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MISSOURI PUBLIC SERVICE COMMISSION

FILE NO. EA-2026-0183

SURREBUTTAL TESTIMONY

OF

ROBERT B. DIXON

ON

BEHALF OF

UNION ELECTRIC COMPANY

D/B/A AMEREN MISSOURI

**St. Louis, Missouri
September, 2026**

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SURREBUTTAL TESTIMONY

OF

ROBERT B. DIXON

FILE NO. EA-2026-0183

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Robert B. Dixon. My business address is One Ameren Plaza,
1901 Chouteau Ave., St. Louis, Missouri.

Q. By whom and in what capacity are you employed?

A. I am employed by Union Electric Company d/b/a Ameren Missouri
("Ameren Missouri", or "Company") as Vice President of Regulatory and Legislative
Affairs.

**Q. Are you the same Robert B. Dixon that submitted Direct Testimony in
this case?**

A. Yes, I am.

II. PURPOSE OF TESTIMONY

Q. To what testimony or issues are you responding?

A. The purpose of my surrebuttal testimony is to respond to certain aspects
of the Rebuttal Testimony of Office of the Public Counsel ("OPC") witness Dr. Geoff
Marke; to provide additional context for the Commission's evaluation of this case in light
of Staff's and OPC's conditional support for issuing certificates of convenience and

1 necessity (“CCNs”); and to address issues raised at the local public hearings, principally
2 regarding the Millcreek BESS facility.

3 My testimony explains why timely resource development is necessary to support
4 reliable electric service, Missouri’s economic development needs, and long-term energy
5 security. It also explains why the Commission’s public interest analysis should balance
6 local concerns with the broader needs of all Missouri customers, and why future questions
7 regarding cost allocation, rate design, and large-load customer responsibility should be
8 addressed in the appropriate ratemaking proceedings rather than used as a basis to delay
9 the requested certificates.

10 **Q. What are the principal issues the Commission should focus on in**
11 **evaluating your Surrebuttal Testimony?**

12 A. The central question in this proceeding is whether the proposed facilities
13 are necessary or convenient for Ameren Missouri to fulfill its obligation to provide safe,
14 adequate, and reliable electric service. When the Commission focuses on that question, the
15 record demonstrates a clear need for the proposed resources and supports approval of the
16 requested CCNs. The record does not, however, support delaying those certificates or
17 imposing conditions that would move future ratemaking issues into this CCN proceeding.
18 Company witness Steve Wills addresses conditions proposed by Staff and OPC in his
19 Surrebuttal Testimony.

20 My Surrebuttal Testimony covers four principal issues that should guide the
21 Commission’s evaluation of this case:

- 22 • First, all parties acknowledge that the Projects are needed and otherwise meet the
23 *Tartan* factors, if the anticipated large load customers materialize as expected. My

- 1 testimony explains why that growth is not speculative, including the substantial
2 customer construction activity currently underway and the obligations already
3 under contract through Electric Service Agreements ("ESAs"), and that
4 implementing these resources now is needed to serve all of our customers.
- 5 • Second, public interest analysis requires balance. Local concerns should be heard
6 and taken seriously, but they must be evaluated alongside the broader needs of all
7 Missouri customers who depend on reliable, adequate, and reasonably priced
8 electric service, with the primary focus on the duty of the utility to provide safe and
9 adequate service to its entire body of customers and how the facilities at issue relate
10 to discharging that duty.
- 11 • Third, this is a CCN proceeding, not a ratemaking case. Questions regarding cost
12 allocation, rate design, and large-load customer responsibility are important, but
13 they should be addressed in ratemaking proceedings designed for those issues, not
14 used to delay a decision on whether the requested CCNs should be approved.
- 15 • Fourth, the concerns raised regarding the Millcreek BESS facility do not undermine
16 the need for that facility. Ameren Missouri understands that residents may have
17 questions about safety, environmental impacts, and local effects. The Company has
18 responded with factual information, public engagement, and supporting studies,
19 and the record does not show that those concerns make the facility unnecessary or
20 contrary to the public interest.

III. LARGE LOAD CUSTOMERS' GROWTH IS MATERIALIZING

Q. How do these Projects support Missouri's broader energy objectives?

A. Missouri's residents, businesses, and economy depend on reliable and available energy infrastructure. Electric demand is increasing significantly, including from economic development and large-load customers, while aged baseload generation plants are approaching retirement. As a result, Missouri will need additional generation resources to maintain reliability, support resource adequacy, and accommodate future growth. These Projects help position Missouri to meet those needs while strengthening the state's long-term energy security. In fact, none of the parties to this case dispute that the Projects are needed if the anticipated large load customers' load growth materializes.

Q. Staff and OPC suggest the Projects are being driven primarily by anticipated data center growth. How do you respond?

A. As I explained in my Direct Testimony, Missouri is experiencing significant economic development activity, including interest from data center large-load customers. The proposed Projects would support that growth while also serving the broader needs of Ameren Missouri's existing and future customers. Ameren Missouri's obligation is to plan for and serve all customers, and resource decisions are evaluated through integrated planning processes rather than the needs of any single customer. Projected load growth reinforces the importance of ensuring sufficient generation resources are available when needed. Regardless, the question in this CCN case is not *why* the facilities are needed but whether they *are* needed, and otherwise, whether the public interest supports approval of the CCNs. As Mr. Wills' Surrebuttal Testimony discusses in greater detail, the Staff and

1 OPC testimony about future ratemaking, including cost allocation among customers is
2 beyond the scope of this case.

3 **Q. Staff and OPC question whether the projected large-load growth will**
4 **actually materialize. What is your response?**

5 A. The record shows that the anticipated large-load growth is not speculative.
6 Ameren Missouri already has approximately 2.8 gigawatts of load under contract through
7 ESAs executed under the Commission-approved Large Load Tariff in File No. ET-2025-
8 0184. Those agreements create enforceable obligations for the large-load customers,
9 including minimum demand charges based on 80% of their contracted capacity, regardless
10 of their actual usage or whether their facilities are complete at the start of the ESA term.

11 Those obligations are significant for two reasons. First, they demonstrate that these
12 customers have made substantial contractual commitments and are not merely expressing
13 preliminary interest. Second, the ESAs and the Large Load Tariff also require Ameren
14 Missouri to be prepared to serve the contracted load and to plan for resource adequacy
15 based on that commitment. In addition, the ESAs include minimum terms, termination
16 obligations, and collateral requirements designed to ensure that large load customers satisfy
17 their payment obligations and provide financial protections for existing customers.

18 **Q. Aside from the fact that these customers are already obligated under**
19 **the ESAs, are there other indications that these loads are indeed "real"?**

20 A. Yes. In addition to the contractual obligations under the ESAs, observable
21 construction activity further demonstrates that these loads are materializing.

22 For one customer that has signed an ESA, approximately 250 construction
23 personnel are currently on site for construction of its data center. The majority of the

1 footings and foundations for the first building are complete, and the footings and
2 foundations for the second building are approximately halfway complete. Steel erection is
3 also underway on the first building, as is installation of roof decking, along with substantial
4 additional site work.

5 For another customer that has signed an ESA, approximately 600 construction
6 workers are mobilized at their construction site. The majority of the foundations and
7 footings for the first building are complete, steel erection is underway, and the pad for the
8 second building is being prepared. That work is occurring in addition to substantial site
9 development and road improvements being undertaken by the customer.

10 For the remaining customers with signed ESAs, site development work and
11 installation of infrastructure necessary to support the sites are underway.

12 Even apart from the 2.8 gigawatts of load already under contract through ESAs,
13 Ameren Missouri continues to see substantial additional economic development activity
14 within its service territory. As discussed in my Direct Testimony, that activity includes an
15 additional 0.6 gigawatts of construction agreements and approximately 4 gigawatts of
16 proposed projects with completed interconnection studies as of July 31, 2026. Those
17 figures do not include the additional pipeline of prospective non-large-load economic
18 development projects. This broader development activity further supports the need for
19 timely resource additions.

20 **Q. You have referenced large load customers' contractual obligations to**
21 **pay several times. What have they actually committed to paying under the terms of**
22 **the ESAs as existing customer safeguards?**

1 A. Based on the executed ESAs, large load customers have already made
2 substantial financial commitments that provide safeguards for existing customers. Under
3 the minimum demand charge provisions applicable to approximately 2.8 gigawatts of
4 contracted capacity, those customers would be obligated to pay approximately \$2.3 billion
5 if they terminated with the required 24 months' notice and approximately \$2.9 billion if
6 they terminated without that advance notice.

7 Those amounts reflect minimum required demand charges and do not include
8 usage-based charges. Stated differently, the \$2.3/\$2.9 billion figures represent the
9 customers' minimum financial commitment even under a scenario in which they execute
10 the ESAs but never take electric service. If the customers take service, they are also
11 obligated to pay for their actual electric usage in addition to maintaining the applicable
12 minimum commitments. These contractual requirements are important safeguards for
13 existing customers if any large-load project fails to materialize as expected.

14 **IV. PUBLIC INTEREST REQUIRES BALANCING LOCAL CONCERNS**
15 **WITH THE NEEDS OF ALL MISSOURI CUSTOMERS**

16 **Q. Why are these Projects in the public interest?**

17 A. As explained in the Direct Testimony of Company witnesses Matt Michels
18 and Steve Wills, and in my Direct Testimony, these Projects are needed to help meet
19 substantial increases in customer demand, maintain reliability, diversify Ameren
20 Missouri's resource portfolio, support compliance obligations, and provide resources
21 identified through long-term planning processes. Those needs exist irrespective of the
22 future ratemaking and cost allocation conditions proposed by Staff and OPC.

23 Failure to add needed resources would increase the risk of future supply shortages
24 and could increase customer costs associated with resource inadequacy. For that reason,

1 the public interest includes both local concerns and the broader need to ensure reliable and
2 adequate electric service for customers throughout Missouri.

3 **Q. Has Ameren Missouri considered public concern regarding these**
4 **Projects?**

5 A. Yes. Ameren Missouri takes community concerns seriously and has
6 participated in public hearings and local outreach efforts to hear and understand
7 stakeholder perspectives. Public concern about major energy infrastructure is real and
8 should not be minimized. Customers reasonably care about affordability, local impacts,
9 fairness, and reliability.

10 Ameren Missouri's position is not that those concerns should be ignored. Rather,
11 the Commission should evaluate them in the correct regulatory context and balance them
12 against the broader obligation to ensure reliable and adequate service for all customers.
13 Later in this testimony, I will address public concerns raised during the local public
14 hearings, particularly those relating to safety and other aspects of the Millcreek BESS
15 project.

16 **V. COST ALLOCATION AND RATEMAKING ISSUES SHOULD BE**
17 **ADDRESSED IN FUTURE RATEMAKING PROCEEDINGS**

18 **Q. Over several pages, OPC witness Dr. Geoff Marke argues that large**
19 **load customers should pay all costs associated with new generation resources,**
20 **discusses what he calls "cost causation" issues, and makes points based on numerous**
21 **sources about risks associated with AI data centers. What do those issues have to do**
22 **with this specific case?**

23 A. As explained in Company witness Steven Wills' Surrebuttal Testimony,
24 these issues are not within the scope of this CCN proceeding. Dr. Marke's testimony raises

1 many of the same cost allocation and large-load policy issues that OPC raised in Ameren
2 Missouri's and Evergy's large-load tariff cases.¹ The Commission approved those tariff
3 proposals, with modifications, and the State of Missouri has made clear that it supports the
4 economic development benefits associated with large load customers when appropriate
5 customer protections are in place.

6 At its core, Dr. Marke's testimony reflects OPC's position that data centers or other
7 large-load customers should bear the costs associated with new generation resources
8 needed to serve them. OPC is entitled to advocate that position. Ameren Missouri agrees
9 with the principle that large-load customers should be allocated the costs that they cause,
10 which is why the Company has consistently advocated that large-load customers pay their
11 fair share and should not be subsidized by other customers, consistent with SB 4. But cost
12 allocation, rate design, and future rate treatment are not the subject of this CCN proceeding.
13 Those issues should be addressed in the ratemaking proceedings designed for that purpose.

14 The issue before the Commission here is whether the proposed facilities should be
15 authorized because they are necessary or convenient for the public. Ameren Missouri has
16 an obligation to serve, has a Commission-approved Large Load Tariff governing service
17 to large load customers, and must plan for the significant additional demand those
18 customers have placed on the system. Those facts support approval of the requested CCNs
19 while preserving future ratemaking issues for the proper proceedings.

¹ File No. ET-2026-0184, In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri for Approval of New Modified Tariffs for Service to Large Load Customers; and File No. EO-2025-0154, In the Matter of the Application of Evergy Metro, Inc. d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc. d/b/a Evergy Missouri West for Approval of New and Modified Tariffs for Service to Large Load Customers.

1 **Q. If not now, when will questions of cost causation and ratemaking be**
2 **answered?**

3 A. Those questions will be addressed in future ratemaking proceedings after
4 the resources are in service and the relevant cost and usage information is available. In
5 those proceedings, the Commission and all parties will have a full and fair opportunity to
6 evaluate cost recovery, cost allocation, rate design, and large-load customer responsibility.

7 Approval of the certificates in this case does not diminish the Commission's
8 authority to apply SB 4, enforce the large load tariff framework, adjust future rates under
9 that framework, or protect existing customers. Nor does approval of the CCNs itself change
10 customer rates.

11 Using unresolved future ratemaking questions as a basis to delay needed resources
12 would create unnecessary reliability and planning risk. It would also reduce the
13 Commission's flexibility to address allocation issues when the relevant facts are fully
14 developed. The better approach is to evaluate the Projects on the evidentiary record in this
15 case and preserve all future ratemaking authority for the proceedings designed to address
16 those issues.

17 **Q. Having generally addressed Dr. Marke's overall themes about cost**
18 **causation and his views of how rates ought to eventually be set as it pertains to these**
19 **facilities, do you wish to more specifically address any of Dr. Marke's points?**

20 A. Yes. I want to address Dr. Marke's comments about the Ratepayer
21 Protection Pledge and Ameren Missouri's position on related customer protection issues.

22 The Pledge reflects an important objective: protecting existing customers while
23 supporting economic growth. Ameren Missouri shares that objective. Consistent with but

1 prior to the execution of the Pledge, the State of Missouri adopted statutory protections
2 through SB 4, and those protections should be applied in the appropriate proceedings to
3 ensure that large load customers are responsible for costs properly attributable to serving
4 them.

5 Those issues involve cost allocation, cost recovery, and rate design. They should
6 be decided when the Commission has the full record necessary to make those
7 determinations, not in this CCN proceeding.

8 **Q. How do you respond to Dr. Marke's characterization of the statement**
9 **attributed to Ameren Missouri employee James O'Mara as conflicting with the**
10 **Pledge and SB 4 consumer protections?**

11 A. The *Post-Dispatch* article relied upon by Dr. Marke does not provide the
12 full context for Mr. O'Mara's statement. Ameren Missouri's system is a shared system.
13 Residential, commercial, industrial, and large load customers are all served by that system,
14 including its generation resources. That does not mean residential customers should pay
15 more than their fair share, nor does it mean that they should subsidize large load customers.
16 Under SB 4, large load customer rates must reflect an allocation of their fair share of the
17 costs of expanding the grid, including the costs of building new power plants where
18 appropriate.

19 Mr. O'Mara never said – as the quote and Dr. Marke's use of it implies – that
20 residential customers are going to pay more than their fair share or are going to subsidize
21 large load customers. Properly understood, Mr. O'Mara's statement reflected the fact that
22 Ameren Missouri's system serves all customers, and that the Commission will address
23 proper cost allocation and rate design in future ratemaking proceedings to ensure that each

1 customer class pays what it should pay. Ameren Missouri's statement was consistent
2 throughout the Large Load Tariff case and has been since its conclusion: other customers
3 will be protected from cost-shifts caused by large load customers.

4 **Q. So, are you saying that the Commission can approve needed resources**
5 **in this case while still protecting existing customers from large-load cost impacts?**

6 A. Yes. Those objectives are not in conflict. The Commission can determine
7 in this proceeding whether the facilities are needed for the public service while preserving
8 all future authority to evaluate cost recovery, cost allocation, rate design, and customer
9 protections in the appropriate ratemaking proceedings.

10 Approval of the certificates would not resolve future rate treatment. Nor would it
11 prevent the Commission from applying SB 4 and the large-load tariff framework to protect
12 existing customers.

13 **VI. LOCAL PUBLIC HEARING CONCERNS DO NOT UNDERMINE THE**
14 **NEED FOR THE MILLCREEK BESS FACILITY NOR ITS PUBLIC**
15 **INTEREST**

16 **Q. Testimony at the local public hearings, particularly in Eolia and**
17 **Moscow Mills, raised concerns about the Millcreek BESS facility. What concerns**
18 **were raised, and how has Ameren Missouri responded?**

19 A. Ameren Missouri understands that residents may have questions about new
20 energy infrastructure, particularly when a project is located near their community.
21 Concerns raised at the local public hearings included questions about BESS safety,
22 potential environmental and wildlife impacts, effects on neighboring properties, and
23 transparency of project information.

1 Those concerns were raised most prominently in connection with the Millcreek
2 BESS facility. After becoming aware of the level of public concern, Ameren Missouri took
3 additional steps to provide factual information, answer questions, and make relevant
4 materials available to the public. That response is consistent with the purpose of the local
5 public hearing process, which is to allow residents to raise questions and for those questions
6 to be addressed in the record.

7 **Q. Has the Company properly addressed the concerns?**

8 A. Yes. Ameren Missouri developed a detailed set of Frequently Asked
9 Questions addressing BESS safety, environmental and wildlife impacts, and incorrect
10 claims that the Millcreek BESS facility was being built to support a data center in the
11 community. The Company also publicly released environmental studies for the Millcreek
12 BESS site, as requested at the Eolia local public hearing. The FAQs and studies are attached
13 to my Surrebuttal Testimony as Schedule RD-S1.

14 Ameren Missouri also made subject matter experts available to answer questions
15 during the question-and-answer sessions before the Eolia and Moscow Mills local public
16 hearings. In addition, the Company made the FAQs, studies, and other project information
17 broadly available through a dedicated project website, social media, and a local op-ed.
18 These steps were taken specifically to respond to questions raised by attendees and to
19 ensure that factual information was available to the public.

20 **Q. Are the concerns that were raised legitimate?**

21 A. It is legitimate for members of the public to raise questions and concerns
22 about the Millcreek BESS facility. Those questions deserve to be heard and addressed with
23 accurate information.

1 However, the record does not support claims that the Millcreek BESS facility is
2 unsafe, will harm the environment, will have significant adverse wildlife impacts, or is
3 being built to bring a data center to Lincoln County. As the FAQs explain, and as Company
4 witness Scott Wibbenmeyer further discusses in his Surrebuttal Testimony, the facility will
5 be safely designed, installed, and operated. The record also does not show that the facility
6 will have a detrimental environmental impact or significant adverse effect on wildlife.

7 As I stated in response to public questions in Moscow Mills, Ameren Missouri is
8 not aware of any planned data centers in Lincoln County. If a data center were planned in
9 Ameren Missouri's service territory, the Company would likely know because electric
10 service providers are typically among the first contacts for developers of such facilities.
11 The purpose of the Millcreek BESS Project is to add reliable, dispatchable capacity to
12 support reliable electric service for customers in Ameren Missouri's service territory.

13 **Q. Does this conclude your Surrebuttal Testimony?**

14 **A. Yes, it does.**

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of the Application of Union Electric	)	
Company d/b/a Ameren Missouri for Permission and	)	
Approval and Certificates of Public Convenience and	)	
Necessity Authorizing it to Construct Renewable	)	File No.: EA-2026-0183
Generation Facility and Battery Energy Storage	)	
Systems.	)	

AFFIDAVIT OF ROBERT B. DIXON

STATE OF MISSOURI	)	
	) ss	
CITY OF ST. LOUIS	)	

Robert B. Dixon, being first duly sworn on his oath, states:

My name is Robert B. Dixon, and hereby declare on oath that I am of sound mind and lawful age; that I have prepared the foregoing *Surrebuttal Testimony*; and further, under the penalty of perjury, that the same is true and correct to the best of my knowledge and belief.

/s/ Robert B. Dixon
Robert B. Dixon

Sworn to me this 4th day of September 2026.

Millcreek Battery Energy Storage Project FAQ

General Information

Is the Millcreek battery storage project being built to support a future data center?

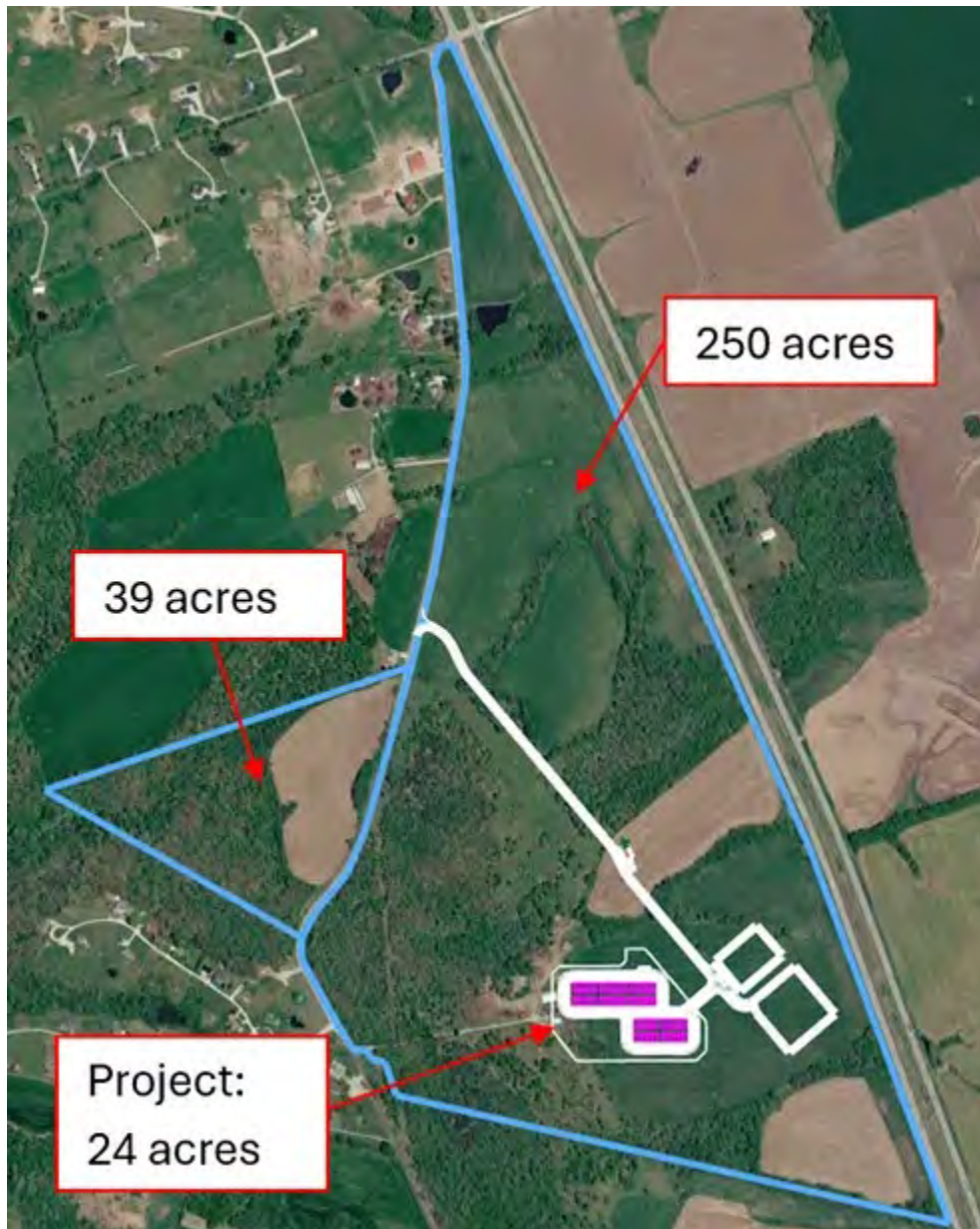
No. It's being built to strengthen electric reliability and is designed to deliver energy when it's needed most.

Does Ameren Missouri know of any data center development coming to Lincoln County?

No. As communicated during local public hearings in July 2026, we are not aware of any data center development coming to Lincoln County. The Millcreek battery storage project is all about bolstering reliability for families and businesses.

How much land would the proposed battery facility use?

The proposed battery storage facility would use approximately 12 acres of Ameren Missouri-owned land in Lincoln County. The associated switching and substation equipment would use another 12 acres. They would be surrounded by an additional 265 acres that are expected to remain largely undeveloped, providing natural terrain and forested areas to help screen the facility and maintain separation from neighboring land uses.



How does the review process work for the proposed Millcreek battery project?

Ameren Missouri must receive approval from the Missouri Public Service Commission before the Millcreek battery storage project can be built. The Commission's review process includes regulatory filings, data requests by parties to the case and opportunities for public input before a decision is made.

As part of that process, Ameren Missouri provides studies, reports and other supporting information for review. The Commission and other participating parties review that information and request additional details as part of their evaluation. The review process includes opportunities to examine a variety of issues including safety and environmental considerations before any approval is granted.

How much energy can the proposed Millcreek batteries hold?

Batteries help keep power available when demand is high by storing electricity when it's plentiful and delivering it back to the grid when customers need it most.

The proposed Millcreek battery facility would be capable of storing 250 megawatts of energy. That's enough energy to help meet the average electricity needs of approximately 180,000 homes for four hours. The energy stored at the facility would be delivered to the electric grid and available to serve all customers across Ameren Missouri's service territory.

Would the battery project create noise during normal operation?

The battery modules have a small cooling fan, generally used during charging and discharging, that is designed to be inaudible at the property line.

How would the proposed battery facility benefit Lincoln County and the surrounding region?

The facility is designed to bolster reliability and provide fast-acting flexibility to the grid under the most demanding conditions, such as when demand is highest. The project also is expected to generate stable, predictable revenue for approximately 20 years to support county services, roads and bridges, parks, and the Silex School District.

Would the proposed project create jobs or economic activity in the community?

Yes. The proposed project would be expected to create significant economic activity during construction and through project-related spending.

Land Use and Stewardship

Did Ameren Missouri use eminent domain to acquire any land in Lincoln County for the proposed battery project or any future project?

No. Ameren Missouri did not use eminent domain to acquire land for the Millcreek battery project. All land contracts for the project were negotiated directly with landowners.

How much did Ameren Missouri pay for the land?

Our team reaches out directly to each landowner to understand their individual circumstances and interests. Because every situation is unique, Ameren Missouri develops specific agreements with each landowner. We work with landowners to reach mutually acceptable agreements while balancing the responsibility of managing project costs on behalf of customers.

Why do landowner contracts include confidentiality provisions?

Like many real estate transactions, the land purchase agreement contains confidential business terms. Those provisions help protect the privacy of the parties involved, including the local landowners.

Confidentiality provisions do not change the approval process for the Millcreek battery storage project. Information about the project itself, including the proposed location, application materials and regulatory filings, is available through the Missouri Public Service Commission and the Millcreek project website. Residents can review those materials, ask questions and provide feedback as part of the public review process.

Why do land agreements include references to things like glare, noise or interference?

Property agreements are written to address a broad range of possible scenarios that could arise over the life of a project. References to things like glare, noise or interference are included to clearly define property rights and responsibilities if questions arise in the future.

Energy projects are planned and designed to minimize impacts on neighboring properties. Including these topics in an agreement does not mean Ameren Missouri expects them to become significant issues. Instead, the provisions are intended to address potential questions up front, so expectations and responsibilities are clearly understood by all parties.

How close would the proposed battery facility be to nearby homes?

The proposed battery facility would be located more than 1,500 feet, or more than one-quarter mile, from the nearest home. Ameren Missouri's plans also include maintaining additional property of existing trees and fields around the facility to help preserve separation from neighboring land uses.

What are Ameren Missouri's plans for the land it owns east of Highway 61?

Currently, Ameren Missouri has no proposal for solar in Lincoln County before the Missouri Public Service Commission, and it is not a part of this application. While Ameren Missouri is considering a future solar project in the area, such a project would require its own review and approval process before the Missouri Public Service Commission.

How can residents be confident Ameren Missouri will continue to maintain this facility and remain accountable to the community over time?

Ameren Missouri would own and operate the proposed Millcreek battery facility throughout its life. As a regulated utility, the company remains responsible for maintaining its facilities, meeting regulatory requirements and serving customers long after construction is complete. The State of Missouri will continue to have oversight of Ameren Missouri and this project.

Ameren Missouri has served customers in Missouri for more than 100 years and expects to continue serving customers in Lincoln County for generations to come. Many Ameren Missouri employees live and work in Lincoln County and nearby communities. The proposed facility would be part of the electric system Ameren Missouri operates every day to help deliver reliable service to homes and businesses across the region, and the company would remain responsible for its operation, maintenance and eventual retirement.

How does the proposed battery facility fit into the investments Ameren Missouri has already made in Lincoln County?

Reliable electric service depends on many types of infrastructure working together. Residents in Lincoln County saw firsthand this spring how important a resilient electric system is when severe weather and an EF1 tornado touched down near Troy. Since 2019, Ameren Missouri has completed approximately 175 reliability projects in the region designed to reduce outages and improve service restoration. Those investments have helped prevent storm-related outages, improve restoration capabilities and strengthen the electric system for customers. The proposed Millcreek battery facility would build on those

investments by adding another tool to make energy available when customers need it most.

Why was this location selected for the proposed battery facility?

Ameren Missouri evaluates many factors when considering potential locations, including the ability to deliver the greatest reliability benefits to customers. The proposed site was selected because it offers access to existing transmission infrastructure, land made available by landowners, and the ability to help meet identified energy system needs. Battery storage facilities must be connected to the electric grid and locating projects where transmission infrastructure already exists can reduce the need for additional infrastructure while supporting reliable electric service for customers.

Are agricultural areas being asked to carry a larger share of new energy infrastructure?

Projects must be built where they can safely connect to the electric grid, operate effectively and support the electric system that serves customers.

Ameren Missouri evaluates potential sites using a range of factors rather than selecting locations based on whether they are rural or urban. The goal is to identify locations that can support the infrastructure needed to provide reliable service to customers while minimizing impacts. Ameren Missouri has never used eminent domain to acquire property for a battery or solar project, and all transactions have been completed with landowners. Ameren Missouri pursued projects at its retired coal-fired power plants first, Rush Island and Meramec, utilizing land that has been dedicated to energy production for many decades. This resulted in the Big Hollow BESS and Castle Bluff BESS projects. Additionally, the Huck Finn BESS project is being added to the Audrain Energy Center property that is already owned by the company.

The proposed Millcreek battery storage project was identified through that evaluation process. Access to the transmission system, the ability to connect to the electric grid and the needs of the electric system were among the factors considered when evaluating potential locations. The proposed facility would help support the electric infrastructure that delivers energy to customers across the region.

Would the proposed Millcreek battery storage project significantly reduce farmland in Lincoln County?

No. The proposed battery storage project and substation would sit on 12 acres each. Lincoln County has a long agricultural tradition, and Ameren Missouri understands why land use is important to many residents. The proposed facility would use a specific site selected through a broader evaluation process that considers many factors, including customer and electric system needs and grid access. The location was selected because it can support infrastructure that helps serve customers while meeting the technical requirements needed to connect to the electric system. The overall property selected for this project is not solely agricultural and contains over 121 acres of wooded area, which will remain undeveloped to create a natural buffer around the project site.

If you build a battery site here, and possibly a solar site in the future, does that mean a data center is coming?

No. The proposed Millcreek battery storage project is being developed to help meet energy system needs and support reliable electric service for customers across Ameren Missouri's service territory.

Like other energy infrastructure projects, battery storage facilities are located based on factors such as access to existing transmission infrastructure, site characteristics and the ability to support the electric grid where it is needed. The presence of a battery storage facility or solar facility does not indicate that a data center is planned for a particular location, nor does it mean that any future development will occur nearby.

What security measures are in place at Ameren Missouri facilities?

Ameren Missouri uses a variety of tools to monitor and protect company-owned equipment in communities across the state. These tools are not intended for any other purpose. As with other critical infrastructure, Ameren Missouri does not publicly disclose specific security measures to help protect facilities and the customers who rely on them.

What happens to the battery facility when it reaches the end of its operating life?

Like Ameren Missouri's other retired energy centers, once the facility is retired, battery units and other project equipment would be removed and the site would be restored. Equipment that remains serviceable may be reused or repurposed, while metals, wiring, transformers, structural steel and other conventional materials can generally enter established recycling streams.

Lithium-ion batteries can also be recycled. Specialized battery recyclers can recover materials such as lithium, copper, aluminum and graphite for reuse in new batteries or other products.

Who is responsible for removing the facility when it is retired?

Ameren Missouri is responsible for meeting the project's retirement obligations when the facility is retired.

Could the property be returned to another use if the facility is retired?

Yes. At the end of operation, the property may be repurposed for another use once retired.

How long is the proposed battery facility expected to operate?

The battery modules have an approximately 20-year lifespan. What happens after that will depend on customer energy needs, available technologies and other factors at the time. No decision has been made about how the site would be used decades in the future. If the facility reaches the end of its operating life, project equipment would be removed and the site would be restored. The property could be used for another purpose based on future needs and circumstances.

Environmental Stewardship

What environmental review has been done?

Ameren Missouri used experienced consultants to complete an environmental review for the Millcreek BESS project. This includes a Phase I Environmental Site Assessment, a Waters Delineation Report, and drainage and flood-related studies. These reviews help ensure the project is being designed responsibly, with appropriate consideration for land, water, wildlife and long-term site conditions.

Findings did not identify significant environmental barriers to development. The Phase I Environmental Site Assessment found no recognized environmental concerns. Water-related impacts are expected to be limited and are primarily associated with the project entrance road, where stream crossings may be needed. Ameren Missouri is coordinating with the U.S. Army Corps of Engineers so those crossings can be designed and permitted to avoid, minimize, or limit environmental impacts.

Overall, the environmental reviews support moving the project forward responsibly, with agency coordination and measures in place to protect environmental resources.

What steps will be taken to protect any endangered species at the site?

Ameren Missouri has coordinated with the U.S. Fish and Wildlife Service regarding potential endangered species in the area and will take steps necessary to avoid harm to any endangered species arising from tree clearing needed to construct the entrance road to the facility.

How much water does a battery site use?

Battery storage facilities do not consume water during normal operations and utilize a closed-loop cooling system that comes filled from the factory, similar to how a car's cooling system works. Unlike some facilities that require water as part of an ongoing operating process, battery storage facilities store electricity and do not rely on continuous groundwater withdrawals to operate.

How is water managed on-site during a battery emergency?

Site design includes stormwater management and containment measures intended to protect nearby properties, waterways and the surrounding environment by keeping water and runoff managed on Ameren Missouri property. The site is being designed to exceed applicable requirements and provide added safeguards to further ensure safe operations, even under emergency conditions. Some design features to manage potential runoff from the site during an emergency include containment barriers designed around the battery and transformer equipment. Furthermore, the entire site will include multiple detention basins designed to collect and manage runoff, so water remains controlled on-site during both normal operations and emergency event conditions.

Safety

How safe and reliable are battery storage facilities?

Battery systems operate safely near homes and businesses across the country every day, including in rural environments. Failures are rare, and the rate continues to decline.

According to the Electric Power Research Institute's global database, the rate of incidents has fallen every year to near zero, even as more facilities come online. This significant reduction in failure rates, even while deployments have rapidly increased, is largely due to the switch to safer battery chemistry (NMC to LFP); fully containerized battery enclosures; advanced monitoring capabilities; improved safety and testing standards; and the industry maturing and learning from past events. Battery systems are designed to not generate waste, odor, emissions or other byproducts and are similar to your cellphone's battery, but larger. Built-in safety features and emergency plans are designed to protect both the community and environment.

How are local fire departments involved in planning for the proposed project?

Are you partnering with local firefighters?

Yes. Ameren Missouri has met with and continues to meet with local fire departments and emergency responders about this project. Emergency response planning and training are developed in coordination with local responders, so they have specific information before the facility begins operation. The company's plans also include safety documentation, training, and visits for local responders. Current industry guidance for responding to a BESS fire is to monitor and contain the incident rather than actively fight the fire directly. This approach reduces the burden on local fire departments with limited resources. Ameren Missouri continues to develop emergency response plans in coordination with local responders, including training. Preparing for emergencies is one part of a broader safety approach that includes battery technology selection, facility design, monitoring systems and ongoing coordination with local responders.

Discuss the project's robust fire safety systems.

Emergency response planning and training are developed in coordination with local responders, so they have specific information before the facility begins operation. Battery systems are designed with monitoring and safety features to detect changes in operating conditions and help operators respond before equipment concerns become larger issues. Those systems are designed to help prevent a single battery unit from affecting neighboring units and keep any impact limited to the smallest area possible.

How are battery units designed to help prevent issues from affecting neighboring units?

Battery storage systems are designed with multiple layers of protection, including advanced monitoring, intended to identify issues early and help limit impacts to individual battery units and nearby equipment.

How are modern battery facilities designed to reduce fire or other risks?

Today's utility-scale battery systems incorporate inherently safer lithium iron phosphate (LFP) chemistry, advanced monitoring systems, automatic safety controls, and built-in fire and explosion mitigation features to detect issues early, isolate affected equipment, and help prevent fires from spreading beyond a single battery unit. Ameren also takes a conservative approach to battery container setbacks and unit spacing to reduce the potential for heat from one unit affecting neighboring units or the surrounding area. Energy storage systems are required to pass rigorous testing demonstrating that they meet nationally recognized safety standards, including Underwriters Laboratories (UL) standard 9540 for the complete system, UL 1973 for battery systems, UL 1642 for individual lithium battery cells, UL 1741 for power conversion equipment, and UL 9540A for fire propagation testing. These standards exist to protect people and property by confirming that the system is properly designed, built, installed, and able to operate safely under normal and abnormal conditions.

The testing to meet those UL standards is rigorous because it evaluates safety at multiple levels: the cell, module, battery unit, and full system. Tests include electrical stress, short circuit and overcharge conditions, grounding and insulation checks, electromagnetic interference, mechanical impact and crush forces, moisture, corrosion, seismic vibration, high temperature exposure, and thermal runaway fire testing. To pass, the product must

avoid unacceptable outcomes such as fire spread, explosion, electric shock, hazardous leakage, loss of protective controls, or unsafe operation.

Before an energy storage system can be installed, it must also comply with mandatory safety standards including National Fire Protection Association (NFPA) standard 855, as well as applicable International Fire Code standards which require rigorous testing, design reviews, and performance validation.

What are Ameren Missouri's policies about safety and battery systems?

Safety is built into every aspect of battery storage design and operation. We follow industry best practices, use advanced monitoring systems and work with local first responders to protect people and property.

What happens to air and water quality if there is a battery fire?

Protecting people and the environment is a key part of emergency response planning. Any fire can produce smoke and other byproducts, which is why battery storage projects incorporate multiple layers of monitoring, detection and protection intended to identify issues early and eliminate explosive hazards.

Battery energy storage systems are designed and tested to meet rigorous fire safety standards, including NFPA 855, applicable fire code requirements and UL 9540A-based hazard analysis. Third-party testing shows that, even under severe emergency conditions, fires are expected to remain contained within the affected enclosure, and concentrations are small enough that they are quickly diluted upon contact with the air, meaning there is no negative impact on air quality in the surrounding area. These results support the conclusion that modern battery systems can be operated safely without posing a meaningful risk to air quality.

BESS units are designed to make it difficult for water to come in contact with the enclosed battery cells. Fire water runoff testing has shown no harmful levels of contaminants. The manufacturer's Emergency Response Guide recommends no direct water application to a fire. In addition, the facility design includes containment barriers around the equipment as well as detention basins to capture site runoff, further minimizing impacts to the surrounding environment during an emergency event or normal operations.

Our project design also includes stormwater management and containment measures to manage water and runoff on the property during construction, normal operations and emergencies. Emergency response procedures are developed to help protect county residents, property and environmental resources.

Local Benefits

How would the proposed battery facility support electric reliability for customers in the region?

The proposed battery facility would store energy and deliver it back to the grid when electricity use is at its highest, supporting reliable power for homes, schools, hospitals and businesses during peak demand and extreme weather.

Would the electricity stored at the facility stay in Lincoln County?

Energy stored at the facility would be delivered to the electric grid, where it would be available to serve customers across Ameren Missouri's service territory. Electricity stored by the project would not be reserved for a single community or county.

The proposed facility would be in Lincoln County and would help support local energy reliability while also contributing to the broader electric grid that serves communities throughout the region. When electricity demand is high, battery storage can discharge energy to help keep power available when customers need it most.

How could the project benefit residents and businesses?

The proposed project would be part of the infrastructure that helps deliver reliable electricity to homes, schools, farms and businesses across the region. Battery storage can store electricity when it is available and deliver it back to the grid when demand is high, helping keep power available when customers need it most.

The project could also generate local economic activity during construction and contribute revenue to support community priorities such as schools, public services and infrastructure.

Why does Ameren Missouri believe additional battery storage is needed?

Customers depend on electricity every hour of every day, including during periods of high demand and extreme weather. Battery storage helps keep power available when customers need it most by storing electricity and delivering it back to the grid when demand is high.

As energy use continues to grow, Ameren Missouri is planning the resources needed to maintain reliable electric service. Battery storage is one tool that can help support reliability by providing additional flexibility to the electric system and making energy available when it is needed most.

LIMITED PHASE I ENVIRONMENTAL SITE ASSESSMENT

**MILLCREEK BESS PROJECT
LINCOLN COUNTY, MISSOURI**

Prepared For:

**AMEREN MISSOURI
1901 CHOUTEAU AVENUE
ST. LOUIS, MISSOURI**

Prepared By:

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
ST. LOUIS, MISSOURI**

CEC Project No. 354-818.0008

August 19, 2026

Report Expiration Date: November 15, 2026

Disclaimer: Civil & Environmental Consultants ("CEC") prepared the attached Report solely for Ameren Missouri. Any third-party receiving the report may review it for informational purposes only. CEC neither warrants nor represents that the attached Report is appropriate for any purpose contemplated by any third-party recipient. The Report is being provided by CEC on a non-reliance basis, and CEC shall not be liable for any reliance that any third-party recipient may place on the Report.

Attachment A



August 19, 2026

Ms. Laura Klingler
Ameren Missouri
1901 Chouteau Avenue
St. Louis, Missouri 63166

**Subject: Limited Phase I Environmental Site Assessment – Administrative Split
Millcreek BESS Project
Lincoln County, Missouri
CEC Project No.: 354-818.0008**

Dear Ms. Klingler:

Civil & Environmental Consultants, Inc. (CEC) is pleased to present this Limited Phase I Environmental Site Assessment (ESA) for the above-referenced property (Subject Property) to Ameren Missouri (Ameren). This Limited Phase I ESA was split from the Limited Phase I ESA dated July 8, 2026, in accordance with the Change Order for CEC Project No. 354-818, dated August 12, 2026, and authorized via Ameren's purchase order dated August 13, 2026. Since this Limited Phase I ESA is a split from the previous report and not an update, changes to this report are strictly administrative, and only reduced the Subject Property area. CEC conducted the site reconnaissance on May 21, 2026.

CEC appreciates the opportunity to serve Ameren on this project. Please contact us if we can be of any further assistance.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.



Tommy J. Goodwin, Jr., PE
Assistant Project Manager



Beth N. Eckley, PE
Principal

EXECUTIVE SUMMARY

Civil & Environmental Consultants, Inc. (CEC) was retained by Ameren Missouri (Ameren) to conduct a Limited Phase I Environmental Site Assessment (I ESA) revision for the Millcreek Battery Energy Storage System (BESS) Project area located in Lincoln County, Missouri. This Phase I ESA is an administrative split for a reduced area to the Phase I ESA dated July 8, 2026. This Phase I ESA was conducted in general accordance with the Change Order for CEC Project No. 354-818, dated August 12, 2026. This is a cursory summary of findings, and the report must be read in its entirety for a comprehensive understanding of items presented.

The Subject Property consists of an approximate 286-acre portion of an approximate 574-acre parcel, west of Highway 61, and approximately 54 acres of Highway 61 right-of-way, in northern Lincoln County, Missouri, east of Silex, Missouri. The Subject Property currently contains agricultural cropland, pastureland, vacant/unimproved land, and agricultural structures. This Limited Phase I ESA revealed the following:

RECs or CRECs

The Limited Phase I ESA identified no Recognized Environmental Conditions (RECs) or Controlled RECs (CRECs) in connection with the Subject Property.

Historical RECs

The Limited Phase I ESA identified no Historical RECs (HRECs) in connection with the Subject Property.

***De Minimis* Conditions**

The Limited Phase I ESA identified no *de minimis* conditions in connection with the Subject Property.

No other *de minimis* conditions were observed on the Subject Property.

The Limited Phase I ESA was completed by the following CEC environmental professionals:
Tommy Goodwin – Assistant Project Manager, Beth Eckley – Principal, and Michael
Ellis – Senior Principal.

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FIGURES

Figure 1: Subject Property Location Map

Figure 2A-G: Subject Property Detail Map

APPENDICES

APPENDIX A: Photographic Documentation

APPENDIX B: User Provided Information & Questionnaire

APPENDIX C: Physical Setting Report

APPENDIX D: Database Report

APPENDIX E: Aerial Photographs

APPENDIX F: Historical Topographic Maps

APPENDIX G: Professional Resumes

1.0 INTRODUCTION

Civil & Environmental Consultants, Inc. (CEC) was retained by Ameren Missouri (Ameren) to conduct a Limited Phase I Environmental Site Assessment (ESA) for the Millcreek Battery Energy Storage System (BESS) Project area located in Lincoln County, Missouri (Subject Property). This Phase I ESA is an administrative split for a reduced area to the Phase I ESA dated July 8, 2026. This Phase I ESA was conducted in general accordance with the Change Order for CEC Project No. 354-818, dated August 12, 2026.

1.1 LOCATION

The Subject Property consists of an approximate 286-acre portion of an approximate 574-acre parcel, west of Highway 61, and approximately 54 acres of Highway 61 right-of-way, in northern Lincoln County, Missouri, east of Silex, Missouri, as shown on the Subject Property Location Map, Figure 1. The parcel numbers, owners, and acreages are listed below.

Landowner Name	PIN	Acreage
FRANKLIN R TEASLEY FARMS INC	4-70-26-000-000-001.000	~286 of 574
STATE OF MISSOURI	State Highway 61 RoW	~54

The Subject Property currently contains agricultural cropland, pastureland, vacant/unimproved land, and agricultural structures. Pertinent features of the Subject Property and adjoining properties are depicted on the Subject Property Detail Map, Figure 2. Photographs documenting the site reconnaissance are included in Appendix A.

1.2 PURPOSE

The purpose of a Phase I ESA is to evaluate the presence or potential presence of recognized environmental conditions (RECs) in connection with the Subject Property as a result of present or past activities on the Subject Property or vicinity. This Limited Phase I ESA was conducted in general accordance with ASTM International, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property (ASTM E 2247-23), but included aspects from ASTM International, Standard Practice for Environmental Site Assessments:

Phase I Environmental Site Assessment Process (ASTM E 1527-21) such as Freedom of Information Act (FOIA) requests to local agencies and landowner interviews.

CEC understands this Limited Phase I ESA will be used as part of a critical issues analysis (CIA), to establish Landowner Liability Protection (LLP) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and to compile and review available information regarding the Subject Property and immediate vicinity to identify recognized environmental concerns (RECs) to the extent feasible pursuant to ASTM E 2247-23 (noting deviations or additions from the Standard as described in this report) for the proposed property transfer.

1.3 DETAILED SCOPE-OF-WORK

The Limited Phase I ESA was conducted in general accordance with CEC's Change Order to Project No. 354-818 and ASTM International, Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process E2247-23 (the standard). This Limited Phase I ESA also incorporates applicable elements prescribed in ASTM E1527-21, as mentioned in Section 1.2, which was published by ASTM in November 2021 and adopted by the United States Environmental Protection Agency (USEPA) on February 13, 2023. ASTM E1527-21 and E2247-23 definitions used throughout this report include, but are not limited to:

REC: *(1) The presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the Subject Property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the Subject Property under conditions that pose a material threat of a future release to the environment.*

De minimis conditions generally do not present a threat to human health or the environment and generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A de minimis condition is not a recognized environmental condition.

Controlled REC (CREC): *A REC affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations).*

Historic REC (HREC): *A historical REC from a previous release of hazardous substances or petroleum products affecting the Subject Property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the Subject Property to any controls. A historical REC is not a recognized environmental condition.*

This Limited Phase I ESA included a review of user-provided information, a regulatory environmental database review, local government inquiries, historical and physical records review, interviews with individuals knowledgeable about the Subject Property, a visual noninvasive reconnaissance of the Subject Property and adjoining properties, and preparation of a report of findings.

1.4 SIGNIFICANT ASSUMPTIONS

In preparing this report, CEC has relied upon and presumed accurate certain information (or the absence thereof) about the Subject Property and adjoining properties provided by governmental officials and agencies, property representatives, Ameren, commercial or third-party providers, and others identified herein. Except as otherwise stated in the report, CEC has not attempted to verify the accuracy or completeness of such information. Further, CEC assumes that the client has communicated to CEC information or experience, if it exists, that was material to RECs or environmental concerns in connection with the Subject Property.

