Special Use Permit Application

Sangchris Energy Center

Christian County, Illinois

The Christian County Zoning Board of Appeals
101 South Main Street
Taylorville, Illinois 62568

Submission Date: June 27, 2023

Applicant & Owner Information
Sangchris Energy Center, LLC
C/O East Point Energy, LLC
200 Garrett Street, Suite J
Charlottesville, VA 22902

East Point Energy Point of Contact
Will Frost
Project Developer
(434) 270-8376
wfrost@eastpointenergy.com

June 27, 2023

Zoning Administrator Tarr,

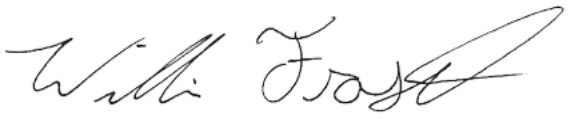
This document contains the Sangchris Energy Center LLC's application for a special use permit for the Sangchris Energy Center. The application is submitted in accordance with Section 1-11-21 of the Christian County Zoning Ordinance and the recently implemented special use permit submission checklist.

Deemed similar to a wind or solar energy facility, the Sangchris Energy Center LLC submits an application for the permitting approval of a standalone grid-connected battery energy storage system. All pertinent information regarding the project and the requested permit approval is included within this application.

East Point Energy and the Sangchris Energy Center LLC look forward to presenting our application to the Christian County Board and Zoning Board of Appeals and are excited to answer any questions regarding the proposed development.

Do not hesitate to reach out at any point during the permitting proceedings.

Very Respectfully,



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Company Background

East Point Energy is a Charlottesville, VA based development firm focused on the origination, construction, and operation of utility scale energy storage systems. Our team is developing a risk-adjusted pipeline of 3.4GW of energy storage capacity across 14 states. We are technology and contractor agnostic, allowing us to find the best solution for each project. The firm's executive team founded East Point in 2018, bringing decades of combined energy development experience and over 1.8 gigawatts of solar, wind, and energy storage projects currently in operation across the United States. A detailed statement of qualifications for East Point and the individuals involved in this project can be found in Appendix E.

East Point Energy is a wholly owned subsidiary of Equinor, a broad international energy company committed to long-term value creation in a low-carbon future. An international energy company headquartered in Norway with 22,000 employees in over 30 countries, Equinor's renewable business will be one of the fastest growing segments in the company in the coming years. By 2030, Equinor will devote at least 50% of its capital to renewable and low-carbon projects on a corporate level. East Point is transitioning our company into a market-leading independent power producer with the backing of the financial strength and renewable energy expertise of Equinor.

Introduction to Battery Energy Storage

Batteries are one of the most ubiquitous technologies in society today. We use them to power our electronic devices from our phones, computers, and tablets and now to our vehicles and even toothbrushes. The same technology that powers these devices is now used to provide back-up power to homes and businesses, limit power outages, make our electrical grid more reliable, and to enable our communities to run on clean, affordable energy.

Just like charging your phone while you sleep, energy storage systems efficiently and conveniently capture electricity so that it can be used when it's needed most. We have seen a recent increase in the deployment of large-scale battery energy storage systems to ensure the continuation of reliable and cheap energy delivery as we change the nature of how we generate electricity. Our electrical grid was built on the energy storage capacity of reservoirs and now needs the support of more flexible energy storage technologies to ensure the stability and independence of our Nation's electrical grid and that energy markets can reflect the true cost of cheap renewable generation by extending the window of time in which we can utilize those resources.

East Point Energy executives, from their background in wind and solar development, saw the imminent need for these large-scale flexible storage systems. As we now see Illinois legislators viewing energy storage as a solution to rising energy prices across the State and Equinor investing in the East Point business plan, we know that their intuition was right. Energy storage is a crucial next step to our transition to a clean, affordable energy future.

Project Details

Introduction

East Point Energy is excited to present the Christian County Board and Zoning Board of Appeals with a Special Use Permit application for the Sangchris Energy Center, LLC. The project is a proposed standalone battery energy storage system (BESS) that will connect to an existing transmission line approximately 3 miles due south of the retiring Kincaid Power Station. The project site is situated approximately 800ft east of County Rd 150E and 1,300ft south of County Rd 1400N. Once operational, the system will charge from and discharge to the electrical transmission system, providing a variety of benefits. These include, but are not limited to, realizing the full value and energy cost savings of solar and wind farms built in and around Christian County, continuing to utilize the existing electrical infrastructure surrounding the Kincaid Power Station, replace tax revenue lost upon the plant's retirement, and help supplement continued first-class farming in the surrounding area.

Christian County was selected for this project primarily because of the retiring Kincaid Power Station. By locating energy storage near this retiring plant, we can help electrical operators continue utilizing the plant's infrastructure by replacing the lost electrical capacity with a dispatchable resource. The Coal to Solar and Energy Storage Initiative that Vistra, the owner of the power station, is utilizing to build 20MW of solar with 2MW of storage at the retiring plant was passed with this logic as one of the primary motives. Secondary reasons for our interest in the County include the surrounding constructed renewables in counties to the north, the proposed and approved systems in all other directions, and the maturity of Christian County's permitting process and depth of the Boards experience.

Deemed similar to a wind or solar energy facility, the Sangchris Energy Center, LLC requires the approval of a special use permit. It is important to note that while deemed similar to, the overall impact of a BESS is significantly smaller than that of a wind or solar generation project. This document provides information specific to the project to address the factors listed in section 1-11-23 of the Christian County Zoning Ordinance and the Special Use Permit Submission Checklist that the Zoning Board of Appeals will weigh in their recommendation to the County Board.

Development Schedule

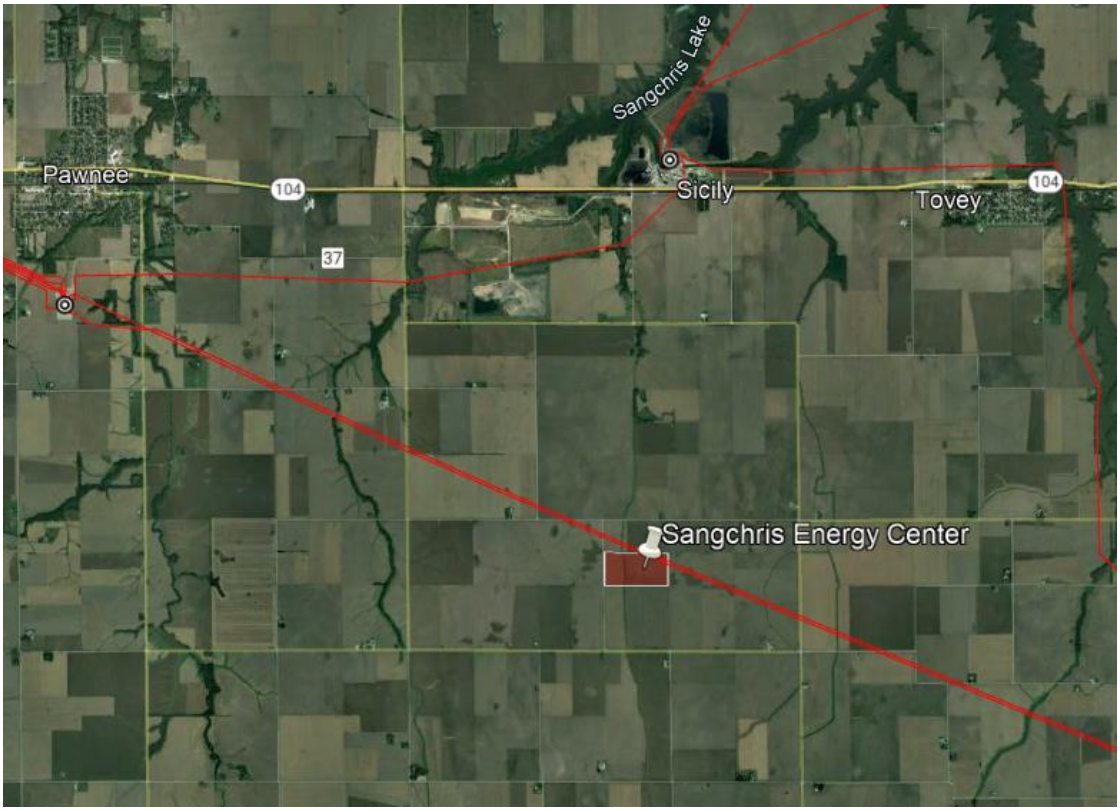
Development Milestone	Status & Estimated Completion Date
Special Use Permit (SUP)	Q3/Q4 2023
Interconnection Request	Q4 2023
Building Permit	Est. Q3/Q4 2025
SUP Extension/Re-Application	Est. Q3/Q4 2024
Interconnection Agreement	Est. Q4 2025/Q1 2026
SUP Re-Application	Est. Q3/Q4 2025
Development Complete	Est. Q4 2025/Q1 2026
COD	Est. Q2 2027

Property Information

Located just over 9 miles west of Taylorville and 1.5 miles east of the county boarder, the project will occupy approximately 45 acres of farmland with access to County Rd 150 East. Information on the properties can be found below in Table 1. Given our extensive diligence of the property over the last 12 months, we anticipate minimal environmental impacts and soil grading to be needed and will be taking careful consideration of any existing drainage tile that may be present on and near the project site area. There is no expectation of expanding beyond the current site area.

Table 1

Current Property Owner	DDS Farms Inc. & David D Skinner
Property Address	County Road 150 E, Pawnee, IL 62558
Property Coordinates	39°32'53.42"N 89°29'54.70"W
Parcel IDs (Project Area)	15-11-26-200-001-00 & 15-11-26-200-003-00
Parcel ID (Access Easement)	15-11-26-200-002-00
Property Zoning	Agricultural
Property Acreage	80 acres
Project Acreage	**Approximately 45 acres**
Contract Structure	Lease

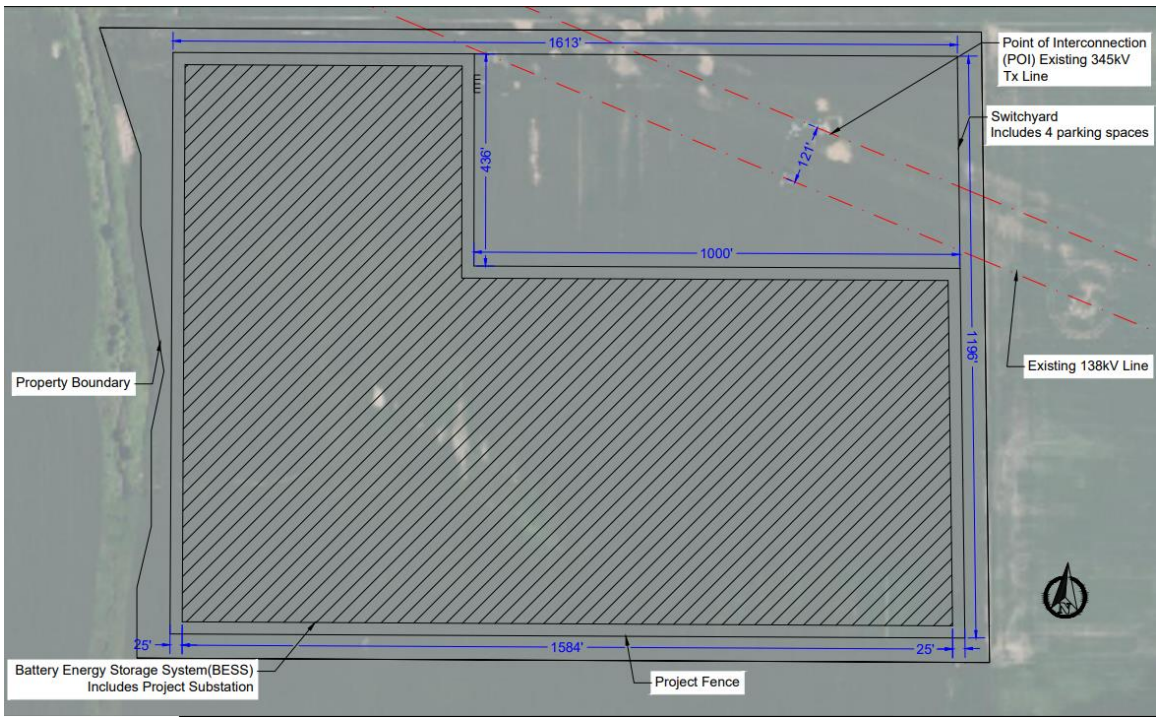


Preliminary Site Plans

The preliminary site plans for the Sangchris Energy Center can be seen below. The site consists of two major components; first is the storage system seen in the dashed portion of the site plan and second is the interconnecting switchyard seen as a blank box in the northeast corner of the site plan. The storage system will include the selected battery technology and enclosure setup, parking spaces, and a project level substation that will step up the voltage of the electricity to transmission levels before reaching the switchyard. The switchyard will look very similar to existing transmission substations in the area and will be the point of interconnection to the 345kV transmission line on the northern side of the project area. Our access to the site will be off County Rd 150 E or County Rd 1300 N with our preference for County Rd 150 E to minimize the acreage required for the access road.

East Point Energy is technology agnostic and will select the best fit technology for each project. This means that we do not select a specific battery technology or supplier until we are prepared to execute construction contracts. The current state of the energy storage industry points to lithium-ion being the most likely type of battery chemistry that will be utilized, short of significant steps towards the commercialization of a different technology.

The site plan you see below covers approximately 45 acres and accounts for all agricultural district regulations as found in the Christian County zoning ordinance. These include 50-foot height limits and 50-foot setbacks from property boundaries.



Bordering Properties

Battery energy storage systems are generally considered residentially friendly in relation to most other types of electrical infrastructure. Any potential impacts to neighboring properties can be largely mitigated through our site selection process and through considerations in our site design. The likely impact areas are as follows:

Noise:
In consultation with a sound specialist, it has been determined that this project will have no noise impact on nearby class A properties based on the Illinois Pollution Control Board (IPCB) standards.

Storage systems emit noise through their inverters, ventilation systems, and transformers. These components will emit noise only when the system is in operation and will generally be at a level somewhere between 70-80 decibels (dB) approximately 5 feet from its source, with 70 dB being equivalent to the volume of a vacuum cleaner. The property line of the nearest Class A property, as defined by the IPCB, is approximately 1,550 feet from the project fence line. Based on the general principals of noise dissipation (5-6 dB decrease every doubling of distance in vacuum conditions across flat land), we have determined that noise emitted from the facility will have blended into the ambient sounds of the rural setting before it reaches the nearest Class A property. The requirements established by the IPCB were referenced to make this determination. Additionally, operational sound is anticipated to be further reduced by items like the ground type, crops, and terrain.

Odor & Gas:
During the normal operations of a battery energy storage system, there is no emission of odors or gases. This is proven by the products we use daily (phones and computers, for example) that similarly do not emit odors or gases.

Visuals:
An 8-foot security fence is typically adequate for masking any visual impacts, but East Point Energy is interested in working with the County to ensure visual impacts are adequately managed.

Because Li-ion battery systems are aggregations of many smaller units, there is flexibility in how the system is ultimately assembled. Most commercial battery enclosures typically do not exceed the height of an average single-story building (approx. 14ft). An 8-foot security fence is standard in our design and in most cases will provide adequate visual screening for drivers and pedestrians.

The infrastructure utilized to plug the system into the transmission line, including the project level substation and the switchyard, will be of the same height and profile of a typical electrical substation and will not exceed the height of the transmission lines the system connects to.

Environmental:
During normal operations, the probably of environmental contamination is very low because of the several layers of protection between any active chemicals and the exterior environment and the specific designs of battery enclosure to prevent leakage. Reference Appendix C for a description of these designs.

East Point intends to consult with the Christian County Farm Bureau and the USDAs Farm Service Agency's Conservation Reserve Program to determine plants to be maintained on vacant ground within the project site area to support the surrounding agricultural efforts.

Legend:
Red – Project Parcels
Yellow – Parcels owned by project parcel landowner
Blue – Adjacent properties of different owners
Red Star – Closest Class A Lots

Bordering Property Landowners:

Mailing address included in Appendix A

1. Frisina Trust
2. James Frisina Jr
3. Michael & Sheila Boarman
4. Boarman Brothers
5. Patrick Wolf
6. Bloome Farms Inc

Closest Class A Land (Residential):

Mailing address included in Appendix A

Distances from project boundary to nearest property line

1. Christopher Howard – 1,550 ft from project
2. Merle Williams – 2,500 ft from project
3. Jeffrey & Deana Puckett – 3,000+ ft from project
4. John & Debra Blanton – 3,000+ ft from project

Interconnection

The Sangchris Energy Center will be submitted to the Midcontinent Independent System Operator's (MISO) interconnection study as a 300MW standalone BESS. We plan to enter the 2023 MISO interconnection queue cluster in September of this year. If submitted to the 2023 queue cluster we would anticipate the signing of an interconnection agreement sometime in late-2025/early-2026.

