local laws, regulations or ordinances that may apply to Nexgen. The Land Reclamation Program permit does not mean that Nexgen does not have to comply with the requirements of department's Water Protection or Air Pollution Control Programs. If the Army Corps of Engineers or U.S. Fish and Wildlife determined they have some level of authority over the property, due to the presence of Waters of the U.S. or an endangered species, Nexgen would be required to comply their laws and regulations as well.

Representatives of Nexgen stated at the public meeting they had not had time to fully review the county health ordinance to decide how to proceed. If Nexgen is issued a permit by the Land Reclamation Program, they would not be exempt from complying with any other local, state or federal requirements.

At minimum, Nexgen would be required to get a permit from the department's Water Protection Program. Since the public meeting, Nexgen has submitted an application for a MO-49 wastewater operating permit. If the permit application is determined to be complete, there will be a 30-day period when the public may submit comments prior to the permit either being issued or denied. Nexgen could not engage in any activities covered by Land Reclamation Program permit without a water permit, since the disturbance and removal of overburden would create the potential for water contamination. Since Nexgen has stated an intent to process the sandstone on-site, they will also need a permit from the department's Air Pollution Control Program.

Additionally, the blasting company must be properly licensed with the Division of Fire Safety in the Department of Public Safety, and the site will also be regulated by the federal Mine Safety Health Administration (MSHA). While the Missouri Mining Commission permit issued by the Land Reclamation Program, Staff Director, is necessary for surface mining of mineral commodities, it is not the only permit required to operate a mine.

Director Lehman extended the public comment period to 5 p.m. on May 31, 2022. The Director of the Land Reclamation Program must make a decision on whether to issue or deny a permit application within six weeks of a public meeting. Once the decision has been made, everyone who either submitted a public comment or attended the public meeting for whom Land Reclamation Program has contact information, will receive information notifying them of the decision. Whether the Director approves or denies the permit, any aggrieved person has 30 days from when the decision is issued to file an appeal with the Administrative Hearing Commission.

Nexgen has not been issued any Notices of Violation or Letters of Warning by the department, but Nexgen has also never had any permits with the department prior to applying to mine sandstone at the Highway 32 Pit site.

The department does have a role in ensuring a quarry operates safely, but its authority is with regard to environmental safety. To ensure water and air are not unduly polluted, and in the case of the Land Reclamation Program, to make certain areas affected by mining are reclaimed to a stable, useable state once mining is complete. The Land Reclamation Program does not have control over all aspects related to personal safety at and around quarries. Though they may overlap in places, safety is typically under jurisdiction of the federal Mine Safety Health Administration.

The Land Reclamation Program's Declaration of Policy states the Land Reclamation Program is to protect and promote the health, safety and general welfare of the people of this state. The health, safety and welfare factors the Program Director may consider when choosing to issue a permit or not are described in 10 CSR 40-10.020(2)(H)5., as;

' . . . items such as permitting and reclamation requirements, erosion and siltation control, excavations posing a threat to public safety, or protection of public road right-of-way.'

If the applicant failed to complete the public notification process, either by not meeting all requirements of the notice in the paper or in sending letters to adjacent landowners, a permit would not be granted until those requirements were met. Nexgen has provided both an affidavit from the Ste. Genevieve Herald, and the certified mail receipts from the notification letters demonstrating compliance with these requirements.

An appeal of a permit issued by the Land Reclamation Program can be made by any aggrieved person affected by the decision, but only within 30 days of the decision.

Phase 1 was outlined on a map displayed by Nexgen at the public meeting as mining east of Establishment Creek on the property. Phase 2 was depicted as mining west of Establishment Creek. This would cover essentially all the property within the mine plan listed in the permit application. For there to be a Phase 3, Nexgen would have to expand the mine plan, which would require first making arrangements with a landowner to gain permission to mine. Then they would have to submit a permit expansion application to the Land Reclamation Program, which would involve another public notification period.

Subject #3: Water and Air Pollution Concerns

Concern: How many gallons of water per day do they plan on using, and how much will be pumped from a well on-site?

The applicant proposes to excavate sand 15 feet down which would be below groundwater. Other silica mines in the country use as much as 6,000 gallons/hour. This would have a dramatic negative impact on neighboring wells fed by aquifers that flow through the area in underground streams. Water would have to be pumped out of the mine. Mineral processing and dust control would use even more water. This would likely disturb the water table in our area, decreasing or eliminating the output of surrounding wells. Certain types of silica mines use toxic additives (flocculants) that end up in drain water. Mine's primary drainage will flow directly down the valley into Establishment Creek, which serves as water source for at least 10 cattle farms and Gray Hawk Lake.

The effects of the mine on groundwater can affect other parks, such as Pickle Springs, and the health of surrounding residents that rely on well water.

I would like to know the impact on wildlife near my house, and the creek below my house my cattle drink from. We also have a well and are very concerned about this.

How will this mine impact nearby resident's access to and quality of well water? Will a specialist come in to examine the water table and potential impacts of a mine of this magnitude on the groundwater, wells and streams? What are the consequences for inevitable water contamination?

Will there be hydrological testing done around the streams downstream of the site? Will there be testing done of our water well pre and post-mine start-up? Where are they getting their water from? How much of our well water are they planning to use?

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There is no easily renewable water source in that area except for groundwater and the local creek. Perhaps off-site water could be used. I understand concerns of the locals about water extraction and use. And keep Nexgen's feet to the fire to ensure state water use and clean water standards are enforced.

The St. Francois County Groundwater Province includes Iron, Madison, Ste. Genevieve, St. Francois, Washington and Wayne counties. Per DNR PUB3003, "communities such as Farmington, Bonne Terre and Fredericktown primarily rely on groundwater for everyday use," and "water in this province is at great risk of contamination than other areas." This possible impact on water resources is of grave concern not just to Ste. Genevieve but to many counties dependent upon the delicate St. Francois County Groundwater Province.

This proposal should be denied due to its potential negative effect on the environment. The draw of 6,000 gallons of water per minute to awash the sand is itself a non-starter, but groundwater pollution, toxic dust, blasting noise, increased traffic are all negative factors that outweigh any economic benefits.

Are there any written facts about how much water will be used in a year's or a month's time? They said in the newspaper it was 6,000 gallons per minute. Is that going to be taken from all the peoples' wells in the area? What happens to the water once you guys leave this site? This one gentleman (Stan Schultz) said the water table will not be affected, but it's so large we'll all be affected eventually.

Third, all these studies on water pollution are fine, but what if you screw it up? About 15 years ago, we had a terrible drought in this area. A lot of people lost their farms, or had to spend \$25,000 drilling deeper wells. You don't have water, you don't have farms. I don't know what provisions you created, if there's an escrow account to cover damages, but that's my concern.

I heard 400 gallons per minute, that's what you're going to use on-site? You've got washing, water spray, water in a clarifier, water in the cyclones. 3 years ago I put in a rock washer, at a 100 pounds a week, was using 400 gallons a minute? You're able to run everything on 400 gallons per minute?

So the groundwater flows northeast, right to my house. Top of my well is 830 feet, roughly. Top of the mine is 870 feet. Water in my well is 60 feet deep, roughly. The well is 150 to 180 feet deep. I'm not going to lose water?

When you initially draw water up to fill your lakes, how much water is going to be pulled (from groundwater or the aquifer) to fill those lakes? How will that affect the water level at the time you fill those lakes?

You dig a hole 100 feet deep, and the water runs in. What's going to happen to our wells? The casing runs 70 feet down and just ends. If the wells go dry, what is Nexgen going to do?

I have continued concerns for pollution of the water table and wells that are within a mile, including my own, as well as Establishment Creek that begins at the proposed mine site and runs beside my house. The good faith promise to use rain water is not a guarantee, as they will need water to begin with and did not present a back-up plan for times of drought. There is still a threat to our water table. The public health of our water system, and the varied possibilities of harm that will potentially be done to all the natural areas within a mile of the mine is not worth risking.

I'm opposed to this development as there is the potential for contamination of the water local residents rely on for their livelihoods for farming and their general health.