1.5 LIMITATIONS AND EXCEPTIONS

Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested was not available or was not received by the issuance of this report. Data presented, and opinions expressed, in this report are qualified as follows:

- The purpose of this Limited Phase I ESA was to assess the physical characteristics of the Subject Property and gather information regarding current and past environmental conditions at the Subject Property with respect to the presence or absence of petroleum products, hazardous materials, or substances as defined in the applicable state and federal environmental laws and regulations.
- CEC derived data in this report primarily from nonintrusive visual inspections, examination of records in the public domain, standard historical, physical setting, and regulatory documentation as defined in ASTM E 2247-23 and interviews with select individuals knowledgeable about the Subject Property. Documentation, records, and

information reviewed for this report are further limited to readily accessible and reasonably obtainable sources.

- Certain indicators of the presence of hazardous substances or petroleum products may have been latent, inaccessible, unobservable, or not present during the most recent site reconnaissance and may subsequently become observable (such as after Subject Property renovation or development). Further, illegal, or unreported activities may have occurred at the Subject Property.
- Current uses of surrounding properties were determined through visual observations conducted from public vantage points, without entering those properties, and readily available historical and regulatory documentation.
- Additional services or ASTM E 2247-23 non-scope items not specifically stated in our proposal or in Section 1.3 have not been addressed in this Limited Phase I ESA. Non-scope items include, but are not limited to: subsurface assessments, radon, evaluation of regulatory compliance, industrial hygiene, health and safety, ecological resources, indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment, biological agents, mold, high voltage power lines, lead-based paint, and lead in drinking water. In addition, issues regarding constituents that are not defined as a hazardous substance or petroleum product in the standard, PCB-containing building materials, ionizing radiation, oil/gas production, mineral rights and mining, and geotechnical suitability are also considered beyond the scope of this project.
- Exceptions to and deletions from ASTM E 2247-23 are discussed where appropriate in Section 1.6 and/or 1.7 of this report.
- Continued viability of this report was subject to ASTM E 2247-23 Sections 4.6 and 4.8. The findings and conclusions expressed herein may be used by those identified in Section 1.8.

An evaluation of the significance of these limitations and missing information with respect to our findings has been conducted, and where appropriate, significant data gaps or data failures are identified and discussed in the text of the report. However, it should be recognized that an evaluation of these limitations and significant data gaps was based on the information available at the time of report issuance, and an evaluation of information received after the report issuance date

may result in an alteration of our conclusions, recommendations, or opinions. The limitations herein must be considered when the user of this report formulates opinions as to risks associated with the Subject Property or otherwise uses the report for any other purpose.

1.6 DATA GAP ANALYSIS

CEC has performed this Limited Phase I ESA utilizing guidance established by ASTM E 2247-23 standard practices. Based on the information CEC received, reviewed, and included in this report, data gaps consistent with the definition in the ASTM E 2247-23 identified for this assessment include:

- Review of standard historical sources at less than approximately five-year intervals was not reasonably ascertainable based on the review of the historical documents provided by EDR.
- Ameren has not provided ownership records or chain of title records to CEC.

Based on review of available historical and regulatory information, the above-referenced data gaps likely have not prevented identification of RECs in connection with the Subject Property.

1.7 DEVIATIONS

Deviations from ASTM E 2247-23 or agreed upon scope of work, if any, were identified and discussed within the applicable sections of this report. Special contractual conditions were not requested or required during the completion of this Limited Phase I ESA.

1.8 USER RELIANCE

This report has been prepared for the exclusive use and reliance of Ameren, its subsidiaries, affiliates, and authorized representatives (Users), who may solely rely upon the conclusions presented herein. Reliance on this Limited Phase I ESA by the Users and all authorized parties will be subject to the terms, conditions and limitations stated in CEC's Change Orders to Project No. 354-818, dated August 12, 2026 and May 13, 2026, CEC's Proposal No. 354-818 dated October 29, 2025, and authorized via Ameren's authorizations to proceed dated August 13, 2026, May 15,

2026, and November 14, 2025, respectively. The use or reliance by a third party is not permitted without the specific written permission of CEC and Ameren.

1.9 SPECIAL TERMS AND CONDITIONS

This report represents our service to Ameren as of the report date. Findings and recommendations presented in this report are based upon the current utilization of the Subject Property, observations from the most recent Subject Property reconnaissance and additional activities described herein. Such information was subject to change due to passage of time, physical alteration of the Subject Property or structures, change in climate or weather conditions, regulatory changes, and advancement in technology.

Phase I ESAs are noninvasive and may not identify the potential that hazardous, toxic, or petroleum substances have been released or are present at the Subject Property. During this Limited Phase I ESA, as described herein, some documents and public records were not reviewed, as they were not reasonably accessible, were not reasonably obtainable, or made known to CEC. No warranties, express or implied, are intended or made.

1.10 REPORT VIABILITY

Database – August 13, 2026

Interviews – Not conducted for the Limited Phase I ESA Update or Revision

Site Reconnaissance – May 21, 2026

Lien Search – Not conducted by CEC

EP Declaration – August 19, 2026

180-day Viability Date – November 15, 2026

2.0 USER PROVIDED INFORMATION

Per Section 6.0 of ASTM E 2247-23, the User (Ameren) is required to perform specific tasks that will aid in the identification of RECs in connection with the Subject Property, in order to qualify for the LLP under the CERCLA. Information provided by the User is summarized below.

2.1 USER QUESTIONNAIRE

A copy of the ASTM E 2247-23 User Questionnaire was submitted to Ameren to assist in gathering information to aid in the identification of RECs in connection with the Subject Property. The questionnaire addressed the following:

1. Environmental liens that are filed or recorded (land title or judicial records) against the Subject Property.
2. Activity and use limitations that are in place on the Subject Property or that have been filed or recorded (land title or judicial records) against the Subject Property.
3. Specialized knowledge or experience related (e.g., same line of business) to the Subject Property or nearby properties.
4. Relationship of the purchase price to the fair market value of the Subject Property if it were not contaminated.
5. Commonly known or reasonably ascertainable information about the Subject Property.
6. The degree of obviousness of the presence or likely presence of contamination at the Subject Property, and the ability to detect the contamination by appropriate investigation.

A completed User Questionnaire was provided to CEC on August 14, 2026, and refers to the Exhibit B and Exhibits C for each landowner which were also provided to CEC. The User Questionnaire and the completed landowner questionnaire acknowledged the historical use of agricultural chemicals on the Subject Property (i.e., herbicides, pesticides, etc.). The User Questionnaire, Exhibit B, and Exhibit C did not reveal any RECs for the Subject Property.

The User Questionnaire, Exhibit B, and Exhibit C are contained in Appendix B.

2.2 TITLE RECORDS

Land title or owner deed records search was not included in the scope of services for this assessment and Ameren has not provided land title or ownership deed records for review. CEC assumes Ameren will evaluate title information with respect to RECs in connection with the Subject Property.

2.3 ENVIRONMENTAL LIENS OR AULS

A search for environmental liens or activity and use limitations (AULs) was not included in the scope of services for this assessment and Ameren has not provided environmental lien or AUL information for review. CEC assumes Ameren will evaluate environmental lien or AUL information with respect to RECs in connection with the Subject Property.

2.4 OWNER, PROPERTY MANAGER AND OCCUPANT INFORMATION

Based on a review of Ameren provided information and publicly available information obtained from Lincoln County Parcel Records, <https://www.lincolncmo.gov/county-assessor-mapping>, the current owners of the two (2) parcels comprising the Subject Property are noted in Section 1.1. Completed landowner questionnaire was provided to CEC as noted in Section 2.1 and is included in Appendix B.

3.0 RECORDS REVIEW

Per ASTM E 2247-23 physical setting sources, environmental regulatory database listings and historical records were reviewed to identify RECs in connection with the Subject Property. The information presented was subject to the accuracy, detail, date of update, and availability of records or documents provided, or obtained from the information providers. In some of the following subsections, the words upgradient, crossgradient, and downgradient refer to the assumed topographic or hydrogeological gradient in relation to the Subject Property.

3.1 PHYSICAL SETTING

CEC reviewed readily available and reasonably ascertainable published physical setting documents to obtain information regarding topographic, geologic, hydrogeological, and soil characteristics of the Subject Property and vicinity. The available information reviewed is summarized in the following sections.

3.1.1 Topography and Soil Characteristics

A review of the United States Geological Survey (USGS) 7.5-Minute Series topographic maps dated 2021 for Auburn, MO and Eolia, MO indicates that the Subject Property has an average elevation of approximately 770 feet above mean sea level (AMSL; ranging from approximately 700 feet AMSL to 810 feet AMSL) and slopes to the west of the Subject Property. The Subject Property drains west into Mill Creek.

The United States Department of Agriculture (USDA) Soil Survey Geographic Database (SSURGO) Natural Resources Conservation Service (NRCS) identified several different types of soil, including the following major soil units underlying the Subject Property:

- Mexico silt loam, 1% - 4% – is located on ridges and till plains and comes from the parent material of loess over pedisediment. The drainage class is poorly drained, and it is in hydrologic group D. It consists of silt loam from zero to 15 inches; clay loam from 15 to 34 inches; and silty clay loam from 34 inches to 79 inches. This soil covers approximately 20% of the Subject Property and immediate surrounding area.

- Goss-Gasconade-Brussels Complex, 9% - 70% slopes, very stony – is located on hillslopes and hills and comes from the parent material of slope alluvium over residuum weathered from dolomite. The drainage class is well drained, and it is in hydrologic group C. It consists of a matrix of primarily Gravelly silt loam, cobbly clay, channery silty clay loam, flaggy silty clay and bedrock throughout the matrix. This soil covers approximately 18% of the Subject Property and immediate surrounding area.
- Keswick silt loam, 5% - 9% slopes, eroded – is located in hillslopes and till plains and comes from the parent material of pedisegment over till. The drainage class is somewhat poorly drained, and it is in hydrologic group D. It consists of silt loam from zero to 7 inches; clay from 7 to 20 inches; and clay loam from 20 inches to 79 inches. This soil covers approximately 20% of the Subject Property and immediate surrounding area.
- The remaining soil types are minor constituents each constituting less than 10% of the Subject Property area. There are nine (9) additional soil types on the Subject Property.

3.1.2 Geology

According to GIS Mapping data provided by the USGS, the entirety of the Subject Property vicinity was underlain by the Odp geologic unit (Decorah Group and Plattin Group), which is of the Middle Ordovician age and primarily consists of limestone.

3.1.3 Groundwater

A review of the ERIS Physical Setting Report (Appendix C) indicates that there are one (1) well on the Subject Property, a private water well. There is one inactive (1) public water system well with violations approximately 200 feet southwest, downgradient, of the westernmost portion of parcel 04-70-26-000-000-001.000 (deactivated in February 2024) and three (3) public drinking wells without violations within 1,000 feet of the boundary of the Subject Property. In total, 32 records for state, federal, and private water wells were identified on the Subject Property or within the one (1)-mile surrounding area.

3.1.4 Oil Wells

A review of the ERIS Physical Setting Report (Appendix C) indicates that there are no oil and gas wells or borings on the Subject Property or the surrounding area.

3.1.5 Hydrology

Based upon the topography depicted on the Subject Property Location Map (Figure 1), the Subject Property drains west into Mill Creek.

Without the benefit of onsite groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the Subject Property cannot be directly ascertained. CEC assumes the local groundwater flow reflects the topography of the Subject Property vicinity. Subsurface and localized geologic conditions can alter assumed flow direction.

3.1.6 Flood Zone

CEC performed a limited records review for flood plain information for the Subject Property through review of the Federal Emergency Management Agency (FEMA) Flood Zone Map data for the Subject Property vicinity. The FEMA Flood Zone Map data was presented on the Overview Map provided in the ERIS Physical Setting Report (Appendix C). According to the FEMA Flood Zone Map information provided by ERIS, the westernmost portion of the parcel 04-70-26-000-000-001.000, near Mill Creek, is mapped as 1% Annual Chance Flood Hazard. The remainder of the Subject Property is mapped as 0.2% Annual Chance of Flood Hazard.

3.2 ENVIRONMENTAL RECORDS REVIEW

CEC reviewed ASTM standard environmental record sources, provided by ERIS, for sites or facilities on or in the vicinity of the Subject Property. In addition, inquiries to appropriate local regulatory agencies were submitted. Listed below are facility listings within the ASTM search distances from the approximate Subject Property boundaries. Database descriptions and definitions are provided in the ERIS database report, which is included in Appendix D.

Federal Databases		
Database	Description	Radius (miles)
NPL/Proposed NPL/NPL LIENS	The National Priorities List (NPL) identifies sites for priority cleanup under the Superfund Program.	1.0 mile
Delisted NPL	The Delisted NPL identifies facilities that have been removed from the NPL.	0.5 miles
SEMS	The Superfund Enterprise Management System (formerly the Comprehensive Environmental Response, Compensation, and Liability Information System [CERCLIS]) database tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund.	0.5 miles
SEMS-ARCHIVE	SEMS-Archive (formerly CERCLIS/No Further Remedial Action Planned [NFRAP]) database identifies sites that to the best of EPA's knowledge, assessment has been completed and the EPA has determined no further steps will be taken to list the site on the NPL. The decision does not necessarily mean that there is no hazard associated with a given site.	0.5 miles
RCRA CORRACTS	Resource Conservation and Recovery Act (RCRA) Corrective Action Report (CORRACTS) database identifies hazardous waste handlers undergoing "corrective action" activity.	1.0 mile
RCRA Non-CORRACTS TSD	The RCRA Non-CORRACTS Treatment Storage and Disposal (TSD) database includes information on sites which generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA.	0.5 miles
RCRA Generators	The RCRA Generators database, maintained by the EPA, lists facilities that generate, transport, store, treat and/or dispose of hazardous waste. Generators are listed as either large (LQG), small (SQG), or conditionally exempt (CESQG). LQG produce at least 1000 kg/month of hazardous waste or over 1 kg/month of acutely hazardous waste; SQG produce 100-1000 kg/month of hazardous waste; CESQG are those that generate less than 100 kg/month of non-acutely hazardous waste.	Target property (TP) and adjoining properties
IC / EC	A listing of sites with institutional controls (IC) and/or engineering controls (EC) in place. IC includes administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site, and deed restrictions are generally required as part of the institutional controls. EC includes various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.	TP and adjoining properties
ERNS	The Emergency Response Notification System (ERNS) records and stores information on reported releases of oil and hazardous substances.	TP

State/Tribal Databases		
Database	Description	Search Radius
SWF/LF	State and/or Tribal database of solid waste facilities/landfills (SWF/LF) located in the state. The database information may include the facility name, class, operation type, area, estimated operational life, and owner.	0.5 miles

State/Tribal Databases		
Database	Description	Search Radius
LUST/LAST	State and/or Tribal database of leaking underground storage tanks (LUSTs). aboveground storage tanks (LASTs).	0.5 miles
UST/AST	State and/or Tribal database of registered underground storage tanks (USTs)/ aboveground storage tanks (ASTs).	TP and adjoining properties
AUL	State database of Activity and use limitations (AUL) includes both engineering controls and institutional controls.	TP and adjoining properties
VCP/VRP	State and/or Tribal database of Voluntary Cleanup or Remediation Program (VCP/VRP) sites.	0.5 miles
Brownfields	State and/or Tribal database of Brownfield properties – an abandoned, inactive, or underutilized, property on which expansion or redevelopment is complicated due to the actual or perceived environmental contamination.	0.5 miles
SMARS	Site Management and Reporting System - currently houses information for Superfund, Federal Facility, Brownfields Voluntary Cleanup Program and Missouri's other state response programs.	0.5 miles

Non-ASTM Databases		
Database	Description	Search Radius
ECHO	The Environmental Compliance History Online (ECHO) is an integrated compliance history database of facilities nationwide.	TP
FRS/FINDS	The Facility Registry System (FRS) identifies facilities, sites or places subject to environmental regulations or of environmental interest and contains "pointers" to other sources that contain more detail. The FRS replaces the Facility Index System (FINDS).	TP
TIER 2	The Tier 2 is a list of facilities which store or manufacture hazardous materials that submit a chemical inventory report.	TP
MANIFEST	The Manifest lists and tracks hazardous waste from the generator through transporters to the treatment, storage, or disposal (TSD) facility.	0.25 miles
PFAS ECHO	Facilities in Industries that May Be Handling Per- and polyfluoroalkyl substances (PFAS) Listing	0.25 miles
MRDS	The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references.	1.0 mile
AIRS	Air Permit Program (AIRS) is a list of permits issued by the Air Permit Program.	TP
ICIS	The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program	TP
FIN ASSUR	Owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the cleanup, closure, and post-closure care of their facilities.	TP

Non-ASTM Databases		
Database	Description	Search Radius
DRYCLEANERS	A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholstery cleaning; industrial launderers; laundry and garment services	0.25 mile
SPILLS	A discharge of a hazardous substance that may adversely impact, or threaten to impact public health, welfare or the environment.	0.125 miles
SWRCY	A listing of recycling center locations.	0.5 miles
WDS	The Waste Data System (WDS) tracks solid and hazardous waste from the generator through the transporter to the disposal or treatment facility.	0.5

In addition to the above ASTM-required databases, CEC reviewed additional federal, state, local, and proprietary databases provided by ERIS. The list of additional databases, database descriptions, and definitions are provided in the ERIS database report, which is included in Appendix D. Information is presented in the manner and style provided in the ERIS Radius Map report.

3.2.1 Subject Property

The Subject Property was identified on the MRDS database. The MRDS database record indicated the presence of industrially useful stone in the geology in the northwest portion of the Subject Property. This database record is not considered a REC for the Subject Property.

3.2.2 Surrounding Area

No databases records searched by ERIS were identified within the database search radii for the Subject Property.

Not all sites or facilities identified in the database records can be accurately located in relation to the Subject Property, due to incomplete information being supplied to the regulatory agencies. These facilities are referred to as "Unplottable Sites" by ERIS. The ERIS Unplottable Summary did not identify any unplottable sites.

3.2.3 Local Agency Inquiries

3.2.3.1 Fire Department

CEC emailed a request to the Lincoln County Fire Protection District 1 for records or information regarding fires, spills, USTs/ASTs, or incidents posing an environmental concern occurring on or in the vicinity of the Subject Property. As of the issuance of this report, a response has not been received from the fire department.

3.2.3.2 Health Department

CEC emailed a request to Brett Siefert, the listed FOIA contact for the Lincoln County Health Department, for records regarding waste disposal activities, wastewater treatment and/or septic systems, water wells and department inspections or reported complaints identifying a potential environmental concern on or in the vicinity of the Subject Property. The health department responded to the original FOIA request on February 4, 2026 with no records for any of the Subject Property parcels listed in the request, and as of the issuance of this report, a response has not been received from the health department for reduced Subject Property.

3.2.3.3 Emergency Management Department

CEC submitted a request to the Lincoln County Emergency Management Department for records regarding chemical spills, ASTs, USTs, or emergency responses involving potential environmental concerns on or in the vicinity of the Subject Property. As of the issuance of this report, a response has not been received from the emergency management department.

3.2.3.4 Economic Development / Building Department

CEC submitted a request to the Lincoln County Economic Development Department for records regarding building, fire, demolition, or other environmentally related permits involving potential environmental concerns on or in the vicinity of the Subject Property. As of the issuance of this report, a response has not been received from the economic development department.

3.3 ENVIRONMENTAL RECORDS REVIEW SUMMARY

The Subject Property was identified on the MRDS database. The MRDS database record indicated the presence of industrially useful stone in the geology in the northwest portion of the Subject Property. This database record is not considered a REC for the Subject Property.

3.4 HISTORICAL USE INFORMATION

Reasonably ascertainable standard historical sources were reviewed to develop a history of uses of the Subject Property and surrounding area. The identified historical uses were evaluated to determine if they may be indicative of RECs in connection with the Subject Property. A summary of each of the sources reviewed is provided below.

3.4.1 Aerial Photographs

Aerial photographs were requested from ERIS to identify the history and development of the Subject Property and the surrounding area. The Subject Property is approximately 1,750 acres of land located adjoining the south side of Highway F and bisected north-south by State Highway 61. ERIS provided aerial photographs from 1941, 1956, 1963, 1974, 1985, 1995, 2003, 2004, 2005, 2006, 2007, 2009, 2010, 2012, 2014, 2016, 2018, 2020, 2022, and 2024. The ERIS Aerial Photograph Report is included in Appendix E.

In the 1941 aerial photograph, the Subject Property and the surrounding area appear entirely to be agricultural field farmland with sections of woodland and dispersed farmsteads. The Mill Creek riparian corridor is visible along the southern boundary of the Subject Property.

The roads that are State Highway 61 (longitudinally adjoining the east of the Subject Property), and Mill Creek Road (dissecting the western portion of 04-70-26-000-000-001.000) are visible and follow the same path as present time. The present Highway 61 is a two- (2-) lane gravel road. Multiple farm ponds and drainages are visible throughout the Subject Property. Due to low resolution of the aerial photograph, individual structures could not be discerned.

In the 1956 aerial photograph, the Subject Property is clearly visible. Either Millcreek School (from the 1942 topographic map) or a farmstead is visible centrally located in the southern part of

parcel 04-70-26-000-000-001.000 bounded by the present-day Highway 61 and Millcreek Church Road. A small section of woodland is cleared immediately north of the school/farmstead which is consistent with the ERIS database result for the mineral testing. Millcreek Church is not discernible, but the drive through the Millcreek Cemetery is visible adjoining the west side of the Millcreek Church Road and the Subject Property. The now visible surrounding area to the western portion of the Subject Property also appears entirely to be agricultural field farmland with small sections of woodland and dispersed farmsteads.

The resolution of the 1963 aerial photograph makes discernment of any structures difficult. There does not appear to be any changes to the Subject Property or the surrounding area.

The 1974 aerial photograph does not show any significant changes to the Subject Property or surrounding area apart from two (2) of the structures in the southern part of parcel 04-70-26-000-000-001.000 have been removed.

The 1985 aerial photograph does not show any significant changes to the Subject Property or surrounding area apart from Highway 61 now being developed as a divided four- (4-) lane highway.

In the 1995, 2003, 2004, 2005, 2006, 2007, 2009, 2010, 2012, 2014, 2016, 2018, 2020, 2022 and 2024 aerial photographs, no major changes are identified on the Subject Property or in the surrounding area apart from a residential development being observed along the newly developed roads (labeled as Sun Haven Drive and Millcreek Drive in the 2011 topographical map) to the southwest of the Subject Property starting in the 2003 aerial photograph.

3.4.2 Historical Topographic Maps

Historical topographic maps were requested from ERIS to identify land development for the Subject Property and surrounding area. The Subject Property is an approximate 286-acre portion of an approximate 574-acre parcel, west of Highway 61, and approximately 54 acres of Highway 61 right-of-way. The ERIS Historical Topographic Map Report is included in Appendix F. The topographic map review was summarized below.

- 1934 Elsberry, MO Quadrangle (15-Minute Series)
- 1942 Elsberry, MO Quadrangle (15-Minute Series)
- 1975 Auburn, MO and Eolia, MO Quadrangles (7.5-Minute Series)
- 1984 Auburn, MO and Eolia, MO Quadrangles (7.5-Minute Series)
- 2011 Auburn, MO Quadrangle (7.5-Minute Series)
- 2014 Auburn, MO Quadrangle (7.5-Minute Series)
- 2017 Auburn, MO Quadrangle (7.5-Minute Series)
- 2021 Auburn, MO and Eolia, MO Quadrangles (7.5-Minute Series)

The 1934 topographical map depicts the Subject Property as largely undeveloped with structures in the northern and southern portions of parcel 04-70-26-000-000-001.000, including Mill Creek School. No 61 (State Highway 61) is depicted along the eastern boundary of the Subject Property. The road that is now Millcreek Church Road (longitudinally transecting the western portion of the Subject Property) are visible and follow the same path as present time. Mill Creek is depicted flowing west through the southern portion of the Subject Property, originating near Highway 61. The Subject Property and surrounding area is primarily dominated by a generally flat ridge gradually sloping off to the west with multiple unnamed stream features flowing off the large ridgetop. The surrounding area is generally undeveloped except for dispersed structures (farmsteads) along the various roadways. A cemetery is depicted adjoining the west of Millcreek Church Road, immediately west of the western portion of the Subject Property.

The 1942 topographical map did not depict any significant changes to the Subject Property or the surrounding area.

The 1975 topographical map is generally similar to the previous topographical map except that all the structures on parcel 04-70-26-000-000-001.000 only has one (1) of the original five (5) structures depicted including the removal of Mill Creek School. An unnamed cemetery is labelled at the northernmost point of parcel 04-70-26-000-000-001.000, west of Highway 61, at one of the structure locations in the previous topographical maps. An overhead transmission line is depicted transecting the western portion of parcel 04-70-26-000-000-001.000, mostly longitudinally, west of Highway 61, and crosses Highway 61 south of the Subject Property. No significant changes are

observed to the surrounding area other than Mill Creek Church being depicted on the west side of what is now Millcreek Road, adjoining the far western boundary of the Subject Property.

In the 1984 topographical map, no significant changes are observed to the Subject Property or the surrounding area other than Highway 61 is labelled as under construction.

In the 2011 topographical map, structures are no longer depicted. A four (4)-lane highway (Highway 61) is depicted and two (2) roads (Millcreek Drive and Sun Haven Drive) adjoining the west side of the Subject Property across Millcreek Church Road. Ellis Cemetery and Mill Creek Cemetery are labeled adjoining the southwest corner of the Subject Property across Millcreek Church Road.

In the 2014, 2017 and 2021 topographical maps, no significant changes are observed to the Subject Property or the surrounding area. Property Tax Maps or Assessor Information

Property tax and assessor information was available via online websites for Lincoln County at <https://lincolngis.integritygis.com/H5/Index.html?viewer=lincoln>. No information pertinent to RECs, CRECs, or HRECs are identified in relation to the property tax and assessor information.

3.4.3 Previous Assessments

CEC was provided with the following previous reports for the Subject Property for review:

- *Limited Phase I Environmental Site Assessment, Millcreek Solar and BESS Project, Lincoln County, Missouri*, dated July 8, 2026, and prepared by Civil & Environmental Consultants, Inc (CEC). The report did not identify any RECs, CRECs, or HRECs.
- *Limited Phase I Environmental Site Assessment, Millcreek Solar Project, Lincoln County, Missouri*, dated February 9, 2026, and prepared by Civil & Environmental Consultants, Inc (CEC). The report did not identify any RECs, CRECs, or HRECs.

3.5 HISTORICAL USE INFORMATION SUMMARY

Based on review of readily available historical use information, the majority of the Subject Property was agricultural land with sparsely forested areas, intermittent and ephemeral streams and farmsteads from at least 1934 through the present. Historical topographic maps depict multiple

structures, including Mill Creek School, on parcel 04-70-26-000-000-001.000 as early as 1934. By 1975, most of these structures, including the school, were no longer depicted. An unnamed cemetery was identified at the northern portion of parcel 04-70-26-000-000-001.000, and later topographic maps identify Ellis Cemetery and Mill Creek Cemetery adjacent to the Subject Property west of Millcreek Church Road. Other notable developments included improvements to Highway 61 and the installation of an overhead transmission line crossing the Subject Property. No RECs, HRECs, or CRECs for the Subject Property were identified through the historical use information.

4.0 SITE RECONNAISSANCE

4.1 METHODOLOGY AND LIMITING CONDITIONS

CEC conducted a site reconnaissance of the Subject Property and vicinity for observation or features indicative of RECs. The site reconnaissance consisted of a walk-through of the Subject Property and interiors of structures, if any, on the Subject Property. Surrounding properties were visually assessed from the Subject Property boundaries or available public vantage points and were not entered for inspection of interior or non-visible areas. Pertinent features observed during the Subject Property reconnaissance are depicted on the Subject Property Detail Map, Figures 2A-E. Photographs documenting the site reconnaissance are included in Appendix A.

Mr. Tommy Goodwin of CEC performed the site reconnaissance on May 21, 2026. Mr. Goodwin was not escorted during the site reconnaissance. CEC conducted landowner questionnaires similar to the user questionnaire via phone calls on May 20, 2026, which are detailed in Section 5.0. At the time of the site reconnaissance, the weather was partly cloudy and visibility was good during the reconnaissance. The weather did not prevent CEC's ability to identify RECs in connection with the Subject Property.

4.2 LOCATION AND CHARACTERISTICS

The Subject Property consists of an approximate 286-acre portion of an approximate 574-acre parcel, west of Highway 61, and approximately 54 acres of Highway 61 right-of-way, in northern Lincoln County, Missouri, east of Silex, Missouri. The Subject Property currently contains agricultural cropland, pastureland, vacant/unimproved land, and agricultural structures. Utility providers for the Subject Property include:

Utility Providers	
Electricity	Ameren Missouri
Natural Gas	Spire Energy
Drinking Water	Private Water Wells
Wastewater	Septic Systems

4.3 DESCRIPTION OF IMPROVEMENTS AND CURRENT ACTIVITIES

The Subject Property consisted of two (2) contiguous parcels. All parcels were at least partially developed for agricultural or conservation purposes, and both parcels contained existing structures or some form of improvement other than electric distribution lines and fences. The improvements included:

- Parcel 04-70-26-000-000-001.000 contained three (3) barns, two (2) grain silos, one (1) storm shelter, and several small shelters for cattle or hay storage; and
- State of Missouri Right of Way parcel contained the divided four- (4-) lane Highway 61.

A lead or asbestos survey was not performed; however, due to most of the buildings being constructed prior to 1970, it is possible that lead and asbestos may be present.

Underground utilities and overhead electric distribution lines border and dissect the parcels of the Subject Property.

4.4 SITE OBSERVATIONS

Information presented in this section was based on observations and information obtained at the time of the site reconnaissance.

4.4.1 Site Processes and Equipment

At the time of the site reconnaissance of the Subject Property, the two (2) parcels were at least partially developed for agricultural purposes, and parcel 04-70-26-000-000-001.000 contained agricultural structures and an overhead high voltage transmission line that transects the middle of the parcel mostly longitudinally and the State of Missouri Right of Way parcel contained the divided four- (4-) lane Highway 61 detailed in Section 4.3. Underground utilities and overhead electric distribution lines border the parcels along the roads and dissect the parcels of the Subject Property.

4.4.2 Chemical or Waste Storage, Drainage or Collection Systems

Underground storage tanks or ancillary UST equipment

Surface indications of USTs (e.g., fill ports, vent lines, pavement patching) were not observed on the Subject Property during the site reconnaissance.

Aboveground storage tanks

Features of ASTs (e.g., support stands, concrete saddle supports, vents or fill ports) were not observed on the Subject Property during the site reconnaissance.

Chemical storage and handling

Containers containing potentially hazardous chemicals or petroleum products were not observed on the Subject Property during the site reconnaissance other than empty farm application containers stored in various barns throughout the Subject Property.

Per- and Polyfluoroalkyl Substances

Per- and polyfluoroalkyl substances (PFAS) are a group of synthetic chemicals that have been in use since the 1940s. PFAS are chemically and thermally stable, and are resistant to heat, water, and oil. PFAS have been used in a wide range of products and processes, including firefighting foams, chemical processing, building/construction, electronics, semiconductor and automotive industries, stain- and water-resistant coatings, food packaging, waxes and cleaners. CEC did not observe suspect PFAS containing substances or equipment.

Solid waste, recycling, and waste material handling

No solid waste dumpsters or containers, trash or debris piles were observed on the Subject Property during the site reconnaissance.

Pipeline markers

No pipeline markers were observed on the Subject Property during the site reconnaissance.

CEC reviewed the National Pipeline Mapping System (NPMS) online records ([NPMS Public Viewer \(dot.gov\)](#)) for information regarding the on-site pipelines. The online viewer indicated that no pipelines were in the vicinity of the Subject Property.

4.4.3 Polychlorinated Biphenyls (PCBs)

Pad- or pole-mounted transformers and/or capacitors

Polychlorinated biphenyls (PCBs) are toxic additives used as coolants and insulating fluids in electrical transformers, capacitors, light ballasts, and other electrical equipment. U.S. EPA regulations prohibit the use of PCBs after 1979. No pole- or pad-mounted transformers or capacitors were observed on the Subject Property during the site reconnaissance.

4.4.4 Releases or Potential Releases

Fill dirt

No fill material was observed on the Subject Property that likely originated from off the Subject Property. Agricultural practices tend to move dirt around and sometimes create soil stockpiles, but that material is typically used within the vicinity of where it was gathered. Some uses of the local fill dirt consist of berm construction and filling in low areas to control drainage.

Staining, releases, or stressed vegetation

No visible signs of stains, leaks, or releases indicative of petroleum product or chemical discharges were noted on the Subject Property during the site reconnaissance.

4.5 ADJOINING PROPERTY RECONNAISSANCE

During the site reconnaissance, CEC conducted a visual observation of the adjoining properties from Subject Property boundaries or other public vantage points. Due to the number of individual adjoining properties broad generalizations of the adjoining properties were documented. The adjoining properties were not entered for inspection or observations of non-visible areas, obstructed areas, or building interiors. The adjoining property reconnaissance identified the following:

- The Subject Property consists of an approximate 286-acre portion of an approximate 574-acre parcel, west of Highway 61, and approximately 54 acres of Highway 61 right-of-way, in northern Lincoln County, Missouri, east of Silex, Missouri. The Subject

Property parcels are all generally bound by undeveloped agricultural fields or woodland, with the exception of:

- o Highway 61 and the various other roads dissecting the Subject Property discussed below; and
- o Four (4) farmsteads and single-family residences, Millcreek Estates subdivision, and Millcreek Baptist Church along Millcreek Road.

Visual observation of the adjoining properties did not identify features or activities indicative of RECs in connection with the Subject Property.

4.6 SITE RECONNAISSANCE SUMMARY

During the site reconnaissance, CEC observed the two (2) parcels were at least partially developed for agricultural purposes. Parcel 04-70-26-000-000-001.000 contained three (3) barns, two (2) grain silos, one (1) storm shelter, and several small shelters for cattle or hay storage; it also contained an overhead high voltage transmission line that transects the middle of the parcel mostly longitudinally. The State of Missouri Right of Way parcel contained the divided four- (4-) lane Highway 61. Underground utilities and overhead electric distribution lines border the parcels along the roads and dissect the parcels of the Subject Property.

Current uses of adjoining properties are primarily residential, agricultural, and undeveloped forested land. Visual observation of the adjoining properties did not identify features or activities indicative of RECs in connection with the Subject Property.

5.0 INTERVIEWS

CEC did not conduct in person interviews with current and previous landowners and operators; however, landowner questionnaires similar to the user questionnaire were conducted over the phone with the property owners. The Parcel 04-70-26-000-000-001.000 property owners were contacted in the original Limited Phase I ESA. Their responses did not indicate knowledge of environmental concerns.

6.0 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.1 FINDINGS

The following summarizes CEC's findings resulting from the completion of a Limited Phase I ESA conducted in accordance with ASTM Standard Practice E E2247-23 and CEC Proposal No. 354-818 for the Millcreek BESS project which consists of an approximate 286-acre portion of an approximate 574-acre parcel, west of Highway 61, and approximately 54 acres of Highway 61 right-of-way, in northern Lincoln County, Missouri, east of Silex, Missouri. Details are not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items presented below.

- The Subject Property currently contains agricultural cropland, pastureland, vacant/unimproved land, and agricultural structures. The Subject Property was identified on the MRDS database. The MRDS database record indicated the presence of industrially useful stone in the geology in the northwest portion of the Subject Property. This database record is not considered a REC for the Subject Property.
- Review of the FEMA Flood Zone Map information provided by ERIS, the westernmost portion of parcel 04-70-26-000-000-001.000, near Mill Creek, is mapped as 1% Annual Chance Flood Hazard. The remainder of the Subject Property is mapped as 0.2% Annual Chance of Flood Hazard.
- Based on review of readily available historical use information, the majority of the Subject Property was agricultural land with sparsely forested areas, intermittent and ephemeral streams and farmsteads from at least 1934 through the present. Historical topographic maps depict multiple structures, including Mill Creek School, on parcel 04-70-26-000-000-001.000 as early as 1934. By 1975, most of these structures, including the school, were no longer depicted. An unnamed cemetery was identified at the northern portion of parcel 04-70-26-000-000-001.000, and later topographic maps identify Ellis Cemetery and Mill Creek Cemetery adjacent to the Subject Property west of Millcreek Church Road. Other notable developments included improvements to Highway 61 and the installation of an overhead transmission line crossing the Subject

Property. No RECs, HRECs, or CRECs for the Subject Property were identified through the historical use information.

- During the site reconnaissance, CEC observed the two (2) parcels were at least partially developed for agricultural purposes. Parcel 04-70-26-000-000-001.000 contained three (3) barns, two (2) grain silos, one (1) storm shelter, and several small shelters for cattle or hay storage; it also contained an overhead high voltage transmission line that transects the middle of the parcel mostly longitudinally. Underground utilities and overhead electric distribution lines border the parcels along the roads and dissect the parcels of the Subject Property. Current uses of adjoining properties are primarily residential, agricultural, and undeveloped forested land. Visual observation of the adjoining properties did not identify features or activities indicative of RECs in connection with the Subject Property.

6.2 OPINION

Based on the scope of services, limitations, and findings of this assessment, it is CEC's opinion that conditions indicative of RECs, CRECs, HRECs, or *de minimis* conditions are not located on or near the Subject Property.

6.3 CONCLUSIONS

CEC has performed a Limited Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM E 2247-23 and CEC Proposal and Change Order No. 354-818 for the Millcreek BESS project which consists of an approximate 286-acre portion of an approximate 574-acre parcel, west of Highway 61, and approximately 54 acres of Highway 61 right-of-way, in northern Lincoln County, Missouri, east of Silex, Missouri. Any exceptions to, or deletions from, this practice are described in Section 1.0 of this report. This assessment has not revealed evidence of RECs, CRECs and/or HRECs in connection with the Subject Property.

7.0 ENVIRONMENTAL PROFESSIONAL STATEMENT

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312; and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Subject Property. We have developed and performed the All-Appropriate Inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. Resumes of the environmental professionals are included in Appendix G.

Tommy J. Goodwin

Name

Assistant Project Manager

Title


Signature

Beth N. Eckley

Name

Principal

Title


Signature

8.0 REFERENCES

- ASTM International (ASTM), ASTM E 2247-23, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property.
- ASTM International (ASTM), ASTM E 1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.
- Environmental Risk Information Services (ERIS). Physical Setting Report, Order No. 26081300772p, dated August 14, 2026, Millcreek BESS, Silex, Missouri.
- ERIS. Database Report, Order No. 26081300772, dated August 13, 2026, Millcreek BESS, Silex, Missouri.
- ERIS. Historical Aerials, Order No. 26081300772, dated August 18, 2026, Millcreek BESS, Silex, Missouri.
- ERIS. Topographic Maps, Order No. 26081300772, dated August 14, 2026, Millcreek BESS, Silex, Missouri.
- “Missouri Geological Maps 24K Collection.” Missouri Department of Natural Resources GeoSTRAT Online Map Viewer. Accessed August 17, 2026. <https://www.arcgis.com/apps/mapviewer/index.html?layers=13a8c6cbd58644b9b6c7d33b8dd27c2c>

FIGURES

MEMORIAL
OLIVE AREA

WHITE MEMORIAL
STATE WILDLIFE AREA

SUBJECT PROPERTY LOCATION
MILLCREEK SOLAR PORTION
(39.1664, -90.9812)

U N I O N

WILLIAM LOGAN
STATE WILDLIFE AREA

Ellis Cem

Wilson
Cem

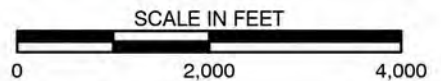


LEGEND

APPROXIMATE SUBJECT PROPERTY BOUNDARY



NORTH



REFERENCE(S):

1. USGS TOPOGRAPHIC MAP / ARCGIS MAP SERVICE:
ACCESSED 8/18/2026.
AUBURN, MISSOURI QUADRANGLE
PUBLISHED 1985

ENGINEERING, SURVEYING AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF NC, PLLC. SERVICES IN PUERTO RICO WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC LANDSCAPE ARCHITECTS, LLC.



Civil & Environmental
Consultants, Inc.

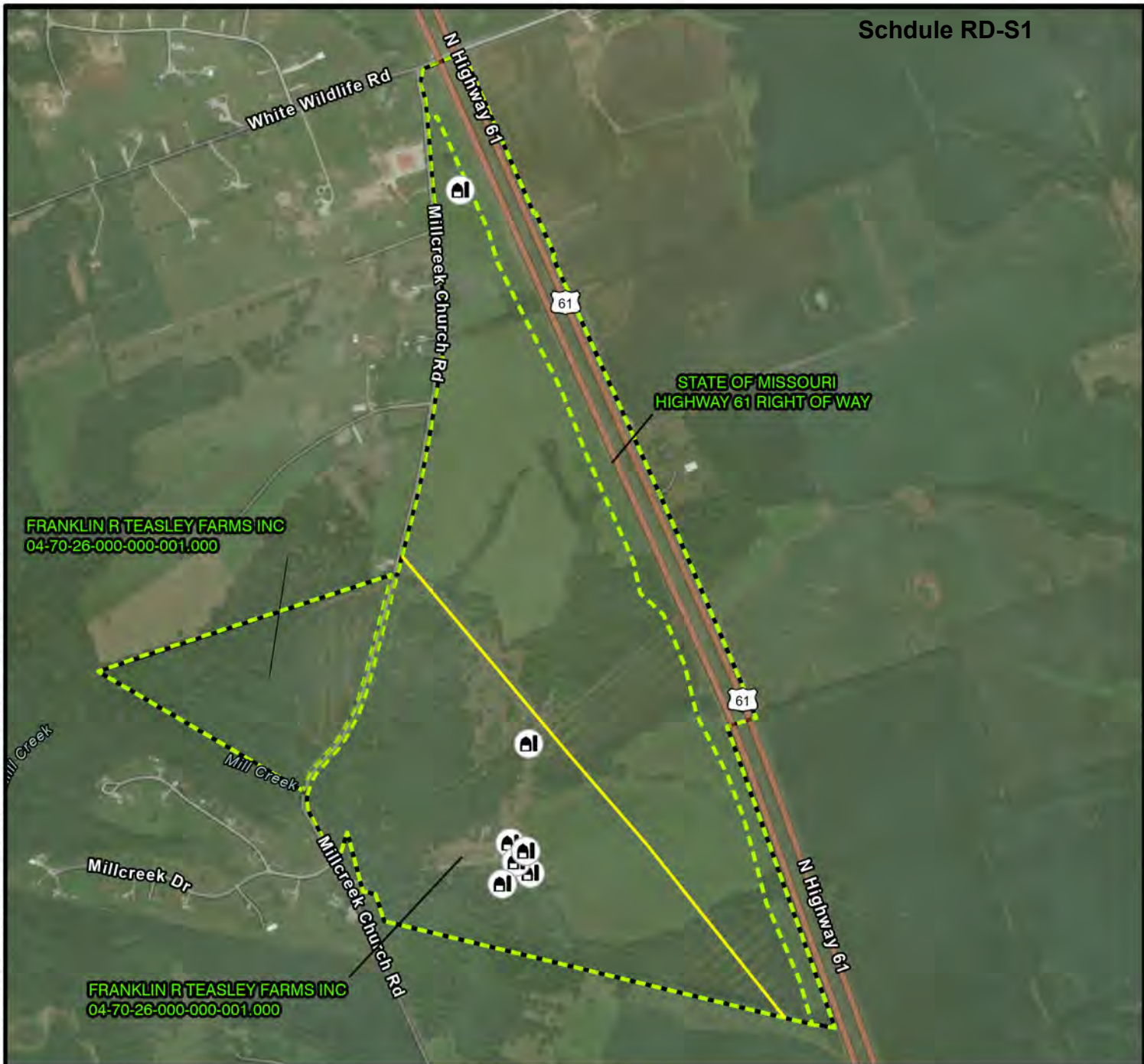
1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566 · 866.250.3679
www.cecinc.com

PHASE I ENVIRONMENTAL ASSESSMENT
MILLCREEK BESS PROJECT
AMEREN MISSOURI
LINCOLN COUNTY, MISSOURI

SUBJECT PROPERTY LOCATION MAP

DRAWN BY:	TJG	CHECKED BY:	BNE	APPROVED BY:	BNE*	FIGURE NO:
DATE:	8/18/2026	SCALE:	1" = 2,000'	PROJECT NO:	354-818	Attachment A

*Hand Signature on file



LEGEND

- APPROXIMATE SUBJECT PROPERTY BOUNDARY
- APPROXIMATE PARCEL BOUNDARY
- HIGH-VOLTAGE TRANSMISSION
- AGRICULTURAL STRUCTURE



NORTH

SCALE IN FEET

0 1,100 2,200

REFERENCE(S):

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE.
ACCESSED 8/18/2026
2. LINCOLN COUNTY MISSOURI ASSESSOR GIS
ACCESSED 2/5/2026

ENGINEERING, SURVEYING AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF NC, PLLC. SERVICES IN PUERTO RICO WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC LANDSCAPE ARCHITECTS, LLC.



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1450 Beale Street
Suite 305
St. Charles, MO 63303
Ph: 314.656.4566 · 866.250.3679
www.cecinc.com

PHASE I ENVIRONMENTAL ASSESSMENT
MILLCREEK BESS PROJECT
AMEREN MISSOURI
LINCOLN COUNTY, MISSOURI

SUBJECT PROPERTY DETAIL MAP

DRAWN BY:	TJG	CHECKED BY:	TJG	APPROVED BY:	BNE*	FIGURE NO:
DATE:	8/17/2026	SCALE:	1" = 1,100'	PROJECT NO:	354-818.0008	Attachment A

*Hand Signature on file

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION



Photo Number:

1

Description:

Representative view of the northern row-crop agricultural portion of parcel 04-70-26-000-000-001.000. Direction of view (DOV) is southeast.



Photo Number:

2

Description:

Representative view of the central row-crop agricultural portion of parcel 04-70-26-000-000-001.000. DOV is west.



Civil & Environmental Consultants, Inc.

St. Charles, MO 63303
Phone: (314) 656-4566
www.cecinc.com

Project Name: Millcreek BESS Project -
Limited Phase I ESA

Client Name: Ameren Missouri

Project Number: 354-818.0008



Photo Number:

3

Description:

Representative view of structures of farmstead on parcel 04-70-26-000-000-001.000. DOV is north.



Photo Number:

4

Description:

Representative view of structures of farmstead on parcel 04-70-26-000-000-001.000. DOV is east.



Civil & Environmental Consultants, Inc.

St. Charles, MO 63303

Phone: (314) 656-4566

www.cecinc.com

Project Name: Millcreek BESS Project -
Limited Phase I ESA

Client Name: Ameren Missouri

Project Number: 354-818.0008



Photo Number:

5

Description:

Representative view of structures of farmstead on parcel 04-70-26-000-000-001.000. DOV is southeast.



Photo Number:

6

Description:

Representative view of an abandoned grain silo and the pasture portion of parcel 04-70-26-000-000-001.000. DOV is east.



Civil & Environmental Consultants, Inc.

St. Charles, MO 63303

Phone: (314) 656-4566

www.cecinc.com

Project Name: Millcreek BESS Project -
Limited Phase I ESA

Client Name: Ameren Missouri

Project Number: 354-818.0008



Photo Number:

7

Description:

Representative view of the maintained Highway-61 right-of-way. DOV is north.



Photo Number:

8

Description:

Representative view of the maintained Highway-61 right-of-way. DOV is south.



Civil & Environmental Consultants, Inc.

St. Charles, MO 63303

Phone: (314) 656-4566

www.cecinc.com

Project Name: Millcreek BESS Project -
Limited Phase I ESA

Client Name: Ameren Missouri

Project Number: 354-818.0008

APPENDIX B

USER PROVIDED INFORMATION & QUESTIONNAIRE

Ameren Missouri
Millcreek BESS Project – Lincoln County, MO
CEC Proposal: 354-818 User Questionnaire
Page 1
August 11, 2026

Instructions: Please answer the following questions to the best of User's ability, and provide relevant documentation as requested and/or necessary. NOTE: If the User cannot provide some or all of the information requested in this questionnaire, CEC will report the missing information as a data gap in the Phase I ESA report. For clarity, User is defined in the ASTM standard as "the party seeking to use practice E 2247 to complete an environmental assessment of the property."

USER PROVIDED INFORMATION-USER QUESTIONNAIRE

Per EPA 40 CFR Part 312 (Standards and Practices for All Appropriate Inquiry), and ASTM E 2247-23 (Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property), in order to qualify for one of the *Landowner Liability Protections (LLPs)*, offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"), the *user* must conduct the following inquiries. These inquiries must also be conducted by EPA Brownfield Assessment and Characterization grantees. The *user* should provide the following information to the *environmental professional*. Failure to conduct these inquiries could result in a determination that "*all appropriate inquiries*" is not complete.