East Point Energy will not begin construction until we have signed an interconnection agreement with MISO. Because of the anticipated timeline to a signed interconnection agreement, our preference would be for the duration of an approved permit to be tied to the MISO interconnection study but we understand this is unlikely to be granted. In lieu of this, it is very likely that we will need to request a second permit approval prior to our application for a building permit. The second approval is included in the presented development schedule on page 3.

Environmental Impact

As part of our diligence efforts, we conducted an analysis of several potential areas of concern for environmental impacts. These can be found in Appendix F and include:

- Wildlife, threatened, and endangered species or habitat
- Historic preservation
- Identification of
    - Forest stands or trees of a uniform size and species
    - Specimen trees of varying sizes and species, particularly free standing or open-grown or field grown trees
    - Distinctive tree lines or forest edges
- Cultural resources
- Wetlands

The key takeaways of these studies are highlighted below. Studies that are not referenced did not identify any concerns.

- Project construction 'may affect' the endangered Northern Long-eared Bat (NLEB)
    - After consulting with USFWS, the Sangchris Energy Center will have a "no affect" determination for the NLEB. The initial "may affect" determination assumed tree clearing activities would need to take place. No trees will need to be cleared for this project.
- No wetlands were identified on the property. However, a perennial stream will likely be crossed for access to the project site.
    - A wetland delineation was conducted on the stream to map its full extent
    - A stream crossing permit will be needed prior to construction and will be part of the scope of the firm we select to manage the construction

Construction Impacts

Construction activities will adhere to all local, state, and federal requirements for development on agricultural land. East Point Energy intends to consult with the Christian County Farm Bureau (CCFB) and Soil & Water Conservation District (CCSWCD) on an ongoing basis to ensure our construction plans account for county and state concerns and

requirements. Many of these requirements are reflected in the Agricultural Impact Mitigation Agreements (AIMA) that are required for the permitting of wind and solar energy generation technologies. Template AIMAs for both technologies have been referenced for the development of this application. Significant portions of those agreements will not apply to the construction of energy storage, including this project, but there are several I would like to reference to provide additional security to the county regarding the minimal impact of our construction activities to the property itself and those around it.

- East Point Energy will work in good faith to limit the impact to agricultural activities during construction, operation, and decommissioning
- The project civil design will attempt to balance cut and fill requirements to reduce the import and export of soils
    - Export may be required if soils are unsuitable to utilize in backfill/compaction and are not allowed to be spread on site
    - Import may be required if in-situ soil conditions do not meet structural design requirements
- East Point Energy will consult with the CCSWCD regarding any necessary installations of new drainage and stormwater management systems to ensure construction activities do not impact the drainage characteristics of the surrounding properties

Decommissioning

East Point Energy intends to fully decommission the project at the end of its operational life. Decommissioning will be conducted following the items in Appendix D.

Operation & Safety

System Monitoring & Controls:

Once operational, staff will be on-site frequently to conduct visual checks, general maintenance work, and project site landscaping needs. System performance and health will be monitored by automated systems and remote staff on a 24/7/365 basis. The systems and staff will have complete operational control to ensure the BESS functions properly and to identify and isolate any issues that may arise. In the event a failure requires the system to be isolated from its power source, an on-site uninterruptible power supply will ensure the safety systems remain operational throughout the event. Our anticipated adherence to the National Fire Protection Association's (NFPA) code 855 ensures that these systems remain operational throughout the lifetime of the project. Please reference Appendix C for a description of the various failure prevention and impact mitigation measures that these systems employ to go above and beyond the requirements of the NFPA 855 code. This will also highlight the robustness of safety designs that minimize the risk of failure and ensure impacts are heavily mitigated if failure does occur.

Fire Safety:

As depicted in Appendix C, the industry has taken significant steps in implementing measures to significantly reduce the likelihood and potential impacts of a thermal runaway event, the most likely impetus for a system fire. In the unlikely event of thermal runaway, where a lithium-ion cell enters into a state of self-heating resulting in gas/smoke venting and potentially fire, there would be some environmental and safety concerns. However, a study conducted by Consolidated Edison and the New York State Energy Research and

Development Authority illustrated that a Li-ion battery fire can be treated with the same precautions as something like a sofa, mattress, or office fire in terms of toxicity.

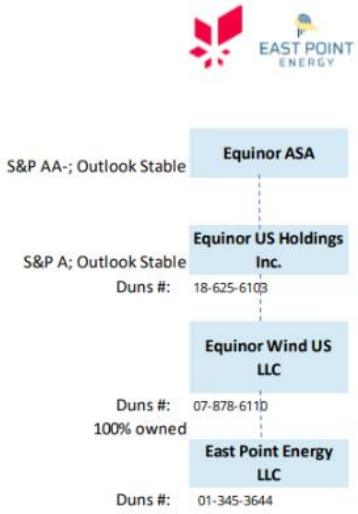
Emergency Response Plan: An emergency response plan will be developed in close coordination with Christian County and the Midland and Pawnee fire departments. The project falls within the Midland fire district but is close to its border with the Pawnee fire district making it is vital that both are involved in the plan's development.

Economics & Tax

Financial Security

East Point Energy is part of Equinor's renewable portfolio of companies. Equinor ASA is the ultimate parent company of Equinor and is 67% owned by the Government of Norway which enjoys a AAA rating, one of the few countries the enjoys the highest rating S&P offers. As of Dec 31, 2022, Equinor ASA maintained a year-to-date net operating income of $78.8 billion and a net income of $28.7 billion. The company had $158 billion in assets and a net worth of $53.9 billion.

Equinor US Holdings is the US holding company. Aside from maintaining a high investment grade rating by S&P, the company had yearend 2021 net income of $2 billion, $17 billion in total assets, and a net worth of $3.7 billion.



Project Revenue Structure

The Sangchris Energy Center will buy and sell energy through the MISO wholesale electricity markets. You can read an explanation of wholesale electricity and how East Point Energy will operate the system within the MISO markets in Appendix B. The project may also contract with a 3rd party (e.g. utility) for a fixed revenue stream in exchange for the provision of needed electric services.

Tax Benefits Offered to County

Personal Property

The state of Illinois has not issued guidance for the taxation of energy storage systems. East Point Energy anticipates that the state will issue guidance similar to that provided for the taxation of solar and wind generation facilities in the near future. If the County Board would like to ensure the revenue gap caused by a lack of guidance on personal property tax does not occur at any point during the project's life, East Point Energy is willing to discuss a payment in addition to taxes to be made until the state has provided guidance for taxing BESS.

Real Property

We can speak more concretely to how we expect this project to impact the real property tax. Our expectations for that change after conversation with the County assessor can be seen in the table below.

	Current Tax (2022 Assessed)	Future Tax
Real Property Assessment	$33,693	$110,000-$120,000
Tax Paid	$2,175	$7,100-$7,800

Tax Incentives Available to Project

The Inflation Reduction Act (IRA), signed into law in August 2022, extended an Investment Tax Credit (ITC) to energy storage systems deployed after December 31st, 2022. The base credit offered to storage systems is 6% which can increase to 30% if prevailing wage and apprenticeship requirements are met. There are additional bonuses that can be stacked on the base ITC. As of today, Christian County is a designated Energy Community. If the designation holds through to the start of construction and the project meets the aforementioned labor requirements, the project would be able to secure a 10% ITC bonus. The projects proximity to the retiring Kincaid Power Station will likely allow it to access yet another 10% ITC bonus.

While this may seem like a staggering tax incentive it is worth noting that the base 30% credit is largely to counteract the increases to the cost of BESS systems caused by supply chain constraints and the increased demand for BESS and lithium-ion batteries (namely electric vehicles) more broadly following the passage of the IRA. The community bonuses are to incentivize developers to build systems in communities more directly impacted by the energy transition and that would more greatly benefit from the tax revenue and employment support these projects will provide.

Ongoing Permitting and Consultations

Permitting Matrix

Permitting activities will be ongoing up to the project's construction. The table below contains a summary of those permitting activities that must be completed prior to the projects construction.

Permit/Clearance	Regulatory Agency	Description
Section 106 Clearance	IL Department of Natural Resources	Cultural and historic impact review
Section 404 of the Clean Water Act & Section 10 of the Rivers and Harbors Act	US Army Corps of Engineers	Required for any dredging, filling, or draining of surface waters – to be acquired if necessary
National Pollutant Discharge Elimination System – Construction Stormwater	IL EPA	Required for construction activities resulting in land disturbances of 1 acre or more – requires stormwater pollution prevention plan
Building Permit	Christian County	Required to begin construction of the storage system

Consultations

As the likelihood of project construction increases, East Point Energy will have continued consultations with state and federal regulatory agencies to confirm impacts, or lack thereof, on the project parcels and those surrounding them. These will include:

Consultation	Regulatory Agency	Description
Endangered Species Act Section 7 Consultation	US Fish and Wildlife Service	Discussing and addressing potential impacts to federally listed threatened and endangered species and/or critical habitat
Section 401 Water Quality Certification	IL EPA	A meeting to confirm lack of lack of risk of discharge into waters of the US
Natural Historic Preservation Act	IL Department of Natural Resources	Consultation with the State Historic Preservation Office to confirm initial study findings of no impacts to historic and cultural resources

Conclusion

We thank the Christian County Zoning Board of Appeals and the Christian County Board for considering our application for approval of a special use permit. Our application is a product of months of development activities and conversations with County Officials and community members in which we have addressed the items required for an approved permit and gone above those requirements in several instances. This does not constitute the end of conversations as East Point Energy is willing to discuss and comply, as necessary, with further requests and/or requirements of the county.

Please reach out to Will Frost, the Project Developer, with any questions you have.

Very Respectfully,

Will Frost
Project Developer
(434) 270-8376
wfrost@eastpointenergy.com

Appendix A: Neighboring Property Mailing Addresses

Properties with Neighboring Property Lines

Frisina Trust
C/O Agrivest Inc
400 Chatham Rd STE 200
Springfield, IL 62704

James Frisina Jr
7528 Crooked Stick Dr
Diamondhead, MS 39525

Michael & Sheila Boarman
4515 Birmingham Dr
Pawnee, IL 62558

Boarman Brothers Land Holding LLC
C/O Michael E Boarman
5815 Boarman Rd
Pawnee, IL 62558

Patrick K Wolf Trust
345 E 750 North Rd
Morrisonville, IL 62546

Bloome Farms Inc
C/O Joseph A Bloome
308 E 1200 North Rd
Morrisonville, IL 62546

Residential Properties within 1.5 Miles

Christopher Howard
195 E 1400 North Rd
Pawnee, IL 62558

Merle Williams
171 E 1300 North Rd
Pawnee, IL 62558

Jeffrey & Deana Puckett
148 E 1300 North Rd
Pawnee, IL 62558

John & Debra Blanton
1293 N 200 East Rd
Pawnee, IL 62558

Michael W Megginson Trustee
2328 Tara Ln
Springfield, IL 62804

Carolyn Eggimann Trust
1496 N 175 East Rd
Pawnee, IL 62558

Brian Abshire
319 E 1400 North Rd
Pawnee, IL 62558

Appendix B: Wholesale Electricity Markets

What is Wholesale Electricity?
Electricity is sold in both wholesale and retail markets. You can think of the difference between these markets like the difference between shopping at Costco versus your local grocery store. The local grocery store sells items for single use while Costco packages up numerous single use items to be sold at once and at a cheaper, per-unit price. Wholesale Electricity is the packaging of numerous household electricity needs (retail electricity) into much larger packages of wholesale energy capacity. These packages are traded in wholesale electricity markets which are managed by regional independent system operators. For the state of Illinois, these markets are managed by the Midcontinent Independent System Operator (MISO) and span 15 states and the Canadian province, Manitoba.

Who can participate in Wholesale Electricity Markets?
Illinois is one of seventeen states with a deregulated energy market. This means that Illinois allows competition to occur for electricity's generation, transmission, and distribution. Ameren is the largest utility in the state but does not own generation resources which means a wholesale electricity market is necessary to supply Ameren with the electricity they are obligated to provide their customers.

The typical participants in a wholesale electricity market are electrical generators and the resellers of the electricity that generators are producing (your local utility). A utility is interested in providing electricity to its entire network of customers and it makes sense for them to purchase that electricity in bulk from the wholesale electricity market. It makes sense for the generator to sell their electricity to utilities through the wholesale market so they can have certainty in the purchase of the electricity they generate, and it reduces the number of entities they need to transact with.

How East Point Energy intends to operate the Sangchris Energy Center in the MISO wholesale electricity market.
Energy storage is a new technology for energy markets around the globe and they are having to adapt to their intended use and resulting benefits. Storage systems are unique in that they operate by both purchasing and selling electricity. They differ from your typical wholesale electricity reseller as an energy storage project will not sell electricity to the retail market but will instead sell the electricity back to the wholesale market. It is intended for the Sangchris Energy Center to operate in this way by purchasing electricity from the wholesale market when it would otherwise be wasted to then resell that electricity when it is needed. And through this mechanism, energy storage projects are able to offer wholesale electricity to the market at lower prices than other sources during peak demand. This lower cost in the wholesale market can translate to lower costs for electricity in the retail market.

Appendix C: System Safety Information

Utility-scale energy storage is a new application of a long-proven technology that will bring significant benefits to the rapidly changing landscape of electrical generation and delivery. That does not mean this new application is absent certain safety considerations, namely thermal runaway. Although an extremely low probability event, additional safety design features, in combination with operational and response plans, help to mitigate the risk of thermal runaway in the utility scale application of battery energy storage technologies.

The prioritization of safety in the design, construction, and operation of energy storage systems is paramount to East Point Energy and our parent Equinor. Battery energy storage industry groups have made exceptional strides in increasing the robustness of the various safety systems that can be utilized and the regulatory bodies and codes that they are held to. The items presented in this appendix represent the most common areas of employed prevention and mitigation measures. Ultimate designs for the project will be completed by a third-party engineering firm following completion of all remaining development efforts. Furthermore, the project's final design will be subject to approval from Christian County in regard to securing the necessary ministerial permits (e.g. building permit, electrical permit, SWPPP, etc.).

Lithium-ion battery failure modes are well understood, and while batteries do not spontaneously combust–- poor cell manufacturing quality, cell abuse, or mechanical failure can lead to a thermal runaway failure and potentially a cascading event. There are well defined stages to these battery failures, however, early intervention, passive protection, and/or active protection systems can mitigate and contain a failure.

Prevention Region

- Stage 1: Battery abuse leading to cell damage (ex: physical damage like puncture or crushing, overcharging, exposure to extreme heat, etc.).
- Stage 2: Off-gas event (which can be detected through active monitoring) which leads to continued heat release and building pressure if unchecked.

Containment / Mitigation Region (Cascading Thermal Runaway or Greater Failure)

- Stage 3: Smoke generation (which can be detected through active monitoring), indicating that catastrophic failure is imminent.
- Stage 4: Fire generation, dramatically increasing the likelihood of propagation to other cells.

Prevention Measures – Measures used to prevent cascading thermal runaway before it occurs or contain the failure event:

Equipment Safety Listing/ Full Scale Fire Testing

- Battery Energy Storage Systems are required to be listed to applicable UL safety standards (such as UL 9540). These standards cover safety testing of the battery and protective systems (UL1973 and UL1741), review of battery construction (UL1973 and UL9540), an engineering analysis of potential failure modes at two levels (FMEA for UL1973 and UL9540), and a review of the integration of the system with the inverter and other balance of system components (UL9540 and UL1741).
- Full-scale fire and failure testing is conducted on representative cells, modules, and Units to the UL 9540A test method. Utilizing the data obtained from the cell, module,

and unit level of the UL 9540A test method, the project can then be built per National Fire Protection Association (NFPA) 855 or the International Fire Code (IFC), which lays out a range of performance-based requirements, centered around a hazard mitigation assessment (HMA) which ensures that fire risk, ventilation, deflagration protection (per NFPA 68 or 69), spacing, and site layout meet acceptable safety levels.

Code / Safety Standard Adherence

- Adequate adherence to nationally and internationally recognized codes and standards is perhaps the strongest preventive tool at our disposal. We will work with Christian County to ensure that the appropriate codes are selected and adhered to.

BESS Maintenance & System Monitoring/Controls – 24/7/365 (Battery BMS and Monitoring)

- Systems are monitored by the Battery Management System (BMS) which actively collects and interprets cell data such as temperature, state of charge, and state of health. Information like the temperature history of battery cells, state of cell ventilation, presence and concentration of gases, systems deployed as prevention measures, and present electrical voltages is obtained from the BMS and relayed to the 24/7 monitoring facility.
- Cell temperature is regulated through sensors paired with remote controls capable of turning off cells with irregular temperature profiles or activating a thermal management system (described below), if necessary.
- Regular performance checks, system maintenance, etc.

Separation

- Battery units, within a metal enclosure, are separated by thermal barriers to prevent unnecessary interaction with other battery units within the same enclosure, preventing the spread of heat within the system.
- Adequate separation distances are validated by data obtained from full-scale fire test data (UL 9540A) to show that it is unlikely that a fire will propagate to other adjacent systems.