If there is even a chance of it contaminating our water, using up our water table, or affecting anyone's health (including the wildlife) why allow it? Why chance it? There's too much at stake here.

I've read many studies on this matter and while Nexgen Silica states our water will not be affected, I simply cannot believe that based on what I've read. In the meeting, Nexgen stated they would get their start-up water to run 6,000

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pounds of water per hour from collecting rainwater. How will it be collected? How long will it take to obtain the necessary start up water amount?

Many were concerned about their water wells and the impact this mine would have on them. Nexgen was so sure there would be no impact. If so, all they needed to say is, "we are so sure, that if there is an impact we will drill you a new well," but they didn't. What is not said speaks loudly to me.

Our wells may or may not be affected. No one can give us a definite answer and many of the wells in this area are shallow and do not have a high gpm. What happens when we find out that it will affect our wells?

Nexgen states all make-up water will be harvested off the property. Two factors were mentioned; a make-up water requirement of 400 gallons/minute and a holding tank of potentially 12 million gallons. While some rainwater can be harvested if the site is well prepared, this cannot be sufficient for an economical first fill of the holding tank they suggest will supply process water, unless Nexgen is prepared to wait some considerable time. What will be done to contain water during initial excavation? Where will run-off go and how will sediment be treated? How long will it take to fill the reservoir, or will Nexgen use well water and run down the aquifer? Where will the 400 gpm stated at the meeting come from?

I have spent hours hiking, exploring and volunteering at Hawn Park. It is a treasure. I feel a silica mine operating for 50 years nearby will denigrate the watershed and the park itself.

The mine could also drastically reduce the quality of water sources around Hawn, affecting both human and animal life.

Many of our members are concerned about the effects this proposed silica mine could bring to our beloved Hawn State Park and the area's watershed.

I cannot support the mine due to watershed issues and its closeness to many State Parks, Conservation Areas and other Natural Areas.

This mining is also likely to derange the hydrology of the landscape well beyond the mining footprint, alternately draining or flooding fragile wetlands, springs, streams and other small ecosystems that nurture southern plant and animal relics from the last glaciation.

You have your map with the fancy green arrows showing how that'll never affect Hawn. What you didn't discuss is the entire east part of that map that will be affected by it. We're not just concerned about Hawn, there's so many other places in the state that are protected, it's disingenuous to focus on just those three and disregard everything to the east.

So the two miles away you keep referencing, that's far enough that no water from the mine is ever going to affect things there?

How will this mine affect watersheds in this geographical and geological area?

What is the actual watershed control plan? Various common surface water controls were mentioned, but specific methodology was not clarified. The statement was made that sediment trapping will occur during low flows. That may be the case, but significant rainfall events appear to be becoming more common and as a result there will likely be times during high flows when sediment enters the local watersheds and contaminates adjacent creeks and rivers.

The ecological impacts far outweigh the profits a few business owners would gain from the operation. Citizens are concerned for their aquifer, streams, wildlife and most importantly the health of their families.

The entire area is situated in the northeast corner of the trillion gallon St. Francois Aquifer, an amoeba-shaped underground reservoir made of 500 million year-old La Motte Sandstone Formation vulnerable to earthquakes vibration

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damage from explosives used in mining, and also chemical and sediment pollution from industrial waste run-off, spills, and harmful, standard mining practices because the surface bedrock is naturally porous.

If you drain a lateral section of the aquifer too much, it could collapse due to lack of internal pressure that naturally occurs as groundwater enters a void, which might obstruct that section as the bedrock structure changes. This would reduce the capacity of the aquifer, damaging its structure and reducing access to freshwater. Almost all of Farmington's available groundwater supply could be contaminated forever.

The St. Francois aquifer, serving eight counties and their residents, is cited as fragile and unique. In some places, the water table is less than ten feet, yet Nexgen proposes open strip mining up to 150 feet. Thousands of residents rely on this aquifer and no amount of reclamation money will be able to repair and restore it if the mine is allowed.

In either August or October of last year (2021), DNR posted an article about how precious our (St. Francois) aquifer is. So how are you going to let a mine come in and damage our water? The DNR article refers to the St. Francois Groundwater Province and says potential contaminants should be either eliminated or limited. That's our family farm. We have five wells, we have a late-1700s farmhouse on our property, we have a late-1700s cemetery on our property, an old cistern well. We have an active spring. How is this protected? How is this physically protected? What are you doing to make sure it isn't damaged?

I also have fears of the recharge rate of the aquifer especially for those living close by such as the Eckenfels and the Baslers. When you strip land of its vegetation and add catch ponds, the natural process of recharge is stopped by not allowing the sandstone to gather and process rainwater. If their wells are not recharged, they will go dry.

It does not rain that much, and I'm leery they will tap into the St. Francois Aquifer. The aquifer affects not only Ste. Genevieve, but eight other counties and is cited as 'fragile' and unique. In some places, the water table is ten feet, but Nexgen proposes mining up to 150 feet. Thousands of residents rely on this aquifer and no amount of reclamation money will be able to repair and restore it if the mine is allowed. How do we know we won't end up like Brewer, MO, where all their wells dried up due to silica sand mining?

The St. Francois Aquifer is vulnerable to earthquakes and damage from explosives used in mining, as well as chemical and sediment pollution, including the potential for hydraulic fluid mixing with the groundwater.

It looks as if there will be quite a bit of water runoff headed towards Hickory Canyon Natural Area. I also see the Establishment Creek begins on the property. How is this going to be managed to make sure we protect the ecosystem of this region? Once they start clear-cutting trees, how will they deal with erosion and everything that follows when pursuing this mine?

If DNR is supposed to help protect our water, can someone tell me what is being done to stop Nexgen Silica from building their mine? The proposed mine site will be at the headwaters of the Establishment Creek. What will contain all the silt runoff after the overburden is removed? What will happen to the shallow water aquifer?

Establishment Creek is within the proposed mining area and would naturally receive runoff from the operation, affecting lakes and recreation areas.

Establishment Creek rises on the boundary of the Nexgen site. No water quality monitoring has been demonstrated to date. I live in Lark Forest, approximately 6.8 miles from the Nexgen site. Our community is in the process of building a new sewage treatment system, as required by DNR, to protect Establishment Creek from discharge from our lakes and wastewater. If we are required to provide such protection, what conditions will be placed on Nexgen to protect the same creek at its source?

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Water is a huge concern. According to the presenter, to prevent runoff from the site retention ponds and erosion barricades will be used to prevent sediment from entering Establishment Creek. That should work for most rains, but about twice a year we get a 3 to 4 inch rain overnight. During these spring storms, water always seems to go over emergency spillways, erosion barricades break or water goes around them and we still end up with gullies. If this happens on a Monday night, Nexgen can/will replace/repair them the next day and we'll be none the wiser, but the headwaters of a creek that runs through 8 cattle farms and a lake community are poisoned.

How does it protect our water? Establishment Creek won't be the same, it can't be when it runs on the property the mine is proposing. Our water may or may not be contaminated and this water flows throughout this area for miles with farms and wildlife dependent on it.

Establishment Creek starts on the property and winds through many areas of the county, including our family farm. Anything getting into the creek will impact the county as a whole. Many people swim, fish and water animals from this creek. Anything that enters the water table could impact the drinking water of many people in multiple counties.

A silica operation will cause a vastly increased possibility of degradation to water and air quality, and the potential for damaging or negatively impacting the water table, springs, creeks and drainages that feed this biodiversity is far too great to allow this operation to ever come to fruition.

Hyperfloc cp 626 and hyperfloc af 307 will be used in processing. Water runs right through sand and will destroy our drinking water. This is our only source of water and with that said I want a geological impact study done.

These mines contaminate local waterways with toxic substances like heavy metals and polyacrylamide, and there have been several cases of waste liquid spills, including one that released 10million gallons of waste into tributaries of the Trempealeau River, leading to dangerous levels of heavy metals in the water. The chemicals or flocculants used in the mining process can contaminate groundwater. Long-term exposure to flocculants can lead to nervous system, blood problems and increased risk of cancer.