Please complete and e-mail to your CEC representative at tgoodwin@cecinc.com. Thank you!

Business Name of User: Ameren Missouri

User Contact Name: Brad Wentz

Phone Number: 314.200.5550

Project Name: Proposed Millcreek BESS Project

Project Address: Northern Lincoln County, MO

(1.) Environmental cleanup liens that are filed or recorded against the property (40 CFR 312.25).

Did a search of *recorded land title records* (or judicial records where appropriate) identify any environmental liens filed or recorded against the *property* under federal, tribal, state or local law?

Unknown, title search pending.

(2.) Activity and use limitations (AULs) that are in place on the property or that have been filed or recorded against the property (40 CFR 312.26(a)(1)(v)).

Did a search of *recorded land title records* (or judicial records where appropriate) identify any AULs, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the *property* and/or have been filed or recorded against the *property* under federal, tribal, state or local law?

Unknown, title search pending.

Ameren Missouri
Millcreek BESS Project – Lincoln County, MO
CEC Proposal: 354-818 User Questionnaire
Page 2
August 11, 2026

(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).

Do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an *adjoining property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?

No, other than farm chemicals.

(4.) Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?

Yes, for those parcels that have purchase options.

(5.) Commonly known or reasonably ascertainable information about the *property* (40 CFR 312.30).

Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example:

- (a.) Do you know the past uses of the *property*?
- (b.) Do you know of specific chemicals that are present or once were present at the *property*?
- (c.) Do you know of spills or other chemical releases that have taken place at the *property*?
- (d.) Do you know of any environmental cleanups that have taken place at the *property*?

See Property Illustrations (Exhibit "B") and Seller's Disclosures (Exhibit "C").

(6.) The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

Based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of releases at the *property*?

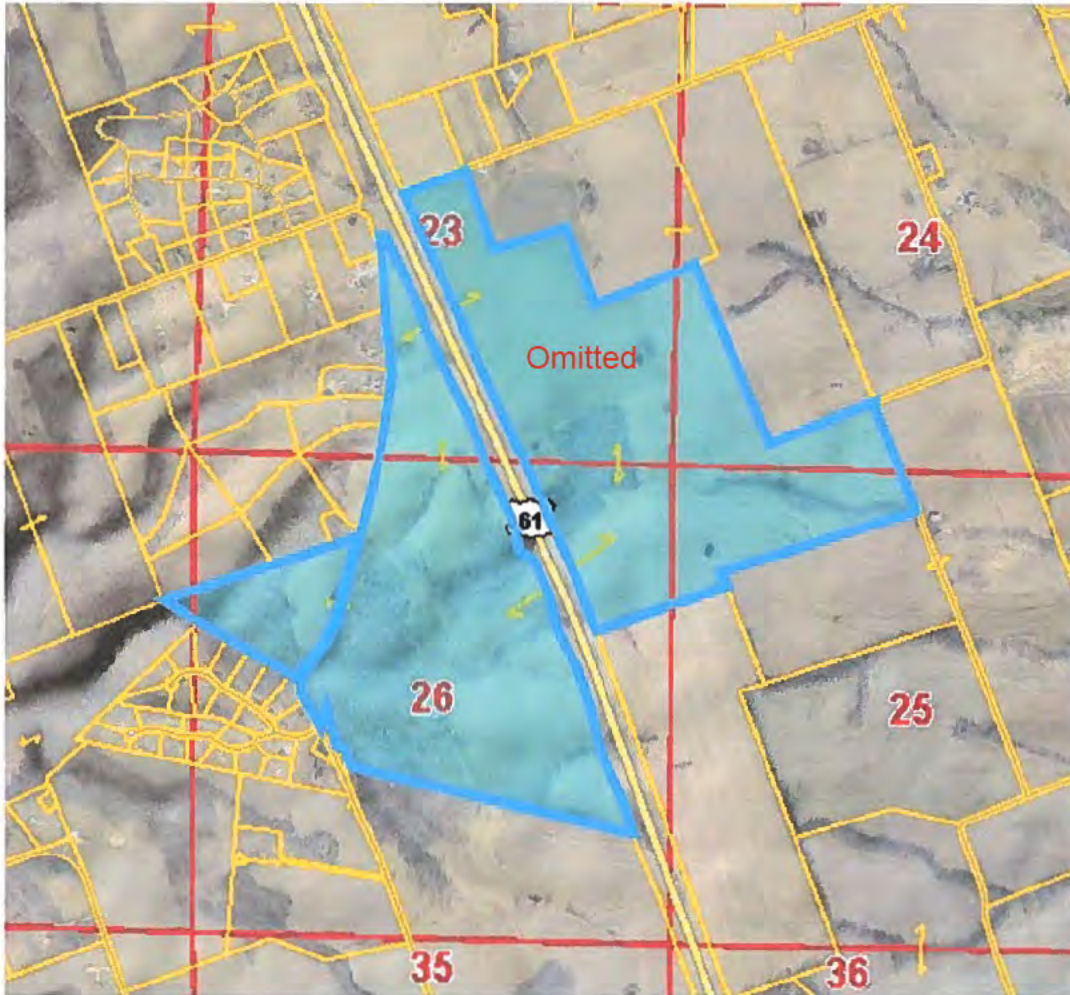
See Property Illustrations (Exhibit "B") and Seller's Disclosures (Exhibit "C").

Completed by:

By: Brad Wentz Date: August 14, 2026
Title: Battery Storage Development Manager Company: Ameren Missouri

EXHIBIT "B"
(Property Illustration)

Parcel 1:



Tax Identification Number: 04-70-26-000-000-001.000

EXHIBIT "C"
(Seller's Disclosures)

- Existing Contracts affecting the Property (including leases, easements, licenses, rights of way):
 - Any default or right of set-off held by any party to any existing Contracts:

None
- Holders of any subsurface estate or interest: None
- Any condemnation, environmental, zoning, or other land-use regulation proceedings, either ongoing or planned, of which Seller has knowledge: None
- Any special assessment proceedings affecting the Property of which Seller has notice:

None
- Any outstanding and unsatisfied judgments against Seller or the Property:

None
- Any litigation at law or in equity, or any other court proceeding, or proceeding by or before any governmental or administrative agency, existing, pending, or threatened, involving Seller or the Property:

None
- Any non-compliance of the Property with applicable laws, rules, or regulations affecting the Property:

None
- Any construction performed on the Property that has not been paid in full:

None
- Any hazardous or regulated substances used or stored at the Property or otherwise discharged or released on the Property, which includes, but is not limited to, underground injection of such substances in violation of any federal, state, or local environmental law, ordinance, rule, or regulation:

Only farm chemicals

 - Seller's knowledge of any other party that has used, stored, discharged, or released hazardous or regulated substances affecting the Property:

Only farm chemicals
- Any wells, including inactive wells, that exist on the Property, including location thereof and details as to use: One water well
 - Any inactive wells that have been properly decommissioned in accordance with federal and state regulations:

None
- Any aboveground or underground tanks located in or about the Property now or previously:

None
- Any portion of the Property currently enrolled in CRP, WRP, or other similar federal or state programs:

None
- Any airport zoning regulations affecting the Property: None

- Any Seller insolvency proceedings: None
- Any other potential issues that could affect the development of the Project on the Property:

One ^{Family} Cemetery with wire fence and trees
located east of residence in field - last visited

The foregoing categories are not meant to be limiting or comprehensive. If there is any other information that would result in any representations or warranties made by Seller in the Agreement being untrue or incurred, such information should be disclosed by Seller herein.

years ago

Frank R. Teasley inc.
 by Frank R. Teasley
 Pres.

9-12-25

APPENDIX C

PHYSICAL SETTING REPORT



Property Information

Order Number: 26081300772p
Date Completed: August 14, 2026
Project Number:
Project Property: Millcreek BESS
Ave of the Saints Silex MO
Coordinates:
Latitude: 39.16074591
Longitude: -90.98073151
UTM Northing: 4336556.8307 Meters
UTM Easting: 674463.0689 Meters
UTM Zone: UTM Zone 15S
Elevation: 772.13 ft
Slope Direction: SE

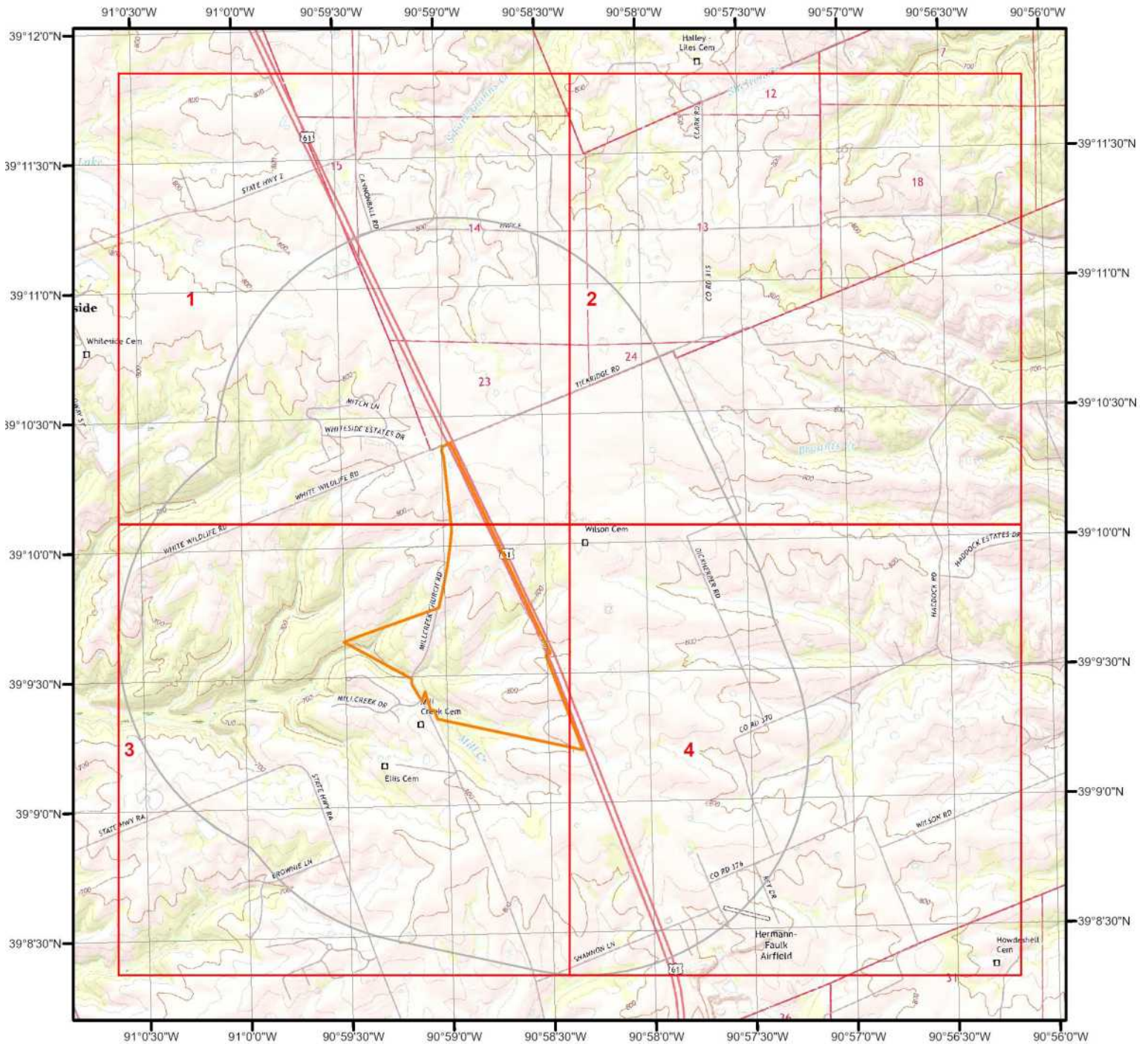
Topographic Information.....2
Hydrologic Information.....12
Geologic Information.....21
Soil Information.....26
Wells and Additional Sources.....38
 Summary.....43
 Detail Report.....45
Radon Information.....86
Appendix.....87
Liability Notice.....89

The ERIS **Physical Setting Report - PSR** provides comprehensive information about the physical setting around a site and includes a complete overview of topography and surface topology, in addition to hydrologic, geologic and soil characteristics. The location and detailed attributes of oil and gas wells, water wells, public water systems and radon are also included for review.

The compilation of both physical characteristics of a site and additional attribute data is useful in assessing the impact of migration of contaminants and subsequent impact on soils and groundwater.

Disclaimer

This Report does not provide a full environmental evaluation for the site or adjacent properties. Please see the terms and disclaimer at the end of the Report for greater detail.



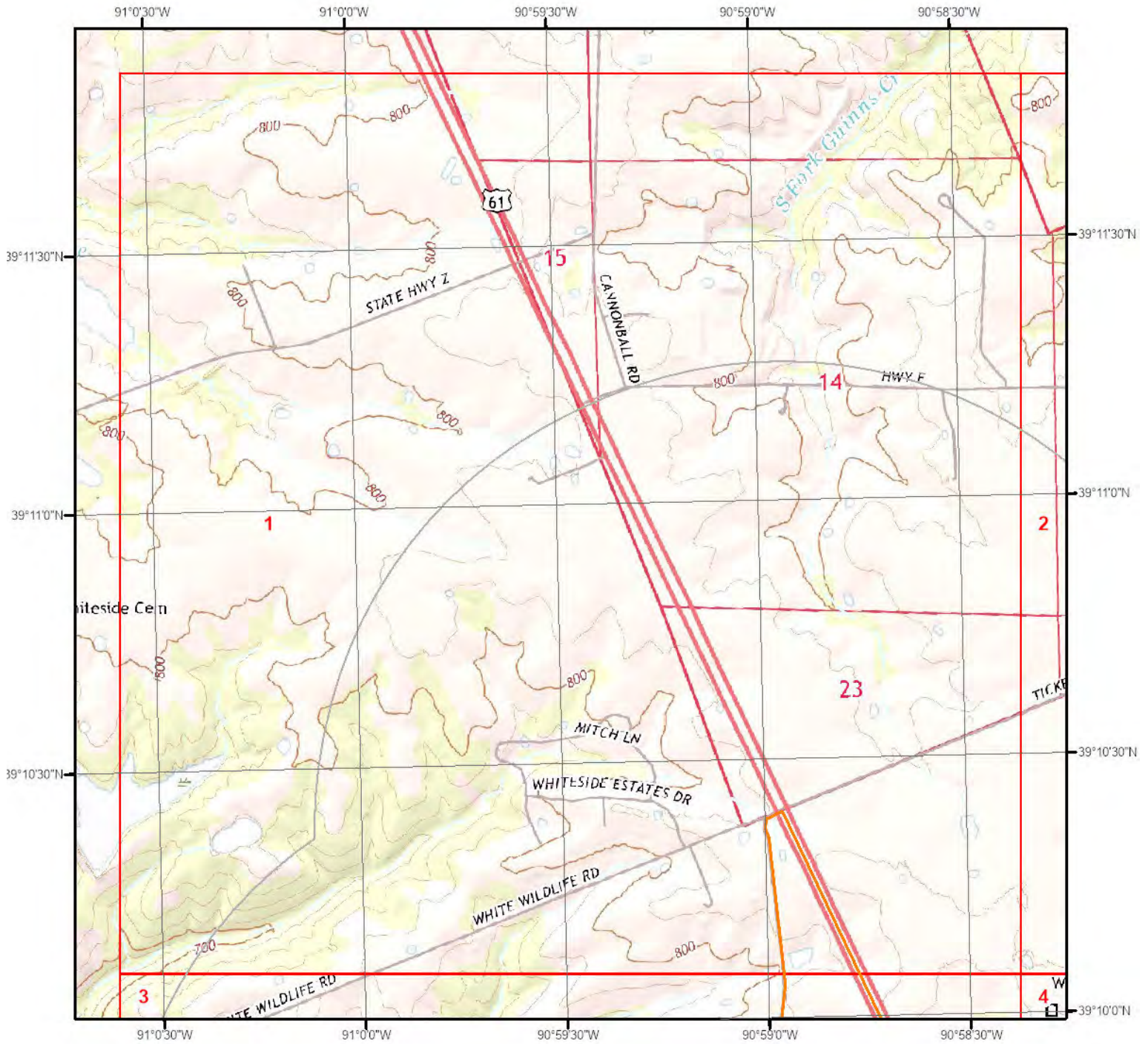
Current USGS Topo (2021)



Quadrangle(s): Auburn,MO; Eolia,MO

Source: USGS 7.5 Minute Topographic Map



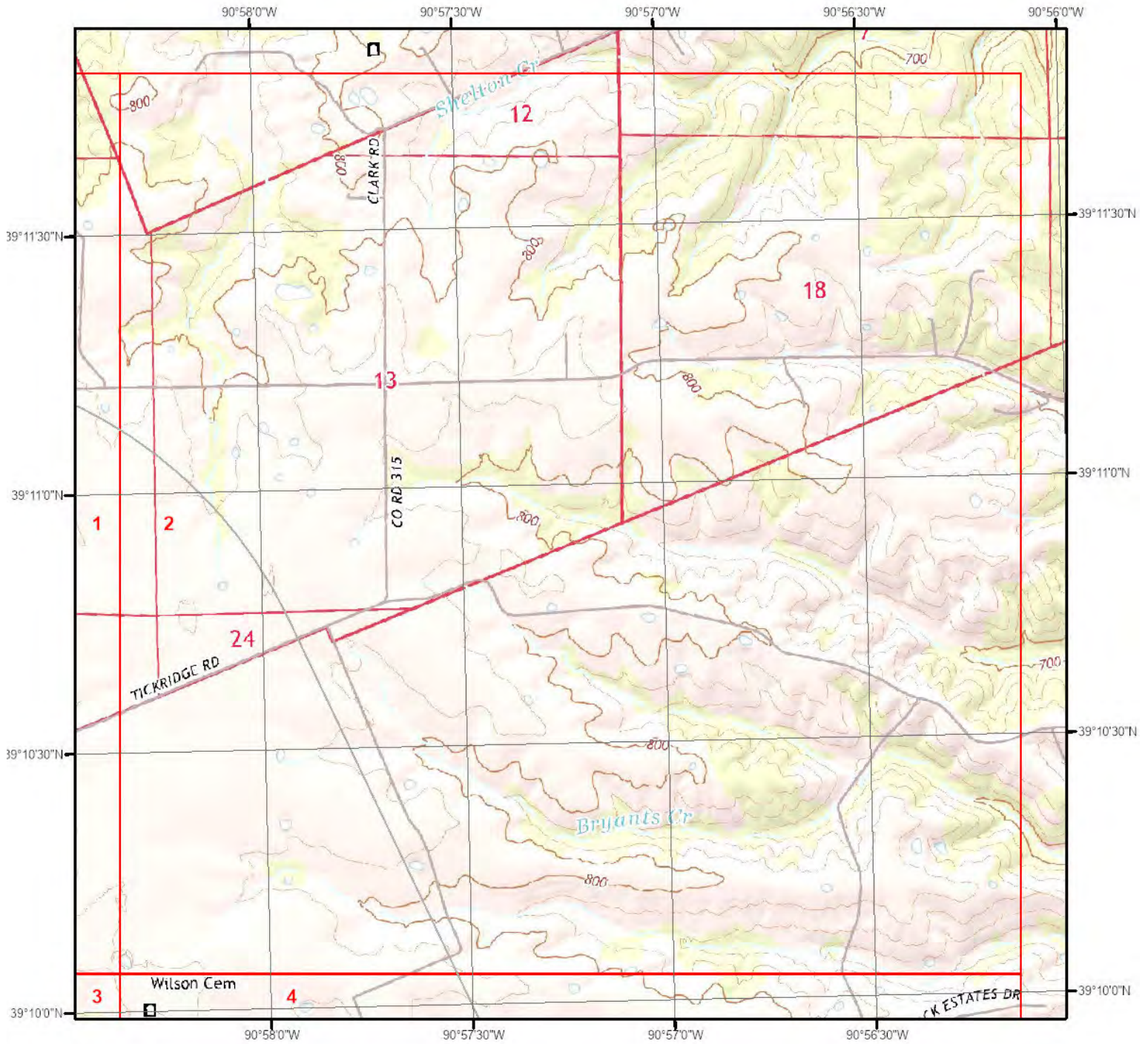


Current USGS Topo - Page 1

Quadrangle(s): Auburn, MO; Eolia, MO

Source: USGS 7.5 Minute Topographic Map





Current USGS Topo - Page 2

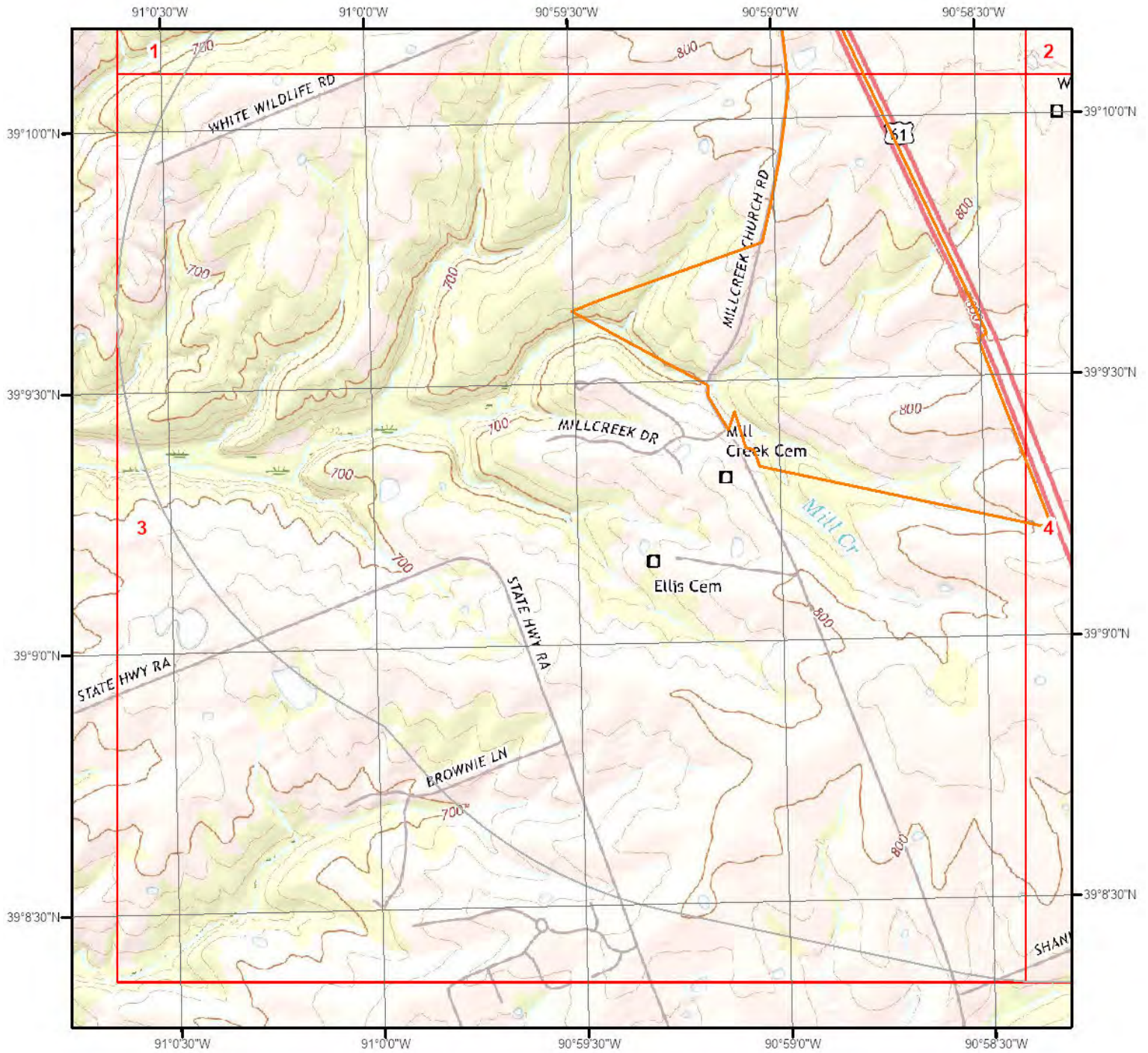
0 0.15 0.3 0.6 Miles



Quadrangle(s): Auburn, MO

Source: USGS 7.5 Minute Topographic Map





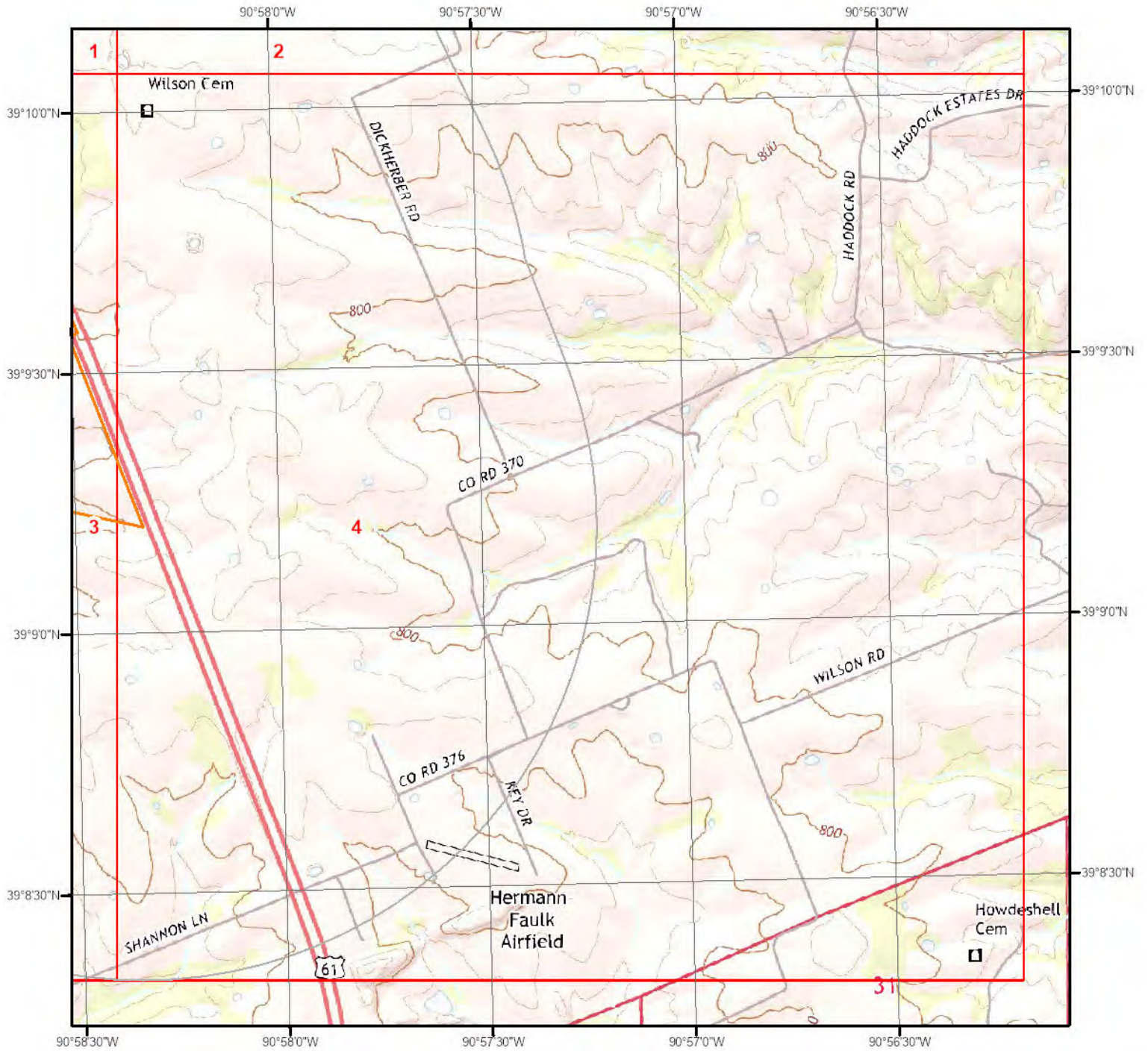
Current USGS Topo - Page 3



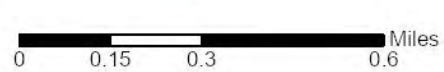
Quadrangle(s): Auburn, MO; Eolia, MO

Source: USGS 7.5 Minute Topographic Map





Current USGS Topo - Page 4



Quadrangle(s): Auburn, MO

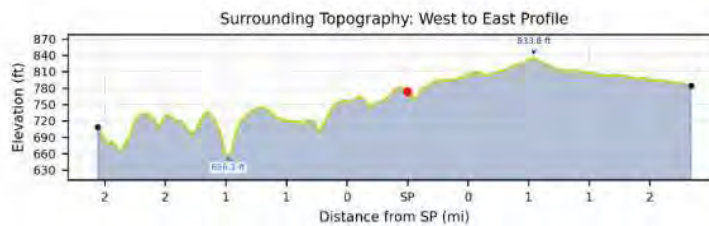
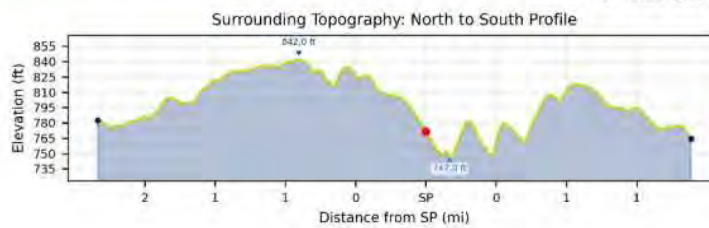
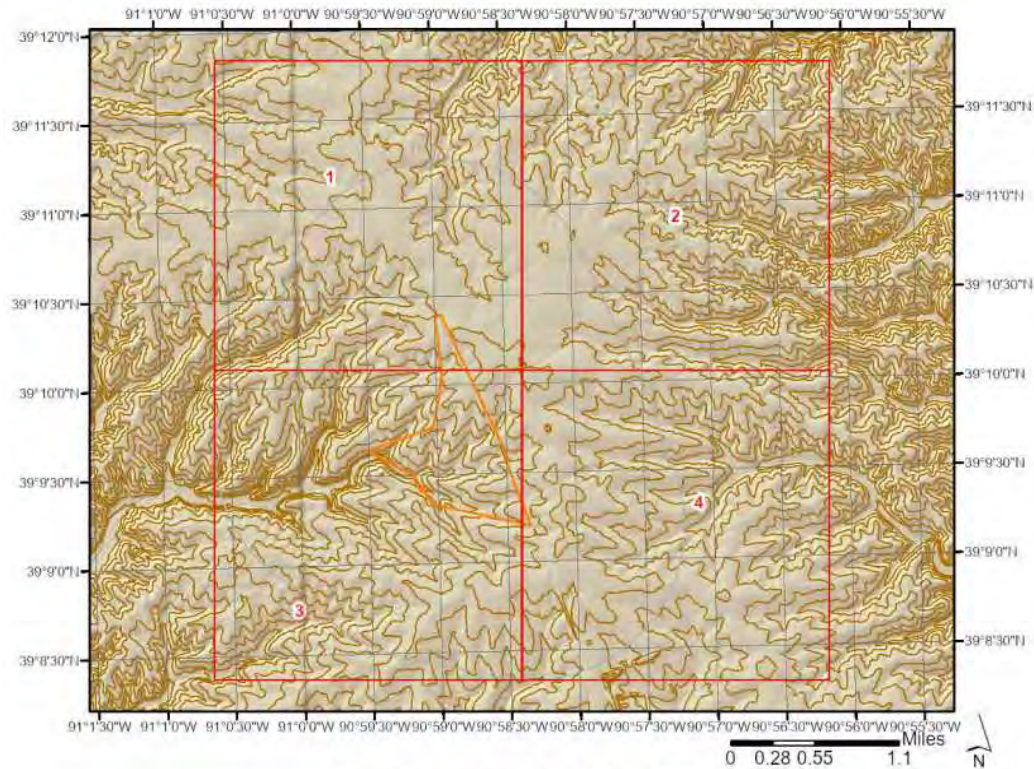
Source: USGS 7.5 Minute Topographic Map

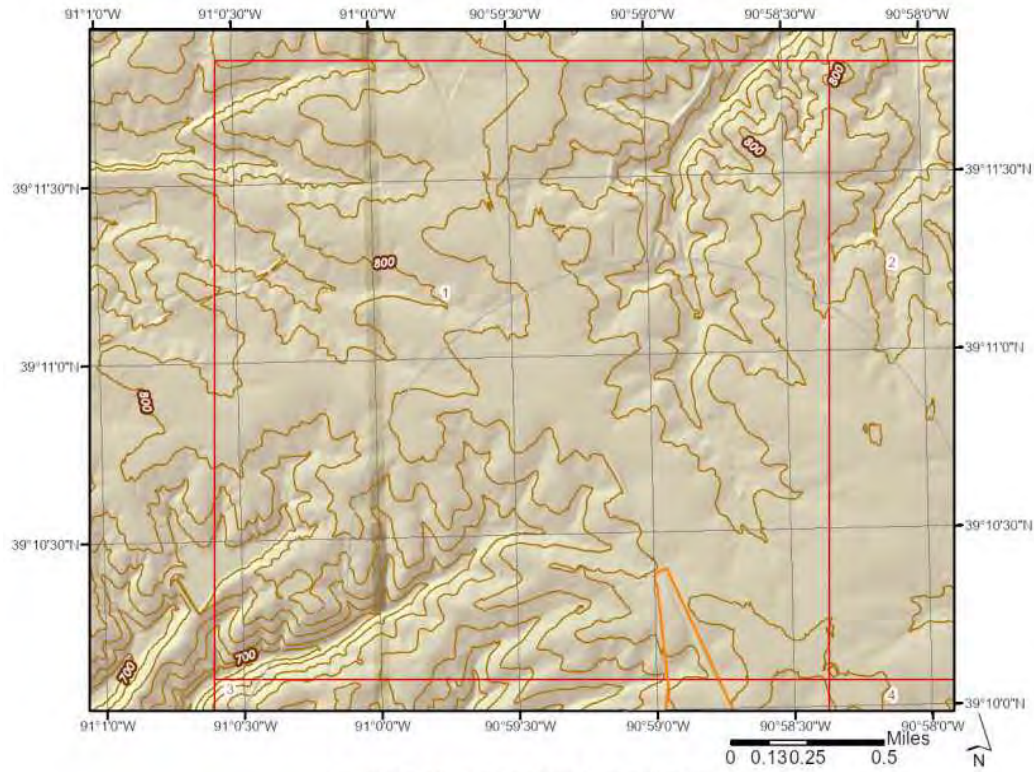


The previous topographic map(s) are created by seamlessly merging and cutting current USGS topographic data. Below are shaded relief map(s), derived from USGS elevation data to show surrounding topography in further detail.

Topographic information at project property:

Elevation: 772.13 ft
Slope Direction: SE

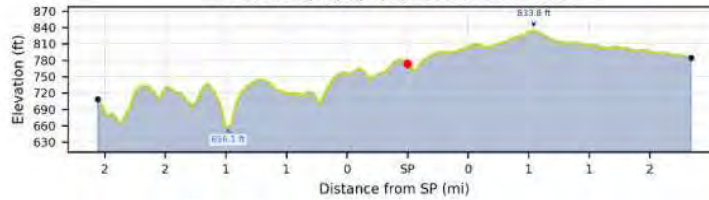


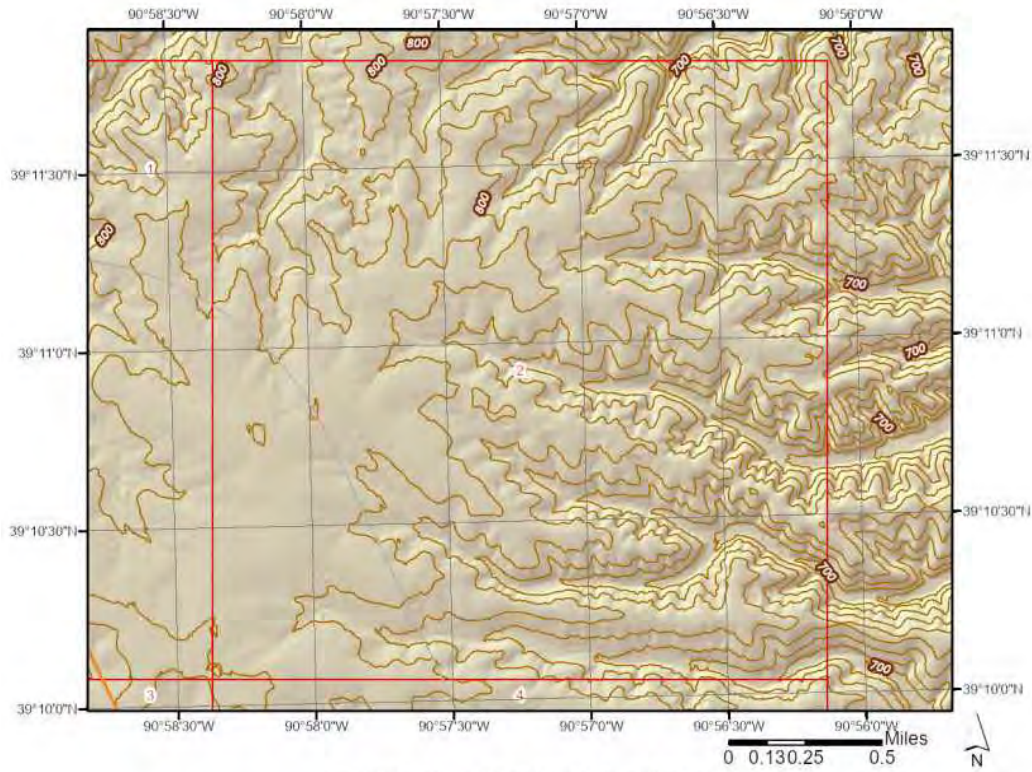


Surrounding Topography: North to South Profile



Surrounding Topography: West to East Profile

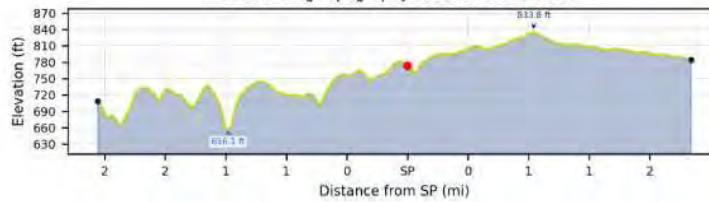


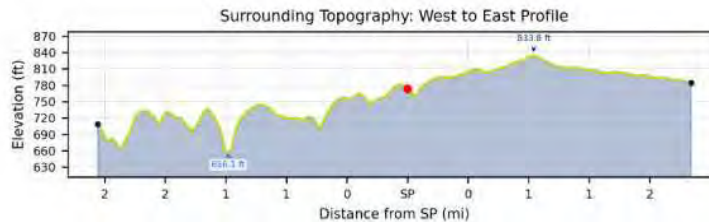
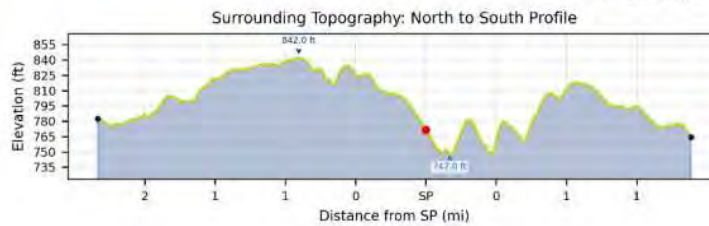
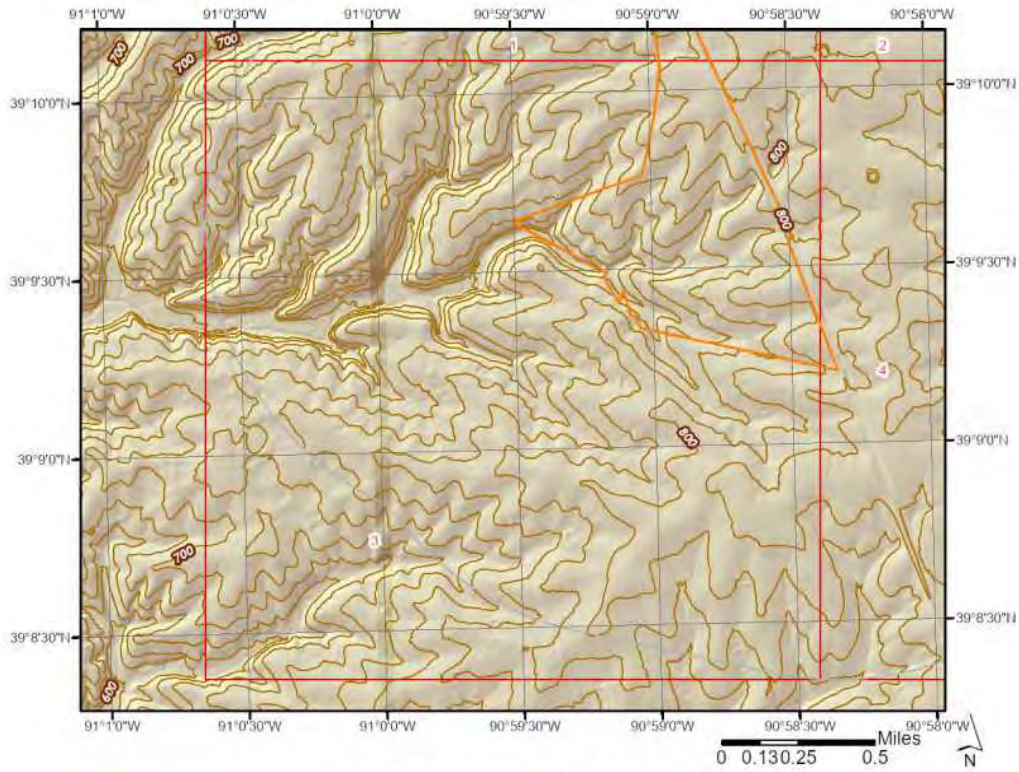


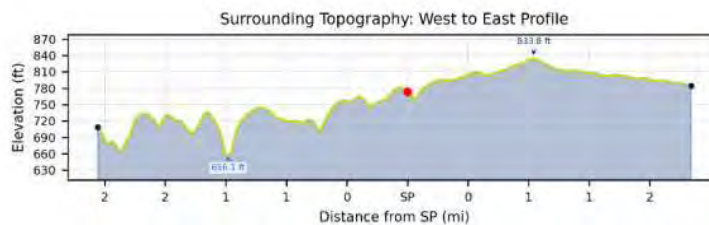
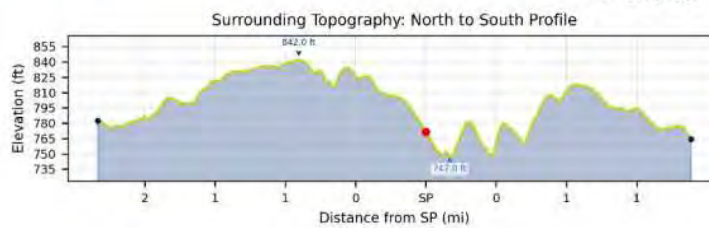
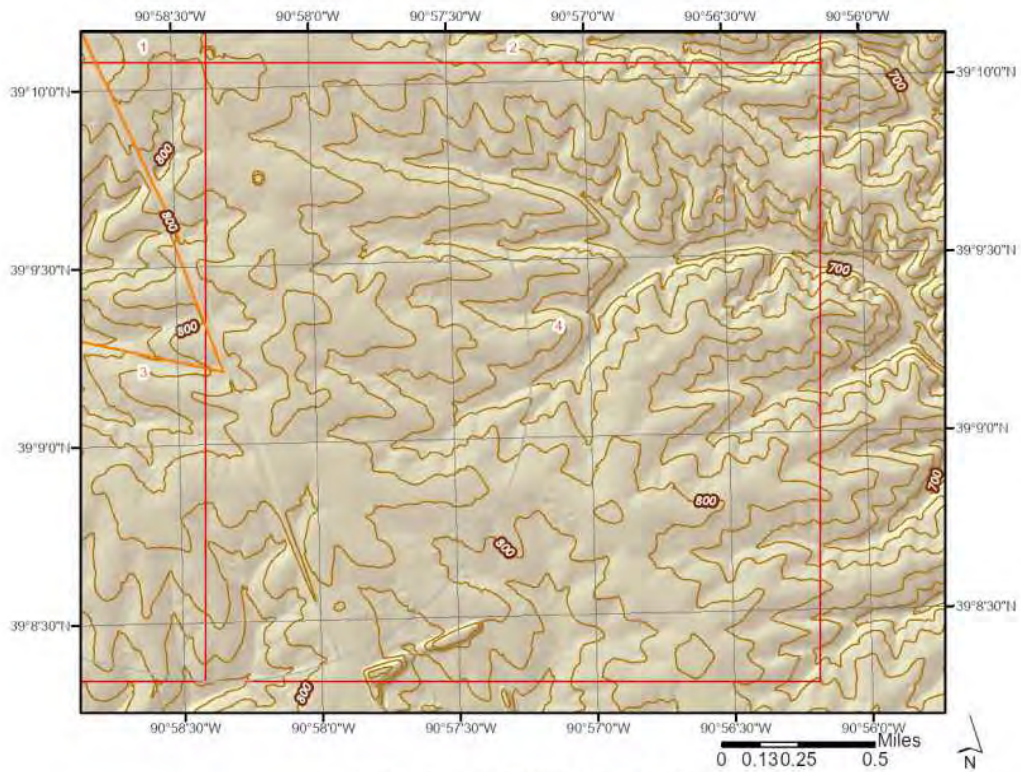
Surrounding Topography: North to South Profile

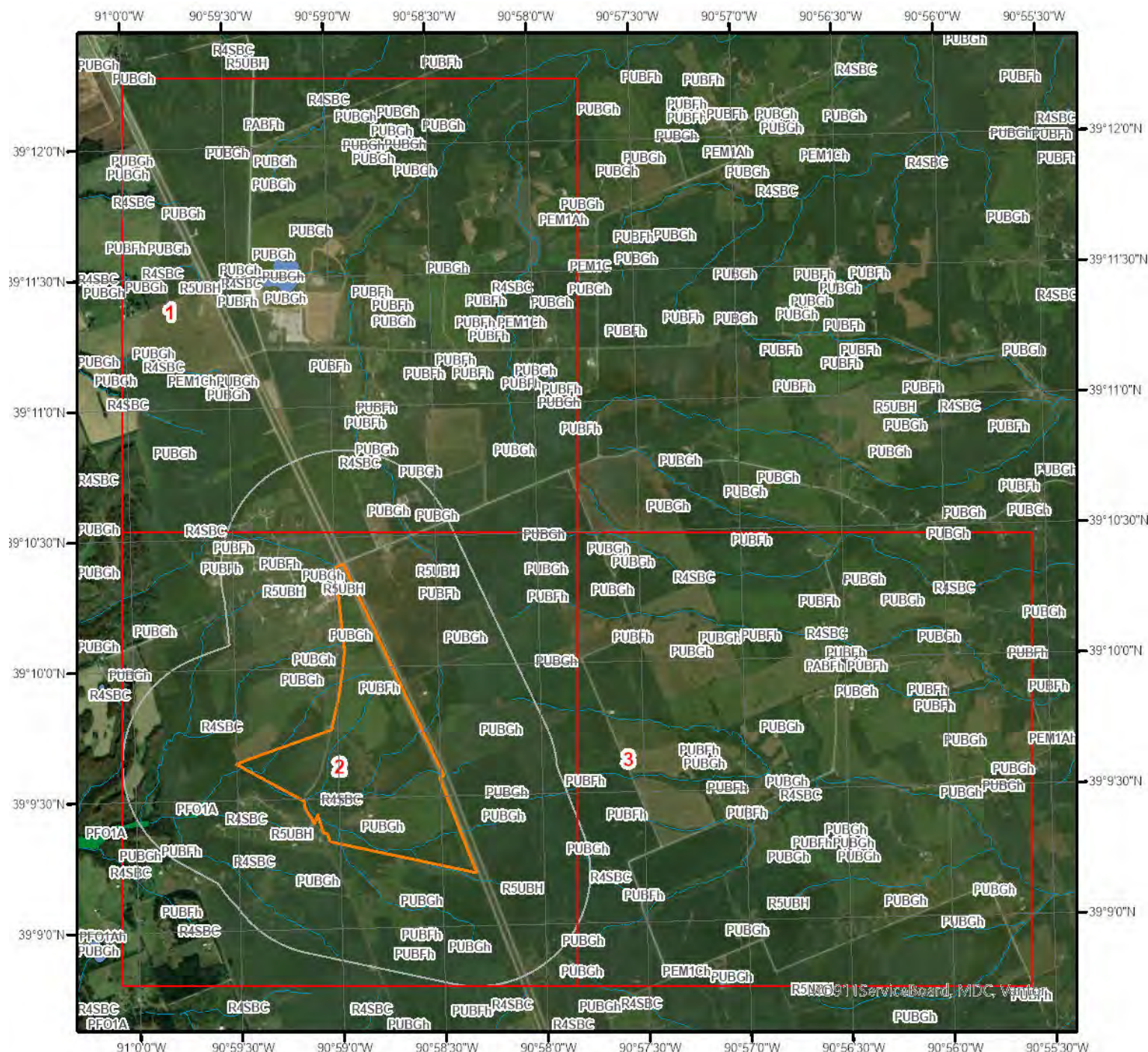


Surrounding Topography: West to East Profile









Wetland

This map shows wetland existence using data from US Fish & Wildlife. Data coverage is shown to the right. Gray indicates no data available in the area.