Thermal barriers adopted after a 2019 incident in Arizona – details below

Exhaust Ventilation

- Exhaust ventilation systems are incorporated to prevent the dangerous accumulation of gases. Proper ventilation is for the safety of first responders and property neighbors and works to prevent a serious incident from occurring.
- Exhaust ventilation is triggered by gas detection and designed to keep flammable off-gassing to below the Lower Flammability Limit (LFL).

Ventilation system adopted after the same 2019 Arizona incident – details below

Thermal Management Systems – Thermal Runaway Prevention

- Thermal management systems are common preventative measures used in battery systems. Upon detection of elevated temperatures within a battery cell, a thermal management system will be activated to prevent the cell from reaching a temperature that could cause the battery cells to ignite and lead to a thermal runaway incident.

Response and Mitigation – In the event a fire breaks out, these are measures taken to mitigate impacts and ensure the safety of local first responders:

System Monitoring – 24/7/365

- The early identification of the source of a problem is critical to the success of mitigation measures and alerting first responders if they are required on scene.
- Systems are monitored by the Battery Management System (BMS) which actively collects and interprets cell data such as temperature, state of charge, and state of health. Information like the temperature history of battery cells, state of cell ventilation, presence and concentration of gases, systems deployed as prevention measures, and present electrical voltages is obtained from the BMS and relayed to the 24/7 monitoring facility. This information can be relayed on site as important information for first responders to know upon arriving at a scene.

A 2021 incident in California showcased the value of system monitoring in response planning and action – details below

Fire Suppression

- Fire suppression comes in various forms from liquid to gaseous systems. Common solutions for fire suppression are (1) water or (2) fire suppressant chemicals. Each system has its purpose and will be activated accordingly by detection systems.
- Discussions with the local Fire Department prior to construction will provide an avenue for first responders to provide feedback and input on the fire suppression system.

Exhaust Ventilation

- Exhaust Ventilation continues to be important after the initiation of thermal runaway to ensure gases do not accumulate, mitigating the risk of an explosion. An exhaust ventilation system will activate upon detection of flammable gas to reduce the concentration within a system to below flammability limits, thus mitigating a potential explosion.
- Explosion protection systems are designed to meet National Fire Protection Association (NFPA) safety standards such NFPA 69.

A 2022 incident in California showcased the continued value of ventilation after cell ignition and a lack of impact to surrounding air quality – details below

Spacing

- Battery enclosures will be spaced apart to allow adequate access to all sides of the enclosure. This spacing also serves to mitigate the spread of a fire from one enclosure to another. The footprint of the project will have gravel so that there are no flammable materials or vegetation nearby.
- Enclosure spacing is validated by Full-scale fire test results (UL 9540A) which can show that a failure in an individual enclosure will not cascade to other enclosures on the premises.

First Responder Planning and Coordination

- Despite the prevention systems built into every utility-scale energy storage system, there is no way to completely mitigate the risk of thermal runaway. In the unlikely

event that an incident occurs it is paramount that plans have been developed for first responders to follow and that they are properly equipped and trained for any such response. Training is provided at no cost to Christian County.

- If additional needs are identified within Christian County to ensure an appropriate response to a thermal runaway event, East Point Energy is more than willing to discuss those needs in greater detail.
- A Subject Matter Expert (SME) will be available to consult with the Incident Commander to provide further guidance, including information relayed from the BMS and system state of health.

Past Incidents and Industry Developments

Arizona, 2019 – In April 2019, an Arizona battery system operated by the Arizona Public Service experienced a failure. It was an incident of cascading thermal runaway that led to an explosion and the injury of 4 firefighters. Initiated by a defected battery cell, the design of this system created an environment for cascading thermal runaway from cell-to-cell and the accumulation of flammable gases within the container. The fire suppression system was not adequately designed and was unsuccessful in preventing a fire from breaking out. Battery cells were unprotected from one another allowing a defect in one to transfer to the others. Additionally, a lack of ventilation of the enclosure created an explosive environment by letting flammable gases accumulate to high concentrations. Designed to allow for one person to be inside of the container, firefighters were forced to open it which introduced oxygen and an ignition source to the highly concentrated gases, leading to an explosion that injured 4 firefighters.

Significant advances have been made to ensure another event like this will not occur, many of which are highlighted in this document. Cell designs have been improved to prevent the defect that led to the failure in the first cell; thermal barriers are now installed between units to mitigate the spread of a thermal incident; ventilation systems are installed to prevent the accumulation of flammable gases; and containers are now designed to ensure no individual can enter the enclosure allowing firefighters to let the incident run its course under proper containment measures.

California, 2021 & 2022 – A portion of a container at the Moss Landing facility in California was damaged due to the premature activation of a heat suppression system. An off-gas detection device activated the suppression system after detecting trace amounts of gas in the container. Upon arriving at the scene, first responders were able to determine that the gas which activated the system did not come from a battery cell as system monitoring showed no abnormal changes to cell temperatures across the system. Therefor thermal runaway was not the immediate concern and mitigation plans could be appropriately adjusted.

A second incident occurred at the California Moss Landing facility in September 2022 where a single container caught fire. As a precautionary measure, a nearby highway was closed and residents were advised to remain indoors and to turn off home ventilation systems; both measures were lifted the next day. Air quality monitoring conducted around the site during and after the incident did not record dangerous concentrations of air contaminants at any time meaning the precautionary measures taken by the town were justified, but ultimately not necessary. The gases emitted during a failure incident are also found in plastic fires in greater ‘time-average’ quantities. Gaseous exposure risk of an equal level likely already exists

in the current environment around a development. A full analysis of this incident is in progress by the project owner.

The systems highlighted above were designed and operated by large utilities and government entities who spread resources across many different sectors of the electrical grid. At East Point Energy, energy storage is what we do, and safety is paramount to our success as a company and is an operational pillar for our parent company, Equinor. The Sangchris Energy Center is in some of the most capable hands in the industry.

Appendix D: Decommissioning

East Point Energy will fully decommission the energy storage facility at the end of its operational life. Our intent to decommission the facility is both legally and reputationally binding. These binding factors are as follows:

1. Site Lease Agreement (legal)
    - Upon its execution, the site lease agreement between East Point Energy and the property owner will ensure the full decommissioning and removal of the facility at the end of the lease period

2. Decommissioning activities will involve Christian County as necessary to ensure planned and executed activities are up to County standards (reputational). East Point Energy will, in good faith, execute the following steps:
    - Prior to decommissioning, East Point Energy shall prepare a written decommissioning plan that provides the organization, documentation requirements, and methods and tools necessary to indicate how the safety systems and its components will be decommissioned and the BESS removed from the site. Plans will include:
        - An overview of the decommissioning process developed specifically for the BESS that is to be decommissioned
        - Roles and responsibilities for all those involved in the decommissioning of the BESS and its removal from the site
        - A description of how any changes to the surrounding areas and other systems adjacent to the BESS, including, but not limited to structural elements, building penetrations, means of egress, and required fire detection and suppression systems, will be protected during decommissioning and confirmed as being acceptable after the system is removed
    - Christian County will be notified prior to the facilities decommissioning conducted by East Point Energy and any designated agent(s) in accordance with the decommissioning plan
    - A decommissioning report shall be prepared to summarize the decommissioning process of the system and associated operational controls and safety systems. This report shall be retained by East Point Energy and provided to Christian County upon request

Appendix E: East Point Energy Statement of Qualifications

Statement of Qualifications

East Point Energy is a development firm focused on the origination, construction, and operation of energy storage projects. Our team is currently developing gigawatts of energy storage projects throughout the country, helping to transform the grid into a renewable, resilient, and affordable system for generations to come. East Point is a wholly owned subsidiary of Equinor, a broad international energy company committed to long-term value creation in a low-carbon future.

EAST POINT AT A GLANCE

- **3.4 GW+ energy storage projects actively under development**
- **8 MWh operational energy storage projects**
- **1.3 GW+ projects estimated to reach COD by 2025**
- **Management team has over 13 years of developing DER's and 1.8 GW of operating wind and solar projects**
- **8GW of cumulative renewable energy development experience**
- **Over $1.5B of cumulative transactional experience**

East Point's nimble team is comprised of hard-working, strategic problem solvers who are passionate about sustainability. We are technology and contractor agnostic, allowing us to find the best solution for each project. The firm's executive team founded East Point in 2018, bringing decades of combined energy development experience and over 1.8 gigawatts of solar, wind, and energy storage projects currently in operation across the United States. Success for East Point is measured by delivering affordable energy storage solutions that benefit the grid, communities, and our environment.

Utility Partners (East Point & Executive Experience)

Supply Chain Partners

Representative Energy Storage Projects

Brokenburg Battery Energy Storage System
System Size: 2MWac | 8MWHac
Owner: Rappahannock Electric Cooperative
Location: Spotsylvania, Virginia (PJM)
Commercial Operation: Q2 2021

The Brokenburg Battery Energy Storage System (BESS) reached commercial operation in the second quarter of 2021, and was developed by East Point Energy, integrated by Powin Energy, and constructed by REC and subcontractors. The BESS provides load shifting at peak times to defer substation upgrades, provides the ability to island and carry an entire distribution circuit in the event of a substation outage, and serves to educate REC and their members on battery storage technology.

Dry Bridge Energy Center Battery Storage Project
System Size: 20 MWac | 80 MWh
Owner: Dominion Energy Virginia
Location: Chesterfield County, Virginia (PJM)
Commercial Operation: 2022 (expected)

East Point Energy began developing the Dry Bridge Energy Center in 2019 and sold it to Dominion Energy in 2021 as part of Dominion's 2020 Clean Energy Request for Proposals. Dry Bridge is expected to be the largest battery energy storage project in the Commonwealth of Virginia when it becomes operational in 2022. The project will deliver services including the firming of intermittent renewable energy, grid resilience, and consumer value by providing capacity, energy, and ancillary services into the PJM wholesale energy market.

Yadkins Energy Center Battery Storage Project
System Size: 100 MWac | 400 MWh
Owner: Aypa Power
Location: Chesapeake, Virginia (PJM)
Commercial Operation: 2025 (expected)

East Point Energy began developing the Yadkins Energy Center in 2018 and sold it in 2022 to Aypa Power, a Blackstone portfolio company and developer, owner and operator of energy storage and hybrid generation assets. East Point will continue to provide development services to the project on its path to becoming operational. The project will increase grid resilience and is well-sited to support the Hampton Roads load growth and planned offshore wind interconnecting nearby.

Shands Energy Center Battery Storage Project
System Size: 15.7 MWac | 62.8 MWh
Owner: Dominion Energy Virginia
Location: PJM
Commercial Operation: 2025 (expected)

East Point Energy began developing the Shands Energy Center in 2018 and sold it to Dominion Energy in 2022 as part of Dominion's 2022 Clean Energy Request for Proposals. Shands will be one of the largest standalone storage projects in Virginia when it becomes operational in 2025. Located in Sussex County, Shands will enhance local grid reliability and serve as an essential component of Dominion Energy's 100% clean energy future.

Knightdale Energy Center Battery Storage Project
System Size: 100 MWac | 400 MWh
Owner: Undisclosed Investor-Owned Utility
Location: SERC
Commercial Operation: 2023 (expected)

East Point Energy began developing the Knightdale Energy Center in 2018 and sold it in 2021 to an undisclosed investor-owned utility. East Point will continue to provide development services to the project until it becomes operational. The project is well-sited to support the significant amount of intermittent solar energy generation and exceptional load growth in the area.

Pleasant Valley Energy Center Battery Storage Project
System Size: 15 MWac | 60 MWh
Location: NYISO
Current Status: Under Development
Commercial Operation: 2024 (expected)

Oxford Energy Center Battery Storage Project
System Size: 17.3 MWac | 69.2 MWh
Location: ISO-NE
Current Status: Under Development
Commercial Operation: 2025 (expected)

Wire Energy Center Battery Storage Project
System Size: 9 MWac | 18 MWh
Location: ERCOT
Current Status: Under Development
Commercial Operation: 2023 (expected)

Management Team

Andrew Foukal | President & CEO

Andrew founded East Point Energy in 2018, and is responsible for business strategy and execution, as well as building and leading the team. Capitalizing on his ten years of energy development experience in utility-scale solar, and with his vision, work ethic and management skills, Andrew is building East Point Energy into a leading energy storage firm in the United States.

In 2009, Andrew joined as one of the first employees of HelioSage Energy, a utility-scale solar project development firm. Andrew rose through the ranks quickly and was instrumental in developing HelioSage's 350 megawatts of contracted solar before the company was acquired by Coronal Energy in 2015. Coronal promoted Andrew to SVP of Operations, where at the end-to-end, utility-scale solar IPP, he managed the Development Engineering and Procurement team, and the development efforts behind a 4 GW utility-scale PV pipeline. When Andrew left to start East Point Energy, Coronal had more than 600 megawatts of PV projects in operation.

Andrew started his career at Lux Research, an independent research and advisory firm providing strategic advice and ongoing intelligence for emerging technologies, including solar photovoltaics and nanotechnology.

Andrew holds a BS in Physics from Bates College and a Masters in Materials Science and Engineering from the University of Virginia.

Chris Walmsley | COO

Prior to joining East Point Energy as a founding member in 2018, Chris helped start HelioSage Energy in 2007. Chris lead the utility-scale solar project development firm as President and CEO until the company was sold in 2015 to Coronal Energy. Chris and his partners navigated tremendous growth at HelioSage establishing the firm as a trusted development partner in the solar industry for a number of the country's largest institutional investors, major equipment vendors and utilities. Chris left Coronal Energy at the end of 2017.

A true entrepreneur, over 25 years ago Chris and his brother, Pierce, started AutoMax, a marketing distributorship headquartered in Prague, Czech Republic. AutoMax has three divisions – lubricants, automotive aftermarket and industrial cleaning - with exclusive rights to major brands like WD-40, Shell Lubricants, and many others. Since 2009, AutoMax has acquired four competing but complementary businesses including the Shell Lubricant division for the Czech and Slovak Republics. With over 110 employees, and offices in the Czech Republic, Slovakia and Hungary, AutoMax continues to grow and remain profitable year after year.

From 2001 until 2005, Chris also spent four years building an online ticketing business for Musictoday, a company sold to Live Nation in 2006. Chris helped design the ticketing system that handled sell-out shows from the Dave Matthews Band to John Mayer.

For many years, Chris served on the Board and was the President of Computers4Kids, a local non-profit, after-school technology mentoring program for disadvantaged youth.

Chris holds a BA in History from the University of Virginia.

Pierce Walmsley | CFO

Pierce has over 20 years of executive experience in many different industries and on two continents.

Prior to joining East Point Energy as a founding member in 2018, Pierce served as the CFO and on the Board of Coronal Energy after Coronal purchased HelioSage in 2015. Pierce joined HelioSage as CFO in September of 2008. Along with fiduciary responsibility for Coronal, Pierce's primary responsibility was directing accounting and project finance. Pierce negotiated a series of strategic agreements with some of the country's largest and most active institutional investors, including several Fortune 500 energy companies. Pierce was also instrumental in negotiating the sale of projects to buyers and, ultimately, the sale of HelioSage to Coronal.

Prior to joining HelioSage, Pierce co-founded two successful start-ups: Global Sleep Products Inc., a memory foam mattress business, and AutoMax, a marketing and distribution firm in the Czech Republic, which he and his brother, Chris, still own. Founded in 1991, AutoMax employs over 110 people across three markets and continues to grow and remain profitable year after year.

Prior to these ventures, Pierce spent 4 years as COO of a 25-store specialty retail chain, The Healthy Back Stores, and 3 years as a Commercial Loan Officer with First Union National Bank. Pierce is also a Director of Froehling and Robertson, Inc, a 133-year old privately-held consulting engineering/testing firm.

Pierce holds a BA in Economics and Psychology from the University of Virginia, and an MBA from the Darden Graduate School of Business Administration.

Nelson Teague | General Counsel

With a background in corporate law and structured finance transactions, Nelson has been engaged in renewable energy development for over fifteen years.

Prior to joining East Point Energy as a founding member in 2018, Nelson helped co-found HelioSage, the utility-scale solar project development firm sold to Coronal Energy in 2015. While at Coronal Energy, he served as Vice President – Legal where he supported the company's development efforts in Charlottesville. Nelson left Coronal Energy in the summer of 2018.

Prior to that, Nelson worked as the Director of Project Transactions with Greenlight Energy, Inc., managing and negotiating a contract suite that became one of the country's largest wind energy project pipelines. Following the sale of Greenlight Energy to BP Alternative Energy Services in 2006, Nelson joined BP where he led the development, project financing, and construction of the 300 megawatt Cedar Creek Wind Farm, a $480 million facility selling power to Xcel Energy under a long term power purchase agreement.

Nelson has also served as General Counsel for several renewable energy development firms in the arenas of utility-scale solar (Axio Power), utility-scale wind (Apex Wind Energy, Inc.), biofuels manufacture (Greenlight Biofuels, Inc.) and the commercialization of a wave-to-energy technology (Columbia Power Technologies).

Nelson practiced law for Williams, Mullen, where he specialized in corporate law. He also served as corporate counsel for Circuit City Stores, Inc. and two of its subsidiaries from 1994-1998.