You dig this out of the ground, it's not clean. You wash it, what's coming off it, what are the concentrations, what do you do with it?

Where's the process water coming from that you're reusing?

Has Nexgen baselined sediment levels in Establishment Creek over the past 12 months?

Has Nexgen baselined the water temperature of Establishment Creek over the past 12 months?

Has Nexgen baselined the water oxygen levels in Establishment Creek over the past 12 months?

Has a stream stabilization plan been created for Establishment Creek?

Has a particulate abatement plan been created for Establishment Creek?

Has the water quality been baselined for Eagle Lake, directly in line with Establishment Creek and Grey Hawk Estates?

Has the water quality been baselined at Lake Ossee, directly fed by Establishment Creek?

No local site measurements of groundwater movement were given. Why will this area be typical of general state information provided? What water bores have been explored on site?

What stream sediment surveys have been done at, close to, and downstream of the site, and when were they done?

What stream chemistry surveys have been done at, close to or downstream of the site?

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What stream oxygen surveys have been done at, close to, or downstream of the site?

What groundwater surveys have been drilled on or around the site? When? What was the groundwater level?

Why should local flows follow the speeds given? They may be more, or less.

What chemical will be released from washing and desliming? What metals?

What will be done with waste produced by the filter press? What chemical or materials are involved? Are there any heavy metals in the overburden or the sandstone? Has this ever been tested?

What will be done with the waste produced at the baghouse? What materials are involved?

I think DNR described that the silt fences had to be maintained, and if they were maintained they worked properly. Who is responsible for maintaining the silt fence? Who monitors Nexgen?

How often does DNR monitor Nexgen?

So if we have concerns, we can contact DNR and they will come inspect? Is there a project manager responsible for the site, or a group of people?

Visitors and wildlife in and around Hawn State Park, Hickory Canyons Conservation Area, and Horton Farm Conservation could be exposed to: Air pollution the crushing and breaking apart of materials at the mine, groundwater contamination and disruption to water systems in the area, and noise and light pollution that often comes from mining operations.

I live less than 2 miles from the proposed mine site. I don't want my family or livestock to breathe silica dust, I don't want a large corporation to be able to use as much water as they want from the aquifer that fills our well, and I don't want noise and light pollution to ruin the view when we sit outside at night.

Silica dust is a hazard to everyone and everything with lungs and its mining requires use of fracking fluids which are known to contaminate groundwater. Most people in the area use a well and are not connected to any kind of water system and this would be disastrous for them.

I'm concerned about the health and water implications for the people, plants and animals living in the area. Silica health concerns and the water impacts of mining are well documented. This mine would pose a huge threat to wonderful natural areas around Ste. Genevieve.

I attended the May 19 meeting and Nexgen's presentation was very poor and unclear. They have done no research on the Establishment Creek watershed and the effects on air quality.

Nexgen stated they would be monitoring air and water in an effort to protect those resources but was not able to share plans as to how they would do so and have not provided any baseline tests to ensure the quality remains the same as it is now.

The silica mining and processing operation proposed by Nexgen Silica, LLC will have the risk of fugitive dust, respirable fine particulate silica reaching the park areas with the inherent risks of air and water pollution.

I would like to know if the silica sand will be processed on-site, and if not where will it be processed? How often will settling pits be drained and cleaned? How will solids be disposed of? Will they have secondary containments around the settling pits?

Silica dust is known to be dangerous and a public health concern. Is it ethical or responsible to install this type of mine near so many family farms and occupied residences? Do we understand the long-term health effects air pollution from

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this mine could cause? What methods will be used to keep dust levels down? Who will monitor this? What consequences will there be if and when dust levels begin impacting nearby families?

We do not agree with this mine as it would not be safe for children and our livestock, along with our pets and ourselves. It is known that silica dust can cause lung cancer along with many other health concerns.

Will they be providing dust collectors for our houses to determine if fugitive dust is making its way to houses within a mile from the blast site? Will they be attending doctor's appointments for my children to have their lungs scanned every week to make sure they are not having any symptoms to silicosis? How are they planning to mitigate dust when they blast?

I know you have to follow state and federal regulations on air quality and other things. Who monitors you and how do they enforce those regulations?

How often would they be monitored?

Visitors and wildlife in and around Hawn State Park, Hickory Canyons and Horton Farms Conservation Areas could be negatively impacted by air pollution from dust particles created by processing of materials at the mine, as well as contamination of the groundwater and disruption of water systems in the area.

While the actual mining will occur on private land, the surrounding area will be affected by the mining process. Dust particles can inhibit the photosynthesis of native plants and build up in local animal's lungs.

The noise, dust and pollution created by this proposal would adversely affect the entire community as wind travels through the valleys of Ste. Genevieve every day, wind that may soon be laced with silica dust.

The traffic, noise, light pollution and airborne particles from silica sand mining would have a strong negative impact on residents' health and quality of life.

As a public health nurse, I know that chronic silicosis is both a public health threat and an occupational hazard. There is no standard in Missouri for allowable levels of silica sand dust even though there are public health risks associated with silica sand mining including diseases associated with increased levels of particulate matter in the air. Our air quality and public health are too important to risk with this proposed silica mining operation!

Have you done particulate monitoring on-site, and are you going to continue to do particulate monitoring?

What if some of the sand gets in the air, on the ground, the crops, the wildlife, our drinking water, could all be affected. Can you guarantee that not to happen?

You've never had anyone show problems from breathing this stuff? It was stated the people who work around this stuff wear hazmat suits. If they have to work in those conditions, what could happen if the wind blows it on the ground, or off the site? If the conditions are like that on-site, how is it not going to affect the rest of us?

Smaller dust particles can travel faster and farther, though.

Are there problems with this silica sand becoming airborne and windborne and are there deleterious effects to plants, animals and humans? Especially with gardening, grazing, farming and haying?

Will employees be wearing some kind of respirator, or will there just be testing units around?

How will the community have access to the air sampling results?

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How far is the maximum reach of particulates from the site? How far is the maximum perceived radius, with the site as the center of the circle? One mile? One hundred feet? How far out can the particulates go?

Have you done a 12-month study at the site to determine what the particulate level is?

I've been around crushers. There could potentially be problems.

How does this mine permit protect our air? Our air will undoubtedly have silica dust in it, to what extent remains to be seen depending on how the mine operates and if they follow all the precautions and safety measures. Who checks our air to see if it truly is contaminated beyond what are safe levels?

Mining silica sand is associated with increased air pollution as it releases tiny dust particles in the air, known as particulate matter. Specifically, silica sand is linked to silicosis, a cancer of the lungs that endangers miners and surrounding communities. Long-term exposure can be fatal.

I fear the silica dust produced by this mine will spread beyond the expected area and have a negative impact on the health of the very young, very old and more fragile people in the area. The area is abnormally windy and I fear dust will certainly not be contained as expected.

What is the intended heating method to dry the sand? What emissions are expected and how will these be controlled or treated?

What dust control will be provided from the crusher hopper through drying to the sand loading system? This is not shown clearly on the process schematics. What will be done with the dust?

What dust suppression is planned for roads and stockpiles? Water spray and beet juice may be effective if carried out diligently. Who will monitor this and how often?

What PM10 or PM4 monitoring has been carried out? What were the results and over what period? It seems Nexgen has accumulated no background information. Is this indicative of responsible mining? The information presented on silica dust was very generalized and may bear no resemblance to what results at Nexgen's site. Nexgen needs to demonstrate a clear ability and responsibility to protect the local population.

Silica regulations for other states were quoted, but not Missouri? Are there local requirements?

What are the guidelines for Nexgen related to dust particles? Why have no background measurements been taken prior to application?

In my research on this project, it sounded like you were trying to sell the community on it by saying there would be 30 jobs? Are those people hired from this area, or people you're bringing in? Silica mining is a leading cause of black lung disease, severe lung disease, and you're trying to sell this community on giving people these 25 to 30 jobs. What are you going to do to protect the people in this community, their family members and their children, when they contract severe black lung disease.