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



 ∇^2

- ERIS** 

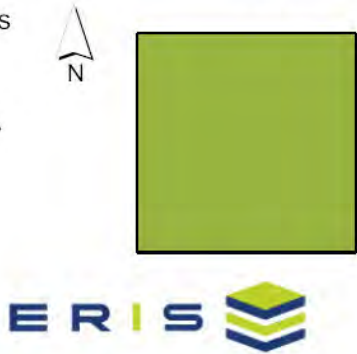


Wetland Type - Page 2

This map shows wetland existence using data from US Fish & Wildlife. Data coverage is shown to the right. Gray indicates no data available in the area.

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland

- Freshwater Pond
- Lake
- Other
- Riverine





0 0.28 0.55 Miles



- ERIS 



Flood Hazard Zones

This map shows FEMA flood hazard zones based on FEMA's National Flood Hazard Layer. FIRM Panels are overlayed. An absent FIRM panel represents no data available.

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard

- 00.250.5

Miles
- 0.2% Annual Chance Flood Hazard
 - Future Conditions 1% Annual Chance Flood Hazard
 - Area with Reduced Risk Due to Levee
 - Area with Risk Due to Levee
 - Open Water

Quadrangle(s): Auburn,MO; Eolia,MO





Flood Hazard Zones - Page 1

This map shows FEMA flood hazard zones based on FEMA's National Flood Hazard Layer. FIRM Panels are overlaid. An absent FIRM panel represents no data available.

- | | |
|-----------------------------------|---|
| 0.2% Annual Chance Flood Hazard | Future Conditions 1% Annual Chance Flood Hazard |
| 1% Annual Chance Flood Hazard | Area with Reduced Risk Due to Levee |
| Regulatory Floodway | Area with Risk Due to Levee |
| Special Floodway | Open Water |
| Area of Undetermined Flood Hazard | |

Quadrangle(s):



The Wetland Type map shows wetland existence overlaid on an aerial imagery. The Flood Hazard Zones map shows FEMA flood hazard zones overlaid on an aerial imagery. Relevant FIRM panels and detailed zone information is provided below. For detailed Zone descriptions please click the link: <https://floodadvocate.com/fema-zone-definitions>

Available FIRM Panels in area: 29113C0090D(effective:2010-09-29) 29163C0500C(effective:2010-04-19)

Flood Zone A-01

Zone: A

Zone subtype:

Flood Zone X-12

Zone: X

Zone subtype: AREA OF MINIMAL FLOOD HAZARD

FEMA Flood Zone Definitions

Special Flood Hazard Areas – High Risk

Special Flood Hazard Areas represent the area subject to inundation by 1-percent-annual chance flood. Structures located within the SFHA have a 26-percent chance of flooding during the life of a standard 30-year mortgage. Federal floodplain management regulations and mandatory flood insurance purchase requirements apply in these zones.

ZONE	DESCRIPTION
A	Areas subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown.
AE, A1-A30	Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. BFEs are shown within these zones. (Zone AE is used on new and revised maps in place of Zones A1–A30.)
AH	Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are 1–3 feet. BFEs derived from detailed hydraulic analyses are shown in this zone.
AO	Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are 1–3 feet. Average flood depths derived from detailed hydraulic analyses are shown within this zone.
AR	Areas that result from the decertification of a previously accredited flood protection system that is determined to be in the process of being restored to provide base flood protection.
A99	Areas subject to inundation by the 1-percent-annual-chance flood event, but which will ultimately be protected upon completion of an under-construction Federal flood protection system. These are areas of special flood hazard where enough progress has been made on the construction of a protection system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes. Zone A99 may be used only when the flood protection system has reached specified statutory progress toward completion. No BFEs or flood depths are shown.

Coastal High Hazard Areas – High Risk

Coastal High Hazard Areas (CHHA) represent the area subject to inundation by 1-percent-annual chance flood, extending from offshore to the inland limit of a primary front al dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. Structures located within the CHHA have a 26-percent chance of flooding during the life of a standard 30-year mortgage. Federal floodplain management regulations and mandatory purchase requirements apply in these zones.

ZONE	DESCRIPTION
V	Areas along coasts subject to inundation by the 1-percent-annual-chance flood event with additional hazards associated with storm-induced waves. Because detailed coastal analyses have not been performed, no BFEs or flood depths are shown.
VE, V1-V30	Areas along coasts subject to inundation by the 1-percent-annual-chance flood event with additional hazards due to storm-induced velocity wave action. BFEs derived from detailed hydraulic coastal analyses are shown within these zones. (Zone VE is used on new and revised maps in place of Zones V1–V30.)

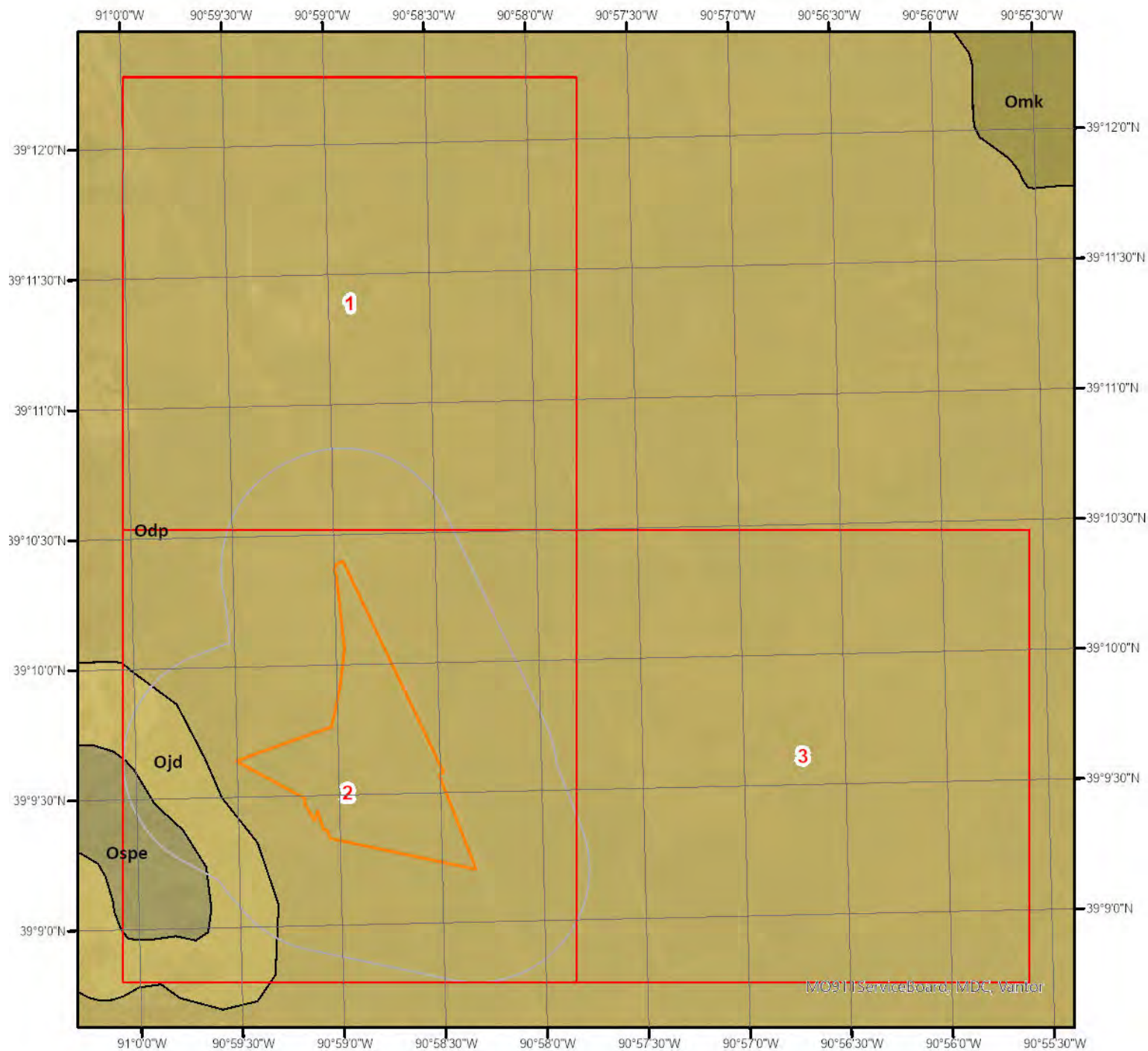
Moderate and Minimal Risk Areas

Areas of moderate or minimal hazard are studied based upon the principal source of flood in the area. However, buildings in these zones could be flooded by severe, concentrated rainfall coupled with inadequate local drainage systems. Local stormwater drainage systems are not normally considered in a community's flood insurance study. The failure of a local drainage system can create areas of high flood risk within these zones. Flood insurance is available in participating communities, but is not required by regulation in these zones. Nearly 25-percent of all flood claims filed are for structures located within these zones.

ZONE	DESCRIPTION
B, X (shaded)	Moderate risk areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by a levee. No BFEs or base flood depths are shown within these zones. (Zone X (shaded) is used on new and revised maps in place of Zone B.)
C, X (unshaded)	Minimal risk areas outside the 1-percent and .2-percent-annual-chance floodplains. No BFEs or base flood depths are shown within these zones. (Zone X (unshaded) is used on new and revised maps in place of Zone C.)

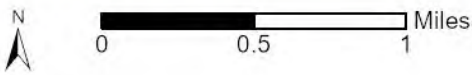
Undetermined Risk Areas

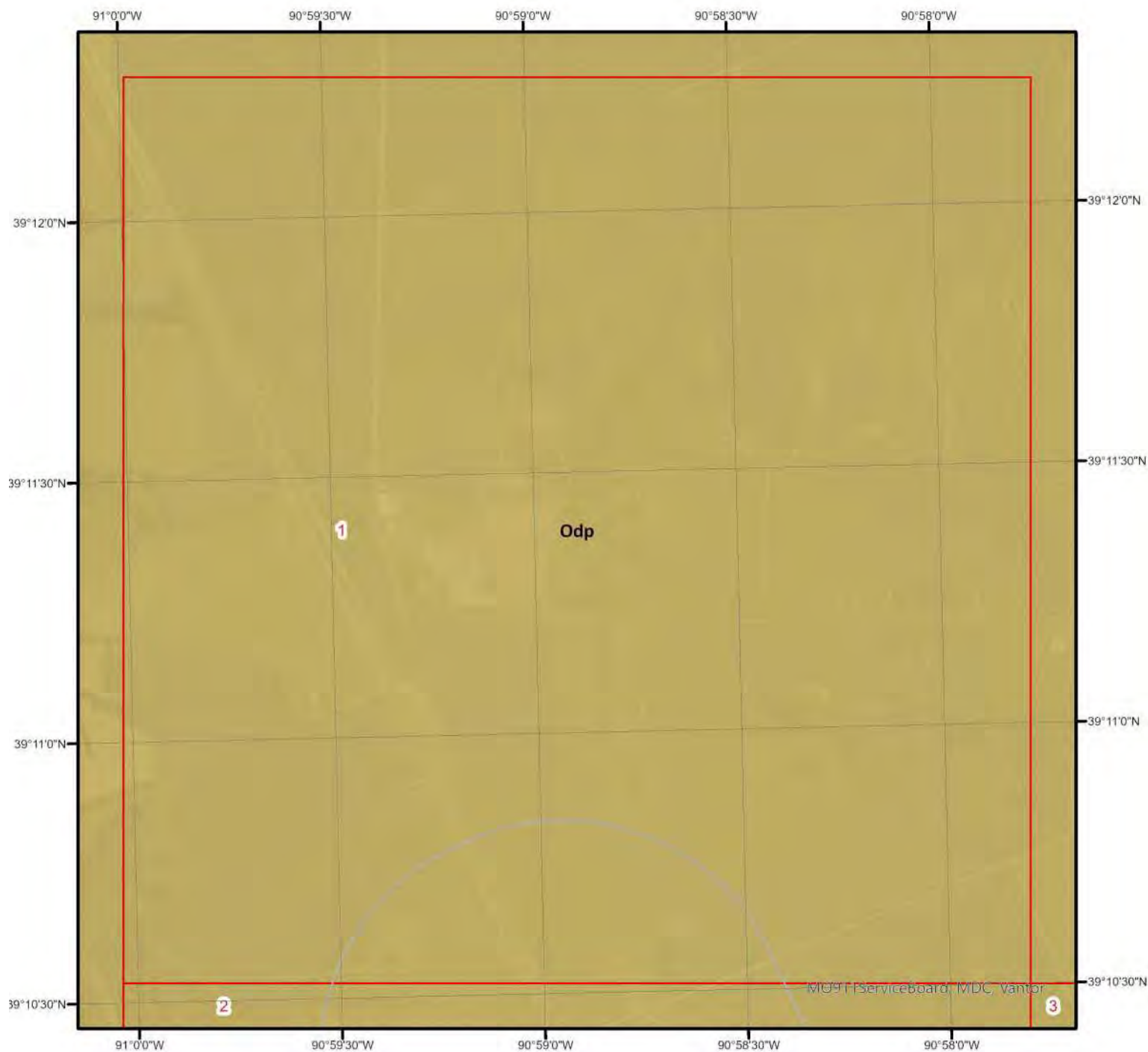
ZONE	DESCRIPTION
D	Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.



Geologic Units

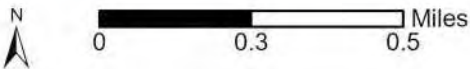
This maps shows geologic units in the area. Please refer to the report for detailed descriptions.

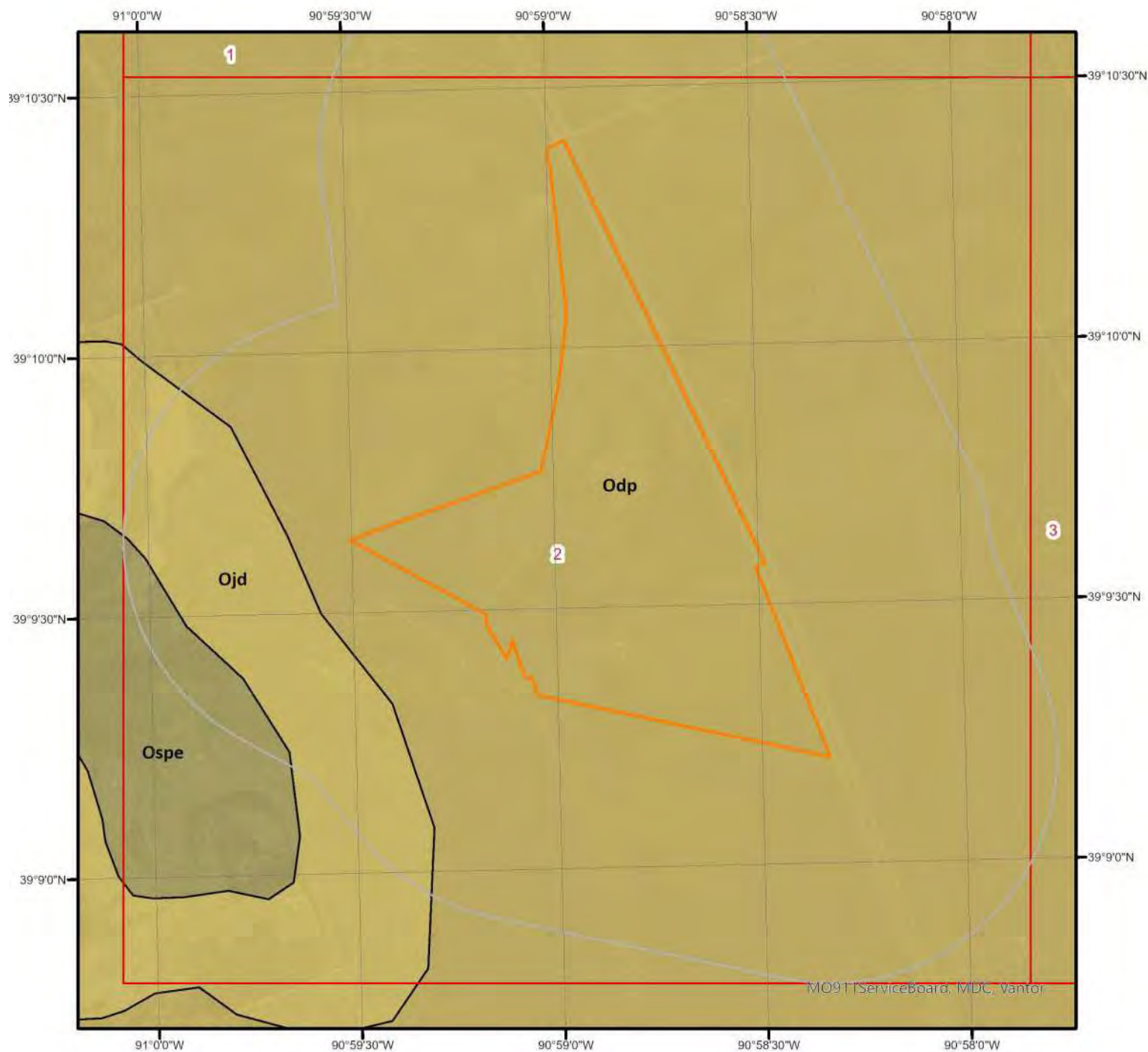




Geologic Units - Page 1

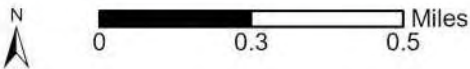
This maps shows geologic units in the area. Please refer to the report for detailed descriptions.

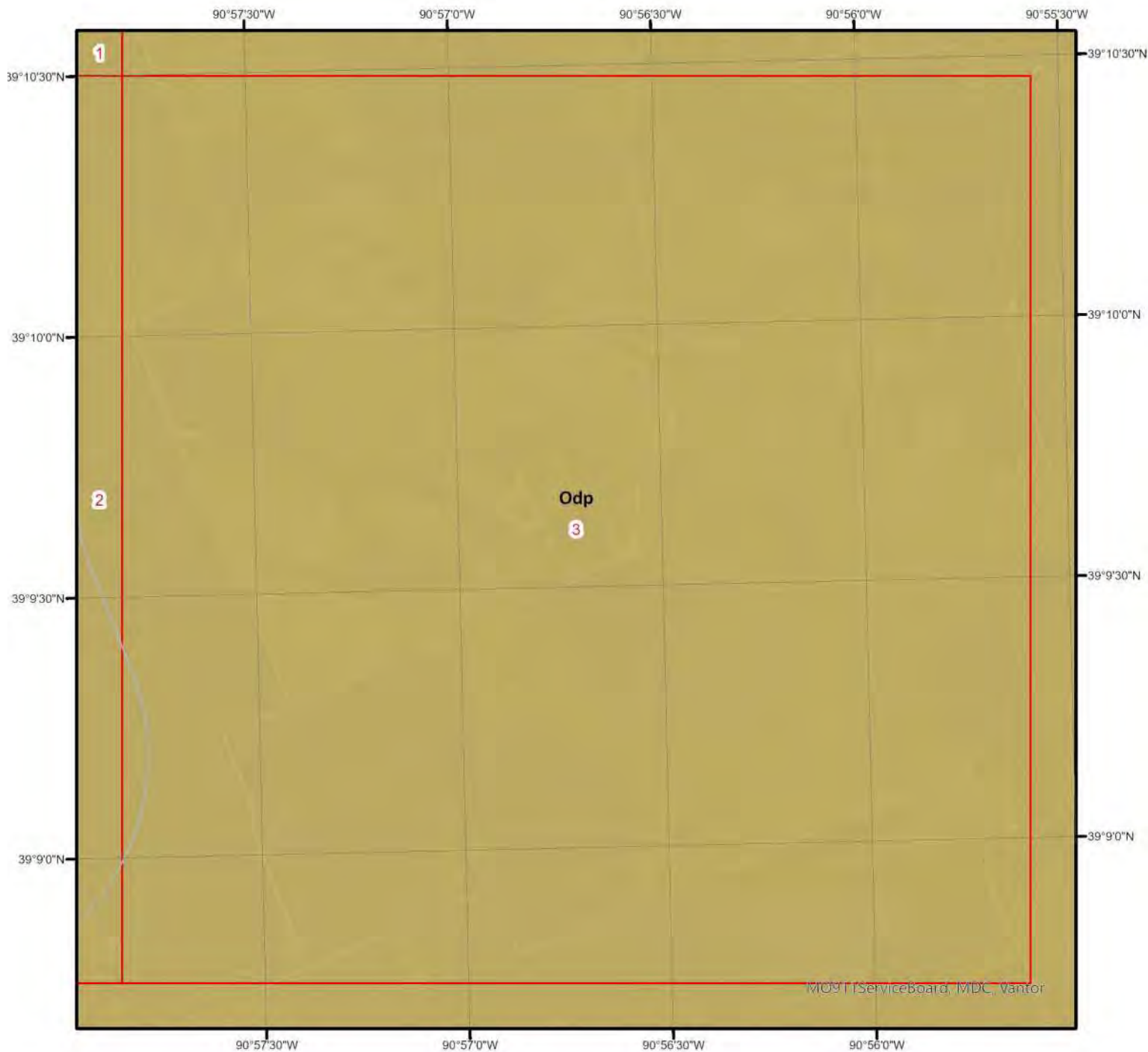




Geologic Units - Page 2

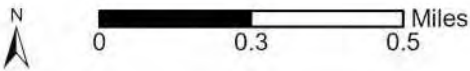
This maps shows geologic units in the area. Please refer to the report for detailed descriptions.





Geologic Units - Page 3

This maps shows geologic units in the area. Please refer to the report for detailed descriptions.



The previous page shows USGS geology information. Detailed information about each unit is provided below.

Geologic Unit Odp

Unit Name:	Decorah Group, Platin Group
Unit Age:	Middle Ordovician-Mohawkian Series
Primary Rock Type:	Limestone
Secondary Rock Type:	
Unit Description:	Decorah Group, Platin Group

Geologic Unit Ojd

Unit Name:	Joachim Dolomite, Dutchtown Formation
Unit Age:	Middle Ordovician-Mohawkian Series
Primary Rock Type:	Dolostone
Secondary Rock Type:	Limestone
Unit Description:	Joachim Dolomite, Dutchtown Formation

Geologic Unit Ospe

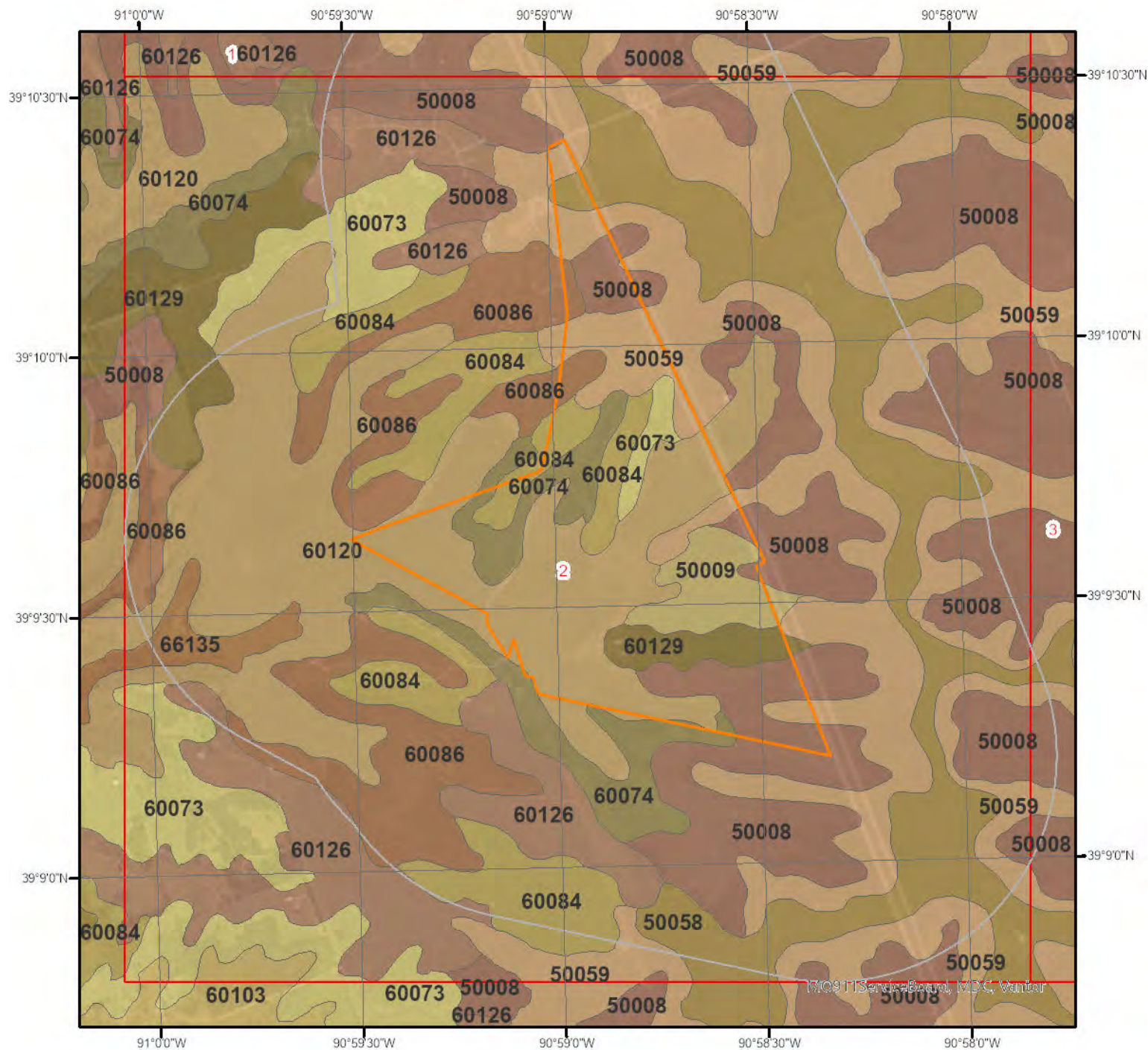
Unit Name:	St. Peter Sandstone, Everton Formation
Unit Age:	Middle Ordovician to Early Ordovician
Primary Rock Type:	Dolostone
Secondary Rock Type:	Sandstone
Unit Description:	St. Peter Sandstone, Everton Formation





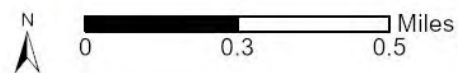
0 0.3 0.5 Miles

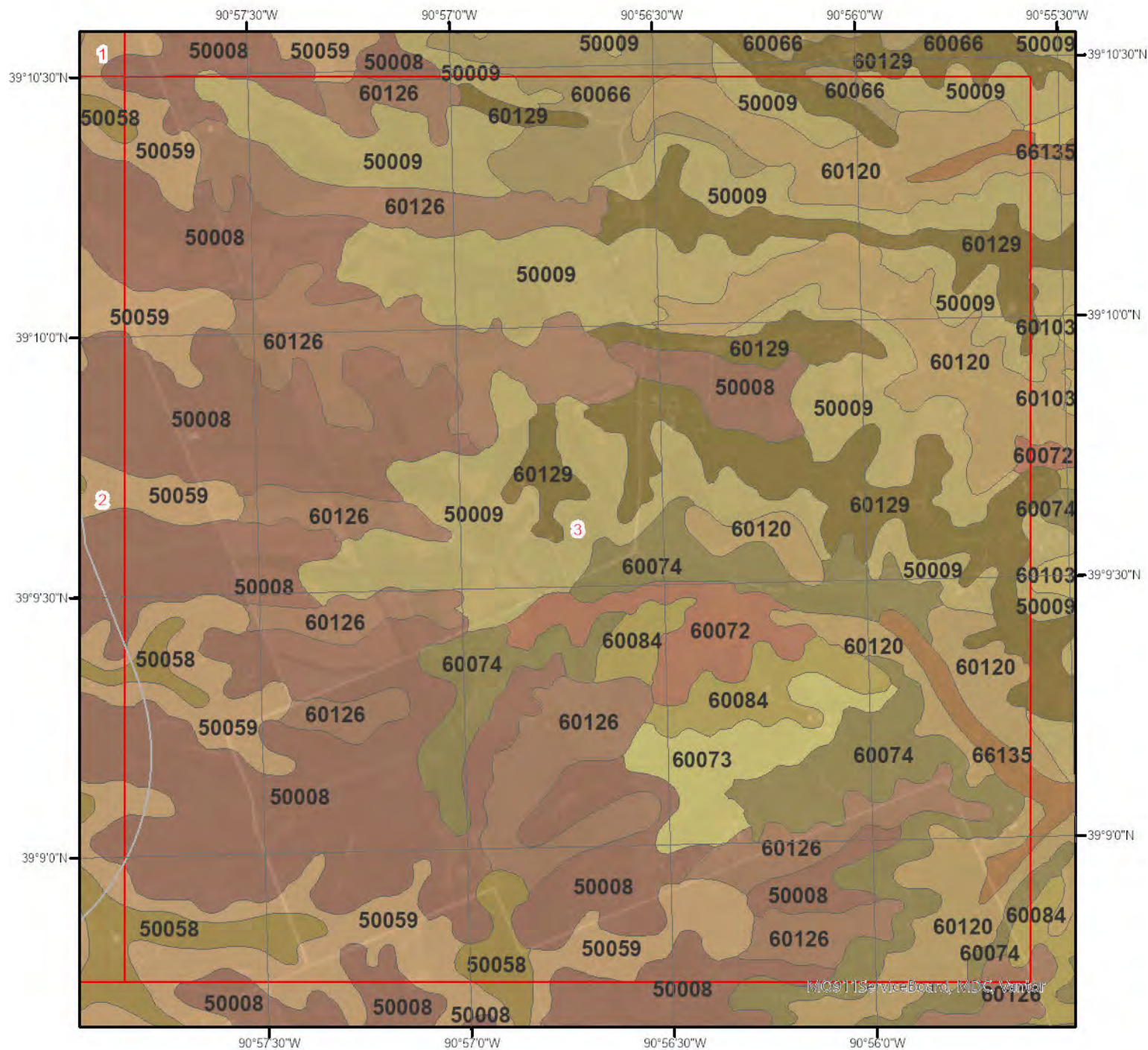




SSURGO Soils - Page 2

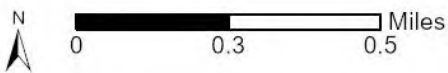
This maps shows SSURGO soil units around the target property. Please refer to the report for detailed soil descriptions.





SSURGO Soils - Page 3

This maps shows SSURGO soil units around the target property. Please refer to the report for detailed soil descriptions.



The previous page shows a soil map using SSURGO data from USDA Natural Resources Conservation Service. Detailed information about each unit is provided below.

Map Unit 50008 (20.02%)

Map Unit Name:	Keswick silt loam, 5 to 9 percent slopes, eroded
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	61cm
Drainage Class - Dominant:	Somewhat poorly drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Keswick(90%)	
horizon Ap(0cm to 18cm)	Silt loam
horizon 2Bt(18cm to 51cm)	Clay
horizon 2Btg(51cm to 200cm)	Clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 50008 - Keswick silt loam, 5 to 9 percent slopes, eroded

Component: Keswick (90%)

The Keswick component makes up 90 percent of the map unit. Slopes are 5 to 9 percent. This component is on hillslopes, till plains. The parent material consists of pedis sediment over till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 2 percent. This component is in the F109XY007MO Till Upland Woodland ecological site. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Leonard (5%)

Generated brief soil descriptions are created for major soil components. The Leonard soil is a minor component.

Component: Lindley (5%)

Generated brief soil descriptions are created for major soil components. The Lindley soil is a minor component.

Map Unit 50009 (1.55%)

Map Unit Name:	Keswick silt loam, 9 to 14 percent slopes, eroded
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	61cm
Drainage Class - Dominant:	Somewhat poorly drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Keswick(85%)	
horizon A(0cm to 10cm)	Silt loam
horizon 2Bt(10cm to 135cm)	Clay loam
horizon 2BC(135cm to 200cm)	Clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 50009 - Keswick silt loam, 9 to 14 percent slopes, eroded

Component: Keswick (85%)

The Keswick component makes up 85 percent of the map unit. Slopes are 9 to 14 percent. This component is on hillslopes, till plains. The parent material consists of pedis sediment over till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 2 percent. This component is in the F109XY007MO Till Upland Woodland ecological site. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Lindley (10%)

Generated brief soil descriptions are created for major soil components. The Lindley soil is a minor component.

Component: Leonard (5%)

Generated brief soil descriptions are created for major soil components. The Leonard soil is a minor component.

Map Unit 50058 (11.8%)

Map Unit Name:	Mexico silt loam, 0 to 2 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	23cm
Drainage Class - Dominant:	Poorly drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Mexico(90%)

horizon Ap(0cm to 23cm)	Silt loam
horizon Btg1(23cm to 38cm)	Silt loam
horizon Btg2(38cm to 86cm)	Clay
horizon Btg3(86cm to 107cm)	Silty clay loam
horizon 2Btg4(107cm to 200cm)	Silty clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 50058 - Mexico silt loam, 0 to 2 percent slopes

Component: Mexico (90%)

The Mexico component makes up 90 percent of the map unit. Slopes are 0 to 2 percent. This component is on ridges, till plains. The parent material consists of loess over pedis sediment. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 9 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 2 percent. This component is in the R113XY001MO Claypan Summit Prairie ecological site. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Putnam (10%)

Generated brief soil descriptions are created for major soil components. The Putnam soil is a minor component.

Map Unit 50059 (20.21%)

Map Unit Name:	Mexico silt loam, 1 to 4 percent slopes, eroded
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	23cm
Drainage Class - Dominant:	Poorly drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Mexico(85%)

horizon Ap(0cm to 18cm)	Silt loam
horizon Btg1(18cm to 38cm)	Silt loam
horizon Btg2(38cm to 86cm)	Clay
horizon Btg3(86cm to 107cm)	Silty clay loam
horizon 2Btg4(107cm to 200cm)	Silty clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 50059 - Mexico silt loam, 1 to 4 percent slopes, eroded

Component: Mexico (85%)

The Mexico component makes up 85 percent of the map unit. Slopes are 1 to 4 percent. This component is on ridges, till plains. The parent material consists of loess over pedisegment. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 9 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 2 percent. This component is in the R113XY001MO Claypan Summit Prairie ecological site. Nonirrigated land capability classification is 3e. This soil meets hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Armstrong (7%)

Generated brief soil descriptions are created for major soil components. The Armstrong soil is a minor component.

Component: Putnam (5%)

Generated brief soil descriptions are created for major soil components. The Putnam soil is a minor component.

Component: Leonard (3%)

Generated brief soil descriptions are created for major soil components. The Leonard soil is a minor component.

Map Unit 60073 (2.04%)

Map Unit Name:	Bucklick silty clay loam, 5 to 9 percent slopes, eroded
Bedrock Depth - Min:	135cm
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Bucklick(90%)

horizon Ap(0cm to 18cm)	Silty clay loam
horizon Bt1(18cm to 79cm)	Silty clay
horizon 2Bt2(79cm to 114cm)	Silty clay
horizon 2Bt3/Cr(114cm to 135cm)	Bedrock
horizon 2R(135cm to 203cm)	Bedrock

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 60073 - Bucklick silty clay loam, 5 to 9 percent slopes, eroded

Component: Bucklick (90%)

The Bucklick component makes up 90 percent of the map unit. Slopes are 5 to 9 percent. This component is on hillslopes, hills. The parent material consists of loess over residuum weathered from dolomite. Depth to a root restrictive layer, bedrock, lithic, is 40 to 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This

component is in the F115BY005MO Loamy Upland Woodland ecological site. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map Unit 60074 (3.79%)

Map Unit Name: Bucklick silty clay loam, 9 to 14 percent slopes, eroded
 Bedrock Depth - Min: 135cm
 Watertable Depth - Annual Min: null
 Drainage Class - Dominant: Well drained
 Hydrologic Group - Dominant: C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Bucklick(90%)	
horizon Ap(0cm to 18cm)	Silty clay loam
horizon Bt1(18cm to 79cm)	Silty clay
horizon 2Bt2(79cm to 114cm)	Silty clay
horizon 2Bt3/Cr(114cm to 135cm)	Bedrock
horizon 2R(135cm to 203cm)	Bedrock

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 60074 - Bucklick silty clay loam, 9 to 14 percent slopes, eroded

Component: Bucklick (90%)

The Bucklick component makes up 90 percent of the map unit. Slopes are 9 to 14 percent. This component is on hillslopes, hills. The parent material consists of loess over residuum weathered from dolomite. Depth to a root restrictive layer, bedrock, lithic, is 40 to 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the F115BY005MO Loamy Upland Woodland ecological site. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map Unit 60084 (6.99%)

Map Unit Name: Crider silt loam, 5 to 9 percent slopes, eroded
 Bedrock Depth - Min: null
 Watertable Depth - Annual Min: null
 Drainage Class - Dominant: Well drained
 Hydrologic Group - Dominant: C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Crider(85%)	
horizon Ap(0cm to 20cm)	Silt loam
horizon Bt1(20cm to 94cm)	Silty clay loam
horizon 2Bt2(94cm to 152cm)	Silty clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 60084 - Crider silt loam, 5 to 9 percent slopes, eroded

Component: Crider (85%)

The Crider component makes up 85 percent of the map unit. Slopes are 5 to 9 percent. This component is on hillslopes, hills. The parent material consists of loess over residuum weathered from dolomite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth

of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the F115BY005MO Loamy Upland Woodland ecological site. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Map Unit 60086 (8.9%)

Map Unit Name:	Crider silt loam, 9 to 14 percent slopes, eroded
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Crider(85%)

horizon Ap(0cm to 28cm)	Silt loam
horizon Bt1(28cm to 94cm)	Silty clay loam
horizon 2Bt2(94cm to 152cm)	Silty clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 60086 - Crider silt loam, 9 to 14 percent slopes, eroded

Component: Crider (85%)

The Crider component makes up 85 percent of the map unit. Slopes are 9 to 14 percent. This component is on hillslopes, hills. The parent material consists of loess over residuum weathered from dolomite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the F115BY005MO Loamy Upland Woodland ecological site. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Map Unit 60120 (17.53%)

Map Unit Name:	Goss-Gasconade-Brussels complex, 9 to 70 percent slopes, very stony
Bedrock Depth - Min:	33cm
Watertable Depth - Annual Min:	null
Drainage Class - Dominant:	Well drained
Hydrologic Group - Dominant:	C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Goss(45%)

horizon A(0cm to 15cm)	Gravelly silt loam
horizon E(15cm to 48cm)	Extremely gravelly silt loam
horizon Bt1(48cm to 152cm)	Very gravelly silty clay loam
horizon 2Bt2(152cm to 203cm)	Cobbly clay

Brussels(26%)

horizon A(0cm to 13cm)	Very channery silty clay loam
horizon Bw1(13cm to 89cm)	Very flaggy silty clay
horizon Bw2(89cm to 152cm)	Extremely flaggy silty clay

Gasconade(24%)

horizon A(0cm to 25cm)	Very channery silty clay loam
horizon Bw(25cm to 33cm)	Channery silty clay
horizon R(33cm to 203cm)	Bedrock

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 60120 - Goss-Gasconade-Brussels complex, 9 to 70 percent slopes, very stony

Component: Goss (40%)

The Goss component makes up 40 percent of the map unit. Slopes are 9 to 70 percent. This component is on hillslopes, hills. The parent material consists of slope alluvium over residuum weathered from dolomite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the F115CY013MO Chert Exposed Backslope Woodland, Chert Protected Backslope Forest ecological site. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria.

Component: Brussels (26%)

The Brussels component makes up 26 percent of the map unit. Slopes are 9 to 70 percent. This component is on hillslopes, hills. The parent material consists of colluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This component is in the F115CY010MO Talus Footslope Forest ecological site. Nonirrigated land capability classification is 7e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent.

Component: Gasconade (24%)

The Gasconade component makes up 24 percent of the map unit. Slopes are 9 to 70 percent. This component is on hillslopes, hills. The parent material consists of residuum weathered from limestone. Depth to a root restrictive layer, bedrock, lithic, is 4 to 20 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 7 percent. This component is in the R115BY009MO Shallow Limestone/dolomite Upland Glade/woodland ecological site. Nonirrigated land capability classification is 7s. This soil does not meet hydric criteria.

Map Unit 60126 (4.56%)

Map Unit Name:	Hatton silt loam, 2 to 5 percent slopes
Bedrock Depth - Min:	null
Watertable Depth - Annual Min:	76cm
Drainage Class - Dominant:	Moderately well drained
Hydrologic Group - Dominant:	D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Hatton(90%)

horizon Ap(0cm to 8cm)	Silt loam
horizon E(8cm to 15cm)	Silt
horizon Bt(15cm to 81cm)	Silty clay
horizon 2Btx(81cm to 122cm)	Silty clay loam
horizon 2Bt(122cm to 152cm)	Silt loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 60126 - Hatton silt loam, 2 to 5 percent slopes

Component: Hatton (85%)

The Hatton component makes up 85 percent of the map unit. Slopes are 2 to 5 percent. This component is on interfluvies, till plains. The parent material consists of loess over pedisidiment. Depth to a root restrictive layer, undefined, is 27 to 38 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of

water saturation is at 30 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 3 percent. This component is in the F115BY004MO Loess Upland Woodland ecological site. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Map Unit 60129 (1.68%)

Map Unit Name: Hatton silt loam, 5 to 9 percent slopes
 Bedrock Depth - Min: null
 Watertable Depth - Annual Min: 76cm
 Drainage Class - Dominant: Moderately well drained
 Hydrologic Group - Dominant: D - Soils in this group have high runoff potential when thoroughly wet. Water movement through the soil is restricted or very restricted.

Major components are printed below

Hatton(90%)

horizon Ap(0cm to 8cm)	Silt loam
horizon E(8cm to 15cm)	Silt
horizon Bt(15cm to 81cm)	Silty clay
horizon 2Btx(81cm to 122cm)	Silty clay loam
horizon 2Bt(122cm to 152cm)	Silt loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 60129 - Hatton silt loam, 5 to 9 percent slopes

Component: Hatton (85%)

The Hatton component makes up 85 percent of the map unit. Slopes are 5 to 9 percent. This component is on ridges, till plains. The parent material consists of loess over pedisodiment. Depth to a root restrictive layer, undefined, is 27 to 38 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 3 percent. This component is in the F115BY004MO Loess Upland Woodland ecological site. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Map Unit 66135 (0.92%)

Map Unit Name: Dameron silt loam, 1 to 4 percent slopes, occasionally flooded
 Bedrock Depth - Min: null
 Watertable Depth - Annual Min: null
 Drainage Class - Dominant: Well drained
 Hydrologic Group - Dominant: C - Soils in this group have moderately high runoff potential when thoroughly wet. Water transmission through the soil is somewhat restricted.

Major components are printed below

Dameron(90%)

horizon Ap(0cm to 20cm)	Silt loam
horizon A(20cm to 71cm)	Silt loam
horizon 2C(71cm to 203cm)	Very gravelly silty clay loam

Component Description:

Minor map unit components are excluded from this report.

Map Unit: 66135 - Dameron silt loam, 1 to 4 percent slopes, occasionally flooded

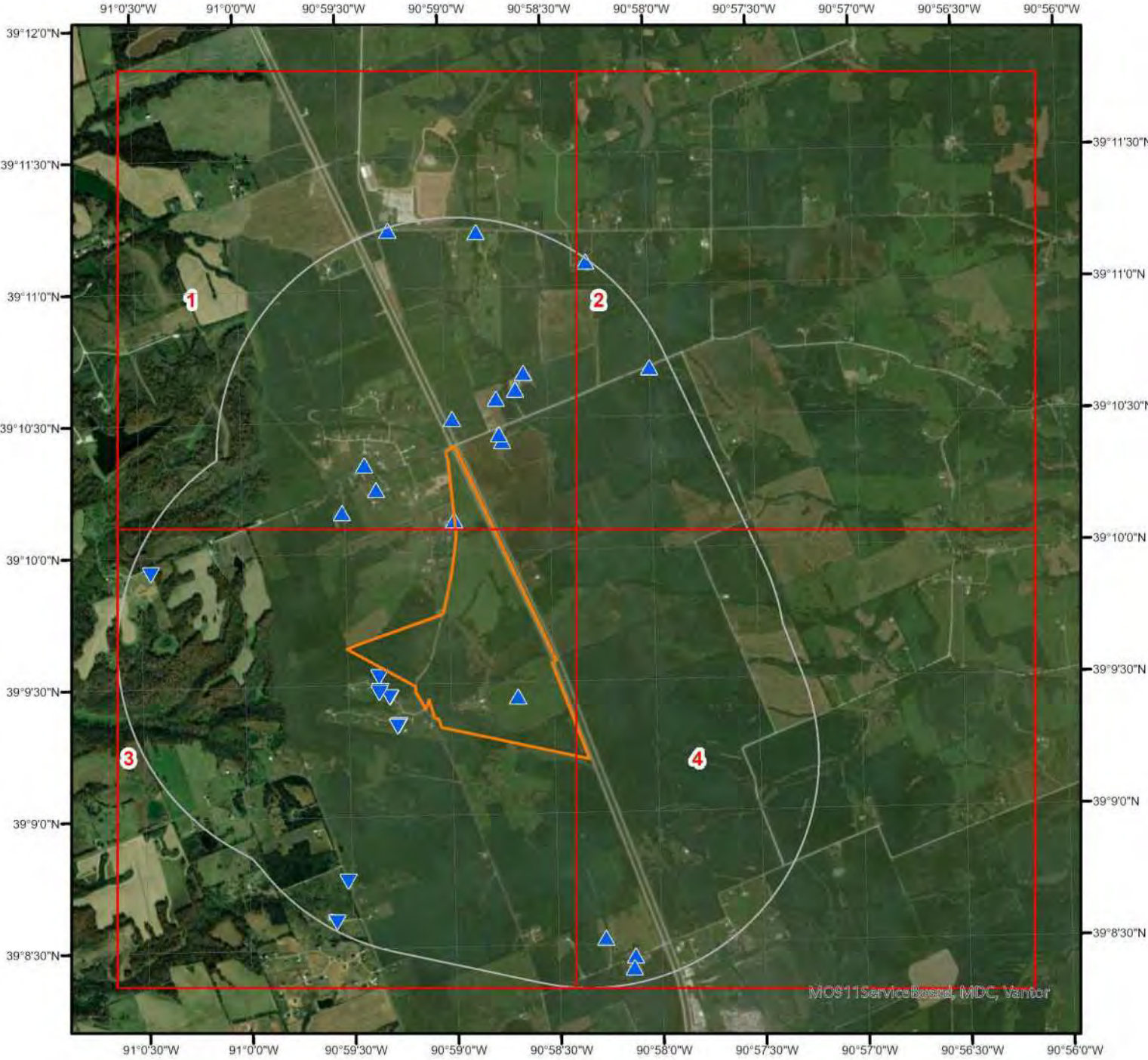
Component: Dameron (90%)

The Dameron component makes up 90 percent of the map unit. Slopes are 1 to 4 percent. This component is on drainageways, till plains. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class

is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is occasionally flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This component is in the F115BY028MO Loamy/gravelly Upland Drainageway Forest ecological site. Nonirrigated land capability classification is 2w. This soil does not meet hydric criteria.

Component: Dockery (3%)

Generated brief soil descriptions are created for major soil components. The Dockery soil is a minor component.