Nelson holds a BA in Politics from Washington and Lee University and his law degree from the TC Williams School of Law at the University of Richmond.

General Staff

Tyler Cline | VP of Project Development

As VP of Project Development, Tyler is responsible for overseeing the development of East Point Energy's front-of-the-meter, standalone energy storage projects throughout the United States. Tyler has a background in utility-scale, renewable energy origination and project development.

Tyler began his career in renewable energy with Coronal Energy, where he facilitated the development of utility-scale solar and solar-plus storage projects throughout the United States. Following the acquisition of Coronal by Ørsted, Tyler shifted his focus to origination, securing long-term revenue opportunities for Ørsted's onshore wind and solar portfolio in the United States. Prior to his career in clean energy, Tyler spent several years in the United States Army as an infantry officer.

Tyler holds a BS in Civil Engineering from the United States Military Academy at West Point and an MBA from the University of North Carolina at Chapel Hill's Kenan-Flagler Business School.

Anne Eschenroeder | VP of Talent & Administration

Anne serves as VP of Talent & Administration for the East Point Energy team. She is responsible for training, managing, and building East Point Energy's world-class development team, as well as defining and maintaining East Point's collaborative, entrepreneurial company culture. She brings with her over a decade of management experience, having helped to build numerous successful businesses and teams.

Prior to joining East Point Energy in 2019, Anne had an extensive career in several entrepreneurial ventures, serving in executive and operational roles in agriculture and food systems organizations in Oregon, California, New York, and Virginia, including running her own successful farm in upstate New York. Anne is passionate about efficient systems and helping to build effective teams.

Anne holds a BA in Anthropology and Environmental Thought and Practice from the University of Virginia. She also holds a Certificate in Ecological Horticulture from the University of California, Santa Cruz's Center for Agroecology and Sustainable Food Systems.

Eric Conner | VP of EPC

Eric serves as VP of EPC at East Point Energy, responsible for leading and managing the engineering, procurement, and construction of all energy storage projects under development and acquired by the company.

Eric's career blends nearly twenty years of engineering, construction, and project management experiences related to the planning and execution of complex, multimillion dollar power projects. The majority of Eric's career focused on gas turbine and hydroelectric projects with the global EPC firm Fluor, before he transitioned to Dominion Energy to lead a team in the development and execution of gas turbine, liquified natural gas, small modular reactor, and battery energy storage projects (BESS), including bringing the company's first utility-scale BESS to commercial operation in VA in 2021.

Eric received his MS in Civil/Structural Engineering from The University of North Carolina at Charlotte, and is a licensed Professional Engineer (PE) and Project Management Professional (PMP). He is also an active member in the Toastmasters organization.

Outside of the office, Eric enjoys trying to keep up with his three active kiddos, catching live music with his wife, and sneaking in a round of golf when possible.

Matt Cousins | Director of Business Development
As Director of Business Development, Matt is responsible for originating revenue contracts for East Point Energy's front-of-the-meter, standalone energy storage projects throughout the United States. Matt has a background in utility-scale, energy storage acquisition, business development, and finance. Matt began his career in renewable energy with Dominion Energy, where he led the acquisition of the company's first utility-scale energy storage projects. Following his time at Dominion, Matt led the US-based electric utility business development strategy for Wartsila's energy storage EPC and integration services business. Prior to his career in clean energy, Matt advised M&A clients at Harris Williams across energy, power, and infrastructure end markets and spent over eleven years flying MH-60S helicopters in the US Navy.

Matt holds a BS in Systems Engineering from the United States Naval Academy, an MBA from The College of William & Mary, and an MS in Accounting from the University of Connecticut.

Maggie Howe | Project Development Manager
Maggie manages and mentors East Point's team of Project Developers, in addition to leading campaigns for several key East Coast markets. Maggie's work in overseeing the development process benefits the company's project pipeline and overall productivity.

Prior to joining East Point, Maggie worked as a contractor for the EPA, where she supported oil spill prevention and response programs. For several years, she also ran an environmentally focused summer camp in Brevard, NC, serving over 1200 children each season. She is passionate about both protecting the environment and facilitating experiences that inspire an authentic connection to the natural world, which in turn motivates us to be good stewards of our planet.
Maggie holds a BS in Science, Technology, and International Affairs, focusing on environmental and energy policy, from Georgetown University's School of Foreign Service. She also holds an MBA from the University of North Carolina's Kenan Flagler School of Business.

Victor Lattari | Project & Safety Manager
Victor Lattari is East Point's Project & Safety Manager, working in tandem with East Point's Vice President of EPC to enable engineering, procurement, and construction capabilities at the company. Victor is serving in this role as a Secondee: an employee of East Point's parent company Equinor, bringing his expertise and experience to work as part of the East Point team for a period of time, supporting in continuing to grow our team and opportunities.

Victor started his professional journey in the oil and gas business, and for more than 15 years he worked with the shipbuilding of oil and gas platforms around the world. He has worked at shipyards in Singapore, China, South Korea, and Abu Dhabi, among others. His focus shifted to the renewable energy business 6 years ago, when he started working with the development and construction of solar and wind projects in Latin America.

Victor holds a BE in Electrical Engineering, a Postgraduate Diploma in Safety Engineering, and an MBA in Project Management from various universities in Brazil.

Will Frost | Project Developer
As a project developer, Will is responsible for ushering projects from site control to a shovel-ready state, and will expand East Point's development pipeline to include new markets. Prior to joining

East Point, Will worked as an Analytical Laboratory Chemist supporting the AstraZeneca drug pipeline and as an Environmental Consultant supporting federal sustainability projects. His most recent experience was serving as the lead for the COVID-19 Information Management Section within the Department of Health and Human Services office of the Assistant Secretary for Preparedness and Response. In this role he led the coordination of communication efforts between front line medical responders and high-level government leadership.

Will holds BAs in Chemistry and Economics from Bucknell University and an MS in Environmental Sciences and Policy from John's Hopkins University.

Kyle Jenkins | Development Engineer

Kyle focuses on the design and interconnection of East Point's energy storage projects and coordinates engineering, technical risk assessments, and permitting with stakeholders and industry partners. Prior to joining the East Point Energy team, Kyle worked as a Cyber Transport Supervisor within the United States Air Force. After his time in the Air Force, Kyle transitioned to the renewables field and worked at Swinerton as an Engineering Coordinator, supporting the construction of utility-scale solar projects.

Kyle holds BS and MS degrees in Renewable Energy Engineering from the Oregon Institute of Technology.

Appendix F: Critical Issues Analysis

August 17, 2022

SangChris Energy Center, LLC
200 Garrett Street, Suite J
Charlottesville, VA 22902
Attn: Mr. Kyle Jenkins

Reference: Critical Issues Analysis
SangChris Energy Center
1398 Country Road 150 East
Pawnee, Christian County, Illinois
ECS Project No. 53:3778-E

Dear Mr. Jenkins:

ECS Midwest, LLC (ECS) is pleased to provide the Critical Issues Analysis (CIA) report for the above-referenced Project Study Area (PSA).

1.0 Project Background

SangChris Energy Center, LLC requested that ECS conduct a CIA of the PSA in anticipation of the proposed SangChris Energy Center development. The purpose of the CIA was to identify potential critical environmental concerns that may impact the scope of the redevelopment.

2.0 Project Study Area (PSA) Description

The PSA is an approximate 80.6 acres of agricultural land located near 1398 Country Road 150 East in Pawnee, Christian County, Illinois (Parcel Identification Numbers 15-11-26-200-001, 15-11-26-200-002, and 15-11-26-200-003).

A PSA Map is provided as **Figure 1**, and a PSA Location/USGS Topographical Map is provided as **Figure 2** located in **Attachment A**.

3.0 Critical Issues Analysis (CIA)

ECS conducted a CIA to identify potential environmental impacts to the proposed SangChris Energy Center development project. The preliminary analysis included a review of publicly available online government records and a site reconnaissance (conducted on July 7, 2022) regarding the following potential environmental impacts:

a. Wildlife, threatened and endangered species or habitat
b. Forest stands, specimen trees, distinctive tree lines
c. Federal Wetland Inventory
d. Historic and Archaeological Resources
e. State and local permitting matrix

Findings associated with the CIA are summarized below.

3.1 Preliminary Wildlife and Threatened and Endangered Species Review

Congress passed the Endangered Species Act in 1973 to protect and recover imperiled species and the ecosystems upon which they depend. Enforcement of the Endangered Species Act regarding terrestrial and freshwater organisms is administered by the United States Fish and Wildlife Service (USFWS). The Illinois Department of Natural Resources (IDNR) regulates and enforces Illinois protected, threatened, and endangered Species.

Online Record Review

Federal and state protected, threatened, and endangered species found within the State of Illinois and Christian County are provided in the EDR NEPASearch Map Report provided as **Attachment B**.

Site Reconnaissance

ECS conducted the site reconnaissance on July 7, 2022. The PSA consists of agricultural land. Obvious natural habitats such as natural prairie, wooded areas, wetlands, etc. were not observed while conducting the site reconnaissance. No trees were observed during the site visit. Wetlands and other surface waters were not observed within the PSA.

Agency Correspondence

ECS inquired the USFWS via the online Information for Planning and Consultation (IPAC) website and the Northern Long-Eared Bat (NLEB) Consultation and 4(d) Rule Consistency determination key, regarding threatened and endangered species and designated critical habitats that may occur within the PSA. Based on the automated response from the USFWS, four threatened, endangered, or candidate species were identified on the list that should be considered. The list includes:

	T&E Species	Listing Status	Suspected Effect Determination*
1	Indiana Bat	Endangered	---
2	Northern Long-eared Bat	Threatened	**May affect**
3	Rabbitsfoot (clam)	Threatened	---
4	Monarch Butterfly	Candidate	---

*Suspected Effect Determinations are based on automated response using NLEB Consultation and 4(d) Rule Consistency determination key for the PSA.
--- Habitat not evaluated by USFWS under the NLEB Consultation 4(d) Rule Consistency determination key

Suspect habitats for the Indiana bat (trees/wooded areas), Rabbitsfoot Clam (fresh water bodies), and the Monarch Butterfly (meadows, prairies) were not identified onsite. Per the USFWS response letter, critical habitats under the jurisdiction of the USFWS are not located within the PSA. However, in the event habitats are encountered, further considerations and consultation may be warranted per State regulation. Other considerations include potential impacts to migratory birds as listed in the USFWS response letter. A copy of the USFWS response letter is provided as **Attachment C**.

According to our review of the IDNR Endangered Species Protection Board Threatened and Endangered Species by County, five threatened, endangered, and species of special concern have been observed in

Christian County. In addition, ECS inquired the Illinois Department of Natural Resources (DNR) via the online Ecological Compliance Assessment Tool (EcoCAT) website regarding threatened and endangered species and designated critical habitats that may occur within the PSA. According to the IDNR, there are no protected resources (i.e. state-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves) in the vicinity of the PSA. A copy of the EcoCAT response is included as **Attachment D**.

3.2 FEMA Floodways

ECS reviewed the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) to determine the flood zone area of the PSA. According to the EDR NEPA Check report, the PSA is not located within a Special Flood Hazard Area (1%) or within a 0.2% Annual Chance Flood Hazard area. A copy of the FIRMette map is provided as **Figure 3** in **Attachment A**.

3.3 Federal Wetland Inventory

Wetlands are defined by the USACE and the United States Environmental Protection Agency (EPA) as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions." In order for an area to be classified as wetland, hydrophytic vegetation, hydric soils, and wetland hydrology indicators must be present described in the 1987 "Corps of Engineers Wetlands Delineation Manual" and the Appropriate Regional Supplement.

ECS reviewed the National Wetland Inventory (NWI) for wetlands within the PSA. Known federal wetlands were not mapped within the PSA. Suspect wetlands were not observed during the site reconnaissance. A copy of the NWI map is provided as **Figure 4** located in **Attachment A**.

3.4 Preliminary Tree Stand Review

ECS conducted a Preliminary Tree Stand review during the site reconnaissance to identify forest stands and to assess the general tree species that are located within the PSA. Typically, stands are relatively uniform with respect to aspect, dominant crown class, stocking density, species composition, and landforms. ECS completed transects throughout the PSA noting tree species and diameter-at-breast-height (DBH) and then plotting their approximate location by global positioning system (GPS).

No trees were observed within the PSA during the site reconnaissance.

3.5 Preliminary Historic Resources Review

The State Historic Preservation Office (SHPO) was created by the United States government in 1966 under Section 101 of the National Historic Preservation Act (NHPA). The purposes of the SHPO include surveying and recognizing historic properties, reviewing nominations for properties to be included in the National Register of Historic Places (NRHP), reviewing undertakings for the impact on the properties as well as supporting federal organizations, state and local governments, and the private sector.

ECS conducted a preliminary historic resources review to identify potential historic structures, a review of aerial photographs, and a review of the EDR NEPASearch Map report, which reviewed the National Register of Historic Places.

Site Reconnaissance

ECS conducted the site reconnaissance on July 7, 2022. ECS did not identify standing structures within the PSA. Potentially significant architectural structures over 50 years of age were not apparent in the immediate surrounding area.

National Register Record Review

ECS searched the National Register of Historic Places for listings at the site address of the PSA and its immediate surrounding area. Based on the EDR NEPASearch Map Report provided as Attachment B, and a review of the online National Register of Historic Places GIS (https://www.nps.gov/maps), historic listings are not located near the PSA.

3.6 State and Local Permitting Matrix

General Discussion

Section 404 of the Clean Water Act regulates the discharge of dredge and fill materials into waters of the United States (lakes, rivers, ponds, streams, etc.), including wetlands. Section 401 of the Clean Water Act grants States authority to approve, condition, or deny general National Pollutant Discharge Elimination System (NPDES) permits for construction and industries that qualify under a State's general permit program. The Illinois Environmental Protection Agency (IEPA) administers NPDES general permits for the State of Illinois.

NPDES Construction General Permit (CGP)

In accordance with the Clean Water Act Amendments of 1987, a NPDES CGP must be obtained from the IEPA. A Notice of Intent (NOI) for a NPDES CGP can be filed online on the central Data Exchange (CDX). Prior to NOI submission, a Storm Water Pollution Prevention Plan (SWPPP), SHPO approval letter, and EcoCAT approval letter must be submitted on the CDX. For the Fox Energy Center development, an application fee of $750 must be submitted to the IEPA.

3.7 Environmental Conditions and Contamination

ECS preliminarily reviewed the United States EPA EnviroFacts database tool in order to search for potential sources of environmental contamination or areas of environmental concern within 1,000 feet of the PSA. The EnviroFacts database includes sources from the following:

- Brownfield Sitesuperfund Sites
- Toxic Release Inventory (TRI)
- NPDES

- Hazardous waste facility (RCRA)
- Air Emission Facility
- Toxic Substances Control Act (TSCA)

Our preliminary review of the Envirofacts database showed no listings within 1,000 feet of the PSA. This preliminary review does not imply a guarantee that all potential sources of contamination were identified within a vicinity of the site. ECS did not evaluate these areas in depth and would likely recommend a Phase I Environmental Site Assessment (ESA) be performed for a more thorough review of the PSA.

4.0 Conclusions

Based on our preliminary review of wildlife and threatened and endangered species, FEMA floodways, the federal wetlands inventory, preliminary tree stand review, and state and local permitting matrices, the following critical issues were identified:

- No known habitats were observed within the PSA during the site reconnaissance;
- The SangChris Energy Center development may affect habitat of the Northern Long-Eared Bat, which is a candidate for the Christian County, Illinois threatened and/or endangered species list. Additional consultation from the IDNR may be warranted.
- According to our review of the FEMA FIRM, the PSA is not located within a mapped FEMA FIRM area;
- As documented on the NWI map, known federal wetlands were not mapped within or adjacent to the PSA;
- Trees were not observed on the PSA;
- Historic listings are not located near the PSA;
- A SWPP should be prepared and implemented at the site in accordance with a required NPDES general permit from the State and per State regulation.

5.0 Closure

ECS appreciates the opportunity to provide our services to you. Please contact Paige Adams or Benjamin LaPointe at 847-279-0366, or via email at padams@ecslimited.com or blapointe@ecslimited.com, if you have questions or require additional information.