Response: Please see attached June 28, 2022 department memorandum for information regarding water resources law; and geology and hydrology. Nexgen stated they will not need 6,000 gallons of water per minute to conduct operations, rather they estimate only 400 gallons per minute will be required. While there will be a well on-site, Nexgen plans to construct two water impoundments, able to hold a total of 12,000,000 gallons. These will collect rainwater, and Nexgen would use that for washing and processing material, as well as for a tire wash for trucks leaving the site. This collected rainwater would account for most of their water use, with the well in reserve as needed. Nexgen will have to drill at least one new well, as the current well does not meet standards to supply 25 employees year-round.

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Nexgen plans to mine to no lower than 760 feet above sea level, the elevation of Establishment Creek. The processing facilities would sit at 850 to 900 feet above sea level. Mike Carlson stated during the meeting that based on information available in GeoSTRAT, groundwater in the region generally starts at 75 to 80 feet below the surface. Mines try to avoid hitting groundwater, because water leaking into a pit has to be pumped out for mining to continue. It is in their best interests to avoid that if they can.

Sandstone is not a calcareous mineral, so unlike limestone or dolomite, it isn't easily dissolved by water. Large underground channels or caves are unlikely to form in La Motte Sandstone, which slows both the rate at which surface water can infiltrate the groundwater, and the rate at which groundwater can move laterally through the formation. Based on some well testing data from Farmington and some independent calculations, Mike Carlson estimated a molecule of water would only move at a rate of 58 feet per year through the La Motte Sandstone.

As discussed in response to Subject #1, Hawn State Park, Horton Farms Conservation Area and Pickle Springs are in a different watershed from the proposed site. Therefore surface runoff from Nexgen should never reach any of those natural areas. Hickory Canyons Natural Area is in the same watershed, but it is separated from the Nexgen site by a ridgeline, which should prevent runoff from either location reaching the other.

There are other homes, farms and communities downstream of the proposed mine site. Nexgen is required by the Land Reclamation Act to prevent any erosion from reaching off the property or entering any streams of the state. LRP monitors for compliance with these requirements during site inspections. If Nexgen failed to follow these regulations, they can be assessed Notices of Violation and fines for non-compliance.

The department's Water Protection Program Program's (WPP) MO-G49 permit is the one typically required for mining operations that use explosives. Nexgen has submitted an application for an MO-G49 permit at the time of this writing. There is a 30-day public comment period for facilities not previously permitted, such as the proposed Nexgen site. After the comment period, the department will either approve or deny the application.

This permit regulates both storm water and process water discharge. Process water, in addition to including water used in processing the mineral commodity, also includes water pumped out of the pit, and water used to wash equipment. The washwater cannot include detergents, acids, caustics, solvents or other additives. Soap or detergent could be authorized, but only if less than 500 gallons are used per day, and it is not allowed to soak into the ground, which should prevent its joining the local groundwater. Washwater without these additives can be discharged like other process wastewater.

There are discharge monitoring and reporting requirements associated with this permit. Samples are collected and tested by the permit holder on regular schedules, following methods approved by the Environmental Protection Agency, and reports on the results are sent to the department's Water Protection Program. The variables tested for are typically levels of suspended solids and pH. Water samples would typically be collected at designated discharge locations called outfalls. These locations must be submitted to and approved by department's Water Protection Program, and must reside on the property where mining or processing takes place.

Outfalls are also typically located near where the drainage meets a named creek, if there is one on the property. So there would be regular monitoring to make certain Establishment Creek was not being polluted. If regulations on levels of suspended solids and pH were not being met, Nexgen could be assessed Letters of Warning or further enforcement action.

These results can be obtained by any person through a Sunshine Law request. The EPA is able to see these reports via the Water Protection Program's MoCWIS application. Water Protection Program can conduct its own monitoring and testing in response to a complaint from the public or other government agency, or because the reports submitted by the

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permit holder show levels of suspended solids or pH that are out of compliance with the legal limits. Water Protection Program typically inspects a given permit holder at least once per permit cycle, but can conduct more frequent inspections in response to complaints or if previous inspections and monitoring reports make it necessary.

Depending on how many activities take place at a mine site, the operator may require multiple general permits, one for each activity. However, an applicant may apply for a site-specific permit that will cover all activities. Site-specific permits take into account individual characteristics of the site such as stormwater runoff process wastewater and domestic wastewater discharges. If the department determines a site-specific permit is necessary to better protect water quality, they may require the operator to obtain one, rather than the general permit.

Section 404(a) of the Clean Water Act requires a Federal 404 Permit from the U.S. Army Corps of Engineers (USACE) for construction activities where there is a discharge of dredged or fill material into waters of the United States. Missouri requires a 401 certification for any project that needs a Federal 404 permit. "Waters of the United States" are currently defined as: lakes, rivers, streams (including dry streams), abandoned quarry pits and wetlands (including dry wetlands.) The USACE has visited the proposed site and informed Nexgen they do not require any permits from the USACE at this time.

Nexgen stated they intend for their process water to empty into concrete-lined sumps, where they will add flocculants to bond with the sediment. This increases the weight of the sediment, causing it to settle out of the water more quickly, so Nexgen can then reuse that water in their processing. Troy Zickert from Hychem stated this process will allow Nexgen to reuse 95% of their process water. This would also make it difficult for sediment or the flocculants to be carried off-site by the water, since the increased mass reduces time the particles can remain suspended.

Nexgen stated the sediment would be removed and set aside to dry. Its final use after that was not determined by the time of the meeting, and would depend on an analysis of the chemical composition. A possible use mentioned at the meeting was as overburden in the reclamation process, or possibly selling it. While the material was drying or be stockpiled, Nexgen would have to take steps to make sure no erosion off that material either left the property or entered Establishment Creek.

Nexgen has not performed any baseline sampling on the levels of sediment, dissolved oxygen or chemical make-up in Establishment Creek. They have also not performed a baseline, pre-mining survey of particulate matter levels in the air on-site. These are not requirements for a permit with The Land Reclamation Act. John Jurgiel stated that while they have not done any baseline studies on dust levels yet, monitoring would be conducted before any activity began, then again after overburden was stripped but before blasting, then again after a blast.

Stan Schultz stated Nexgen would use a variety of erosion control methods, including silt fences, ditch checks, straw bales and storm waddles. Maintenance and upkeep of these erosion controls structures is Nexgen's responsibility. Monitoring Nexgen to make certain they do maintain their erosion control structures is the department's responsibility. Both Water Protection Program and the Land Reclamation Program inspect any permit holder's site for any failures in erosion control or even things that may be in danger of failing. This can include falling silt fences, breached berms or check dams, or sediment ponds nearing capacity, among other things. Both programs inspect sites independently, on their own schedules, but share information as needed.

The department's Southeast Regional Office or Water Protection Program may inspect a particular permit holder. While Land Reclamation Program may have one inspector who typically works with a permit holder, in the event of a concern or other time-sensitive matter, any member of the Land Reclamation Program's Industrial and Metallic Minerals Mining Unit may perform a site inspection. However, records of past inspections are maintained to bring new inspectors up to speed on mines they haven't visited yet.

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Dust concerns would fall under the Department of Natural Resources' Air Pollution Control Program. The department's Southeast Regional Office will conduct inspections in response to complaints by the public or other government agencies.

Quarry operators are required to monitor PM10 levels in the air, and to keep dust levels below statutory limits. "PM10" refers to particulate matter less than 10 microns in diameter. There are daily and annual limits on the amount of particulate matter a permit holder may allow in the air, and the permit holder is required to submit reports of the PM10 levels on-site. Rules promulgated under the Missouri Air Conservation Law state dust cannot leave property owned or operated on by the quarry.

An application for an air permit will include an Application for Authority to Construct, Emissions Unit Information forms, a site layout form, and worksheets for haul roads, storage piles and fuel storage tanks. The applicant is also required to provide an illustration of the site layout, a list of the process equipment to be used, and the expected annual production. Air Pollution Control Program considers the emissions of each piece of equipment in making certain the processing plant is in compliance with their regulations. Haul roads within the quarry and the dust potentially created by vehicles using them are also factored in.