Wells & Additional Sources

▲ Sites with Higher Elevation

■ Sites with Same Elevation

▼ Sites with Lower Elevation

● Sites with Unknown Elevation

▲ OGW Sites with Higher Elevation

■ OGW Sites with Same Elevation

▼ OGW Sites with Lower Elevation

● OGW Sites with Unknown Elevation

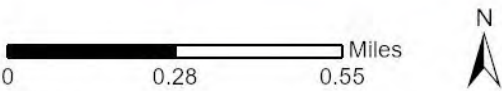
N

0 0.5 1 Miles

ERIS



Wells & Additional Sources - Page 1

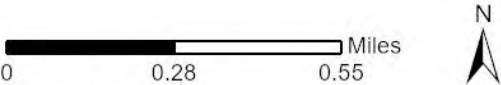


- | | |
|--------------------------------|------------------------------------|
| ▲ Sites with Higher Elevation | ▲ OGW Sites with Higher Elevation |
| ■ Sites with Same Elevation | ■ OGW Sites with Same Elevation |
| ▼ Sites with Lower Elevation | ▼ OGW Sites with Lower Elevation |
| ● Sites with Unknown Elevation | ● OGW Sites with Unknown Elevation |





Wells & Additional Sources - Page 2

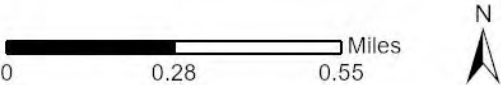


- | | |
|--------------------------------|------------------------------------|
| ▲ Sites with Higher Elevation | ▲ OGW Sites with Higher Elevation |
| ■ Sites with Same Elevation | ■ OGW Sites with Same Elevation |
| ▼ Sites with Lower Elevation | ▼ OGW Sites with Lower Elevation |
| ● Sites with Unknown Elevation | ● OGW Sites with Unknown Elevation |





Wells & Additional Sources - Page 3

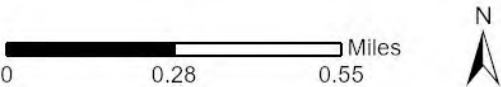


- | | |
|------------------------------|----------------------------------|
| Sites with Higher Elevation | OGW Sites with Higher Elevation |
| Sites with Same Elevation | OGW Sites with Same Elevation |
| Sites with Lower Elevation | OGW Sites with Lower Elevation |
| Sites with Unknown Elevation | OGW Sites with Unknown Elevation |





Wells & Additional Sources - Page 4



- | | |
|--------------------------------|------------------------------------|
| ▲ Sites with Higher Elevation | ▲ OGW Sites with Higher Elevation |
| ■ Sites with Same Elevation | ■ OGW Sites with Same Elevation |
| ▼ Sites with Lower Elevation | ▼ OGW Sites with Lower Elevation |
| ● Sites with Unknown Elevation | ● OGW Sites with Unknown Elevation |



Federal Sources

Public Water Systems Violations and Enforcement Data

Map Key	PWS ID	Distance (ft)	Direction
4	MO6036370	230.98	WSW
28	MO6172340	5232.31	NNW

Safe Drinking Water Information System (SDWIS)

Map Key	PWS ID	Distance (ft)	Direction
4	MO6036370	230.98	WSW
28	MO6172340	5232.31	NNW

USGS National Water Information System

Map Key	Loc Identifier	Distance (ft)	Direction
12	USGS-391025090584501	1052.44	N

State Sources

Oil and Gas Wells

Map Key	ID	Distance (ft)	Direction
No records found			

Public Drinking Water Wells

Map Key	Unique ID	Distance (ft)	Direction
3		516.77	WSW
6		548.35	WSW
8		771.69	SW

Springs

Map Key	ID	Distance (ft)	Direction
No records found			

Water Wells

Map Key	Ref No	Distance (ft)	Direction
1	00531341	0.00	-
2	00278167	517.80	WSW
5	00278166	494.52	WSW
7	00452025	731.79	SW
9	00414060	9.86	NNW
10	01015374	1719.90	NW

11	01012842	2558.27	NW
13	00376570	1047.28	N
14	01015698	1895.66	NNW
15	00213514	663.88	N
16	00348214	1470.49	N
17	00113075	1928.48	N
18	01009909	4172.55	SSW
19	00011052	2329.27	N
20	00396404	5116.81	SSW
21	01010614	4123.59	SSE
22	00261956	4836.86	NNE
22	00330927	4836.86	NNE
22	00251787	4836.86	NNE
23	01008000	4816.05	WNW
24	00451233	4637.68	SSE
25	11257910	4897.87	SSE
26	00402401	5233.29	NNE
27	00225350	4987.09	N

Public Water Systems Violations and Enforcement Data

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	WSW	0.04	230.98	720.77	PWSV

PWS ID: MO6036370
PWS Type Code: CWS
PWS Type Description: Community water system
Primary Source Code: GW
Primary Source Desc: Ground water
PWS Activity Code: I
PWS Activity Description: Inactive
PWS Deactivation Date: 02/27/2024
Zip Code: 63377-0000
Phone No:
Phone Ext No:
Admin Name: TRENTMAN, DANIEL
Alt Phone No:
Email Addr: drtren@hotmail.com
Fax No:
Cds ID:
Population Served Count: 47
Epa Region Desc: Region 7
Epa Region: 07
First Reported Date: 08/30/2023
Gw or Sw: Groundwater
Gw Sw Code: GW
Is Grant Eligible Ind: No
Outstanding Performer:
Is School or Daycare Ind: No
Is Source Water Protection:
Is Wholesaler Ind: No
Lt2 Schedule Cat:
Lt2 Schedule Cat Code:
Last Reported Date: 06/05/2024
Org Name: TRENTMAN, DANIEL
Outstanding Perform
Begin Date:
Owner Type: Private
Pop Cat 11: <=100
Pop Cat 2: <10,000
Pop Cat 3: <=3300
Pop Cat 4: <10K
Pop Cat 5: <=500
Primacy Agency: Missouri
Season Begin Date:

Season End Date:
 Service Connections Count: 20
 Submission Status Code: Y
 Submission year quarter: 2025Q2
 Primacy Type: State
 Dbpr Schedule Category:
 Submission Status: Reported and accepted
 Reduced Monitoring Begin Date:
 Reduced Monitoring End Date:
 Reduced Rtr Monitoring:
 Seasonal Startup System:
 Source Protection Begin Date:
 City Served:
 County Served: Lincoln
 Source Water Protection Code:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
28	NNW	0.99	5,232.31	817.77	PWSV

PWS ID: MO6172340
 PWS Type Code: TNCWS
 PWS Type Description: Transient non-community system
 Primary Source Code: GW
 Primary Source Desc: Ground water
 PWS Activity Code: A
 PWS Activity Description: Active
 PWS Deactivation Date:
 Zip Code: 63377-0000
 Phone No: 573-485-2200
 Phone Ext No:
 Admin Name: FREYMUTH, STEPHANIE
 Alt Phone No:
 Email Addr: sfreymuth@oelocal513.com
 Fax No:
 Cds ID:
 Population Served Count: 30
 Epa Region Desc: Region 7
 Epa Region: 07
 First Reported Date: 07/15/1998
 Gw or Sw: Groundwater
 Gw Sw Code: GW
 Is Grant Eligible Ind: Yes
 Outstanding Performer:
 Is School or Daycare Ind: Yes

Is Source Water Protection: No
 Is Wholesaler Ind: No
 Lt2 Schedule Cat:
 Lt2 Schedule Cat Code:
 Last Reported Date: 06/24/2025
 Org Name: FREYMUTH, STEPHANIE
 Outstanding Perform Begin Date:
 Owner Type: Private
 Pop Cat 11: <=100
 Pop Cat 2: <10,000
 Pop Cat 3: <=3300
 Pop Cat 4: <10K
 Pop Cat 5: <=500
 Primacy Agency: Missouri
 Season Begin Date: 01-01
 Season End Date: 12-31
 Service Connections Count: 1
 Submission Status Code: Y
 Submissionyearquarter: 2025Q2
 Primacy Type: State
 Dbpr Schedule Category:
 Submission Status: Reported and accepted
 Reduced Monitoring Begin Date:
 Reduced Monitoring End Date:
 Reduced Rtr Monitoring:
 Seasonal Startup System:
 Source Protection Begin Date:
 City Served:
 County Served: Lincoln
 Source Water Protection Code: N

Safe Drinking Water Information System (SDWIS)

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
4	WSW	0.04	230.98	720.77	SDWIS

PWS ID: MO6036370
 PWS Type Code: CWS
 PSW Type: Community water system
 Primary Source Code: GW
 Primary Source: Ground water
 Pws Activity Code: I
 Activity: Inactive
 PWS Deactivation Dt: 02/27/2024

Wells and Additional Sources Detail Report

Schedule RD-S1

Phone No:
Phone Ext No:
Admin Name: TRENTMAN, DANIEL
Alt Phone No:
Email Addr: drtren@hotmail.com
Fax No:
Cds ID:
Population Served Count: 47
Epa Region Desc: Region 7
Epa Region: 07
First Reported Date: 08/30/2023
Gw or Sw: Groundwater
Is Grant Eligible Ind: No
Outstanding Performer:
Is School or Daycare Ind: No
Is Wholesaler Ind: No
Lt2 Schedule Cat:
Last Reported Date: 06/05/2024
Org Name: TRENTMAN, DANIEL
Outstanding Perform
Begin Date:
Owner Type: Private
Pop Cat 11: <=100
Pop Cat 2: <10,000
Pop Cat 3: <=3300
Pop Cat 4: <10K
Pop Cat 5: <=500
Primacy Agency: Missouri
Primacy Agency Code: MO
Season Begin Date:
Season End Date:
Service Connections
Count: 20
Submission Yr Qtr: 2025Q2
Primacy Type: State
Dbpr Schedule Category:
Submission Status: Reported and accepted
Reduced Monitoring
Begin:
Reduced Monitoring End
Date:
Reduced Rtr Monitoring:
Seasonal Startup System:
Source Protection Begin
Date:
City Served:
County Served: Lincoln

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
28	NNW	0.99	5,232.31	817.77	SDWIS

PWS ID: MO6172340
 PWS Type Code: TNCWS
 PSW Type: Transient non-community system
 Primary Source Code: GW
 Primary Source: Ground water
 Pws Activity Code: A
 Activity: Active
 PWS Deactivation Dt:
 Phone No: 573-485-2200
 Phone Ext No:
 Admin Name: FREYMUTH, STEPHANIE
 Alt Phone No:
 Email Addr: sfreymuth@oelocal513.com
 Fax No:
 Cds ID:
 Population Served Count: 30
 Epa Region Desc: Region 7
 Epa Region: 07
 First Reported Date: 07/15/1998
 Gw or Sw: Groundwater
 Is Grant Eligible Ind: Yes
 Outstanding Performer:
 Is School or Daycare Ind: Yes
 Is Wholesaler Ind: No
 Lt2 Schedule Cat:
 Last Reported Date: 06/24/2025
 Org Name: FREYMUTH, STEPHANIE
 Outstanding Perform
 Begin Date:
 Owner Type: Private
 Pop Cat 11: <=100
 Pop Cat 2: <10,000
 Pop Cat 3: <=3300
 Pop Cat 4: <10K
 Pop Cat 5: <=500
 Primacy Agency: Missouri
 Primacy Agency Code: MO
 Season Begin Date: 01-01
 Season End Date: 12-31
 Service Connections
 Count: 1
 Submission Yr Qtr: 2025Q2
 Primacy Type: State
 Dbpr Schedule Category:
 Submission Status: Reported and accepted
 Reduced Monitoring
 Begin:

Wells and Additional Sources Detail Report

Schedule RD-S1

Reduced Monitoring End
Date:
Reduced Rtr Monitoring:
Seasonal Startup System:
Source Protection Begin
Date:
City Served:
County Served: Lincoln

USGS National Water Information System

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
12	N	0.20	1,052.44	828.71	FED USGS

Loc Identifier:	USGS-391025090584501	Well Depth:	307.0
Date Drilled:		Well Depth Unit:	ft
Latitude:	39.1736578015061	Well Hole Depth:	
Longitude:	-90.9787472926763	Well Hole Dpth Unt:	
Loc Horz Coord Std:	NAD83	Loc Country Name:	United States of America
Loc Latitude Stnd:	39.1736578015061	Loc HUC Code:	071100041004
Loc Longitude Stnd:	-90.9787472926763	Loc Aquifer Code:	364STPR
Loc Tribl Land Ind:		Loc Aquifer Conte:	
Loc Tribal Land:		Loc Aquifer Desc:	
Location Welltype:		Alt Loc Identif A:	
Alt Loc Identifier:		Alt Loc Identif B:	
Alt Loc Identif 1:		Alt Loc Identif C:	
Alt Loc Identifi 2:			
Site Type:	Well		
Formation Type:			
Reporting Agency:	U.S. Geological Survey		
Station Name:	T51N R01W 23ACC1		

Public Drinking Water Wells

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
3	WSW	0.10	516.77	751.52	PWSW

Well No:	2	Out Case Dep:	
Well ID:	20384	Out Case Size:	
Unique ID:		Pump Capacity:	20
Log ID:		Pump Depth:	
WWIMS ID:		Pump Manuf:	
PWSS ID:		Pump Type:	
PWSS ID Ext:		Pump Com:	
IPWS:	MO6036370	Pump Test:	
IPWS Ext:		Pump Test Da:	
PWIMS ID:		Scrn Length:	
Status:	Active	Scrn Size:	
Facility Type:	Subdivision	Stand by Power:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Fed Type:		Stappr:	
MDNR No:		Static Lev:	-9999
MDNR Reg:		Surf Drain:	
Drill Date:	-9999	Top Case Elv:	
Aban:		Top Seal:	
Plug:		Tot Depth:	507
Material:		GRT Mat:	
GWUDISW:		GRT Seal:	
Bottom Seal:		GW Provinc:	
Case Depth:		Rads:	
Case Height:		Rcnstrct:	
Case Size:		IOC:	
Case Type:		VOC:	
Meter:		Yield:	50
Chlor:		Verloc:	
Draw Down:		Grnd Elev:	-9999
Entry:		Method:	
Filter:		Accuracy:	
FIPS:		Location Status:	
From CD:		Last Update:	
From TD:		County:	Lincoln
Head:		Y:	39.15749999975188
Nitrate:		X:	-90.98833000023204
D Fed Prim Src Cd:	GW	Name:	MILLCREEK ESTATES
D Population Count:	47	No:	MO6036370
D Pws Fed Type Cd:	C	Oper Category Cd:	1
D Ttl Stor Cap Msr:	476		
Local Name:	Well #2		
Aquifer:			
FM Source:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
6	WSW	0.10	548.35	753.13	PWSW

Well No:	1	Out Case Dep:	
Well ID:	20383	Out Case Size:	
Unique ID:		Pump Capacity:	20
Log ID:		Pump Depth:	
WWIMS ID:		Pump Manuf:	
PWSS ID:		Pump Type:	
PWSS ID Ext:		Pump Com:	
IPWS:	MO6036370	Pump Test:	
IPWS Ext:		Pump Test Da:	
PWIMS ID:		Scrn Length:	
Status:	Active	Scrn Size:	
Facility Type:	Subdivision	Stand by Power:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Fed Type:		Stappr:	
MDNR No:		Static Lev:	-9999
MDNR Reg:		Surf Drain:	
Drill Date:	-9999	Top Case Elv:	
Aban:		Top Seal:	
Plug:		Tot Depth:	-9999
Material:		GRT Mat:	
GWUDISW:		GRT Seal:	
Bottom Seal:		GW Provinc:	
Case Depth:		Rads:	
Case Height:		Rcnstrct:	
Case Size:		IOC:	
Case Type:		VOC:	
Meter:		Yield:	50
Chlor:		Verloc:	
Draw Down:		Grnd Elev:	-9999
Entry:		Method:	
Filter:		Accuracy:	
FIPS:		Location Status:	
From CD:		Last Update:	
From TD:		County:	Lincoln
Head:		Y:	39.15777000005665
Nitrate:		X:	-90.98916000054099
D Fed Prim Src Cd:	GW	Name:	MILLCREEK ESTATES
D Population Count:	47	No:	MO6036370
D Pws Fed Type Cd:	C	Oper Category Cd:	1
D Ttl Stor Cap Msr:	476		
Local Name:	Well #1		
Aquifer:			
FM Source:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
8	SW	0.15	771.69	770.15	PWSW

Well No:	3	Out Case Dep:	
Well ID:	20385	Out Case Size:	
Unique ID:		Pump Capacity:	-9999
Log ID:		Pump Depth:	
WWIMS ID:		Pump Manuf:	
PWSS ID:		Pump Type:	
PWSS ID Ext:		Pump Com:	
IPWS:	MO6036370	Pump Test:	
IPWS Ext:		Pump Test Da:	
PWIMS ID:		Scrn Length:	
Status:	Active	Scrn Size:	
Facility Type:	Subdivision	Stand by Power:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Fed Type:		Stappr:	
MDNR No:		Static Lev:	-9999
MDNR Reg:		Surf Drain:	
Drill Date:	-9999	Top Case Elv:	
Aban:		Top Seal:	
Plug:		Tot Depth:	773
Material:		GRT Mat:	
GWUDISW:		GRT Seal:	
Bottom Seal:		GW Provinc:	
Case Depth:		Rads:	
Case Height:		Rcnstrct:	
Case Size:		IOC:	
Case Type:		VOC:	
Meter:		Yield:	60
Chlor:		Verloc:	
Draw Down:		Grnd Elev:	-9999
Entry:		Method:	
Filter:		Accuracy:	
FIPS:		Location Status:	
From CD:		Last Update:	
From TD:		County:	Lincoln
Head:		Y:	39.155629999986864
Nitrate:		X:	-90.987719999988773
D Fed Prim Src Cd:	GW	Name:	MILLCREEK ESTATES
D Population Count:	47	No:	MO6036370
D Pws Fed Type Cd:	C	Oper Category Cd:	1
D Ttl Stor Cap Msr:	476		
Local Name:	Well #3		
Aquifer:			
FM Source:			

Water Wells

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
1	-	0.00	0.00	797.65	WATER WELLS

Well ID:	134607	Subdiv 1:	
Well Inst:	271192	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	112894	Rng No:	
Ref No:	00531341	Rng Dir:	
Cert No:	A215363	Sctn No:	
Date Compl:	2017/08/30 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	60	Elev:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Site Add1:		Total Dpth:	420
Site Add2:		Casing Len:	240
Site City:		SWL:	150
Site Name:	CONVERSION	Casing Mat:	Plastic
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.1574778979169	Liner Use:	
Y:	-90.9779117270805	Added By:	
Owner Add1:	402 WOODS ROAD	Business:	
Owner Add2:		Cont Fn:	
Owner City:	SILEX	Cont Ln:	
Owner Fn:	DARRYL	Cont Prmt:	
Owner Ln:	VEHIGE	Depth Gw:	0
Owner Mi:		Driller Fn:	DANIEL
Owner St:	MO	Driller Ln:	FLYNN
Owner Zip:	63377	Drill Prmt:	001120
Well No:			
From 1:	0		
To 1:	6		
Form 1:	CLY		
From 2:	6		
To 2:	15		
Form 2:	WHT RX		
From 3:	15		
To 3:	16		
Form 3:	SH		
From 4:	16		
To 4:	85		
Form 4:	LM		
From 5:	85		
To 5:	220		
Form 5:	SS		
From 6:	220		
To 6:	230		
Form 6:	SH		
From 7:	230		
To 7:	420		
Form 7:	LM		
From 8:	0		
To 8:	0		
Form 8:			
From 9:	0		
To 9:	0		
Form 9:			
From 10:	0		
To 10:	0		
Form 10:			

Wells and Additional Sources Detail Report

Schedule RD-S1

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
2	WSW	0.10	517.80	753.24	WATER WELLS
Well ID:	100084	Subdiv 1:			
Well Inst:	134867	Subdiv 2:			
Well Name:		Subdiv 3:			
Well Type:	Multi-Family	Twtn No:			
Well Use:		Twtn Dir:			
FID:	128264	Rng No:			
Ref No:	00278167	Rng Dir:			
Cert No:	A111893	Sctn No:			
Date Compl:	2002/02/13 00:00:00+00	Cnty Fips:			
Well Stat:	Active	Drill Area:			
Well Yield:	50	Elev:			
Site Add1:		Total Dpth:	507		
Site Add2:		Casing Len:	0		
Site City:		SWL:	340		
Site Name:	CONVERSION	Casing Mat:			
Site St:	MO	Liner Len:	105		
Site Zip:		Liner Mat:	Steel		
X:	39.1574778979449	Liner Use:			
Y:	-90.9882877068024	Added By:			
Owner Add1:	755 MARY JO RD	Business:	MILL CREEK ESTATES		
Owner Add2:		Cont Fn:	EDWARD		
Owner City:	SILEX	Cont Ln:	MUDD		
Owner Fn:	C/O BUTCH	Cont Prmt:	001037		
Owner Ln:	MENNE	Depth Gw:	0		
Owner Mi:		Driller Fn:	DAVID		
Owner St:	MO	Driller Ln:	GUZY		
Owner Zip:	63377	Drill Prmt:	002994		
Well No:					
From 1:	0				
To 1:	15				
Form 1:	CLY				
From 2:	15				
To 2:	65				
Form 2:	LS				
From 3:	65				
To 3:	80				
Form 3:	GRY LS,SH				
From 4:	80				
To 4:	210				
Form 4:	SS				
From 5:	210				
To 5:	220				

Wells and Additional Sources Detail Report

Schedule RD-S1

Form 5: SH
 From 6: 220
 To 6: 240
 Form 6: SS
 From 7: 240
 To 7: 466
 Form 7: GRY LS;WT LS 302-425
 From 8: 466
 To 8: 507
 Form 8: WT LS
 From 9: 0
 To 9: 0
 Form 9:
 From 10: 0
 To 10: 0
 Form 10:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
5	WSW	0.09	494.52	753.90	WATER WELLS

Well ID:	240560	Subdiv 1:	
Well Inst:	134866	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Multi-Family	TwN No:	
Well Use:		TwN Dir:	
FID:	135771	Rng No:	
Ref No:	00278166	Rng Dir:	
Cert No:	A111894	Sctn No:	
Date Compl:	2002/02/15 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	50	Elev:	
Site Add1:		Total Dpth:	507
Site Add2:		Casing Len:	0
Site City:		SWL:	340
Site Name:	CONVERSION	Casing Mat:	
Site St:	MO	Liner Len:	105
Site Zip:		Liner Mat:	Steel
X:	39.1579051433276	Liner Use:	
Y:	-90.9890811630964	Added By:	
Owner Add1:	755 MARY JO RD	Business:	MILL CREEK ESTATES
Owner Add2:		Cont Fn:	EDWARD
Owner City:	SILEX	Cont Ln:	MUDD
Owner Fn:	C/O BUTCH	Cont Prmt:	001037
Owner Ln:	MENNE	Depth Gw:	0
Owner Mi:		Driller Fn:	DAVID
Owner St:	MO	Driller Ln:	GUZY

Wells and Additional Sources Detail Report

Schedule RD-S1

Owner Zip:	63377	Drill Prmt:	002994
Well No:			
From 1:	0		
To 1:	25		
Form 1:	CLY<15;WEATH LS		
From 2:	25		
To 2:	35		
Form 2:	GRY LS		
From 3:	35		
To 3:	75		
Form 3:	WT LS,LAYERED SH		
From 4:	75		
To 4:	220		
Form 4:	SS<210;SH		
From 5:	220		
To 5:	240		
Form 5:	SS		
From 6:	240		
To 6:	261		
Form 6:	GRY LS		
From 7:	261		
To 7:	343		
Form 7:	WT LS		
From 8:	343		
To 8:	384		
Form 8:	GRY LS		
From 9:	384		
To 9:	507		
Form 9:	WT LS		
From 10:	0		
To 10:	0		
Form 10:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
7	SW	0.14	731.79	767.35	WATER WELLS

Well ID:	27356	Subdiv 1:	
Well Inst:	219887	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Multi-Family	Twtn No:	
Well Use:		Twtn Dir:	
FID:	155774	Rng No:	
Ref No:	00452025	Rng Dir:	
Cert No:	A222773	Sctn No:	
Date Compl:	2009/09/18 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Well Yield:	60	Elev:	
Site Add1:	MILL CREEK CHURCH ROAD	Total Dpth:	773
Site Add2:		Casing Len:	0
Site City:	SILEX	SWL:	180
Site Name:		Casing Mat:	
Site St:	MO	Liner Len:	126
Site Zip:		Liner Mat:	Steel
X:	39.1557078778703	Liner Use:	
Y:	-90.9876163196829	Added By:	
Owner Add1:	755 MARY JO ROAD	Business:	MILL CREEK ESTATES
Owner Add2:		Cont Fn:	
Owner City:	SILEX	Cont Ln:	
Owner Fn:	BUTCH	Cont Prmt:	
Owner Ln:	MENNE	Depth Gw:	0
Owner Mi:		Driller Fn:	DAVID
Owner St:	MO	Driller Ln:	GUZY
Owner Zip:	63377	Drill Prmt:	002994
Well No:			
From 1:	0		
To 1:	50		
Form 1:	CLY		
From 2:	50		
To 2:	65		
Form 2:	GRY LM		
From 3:	65		
To 3:	70		
Form 3:	MD SM		
From 4:	70		
To 4:	100		
Form 4:	GRY LM		
From 5:	100		
To 5:	310		
Form 5:	SS		
From 6:	310		
To 6:	320		
Form 6:	SH		
From 7:	320		
To 7:	390		
Form 7:	GRY LM		
From 8:	390		
To 8:	400		
Form 8:	SH		
From 9:	400		
To 9:	410		
Form 9:	GRY LM		
From 10:	410		
To 10:	415		

Wells and Additional Sources Detail Report

Schedule RD-S1

Form 10: SH

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
9	NNW	0.00	9.86	811.29	WATER WELLS

Well ID:	128375	Subdiv 1:	
Well Inst:	204960	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	13327	Rng No:	
Ref No:	00414060	Rng Dir:	
Cert No:	A164545	Sctn No:	
Date Compl:	2008/08/20 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	18	Elev:	
Site Add1:		Total Dpth:	380
Site Add2:		Casing Len:	0
Site City:		SWL:	220
Site Name:	CONVERSION	Casing Mat:	
Site St:	MO	Liner Len:	100
Site Zip:		Liner Mat:	Plastic
X:	39.168708368722	Liner Use:	
Y:	-90.9827945419103	Added By:	
Owner Add1:	905 MILL CREEK CHURCH RD	Business:	
Owner Add2:		Cont Fn:	
Owner City:	SILEX	Cont Ln:	
Owner Fn:	BRIAN	Cont Prmt:	
Owner Ln:	BEAGLE	Depth Gw:	300
Owner Mi:		Driller Fn:	MARK
Owner St:	MO	Driller Ln:	LAVY
Owner Zip:	63377	Drill Prmt:	001121
Well No:			
From 1:	0		
To 1:	5		
Form 1:	CLY		
From 2:	5		
To 2:	40		
Form 2:	LM		
From 3:	40		
To 3:	50		
Form 3:	RD		
From 4:	50		
To 4:	180		
Form 4:	LM		
From 5:	180		

Wells and Additional Sources Detail Report

Schedule RD-S1

To 5: 300
 Form 5: SS
 From 6: 300
 To 6: 307
 Form 6: SH
 From 7: 307
 To 7: 380
 Form 7: LM
 From 8: 0
 To 8: 0
 Form 8:
 From 9: 0
 To 9: 0
 Form 9:
 From 10: 0
 To 10: 0
 Form 10:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
10	NW	0.33	1,719.90	806.33	WATER WELLS

Well ID:	108858	Subdiv 1:	
Well Inst:	298550	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	1926	Rng No:	
Ref No:	01015374	Rng Dir:	
Cert No:	A236783	Sctn No:	
Date Compl:	2021/12/17 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	60	Elev:	
Site Add1:	130 WHITE WILDLIFE RD.	Total Dpth:	440
Site Add2:		Casing Len:	260
Site City:	SILEX	SWL:	180
Site Name:		Casing Mat:	Plastic
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.1707225285096	Liner Use:	
Y:	-90.9890811644801	Added By:	
Owner Add1:	130 WHITE WILDLIFE RD.	Business:	
Owner Add2:		Cont Fn:	DANIEL
Owner City:	SILEX	Cont Ln:	FLYNN
Owner Fn:	CHRISTINA	Cont Prmt:	001120
Owner Ln:	ROTH	Depth Gw:	0
Owner Mi:		Driller Fn:	ALAN

Wells and Additional Sources Detail Report

Schedule RD-S1

Owner St:	MO	Driller Ln:	BURGESS
Owner Zip:	63377	Drill Prmt:	003163
Well No:			
From 1:	0		
To 1:	10		
Form 1:	CLAY		
From 2:	10		
To 2:	15		
Form 2:	WEATHERED ROCK		
From 3:	15		
To 3:	40		
Form 3:	LIME		
From 4:	40		
To 4:	70		
Form 4:	GRAY LIME		
From 5:	70		
To 5:	110		
Form 5:	LIME		
From 6:	110		
To 6:	245		
Form 6:	SAND STONE		
From 7:	245		
To 7:	250		
Form 7:	SHALE		
From 8:	250		
To 8:	440		
Form 8:	LIME		
From 9:	0		
To 9:	0		
Form 9:			
From 10:	0		
To 10:	0		
Form 10:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
11	NW	0.48	2,558.27	791.18	WATER WELLS

Well ID:	107157	Subdiv 1:	
Well Inst:	296882	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	141134	Rng No:	
Ref No:	01012842	Rng Dir:	
Cert No:	A230007	Sctn No:	
Date Compl:	2021/05/24 00:00:00+00	Cnty Fips:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Well Stat:	Active	Drill Area:	
Well Yield:	60	Elev:	
Site Add1:	170 WHITE WILDLIFE	Total Dpth:	440
Site Add2:		Casing Len:	273
Site City:	SILEX	SWL:	150
Site Name:		Casing Mat:	Steel
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.169318720142	Liner Use:	
Y:	-90.9918887821068	Added By:	
Owner Add1:	232 WHITE WILDLIFE RD.	Business:	
Owner Add2:		Cont Fn:	DANIEL
Owner City:	SILEX	Cont Ln:	FLYNN
Owner Fn:	ETHAN	Cont Prmt:	001120
Owner Ln:	STRUNK	Depth Gw:	0
Owner Mi:		Driller Fn:	BRAD
Owner St:	MO	Driller Ln:	LAVY
Owner Zip:	63377	Drill Prmt:	006342
Well No:			
From 1:	0		
To 1:	15		
Form 1:	CLAY/FLINT		
From 2:	15		
To 2:	45		
Form 2:	GRAY LIME		
From 3:	45		
To 3:	80		
Form 3:	SHALE		
From 4:	80		
To 4:	110		
Form 4:	SHALE/TAN		
From 5:	110		
To 5:	240		
Form 5:	SAND		
From 6:	240		
To 6:	440		
Form 6:	TAN/GRAY LIME		
From 7:	0		
To 7:	0		
Form 7:			
From 8:	0		
To 8:	0		
Form 8:			
From 9:	0		
To 9:	0		
Form 9:			
From 10:	0		

Wells and Additional Sources Detail Report

Schedule RD-S1

To 10: 0
Form 10:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
13	N	0.20	1,047.28	830.48	WATER WELLS

Well ID:	251099	Subdiv 1:	
Well Inst:	185850	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	2840	Rng No:	
Ref No:	00376570	Rng Dir:	
Cert No:	A171683	Sctn No:	
Date Compl:	2010/01/12 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	30	Elev:	
Site Add1:	TICK RIDGE RD	Total Dpth:	440
Site Add2:		Casing Len:	320
Site City:	SILEX	SWL:	180
Site Name:	FINLEY FARM	Casing Mat:	Plastic
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.174079463932	Liner Use:	
Y:	-90.9790103616926	Added By:	
Owner Add1:	4414 NORTH HWY 61	Business:	
Owner Add2:		Cont Fn:	
Owner City:	SILEX	Cont Ln:	
Owner Fn:	FRANKIE	Cont Prmt:	
Owner Ln:	TEASLEY	Depth Gw:	0
Owner Mi:		Driller Fn:	DAVID
Owner St:	MO	Driller Ln:	GUZY
Owner Zip:	63377	Drill Prmt:	002994
Well No:			
From 1:	0		
To 1:	30		
Form 1:	CLY		
From 2:	30		
To 2:	70		
Form 2:	WT LM		
From 3:	70		
To 3:	155		
Form 3:	GRY LM		
From 4:	155		
To 4:	290		
Form 4:	SND		

Wells and Additional Sources Detail Report

Schedule RD-S1

From 5: 290
 To 5: 295
 Form 5: SH
 From 6: 295
 To 6: 440
 Form 6: GRY LM
 From 7: 0
 To 7: 0
 Form 7:
 From 8: 0
 To 8: 0
 Form 8:
 From 9: 0
 To 9: 0
 Form 9:
 From 10: 0
 To 10: 0
 Form 10:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
14	NNW	0.36	1,895.66	800.86	WATER WELLS

Well ID:	108992	Subdiv 1:	
Well Inst:	298731	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	78453	Rng No:	
Ref No:	01015698	Rng Dir:	
Cert No:	A238613	Sctn No:	
Date Compl:	2021/12/21 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	40	Elev:	
Site Add1:	120 WHITE WILDLIFE RD.	Total Dpth:	460
Site Add2:		Casing Len:	280
Site City:	SILEX	SWL:	180
Site Name:		Casing Mat:	Plastic
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.1723094427321	Liner Use:	
Y:	-90.9899966929239	Added By:	
Owner Add1:	120 WHITE WILDLIFE RD.	Business:	
Owner Add2:		Cont Fn:	DANIEL
Owner City:	SILEX	Cont Ln:	FLYNN
Owner Fn:	LINCOLN	Cont Prmt:	001120
Owner Ln:	STEINER	Depth Gw:	0

Wells and Additional Sources Detail Report

Schedule RD-S1

Owner Mi:		Driller Fn:	ALAN
Owner St:	MO	Driller Ln:	BURGESS
Owner Zip:	63377	Drill Prmt:	003163
Well No:			
From 1:	0		
To 1:	10		
Form 1:	CLAY		
From 2:	10		
To 2:	15		
Form 2:	WEATHERED ROCK		
From 3:	15		
To 3:	120		
Form 3:	LIME		
From 4:	120		
To 4:	255		
Form 4:	SAND STONE		
From 5:	255		
To 5:	260		
Form 5:	SHALE		
From 6:	260		
To 6:	460		
Form 6:	LIME		
From 7:	0		
To 7:	0		
Form 7:			
From 8:	0		
To 8:	0		
Form 8:			
From 9:	0		
To 9:	0		
Form 9:			
From 10:	0		
To 10:	0		
Form 10:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
15	N	0.13	663.88	832.01	WATER WELLS

Well ID:	176892	Subdiv 1:	
Well Inst:	103371	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	Twtn No:	
Well Use:		Twtn Dir:	
FID:	32227	Rng No:	
Ref No:	00213514	Rng Dir:	
Cert No:	A073188	Sctn No:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Date Compl:	1998/10/12 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	25	Elev:	
Site Add1:		Total Dpth:	450
Site Add2:		Casing Len:	84
Site City:		SWL:	250
Site Name:	CONVERSION	Casing Mat:	Steel
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.1751170610827	Liner Use:	
Y:	-90.9827945425329	Added By:	
Owner Add1:	889 MILLCREEK CHURCH RD	Business:	
Owner Add2:		Cont Fn:	DANIEL
Owner City:	SILEX	Cont Ln:	FLYNN
Owner Fn:	JIM	Cont Prmt:	001120
Owner Ln:	FUHRMANN, SR.	Depth Gw:	0
Owner Mi:		Driller Fn:	DANIEL
Owner St:	MO	Driller Ln:	FLYNN
Owner Zip:	63377	Drill Prmt:	001120
Well No:			
From 1:	0		
To 1:	7		
Form 1:	DIRT		
From 2:	7		
To 2:	252		
Form 2:	LS<120;SS		
From 3:	252		
To 3:	258		
Form 3:	SHALEY		
From 4:	258		
To 4:	450		
Form 4:	LS		
From 5:	0		
To 5:	0		
Form 5:			
From 6:	0		
To 6:	0		
Form 6:			
From 7:	0		
To 7:	0		
Form 7:			
From 8:	0		
To 8:	0		
Form 8:			
From 9:	0		
To 9:	0		
Form 9:			

Wells and Additional Sources Detail Report

Schedule RD-S1

From 10: 0
To 10: 0
Form 10:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
16	N	0.28	1,470.49	815.68	WATER WELLS

Well ID:	8853	Subdiv 1:	
Well Inst:	172719	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	84864	Rng No:	
Ref No:	00348214	Rng Dir:	
Cert No:	A134329	Sctn No:	
Date Compl:	2005/05/15 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	16	Elev:	
Site Add1:	MILL CREEK RD SILEX	Total Dpth:	404
Site Add2:		Casing Len:	0
Site City:		SWL:	150
Site Name:		Casing Mat:	
Site St:	MO	Liner Len:	80
Site Zip:		Liner Mat:	Plastic
X:	39.1763377646738	Liner Use:	
Y:	-90.9791934667584	Added By:	
Owner Add1:	2431 EAST 47	Business:	
Owner Add2:		Cont Fn:	EDWARD
Owner City:	WINFIELD	Cont Ln:	MUDD
Owner Fn:	DARREL	Cont Prmt:	001037
Owner Ln:	HENRY	Depth Gw:	0
Owner Mi:		Driller Fn:	DAVID
Owner St:	MO	Driller Ln:	GUZY
Owner Zip:	63389	Drill Prmt:	002994
Well No:			
From 1:	0		
To 1:	18		
Form 1:	CLY		
From 2:	18		
To 2:	35		
Form 2:	WTHRD LM		
From 3:	35		
To 3:	90		
Form 3:	WHT LM		
From 4:	90		
To 4:	98		

Wells and Additional Sources Detail Report

Schedule RD-S1

Form 4: WTHRD LM
 From 5: 98
 To 5: 110
 Form 5: WHT LM
 From 6: 110
 To 6: 116
 Form 6: BRN SH WTRH
 From 7: 116
 To 7: 145
 Form 7: GRY LM
 From 8: 145
 To 8: 280
 Form 8: SND
 From 9: 280
 To 9: 290
 Form 9: SH
 From 10: 290
 To 10: 363
 Form 10: GRY LM

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
17	N	0.37	1,928.48	815.16	WATER WELLS

Well ID:	123512	Subdiv 1:	
Well Inst:	55938	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	Twtn No:	
Well Use:		Twtn Dir:	
FID:	254241	Rng No:	
Ref No:	00113075	Rng Dir:	
Cert No:	A147168	Sctn No:	
Date Compl:	2006/10/17 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	30	Elev:	
Site Add1:		Total Dpth:	405
Site Add2:		Casing Len:	0
Site City:		SWL:	180
Site Name:	CONVERSION	Casing Mat:	
Site St:	MO	Liner Len:	80
Site Zip:		Liner Mat:	Steel
X:	39.1768870812738	Liner Use:	
Y:	-90.977606552755	Added By:	
Owner Add1:	123 TRICKRIDGE RD	Business:	
Owner Add2:		Cont Fn:	
Owner City:	SILEX	Cont Ln:	
Owner Fn:	SAMUEL	Cont Prmt:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Owner Ln:	DURBIN	Depth Gw:	0
Owner Mi:		Driller Fn:	DAVID
Owner St:	MO	Driller Ln:	GUZY
Owner Zip:	63377	Drill Prmt:	002994
Well No:			
From 1:	0		
To 1:	15		
Form 1:	CLY		
From 2:	15		
To 2:	25		
Form 2:	MUD		
From 3:	25		
To 3:	40		
Form 3:	WHITE LM		
From 4:	40		
To 4:	155		
Form 4:	GRY LM		
From 5:	155		
To 5:	220		
Form 5:	SAND		
From 6:	220		
To 6:	225		
Form 6:	SH		
From 7:	225		
To 7:	300		
Form 7:	GRY LM		
From 8:	300		
To 8:	380		
Form 8:	WHITE LM		
From 9:	380		
To 9:	405		
Form 9:	GRY LM		
From 10:	0		
To 10:	0		
Form 10:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
18	SSW	0.79	4,172.55	755.18	WATER WELLS

Well ID:	195650	Subdiv 1:	
Well Inst:	295103	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	120625	Rng No:	
Ref No:	01009909	Rng Dir:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Cert No:	A228073	Sctn No:	
Date Compl:	2020/07/08 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	25	Elev:	
Site Add1:	303 HWY RA	Total Dpth:	400
Site Add2:		Casing Len:	300
Site City:	SILEX	SWL:	160
Site Name:		Casing Mat:	Plastic
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.1458812152143	Liner Use:	
Y:	-90.9920108510261	Added By:	
Owner Add1:	303 HWY RA	Business:	
Owner Add2:		Cont Fn:	DANIEL
Owner City:	SILEX	Cont Ln:	FLYNN
Owner Fn:	BILL	Cont Prmt:	001120
Owner Ln:	GROTHAUS	Depth Gw:	0
Owner Mi:		Driller Fn:	ALAN
Owner St:	MO	Driller Ln:	BURGESS
Owner Zip:	63377	Drill Prmt:	003163
Well No:			
From 1:	0		
To 1:	10		
Form 1:	CLAY		
From 2:	10		
To 2:	12		
Form 2:	WEATHERED ROCK		
From 3:	12		
To 3:	60		
Form 3:	LIME		
From 4:	60		
To 4:	70		
Form 4:	GRAY SHALE		
From 5:	70		
To 5:	105		
Form 5:	LIME		
From 6:	105		
To 6:	110		
Form 6:	SHALE		
From 7:	110		
To 7:	150		
Form 7:	LIME		
From 8:	150		
To 8:	285		
Form 8:	SANDSTONE		
From 9:	285		
To 9:	292		

Wells and Additional Sources Detail Report

Schedule RD-S1

Form 9: SHALE
 From 10: 292
 To 10: 400
 Form 10: LIME

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
19	N	0.44	2,329.27	816.62	WATER WELLS

Well ID:	152847	Subdiv 1:	
Well Inst:	13295	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	213366	Rng No:	
Ref No:	00011052	Rng Dir:	
Cert No:	A008313	Sctn No:	
Date Compl:	1988/05/01 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	60	Elev:	
Site Add1:		Total Dpth:	360
Site Add2:		Casing Len:	105
Site City:		SWL:	80
Site Name:	CONVERSION	Casing Mat:	Steel
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.1779246791072	Liner Use:	
Y:	-90.9769351655969	Added By:	
Owner Add1:	RT 1	Business:	
Owner Add2:		Cont Fn:	MARK
Owner City:	OLD MONROE	Cont Ln:	LAVY
Owner Fn:	DAN	Cont Prmt:	001121
Owner Ln:	RANKIN	Depth Gw:	0
Owner Mi:		Driller Fn:	MARK
Owner St:	MO	Driller Ln:	LAVY
Owner Zip:	63369	Drill Prmt:	001121
Well No:			
From 1:	0		
To 1:	15		
Form 1:	DIRT0-7,WTHRDLS		
From 2:	15		
To 2:	155		
Form 2:	GRYSH,WHTLS45-155		
From 3:	155		
To 3:	170		
Form 3:	BRN RX 360 60GPM		
From 4:	170		

Wells and Additional Sources Detail Report

Schedule RD-S1

To 4: 340
 Form 4: LS 300&200 50&35GPM
 From 5: 340
 To 5: 360
 Form 5: SS 160 15GPM
 From 6: 0
 To 6: 0
 Form 6:
 From 7: 0
 To 7: 0
 Form 7:
 From 8: 0
 To 8: 0
 Form 8:
 From 9: 0
 To 9: 0
 Form 9:
 From 10: 0
 To 10: 0
 Form 10:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
20	SSW	0.97	5,116.81	757.62	WATER WELLS

Well ID:	18924	Subdiv 1:	
Well Inst:	196948	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	139099	Rng No:	
Ref No:	00396404	Rng Dir:	
Cert No:	A157678	Sctn No:	
Date Compl:	2007/12/07 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	40	Elev:	
Site Add1:		Total Dpth:	465
Site Add2:		Casing Len:	0
Site City:		SWL:	230
Site Name:	CONVERSION	Casing Mat:	
Site St:	MO	Liner Len:	80
Site Zip:		Liner Mat:	Plastic
X:	39.1433177384412	Liner Use:	
Y:	-90.9929874127958	Added By:	
Owner Add1:	300 HWY RA	Business:	
Owner Add2:		Cont Fn:	
Owner City:	SILEX	Cont Ln:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Owner Fn:	AUSTIN	Cont Prmt:	
Owner Ln:	ROPER	Depth Gw:	260
Owner Mi:		Driller Fn:	MARK
Owner St:	MO	Driller Ln:	LAVY
Owner Zip:	63377	Drill Prmt:	001121
Well No:			
From 1:	0		
To 1:	5		
Form 1:	CLY		
From 2:	5		
To 2:	190		
Form 2:	LM		
From 3:	190		
To 3:	280		
Form 3:	SS		
From 4:	280		
To 4:	465		
Form 4:	LM		
From 5:	0		
To 5:	0		
Form 5:			
From 6:	0		
To 6:	0		
Form 6:			
From 7:	0		
To 7:	0		
Form 7:			
From 8:	0		
To 8:	0		
Form 8:			
From 9:	0		
To 9:	0		
Form 9:			
From 10:	0		
To 10:	0		
Form 10:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
21	SSE	0.78	4,123.59	776.03	WATER WELLS

Well ID:	105668	Subdiv 1:	
Well Inst:	295578	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	Twn No:	
Well Use:		Twn Dir:	
FID:	205489	Rng No:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Ref No:	01010614	Rng Dir:	
Cert No:	A228626	Sctn No:	
Date Compl:	2020/09/30 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	30	Elev:	
Site Add1:	91 SHANNON LANE	Total Dpth:	480
Site Add2:		Casing Len:	300
Site City:	SIELX	SWL:	200
Site Name:		Casing Mat:	Plastic
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.142097036682	Liner Use:	
Y:	-90.9711978562041	Added By:	
Owner Add1:	91 SHANNON LANE	Business:	
Owner Add2:		Cont Fn:	DANIEL
Owner City:	SIELX	Cont Ln:	FLYNN
Owner Fn:	MCKENZIE	Cont Prmt:	001120
Owner Ln:	SHANNON	Depth Gw:	0
Owner Mi:		Driller Fn:	DAVID
Owner St:	MO	Driller Ln:	GUZY
Owner Zip:	63377	Drill Prmt:	002994
Well No:			
From 1:	0		
To 1:	12		
Form 1:	CLAY		
From 2:	12		
To 2:	50		
Form 2:	WHITE LIME		
From 3:	50		
To 3:	55		
Form 3:	GRAY LIME		
From 4:	55		
To 4:	65		
Form 4:	SHALE		
From 5:	65		
To 5:	135		
Form 5:	GRAY LIME		
From 6:	135		
To 6:	260		
Form 6:	SAND		
From 7:	260		
To 7:	270		
Form 7:	SHALE		
From 8:	270		
To 8:	480		
Form 8:	LIME		
From 9:	0		

Wells and Additional Sources Detail Report

Schedule RD-S1

To 9: 0
Form 9:
From 10: 0
To 10: 0
Form 10:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
22	NNE	0.92	4,836.86	832.05	WATER WELLS

Well ID:	97010	Subdiv 1:	
Well Inst:	126431	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	131458	Rng No:	
Ref No:	00261956	Rng Dir:	
Cert No:	A097242	Sctn No:	
Date Compl:	2001/03/12 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	50	Elev:	
Site Add1:	CESSMAN RD	Total Dpth:	560
Site Add2:		Casing Len:	294
Site City:		SWL:	120
Site Name:		Casing Mat:	Steel
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.1781077850966	Liner Use:	
Y:	-90.9666812562473	Added By:	
Owner Add1:	1652 DOVE VALLEY WAY	Business:	DENTON RAYMOND CONSTRUCTION
Owner Add2:		Cont Fn:	DANIEL
Owner City:	OFALLON	Cont Ln:	FLYNN
Owner Fn:		Cont Prmt:	001120
Owner Ln:		Depth Gw:	0
Owner Mi:		Driller Fn:	DANIEL
Owner St:	MO	Driller Ln:	FLYNN
Owner Zip:	63366	Drill Prmt:	001120
Well No:			
From 1:	0		
To 1:	20		
Form 1:	ROCKY CLY		
From 2:	20		
To 2:	32		
Form 2:	FLT		
From 3:	32		
To 3:	45		
Form 3:	LIME		

Wells and Additional Sources Detail Report

Schedule RD-S1

From 4:	45
To 4:	52
Form 4:	WEATHERED LIME
From 5:	52
To 5:	100
Form 5:	LIME
From 6:	100
To 6:	149
Form 6:	SHALE
From 7:	149
To 7:	175
Form 7:	LIME
From 8:	175
To 8:	249
Form 8:	SHALEY LIME
From 9:	249
To 9:	380
Form 9:	WHITE LIME
From 10:	380
To 10:	515
Form 10:	LIME

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
22	NNE	0.92	4,836.86	832.05	WATER WELLS

Well ID:	236744	Subdiv 1:	
Well Inst:	164688	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	247706	Rng No:	
Ref No:	00330927	Rng Dir:	
Cert No:	A123689	Sctn No:	
Date Compl:	2004/04/15 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	15	Elev:	
Site Add1:		Total Dpth:	480
Site Add2:		Casing Len:	0
Site City:		SWL:	210
Site Name:	CONVERSION	Casing Mat:	
Site St:	MO	Liner Len:	84
Site Zip:		Liner Mat:	Steel
X:	39.1781077850966	Liner Use:	
Y:	-90.9666812562473	Added By:	
Owner Add1:	767 DUCKETT RD	Business:	
Owner Add2:		Cont Fn:	DANIEL