Sincerely,

ECS Midwest, LLP

Paige Adams
Environmental Project Manager
padams@ecslimited.com
847-279-0366

Benjamin M. LaPointe, CHMM
Environmental Department Manager, Associate Principal
blapointe@ecslimited.com
847-279-0366

Attachments:
Attachment A - Figures
- Figure 1 - Property Study Area Map
- Figure 2 - PSA Location / USGS Topographic Map
- Figure 3 – FEMA FIRM
- Figure 4 – National Wetland Inventory Map

Attachment B – EDR NEPASearch Map Report
Attachment C – USFWS IPaC Letter
Attachment D – EcoCAT Response Letter
Attachment E – Photographs

Attachment A – Figures

Figure 1 – Project Study Area Map
Figure 2 – PSA Location / Topographic Map
Figure 3 – FEMA FIRM
Figure 4 – National Wetland Inventory Map

Figure 1

Site Location Map

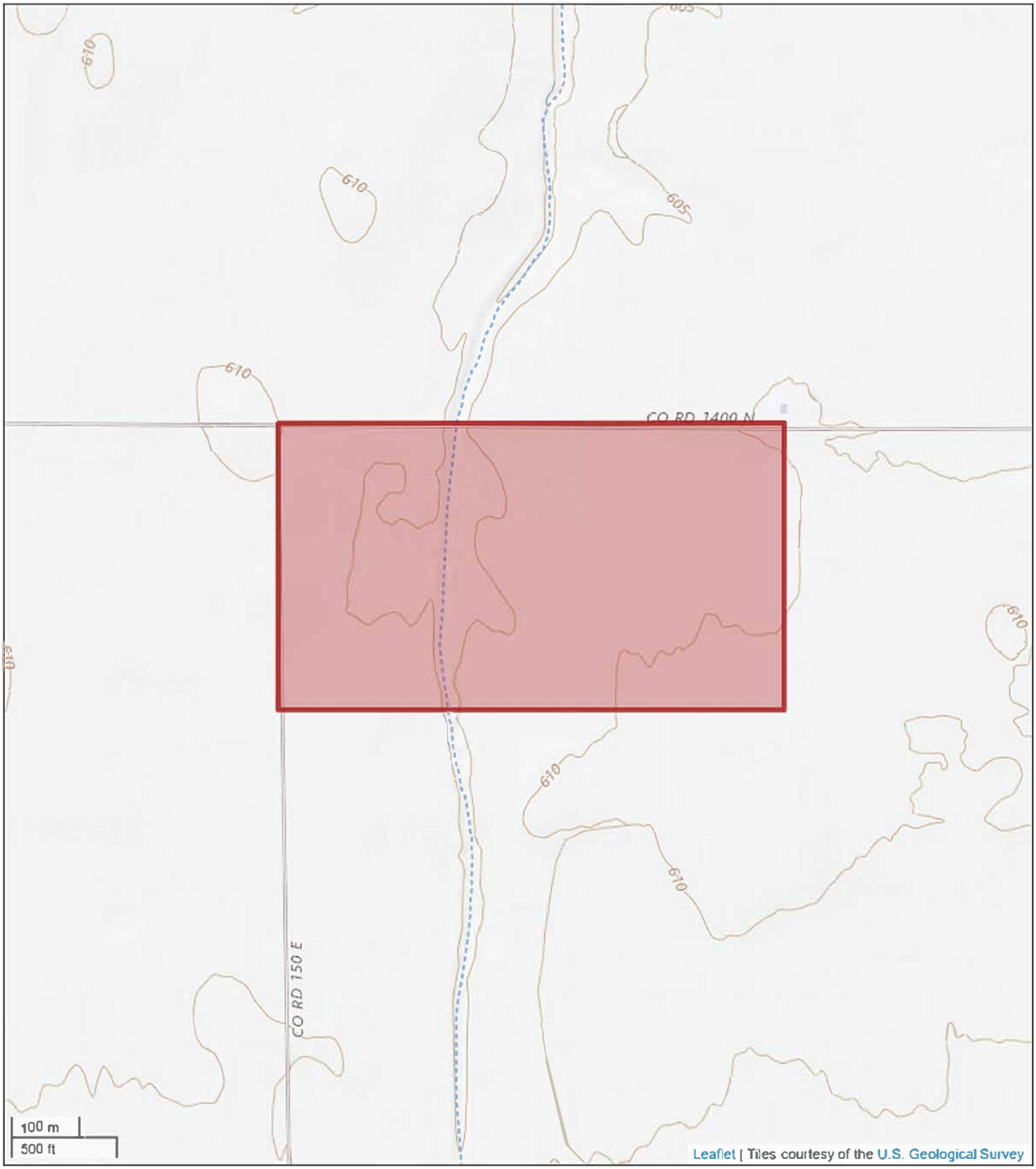


Figure 2

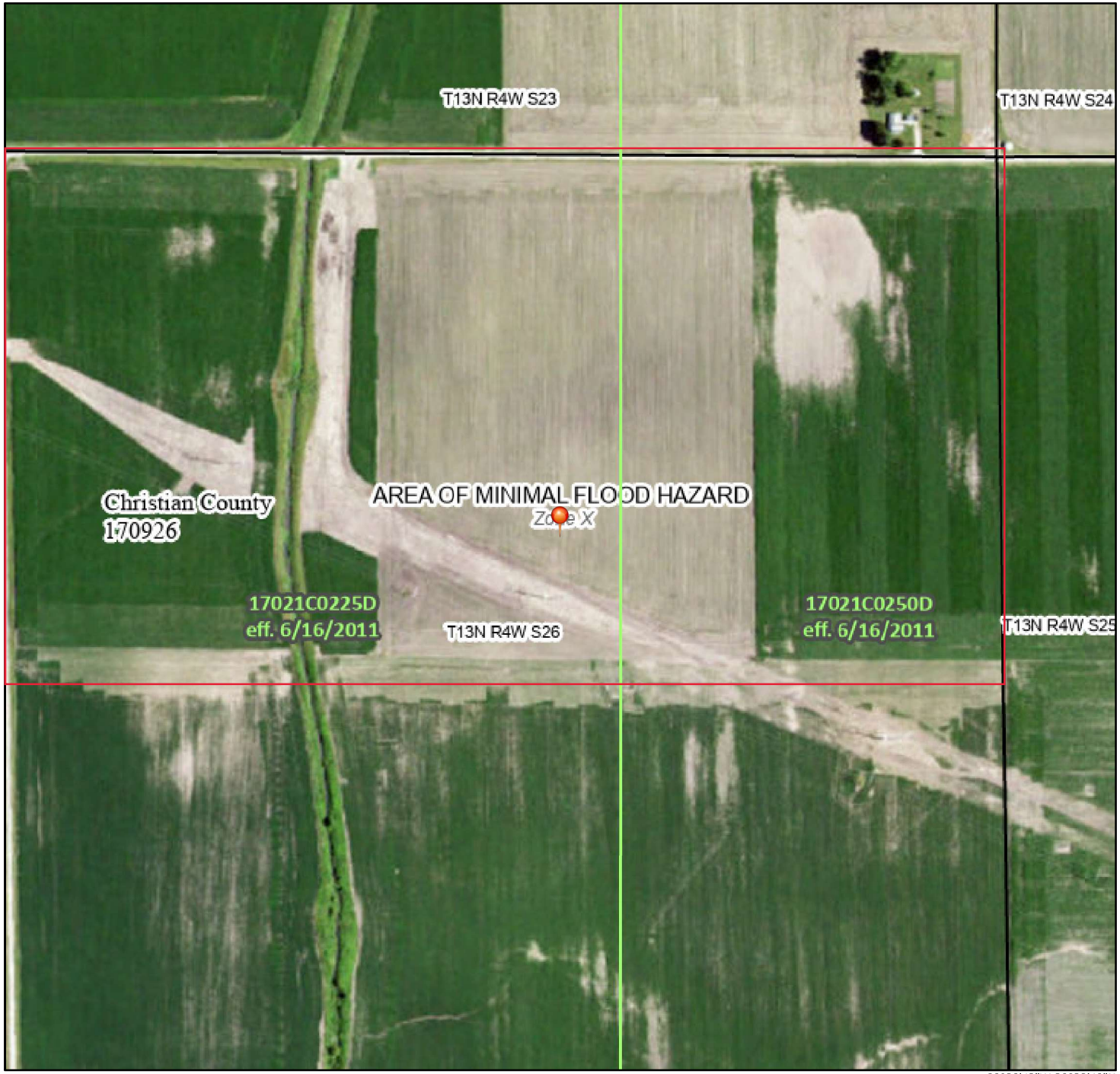
Site Location Map

National Flood Hazard Layer FIRMette

Figure 3

FEMA

89°30'21"W 39°33'17"N



89°29'43"W 39°32'49"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/28/2022 at 1:24 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

U.S. Fish and Wildlife Service
National Wetlands Inventory

Figure 4

July 27, 2022

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Attachment B – EDR NEPASearch Map Report

Sangchris Energy Center
200 E 1400 NORTH RD
PAWNEE, IL 62558

Inquiry Number: 7033271.1s
June 27, 2022

EDR NEPASearch™ Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EDR NEPASearch DESCRIPTION

The National Environmental Policy Act of 1969 (NEPA) requires that Federal agencies include in their decision-making processes appropriate and careful consideration of all environmental effects and actions, analyze potential environmental effects of proposed actions and their alternatives for public understanding and scrutiny, avoid or minimize adverse effects of proposed actions, and restore and enhance environmental quality as much as possible.

The EDR NEPASearch Map Report provides information which may be used, in conjunction with additional research, to determine whether a proposed site or action will have significant environmental effect.

TARGET PROPERTY ADDRESS

SANGCHRIS ENERGY CENTER
200 E 1400 NORTH RD
PAWNEE, IL 62558

Inquiry #: 7033271.1s
Date: 6/27/22

TARGET PROPERTY COORDINATES

Latitude (North):	39.548096 - 39ˆ 32’ 53.1’’
Longitude (West):	89.501221 - 89ˆ 30’ 4.4’’
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	285077.0
UTM Y (Meters):	4380381.0

The report provides maps and data for the following items (where available). Search results are provided in the Map Findings Summary on page 2 of this report.

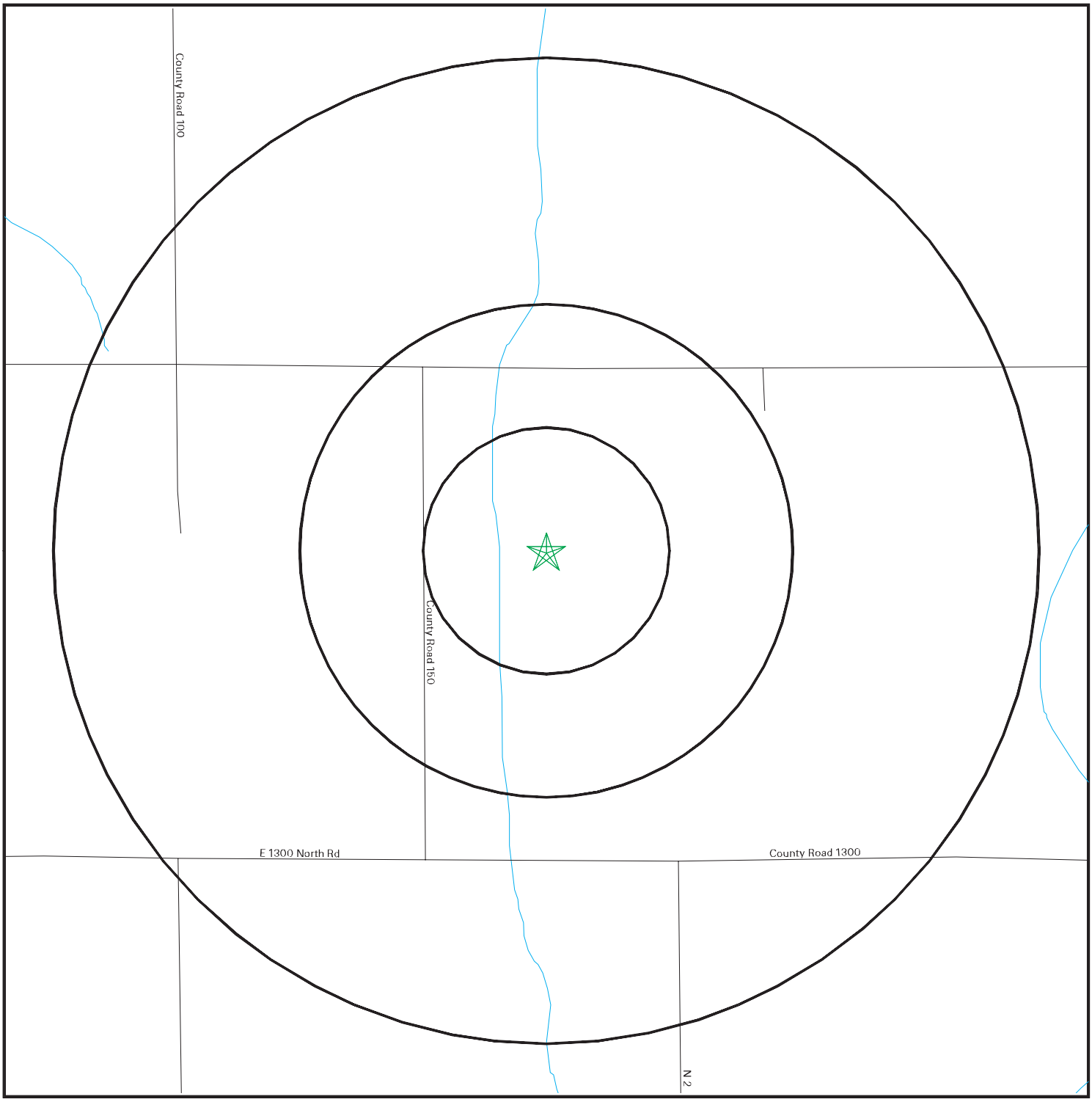
Section	Regulation
Natural Areas Map	
´• Federal Lands Data:	
- Officially designated wilderness areas	47 CFR 1.1307(1)
- Officially designated wildlife preserves, sanctuaries and refuges	47 CFR 1.1307(2)
- Wild and scenic rivers	40 CFR 6.302(e)
- Fish and Wildlife	40 CFR 6.302
´• Threatened or Endangered Species, Fish and Wildlife, Critical Habitat Data (where available)	47 CFR 1.1307(3); 40 CFR 6.302
Historic Sites Map	
´• National Register of Historic Places	47 CFR 1.1307(4); 40 CFR 6.302
´• State Historic Places (where available)	
´• Indian Reservations	
Flood Plain Map	
´• National Flood Hazard Layer Data (where available)	47 CFR 1.1307(6); 40 CFR 6.302
´• FEMA Q3 Flood Data (where available)	47 CFR 1.1307(6); 40 CFR 6.302
Wetlands Map	
´• National Wetlands Inventory Data (where available)	47 CFR 1.1307(7); 40 CFR 6.302
´• State Wetlands Data (where available)	47 CFR 1.1307(7); 40 CFR 6.302
FCC & FAA Map	
´• FCC antenna/tower sites, FAA Markings and Obstructions, Airports, Topographic gradient	47 CFR 1.1307(8)
Key Contacts and Government Records Searched	

MAP FINDINGS SUMMARY

The databases searched in this report are listed below. Database descriptions and other agency contact information is contained in the Key Contacts and Government Records Searched section on page 24 of this report.

Applicable Regulation from 47 CFR/FCC Checklist	Database	Search Distance (Miles)	Within Search	Within 1/8 Mile
NATURAL AREAS MAP				
1.1307a (1) Officially Designated Wilderness Area	US Federal Lands	1.00	NO	NO
	US Wilderness Preservation	1.00	NO	NO
1.1307a (2) Officially Designated Wildlife Preserve	US Federal Lands	1.00	NO	NO
	US ACEC	1.00	NO	NO
	US Proclamation Boundaries	1.00	NO	NO
	US Scenic River	1.00	NO	NO
	IL State Conservation Area	1.00	NO	NO
	IL Natural Areas	1.00	NO	NO
	IL Nature Preserves	1.00	NO	NO
	US NCED	1.00	NO	NO
	US Critical Water Habitat	1.00	NO	NO
	US Critical Land Habitat	1.00	NO	NO
1.1307a (3) Threatened or Endangered Species or Critical Habitat	US Endangered Species	County	YES	N/A
1.1307a (3) Threatened or Endangered Species or Critical Habitat	IL Endangered Species	County	YES	N/A
HISTORIC SITES MAP				
1.1307a (4) Listed or eligible for National Register	IL Historic Sites	1.00	NO	NO
1.1307a (4) Listed or eligible for National Register	Natchez Trace National Scenic	1.00	NO	NO
1.1307a (4) Listed or eligible for National Register	Potomac Heritage National Scen	1.00	NO	NO
	Indian Reservations	1.00	NO	NO
1.1307a (4) Listed or eligible for National Register	US Trails	1.00	NO	NO
1.1307a (4) Listed or eligible for National Register	National Register of Hist. Pla	1.00	NO	NO
FLOOD PLAIN MAP				
1.1307 (6) Located in a Flood Plain	Special Flood Hazard Area (1%)	1.00	NO	NO
1.1307 (6) Located in a Flood Plain	0.2% Annual Chance Flood Hazar	1.00	NO	NO
WETLANDS MAP				
1.1307 (7) Change in surface features (wetland fill)	NWI	1.00	YES	NO
1.1307 (7) Change in surface features (wetland fill)	STATE	1.00	NO	NO
FCC & FAA SITES MAP				
	Cellular	1.00	NO	NO
	Antenna Structure Registration	1.00	NO	NO
	AM Antenna	1.00	NO	NO
	FM Antenna	1.00	NO	NO
	FAA DOF	1.00	YES	NO
	Airports	1.00	NO	---
	Power Lines	1.00	YES	---

Natural Areas Map



- Target Property
- Roads
- County Boundary
- Waterways
- Water
- Locations
- Federal Areas
- Federal Linear Features
- State Areas
- State Linear Features

SITE NAME: Sangchris Energy Center	CLIENT: ECS Midwest LLC
ADDRESS: 200 E 1400 NORTH RD PAWNEE IL 62558	CONTACT: Paige Adams
LAT/LONG: 39.548095 / 89.501223	INQUIRY #: 7033271.1s DATE: June 27, 2022

NATURAL AREAS MAP FINDINGS

Federal Endangered Species from the U.S. Fish and Wildlife for CHRISTIAN County

Group:Flowering Plants

Common Name: Eastern prairie fringed orchid
Scientific Name: Platanthera leucophaea
Status: Threatened

Group:Mammals

Common Name: Indiana bat
Scientific Name: Myotis sodalis
Status: Endangered

Common Name: Northern Long-Eared Bat
Scientific Name: Myotis septentrionalis
Status: Threatened

Federal Endangered Species from the U.S. Fish and Wildlife for IL State

Group:Amphibians

Common Name: Illinois chorus frog
Scientific Name: Pseudacris illinoensis
Status: Under Review

Common Name: Hellbender
Scientific Name: Cryptobranchus alleganiensis
Status: Under Review

Common Name: Eastern Hellbender
Scientific Name: Cryptobranchus alleganiensis alleganiensis
Status: Species of Concern

Group:Birds

Common Name: Migrant loggerhead shrike
Scientific Name: Lanius ludovicianus migrans
Status: Species of Concern

Common Name: Black tern
Scientific Name: Chlidonias niger
Status: Species of Concern

Common Name: Common tern
Scientific Name: Sterna hirundo
Status: Species of Concern

Common Name: Black Rail
Scientific Name: Laterallus jamaicensis
Status: Under Review

Common Name: Red knot
Scientific Name: Calidris canutus rufa
Status: Threatened

Common Name: Golden-winged warbler
Scientific Name: Vermivora chrysoptera
Status: Under Review

Group:Clams

Common Name: Longsolid
Scientific Name: Fusconaia subrotunda
Status: Under Review

Common Name: Salamander mussel
Scientific Name: Simpsonaias ambigua
Status: Under Review

Common Name: Purple lilliput
Scientific Name: Toxolasma lividus
Status: Under Review

Common Name: Tennessee heelsplitter
Scientific Name: Lasmigona holstonia
Status: Under Review

Federal Endangered Species from the U.S. Fish and Wildlife for IL State (Continued...)