During the meeting, Nexgen stated material would be moved from the pit to the wet plant, and from the wet plant to the dry plant, by means of conveyors, rather than trucks or other equipment, in an effort to reduce dust. They stated all roads on the property would be either asphalt or concrete, also to minimize dust, and there would be a tire wash on the road exiting the property to keep trucks from tracking anything off their tires onto Highway 32. The wash water used for that purpose would also be collected, cleaned, and reused.

Potential emissions determine which type of air permit is required. There are 3 types of air construction permits: De Minimis, Minor and Prevention of Significant Deterioration. Only the Prevention of Significant Deterioration permit requires a public notice, and this permit applies when expected emissions will exceed 250 tons of particulate matter that is 10 microns or less in diameter in a year. Most quarries do not produce over 250 tons of PM10 in a year. It's also possible a mine site may require an air operating permit in addition to the air construction permit. Operating permits are required when a facility has large potential emissions or if any of the equipment is subject to New Source Performance Standards (NSPS). If required, the operator must submit an application for the operating permit once construction (which would be under the air construction permit) of the facility has begun.

A facility may apply for a pre-construction waiver which, if approved, allows construction but not operation of the facility. General land clearing of the site is acceptable prior to approval of an air permit, but this site would need a Land Reclamation and MO-G 49 Water permit before that could legally take place for the purpose of mining.

Monitoring reports are submitted to the Air Pollution Control Program. Clark Bollinger stated all monitoring results would be available to those interested, either by contacting Nexgen directly, or Nexgen could post them on a website. Air Pollution Control Program can also conduct inspections of conditions on-site at their discretion, or in response to a public concern. Dust should not be observed leaving the property, and the permit holder must utilize suppression techniques to follow this requirement. There is an exemption to watering roads or stockpiles when the temperature is below freezing to avoid the safety issues that accompany icing.

Crystalline silica is considered to be in the respirable range, and therefore at a risk of remaining in the lungs, when particles are between 2.5 to 4 microns. Particles of that size can be carried over a mile on winds less than 5 miles per hour. However, Nexgen stated they were planning to produce sand grains between 100 and 560 microns. This is a minimum of 25 times larger than the respirable range for particulate matter. Further, Nexgen plans to have both their wet and dry plants inside buildings, which should limit the opportunity for transmission of particulate matter through the air.

There are health and safety standards that establish levels of acceptable crystalline silica in the air. The Mine Safety Health Administration can, during their inspections, use a mock breathing apparatus to collect samples to test the particulate matter levels in the air. If concentrations of airborne crystalline silica at the mine exceed acceptable levels, Nexgen would be required to have personal protective equipment to mitigate the airborne particulate matter. This would most likely be some manner of backpack respirator or breathing mask.

Subject #4: Blasting Concerns

Concern: When will blasting occur? At what times will the mine be operational? How far away will vibrations be felt?

I would like to know what direction they plan to face their highwall concerning air blast from the blasting. How many times a day will they blast? Will they be setting up seismographs at everyone's house with a certain radius? Will they be conducting pre-blast and post-blast surveys to determine any damage to nearby houses?

Other mines in the county receive reports of residents hearing and feeling blasts up to 3 miles away. Blasting has the potential to crack foundations, roadways and the integrity of stone overlying the aquifer. We don't know the plans for safety precautions for surface-level blasting and the ramifications of the dust and particles blown in the air.

My question is, a home that's already settled is going to react different from one that's being built. A lot of people are building homes around there.

You're saying there wouldn't be a difference between how an older home and new construction in regards to the effect of a shot?

So we're initially going to go from bad to better?

There's a lot of undermining in the area, that's why I'm concerned.

Earlier we heard there will be no blasting before 9 a.m. or after 3 p.m. How can you ensure that the next owners will follow that?

Can I get the slide pulled up that showed the blast area? I proposed to build my house in this clearing near the area indicated on the slide. Would any of you involved in this mine still proceed to build a house right there if you were me?

Will seismology surveys be taken at neighboring properties as well as at Nexgen boundaries? By who? Will these records be made public? When Holcim started quarrying at Bloomsdale, they used seismographs near neighbors at a distance and acted on calls when blasts caused higher than normal ground vibration. Will Nexgen provide similar liaison?

Will blasting shocks crack well casings? How long before contamination becomes an issue? If it does, who will pay compensation?

Is there any possibility of shot rock reaching outside the mine boundary? Reaching public roads? Shot rock can at times travel much further than expected and this mine borders a busy highway.

Response: Clark Bollinger stated that while the mine might be active 24 hours a day, no blasting would take place before 9 a.m. or after 3 p.m., and blasting would only take place on weekdays. It is true, however, that if the permit were granted to Nexgen and then transferred to a different company at some point in the future, that new company might change the policies.

The 2007 standards of the Missouri Blasting Safety Act are put in place to protect people and structures from ground vibrations and air overpressure. Blasters must go through an extensive training period before being certified by the State

of Missouri and must also take refresher courses every three (3) years to keep the certificate valid. Most blasts are monitored with a seismograph and monitoring records are kept for review. Missouri blasting limits are taken from a 1980 study done for the U.S. Bureau of Mines. Even though the U.S. Bureau of Mines study is over 40 years old, other studies have tried to invalidate the 1980 study without success.

Air overpressure travels slower and farther than ground vibrations, and is what is most commonly felt by those around blasts. It is typically the overpressure which would rattle windows. The limit on air overpressure is set at 133 decibels, which is not a measure of sound, but of pressure equivalent to a 27 mph wind. Ground vibration limits are set to prevent even minimal levels of damage, where even minor cosmetic cracking of plaster or drywall would be considered "damage."

Keith Henderson stated it is Buckley Powder's (who Nexgen intends to contract to handle blasting) goal to stay well below those limits on vibration and air overpressure with every blast. Each blast is approached from the perspective of what energy is needed to break that specific rock formation. He stated that if they stay below the limits there would be no concern of damage. The levels for both vibration and air overpressure were set to protect even weaker building materials like plaster from damage, so more resilient materials such as concrete or cement would be unaffected. Even a home that has been in its current location for decades and settled over that time should not experience structural damage from the blasts. Likewise, the level of vibration should not damage well casings.

There are requirements in the Missouri Blasting Safety Act that if a blast is of a strength as noted in the regulations, a seismograph must be set at the nearest uncontrolled structure to monitor the blast. This is based on scaled distance. Scaled distance is counterintuitive; meaning the smaller the scale distance, the more intense the blast will be. If the nearest uncontrolled structure is further away from a blast, the blast could be still larger as compared to a structure that is closer, and the blaster in charge would need to set off a smaller detonation. There is an equation to help determine the scaled distance of a blast as compared to the distance of the nearest uncontrolled structure. A seismograph is required by regulation 11 CSR 40-7.010(9)(B) and reads:

"In any instance when the calculated scaled distance value is fifty-five (55) or less, and person using explosives shall use at least one (1) seismograph calibrated to the manufacturer's standard for use to record the ground vibration and acoustic levels that occur from the use of such explosives or explosive materials."

Mr. Henderson stated it is company policy to have a seismograph and recording of every blast, whether the scale distance to the nearest uncontrolled structure would require it or not.

If there are concerns blasting is causing damage to foundations or wells, the Division of Fire Safety will send an inspector in response to a complaint call. Licensed blasters are required to keep records of all blasts over the previous three years, and inspectors from Fire Safety can demand to see those records. While the Division of Fire Safety could issue violations or fines to blasters not in compliance with the regulations, the matter of compensation for damages would be a matter for civil court between the affected party and the responsible party.

Fly rock has at times traveled up to one-half mile from the blast. Page 1 of Nexgen's mine plan states the closest point of excavation to a road right-of-way will be 2,500 feet, which would be at the outer limit of that half-mile radius. However, the goal of blasting companies is to successfully break the targeted rock formation with the most efficient use of energy possible. To send rock that distance would suggest an error in the calculations on the blast. When there are possible risks of fly rock reaching a road, mine companies will often temporarily halt traffic on the road before it can reach the mine site until the blast is complete.