Wells and Additional Sources Detail Report

Schedule RD-S1

Owner City:	SILEX	Cont Ln:	FLYNN
Owner Fn:	JIM	Cont Prmt:	001120
Owner Ln:	PRUITT	Depth Gw:	0
Owner Mi:		Driller Fn:	DANIEL
Owner St:	MO	Driller Ln:	FLYNN
Owner Zip:	63377	Drill Prmt:	001120
Well No:			
From 1:	0		
To 1:	20		
Form 1:	CLY<15;WEATH ROCK		
From 2:	20		
To 2:	84		
Form 2:	GRY LS		
From 3:	84		
To 3:	130		
Form 3:	WT LS		
From 4:	130		
To 4:	137		
Form 4:	SOFT GRY LS		
From 5:	137		
To 5:	195		
Form 5:	LS;BRN ROCK 160-170		
From 6:	195		
To 6:	370		
Form 6:	SS		
From 7:	370		
To 7:	480		
Form 7:	LS		
From 8:	0		
To 8:	0		
Form 8:			
From 9:	0		
To 9:	0		
Form 9:			
From 10:	0		
To 10:	0		
Form 10:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
22	NNE	0.92	4,836.86	832.05	WATER WELLS

Well ID:	289622	Subdiv 1:	
Well Inst:	121044	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	Twn No:	
Well Use:		Twn Dir:	

Wells and Additional Sources Detail Report

Schedule RD-S1

FID:	70237	Rng No:	
Ref No:	00251787	Rng Dir:	
Cert No:	A089441	Sctn No:	
Date Compl:	2000/05/25 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	20	Elev:	
Site Add1:	WHITE WILDLIFE RD SELEX	Total Dpth:	420
Site Add2:		Casing Len:	294
Site City:		SWL:	180
Site Name:		Casing Mat:	Steel
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.1781077850966	Liner Use:	
Y:	-90.9666812562473	Added By:	
Owner Add1:	545 BIRKHEAD	Business:	DARYL BIRKHEAD CONSTRUCTION
Owner Add2:		Cont Fn:	DANIEL
Owner City:	WINFIELD	Cont Ln:	FLYNN
Owner Fn:		Cont Prmt:	001120
Owner Ln:		Depth Gw:	0
Owner Mi:		Driller Fn:	DANIEL
Owner St:	MO	Driller Ln:	FLYNN
Owner Zip:	63389	Drill Prmt:	001120
Well No:			
From 1:	0		
To 1:	12		
Form 1:	DRT/CLY		
From 2:	12		
To 2:	18		
Form 2:	WTHRD LM		
From 3:	18		
To 3:	125		
Form 3:	LM		
From 4:	125		
To 4:	132		
Form 4:	SH		
From 5:	132		
To 5:	270		
Form 5:	SS		
From 6:	270		
To 6:	275		
Form 6:	SH		
From 7:	275		
To 7:	420		
Form 7:	LM		
From 8:	0		
To 8:	0		
Form 8:			

Wells and Additional Sources Detail Report

Schedule RD-S1

From 9: 0
To 9: 0
Form 9:
From 10: 0
To 10: 0
Form 10:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
23	WNW	0.91	4,816.05	749.88	WATER WELLS

Well ID:	49008	Subdiv 1:	
Well Inst:	293807	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	24374	Rng No:	
Ref No:	01008000	Rng Dir:	
Cert No:	A221014	Sctn No:	
Date Compl:	2019/08/29 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	35	Elev:	
Site Add1:	478 WHITE WILDLIFE ROAD	Total Dpth:	400
Site Add2:		Casing Len:	240
Site City:	SILEX	SWL:	140
Site Name:		Casing Mat:	Plastic
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.1655345386271	Liner Use:	
Y:	-91.0075137868662	Added By:	
Owner Add1:	815 HUNTINGTON DR	Business:	
Owner Add2:		Cont Fn:	DANIEL
Owner City:	TROY	Cont Ln:	FLYNN
Owner Fn:	HARVEY	Cont Prmt:	001120
Owner Ln:	RHODES	Depth Gw:	0
Owner Mi:		Driller Fn:	DANIEL
Owner St:	MO	Driller Ln:	FLYNN
Owner Zip:	63379	Drill Prmt:	001120
Well No:			
From 1:	0		
To 1:	20		
Form 1:	CLAY		
From 2:	20		
To 2:	30		
Form 2:	ROCK		
From 3:	30		
To 3:	40		

Wells and Additional Sources Detail Report

Schedule RD-S1

Form 3: WEATHERED LIMESTONE
 From 4: 40
 To 4: 75
 Form 4: GRAY LIME
 From 5: 75
 To 5: 220
 Form 5: SAND
 From 6: 220
 To 6: 230
 Form 6: SHALE
 From 7: 230
 To 7: 400
 Form 7: LIME
 From 8: 0
 To 8: 0
 Form 8:
 From 9: 0
 To 9: 0
 Form 9:
 From 10: 0
 To 10: 0
 Form 10:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
24	SSE	0.88	4,637.68	801.30	WATER WELLS

Well ID:	286965	Subdiv 1:	
Well Inst:	219199	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	82443	Rng No:	
Ref No:	00451233	Rng Dir:	
Cert No:	A183235	Sctn No:	
Date Compl:	2011/06/02 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	21	Elev:	
Site Add1:		Total Dpth:	445
Site Add2:		Casing Len:	0
Site City:		SWL:	180
Site Name:	CONVERSION	Casing Mat:	
Site St:	MO	Liner Len:	100
Site Zip:		Liner Mat:	Plastic
X:	39.1409373679134	Liner Use:	
Y:	-90.9688174841883	Added By:	
Owner Add1:	47 SHANNON LANE	Business:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Owner Add2:		Cont Fn:	DANIEL
Owner City:	SILEX	Cont Ln:	FLYNN
Owner Fn:	GARY	Cont Prmt:	001120
Owner Ln:	SHANNON	Depth Gw:	0
Owner Mi:		Driller Fn:	DAVID
Owner St:	MO	Driller Ln:	GUZY
Owner Zip:	63377	Drill Prmt:	002994
Well No:			
From 1:	0		
To 1:	10		
Form 1:	CLY		
From 2:	10		
To 2:	15		
Form 2:	WTHRD		
From 3:	15		
To 3:	65		
Form 3:	WT LM		
From 4:	65		
To 4:	75		
Form 4:	GRY LM		
From 5:	75		
To 5:	83		
Form 5:	SH		
From 6:	83		
To 6:	135		
Form 6:	GRY LM		
From 7:	135		
To 7:	295		
Form 7:	SND		
From 8:	295		
To 8:	445		
Form 8:	GRY LM		
From 9:	0		
To 9:	0		
Form 9:			
From 10:	0		
To 10:	0		
Form 10:			

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
25	SSE	0.93	4,897.87	795.25	WATER WELLS

Well ID:	302523	Subdiv 1:	
Well Inst:	303019	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Well Use:		TwN Dir:	
FID:	198102	Rng No:	
Ref No:	11257910	Rng Dir:	
Cert No:	A902561	Sctn No:	
Date Compl:	2022/06/17 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	60	Elev:	
Site Add1:	135 Shannon Ln	Total Dpth:	480
Site Add2:		Casing Len:	300
Site City:	Silex	SWL:	150
Site Name:		Casing Mat:	Plastic
Site St:	MO	Liner Len:	0
Site Zip:	63377	Liner Mat:	
X:	39.1401901727369	Liner Use:	
Y:	-90.9689317354785	Added By:	FLYNN DRILLING CO
Owner Add1:	135 Shannon Ln	Business:	
Owner Add2:		Cont Fn:	DANIEL
Owner City:	Silex	Cont Ln:	FLYNN
Owner Fn:	Sean	Cont Prmt:	001120
Owner Ln:	Shannon	Depth Gw:	0
Owner Mi:		Driller Fn:	BRAD
Owner St:	MO	Driller Ln:	LAVY
Owner Zip:	63377	Drill Prmt:	006342
Well No:			
From 1:	0		
To 1:	8		
Form 1:	Clay		
From 2:	8		
To 2:	12		
Form 2:	Weathered		
From 3:	12		
To 3:	65		
Form 3:	White		
From 4:	65		
To 4:	69		
Form 4:	Gray		
From 5:	69		
To 5:	75		
Form 5:	Shale		
From 6:	75		
To 6:	162		
Form 6:	Gray		
From 7:	162		
To 7:	291		
Form 7:	Sand Stone		
From 8:	291		
To 8:	295		

Wells and Additional Sources Detail Report

Schedule RD-S1

Form 8: Shale
 From 9: 295
 To 9: 320
 Form 9: Lime
 From 10: 320
 To 10: 340
 Form 10: Shale / Lime

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
26	NNE	0.99	5,233.29	829.36	WATER WELLS

Well ID:	205512	Subdiv 1:	
Well Inst:	200374	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	290765	Rng No:	
Ref No:	00402401	Rng Dir:	
Cert No:	A152387	Sctn No:	
Date Compl:	2007/03/03 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	18	Elev:	
Site Add1:		Total Dpth:	165
Site Add2:		Casing Len:	100
Site City:		SWL:	120
Site Name:	CONVERSION	Casing Mat:	Plastic
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.1848826882774	Liner Use:	
Y:	-90.9716861414795	Added By:	
Owner Add1:	276 HWY F	Business:	
Owner Add2:		Cont Fn:	
Owner City:	SILEX	Cont Ln:	
Owner Fn:	BRAD	Cont Prmt:	
Owner Ln:	NOAH	Depth Gw:	130
Owner Mi:		Driller Fn:	MARK
Owner St:	MO	Driller Ln:	LAVY
Owner Zip:	63377	Drill Prmt:	001121
Well No:			
From 1:	0		
To 1:	22		
Form 1:	CLAY		
From 2:	22		
To 2:	40		
Form 2:	GREY SHALE		
From 3:	40		

Wells and Additional Sources Detail Report

Schedule RD-S1

To 3: 122
 Form 3: WHITE
 From 4: 122
 To 4: 140
 Form 4: BRKN
 From 5: 140
 To 5: 165
 Form 5: LIME
 From 6: 0
 To 6: 0
 Form 6:
 From 7: 0
 To 7: 0
 Form 7:
 From 8: 0
 To 8: 0
 Form 8:
 From 9: 0
 To 9: 0
 Form 9:
 From 10: 0
 To 10: 0
 Form 10:

Map Key	Direction	Distance (mi)	Distance (ft)	Elevation (ft)	DB
27	N	0.94	4,987.09	779.58	WATER WELLS

Well ID:	167742	Subdiv 1:	
Well Inst:	107788	Subdiv 2:	
Well Name:		Subdiv 3:	
Well Type:	Domestic	TwN No:	
Well Use:		TwN Dir:	
FID:	252471	Rng No:	
Ref No:	00225350	Rng Dir:	
Cert No:	A088263	Sctn No:	
Date Compl:	1999/08/16 00:00:00+00	Cnty Fips:	
Well Stat:	Active	Drill Area:	
Well Yield:	18	Elev:	
Site Add1:		Total Dpth:	425
Site Add2:		Casing Len:	316
Site City:		SWL:	230
Site Name:	CONVERSION	Casing Mat:	Steel
Site St:	MO	Liner Len:	0
Site Zip:		Liner Mat:	
X:	39.1868968486156	Liner Use:	
Y:	-90.9805362419579	Added By:	

Wells and Additional Sources Detail Report

Schedule RD-S1

Owner Add1:	HWY F	Business:	
Owner Add2:		Cont Fn:	EDWARD
Owner City:	EOLIA	Cont Ln:	MUDD
Owner Fn:	TONY & MARY ANN	Cont Prmt:	001037
Owner Ln:	SANSONE	Depth Gw:	0
Owner Mi:		Driller Fn:	DAVID
Owner St:	MO	Driller Ln:	GUZY
Owner Zip:	63344	Drill Prmt:	002994
Well No:			
From 1:	0		
To 1:	55		
Form 1:	CLY		
From 2:	55		
To 2:	110		
Form 2:	GRY LS		
From 3:	110		
To 3:	115		
Form 3:	WEATH LS		
From 4:	115		
To 4:	140		
Form 4:	GRY LS		
From 5:	140		
To 5:	275		
Form 5:	SS		
From 6:	275		
To 6:	285		
Form 6:	SH		
From 7:	285		
To 7:	295		
Form 7:	WT LS		
From 8:	295		
To 8:	300		
Form 8:	SH		
From 9:	300		
To 9:	425		
Form 9:	WT LS		
From 10:	0		
To 10:	0		
Form 10:			

This section lists any relevant radon information found for the target property.

Federal EPA Radon Zone for LINCOLN County: **2**

Zone 1: Counties with predicted average indoor radon screening levels greater than 4 pCi/L

Zone 2: Counties with predicted average indoor radon screening levels from 2 to 4 pCi/L

Zone 3: Counties with predicted average indoor radon screening levels less than 2 pCi/L

Federal Area Radon Information for LINCOLN County

No Measures/Homes:	6
Geometric Mean:	0.8
Arithmetic Mean:	1.3
Median:	0.9
Standard Deviation:	1.6
Maximum:	4.5
% >4 pCi/L:	17
% >20 pCi/L:	0
Notes on Data Table:	TABLE 1. Screening indoor radon data from the EPA/State Residential Radon Survey of Missouri conducted during 1987-88. Data represent 2-7 day charcoal canister measurements from the lowest level of each home tested.

Federal Sources

FEMA National Flood Hazard Layer

FEMA FLOOD

The National Flood Hazard Layer (NFHL) data incorporates Flood Insurance Rate Map (FIRM) databases published by the Federal Emergency Management Agency (FEMA), and any Letters Of Map Revision (LOMRs) that have been issued against those databases since their publication date. The FIRM Database is the digital, geospatial version of the flood hazard information shown on the published paper FIRMs. The FIRM Database depicts flood risk information and supporting data used to develop the risk data. The FIRM Database is derived from Flood Insurance Studies (FISs), previously published FIRMs, flood hazard analyses performed in support of the FISs and FIRMs, and new mapping data, where available.

Indoor Radon Data

INDOOR RADON

Indoor radon measurements tracked by the Environmental Protection Agency (EPA) and the State Residential Radon Survey.

Public Water Systems Violations and Enforcement Data

PWSV

This list of drinking water violations and enforcement actions is sourced from the U.S. Environmental Protection Agency's (EPA) Enforcement and Compliance History Online (ECHO) system that incorporates Public Water Systems data from EPA's Safe Drinking Water Information System (SDWIS) database, as part of the national download of Safe Drinking Water Act (SDWA) data. SDWIS contains information on public water systems from the Public Water System Supervision (PWSS) Program, including monitoring, enforcement, and violation data related to requirements established by the SDWA. Address information provided in SDWIS may correspond either with the physical location of the water system, or with a contact address.

Radon Zone Level

RADON ZONE

Areas showing the level of Radon Zones (level 1, 2 or 3) by county. This data is maintained by the Environmental Protection Agency (EPA).

Safe Drinking Water Information System (SDWIS)

SDWIS

This national download of Safe Drinking Water Act (SDWA) data is sourced from the U.S. Environmental Protection Agency's (EPA) Enforcement and Compliance History Online (ECHO) system that incorporates Public Water Systems data from EPA's Safe Drinking Water Information System (SDWIS) database. SDWIS contains information on public water systems from the Public Water System Supervision (PWSS) Program related to requirements established by the Safe Drinking Water Act (SDWA). Address information provided in SDWIS may correspond either with the physical location of the water system, or with a contact address.

Soil Survey Geographic database

SSURGO

The Soil Survey Geographic database (SSURGO) contains information about soil as collected by the National Cooperative Soil Survey at the Natural Resources Conservation Service (NRCS). Soil maps outline areas called map units. The map units are linked to soil properties in a database. Each map unit may contain one to three major components and some minor components.

U.S. Fish & Wildlife Service Wetland Data

US WETLAND

The U.S. Fish & Wildlife Service Wetland layer represents the approximate location and type of wetlands and deepwater habitats in the United States.

USGS Current Topo

US TOPO

US Topo topographic maps are produced by the National Geospatial Program of the U.S. Geological Survey (USGS). The project was launched in late 2009, and the term "US Topo" refers specifically to quadrangle topographic maps published in 2009 and later.

USGS Geology

US GEOLOGY

Seamless maps depicting geological information provided by the United States Geological Survey (USGS).

USGS National Water Information System

FED USGS

The U.S. Geological Survey's (USGS) National Water Information System (NWIS) is the nation's principal repository of water resources data. The data includes comprehensive information of well-construction details, time-series data for gage height, streamflow, groundwater level, and precipitation and water use data. This NWIS database information is obtained through the Water Quality Data Portal (WQP). The WQP

is a cooperative service sponsored by the USGS, the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). WQX3.0 is the newest version of the data standard that is delivered from the WQP, and this updated version holds new profiles containing USGS data added since March 11, 2024 sourced from their beta version website.

State Sources

Oil and Gas Wells

OGW

Oil and Gas Wells Data Collected by Missouri Department of Natural Resources.

Public Drinking Water Wells

PWSW

The Public Drinking Water Wells data consists of community water supply wells in Missouri. This data was made available by the Missouri Department of Natural Resources to facilitate safe public drinking water systems and awareness.

Springs

SPRING

Locations of known and probable spring locations as determined by review of U.S. Geological Survey topographic maps and field verification, made available by the Missouri Geological Survey.

Water Wells

WATER WELLS

This data set provides information about certified water wells and is maintained by the Missouri Department of Natural Resources (DNR), Missouri Geological Survey (MGS), Geological Survey Program (GSP), Wellhead Protection Section (WHP).

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APPENDIX D

DATABASE REPORT



DATABASE REPORT

Project Property:	<i>Millcreek BESS Ave of the Saints Silex MO</i>
Project No:	
Report Type:	<i>Database Report</i>
Order No:	<i>26081300772</i>
Requested by:	<i>Civil & Environmental Consultants, Inc.</i>
Date Completed:	<i>August 17, 2026</i>

Environmental Risk Information Services

A division of Glacier Media Inc.

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Executive Summary

Property Information:

Project Property: *Millcreek BESS
Ave of the Saints Silex MO*

Project No:

Coordinates:

Latitude: 39.16074591
Longitude: -90.98073151
UTM Northing: 4,336,556.83
UTM Easting: 674,463.07
UTM Zone: UTM Zone 15S

Elevation: 772 FT

Order Information:

Order No: 26081300772
Date Requested: August 13, 2026
Requested by: Civil & Environmental Consultants, Inc.
Report Type: Database Report

Historicals/Products:

Aerial Photographs *Historical Aerials (with Project Boundaries)*
ERIS Xplorer [ERIS Xplorer](#)
Excel Add-On *Excel Add-On*
Physical Setting Report (PSR) *Physical Setting Report (PSR)*
Topographic Map *Topographic Maps*

Executive Summary: Report Summary

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
<u>Standard Environmental Records</u>								
Federal								
NPL	Y	1	0	0	0	0	0	0
PROPOSED NPL	Y	1	0	0	0	0	0	0
DELETED NPL	Y	0.5	0	0	0	0	-	0
SEMS	Y	0.5	0	0	0	0	-	0
SEMS ARCHIVE	Y	0.5	0	0	0	0	-	0
ODI	Y	0.5	0	0	0	0	-	0
IODI	Y	0.5	0	0	0	0	-	0
CERCLIS	Y	0.5	0	0	0	0	-	0
CERCLIS NFRAP	Y	0.5	0	0	0	0	-	0
CERCLIS LIENS	Y	PO	0	-	-	-	-	0
RCRA CORRACTS	Y	1	0	0	0	0	0	0
RCRA TSD	Y	0.5	0	0	0	0	-	0
RCRA LQG	Y	0.25	0	0	0	-	-	0
RCRA SQG	Y	0.25	0	0	0	-	-	0
RCRA VSQG	Y	0.25	0	0	0	-	-	0
RCRA NON GEN	Y	0.25	0	0	0	-	-	0
RCRA CONTROLS	Y	0.5	0	0	0	0	-	0
FED ENG	Y	0.5	0	0	0	0	-	0
FED INST	Y	0.5	0	0	0	0	-	0
LUCIS	Y	0.5	0	0	0	0	-	0
NPL IC	Y	0.5	0	0	0	0	-	0
ERNS 1982 TO 1986	Y	PO	0	-	-	-	-	0
ERNS 1987 TO 1989	Y	PO	0	-	-	-	-	0
ERNS	Y	PO	0	-	-	-	-	0
FED BROWNFIELDS	Y	0.5	0	0	0	0	-	0
FEMA UST	Y	0.25	0	0	0	-	-	0
FRP	Y	0.25	0	0	0	-	-	0

Schedule RD-S1

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
DELISTED FRP	Y	0.25	0	0	0	-	-	0
HIST GAS STATIONS	Y	0.25	0	0	0	-	-	0
REFN	Y	0.25	0	0	0	-	-	0
BULK TERMINAL	Y	0.25	0	0	0	-	-	0
SEMS LIEN	Y	PO	0	-	-	-	-	0
SUPERFUND ROD	Y	1	0	0	0	0	0	0
State								
SHWS REG LOG	Y	1	0	0	0	0	0	0
SHWS	Y	1	0	0	0	0	0	0
SMAR	Y	0.5	0	0	0	0	-	0
DELISTED SHWS	Y	1	0	0	0	0	0	0
SHWS REM/AS	Y	0.5	0	0	0	0	-	0
DELISTED HWC	Y	1	0	0	0	0	0	0
DEL SHWS	Y	1	0	0	0	0	0	0
HWCP	Y	1	0	0	0	0	0	0
SWF/LF	Y	0.5	0	0	0	0	-	0
LST	Y	0.5	0	0	0	0	-	0
DELISTED LST	Y	0.5	0	0	0	0	-	0
TANK AUL	Y	0.5	0	0	0	0	-	0
UST	Y	0.25	0	0	0	-	-	0
AST	Y	0.25	0	0	0	-	-	0
DEL TANK	Y	0.25	0	0	0	-	-	0
AUL	Y	0.5	0	0	0	0	-	0
VCP	Y	0.5	0	0	0	0	-	0
BROWNFIELDS	Y	0.5	0	0	0	0	-	0
Tribal								
INDIAN LUST	Y	0.5	0	0	0	0	-	0
INDIAN UST	Y	0.25	0	0	0	-	-	0
DELISTED INDIAN LST	Y	0.5	0	0	0	0	-	0
DELISTED INDIAN UST	Y	0.25	0	0	0	-	-	0

County *No County standard environmental record sources available for this State.*

Additional Environmental Records

Federal

Database	Schdule RD-S1							Total
	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	
OSC RESPONSE	Y	0.125	0	0	-	-	-	0
PFAS GHG	Y	0.5	0	0	0	0	-	0
FINDS/FRS	Y	PO	0	-	-	-	-	0
TRIS	Y	PO	0	-	-	-	-	0
PFAS NPL	Y	0.5	0	0	0	0	-	0
PFAS FED SITES	Y	0.5	0	0	0	0	-	0
PFAS SSEHRI	Y	0.5	0	0	0	0	-	0
PFAS ERNS	Y	0.5	0	0	0	0	-	0
PFAS NPDES	Y	0.5	0	0	0	0	-	0
PFAS TRI	Y	0.5	0	0	0	0	-	0
PFAS WATER	Y	0.5	0	0	0	0	-	0
PFAS TSCA	Y	0.5	0	0	0	0	-	0
PFAS E-MANIFEST	Y	0.5	0	0	0	0	-	0
PFAS IND	Y	0.5	0	0	0	0	-	0
HMIRS	Y	0.125	0	0	-	-	-	0
NCDL	Y	0.125	0	0	-	-	-	0
TSCA	Y	0.125	0	0	-	-	-	0
HIST TSCA	Y	0.125	0	0	-	-	-	0
FTTS ADMIN	Y	PO	0	-	-	-	-	0
FTTS INSP	Y	PO	0	-	-	-	-	0
PRP	Y	PO	0	-	-	-	-	0
SCRD DRYCLEANER	Y	0.5	0	0	0	0	-	0
ICIS	Y	PO	0	-	-	-	-	0
FED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED FED DRY	Y	0.25	0	0	0	-	-	0
FUDS	Y	1	0	0	0	0	0	0
FUDS MRS	Y	1	0	0	0	0	0	0
FORMER NIKE	Y	1	0	0	0	0	0	0
PIPELINE INCIDENT	Y	PO	0	-	-	-	-	0
MLTS	Y	PO	0	-	-	-	-	0
HIST MLTS	Y	PO	0	-	-	-	-	0
MINES	Y	0.25	0	0	0	-	-	0
SMCRA	Y	1	0	0	0	0	0	0
MRDS	Y	1	1	0	0	0	0	1
LM SITES	Y	1	0	0	0	0	0	0

Schedule RD-S1

Database	Searched	Search Radius	Project Property	Within 0.12mi	0.125mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
ALT FUELS	Y	0.25	0	0	0	-	-	0
CONSENT DECREES	Y	0.25	0	0	0	-	-	0
AFS	Y	PO	0	-	-	-	-	0
SSTS	Y	0.25	0	0	0	-	-	0
PCBT	Y	0.5	0	0	0	0	-	0
PCB	Y	0.5	0	0	0	0	-	0
POWER PLANTS	Y	0.125	0	0	-	-	-	0
HIST RISK	Y	0.125	0	0	-	-	-	0
NPDES BIOSOLIDS	Y	PO	0	-	-	-	-	0

State

DRYCLEANERS	Y	0.25	0	0	0	-	-	0
DELISTED DRYCLEANERS	Y	0.25	0	0	0	-	-	0
SPILLS	Y	0.125	0	0	-	-	-	0
TIER 2	Y	0.125	0	0	-	-	-	0
PFAS	Y	0.5	0	0	0	0	-	0
PFAS SAMPLING	Y	0.5	0	0	0	0	-	0

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Total:	1	0	0	0	0	0	1
--------	---	---	---	---	---	---	---

*PO – Property Only

*'Property and adjoining properties' database search radii are set at 0.25 miles.

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Direction	Distance (mi/ft)	Elev Diff (ft)	Page Number
1	MRDS	UNKNOWN LS	LINCOLN COUNTY SILEX MO 63377 <i>Dep ID: 10292873</i>	W	0.00 / 0.00	-7	16

Executive Summary: Site Report Summary - Surrounding Properties

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Direction</i>	<i>Distance (mi/ft)</i>	<i>Elev Diff (ft)</i>	<i>Page Number</i>
--------------------	-----------	--------------------------	----------------	------------------	-----------------------------	---------------------------	------------------------

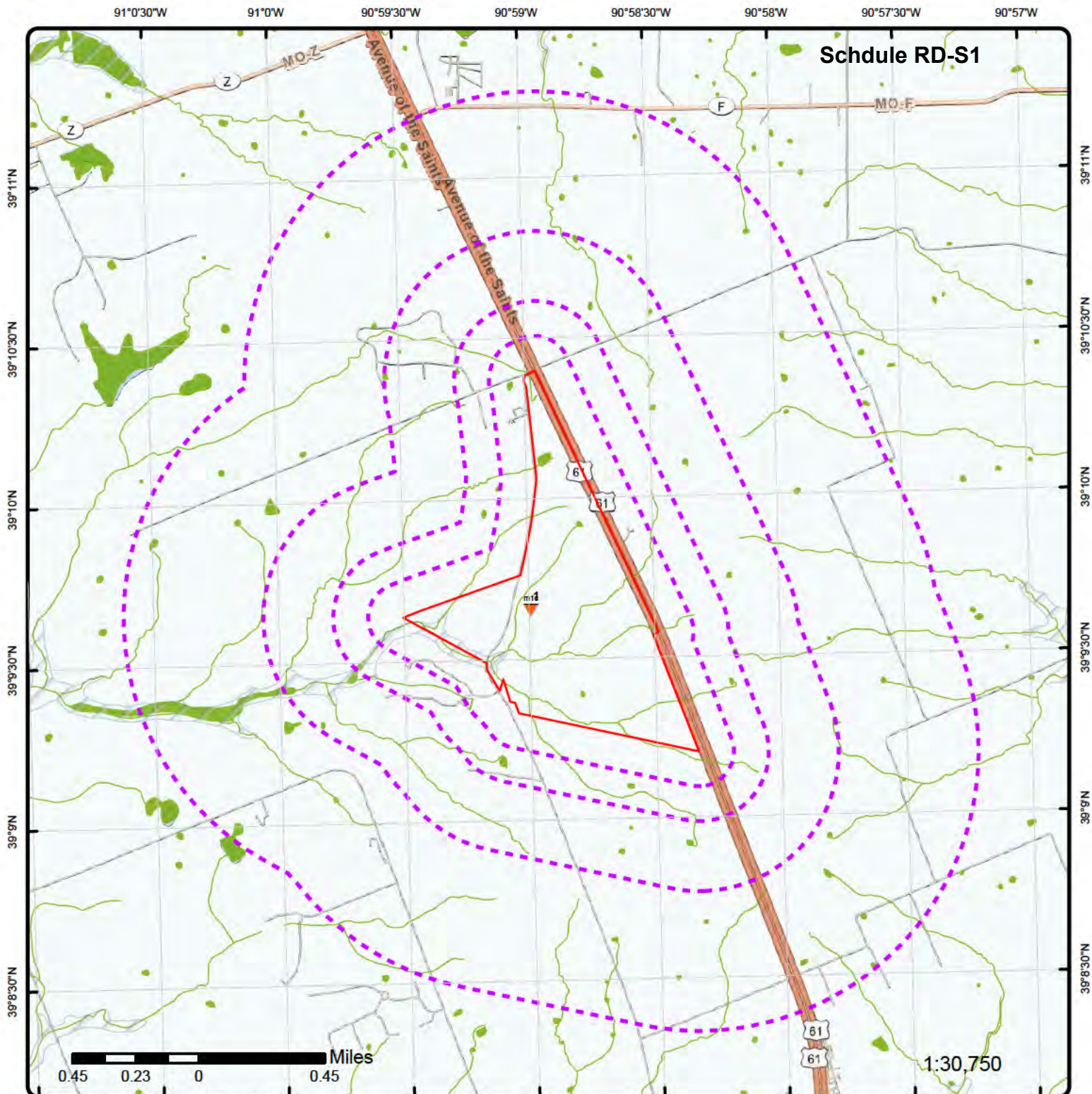
No records found in the selected databases for the surrounding properties.

Executive Summary: Summary by Data Source

Non Standard**Federal****MRDS - Mineral Resource Data System**

A search of the MRDS database, dated Mar 15, 2016 has found that there are 1 MRDS site(s) within approximately 1.00miles of the project property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction</u>	<u>Distance (mi/ft)</u>	<u>Map Key</u>
UNKNOWN LS	LINCOLN COUNTY SILEX MO 63377	W	0.00 / 0.00	<u>1</u>
<i>Dep ID: 10292873</i>				



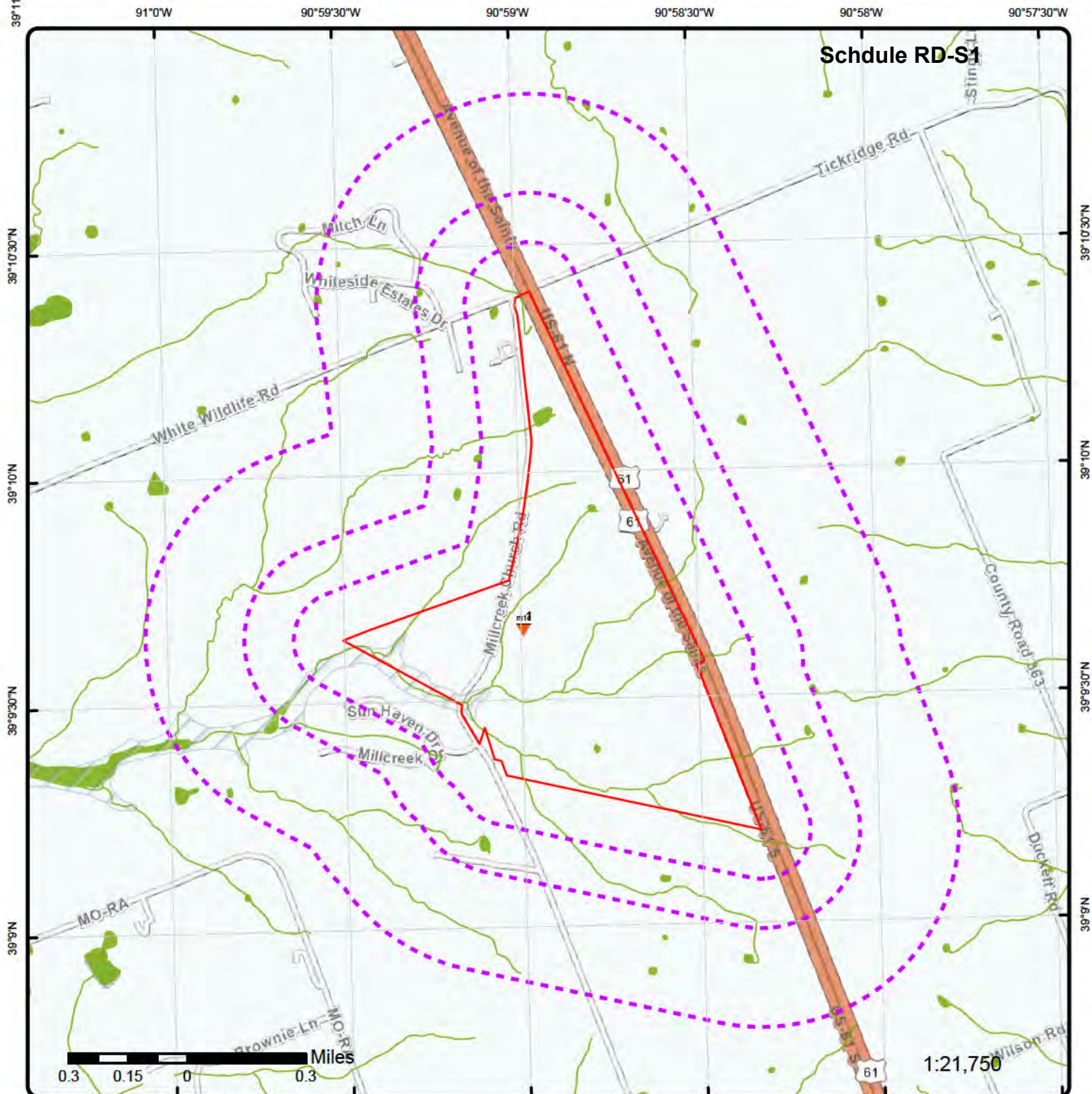
Map: 1.0 Mile Radius

Order Number: 26081300772

Address: Ave of the Saints, Silex, MO



- | | | | |
|---|---|--|--|
| Project Property | Freeways; Highways | State | FWS Special Designation Areas |
| Buffer Outline | Traffic Circle; Ramp | Country | National Priorities List (Active, Delisted, Proposed, Institutional Control) |
| ▲ Sites with Higher Elevation | Major & Minor Arterial | National Wetland | |
| ■ Sites with Same Elevation | Traffic Circle; Ramp | Indian Reserve Land | |
| ▼ Sites with Lower Elevation | Local Road | 100 Year Flood Zone | |
| ○ Sites with Unknown Elevation | Rail | 500 Year Flood Zone | |
| Areas with Higher Elevation | | | |
| Areas with Same Elevation | | | |
| Areas with Lower Elevation | | | |
| Areas with Unknown Elevation | | | |



Map: 0.5 Mile Radius

Order Number: 26081300772

Address: Ave of the Saints, Silex, MO



Project Property

Buffer Outline

Sites with Higher Elevation

Sites with Same Elevation

Sites with Lower Elevation

Sites with Unknown Elevation

Areas with Higher Elevation

Areas with Same Elevation

Areas with Lower Elevation

Areas with Unknown Elevation

Freeways; Highways

Traffic Circle; Ramp

Major & Minor Arterial

Traffic Circle; Ramp

Local Road

Rail

State

Country

National Wetland

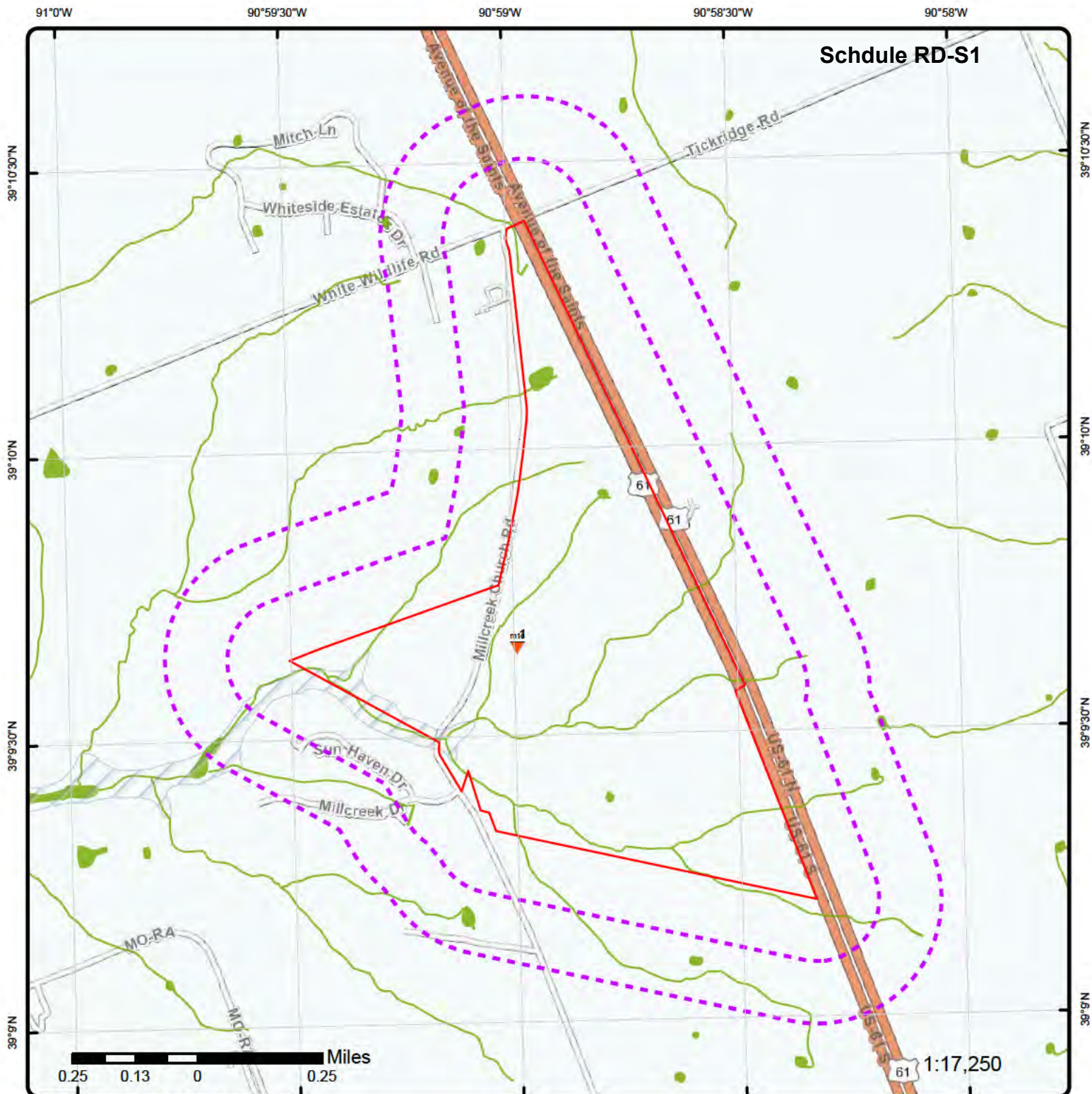
Indian Reserve Land

100 Year Flood Zone

500 Year Flood Zone

FWS Special Designation Areas

National Priorities List (Active, Delisted, Proposed, Institutional Control)



Map: 0.25 Mile Radius

Order Number: 26081300772

Address: Ave of the Saints, Silex, MO



Project Property

Buffer Outline

▲ Sites with Higher Elevation

■ Sites with Same Elevation

▼ Sites with Lower Elevation

○ Sites with Unknown Elevation

Areas with Higher Elevation

Areas with Same Elevation

Areas with Lower Elevation

Areas with Unknown Elevation

Freeways; Highways

Traffic Circle; Ramp

Major & Minor Arterial

Traffic Circle; Ramp

Local Road

Rail

State

Country

National Wetland

Indian Reserve Land

100 Year Flood Zone

500 Year Flood Zone

FWS Special Designation Areas

National Priorities List (Active, Delisted, Proposed, Institutional Control)



Aerial Year: 2025

Address: Ave of the Saints, Silex, MO

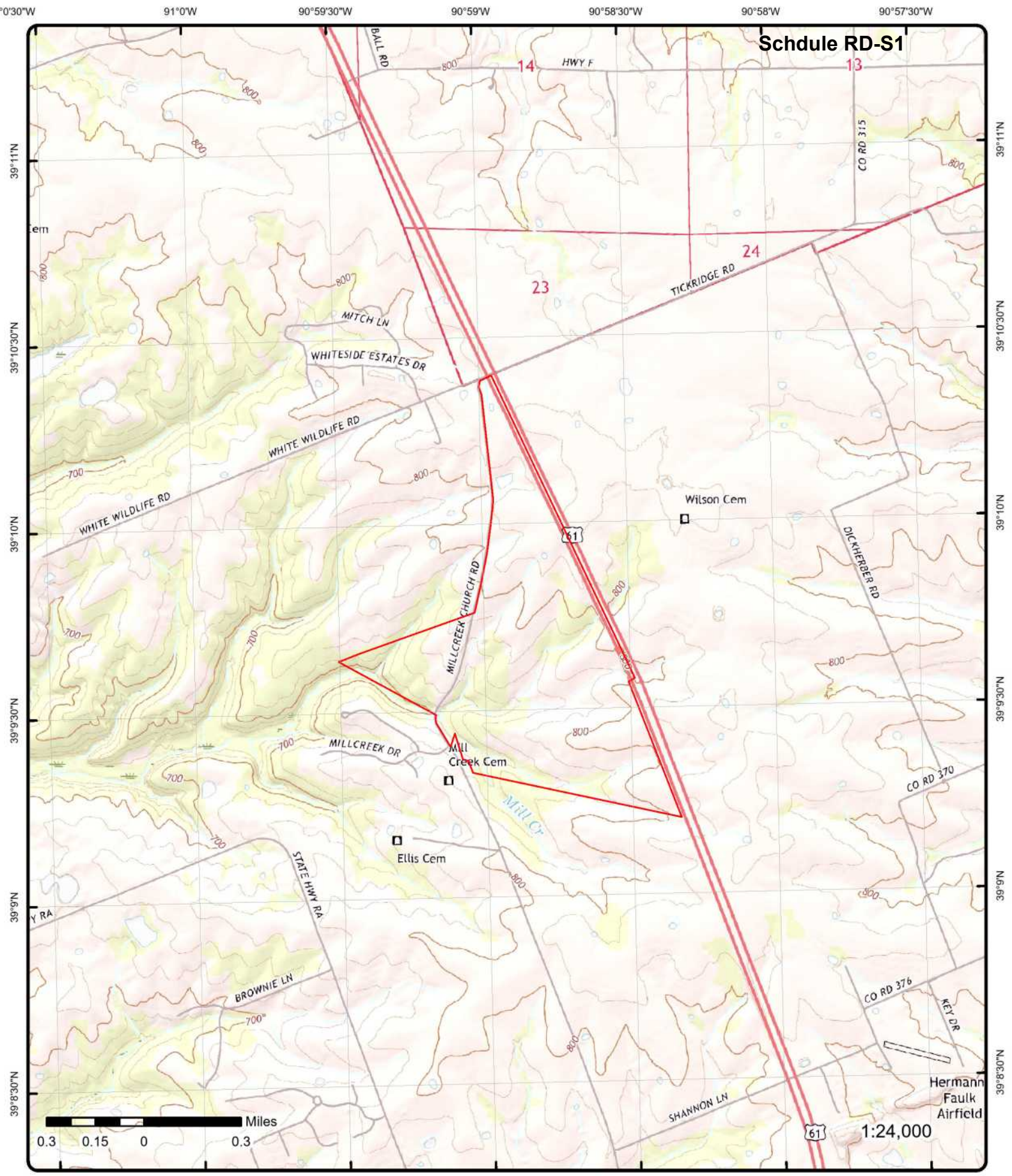
Source: ESRI World Imagery

Order Number: 26081300772



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Attachment A



Detail Report

Map Key	Number of Records	Direction	Distance (mi/ft)	Elev/Diff (ft)	Site	DB
1	1 of 1	W	0.00 / 0.00	765.31 / -7	UNKNOWN LS LINCOLN COUNTY SILEX MO 63377	MRDS

Dep ID: 10292873
Dev Status: PAST PRODUCER
Code List: STN_C
Url: http://mrdata.usgs.gov/mrds/show-mrds.php?dep_id=10292873

I1: 58
Latitude: 39.160889
Longitude: -90.983215

Commodity

I1: 47
Code: STN_C
Commodity: Stone, Crushed/Broken
Commodity Type: Non-metallic
Commodity Group: Stone, Crushed
Importance: Primary

Line: 1
Inserted By: MAS migration
Insert Date: 29-OCT-02
Updated By: USGS
Update Date: 29-OCT-02

Names

I1: 50
Status: Current
Site Name: Unknown Ls
Line: 2

Inserted By: MAS migration
Insert Date: 29-OCT-02
Updated By: USGS
Update Date: 29-OCT-02

Unplottable Summary

Total: 0 Unplottable sites

DB	Company Name/Site Name	Address	City	Zip	ERIS ID
----	------------------------	---------	------	-----	---------

No unplottable records were found that may be relevant for the search criteria.

Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

Appendix: Database Descriptions

Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. ERIS updates databases as set out in ASTM Standard E1527-13 and E1527-21, Section 8.1.8 Sources of Standard Source Information:

"Government information from nongovernmental sources may be considered current if the source updates the information at least every 90 days, or, for information that is updated less frequently than quarterly by the government agency, within 90 days of the date the government agency makes the information available to the public."

Standard Environmental Record Sources

Federal

National Priority List:

NPL

The U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL) includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program, based primarily on the score a site receives from EPA's Hazard Ranking System. A site must be on the NPL to receive money from the Superfund Trust Fund for remedial action. This data includes NPL sites represented as polygons, where available, that can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Currently on the Final NPL (F)' and/or the 'Site is Part of NPL Site (A)'. These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. As site investigation and remediation progress, OUs may be added, modified or refined. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jul 6, 2026

National Priority List - Proposed:

PROPOSED NPL

Sites proposed by the U.S. Environmental Protection Agency (EPA), the state agency, or concerned citizens for addition to the National Priorities List (NPL) due to contamination by hazardous waste and identified by the EPA as a candidate for cleanup because it poses a risk to human health and/or the environment. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jul 6, 2026

Deleted NPL:

DELETED NPL

Sites deleted from the U.S. Environmental Protection Agency (EPA)'s National Priorities List (NPL). The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425(e), sites may be deleted from the NPL where no further response is appropriate. Sites represented as polygons, where available, can be sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). These site boundaries represent the footprint of a whole site, the sum of all the Operable Units (OUs) and the current understanding of the full extent of contamination; for Federal Facility sites, the total site polygon may be the Facility boundary. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jul 6, 2026

SEMS List 8R Active Site Inventory:

SEMS

The U.S. Environmental Protection Agency's (EPA) Superfund Program has deployed the Superfund Enterprise Management System (SEMS), which integrates multiple legacy systems into a comprehensive tracking and reporting tool. This inventory contains active sites evaluated by the Superfund program that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. This data includes SEMS sites from the List 8R Active file as well as applicable sites from the EPA's Facility Registry Service map tool. This data may also include applicable sites represented as polygons sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Not on the NPL (N)', 'Removed from Proposed (R)', and/or 'Pre-Proposal Site (S)'. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jul 5, 2026

SEMS List 8R Archive Sites:

SEMS ARCHIVE

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. This data includes sites from the List 8R Archived site file. This data may also include applicable sites represented as polygons sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS), and is limited to those sites where the NPL Status reflects the site is 'Not on the NPL (N)', 'Removed from Proposed (R)', and/or 'Pre-Proposal Site (S)'. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes. Where there is no polygon boundary data available for a given site, the site is represented as a point.

Government Publication Date: Jun 29, 2026

Inventory of Open Dumps, June 1985:

ODI

The Resource Conservation and Recovery Act (RCRA) provides for publication of an inventory of open dumps. The Act defines "open dumps" as facilities which do not comply with EPA's "Criteria for Classification of Solid Waste Disposal Facilities and Practices" (40 CFR 257).

Government Publication Date: Jun 1985

EPA Report on the Status of Open Dumps on Indian Lands:

IODI

Public Law 103-399, The Indian Lands Open Dump Cleanup Act of 1994, enacted October 22, 1994, identified congressional concerns that solid waste open dump sites located on American Indian or Alaska Native (AI/AN) lands threaten the health and safety of residents of those lands and contiguous areas. The purpose of the Act is to identify the location of open dumps on Indian lands, assess the relative health and environment hazards posed by those sites, and provide financial and technical assistance to Indian tribal governments to close such dumps in compliance with Federal standards and regulations or standards promulgated by Indian Tribal governments or Alaska Native entities.

Government Publication Date: Dec 31, 1998

Comprehensive Environmental Response, Compensation and Liability Information System -

CERCLIS

CERCLIS:

Superfund is a program administered by the United States Environmental Protection Agency (EPA) to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The EPA administers the Superfund program in cooperation with individual states and tribal governments; this database is made available by the EPA.