Common Name: Rabbitsfoot
Scientific Name: Quadrula cylindrica cylindrica
Status: Threatened

Common Name: Round hickorynut
Scientific Name: Obovaria subrotunda
Status: Under Review

Common Name: Snuffbox mussel
Scientific Name: Epioblasma triquetra
Status: Endangered

Group:Crustaceans

Common Name: Subtle cave amphipod
Scientific Name: Stygobromus subtilis
Status: Species of Concern

Common Name: Indiana crayfish
Scientific Name: Orconectes indianensis
Status: Species of Concern

Group:Fishes

Common Name: Plains minnow
Scientific Name: Hybognathus placitus
Status: Species of Concern

Common Name: Eastern sand darter
Scientific Name: Ammocrypta pellucida
Status: Species of Concern

Common Name: Kiyi
Scientific Name: Coregonus kiyi
Status: Species of Concern

Common Name: Lake sturgeon
Scientific Name: Acipenser fulvescens
Status: Species of Concern

Common Name: Western silvery minnow
Scientific Name: Hybognathus argyritis
Status: Species of Concern

Common Name: Shortjaw cisco
Scientific Name: Coregonus zenithicus
Status: Species of Concern

Common Name: Greater redhorse
Scientific Name: Moxostoma valenciennesi
Status: Species of Concern

Common Name: Shortnose cisco
Scientific Name: Coregonus reighardi
Status: Species of Concern

Common Name: Flathead chub
Scientific Name: Platygobio gracilis
Status: Species of Concern

Common Name: Stargazing darter
Scientific Name: Percina uranidea
Status: Species of Concern

Group:Flowering Plants

Common Name: Purple false-foxglove
Scientific Name: Tomanthera skinneriana
Status: Species of Concern

Common Name: Ofer Hollow reedgrass
Scientific Name: Calamagrostis porteri insperata
Status: Species of Concern

Federal Endangered Species from the U.S. Fish and Wildlife for IL State (Continued...)

Common Name: Umbrella sedge
Scientific Name: Cyperus grayoides
Status: Species of Concern

Common Name: Rough-seeded fameflower
Scientific Name: Talinum rugospermum
Status: Species of Concern

Common Name: Kankakee globe-mallow
Scientific Name: Iliamna remota
Status: Species of Concern

Common Name: No common name
Scientific Name: Cimicifuga rubifolia
Status: Species of Concern

Common Name: Price's potato-bean
Scientific Name: Apios priceana
Status: Threatened

Common Name: No common name
Scientific Name: Hypericum adpressum
Status: Species of Concern

Common Name: [Unnamed] sumac
Scientific Name: Rhus trilobata arenaria
Status: Species of Concern

Common Name: No common name
Scientific Name: Eleocharis wolfii
Status: Species of Concern

Common Name: [Unnamed] aster
Scientific Name: Eurybia furcata
Status: Species of Concern

Common Name: [Unnamed] thistle
Scientific Name: Cirsium hillii
Status: Species of Concern

Common Name: Auriculate false-foxglove
Scientific Name: Agalinis auriculata
Status: Species of Concern

Common Name: Hall's bullrush
Scientific Name: Schoenoplectus hallii
Status: Under Review

Common Name: Cleft, phlox
Scientific Name: Phlox bifida stellaria
Status: Species of Concern

Common Name: No common name
Scientific Name: Thismia americana
Status: Species of Concern

Group:Insects

Common Name: Frison's seratellan mayfly
Scientific Name: Seratella frisoni
Status: Species of Concern

Common Name: Smyth's apamea moth
Scientific Name: Apamea smythi
Status: Species of Concern

Common Name: Pecatonica River mayfly
Scientific Name: Acanthometropus pecatonica
Status: Species of Concern

Common Name: Prairie mole cricket
Scientific Name: Gryllotalpa major
Status: Species of Concern

Federal Endangered Species from the U.S. Fish and Wildlife for IL State (Continued...)

Common Name: [Unnamed] noctuid moth — Scientific Name: Schinia indiana
Status: Species of Concern

Common Name: Variegated false water penny — Scientific Name: Dicranopselaphus variegatus
Status: Species of Concern

Common Name: Redveined prairie leafhopper — Scientific Name: Aflexia rubranura
Status: Species of Concern

Common Name: Belfragi's chlorochroan bug — Scientific Name: Chlorochroa belfragii
Status: Species of Concern

Common Name: Argo ephemerellan mayfly — Scientific Name: Ephemerella argo
Status: Species of Concern

Common Name: [Unnamed] looper moth — Scientific Name: Euchlaena milnei
Status: Species of Concern

Common Name: Rusty patched bumble bee — Scientific Name: Bombus affinis
Status: Under Review

Common Name: Linda's Roadside-skipper — Scientific Name: Amblyscirtes linda
Status: Under Review

Common Name: Monarch buttefly — Scientific Name: Danaus plexippus plexippus
Status: Under Review

Common Name: Diana fritillary — Scientific Name: Speyeria diana
Status: Species of Concern

Common Name: Elusive clubtail — Scientific Name: Stylurus notatus
Status: Species of Concern

Common Name: Regal fritillary — Scientific Name: Speyeria idalia
Status: Under Review

Common Name: Illinois cave beetle — Scientific Name: Pseudanophthalmus illinoisensis
Status: Species of Concern

Common Name: Black lordithon rove beetle — Scientific Name: Lordithon niger
Status: Species of Concern

Common Name: [Unnamed] noctuid moth — Scientific Name: Papaipema aerata
Status: Species of Concern

Group:Lichens

Common Name: Lea's Bog lichen — Scientific Name: Phaeophyscia leana
Status: Under Review

Group:Mammals

Common Name: Southeastern myotis — Scientific Name: Myotis austroriparius
Status: Species of Concern

Common Name: Wisconsin puma — Scientific Name: Felis concolor schorgeri

NATURAL AREAS MAP FINDINGS

Federal Endangered Species from the U.S. Fish and Wildlife for IL State (Continued...)
Status: Species of Concern

Group:Reptiles

Common Name: Yellow mud turtle — Scientific Name: Kinosternon flavescens flavescens
Status: Species of Concern

Common Name: Kirtland's snake — Scientific Name: Clonophis kirtlandii
Status: Under Review

Common Name: Blanding's turtle — Scientific Name: Emydoidea blandingii
Status: Under Review

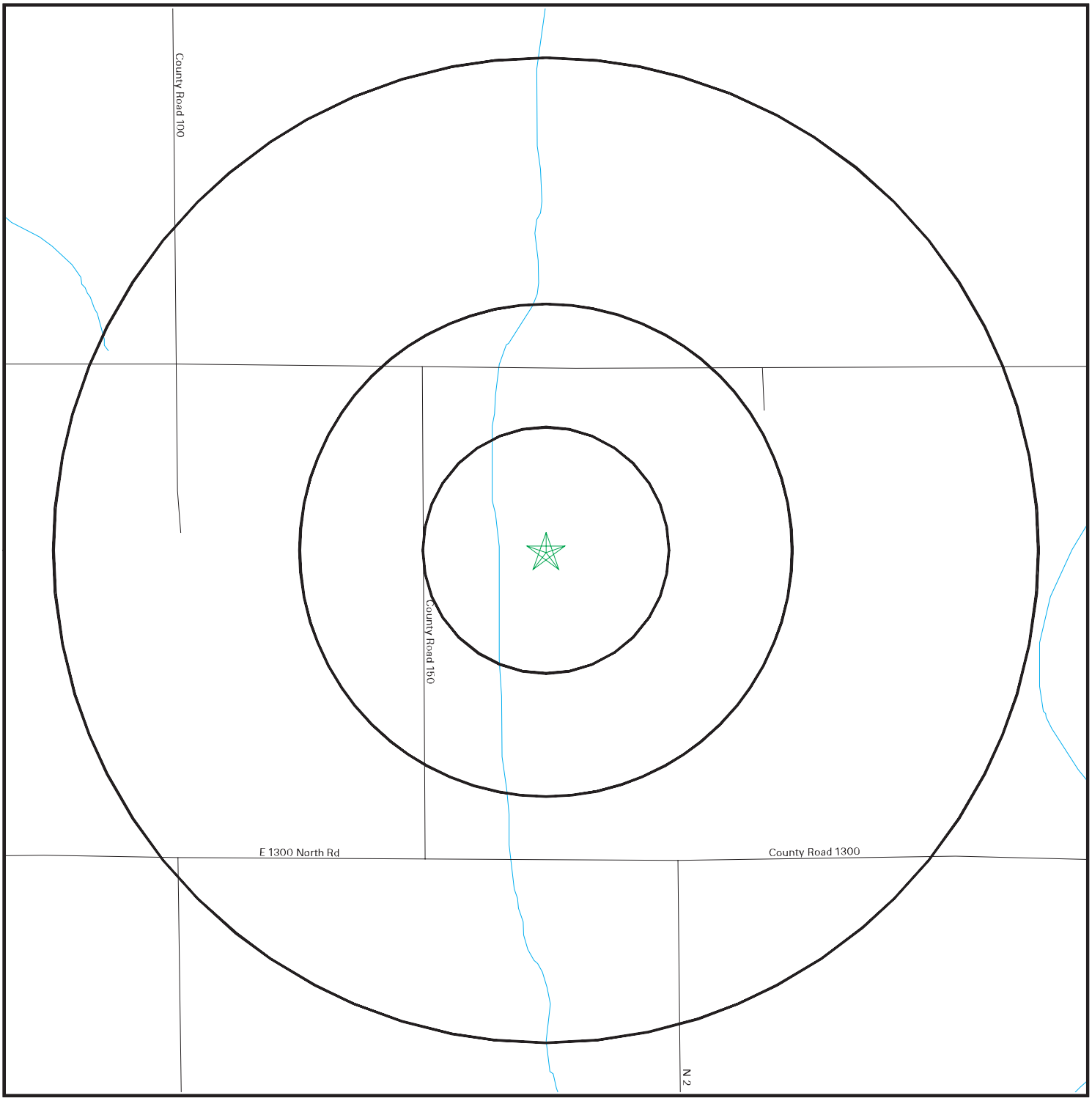
Group:Snails

Common Name: Carinate pillsnail — Scientific Name: Euchemotrema hubrichti
Status: Species of Concern

Map ID Direction Distance Distance (ft.)	EDR ID Database

No mapped sites were found in EDR's search of available government records within the search radius around the target property.

Historic Sites Map



- Target Property
- Streets
- County Boundary
- Waterways
- Water
- Historic Sites
- Federal Historic Areas
- State Historic Areas
- US Indian Reservations
- Scenic Trail

SITE NAME:	Sangchris Energy Center	CLIENT:	ECS Midwest LLC
ADDRESS:	200 E 1400 NORTH RD PAWNEE IL 62558	CONTACT:	Paige Adams
		INQUIRY #:	7033271.1s
LAT/LONG:	39.548095 / 89.501223	DATE:	June 27, 2022

HISTORIC SITES MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.) **EDR ID** **Database**

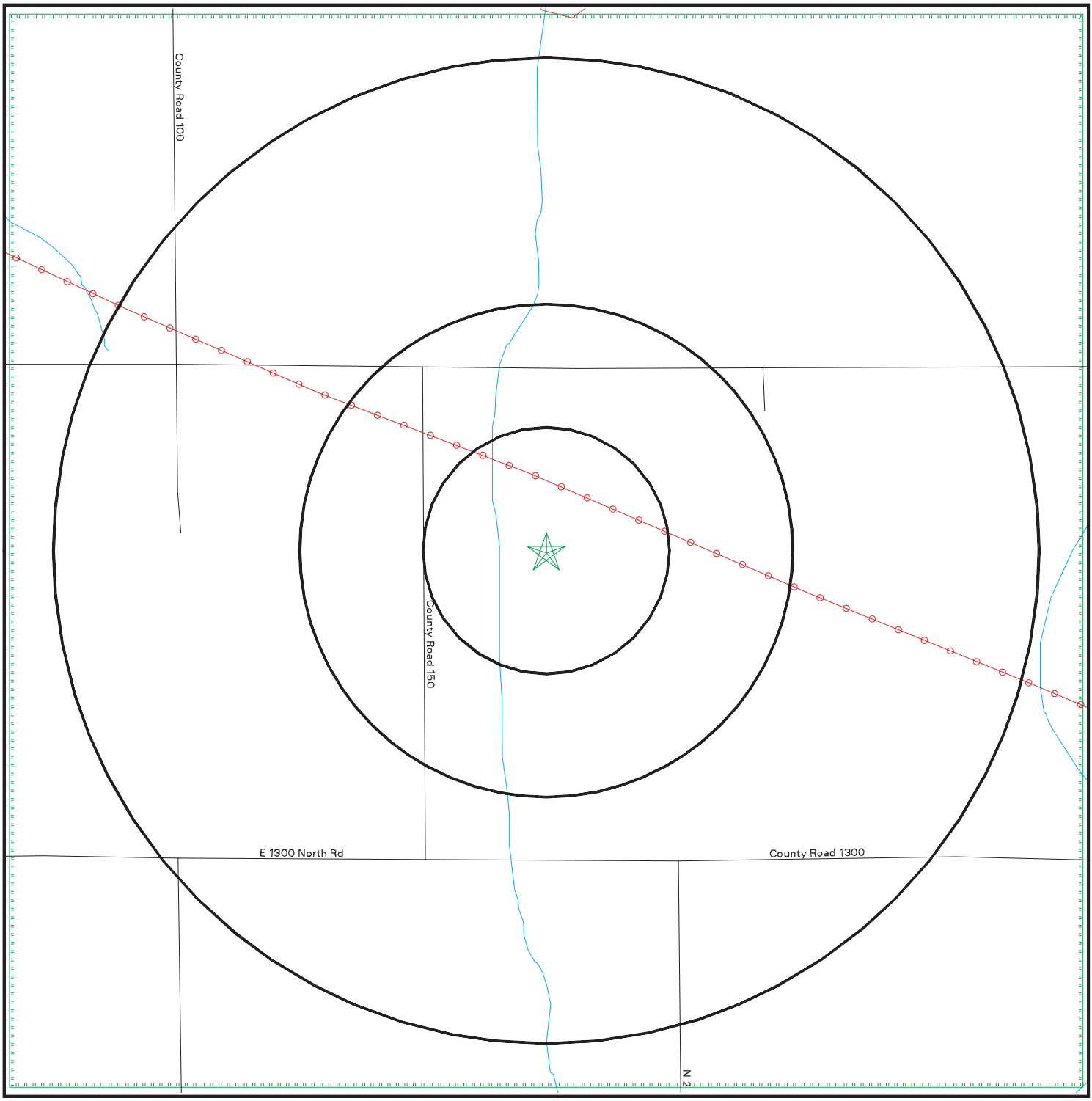
No mapped sites were found in EDR's search of available government records within the search radius around the target property.