Blasting is regulated at the federal level by the Department of Alcohol, Tobacco, Firearms and Explosives, and at the state level by the Division of Fire Safety, within the Department of Public Safety. The Department of Natural Resources

does not regulate blasting at any quarries, and does not consider blasting in their determination of whether to approve the permit application or not.

Subject #5: Road and Rail Traffic Concerns

Concern: I question the ability of Ste. Genevieve County infrastructure to handle a mine of this size moving silica sand from the mining site to barges. Will it travel by road? Will a representative from MODOT examine the impacts this will have on Highway 32? When will bridges need to be replaced? Will taxes eventually increase to repair roads and bridges? Or will it travel by rail? Will a traffic light need to be installed along Highway 32 to allow train crossings? How often will trains or trucks be leaving the site?

On top of immediate environmental impact, there would be way more traffic on a highway that is already overused due to its proximity to Farmington.

Will Nexgen Silica be in contact with USPS concerning the placement of our mailbox, being we have to cross the road to get to our mail, with the influx of traffic I do not feel comfortable letting my wife cross the road with even heavier traffic being present. Will they be hauling sand by rail? If so, how many trains a day? How many truck loads a day will be hauled out? How are they planning to mitigate traffic? Will Nexgen Silica help with damages to the highway, with heavier loads of equipment and more 18-wheelers?

There is only one access in and out of the community, Highway 32, which follows a high ridgeline. There is a safety concern regarding when the dump trucks leave the proposed mine. They would be turning onto a road that regularly sees traffic driving upwards of 60mph, and those trucks would be blind to cars coming up the hill they are turning on. It will take heavy, loaded dump trucks time to build speed, potentially causing accidents. The road along the ridge-top is windy and there are several school bus stops along the route. With the expected amount of sand being mined, 20-40 tandem loads per day would be traveling these same roads causing congestion, pollution, wear and tear, and a greater potential for accidents. In addition, it has been mentioned there are possibilities of a railroad depot to be opened. Exporting products in this fashion would impact traffic, daily travel and everyone in the community.

This operation will create far greater and hazardous traffic on Highway 32.

My second concern is traffic. It's about the worst place on Highway 32 for train crossings. I don't know what plans you have for that. It's blind from traffic coming from Ste. Genevieve and it's blind from traffic coming from Farmington. It's on a hill and it's just a really difficult place to have trucks coming in and out.

Who would pay for a third lane on Highway 32?

Traffic is a problem. That entrance is in a bad place. Trucks coming on and off the road at the top of a hill.

Highway 32 in that stretch is a blacktop road with no shoulders. It is not a very safe road to drive on. Just east of the junction of Highway 32 and Route C is where Weingarten Winery comes to Highway 32 just after a blind hill to the west. Also, is highway 32 built strong enough to carry heavy truck loads for decades?

What if they plan to use the local railroad tracks? That railroad has only been used when the Mississippi River floods eliminate usage of the tracks by the river. There are so many crossings that are going to be in regular use for the first time in decades. Are the tracks and bridges up to regular heavy use? Are the railroads prepared to install better crossing warnings?

I live right by Hickory Canyon and west of the proposed mine. The railroad tracks are 60 feet from my front door. I do not want heavy train traffic, much less a train carrying toxic materials, through my front yard. The trains will disrupt my cattle, and when cattle are stressed they die.

Location of entry to the property is potentially dangerous due to poor visibility for traffic approaching from either direction over a hill crest. Trucks entering or leaving the sand mine will present an unexpected obstacle. Renderings shown at the meeting indicate a simple T-junction which could be potentially dangerous. A later slide suggested a third lane could be added to the mine side of the road. Will this be provided at Nexgen's expense, or will taxpayers be expected to foot the bill?

No useful information was provided on rail transport. Will this be a source of noise? What is the expected train frequency?

Response: Nexgen stated at the meeting that they did plan to ship sand by both truck and train. Trains would only travel west towards Bismarck, Missouri. Nexgen further stated any facilities for loading sand onto trains or reversing their courses would be on the mine property. No trains would cross Highway 32.

With regards to traffic on Highway 32, Nexgen has been in contact with the Missouri Department of Transportation (MODOT) about adding a turn lane to Highway 32 at the proposed entrance to the mine site. This would allow trucks to turn off Highway 32 into the mine site without blocking the east and westbound lanes of traffic. At the time of the meeting, it had not been determined whether the proposal would be adopted, or who would pay for the additional lanes.

The Land Reclamation Program has no regulations governing where an operator places the entrance to their quarry, other than they must have the rights to access the property where it is located. Road repairs would be the responsibility of the legal entity with authority over the road, in this case MODOT. Likewise, Land Reclamation Program has no authority over railroads, as those would also fall under MODOT. Railroads are privately owned, and 389.610(2) RSMO states that the railroad corporation:

'shall construct and maintain good and sufficient crossings where it crosses public roads, highways, streets or crosswalks now or hereafter to be opened.'

The determination of how the costs of maintenance of crossings are divided between the railroad and any interested public authority is made by the State Highways and Transportation Commission, as established in 389.610(6). The Federal Railroad Administration requires each railroad to have bridge safety maintenance programs to prevent deterioration of railroad bridges.

Subject #6: Other Concerns

Comments: How does this affect wildlife tourism that comes to the area for camping, hiking, hunting, and fishing?

Tourism is a large industry in this area. Many local residents depend on these tourist dollars and also love to utilize the parks and natural areas. This mine is too close to those areas and also can contaminate waterways.

This proposed silica sand mine would also cause major harm to the surrounding community which benefits from tourists drawn to this prized natural corridor. Pollution will reduce visitors to Hawn, Hickory Canyons or Pickle Springs. This would harm local businesses and reduce tax revenue, affecting schools and social services.

The silica mining operation proposed by Nexgen Silica, LLC for a 249-acre site north of Highway 32 in Ste. Genevieve County threatens and has the potential to destroy the peaceful nature and visitor experience of Hawn State Park and its Natural Areas and Outstanding State Resource Waters by creating excess artificial light and noise during daytime blasting and the 24/7 sand mining, processing and truck or rail shipping operations.

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How will light pollution affect the area? How will noise pollution impact the lives of nearby residents? Many families in the area rely on agriculture as their livelihoods. What impacts will this have on their farms?

The nighttime light pollution will be horrible and life changing for locals near the mine.

Noise and light pollution from this mine would degrade the character of the public lands in this area, including wilderness character of Whispering Pines Wild Area at Hawn State Park.

I live less than 2 miles from the proposed mine site. I don't want my family or livestock to breathe silica dust, I don't want a large corporation to be able to use as much water as they want from the aquifer that fills our well, and I don't want noise and light pollution to ruin the view when we sit outside at night.

Hawn State Park is a Dark Sky sites, which could be lost from nightglow, and also the vibration and the noise. We work hard all week to go enjoy our natural resources. Going to these parks and hearing grinding and truck noise, it won't hurt my health, but it will ruin the experience.

Statements on lighting have been totally general. Have preconstruction levels been measured? I drive to a farm 1.4 miles from the Nexgen site to observe meteor showers, since there is essentially no artificial light pollution. This will almost certainly change if the plant is constructed. Light will likely extend beyond the site boundary and there will likely be light scatter? Who policies this from an environmental standpoint?

Quarrying is a noisy process. Nexgen have chosen a large impact crusher, which are the loudest of various crusher types on the market. Nexgen stated vegetation on the bund, in conjunction with the bund, assist in noise reduction. What actual noise levels are they predicting at their boundary? How long will it take to grow trees on the bund? What reduces noise in the interim? Who will police noise levels and what restrictions will apply?

My first concern is noise. I live south of Hawn State Park and I can hear the trains from 20 miles away. I can hear the trucks on Highway 32 4 miles away and my neighbors shooting guns three miles away. Now you're adding blasting and train and heavy truck traffic.