Government Publication Date: Oct 25, 2013

CERCLIS - No Further Remedial Action Planned:

CERCLIS NFRAP

An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time. The Archive designation means that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Government Publication Date: Oct 25, 2013

CERCLIS Liens:

CERCLIS LIENS

A Federal Superfund lien exists at any property where EPA has incurred Superfund costs to address contamination ("Superfund site") and has provided notice of liability to the property owner. A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. This database is made available by the United States Environmental Protection Agency (EPA). This database was provided by the United States Environmental Protection Agency (EPA). Refer to SEMS LIEN as the current data source for Superfund Liens.

Government Publication Date: Jan 30, 2014

RCRA CORRACTS-Corrective Action:

[RCRA CORRACTS](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. At these sites, the Corrective Action Program ensures that cleanups occur. EPA and state regulators work with facilities and communities to design remedies based on the contamination, geology, and anticipated use unique to each site.

Government Publication Date: May 17, 2026

RCRA non-CORRACTS TSD Facilities:

[RCRA TSD](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. This database includes Non-Corrective Action sites that have indicated engagement in the treatment, storage, or disposal of hazardous waste which requires a RCRA hazardous waste permit.

Government Publication Date: May 17, 2026

RCRA Generator List:

[RCRA LQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Large Quantity Generators (LQGs) generate 1,000 kilograms per month or more of hazardous waste or more than one kilogram per month of acutely hazardous waste. This list also includes RCRAInfo sites that have notified as LQGs that do not have a registered Site Manager or Certifier in RCRAInfo.

Government Publication Date: May 17, 2026

RCRA Small Quantity Generators List:

[RCRA SQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Small Quantity Generators (SQGs) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month. This list also includes RCRAInfo sites that have notified as SQGs that do not have a registered Site Manager or Certifier in RCRAInfo.

Government Publication Date: May 17, 2026

RCRA Very Small Quantity Generators List:

[RCRA VSQG](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Very Small Quantity Generators (VSQG) generate 100 kilograms or less per month of hazardous waste, or one kilogram or less per month of acutely hazardous waste. Additionally, VSQG may not accumulate more than 1,000 kilograms of hazardous waste at any time.

Government Publication Date: May 17, 2026

RCRA Non-Generators:

[RCRA NON GEN](#)

RCRA Info is the U.S. Environmental Protection Agency's (EPA) comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA Info replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS) and the Biennial Reporting System (BRS). A hazardous waste generator is any person or site whose processes and actions create hazardous waste (see 40 CFR 260.10). Non-Generators do not presently generate hazardous waste.

Government Publication Date: May 17, 2026

RCRA Sites with Controls:

[RCRA CONTROLS](#)

List of Resource Conservation and Recovery Act (RCRA) facilities with institutional controls in place. RCRA gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Government Publication Date: May 17, 2026

Federal Engineering Controls-ECs:

List of Engineering controls (ECs) made available by the United States Environmental Protection Agency (EPA). ECs encompass a variety of engineered and constructed physical barriers (e.g., soil capping, sub-surface venting systems, mitigation barriers, fences) to contain and/or prevent exposure to contamination on a property. The EC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jun 29, 2026

Federal Institutional Controls- ICs:

List of Institutional controls (ICs) made available by the United States Environmental Protection Agency (EPA). ICs are non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. The IC listing includes remedy component data from Superfund decision documents for applicable sites on the final or deleted on the National Priorities List (NPL); and sites with a Superfund Alternative Approach (SAA) Agreement in place. The only sites included that are not on the NPL; proposed for NPL; or removed from proposed NPL, are those with an SAA Agreement in place.

Government Publication Date: Jun 29, 2026

Land Use Controls Information System:

The Land Use Controls Information System (LUCIS) database is sourced from the U.S. Department of the Navy (DON). This data contains information for former Base Realignment and Closure (BRAC) properties across the United States. DON's BRAC office was tasked with tracking certain base closures while requiring the prevention of risks to human health and the environment of those properties with LUCs in place. Regarding currently available LUC Sites data, the sites listing is limited to centroid point locations for the overall installation property boundaries. Formerly obtained LUC Sites data may reflect site details that applied previously for a BRAC property.

Government Publication Date: Jun 13, 2024

Institutional Control Boundaries at NPL sites:

These boundaries of Institutional Control areas at sites on the U.S. Environmental Protection Agency's (EPA) National Priorities List (NPL), or as Proposed or Deleted, are sourced from the EPA NPL Superfund Site Boundaries dataset, refreshed by the Shared Enterprise Geodata and Services (SEGS). The EPA's NPL includes the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund program. Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Data provided by external parties is not independently verified by EPA. This boundary data is made available to the public strictly for informational purposes.

Government Publication Date: Jul 6, 2026

Emergency Response Notification System:

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1982-1986

Emergency Response Notification System:

Database of oil and hazardous substances spill reports controlled by the National Response Center. The primary function of the National Response Center is to serve as the sole national point of contact for reporting oil, chemical, radiological, biological, and etiological discharges into the environment anywhere in the United States and its territories.

Government Publication Date: 1987-1989

Emergency Response Notification System:

Database of oil and hazardous substances spill reports made available by the United States Coast Guard National Response Center (NRC). The NRC fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. These data contain initial incident data that has not been validated or investigated by a federal/state response agency.

Government Publication Date: Apr 12, 2026

Brownfields Properties:

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. This list of Brownfields Properties is provided by the United States Environmental Protection Agency (EPA) and is sourced from the Cleanups in My Community (CIMC) web application. The brownfields data are reported by grant recipients through the EPA's Assessment, Cleanup and Redevelopment Exchange System (ACRES). Many properties meet the definition of a brownfield but are not funded by the EPA's program. Such properties may instead be supported by state or local governments, private organizations, or nonprofit entities.

Government Publication Date: Mar 31, 2026

FEMA Underground Storage Tank Listing:

FEMA UST

The Federal Emergency Management Agency (FEMA) of the Department of Homeland Security maintains a list of FEMA owned underground storage tanks.

Government Publication Date: Dec 31, 2017

Facility Response Plan:

FRP

This listing contains facilities that have submitted Facility Response Plans (FRPs) to the U.S. Environmental Protection Agency (EPA). Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit FRPs. Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments. The list includes FRP facilities sourced from the EPA FOIA office and from previously available Homeland Infrastructure Foundation-Level Data (HIFLD) file/s. Disclaimer: Per the EPA FOIA Office, the verification process for current requested FRP data is undergoing review and revision, and any similar reporting will be made public in Fiscal Year 2027. For this reason, the latest available FOIA file may be incomplete.

Government Publication Date: Jun 1, 2025

Delisted Facility Response Plans:

DELISTED FRP

Facilities that once appeared in - and have since been removed from - the list of facilities that have submitted Facility Response Plans (FRP) to EPA. Facilities that could reasonably be expected to cause "substantial harm" to the environment by discharging oil into or on navigable waters are required to prepare and submit Facility Response Plans (FRPs). Harm is determined based on total oil storage capacity, secondary containment and age of tanks, oil transfer activities, history of discharges, proximity to a public drinking water intake or sensitive environments.

Government Publication Date: Jun 1, 2025

Historical Gas Stations:

HIST GAS STATIONS

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

Government Publication Date: Jul 1, 1930

Petroleum Refineries:

REFN

This list of petroleum refineries is sourced from the U.S. Energy Information Administration (EIA), Refinery Capacity Report. The listing includes operating and idle petroleum refineries (including new refineries under construction) and refineries shut down during the previous year. The geographic area the report covers is the 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, and other U.S. possessions. Per the EIA, the facility location data represents the approximate location based on research of publicly available information from sources such as Federal agencies, company websites, and satellite images on public websites.

Government Publication Date: Oct 31, 2024

Petroleum Product and Crude Oil Rail Terminals:

BULK TERMINAL

A list of petroleum product and crude oil rail terminals from the U.S. Energy Information Administration (EIA), as well as petroleum terminals sourced from Oak Ridge National Laboratory hosted by the Homeland Infrastructure Foundation-Level Database. Data includes operable bulk petroleum product terminals with a total bulk shell storage capacity of 50,000 barrels or more, and/or the ability to receive volumes from tanker, barge, or pipeline; also rail terminals handling the loading and unloading of crude oil with activity between 2017 and 2018. EIA petroleum product terminal data comes from the EIA-815 Bulk Terminal and Blender Report, which includes working, shell in operation, and shell idle for several major product groupings.

Government Publication Date: Jun 5, 2025

LIEN on Property:

SEMS LIEN

The U.S. Environmental Protection Agency's (EPA) Superfund Enterprise Management System (SEMS) provides Lien details on applicable properties, such as the Superfund lien on property activity, the lien property information, and the parties associated with the lien.

Government Publication Date: Jun 29, 2026

Superfund Decision Documents:

This database contains a list of decision documents for Superfund sites. Decision documents serve to provide the reasoning for the choice of (or) changes to a Superfund Site cleanup plan. The decision documents include completed Records of Decision (ROD), ROD Amendments, Explanations of Significant Differences (ESD) for active and archived sites stored in the Superfund Enterprise Management System (SEMS), along with other associated memos and files. This information is maintained and made available by the U.S. Environmental Protection Agency.

Government Publication Date: Mar 31, 2026

State**Registry Log:**

SHWS REG LOG

This Registry Log includes sites currently listed on and proposed for the Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri, and it is maintained by the Missouri Department of Natural Resources (DNR) pursuant to the Missouri Hazardous Waste Management Law, Section 260.440, RSMo. The Registry lists only those sites known to be contaminated with substances that meet the definition of hazardous waste. Therefore, sites contaminated with hazardous substances may not be included. It is possible for these sites to be addressed through other state and federal laws. The DNR makes every effort to provide the most complete Registry possible; however, many eligible sites are not yet listed due to pending or ongoing investigations, cleanup negotiations or appeals. Also, unreported facilities or contaminated sites may exist, which the DNR is either not aware of or is not actively involved with currently.

Government Publication Date: Mar 11, 2026

Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites:

SHWS

As required by Section 260.445, RSMo, the Missouri Department of Natural Resources (DNR) prepares an annual report regarding sites listed on the Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri, published for the latest Fiscal Year as the Missouri Registry Annual Report. The DNR conducts annual inspections at each Registry site. If conditions at a site have changed over the past year, the committee may recommend a change in classification to better define the threat to human health and the environment. The registry is not intended or legally required to provide a comprehensive inventory of sites where hazardous chemicals and wastes have been disposed of in Missouri. Instead, it is developed based on a specific legal mandate, which directs that sites be listed on the registry if they are contaminated with hazardous substances that: A. Meet the legal definition of hazardous waste according to Missouri statutes and regulations. B. Were disposed of before state and federal regulations were established for that kind of waste, which began in 1980, or disposed of illegally since that time; and C. Are present at concentrations above health-based screening levels. This database serves a purpose similar to that of the federal Superfund Enterprise Management System (SEMS), functioning as a state-level counterpart for tracking potential hazardous substance release sites.

Government Publication Date: Jun 30, 2025

Site Management and Reporting System:

SMAR

The Missouri Department of Natural Resources (MDNR) maintains the Site Management and Reporting System (SMARS) database. This SMARS data list is specific to the MDNR's Environmental Remediation Program Site Specific Query that includes information for Brownfields Voluntary Cleanup Program (BVCP), Superfund, and Federal Facility sites.

Government Publication Date: Jul 1, 2026

Delisted Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites:

DELISTED SHWS

The Missouri Department of Natural Resources would remove a record from the Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites, if the record is not a Registry Site. This list contains all such non-registry sites that are not included in the Registry Removed sites.

Government Publication Date: Mar 6, 2026

Registry Sites Removed or Action Suspended:

SHWS REM/AS

This is a list of sites that were either removed or had registry actions suspended from the Missouri Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites, based on the latest fiscal year Missouri Registry Annual Report published by the Missouri Department of Natural Resources (DNR).

Government Publication Date: Jun 30, 2025

Delisted Hazardous Waste Cleanup Sites:

DELISTED HWC

List of sites which once appeared on the Missouri Department of Natural Resources (MDNR)'s Hazardous Waste Program Cleanup Sites list, but have since been removed.

Government Publication Date: May 29, 2026

Registry Sites Withdrawn or Deleted:

DEL SHWS

This database contains a list of sites that were removed from the Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites, or Registry action was suspended due to cleanup. This database serves a purpose similar to that of the federal Superfund Enterprise Management System (SEMS), functioning as a state-level counterpart for tracking potential hazardous substance release sites.

Government Publication Date: Apr 10, 2026

Hazardous Waste Cleanup Program Sites:

HWCP

Missouri's Department of Natural Resources (MDNR) manages a Hazardous Waste Program Cleanup Sites list that includes sites that were remediated or investigated under the oversight of the Hazardous Waste Program. These include Superfund, Federal Facilities, Resource Conservation and Recovery Act (RCRA) Corrective Action, and Brownfields/Voluntary Cleanup Program sites that fall under the following four categories: Active Sites, Long Term Stewardship Sites, Environmental Notice Sites and Completed Sites.

Government Publication Date: May 29, 2026

Solid Waste Facility List:

SWF/LF

This list of solid waste facility locations is made available by the Missouri Department of Natural Resources (DNR). The listing includes Sanitary Landfills, Utility Waste Landfills, Special Waste Landfills, Demolition Landfills and other solid waste type facilities. The DNR provides no warranty, expressed or implied, as to the accuracy of the data, and no responsibility is assumed by the DNR in the use of these data.

Government Publication Date: May 22, 2026

Leaking Storage Tank:

LST

List of remediation facilities in the Missouri Department of Natural Resources (DNR)'s Underground Storage Tank and Aboveground Storage Tank Summary database.

Government Publication Date: Mar 9, 2026

Delisted Leaking Storage Tank:

DELISTED LST

This database contains a list of closed leaking storage tank sites that were removed from the Missouri Department of Natural Resources (DNR)'s Underground Storage Tank and Aboveground Storage Tank Summary database.

Government Publication Date: Mar 9, 2026

Regulated Tanks with Activity and Use Limitations:

TANK AUL

List of Regulated Petroleum and Hazardous Substance Storage Tanks with Activity and Use Limitations, made available by the Missouri Department of Natural Resources (DNR) via the Environmental Site Tracking and Research Tool (E-START).

Government Publication Date: Jan 30, 2026

Petroleum Storage Tanks:

UST

List of Underground Storage Tank (UST) facilities included in the Missouri Department of Natural Resources (DNR)'s Underground Storage Tank summary database and the Environmental Site Tracking and Research Tool (E-START) .

Government Publication Date: Mar 9, 2026

Aboveground Storage Tanks:

AST

List of Aboveground Storage Tanks (ASTs) inspected by the Missouri Department of Agriculture's Petroleum/Propane/Anhydrous Ammonia Inspection Program.

Government Publication Date: Jun 18, 2026

Delisted Storage Tanks:

DEL TANK

This database contains a list of closed storage tank sites that were removed from the Missouri Department of Natural Resources (DNR)'s Underground Storage Tank summary database.

Government Publication Date: Jun 18, 2026

Activity and Use Limitations:

AUL

Missouri's Department of Natural Resources (MDNR) manages a Hazardous Waste Program Cleanup Sites list that includes sites that have Activity and Use Limitations in place. These mechanisms or controls ensure that exposure pathways to Contaminants of Concern (COCs) through current or reasonable future uses, are not completed for as long as the COCs pose an unacceptable risk to human health, public welfare or the environment.

Government Publication Date: May 29, 2026

Brownfields/Voluntary Cleanup Program:

VCP

Schedule RD-S1

This Voluntary Cleanup Program (VCP) Site Status List is provided by the Missouri Department of Natural Resources (DNR) and produced from the DNR's Site Management and Reporting System (SMARS) database. First established by the state legislature in 1994, the DNR's Brownfields/Voluntary Cleanup Program (BVCP) provides state oversight for voluntary cleanups of properties contaminated with hazardous substances. Many sites entering the program are not heavily contaminated and are contaminated by sources not addressed by any of the department's regulatory groups, such as Emergency Response, Superfund, Resource Conservation and Recovery Act (RCRA) or Petroleum Storage Tanks. Property owners, business operators or prospective buyers want the property cleaned up to standards acceptable to the state, and to receive some type of cleanup certification from the DNR. This certification can greatly reduce the environmental liability associated with these properties.

Government Publication Date: Jul 1, 2026

Brownfields Assessment Sites List:

[BROWNFIELDS](#)

This Brownfields Assessment List is provided by the Missouri Department of Natural Resources (DNR) and produced from the DNR's Site Management and Reporting System (SMARS) database. Under a cooperative agreement with the U.S. Environmental Protection Agency (EPA), the DNR's Brownfields/Voluntary Cleanup Program (BVCP) staff conducts brownfields site-specific assessments of properties for public entities, as well as for not-for-profit organizations. Local governments acquire contaminated properties through foreclosure for back taxes, land donations or may own property they would like to sell for redevelopment purposes. Entities sometimes have difficulty finding enough funding to pay for environmental assessments before redevelopment. The BVCP provides technical assistance to help communities assess properties.

Government Publication Date: Jul 1, 2026

Tribal

Leaking Underground Storage Tanks (LUSTs) on Indian Lands:

[INDIAN LUST](#)

This list of leaking underground storage tanks (LUSTs) on Tribal/Indian Lands in Region 7, which includes Missouri, is made available by the United States Environmental Protection Agency (EPA). There are no federally recognized Tribes in Missouri, according to the U.S. Department of Interior, Bureau of Indian Affairs.

Government Publication Date: Oct 12, 2017

Underground Storage Tanks (USTs) on Indian Lands:

[INDIAN UST](#)

This list of underground storage tanks (USTs) on Tribal/Indian Lands in Region 7, which includes Missouri, is made available by the United States Environmental Protection Agency (EPA). There are no federally recognized Tribes in Missouri, according to the U.S. Department of Interior, Bureau of Indian Affairs.

Government Publication Date: Oct 12, 2017

Delisted Tribal Leaking Storage Tanks:

[DELISTED INDIAN LST](#)

Leaking Underground Storage Tank (LUST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian LUST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 28, 2026

Delisted Tribal Underground Storage Tanks:

[DELISTED INDIAN UST](#)

Underground Storage Tank (UST) facilities which once appeared on - and have since been removed from - the Regional Tribal/Indian UST lists made available by the United States Environmental Protection Agency (EPA).

Government Publication Date: May 28, 2026

County

No County standard environmental record sources available for this State.

Additional Environmental Record Sources

Federal

On-Scene Coordinator Response Sites:

[OSC RESPONSE](#)

Schedule RD-S1

This list of On-Scene Coordinator (OSC) Response Sites is provided by the U.S. Environmental Protection Agency (EPA). OSCs are the federal officials responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. OSCs coordinate all federal efforts with, and provide support and information to local, state, and regional response communities. An OSC is an agent of either EPA or the U.S. Coast Guard (USCG), depending on where the incident occurs. EPA's OSCs have primary responsibility for spills and releases to inland areas and waters. USCG OSCs have responsibility for coastal waters and the Great Lakes. In general, an OSC has the following key responsibilities during and after a response: Assessment, Monitoring, Response Assistance, and Evaluation. The site listing is made available by the EPA's secure Freedom of Information Act (FOIA) process.

Government Publication Date: Mar 24, 2026

PFAS Greenhouse Gas Emissions Data:

PFAS GHG

The U.S. Environmental Protection Agency's (EPA) Greenhouse Gas Reporting Program (GHGRP) collects Greenhouse Gas (GHG) data from large emitting facilities (25,000 metric tons of carbon dioxide equivalent (CO₂e) per year), and suppliers of fossil fuels and industrial gases that results in GHG emissions when used. This dataset is sourced from the EPA through its Enforcement and Compliance History Online (ECHO) PFAS Analytic Tools, and it includes GHG emissions data for facilities that emit or have emitted since 2010 chemicals identified as PFAS based on EPA's CompTox Chemicals Dashboard lists of PFAS with defined and undefined structures. PFAS emissions data has been identified for facilities engaged in the following industrial processes: Aluminum Production (GHGRP Subpart F), HCFC-22 Production and HFC-23 Destruction (Subpart O), Electronics Manufacturing (Subpart I), Fluorinated Gas Production (Subpart L), Magnesium Production (Subpart T), Electrical Transmission and Distribution Equipment Use (Subpart DD), and Manufacture of Electric Transmission and Distribution Equipment (Subpart SS). Over time, other industrial processes with required GHGRP reporting may include PFAS emissions data and the list of reportable gases may change over time. Note that some regulatory programs have specified chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard.

Government Publication Date: May 18, 2026

Facility Registry Service/Facility Index:

FINDS/FRS

The Facility Registry Service (FRS) is a centrally managed database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. FRS creates high-quality, accurate, and authoritative facility identification records through rigorous verification and management procedures that incorporate information from program national systems, state master facility records, and data collected from EPA's Central Data Exchange registrations and data management personnel. This list is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Mar 1, 2026

Toxics Release Inventory (TRI) Program:

TRIS

The U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) is a database containing data on disposal or other releases of toxic chemicals from U.S. facilities and information about how facilities manage those chemicals through recycling, energy recovery, and treatment. There are currently 770 individually listed chemicals and 33 chemical categories covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual reporting forms for each chemical. Note that the TRI chemical list does not include all toxic chemicals used in the U.S. One of TRI's primary purposes is to inform communities about toxic chemical releases to the environment. This database includes TRI Reporting Data for calendar years 1987 through 2024.

Government Publication Date: Nov 5, 2025

PFOA/PFOS Contaminated Sites:

PFAS NPL

This list of Superfund Sites with Per- and Polyfluoroalkyl Substances (PFAS) detections is provided by the U.S. Environmental Protection Agency (EPA) through its Enforcement and Compliance History Online (ECHO) PFAS Analytic Tools. EPA's Office of Land and Emergency Management and EPA Regional Offices maintain what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment. Limitations: Detections of PFAS at National Priorities List (NPL) sites do not mean that people are at risk from PFAS, are exposed to PFAS, or that the site is the source of the PFAS. For Federal Facilities data, the other Federal agencies (OFA) are the lead agency for their data and provided them to EPA.

Government Publication Date: Mar 30, 2026

Federal Agency Locations with Known or Suspected PFAS Detections:

PFAS FED SITES

This site list of Federal Agency Locations with known or suspected detections of Per- and Polyfluoroalkyl Substances (PFAS) is provided by the U.S. Environmental Protection Agency (EPA) through its Enforcement and Compliance History Online (ECHO) PFAS Analytic Tools. The EPA outlines that these data are gathered from several federal entities, such as the federal Superfund program, Department of Defense (DOD), National Aeronautics and Space Administration (NASA), Department of Transportation (DOT), and Department of Energy (DOE). The dates this data was extracted for the PFAS Analytic Tools range from 2021 to 2025 per agency entity dataset. Sites on this list do not necessarily reflect the source/s of PFAS contamination and detections do not indicate level of risk or human exposure at the site. Agricultural notifications in this data are limited to DOD sites only. At this time, the EPA is aware that this list is not comprehensive of all Federal agencies.

Government Publication Date: Dec 15, 2025

SSEHRI PFAS Contamination Sites:

PFAS SSEHRI

Schedule RD-S1

This PFAS Contamination Site Tracker database is compiled by the PFAS Project Lab, part of the Social Science Environmental Health Research Institute (SSEHRI) at Northeastern University. According to the SSEHRI, the database records qualitative and quantitative data from each known site of PFAS contamination, including timeline of discovery, sources, levels, health impacts, community response, and government response. The goal of this database is to compile information and support public understanding of the rapidly unfolding issue of PFAS contamination. All data presented was extracted from government websites, news articles, or publicly available documents. Locations for the Known PFAS Contamination Sites are sourced from the PFAS Sites and Community Resources Map by the PFAS-REACH team, credited to PFAS Project Lab, Silent Spring Institute, and PFAS Exchange. Disclaimer: The source conveys the data undergoes regular updates as new information becomes available, some sites may be missing and/or contain information that is incorrect or outdated, as well as their information represents all contamination sites SSEHRI is aware of, not all possible contamination sites. This data is not intended to be used for legal purposes. Access the following source link for the most current information: <https://pfasproject.com/pfas-sites-and-community-resources/>

Government Publication Date: Aug 1, 2025

National Response Center PFAS Spills:

[PFAS ERNS](#)

This Per- and Poly-Fluoroalkyl Substances (PFAS) Spills dataset is provided by the U.S. Environmental Protection Agency (EPA) through its Enforcement and Compliance History Online (ECHO) PFAS Analytic Tools. The National Response Center (NRC), operated by the U.S. Coast Guard, is the designated federal point of contact for reporting all oil, chemical, and other discharges into the environment, for the United States and its territories. This dataset contains NRC spill information from 1990 to the present that is restricted to records associated with PFAS and PFAS-containing materials. Incidents are filtered to include only records with a "Material Involved" or "Incident Description" related to Aqueous Film Forming Foam (AFFF). The keywords used to filter the data included "AFFF," "Fire Fighting Foam," "Aqueous Film Forming Foam," "Fire Suppressant Foam," "PFAS," "PERFL," "PFOA," "PFOS," and "Genx." Limitations: The data from the NRC website contains initial incident data that has not been validated or investigated by a federal/state response agency. Keyword searches may misidentify some incident reports that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS spills/release incidents.

Government Publication Date: Jul 20, 2026

PFAS NPDES Discharge Monitoring:

[PFAS NPDES](#)

This list of National Pollutant Discharge Elimination System (NPDES) Discharge Monitoring Report (DMR) permitted facilities, with required monitoring for Per- and Polyfluoroalkyl Substances (PFAS), is provided by the U.S. Environmental Protection Agency (EPA) through its Enforcement and Compliance History Online (ECHO) PFAS Analytic Tools. Any point-source wastewater discharger to waters of the United States must have a NPDES permit, which defines a set of parameters for pollutants and monitoring to ensure that the discharge does not degrade water quality or impair human health. This list includes NPDES permitted facilities associated with permits that monitor for PFAS, limited to the years 2007 - present. EPA Disclaimer: Currently, fewer than half of states have required PFAS monitoring for at least one of their permittees, and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future. For states that may have required monitoring, some reporting and data transfer issues may exist on a state-by-state basis.

Government Publication Date: Mar 30, 2026

Perfluorinated Alkyl Substances (PFAS) from Toxic Release Inventory:

[PFAS TRI](#)

List of Toxics Release Inventory (TRI) facilities at which the reported chemical is a per- or polyfluoroalkyl (PFAS) substance included in the U.S. Environmental Protection Agency's (EPA) consolidated PFAS Master List of PFAS Substances. Encompasses Toxics Release Inventory records included in the EPA PFAS Analytic Tools. The EPA's TRI database currently tracks information on disposal or releases of 770 individually listed toxic chemicals and 33 chemical categories from thousands of U.S. facilities and details about how facilities manage those chemicals through recycling, energy recovery, and treatment. This listing includes TRI Reporting Data for calendar years 1987 through 2021 and Preliminary Data for 2022.

Government Publication Date: Sep 20, 2023

PFAS Water Quality Portal Sampling Data:

[PFAS WATER](#)

This Per- and Poly-Fluoroalkyl Substances (PFAS) Environmental Media Sampling Data is made available via the U.S. Environmental Protection Agency's (EPA) PFAS Analytic Tools. The Water Quality Portal (WQP), as a cooperative service sponsored by the United States Geological Survey, the EPA, and the National Water Quality Monitoring Council, is part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations, and individuals submit project details and sampling results to this public repository. Limitations: EPA did not carry out the sampling or testing of a majority of the data in the WQP PFAS dataset. EPA can only speak to the accuracy and completeness of the data from projects like the National Aquatic Resource Surveys for which EPA is the data owner/organization. Data may exist within the file on Quality Assurance Project Plans (QAPPs) and the approving agency of the QAPP, if a QAPP is entered.

Government Publication Date: Feb 2, 2026

PFAS TSCA Manufacture and Import Facilities:

[PFAS TSCA](#)

Schedule RD-S1

The U.S. Environmental Protection Agency (EPA) issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. This list is specific only to TSCA Manufacture and Import Facilities with reported per- and poly-fluoroalkyl (PFAS) substances. Data file is sourced from EPA's PFAS Analytic Tools TSCA dataset which includes CDR/Inventory Update Reporting data from 1998 up to 2020. Disclaimer: This data file includes production and importation data for chemicals identified in EPA's CompTox Chemicals Dashboard list of PFAS without explicit structures and list of PFAS structures in DSSTox. Note that some regulations have specific chemical structure requirements that define PFAS differently than the lists in EPA's CompTox Chemicals Dashboard. Reporting information on manufactured or imported chemical substance amounts should not be compared between facilities, as some companies claim Chemical Data Reporting Rule data fields for PFAS information as Confidential Business Information.

Government Publication Date: Jan 5, 2023

PFAS Waste Transfers from RCRA e-Manifest:

[PFAS E-MANIFEST](#)

This Per- and Poly-Fluoroalkyl Substances (PFAS) Waste Transfers dataset is provided by the U.S. Environmental Protection Agency (EPA) through its Enforcement and Compliance History Online (ECHO) PFAS Analytic Tools. Every shipment of hazardous waste in the U.S. must be accompanied by a shipment manifest, which is a critical component of the cradle-to-grave tracking of wastes mandated by the Resource Conservation and Recovery Act (RCRA). According to the EPA, currently no Federal Waste Code exists for any PFAS compounds. To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: • PFAS • PFOA • PFOS • PERFL • AFFF • GENX • GEN-X (plus the Vermont state-specific waste codes). Limitations: Amount or concentration of PFAS being transferred cannot be determined from the manifest information. Keyword searches may misidentify some manifest records that do not contain PFAS. This dataset should also not be considered to be exhaustive of all PFAS waste transfers.

Government Publication Date: Apr 25, 2026

PFAS Industry Sectors:

[PFAS IND](#)

This Per- and Poly-Fluoroalkyl Substances (PFAS) Industry Sectors dataset is provided by the U.S. Environmental Protection Agency (EPA) through its Enforcement and Compliance History Online (ECHO) PFAS Analytic Tools. The dataset was developed from various sources that show which industries may be handling PFAS including: EPA's ECHO records restricted to potential PFAS-handling industry sectors, based on the North American Industry Classification System (NAICS) Codes and Standard Industrial Classification (SIC) Codes associated federal regulatory programs (e.g., Clean Water Act, Clean Air Act, and Resource Conservation and Recovery Act) at the facility level; ECHO records for Fire Training Sites identified where fire-fighting foam may have been used in training exercises; and 14 CFR Part 139 Airports compiled from historic and current records from the FAA Airport Data and Information Portal. Since July 2006, all certificated Part 139 Airports are required to have fire-fighting foam onsite that meet certain military specifications, which to date have been fluorinated (Aqueous Film Forming Foam). Limitations: Inclusion in this dataset does not indicate that PFAS are being manufactured, processed, used, or released by the facility. Listed facilities potentially handle PFAS based on their industrial profile but are unconfirmed by the EPA. Keyword searches in ECHO for Fire Training Sites may misidentify some facilities and should not be considered to be an exhaustive list of fire training facilities in the U.S.

Government Publication Date: May 4, 2026

Hazardous Materials Information Reporting System:

[HMIRS](#)

The Hazardous Materials Incident Reporting System (HMIRS) database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.

Government Publication Date: Jan 29, 2026

National Clandestine Drug Labs:

[NCDL](#)

The U.S. Department of Justice ("the Department"), Drug Enforcement Administration (DEA), provides this data as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy.

Government Publication Date: Nov 30, 2023

Toxic Substances Control Act:

[TSCA](#)

The U.S. Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule. The CDR enables EPA to collect and publish information on the manufacturing, processing, and use of commercial chemical substances and mixtures (referred to hereafter as chemical substances) on the TSCA Chemical Substance Inventory (TSCA Inventory). This includes current information on chemical substance production volumes, manufacturing sites, and how the chemical substances are used. This information helps the Agency determine whether people or the environment are potentially exposed to reported chemical substances. EPA publishes submitted CDR data that is not Confidential Business Information (CBI). EPA CDR collections occur approximately every four years and reporting requirements change per collection.

Government Publication Date: May 12, 2022

Hist TSCA:

[HIST TSCA](#)

Schedule RD-S1

The Environmental Protection Agency (EPA) is amending the Toxic Substances Control Act (TSCA) section 8(a) Inventory Update Reporting (IUR) rule and changing its name to the Chemical Data Reporting (CDR) rule.

The 2006 IUR data summary report includes information about chemicals manufactured or imported in quantities of 25,000 pounds or more at a single site during calendar year 2005. In addition to the basic manufacturing information collected in previous reporting cycles, the 2006 cycle is the first time EPA collected information to characterize exposure during manufacturing, processing and use of organic chemicals. The 2006 cycle also is the first time manufacturers of inorganic chemicals were required to report basic manufacturing information.

Government Publication Date: Dec 31, 2006

FTTS Administrative Case Listing:

FTTS ADMIN

An administrative case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

FTTS Inspection Case Listing:

FTTS INSP

An inspection case listing from the Federal Insecticide, Fungicide, & Rodenticide Act (FIFRA) and Toxic Substances Control Act (TSCA), together known as FTTS. This database was obtained from the Environmental Protection Agency's (EPA) National Compliance Database (NCDB). The FTTS and NCDB was shut down in 2006.

Government Publication Date: Jan 19, 2007

Potentially Responsible Parties List:

PRP

Early in the site cleanup process, the U.S. Environmental Protection Agency (EPA) conducts a search to find the Potentially Responsible Parties (PRPs). The EPA looks for evidence to determine liability by matching wastes found at the site with parties that may have contributed wastes to the site. This listing contains PRPs, Noticed Parties, at sites in the EPA's Superfund Enterprise Management System (SEMS).

Government Publication Date: Mar 26, 2026

State Coalition for Remediation of Drycleaners Listing:

SCRD DRYCLEANER

The State Coalition for Remediation of Drycleaners (SCRD) was established in 1998, with support from the U.S. Environmental Protection Agency (EPA) Office of Superfund Remediation and Technology Innovation. Coalition members are states with mandated programs and funding for drycleaner site remediation. Current members are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin. Since 2017, the SCRD no longer maintains this data, refer to applicable state source data where available.

Government Publication Date: Nov 08, 2017

Integrated Compliance Information System (ICIS):

ICIS

The Integrated Compliance Information System (ICIS) database contains integrated enforcement and compliance information across most of U.S. Environmental Protection Agency's (EPA) programs. The vision for ICIS is to replace EPA's independent databases that contain enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions and a subset of the Permit Compliance System (PCS), which supports the National Pollutant Discharge Elimination System (NPDES). This information is maintained by the EPA Headquarters and at the Regional offices. A future release of ICIS will completely replace PCS and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities that support compliance and enforcement programs, including incident tracking, compliance assistance, and compliance monitoring.

Government Publication Date: May 2, 2026

Drycleaner Facilities:

FED DRYCLEANERS

A list of drycleaner facilities from Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. This EPA source file tracks facilities that possess NAICS and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Apr 19, 2026

Delisted Drycleaner Facilities:

DELISTED FED DRY

List of sites which once appeared on - and have since been removed from - the list of drycleaner facilities included in Enforcement and Compliance History Online (ECHO) data as made available by the U.S. Environmental Protection Agency (EPA), sourced from the ECHO Exporter file. This EPA source file tracks facilities that possess NAICS and SIC codes that classify businesses as drycleaner establishments.

Government Publication Date: Apr 19, 2026

Formerly Used Defense Sites:

FUDS

Schedule RD-S1

Formerly Used Defense Sites (FUDS) are properties formerly owned by, leased to, or otherwise possessed by and under the jurisdiction of the Secretary of Defense prior to October 1986, where the Department of Defense (DOD) is responsible for environmental restoration. The FUDS Annual Report to Congress (ARC) is published by the U.S. Army Corps of Engineers (USACE). This data is sourced from the USACE's Geospatial FUDS Property Point, FUDS Project Point, and FUDS Property Polygon layers which apply to the Fiscal Year 2024 Inventory. **DISCLAIMER:** Polygon data are based on preliminary findings, and not all properties currently have polygon data available. This data represents the results of data collection/processing for a specific USACE activity and is in no way considered comprehensive or to be used in any legal or official capacity as presented on this site. The USACE makes no warranty, representation or guaranty, either expressed or implied, as to the content, sequence, accuracy, timeliness or completeness of any of the data provided herein.

Government Publication Date: Apr 15, 2026

FUDS Munitions Response Sites:

FUDS MRS

This Munitions Response Sites (MRS) dataset is published with the Formerly Used Defense Sites (FUDS) Annual Report to Congress (ARC) for Fiscal Year 2024 by the U.S. Army Corps of Engineers (USACE). An MRS is a discrete location within a Munitions response area (MRA) that is known to require a munitions response. An MRA means any area on a defense site that is known or suspected to contain unexploded ordnance (UXO), discarded military munitions (DMM), or munitions constituents (MC). This data is compiled from the USACE's Geospatial FUDS MRS data layer. The USACE makes no warranty, representation or guaranty, either expressed or implied, as to the content, sequence, accuracy, timeliness or completeness of any of the data provided herein.

Government Publication Date: Apr 15, 2026

Former Military Nike Missile Sites:

FORMER NIKE

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites. During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

Government Publication Date: Dec 2, 1984

PHMSA Pipeline Safety Flagged Incidents:

PIPELINE INCIDENT

This list of flagged pipeline incidents is made available by the U.S. Department of Transportation (US DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA). PHMSA regulations require incident and accident reports for five different pipeline system types. Accidents reported on hazardous liquid gravity lines (§195.13) and reporting-regulated-only hazardous liquid gathering lines (§195.15) and incidents reported on Type R gas gathering (§192.8(c)) are not included in the flagged incident file data.

Government Publication Date: Jan 7, 2026

Material Licensing Tracking System (MLTS):

MLTS

A list of sites that store radioactive material subject to the Nuclear Regulatory Commission (NRC) licensing requirements. This list is maintained by the NRC. As of September 2016, the NRC no longer releases location information for sites. Site locations were last received in July 2016.

Government Publication Date: May 11, 2021

Historic Material Licensing Tracking System (MLTS) sites:

HIST MLTS

A historic list of sites that have inactive licenses and/or removed from the Material Licensing Tracking System (MLTS). In some cases, a site is removed from the MLTS when the state becomes an "Agreement State". An Agreement State is a State that has signed an agreement with the Nuclear Regulatory Commission (NRC) authorizing the State to regulate certain uses of radioactive materials within the State.

Government Publication Date: Jan 31, 2010

Mines Master Index File:

MINES

The Master Index File (MIF) is provided by the United States Department of Labor, Mine Safety and Health Administration (MSHA). This file, which was originally created in the 1970's, contained many Mine-IDs that were invalid. MSHA removes invalid IDs from the MIF upon discovery. MSHA applicable data includes the following: all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970; mine addresses for all mines in the database except for Abandoned mines prior to 1998 from MSHA's legacy system (addresses may or may not correspond with the physical location of the mine itself); violations that have been assessed penalties as a result of MSHA inspections beginning on 1/1/2000; and violations issued as a result of MSHA inspections conducted beginning on 1/1/2000.

Government Publication Date: May 8, 2026

Surface Mining Control and Reclamation Act Sites:

SMCRA

Schedule RD-S1

This inventory of land and water impacted by past mining (primarily legacy coal mining operations) is maintained by the U.S. Department of the Interior's Office of Surface Mining Reclamation and Enforcement (OSMRE), as it provides information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). This inventory contains information on the type and extent of Abandoned Mine Land (AML) Problems, as well as information on the cost associated with the reclamation of those problems. The data is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed. Disclaimer: Per the OSMRE, States and tribes who enter their data into e-AMLIS (AML Inventory System) may truncate their latitude and longitude so the precise location of usually dangerous AMLs is not revealed in an effort to protect the public from searching for these AMLs, most of which are on private property. If more precise location information is needed, please contact the applicable state/tribe of interest.

Government Publication Date: May 7, 2026

Mineral Resource Data System:

MRDS

The Mineral Resource Data System (MRDS) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS. The USGS has ceased systematic updates of the MRDS database with their focus more recently on deposits of critical minerals while providing a well-documented baseline of historical mine locations from USGS topographic maps.

Government Publication Date: Mar 15, 2016

DOE Legacy Management Sites:

LM SITES

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) currently manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The LM manages sites with diverse regulatory drivers (statutes or programs that direct cleanup and management requirements at DOE sites) or as part of internal DOE or congressionally-recognized programs, such as but not limited to: Formerly Utilized Sites Remedial Action Program (FUSRAP), Uranium Mill Tailings Radiation Control Act (UMTRCA Title I, Title II), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Decontamination and Decommissioning (D&D), Nuclear Waste Policy Act (NWPA). The intent of the site location is to provide a general reference point to the site on a national scale. The coordinates of each site point can be the location of a site monument, the centroid of the site boundary, or a general location of the site. This site listing includes data exported from the DOE Office of LM's Geospatial Environmental Mapping System (GEMS). GEMS Data disclaimer: The DOE Office of LM makes no representation or warranty, expressed or implied, regarding the use, accuracy, availability, or completeness of the data presented herein.

Government Publication Date: Jan 9, 2026

Alternative Fueling Stations:

ALT FUELS

This list of alternative fueling stations is sourced from the U.S. Department of Energy's (DOE) Alternative Fuels Data Center (AFDC) and National Renewable Energy Laboratory (NREL). The DOE's Office of Energy Efficiency & Renewable Energy launched the AFDC in 1991 as a repository for alternative fuel vehicle performance data, which provides a wealth of information and data on alternative and renewable fuels, advanced vehicles, fuel-saving strategies, and emerging transportation technologies. The data includes Biodiesel (B20 and above), Compressed Natural Gas (CNG), Electric, Ethanol (E85), Hydrogen, Liquefied Natural Gas (LNG), Propane (LPG), and Renewable Diesel (R20 and above) fuel type locations.

Government Publication Date: Jun 4, 2026

Superfunds Consent Decrees:

CONSENT DECREES

This list of Superfund consent decrees is provided by the Department of Justice, Environment & Natural Resources Division (ENRD) through a Freedom of Information Act (FOIA) applicable file. This listing includes Cases filed since 2010 limited to the following: Consent Decrees for CERCLA or Superfund Sites filed and/or as proposed within the ENRD's Case Management System (CMS); and applicable ENRD's Environmental Defense Section (EDS) CERCLA Cases with "Consent" in History Note. CMS may not reflect the latest developments in a case, nor can the agency guarantee the accuracy of the data. ENRD Disclaimer: Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA; response is limited to those records that are subject to the requirements of the FOIA; however, this should not be taken as an indication that excluded records do, or do not, exist.

Government Publication Date: Dec 30, 2025

Air Facility System:

AFS

This EPA retired Air Facility System (AFS) dataset contains emissions, compliance, and enforcement data on stationary sources of air pollution. Regulated sources cover a wide spectrum; from large industrial facilities to relatively small operations such as dry cleaners. AFS does not contain data on facilities that are solely asbestos demolition and/or renovation contractors, or landfills. ECHO Clean Air Act data from AFS are frozen and reflect data as of October 17, 2014; the EPA retired this system for Clean Air Act stationary sources and transitioned to ICIS-Air.

Government Publication Date: Oct 17, 2014

Registered Pesticide Establishments:

SSTS

Schedule RD-S1

This national list of active EPA-registered foreign and domestic pesticide and/or device-producing establishments is based on data from the Section Seven Tracking System (SSTS). The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Section 7 requires that each producing establishment must place its EPA establishment number on the label or immediate container of each pesticide, active ingredient or device produced. An EPA establishment number on a pesticide product label identifies the EPA registered location where the product was produced. The list of establishments is made available by the U.S. Environmental Protection Agency (EPA).

Government Publication Date: Sep 26, 2025

Polychlorinated Biphenyl (PCB) Transformers:

PCBT

Locations of Transformers Containing Polychlorinated Biphenyls (PCBs) registered with the United States Environmental Protection Agency. PCB transformer owners must register their transformer(s) with EPA. Although not required, PCB transformer owners who have removed and properly disposed of a registered PCB transformer may notify EPA to have their PCB transformer de-registered. Data made available by EPA.

Government Publication Date: Oct 15, 2019

Polychlorinated Biphenyl (PCB) Notifiers:

PCB

Facilities included in the national list of facilities that have notified the United States Environmental Protection Agency (EPA) of Polychlorinated Biphenyl (PCB) activities. Any company or person storing, transporting or disposing of PCBs or conducting PCB research and development must notify the EPA and receive an identification number.

Government Publication Date: Aug 12, 2025

Power Plants:

POWER PLANTS

This list of power plants is provided by the U.S. Energy Information Administration (EIA). The listing includes operable electric generating plants in the United States by energy source, originating from the EIA-860, Annual Electric Generator Report; EIA-860M, Monthly Update to the Annual Electric Generator Report; and EIA-923, Power Plant Operations Report. It includes all operable plants by energy source with a combined nameplate capacity of 1 megawatt or more that are operating, are on standby, or out of service for short- or long-term.

Government Publication Date: Jun 5, 2025

Historical Business Activity Risk:

HIST RISK

Proprietary list of sites identified as potentially having engaged in business activity that poses a higher-than-normal risk of contamination. Records originate from historical city directories, and are included in this list based on broad business categories Potentially Hazardous Chemical Users and Fuel and Automotive, including but not limited to Dry Cleaners and Fuel Stations, Garages, etc. Inclusion in this listing does not indicate that there is or ever has been contamination; rather, sites are included in this list due to their potential for having engaged in a business activity presenting an elevated risk of contamination. The list was compiled from various city directories including Polks, Millers, Mullin Kille, Interstate Directory, and State Directory Co; spanning roughly 1920s through 1960 depending on information available by city.

Government Publication Date: Jan 1, 1960

NPDES Biosolids Program Permit Holders:

NPDES BIOSOLIDS

This Water National Pollutant Discharge Elimination System (NPDES) Biosolids Permits list is sourced from the U.S. Environmental Protection Agency's (EPA) Enforcement and Compliance History Online data. EPA's Integrated Compliance Information System (ICIS) for NPDES includes facility and compliance information for NPDES permits in the ECHO Biosolids facility universe. Per the EPA, when sewage from households and businesses (and sometimes wastewater from industrial dischargers) is sent to a wastewater treatment plant, the liquids are separated from the solids, producing a semi-solid, nutrient-rich product known as "sewage sludge" or "biosolids". The EPA typically uses the term "biosolids" to mean sewage sludge that has been treated to meet the agency's regulatory requirements and is intended to be land applied as a soil conditioner or fertilizer.

Government Publication Date: May 2, 2026

State

Dry Cleaner List:

DRYCLEANERS

List of sites included in the Dry Cleaner List made available by the Missouri Department of Natural Resources. Includes sites that are known or thought to have been a dry cleaning facility at one time.

Government Publication Date: Nov 30, 2017

Delisted Dry Cleaner:

DELISTED DRYCLEANERS

List of sites which once appeared on - and have since been removed from - the list of dry cleaners made available by the Missouri Department of Natural Resources.

Government Publication Date: Nov 30, 2017

Environmental Incident Summary Database:

SPILLS

Schedule RD-S1

List of hazardous substance release incidents reported to and entered in the Missouri Department of Natural Resources' (DNR) Environmental Emergency Response Tracking System (MEERTS) and Environmental Logging Index (MERLIN). Incidents occurring on or before October 31, 2021 are tracked in the DNR's MEERTS. Incidents occurring since November 1, 2021 are tracked in the DNR's MERLIN. The listing also includes locations of responses to environmental incidents by the DNR Emergency Response Section available on the Missouri Spatial Data Information Service Open Data.
Government Publication Date: Jun 12, 2026

Tier 2 Report:

TIER 2

A list of Tier 2 facilities in Missouri. This list is made available by the State Emergency Management Agency (SEMA), a division of the Department of Public Safety. SEMA is the state of Missouri's coordinating agency for disaster planning, response, and recovery.

Government Publication Date: Sep 23, 2019

Per- and Polyfluoroalkyl Substances (PFAS):

PFAS

A list of sites where PFAS/PFOS or a PFOS or PFAS-containing material is currently or ever has been: manufactured, used, stored, disposed of, or released. This list is made available by the Missouri Department of Natural Resources.

Government Publication Date: Jan 6, 2026

Public Drinking Water System PFAS Sampling:

PFAS SAMPLING

This Per- and Polyfluoroalkyl Substances (PFAS) sampling data is sourced from the Missouri Department of Natural Resources (MODNR) PFAS Viewer Tool. The data identifies the approximated centroid location (center point for general service area) of the facilities associated with a given public water system for voluntary PFAS sampling. These results will indicate either detections above health advisory limits, detections below health advisory limits, or no detection of PFAS. No warranty is expressed or implied by the MODNR, that these point locations reflect the location of any facility of a public water system.

Government Publication Date: Jun 24, 2024

Tribal

No Tribal additional environmental record sources available for this State.

County

No County additional environmental record sources available for this State.

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX E

AERIAL PHOTOGRAPHS



HISTORICAL AERIALS

Project Property: Millcreek BESS
Ave of the Saints
Silex MO

Project No:

Requested By: Civil & Environmental Consultants, Inc.