UNMAPPABLE HISTORIC SITES

Due to poor or inadequate address information, the following sites were not mapped:	Status EDR ID Database

No unmapped sites were found in EDR's search of available government records.

Flood Plain Map



- Major Roads
- Contour Lines
- Waterways
- County Boundary
- Power Lines
- Pipe Lines
- Fault Lines
- Water
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- Electronic FEMA data available
- Electronic FEMA data not available

SITE NAME: Sangchris Energy Center	CLIENT: ECS Midwest LLC
ADDRESS: 200 E 1400 NORTH RD PAWNEE IL 62558	CONTACT: Paige Adams INQUIRY #: 7033271.1s
LAT/LONG: 39.548095 / 89.501223	DATE: June 27, 2022

FLOOD PLAIN MAP FINDINGS

Source: FEMA FIRM Flood Data, FEMA Q3 Flood Data

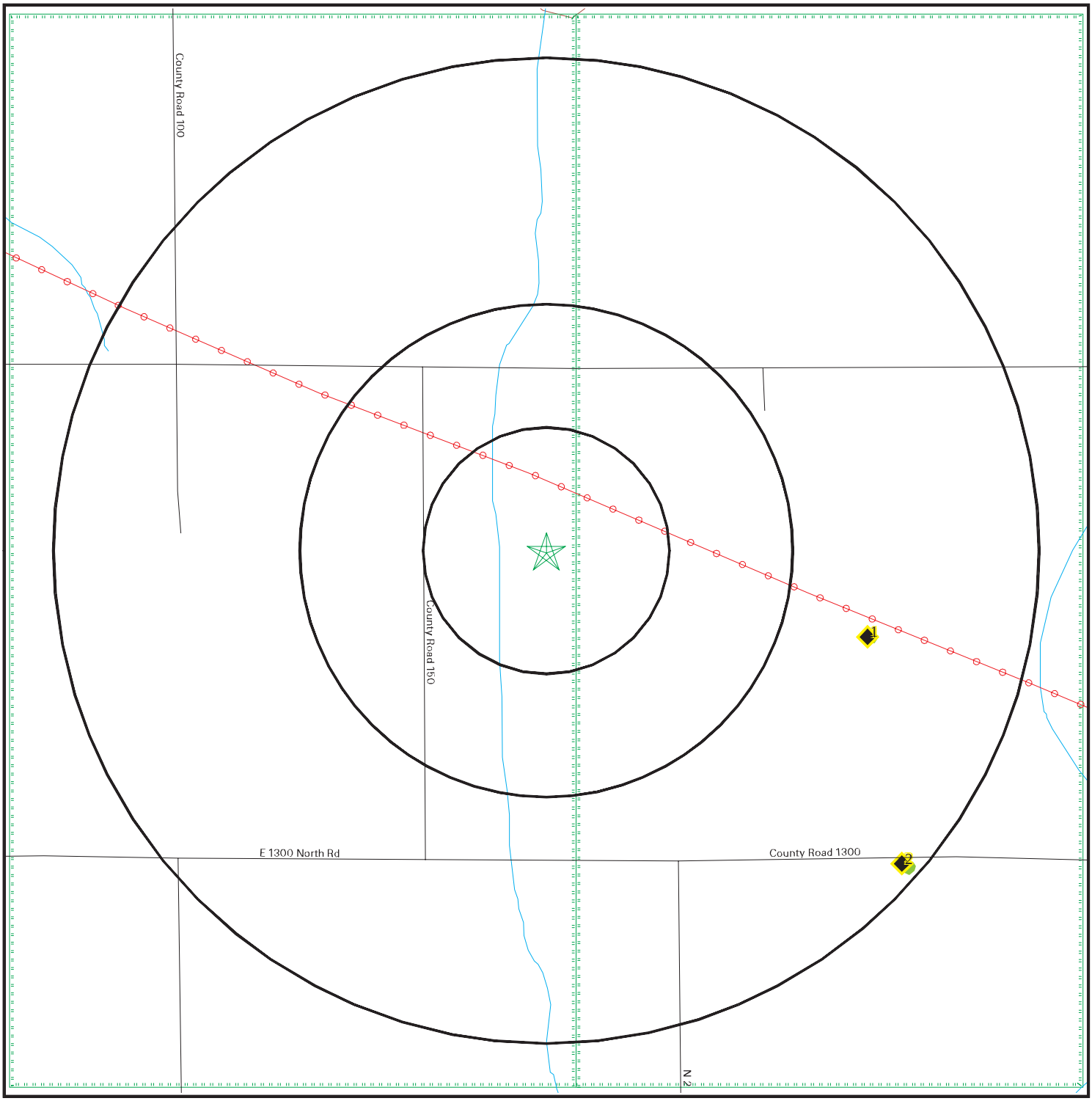
Flood Panel Number	**FEMA Source Type**

Flood Plain panel at target property:
17167C0575F (FEMA FIRM Flood data)

Additional Flood Plain panel(s) in search area:
17021C0250D (FEMA FIRM Flood data)

Map ID Direction Distance Distance (ft.)	Description	Database

Wetlands Map



Major Roads
Contour Lines
Waterways
County Boundary
Power Lines
Fault Lines
Water
National Wetlands Inventory
State Wetlands
Electronic NWI data available
Electronic NWI data not available

SITE NAME:	Sangchris Energy Center	CLIENT:	ECS Midwest LLC
ADDRESS:	200 E 1400 NORTH RD PAWNEE IL 62558	CONTACT:	Paige Adams
		INQUIRY #:	7033271.1s
LAT/LONG:	39.548095 / 89.501223	DATE:	June 27, 2022

WETLANDS MAP FINDINGS

Source: Fish and Wildlife Service NWI data

NWI hardcopy map at target property: Pawnee
Additional NWI hardcopy map(s) in search area:
Kincaid

Map ID Direction Distance Distance (ft.)	Code and Description*	Database
1 ESE 1/2-1 mi 3566	PEMAf [P] Palustrine [EM] Emergent [A] Temporarily Flooded [f] Farmed Lat/Lon: 39.545559 / -89.489014	NWI
2 SE 1/2-1 mi 5076	PEMAf [P] Palustrine [EM] Emergent [A] Temporarily Flooded [f] Farmed Lat/Lon: 39.538891 / -89.487709	NWI

*See Wetland Classification System for additional information.

WETLANDS CLASSIFICATION SYSTEM

National Wetland Inventory Maps are produced by the U.S. Fish and Wildlife Service, a sub-department of the U.S. Department of the Interior. In 1974, the U.S. Fish and Wildlife Service developed a criteria for wetland classification with four long range objectives:

- to describe ecological units that have certain homogeneous natural attributes,
- to arrange these units in a system that will aid decisions about resource management,
- to furnish units for inventory and mapping, and
- to provide uniformity in concepts and terminology throughout the U.S.

High altitude infrared photographs, soil maps, topographic maps and site visits are the methods used to gather data for the productions of these maps. In the infrared photos, wetlands appear as different colors and these wetlands are then classified by type. Using a hierarchical classification, the maps identify wetland and deepwater habitats according to:

- system
- subsystem
- class
- subclass
- modifiers

(as defined by Cowardin, et al. U.S. Fish and Wildlife Service FWS/OBS 79/31. 1979.)

The classification system consists of five systems:

1. marine
2. estuarine
3. riverine
4. lacustrine
5. palustrine

The marine system consists of deep water tidal habitats and adjacent tidal wetlands. The riverine system consists of all wetlands contained within a channel. The lacustrine systems includes all nontidal wetlands related to swamps, bogs & marshes. The estuarine system consists of deepwater tidal habitats and where ocean water is diluted by fresh water. The palustrine system includes nontidal wetlands dominated by trees and shrubs and where salinity is below .5% in tidal areas. All of these systems are divided in subsystems and then further divided into class.

National Wetland Inventory Maps are produced by transferring gathered data on a standard 7.5 minute U.S.G.S. topographic map. Approximately 52 square miles are covered on a National Wetland Inventory map at a scale of 1:24,000. Electronic data is compiled by digitizing these National Wetland Inventory Maps.

SYSTEM **MARINE**

SUBSYSTEM **1 - SUBTIDAL** **2 - INTERTIDAL**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RF-REEF	OW-OPEN WATER / Unknown Bottom	AB-AQUATIC BED	RF-REEF	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 3 Rooted Vascular 5 Unknown Submergent	1 Coral 3 Worm		1 Algal 3 Rooted Vascular 5 Unknown Submergent	1 Coral 3 Worm	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic

SYSTEM **E - ESTUARINE**

SUBSYSTEM **1 - SUBTIDAL**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RF-REEF	OW-OPEN WATER / Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm	

SUBSYSTEM **2 - INTERTIDAL**

CLASS	AB-AQUATIC BED	RF-REEF	SB - STREAMBED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	EM-EMERGENT	SS-SCRUB SHRUB	FO-FORESTED
Subclass	1 Algal 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	2 Mollusk 3 Worm	1 Cobble- Gravel 2 Sand 3 Mud 4 Organic	1 Bedrock 2 Rubble	1 Cobble- Gravel 2 Sand 3 Mud 4 Organic	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen

SYSTEM — **R - RIVERINE**

SUBSYSTEM	1 - TIDAL	2 - LOWER PERENNIAL	3 - UPPER PERENNIAL	4 - INTERMITTENT	5 - UNKNOWN PERENNIAL
CLASS	RB-ROCK BOTTOM UB-UNCONSOLIDATED BOTTOM *SB-STREAMBED AB-AQUATIC BED RS-ROCKY SHORE US-UNCONSOLIDATED SHORE **EM-EMERGENT OW-OPEN WATER/ Unknown Bottom				
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Bedrock 2 Rubble 3 Cobble-Gravel 4 Sand 5 Mud 6 Organic 7 Vegetated	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	2 Nonpersistent

* STREAMBED is limited to TIDAL and INTERMITTENT SUBSYSTEMS, and comprises the only CLASS in the INTERMITTENT SUBSYSTEM.
**EMERGENT is limited to TIDAL and LOWER PERENNIAL SUBSYSTEMS.

SYSTEM — **L - LACUSTRINE**

SUBSYSTEM — **1 - LIMNETIC**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	

SUBSYSTEM — **2 - LITTORAL**

CLASS	RB-ROCK BOTTOM	UB-UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	RS-ROCKY SHORE	US-UNCONSOLIDATED SHORE	EM-EMERGENT	OW-OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Bedrock 2 Rubble	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	2 Nonpersistent	

SUBSYSTEM — **P - PALUSTRINE**

CLASS	RB--ROCK BOTTOM	UB--UNCONSOLIDATED BOTTOM	AB-AQUATIC BED	US--UNCONSOLIDATED SHORE	ML--MOSS-LICHEN	EM--EMERGENT	SS--SCRUB-SHRUB	FO--FORESTED	OW-OPEN WATER/ Unknown
Bottom									
Subclass	1 Bedrock 2 Rubble 3 Mud 4 Organic	1 Cobble-Gravel 2 Sand	1 Algal 2 Aquatic Moss 3 Rooted Vascular 4 Floating Vascular 5 Unknown Submergent 6 Unknown Surface	1 Cobble-Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated	1 Moss 2 Lichen	1 Persistent 2 Nonpersistent	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-Leaved Deciduous 2 Needle-Leaved Deciduous 3 Broad-Leaved Evergreen 4 Needle-Leaved Evergreen 5 Dead 6Deciduous 7 Evergreen	

MODIFIERS

In order to more adequately describe wetland and deepwater habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME

Non-Tidal

A Temporarily Flooded
B Saturated
C Seasonally Flooded
D Seasonally Flooded/ Well Drained
E Seasonally Flooded/ Saturated
F Semipermanently Flooded
G Intermittently Exposed

Tidal

H Permanently Flooded
J Intermittently Flooded
K Artificially Flooded
W Intermittently Flooded/Temporary
Y Saturated/Semipermanent/ Seasonal
Z Intermittently Exposed/Permanent
U Unknown

Coastal Halinity

K Artificially Flooded
L Subtidal
M Irregularly Exposed
N Regularly Flooded
P Irregularly Flooded

Inland Salinity

*S Temporary-Tidal
*R Seasonal-Tidal
*T Semipermanent -Tidal
V Permanent -Tidal
U Unknown

*These water regimes are only used in tidally influenced, freshwater systems.

pH Modifiers for WATER CHEMISTRY

		all Fresh Water
1 Hyperhaline	7 Hypersaline	
2 Euhaline	8 Eusaline	a Acid
3 Mixohaline (Brackish)	9 Mixosaline	t Circumneutral
4 Polyhaline	0 Fresh	i Alkaline
5 Mesohaline		
6 Oligohaline		
0 Fresh		

SOIL

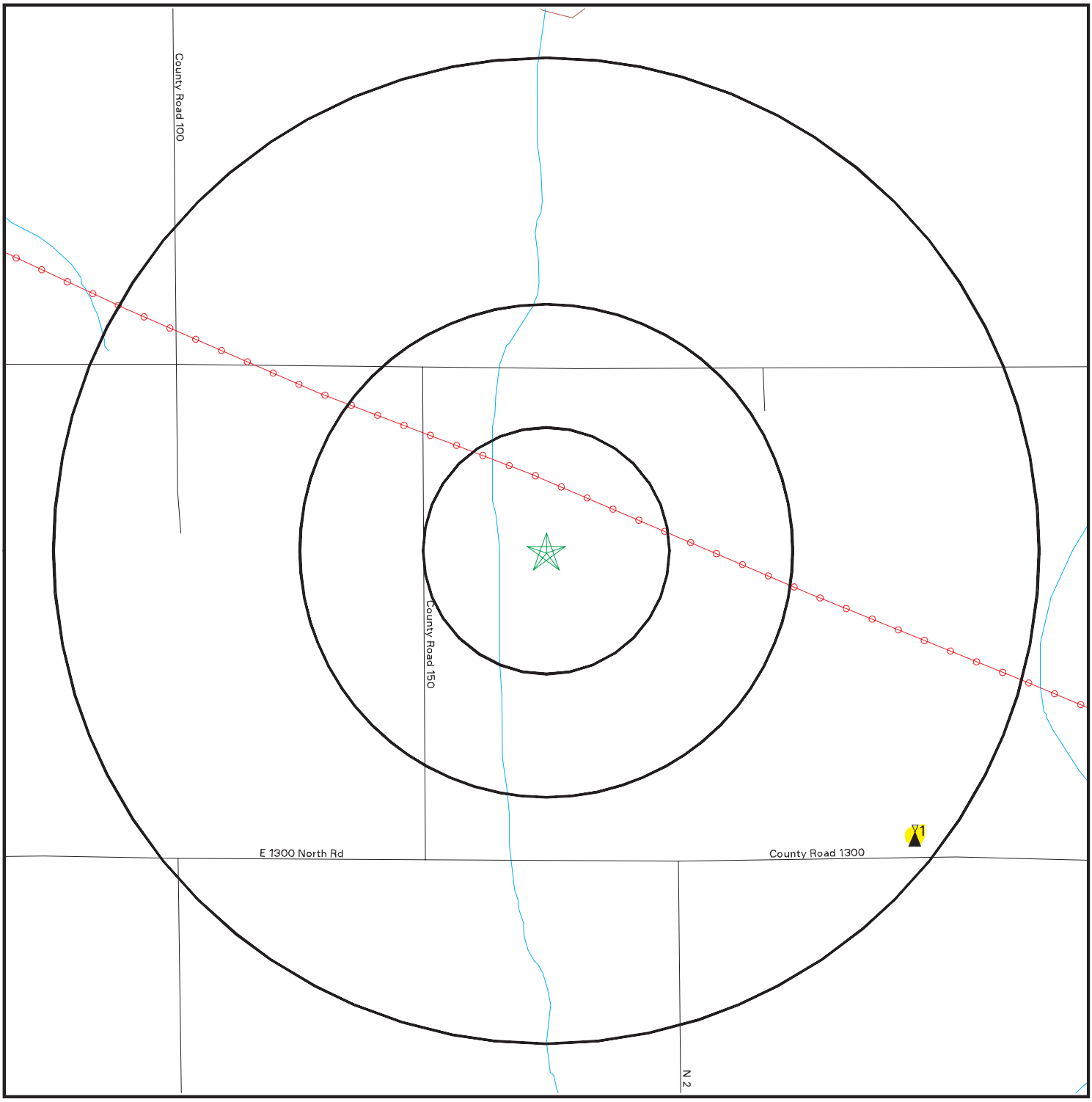
g Organic
n Mineral

SPECIAL MODIFIERS

b Beaver
d Partially Drained/Ditched
f Farmed
h Diked/Impounded
r Artificial Substrate
s Spoil
x Excavated

Source: U.S. Department of the Interior
Fish and Wildlife Service
National Wetlands Inventory

FCC & FAA Sites Map



Streets
Contour Lines
County Boundary
Waterways
Power Lines
Water
Sites

SITE NAME:	Sangchris Energy Center	CLIENT:	ECS Midwest LLC
ADDRESS:	200 E 1400 NORTH RD PAWNEE IL 62558	CONTACT:	Paige Adams
		INQUIRY #:	7033271.1s
LAT/LONG:	39.548095 / 89.501223	DATE:	June 27, 2022

FCC & FAA SITES MAP FINDINGS
TOWERS

Map ID Direction Distance Distance (ft.)		EDR ID Database
1 SE 1/2-1 mi 4989		DOF161200082012 FAA DOF
Obstacle #:	17-001583	
Obstacle Type:	TOWER	
Quantity:	1	
Ft Above Ground:	215	
Ft Above Sea Level:	827	
Verification Status:	Unverified	
Lighting:	Red	
Horizontal Accuracy:	Not Reported	
Vertical Accuracy:	Not Reported	
Markings:	Unknown	
Action:	Dismantle	
Action Date:	1986112	

FCC & FAA SITES MAP FINDINGS
AIRPORTS

EDR ID
Database

No Sites Reported.