This area where Nexgen is proposing to set up is centered in the midst of nature areas. The idea of the sounds of bulldozers, blasting, back-up warnings, engines straining and gears shifting will eliminate peace and quiet for a great distance. Not only for parks and nature areas, but also all the neighbors who specifically moved to that area for peace and quiet. I hear this mine intends/plans to operate 24 hours a day. This is going to mess up/trash peace and quiet, much less sleeping with the windows open.

The noise, dust and light from the proximity of the industrial mining operations and associated train and truck traffic will significantly diminish visitor experience at Hickory Canyons Natural Area by negatively affecting the quiet enjoyment of wild nature visitors seek.

What's the baseline for noise pollution over the last 12 months? Has anything been measured?

Has there been a light pollution study done over the past 12 months?

What is the anticipated decibel levels produced from your factory and how do you expect that level to affect the surrounding residents?

This is a popular hunting area with a MDC public hunting site on the opposite side of Highway 32. The effects of noise and concussion from this mine cannot be anything but negative. Hawn State Park is less than 3.4 miles south and Hickory Canyons is even closer on the north side. It seems highly unlikely birds and animals will want to remain when potential noise and shock from blasting and crushing, together with general mining noise and light scatter continue,

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particularly if the mine works night shifts as well. What long-term base level noise recordings have been taken? Where are these records?

How much light is going to come from that plant? How much light is going to block our view of the stars?

Visitors and wildlife in and around Hawn State Park, Hickory Canyons and Horton Farms Conservation Areas could be negatively impacted from exposure to noise and light pollution that often comes from mining.

This proposed 50-year mining operation would cause noise, plus water and light pollution in the surrounding areas and parks.

The pollution of our beautiful white sand beaches along the creek along with the sand bars would be a shame, especially since we should not have sand beaches in Missouri. I am putting Nexgen Silica on notice, if our home, creek, ponds, drinking water from our well and steel storage containers are impacted by the blasting, we will seek compensation and clean-up for the impact on this unique, beautiful, spring-fed oasis that is our farm.

Many young families built their forever homes within a half-mile of the site. Most of them have young children they are concerned for.

Does R&K Excavating have any ties to Nexgen Silica being it is owned by the same guy? How much will they be sending to schools? Will they be paying the difference in my property value, pre-start-up versus post-start-up? Will any money made by Nexgen Silica be “donated” to any of Roger Faulkner’s churches? If so, what percent?

This mine would drastically affect our ability to enjoy our properties, decrease our property values, and destroy the quiet community in which we live.

This will immediately decrease property value and quality of life of surrounding residences, taking money away from local towns and schools as tax revenue decreases.

I am extremely concerned about the negative effects this type of industry can have on the surrounding residents. Air, water, wildlife, natural park systems and lastly, our property values. Our homes, that we have worked so hard for, could lose substantial value just by being located near potentially dangerous mine.

Have you got other mines around the country?

Are you guys going to be working 24/7? Weekends, too?

So it’s going to be 7 days a week, one way or another, 24 hours a day?

How do you pick your business partners? Do you do background checks on people you do business with, like maybe a \$1.5 million bankruptcy? Who will clean up the mess? You’re gonna file bankruptcy and leave. Who is going to fix our property, put our deer back, clean up our water? When my cattle get stressed and die, that’s our livelihood and food being impacted.

R&K has shown in the past their failure to abide by the regulations. Please refer to the project abandoned at the I-55 and Highway 61 intersection. The project was scrapped, reportedly due to some type of failure to follow requirements and resulting fines. It remains an eyesore to this day, and R&K defaulted on a hefty loan associated with it. This is something that should be looked into by the DNR. If they ignored regulations before, they will again.

Mr. Faulkner has a track record of attempting to default on debts, using litigation in an attempt to run up legal fees for the plaintiffs, as evidenced from public records on Casenet. When it takes a local company nine years to collect a default judgment of over \$226,000 from R&K Excavation, owned by Faulkner, it’s clear Faulkner’s interests are for himself only.

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Nexgen and Faulkner should not be permitted to operate in business in the county, especially given Faulkner's lengthy record with the courts, in my opinion.

What's the revenue expected to come out of this mine?

From my research, the silica sand business seems to be up and down with supply and demand. An article from 2019 on a company that started bankruptcy due to low demand for sand discusses Wisconsin mines filing for bankruptcy and closing several mines. It raises the question of if there is enough money for reclamation and restoration, and notes surety bonds are sometimes backed by local companies that are subsidiaries of large, nationwide frac sand companies. Is that how Missouri works, too? Sounds to me if Nexgen Silica goes belly up or closes due to low demand, we are screwed. How does this protect our water, land and air?

If this mine is approved, when is the proposed start date? If approved, how many days from approval will the mine begin? What are the various phases in detail?

I'm opposed to mining silica in Ste. Genevieve or anywhere in Missouri. This silica, or frac sand, is to be used in fracking. Fracking has been devastating environmentally in communities where it is conducted, and is also a contributor to climate change through everything from direct methane leaks at extraction to the emissions from burning fossil gas as a fuel source.

This project likely supports fossil fuel use as silica sand is sold to oil and gas companies who use it to prop open cracks made in the fracking process. At a time when it is critical we collectively shift away from fossil fuels, it is completely irresponsible to begin a 50-year projects that bolsters the fossil fuel industry.

The very nature of silica mining should make it anathema. Nothing that promotes or abets fracking is good for Missouri or good for the planet. Aside from the degradation of land and aquifers caused by fracking, approving this mining operation flies in the face of our state and our nation's need to turn away from fossil fuels.

Many local small farmers and landowners oppose the move as it could destroy their way of life.

As a homeowner in Ste. Genevieve County and concerned citizen of Missouri, I am opposed to the silica mine proposal for our county. Public health, safety and the beauty of nearby Hawn State Park will be severely impacted by the silica mining operation.

You say you're gonna go above and beyond, protect the air and the water, but thing has been in the making how many years and you've kept it a secret? What makes us think you're gonna go above and beyond when you haven't so far? You've only done what DNR requires, that's not above and beyond.

How long has Nexgen Silica been in business? You filed for a business license in January of this year?

Has Nexgen ever paid property damages to landowners? Has Nexgen ever settled a dispute with landowners?

I live in one of the 6 houses next to your site that you didn't bother to include on your map, which doesn't show a lot of respect for me or my neighbors.

Are you doing this to make Ste. Genevieve better, or doing it to pad your pockets?

Will the slides from the presentations be sent to everyone here?

Response: Resolution of damages incurred on adjoining properties as a result of mining activity would be a civil matter, and settled between the landowner of the affected property, and the parties involved. The Land Reclamation Program or other regulatory body may impose fines on the operator, depending on the nature of the problem, but they

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would not be responsible for assessing or paying damages to the affected parties. Likewise, injuries accrued as a result of mining activity would be settled between the injured party or their families, and the mining company.

No one has the right to cause devaluation of someone else's property without proper reimbursement or settlement for those damages. This is based on laws governing property rights, not laws governing mining. While there are no specific requirements in the regulations on setbacks from property lines, an operator must still take steps to ensure their excavation does not affect adjacent properties, lest they be liable for damages.

There have been several studies on the effects of quarries on surrounding property values. The most commonly cited, from 2006 by a Professor Hite¹, found that properties within 2 miles of a quarry in Delaware, Ohio did sell for less than those 5 miles or farther away. These results have been extrapolated to several other locations around the country where quarries were proposed.

However, a study done in 2018 by Drs. Ford and Seals², based on the same quarry in Delaware, Ohio, looked at the property values from 1998 to 2007. They found that property values, based on sales prices, declined as one moved farther from the quarry. Similar studies performed near quarries in Tennessee, Alabama, and California produced by the same authors revealed variable results, especially when accounting for the value of the property prior to the opening of the quarry. In some cases, property values suffered declines closer to the quarry. In other places, property values rose.

Drs. Ford and Seals concluded there were many variables that go into the increase or decrease in value of a particular property, and it is extremely difficult to attribute the difference, good or ill, strictly to the presence or absence of a quarry nearby.