FCC & FAA SITES MAP FINDINGS
POWERLINES

EDR ID
Database

121888
POWERLINES

Voltage:	138
Range:	Not Reported
Hi voltage:	0
Volt cat:	70-138 kV
Type:	Alternating current
Status:	Active
Corridor:	Single line
Owner:	Ameren Corp
Owner id:	AMECOR
Num owners:	Single Owner
Operator:	Ameren Illinois Company
Operator id:	AMERENIL
Last owner:	Not Reported
Last own id:	Not Reported
Last oper:	Ameren CIPS
Last oper id:	ACIPS
Mileage:	12.16705091

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Various Federal laws and executive orders address specific environmental concerns. NEPA requires the responsible offices to integrate to the greatest practical extent the applicable procedures required by these laws and executive orders. EDR provides key contacts at agencies charged with implementing these laws and executive orders to supplement the information contained in this report.

NATURAL AREAS
Wilderness Areas
Government Records Searched in This Report

FED_LAND: Federal Lands
Source: USGS
Telephone: 703-648-5094
Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.
- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2005

US NWP: National Wilderness Preservation System
This map layer consists of National Wilderness Preservation System areas of 320 acres or more, in the United States, Puerto Rico, and the U.S. Virgin Islands. Some established wilderness areas which are larger than 320 acres are not included in this map layer because their boundaries were not available from the owning or administering agency.
Source: U.S. Geological Survey.
Telephone: 888-275-8747

Federal Contacts for Additional Information

National Park Service, Midwest Region
1709 Jackson Street
Omaha NE 68102
402-221-3471

USDA Forest Service, Eastern
310 West Wisconsin Avenue
Milwaukee WI 53203
414-297-3693

BLM - Eastern States Office
7450 Boston Blvd.
Springfield VA 22153
703-440-1713

Fish & Wildlife Service, Fish & Wildlife Region 3
BHW Federal Building One Federal Drive
Fort Snelling MN 55111-4056
612-713-5230

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Wildlife Preserves, Sanctuaries and Refuges
Government Records Searched in This Report

FED_LAND: Federal Lands
Source: USGS
Telephone: 703-648-5094
Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.
- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2005

IL Natural Areas by County: Natural Areas
Source: Department of Natural Resources.
Telephone: 217-785-8586

IL Natural Areas: Natural Areas Inventory
The Illinois Natural Areas Inventory (INAI) provides a set of information about high quality natural areas, habitats of endangered species, and other significant natural features. Information from the INAI is used to guide and support land acquisition and protection programs by all levels of government as well as by private landowners and conservation organizations
Source: Department of Natural Resources.
Telephone: 217-782-2685

IL State Conservation Area: DNR Properties Boundary
State forest, state fish and wildlife area, state habitat area, state memorial, state natural area, state park, state recreation area, state trail, and state wildlife area.
Source: Department of Natural Resources.
Telephone: 217-782-6302

IL Nature Preserves by County: IL Nature Preserves
A nature preserve is an area of land or water in public or private ownership that is formally dedicated pursuant to the terms of the law, to be maintained in its natural condition.
Source: Department of Natural Resources.
Telephone: 217-785-8586

US ACEC: Areas of Critical Environmental Concern Designated Polygons
The designated ACECs are "areas within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems of processes, or to protect life and safety from natural hazards
Source: Bureau of Land Management.
Telephone: 202-912-7352

US Critical Water Habitat: US Critical Water Habitat
When a species is proposed for listing as endangered or threatened under the Endangered Species Act, the U.S. Fish and Wildlife Service must consider whether there are areas of habitat believed to be essential the species conservation. Those areas may be proposed for designation as critical habitat. Critical habitat is a term defined and used in the Act.
Source: US Fish & Wildlife Services.
Telephone: 970-226-9468

US Proclamation Boundaries: US Proclamation Boundaries
Approved, Proclamation or Extent Boundary
Source: USGS.
Telephone: 208-301-8288

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

US Scenic River: National Wild and Scenic River System
National Wild and Scenic Rivers System
Source: USGS National Atlas and the Interagency Wild and Scenic River Coordinating Council.
Telephone: 509-546-8333

US NCED: National Conservation Easement Database
NCED shows a comprehensive picture of privately owned conservation easement lands in the U.S. The NCED will allow better strategic planning for conservation and development by merging data on land protection with biodiversity and resources, improving ecological and economic plans and investments.
Source: U.S Endowment for Forestry and Communities.
Telephone: 202-621-1647

US Critical Land Habitat: US Critical Land Habitat
When a species is proposed for listing as endangered or threatened under the Endangered Species Act, the U.S. Fish and Wildlife Service must consider whether there are areas of habitat believed to be essential the species conservation. Those areas may be proposed for designation as critical habitat. Critical habitat is a term defined and used in the Act.
Source: US Fish & Wildlife Services.
Telephone: 970-226-9468

Federal Contacts for Additional Information

Fish & Wildlife Service, Fish & Wildlife Region 3
BHW Federal Building One Federal Drive
Fort Snelling MN 55111-4056
612-713-5230

State Contacts for Additional Information

Dept. of Natural Resources
217-782-6302

Wild and scenic rivers

Government Records Searched in This Report

FED_LAND: Federal Lands
Source: USGS
Telephone: 703-648-5094
Federal data from Bureau of Land Management, National Park Service, Forest Service, and Fish and Wildlife Service.
- National Parks
- Forests
- Monuments
- Wildlife Sanctuaries, Preserves, Refuges
- Federal Wilderness Areas.

Date of Government Version: 12/31/2005

Federal Contacts for Additional Information

Fish & Wildlife Service, Fish & Wildlife Region 3
BHW Federal Building One Federal Drive
Fort Snelling MN 55111-4056
612-713-5230

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Endangered Species

Government Records Searched in This Report

IL Endangered Species by County: Natural Heritage Database
Species that are listed as Threatened or Endangered by the state of Illinois, or by the federal government.
Source: Natural History Survey.
Telephone: 217-785-8774

Federal Endangered Species by County: Threatened and Endangered Species Listing
Endangered, Threatened, Emergency Listing (Endangered), Emergency Listing (Threatened), Experimental Population (Essential), Experimental Population (Non-Essential), Similarity of Appearance (Endangered), Similarity of Appearance (Threatened).
Source: US Fish and Wildlife Services.
Telephone: 800-344-9453

Federal Contacts for Additional Information

Fish & Wildlife Service, Fish & Wildlife Region 3
BHW Federal Building One Federal Drive
Fort Snelling MN 55111-4056
612-713-5230

State Contacts for Additional Information

Natural Heritage Division, Dept. of Natural Resources
217-785-8774

LANDMARKS, HISTORICAL, AND ARCHEOLOGICAL SITES
Historic Places

Government Records Searched in This Report

National Register of Historic Places:
The National Register of Historic Places is the official federal list of districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture. These contribute to an understanding of the historical and cultural foundations of the nation.
The National Register includes:
- All prehistoric and historic units of the National Park System;
- National Historic Landmarks, which are properties recognized by the Secretary of the Interior as possessing national significance; and
- Properties significant in American, state, or local prehistory and history that have been nominated by State Historic Preservation Officers, federal agencies, and others, and have been approved for listing by the National Park Service.

Date of Government Version: 07/19/2015

IL Historic Sites: Historic and Architectural Resources Geographic Information System
The Historic and Architectural Resources Geographic Information System (HARGIS) is the public portal to Illinois historic buildings, structures, sites, objects, and districts.
Source: Illinois Historic Preservation Agency.
Telephone: 217-785-4234

Potomac Heritage National Scenic Trail: Potomac Heritage National Scenic Trail
Source: Potomac Heritage NST Office.
Telephone: 304-535-4014

Natchez Trace National Scenic Trail: Natchez Trace National Scenic Trail
Source: Natchez Trace Parkway.
Telephone: 800-305-7417

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Indian Reservations: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.
Source: USGS.
Telephone: 202-208-3710

US Trails: US Trails
This dataset contains a baseline inventory and condition assessment of all non-motorized trails on U.S. Fish and Wildlife Service lands as part of the National Trails Inventory Program conducted by the US Dept. of Transportation, Federal Highway Administration, Federal Lands Highway Division.
Source: U.S. Fish and Wildlife.
Telephone: 703-358-2205

Federal Contacts for Additional Information

Park Service; Advisory Council on Historic Preservation
1849 C Street NW
Washington, DC 20240
Phone: (202) 208-6843

State Contacts for Additional Information

Illinois Historic Preservation Agency
217-785-1153

Indian Religious Sites

Government Records Searched in This Report

Indian Reservations:
This map layer portrays Indian administrated lands of the United States that have any area equal to or greater than 640 acres.
Source: USGS
Phone: 888-275-8747
Date of Government Version: 12/31/2005

Federal Contacts for Additional Information

Department of the Interior- Bureau of Indian Affairs
Office of Public Affairs
1849 C Street, NW
Washington, DC 20240-0001
Office: 202-208-3711
Fax: 202-501-1516

National Association of Tribal Historic Preservation Officers
1411 K Street NW, Suite 700
Washington, DC 20005
Phone: 202-628-8476
Fax: 202-628-2241

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

State Contacts for Additional Information
A listing of local Tribal Leaders and Bureau of Indian Affairs Representatives can be found at:
http://www.doi.gov/bia/areas/agency.html

FLOOD PLAIN, WETLANDS AND COASTAL ZONE

Flood Plain Management
Government Records Searched in This Report
Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts Special Flood Hazard Areas (1%) and 0.2% Annual Chance of Flood Hazard as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Phone: 877-336-2627
Date of Government Version: 2015, 2003

Federal Contacts for Additional Information
Federal Emergency Management Agency
877-3362-627

State Contacts for Additional Information
Illinois Emergency Management Agency
217-782-7860

Wetlands Protection
Government Records Searched in This Report
NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010, and 2015 from the U.S. Fish and Wildlife Service.
Source: U.S. Fish and Wildlife Service.
Phone: 608-238-9333
Date of Government Version: 05/28/2015

State Wetlands Data: Wetland Inventory
Source: Illinois State Geological Survey
Telephone: 217-333-4747

Federal Contacts for Additional Information
Fish & Wildlife Service
813-570-5412

State Contacts for Additional Information
Dept. of Natural Resources
217-782-6302

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Coastal Zone Management
Government Records Searched in This Report

CAMA Management Areas
Dept. of Env., Health & Natural Resources
919-733-2293

Federal Contacts for Additional Information

Office of Ocean and Coastal Resource Management
N/ORM, SSMC4
1305 East-West Highway
Silver Spring, Maryland 20910
301-713-3102

State Contacts for Additional Information

FCC & FAA SITES MAP
For NEPA actions that come under the authority of the FCC, the FCC requires evaluation of Antenna towers and/or supporting structures that are to be equipped with high intensity white lights which are to be located in residential neighborhoods, as defined by the applicable zoning law.

Government Records Searched in This Report

Cellular
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554
888-225-5322

Antenna Structure Registration
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554
888-225-5322

AM Antenna
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554
888-225-5322

FM Antenna
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554
888-225-5322

FAA Digital Obstacle File
Federal Aviation Administration (FAA)
1305 East-West Highway, Station 5631
Silver Sprinng, MD 20910-3281
Telephone: 301-713-2817
Describes known obstacles of interest to aviation users in the US. Used by the Federal Aviation Administration (FAA) and the National Oceanic and Atmospheric Administration to manage the National Airspace System.

KEY CONTACTS & GOVERNMENT RECORDS SEARCHED

Airport Landing Facilities
Federal Aviation Administration
Telephone (800) 457-6656
Private and public use landing facilities.

Electric Power Transmission Line Data
PennWell Corporation
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Excessive Radio Frequency Emission
For NEPA actions that come under the authority of the FCC, Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the determination of whether the particular facility, operation or transmitter would cause human exposure to levels of radio frequency in excess of certain limits.

Federal Contacts for Additional Information
Office of Engineering and Technology
Federal Communications Commission
445 12th Street SW
Washington, DC 20554
Phone: 202-418-2470

OTHER CONTACT SOURCES

Department of Commerce & Community Affairs, James R. Thompson Center
100 West Randolph, Suite 3-400
Chicago IL 60601
312-814-6028

STREET AND ADDRESS INFORMATION

Attachment C – USFWS IPaC Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Illinois-Iowa Ecological Services Field Office
Illinois & Iowa Ecological Services Field Office
1511 47th Ave
Moline, IL 61265-7022
Phone: (309) 757-5800 Fax: (309) 757-5807

In Reply Refer To: July 28, 2022
Project code: 2022-0068569
Project Name: SangChris Energy Center

Subject: Consistency letter for the 'SangChris Energy Center' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Dear Paige Adams:

The U.S. Fish and Wildlife Service (Service) received on July 28, 2022 your effects determination for the 'SangChris Energy Center' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take"[1] of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

- Eastern Prairie Fringed Orchid *Platanthera leucophaea* Threatened

- Indiana Bat *Myotis sodalis* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

---

[1]Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

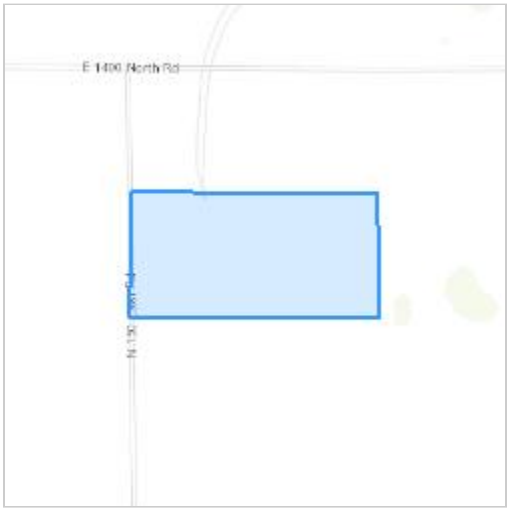
SangChris Energy Center

2. Description

The following description was provided for the project 'SangChris Energy Center':

CIA

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.54804995,-89.5010718678077,14z



Determination Key Result

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

Determination Key Description: Northern Long-eared Bat 4(d) Rule
This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

Determination Key Result

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

Qualification Interview

1. Is the action authorized, funded, or being carried out by a Federal agency?

   No

2. Will your activity purposefully **Take** northern long-eared bats?

   No

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

   Automatically answered
   No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

   Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0.

   Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

   No

6. Will the action involve Tree Removal?

   No

Project Questionnaire

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type ‘0’ in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31

0

If the project includes timber harvest, report the appropriate acreages below. Otherwise, type ‘0’ in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type ‘0’ in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31

0

If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type ‘0’ in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

IPaC User Contact Information

Agency: ECS
Name: Paige Adams
Address: 1575 Barclay Boulevard
City: Buffalo Grove
State: IL
Zip: 60089
Email adamspaige173@gmail.com
Phone: 7738025293

Attachment D – EcoCAT Response Letter

Eco CAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Applicant: ECS
Contact: Paige Adams
Address: 1575 Barclay Boulevard
Buffalo Grove, IL 60089

IDNR Project Number: 2214908
Date: 06/27/2022

Project: SangChris Energy Center
Address: 1398 Country Road 150 East, Pawnee

Description: ECS is conducting a Critical Issues Analysis of the property located at 1398 Country Road 150 East in Pawnee, Illinois. The Critical Issues Analysis includes the consultation of Eco CAT for a natural resources review.

Natural Resource Review Results

This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Christian

Township, Range, Section:
13N, 4W, 25
13N, 4W, 26

IL Department of Natural Resources Contact
Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

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EcoCAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

EcoCAT Receipt

Project Code 2214908

APPLICANT	DATE
ECS Paige Adams 1575 Barclay Boulevard Buffalo Grove, IL 60089	6/27/2022

DESCRIPTION	FEE	CONVENIENCE FEE	TOTAL PAID
EcoCAT Consultation	$ 25.00	$ 1.00	$ 26.00

TOTAL PAID $ 26.00

Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702
217-785-5500
dnr.ecocat@illinois.gov

Attachment E – Photographs

Photograph 1: Agricultural operations within the PSA.

Photograph 2: Agricultural operations within the PSA.

Photograph 3: Agricultural operations within the PSA.

Photograph 4: A drainage ditch observed in the vicinity of the PSA.