Nexgen has not tested light or noise levels on the proposed site prior to their mining. Nexgen acknowledged that if the mine operated at night there would be a glow. They planned to install enough lights for safety, but use fixtures and other mitigation techniques that would minimize the effect to the surrounding neighborhood. Nexgen did not estimate the decibel levels for the surrounding properties if the mine was operating, but stated they plan to build a 30-foot berm around the property to help contain noise.

The department has no regulations or law related to noise or light pollution. These do not fall within the environmental issues that the Land Reclamation Program Director may consider when deciding whether to issue a permit or not.

Nexgen stated that it was possible they would operate 24 hours a day, 7 days a week if the permit was granted. The Land Reclamation Act does not restrict hours of operation for a mine site.

If the Land Reclamation Program Director chooses to issue the permit, Nexgen would, under the Land Reclamation Act, be permitted to begin mining immediately. This permit would be valid even during an appeals process, unless or until the decision was made by the Missouri Mining Commission to overturn that decision and revoke the permit.

However, if Nexgen did not have the necessary permits from the Water Protection Program, they could not begin removing any overburden, which would be a necessary step for mining. Likewise, without a permit from the Air Pollution Control Program, Nexgen would not be able to process any sandstone. If the health ordinance imposed by both the Ste. Genevieve County Commission and Ste. Genevieve County Public Health Board is still in effect, Nexgen would be restricted to mining only on places within the permit boundary which did not conflict with that ordinance.

The Land Reclamation Act does not dictate what a permit-holder may sell their mineral commodity for. It is concerned with making certain land affected by mining is reclaimed to some usable state once mining is completed. Likewise, while Land Reclamation Program would prefer businesses that are issued permits not fail or go bankrupt, as with any industry, success cannot be guaranteed. That is why an applicant must provide financial assurance before any permit can be issued, so there are funds available to complete reclamation in the event the company cannot.

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Nexgen has not had a permit with the Land Reclamation Program previously, and has had no mine sites. The Articles of Organization sent by Nexgen to Land Reclamation Program were dated January 13, 2022.

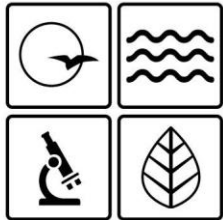
Closing

There are about 700 mine sites in Missouri. The department's Land Reclamation Program conducts inspections at industrial mineral mine sites about once every two years, unless contacted by the operator, or if a complaint is received. If anyone has a concern with environmental aspects of any mining operators, they may contact the department's Land Reclamation Program by telephone at 573-751-4041.

The director of the Land Reclamation Program has six (6) weeks from the date of this public meeting to investigate the application and make a decision to issue or deny the permit. Public comments will be considered when making this decision. Any interested party whose health, safety, or livelihood will be unduly impaired by the decision will have an opportunity to appeal the decision to the Administrative Hearing Commission (AHC). If the director denies this permit, Nexgen can appeal the decision. If the director issues the permit, affected parties can appeal the decision. All appeals must be filed by petition within thirty (30) days after the director's decision as provided by 621.250.3 RSMo. All appeals must be filed by petition and sent to this address: Administration Hearing Commission, PO Box 1557, Jefferson City, MO 65102.

¹ Hite, D. (2006). Summary of Analysis: Impact of an Operational Gravel Pit on House Values: Delaware County, Ohio.

² Ford, G., & Seals, R. (2018). Quarry Operations and Property Values: Revisiting Old and Investigating New Empirical Evidence. *Phoenix Center Policy Paper Series*, 53.



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Michael L. Parson
Governor

Dru Buntin
Director

MEMORANDUM

DATE: June 28, 2022

TO: Larry Lehman, Land Reclamation Program Director

FROM: Sherri Stoner, RG, Environmental Geology Section Manager
Geological Survey Program
Scott Kaden, RG, Groundwater Section Manager
Water Resources Center

RE: Nexgen Silica, LLC

Multiple citizens have raised concerns over the proposed Nexgen Silica, LLC (Nexgen) quarry site regarding the site's impact to area water resources. These concerns were about the amount of water Nexgen would be removing from the aquifer, the impact to the well water quality close to the proposed site, the availability of hydrological testing on the local streams, and concerns about water pollution. Water pollution and water quality concerns are currently being assessed by the pending water permit for this site.

Water Resources Law

Missouri water resources generally operate under the premise of riparian rights. Simply put, this means anyone can produce any "reasonable" amount of water for any purpose. There are no set limits or restrictions, and there is no permit required for water withdrawal. There is not a specific "statute" or RSMo to cite for this but rather a series of court cases that provide some basis for interpretation (see the "Water Rights" section on page 27 of WR-51—*A Summary of Missouri Water Laws*¹). If someone is adversely affected by another's water usage, it is a civil matter, not a regulatory matter. An affected individual would ask for the court's decision of what is reasonable versus unreasonable. The Department does not have the authority to enforce these civil matters.

Though a permit is not required to withdraw water in Missouri, there is a requirement (RSMo 256.400 – 256.433) for "major water users" to file an official registration with the Department. A "major water user" is defined as "any person, firm, corporation or the state of Missouri, its

¹ This source can be reviewed online at [https://share.mo.gov/nr/mgs/MGSDData/Books/Water%20Resources/A%20Summary%20of%20Missouri%20Water%20Law%20\(Missouri%20State%20Water%20Plan%20Series%20Volume%20VII\)/WR51.pdf](https://share.mo.gov/nr/mgs/MGSDData/Books/Water%20Resources/A%20Summary%20of%20Missouri%20Water%20Law%20(Missouri%20State%20Water%20Plan%20Series%20Volume%20VII)/WR51.pdf) or by contacting the Missouri Department of Natural Resources at 573-368-2100 or by mail at 111 Fairgrounds Rd. Rolla, MO 65401 for a copy.



agencies or corporations and any other political subdivision of this state, their agencies or corporations, with a water source and equipment necessary to withdraw or divert one hundred thousand gallons or more per day from any stream, river, lake, well, spring or other water source.” The registration document must include amount in gallons of water withdrawn or diverted on an average day of operation; it must also include the amount in gallons withdrawn or diverted during the preceding year. The stated purpose of developing this information is, “to insure the development of information required for the analysis of certain future water resource management needs. It is intended to provide an important part of the information required in the technical assessment of current and future requirements for the regulation of water use or consumption . . .” The statute does not otherwise regulate or restrict withdrawal or diversion of water.

If Nexgen qualifies as a “major water user,” they would be required to provide the above-mentioned information to the Department.

Geology and Hydrology

The stratigraphy, or rock layers, at the proposed site consists of Precambrian-age igneous rocks that are overlain by Cambrian-age Lamotte Sandstone. The Precambrian underlies the entire area and is exposed approximately 1.5 miles south of the site. The Lamotte Sandstone is the geologic unit at the surface of the proposed site and most of the surrounding area.

The St. Francois Aquifer provides groundwater in the proposed mine area. The Lamotte Sandstone is the lowest unit in the St. Francois Aquifer, which provides a significant amount of groundwater in the area. Groundwater moves through the Lamotte Sandstone between the sand grains as well as along fractured zones. Nearly all of the known existing domestic wells near the proposed site produce water from the Lamotte Sandstone.

A domestic water well on site is reported to be 245 feet deep and did not encounter the base of the Lamotte Sandstone. A review of other well records and well logs indicate that the Lamotte Sandstone thins to the south of the site and is absent in parts of Hawn State Park, where Precambrian igneous rocks crop out, and thickens to the north and east. However, local variation in thickness is possible and unpredictable given that underlying and impermeable Precambrian knobs or ridges are known to protrude up into the Lamotte Sandstone. Overall, groundwater movement is expected to be northeast. Potential groundwater drawdown impacts and aquifer yields cannot be calculated with any certainty at the proposed site due to lack of data.

Surface water from the site flows northeast into an unnamed tributary and eventually into Establishment Creek. Any potential discharge into surface water from the site would be regulated under authority administered by the Department’s Water Protection Program.