Order No: 26081300772

Date Completed: August 18, 2026

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Date	Source	Scale	Comments
2024	United States Department of Agriculture	1" = 1000'	
2022	United States Department of Agriculture	1" = 1000'	
2020	United States Department of Agriculture	1" = 1000'	
2018	United States Department of Agriculture	1" = 1000'	
2016	United States Department of Agriculture	1" = 1000'	
2014	United States Department of Agriculture	1" = 1000'	
2012	United States Department of Agriculture	1" = 1000'	
2010	United States Department of Agriculture	1" = 1000'	
2009	United States Department of Agriculture	1" = 1000'	
2007	United States Department of Agriculture	1" = 1000'	
2006	United States Department of Agriculture	1" = 1000'	
2005	United States Department of Agriculture	1" = 1000'	
2004	United States Department of Agriculture	1" = 1000'	
2003	United States Department of Agriculture	1" = 1000'	
1995	United States Geological Survey	1" = 1000'	
1985	United States Geological Survey	1" = 1000'	
1974	United States Geological Survey	1" = 1000'	
1963	Agricultural Stabilization & Conserv. Service	1" = 1000'	Photo Index - Best Available
1956	Army Mapping Service	1" = 1000'	Best Copy Available
1941	Agricultural Stabilization & Conserv. Service	1" = 1000'	Photo Index - Best Available

1000
Feet

Schdule RD-S1



Year: 2024
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772



Year: 2022
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

1000
Feet

Schedule RD-S1



Year: 2020
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

1000
Feet

Schedule RD-S1



Year: 2018
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

1000
Feet

Schedule RD-S1



Year: 2016
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

1000
Feet

Schedule RD-S1



Year: 2014
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

1000
Feet

Schedule RD-S1



Year: 2012
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

1000
Feet

Schedule RD-S1



Year: 2010
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

1000
Feet

Schedule RD-S1



Year: 2009
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772



1000
Feet

Schdule RD-S1

Year: 2007
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772



Year: 2006
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

1000
Feet

Schedule RD-S1



Year: 2005
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772



1000
Feet

Schdule RD-S1

Year: 2004
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

1000
Feet

Schedule RD-S1



Year: 2003
Source: USDA
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

1000
Feet

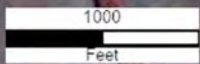
Schedule RD-S1



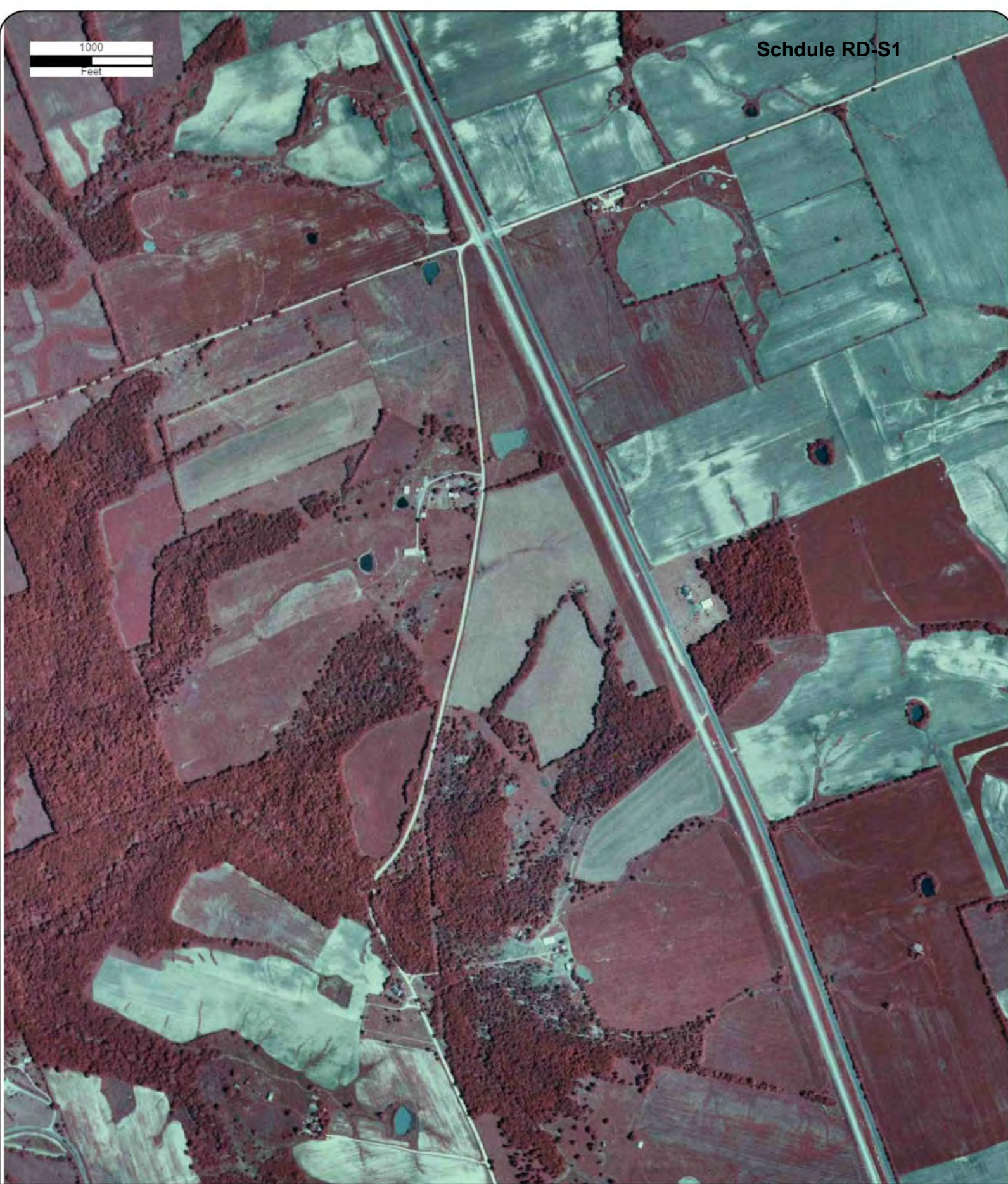
Year: 1995
Source: USGS
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772



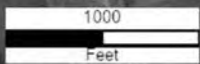
Schedule RD-S1



Year: 1985
Source: USGS
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772



Schedule RD-S1



Year: 1974
Source: USGS
Scale: 1" = 1000'
Comment:

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

1000
Feet

Schedule RD-S1

TM-2CC-170

TM-2CC-169

Year: 1963
Source: ASCS
Scale: 1" = 1000'
Comment: Photo Index - Best Available

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772



1000
Feet

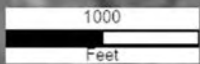
Schedule RD-S1



Year: 1956
Source: AMS
Scale: 1" = 1000'
Comment: Best Copy Available

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772



Schedule RD-S1



Year: 1941
Source: ASCS
Scale: 1" = 1000'
Comment: Photo Index - Best Available

Address: Ave of the Saints, Silex, MO
Approx Center: -90.98073151,39.16074591

Order No: 26081300772

APPENDIX F

HISTORICAL TOPOGRAPHIC MAPS



TOPOGRAPHIC MAPS

Project Property:	Millcreek BESS
	Ave of the Saints
	Silex MO None
Project No:	None
Requested By:	Civil & Environmental Consultants, Inc.
Order No:	26081300772
Date Completed:	August 14, 2026

We have searched USGS collections of current topographic maps and historical topographic maps for the project property. Below is a list of maps found for the project property and adjacent area. Maps are from 7.5 and 15 minute topographic map series, if available.

Year	Map Series
2021	7.5
2017	7.5
2014	7.5
2011	7.5
1984	7.5
1975	7.5
1942	15
1934	15

Topographic Map Symbolology for the maps may be available in the following documents:

Pre-1947

[Page 223 of 1918 Topographic Instructions](#)

[Page 130 of 1928 Topographic Instructions](#)

1947-2009

[Topographic Map Symbols](#)

2009-present

[US Topo Map Symbols](#)

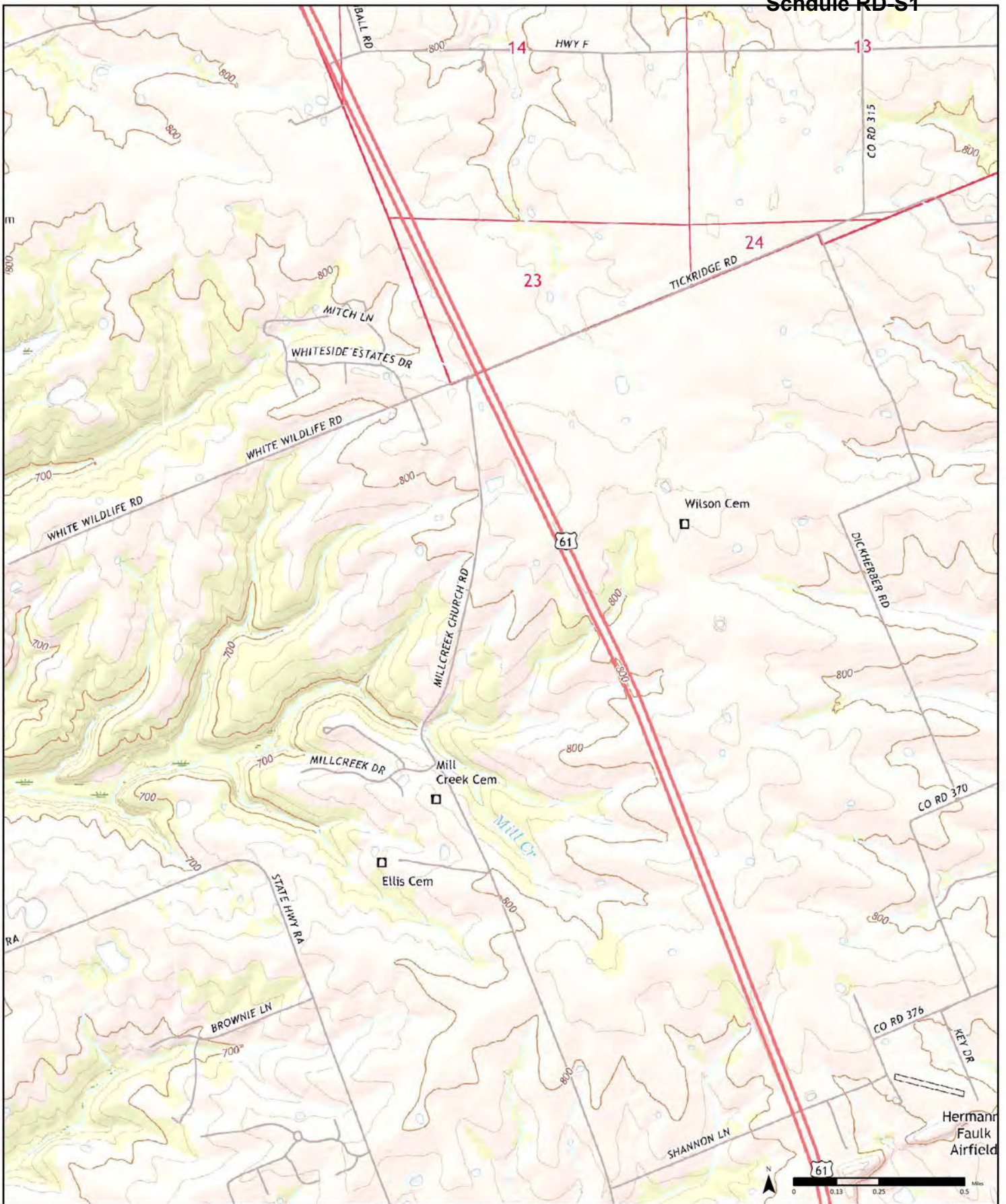
Topographic Maps included in this report are produced by the USGS and are to be used for research purposes including a phase I report. Maps are not to be resold as commercial property.

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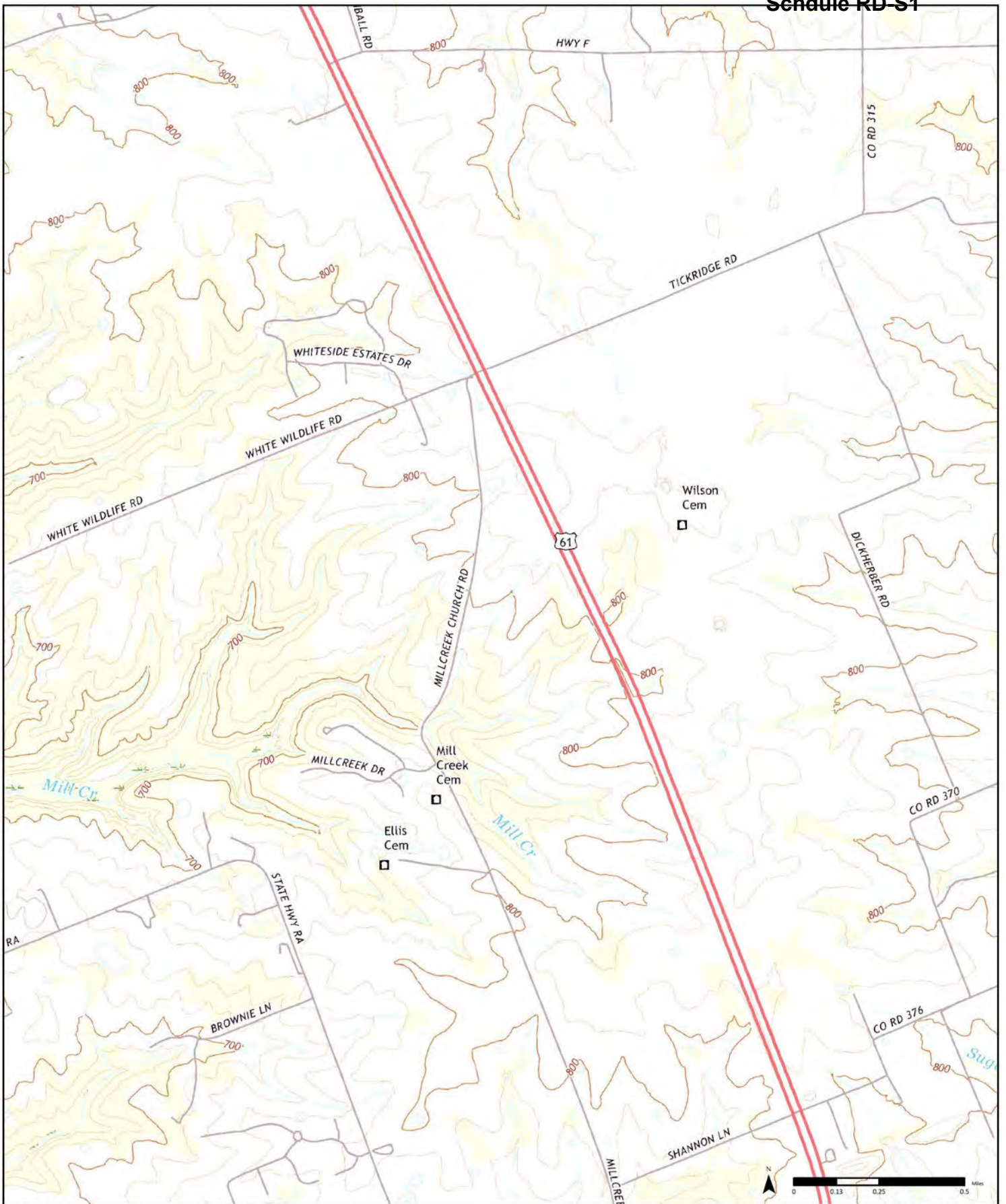


Order No. 26081300772



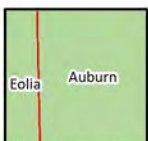
Available Quadrangle(s): Auburn, MO
Eolia, MO

Source: USGS 7.5 Minute Topographic Map



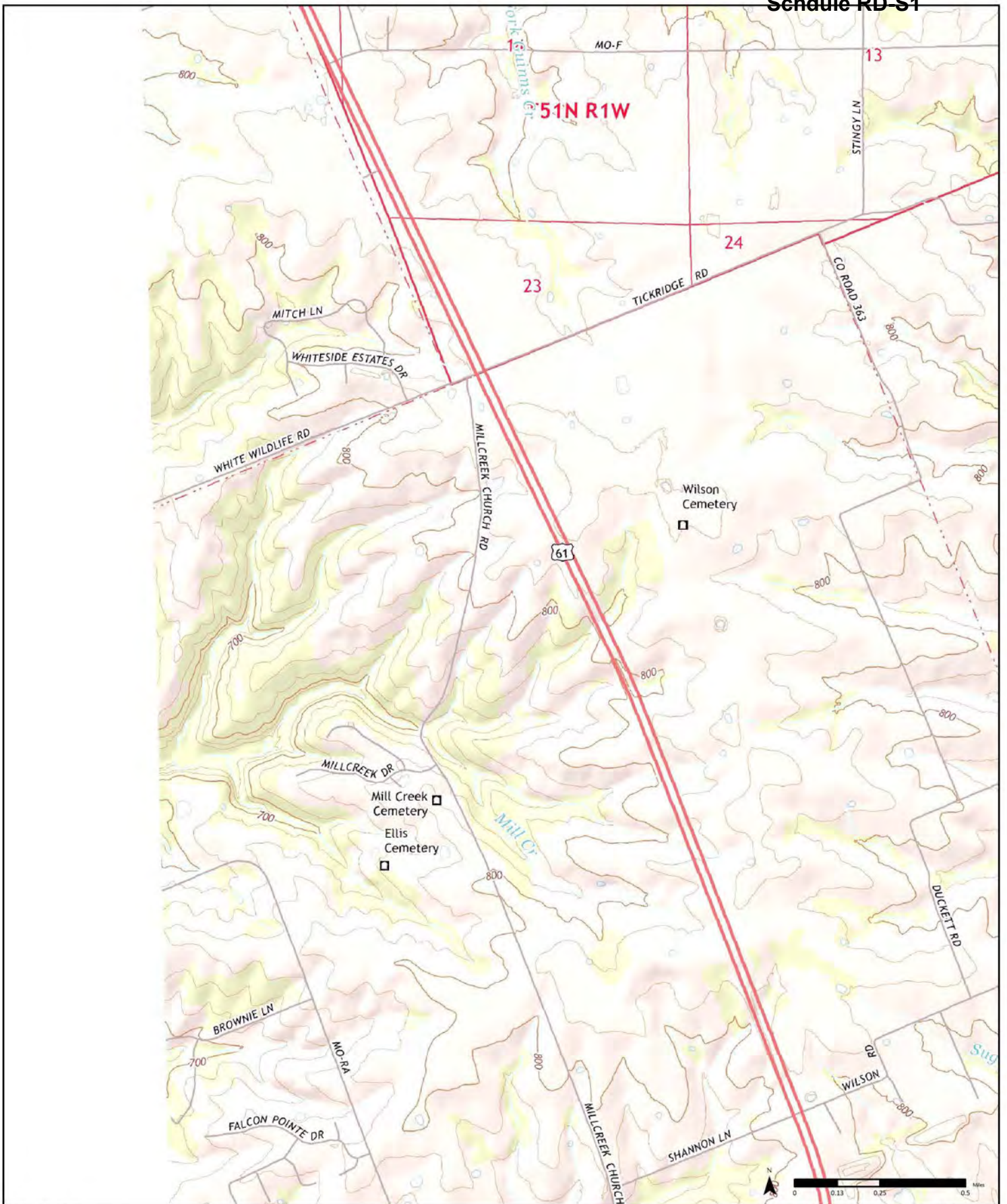
2017

Order No. 26081300772



Available Quadrangle(s): Auburn, MO
Eolia, MO

Source: USGS 7.5 Minute Topographic Map



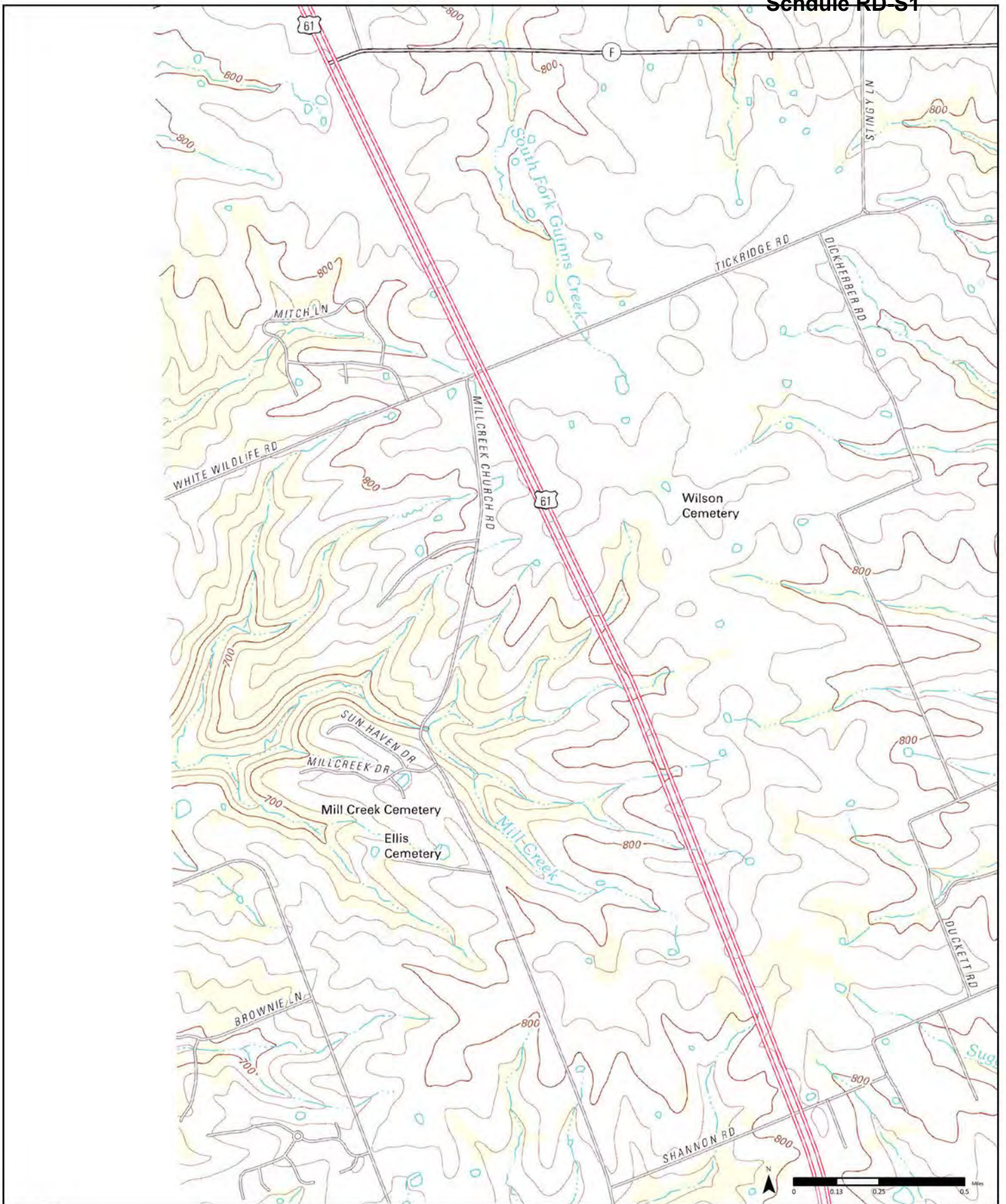
2014

Order No. 26081300772



Available Quadrangle(s): Auburn, MO

Source: USGS 7.5 Minute Topographic Map



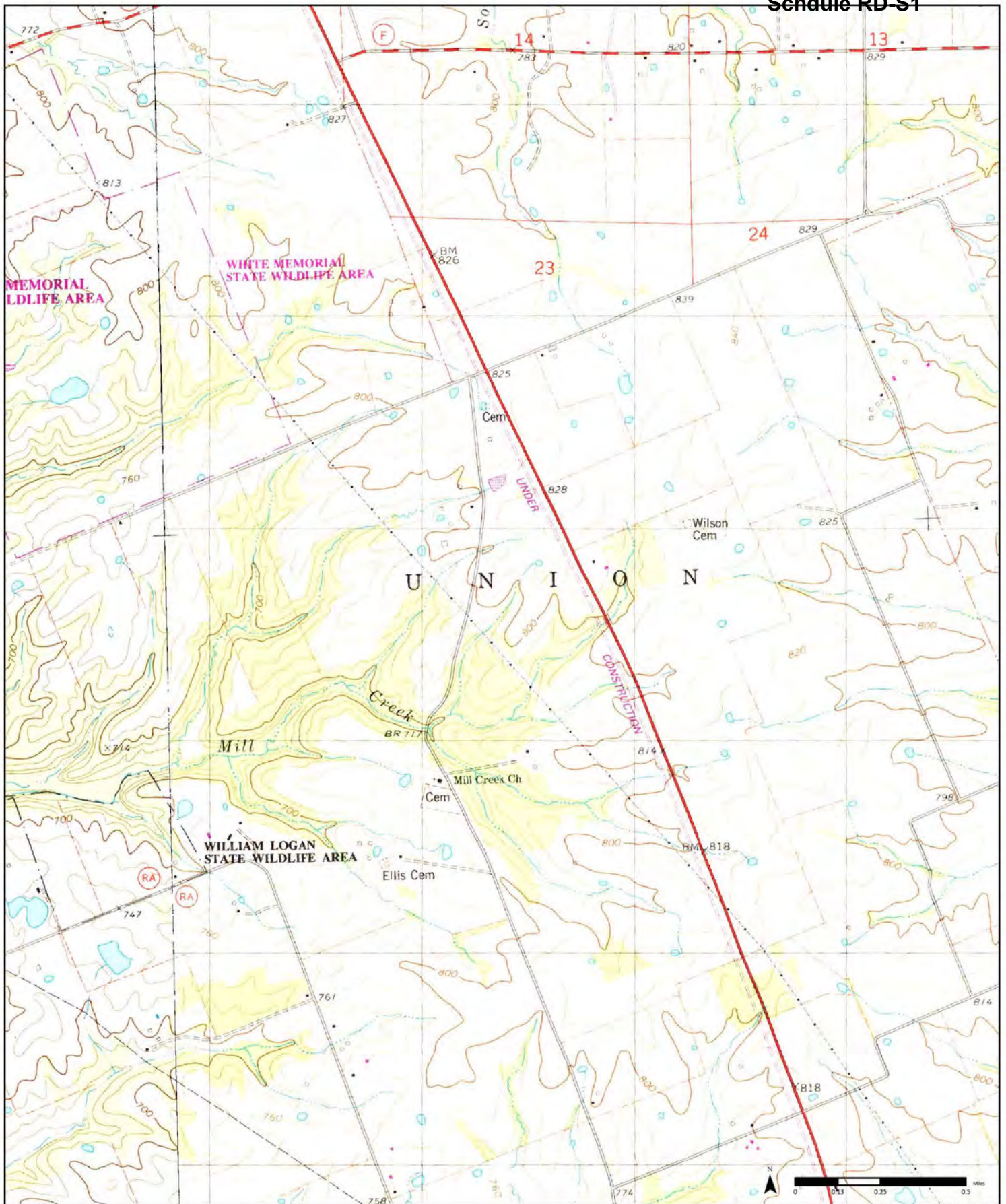
2011

Order No. 26081300772



Available Quadrangle(s): Auburn, MO

Source: USGS 7.5 Minute Topographic Map



1984

(1-1984) Aerial Photo Year: 1982
Photo Revision Year: 1984

(2-1984) Aerial Photo Year: 1982
Photo Revision Year: 1984

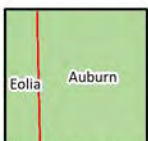
Order No. 26081300772



Available Quadrangle(s): Auburn, MO(1-1984)
Eolia, MO(2-1984)

(1-1975) *Aerial Photo Year: 1974* (2-1975) *Aerial Photo Year: 1974*

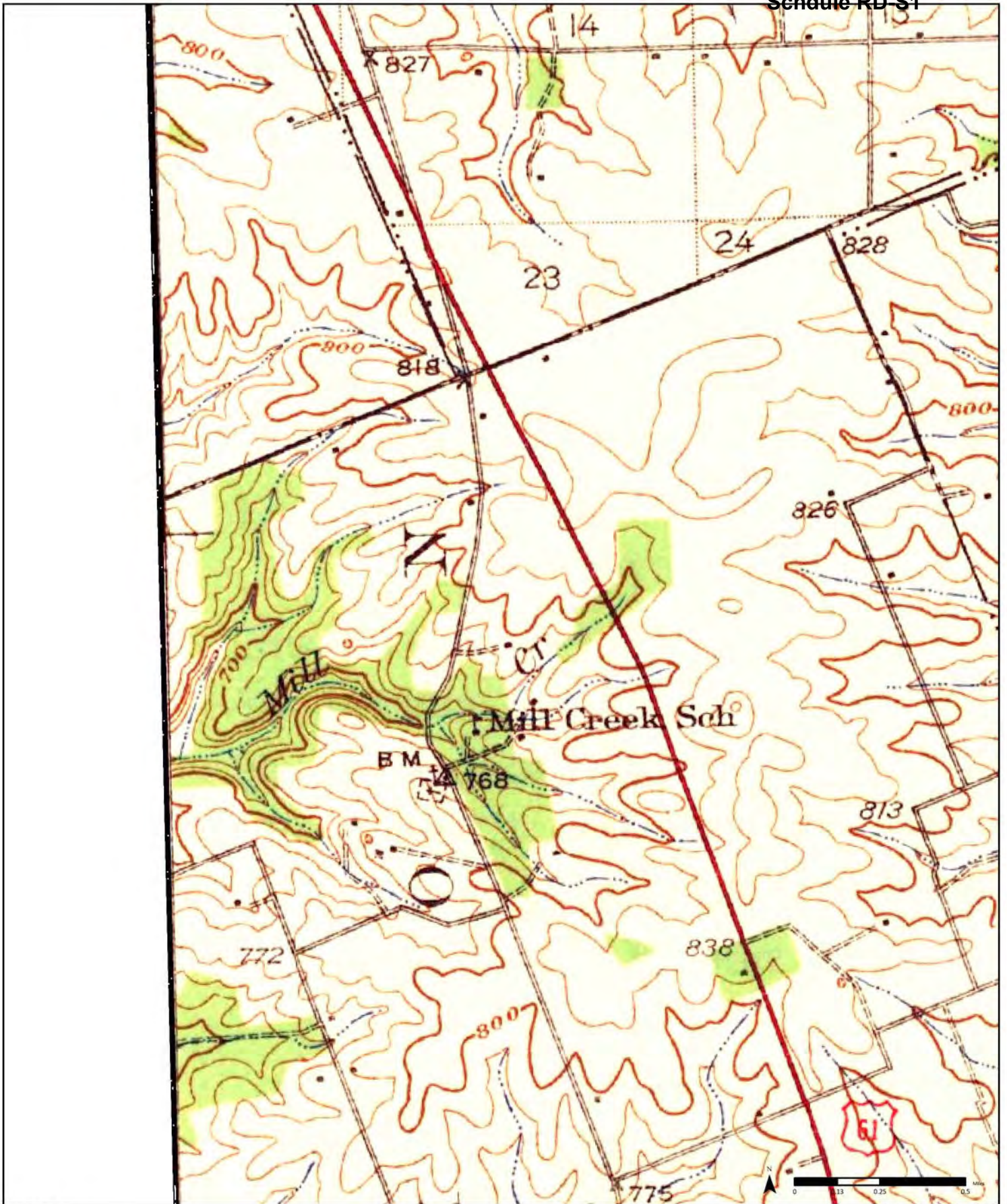
Order No. 26081300772



Available Quadrangle(s): Auburn, MO₍₁₋₁₉₇₅₎
Eolia, MO₍₂₋₁₉₇₅₎

Source: USGS 7.5 Minute Topographic Map

Attachment A 



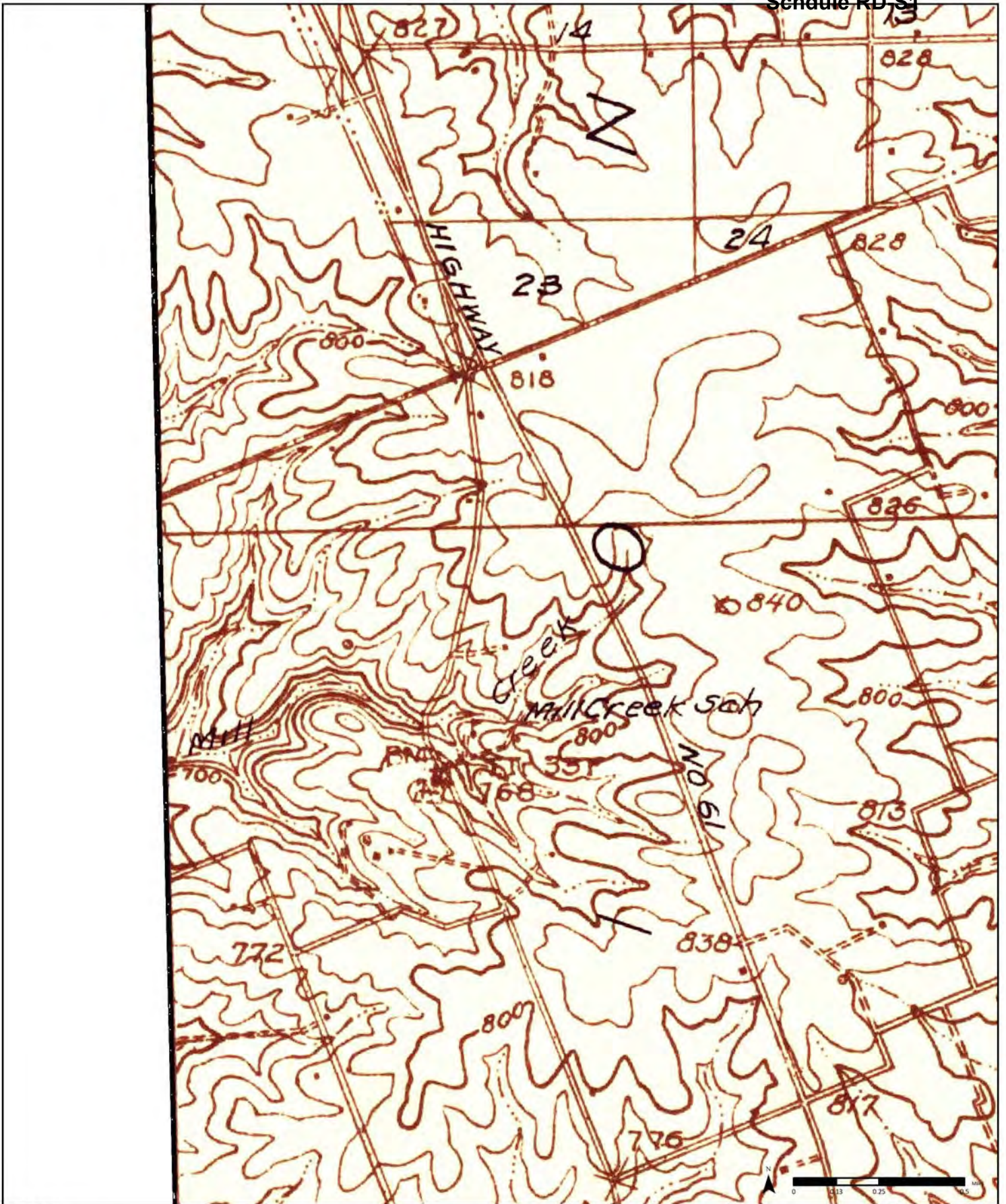
1942

Order No. 26081300772



Available Quadrangle(s): Elsberry, MO

Source: USGS 15 Minute Topographic Map



1934

Order No. 26081300772



Available Quadrangle(s): Elsberry, MO

APPENDIX G

PROFESSIONAL RESUMES

Tommy J. Goodwin JR, P.E.

Project Consultant



7 YEARS OF EXPERIENCE

EDUCATION

B.S., Biological Science, Missouri S&T, 2014

B.S., Environmental Engineering, Missouri S&T, 2014

M.S., Environmental Engineering, Missouri S&T, 2016

Mr. Tommy Goodwin has been a practicing environmental engineer since 2014. He has extensive experience in Environmental Site Assessment (ESA) reporting, Spill Pollution, Controls, and Countermeasures (SPCC) reporting, Storm Water Pollution Prevention Plan (SWPPP) reporting, laboratory analytical data validation, water and groundwater quality monitoring, and EPA Method 9 and Method 22 visual emission assessments. Tommy has performed field work and managed projects in multiple US states and Canadian provinces.

PROJECT EXPERIENCE

Environmental Due Diligence and Permitting

EaglePicher Technologies RCRA Permit, Eagle Picher Technologies, LLC, Joplin, MO

Role: Engineer

Updated the RCRA Permit and associated report attachments including: Sampling and Analysis Plan, Operations and Maintenance Plan, Soil Management Plan, Quality Assurance Project Plan, and figures for the Joplin EaglePicher facility.

MoTie SWPPPs, MoTie, Iron County, Missouri

Role: Engineer

Updated site specific and general NPDES permit SWPPPs to incorporate permit and BMP changes to two facilities.

Pheasants Forever Phase I, Pheasants Forever, Saline and Williamson Counties, Illinois

Role: Engineer

Performed a phase I environmental site assessment for a several thousand acre prior-mine site that had portions dating back over 100 years of operation.

Phase I Environmental Site Assessments, Various, Various*

Role: Engineer

Conducted on-site field investigations and prepared reports for several sites across the USA. Clients are not disclosed for confidentiality due to property transactions.

Phase II Environmental Site Assessments, Various, Various*

Role: Engineer

Conducted on-site field investigations and prepared reports for several sites across the USA. Installed temporary monitoring wells to collect soil and ground water samples. Clients are not disclosed for confidentiality due to property transactions.

EXPERTISE

Conducting and Planning Bird Nest Surveys

Conducting and Planning Bird Point Counts / Identifying Species

Conducting and Planning Ground Water Sampling

Conducting and Planning Surface Water Sampling

Performing EPA Data Validation for Ground Water Samples

Preparing Spill Pollution, Control, and Countermeasure Plans

Conducting and Planning Wetland Delineations

Conducting EPA Method 9 and 22 Visual Emission Inspections

Preparing Storm Water Pollution Prevention Plans

REGISTRATIONS

Professional Engineer

- MO 2019029539

CERTIFICATIONS

40-Hour Wetland Delineation Course, Richard Chinn

10-Hour OSHA Construction Safety (Occupational Safety & Health Administration), OSHA

40-Hour OSHA HAZWOPER, Occupational Safety & Health Administration

MSHA Surface Miner, Mine Safety And Health Administration

First Aid, CPR, & AED, National Safety Council

Portable Nuclear Gauge Safety & US DOT HAZMAT Certification, Troxler Electronic Laboratories, Inc.

Approved Surveyor for Black Rails, US Fish & Wildlife Service



Tommy J. Goodwin JR, P.E.

Project Consultant

Data Validation for Laboratory Analytics, Various, Various States in the USA*

Role: Engineer

Performed Levels 2-4 data validation following EPA guidelines for organic, inorganic, and radioactive analytical results from various labs and for multiple states.

SWPPP Reports, Holcim Ste. Genevieve Cement Plant, Holcim Ste. Genevieve Cement Plant

Role: Engineer

Performed site visits and prepared SWPPP reports for facility expansion projects at the Ste. Genevieve, MO LaFarge/Holcim facility.

SPCC Plan Updates, Enbridge, Enbridge*

Role: Engineer

Performed site visits and SPCC plan updates for multiple compressor stations in Arkansas, Missouri, Illinois, Indiana, and Ohio.

SWPPP Reports, Specialty Granules LLC, SGI LLC*

Role: Engineer

Performed site visits and prepared SWPPP reports for facility expansion projects at the Annapolis, MO SGI facility.

SPCC Plans, Targa, Targa*

Role: Engineer

Prepared new and updated existing SPCC plans for multiple Targa oil and gas facilities in Texas, Louisiana, and North Dakota.

** Work performed prior to joining CEC*

PROFESSIONAL AFFILIATIONS

Association of Environmental and Engineering Geologists

Missouri Birding Society / Audubon Society of Missouri

National Audubon Society

Webster Groves Nature Studies Society

Society of Wetland Scientists

PUBLICATIONS

Goodwin, T J. "Phytoforensics Tools: The degradation and detection of chlorinated solvents in integrated systems." Masters Theses. 2016

Beth Eckley, P.E.
Principal



21 YEARS OF EXPERIENCE

EDUCATION

B.S., Civil and Environmental Engineering,
Southern Illinois University-Carbondale, 2002

PROJECT EXPERIENCE

Due Diligence

Due Diligence with Environmental Compliance

Role: Manager, Associate

Conducted and assisted with environmental due diligence assessments including limited compliance reviews of facilities located throughout the United States. The wide range of operations assessed include: automotive parts manufacturer, floral assembly and manufacturer, image-guided medical device manufacturer, commercial properties, sterilization facility, botanical herb production, chemical truck terminal and maintenance facilities, flow meter manufacturing and assembly facilities, distribution warehouses, pet food and home and garden product manufacturer, sulfuric acid research and development facility, landfill gas to energy plant, multi-tenant office buildings, gas station and convenience stores, supermarkets, silica processing and mine, crane rental facility, die cast manufacturer, medical facilities, ethanol manufacturing facility, and chemical management services facility. The purpose of these reports was to identify environmental concerns that could result in potentially significant liabilities, identify areas of noncompliance with current and future applicable environmental regulations, estimate the present value of identified environmental liabilities and make recommendations on ways to reduce such liabilities.

Environmental Compliance

Multi-Media Environmental Compliance Assistance, Portable Gas Detection Manufacturer, Lincolnshire, IL*

Role: Senior Manager

Provided annual multi-media environmental compliance support including air, EPCRA (Tier II, TRI) and waste. Routine assistance included the preparation and submission of annual air emissions reports, development and maintaining a monthly air emissions recordkeeping spreadsheet, Tier II and TRI chemical inventory reports and annual state waste reporting. Other projects included air construction permit applications and air permit operating permit renewals for a synthetic minor source.

Environmental Compliance Auditing and Assistance, Fortune 200 multi-national company, Europe, Asia and Latin America*

Role: Senior Manager

Managed a variety of services for a Fortune 200 multi-national company to assist its corporate and plant staffs to attain and maintain compliance with applicable environmental regulations primarily throughout Europe, Asia and Latin America. These services include: • Conducting environmental compliance assessments of select facilities (approx. 10-20 per year): • Identification and preparation of "good

EXPERTISE

Due Diligence

EPCRA (Tier II, TRI) Compliance and Reporting

Spill Prevention Control and Countermeasure (SPCC) Plan

Stormwater Permitting/Stormwater Pollution Prevention Plan (SWPPP)

Air Permitting and Compliance

Environmental Compliance Auditing

Environmental Permit Transfers

REGISTRATIONS

Professional Engineer

- MO 2008019538
- KY 33071
- IL 062069373

CERTIFICATIONS

40-Hour Hazardous Waste Operators and Emergency Response (129 CFR 1910.120)



Beth Eckley, P.E.

Principal

environmental management practices” which provide a corporate baseline for environmental compliance, regardless of local regulations; • Preparation of regulatory documents as required to assist plant personnel; • Preparation and presentation of annual environmental webinars for all facilities in Europe, China, and India. These services and deliverables have been provided in a uniform, consistent high quality timely manner as a result of a project management system which utilizes a single senior point-of-contact, a minimum number of key regional managers, and a written procedures manual based on the client's specific requirements. Manage domestic and international environmental due diligence for various manufacturing facilities. In addition, management of environmental compliance auditing efforts for existing manufacturing facilities in the Americas, China, Latin America, Europe and Asia.

Permit Transfers, Various Manufacturing Companies

Role: Senior Manager

Assisted in environmental permit transfers for numerous adhesive, plastic and metal manufacturing facilities, plywood manufacturing facilities and paperboard manufacturing facilities throughout the United States. Projects included coordination with legal personnel and regulatory officials to transition various air, water, waste, wastewater and transportation permits between companies.

Air Permitting

Routine Air Reporting Assistance, Various Manufacturing Facilities

Role: Senior Manager

Prepared annual emission reports and annual air permit compliance certifications for facilities in Illinois, Iowa, Kentucky, Missouri, Texas, Tennessee and Wisconsin covering a broad range of industrial sectors including die casting, pharmaceutical, paper and web coating, research centers, gypsum wallboard manufacturing, auto body part manufacturing, food flavoring, foundry operations and secondary aluminum operations. Projects involved identifying emission sources, determination of emission factors, emission calculations and submittal of final report package.

Air Permit Assistance, Various Manufacturing Facilities

Role: Senior Manager

Prepared air construction and operating permit applications and renewals for true minor sources, synthetic minor sources and Title V sources establishments engaged in manufacturing of metal cans, printing inks, gypsum wallboard facilities, corrugated cardboard boxes, aerospace, pharmaceutical, metal sheets, food flavoring. Projects included in depth understanding of new and existing processes, individual state requirements, development of emission factors and calculations, proposing emission limitations that would optimize plant operations, submittal of final permit provisions.

Railcar Maintenance and Cleaning , GA, TX*

Role: Senior Manager

Prepared air construction and operating permit renewals for synthetic minor sources and Title V sources. Projects included in depth understanding of new and existing processes, individual state requirements, development of emission factors, development of facility-wide and project specific emission calculations, proposing emission limitations that would optimize plant operations, and submittal of final permit provisions.

EPCRA

Routine EPCRA (Tier II and TRI) Chemical Inventory Reporting, Various Manufacturing Facilities*

Role: Senior Manager

Prepared and assisted with the preparation of over 200 routine Tier II and TRI reports in the following industries: - Adhesive/Sealant manufacturing; - Fluid and metering pump manufacturing; - Aerospace metal working and fabrication; - Paper and web coating; - Die Casting; - Tractor Trailer manufacturing; - Metal foundries; and - General metal machining and manufacturing. Routine reporting involved comprehensive understanding of material usage and process descriptions. Tier II reporting included the preparation of chemical inventories, Safety Data Sheet hazard evaluations, and preparation of state and local Tier II reports in over 20 states. TRI reporting included the preparation of detailed TRI threshold determinations and release calculations and the preparation and submission of all applicable Form R/A reports.

Corporate Tier II Training , Food and Beverage Container Manufacturer*

Role: Senior Manager

Beth Eckley, P.E.

Principal

Developed state specific Tier II training material for a food and beverage container manufacturer. The purpose of the training material was to be implemented by the corporate level and presented to all manufacturing facilities to educate facility personnel on the purpose of Tier II reporting, provide guidance on the process of developing a chemical inventory, assessing chemical hazards, determining if Tier II reporting is required, and preparing and submitting Tier II reports including any state specific requirements of reporting thresholds.

SPCC

SPCC Plan Preparation and Certification, Various Manufacturing Facilities*

Role: Senior Manager

Prepared SPCC plans for a variety of industrial facilities. Projects involved comprehensive understanding of oil material storage, usage and process descriptions, applicability threshold determinations, spill response procedures and application of the oil prevention pollution regulations to individual facilities. Industrial facility types include: communication services provider/data centers, food manufacturing, aluminum smelting, automotive component manufacturing, agricultural research, hydraulic component manufacturing, filter manufacturing, metal container manufacturing for the food and beverage industry.

Corporate SPCC Training, Communication Services Provider, Various locations throughout the US*

Role: Senior Manager

Developed corporate SPCC training material to be incorporated into the companies mandatory training program for new hires and annual refresher training. The training material included regulatory background information on 40 CFR 112 as well as facility specific spill prevention, control and countermeasures along with local personnel and agency contact information.

Stormwater

Stormwater Permitting and Compliance, Various Manufacturing Facilities*

Role: Senior Manager

Prepared Notice of Intents (NOIs) and SWPPPs for facilities conducting automotive industry component manufacturing, paperboard manufacturing, liquid smoke manufacturing, plastic injection molding, hydraulic component manufacturing, filter manufacturing, metal container manufacturing for the food and beverage industry.

Site Specific National Pollutant Discharge Elimination System (NPDES) Permitting , KY, IL*

Role: Senior Manager

Composed a site specific NPDES permit application for facilities located in Kentucky and Illinois covering industrial sectors that included mining or quarrying, processing crushed and broken limestone and chemical manufacturing.

** Work performed prior to joining CEC*

TRAINING

ASTM - Phase I Environmental Site Assessment Standards for Commercial Real Estate (ASTM E1527-21)

WATERS DELINEATION REPORT
MILLCREEK BESS PROJECT
SILEX, LINCOLN COUNTY, MISSOURI

Prepared For:

AMEREN MISSOURI
1901 CHOUTEAU AVENUE
ST. LOUIS, MO 63166

Prepared By:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
ST. LOUIS, MO

CEC Project 354-818

JULY 2026

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TABLES

Table 1 Wetlands Delineated
 Table 2 Streams Delineated
 Table 3 Open Waters Delineated

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Figure 1 Site Location Map
 Figure 2 Environmental Data Review Map
 Figure 3 Waters Delineation Map
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APPENDICES

Appendix A Soils Information
 Appendix B Photographic Summary
 Appendix C Wetland Determination Data Sheets
 Appendix D Antecedent Precipitation Tool Analysis

1.0 INTRODUCTION

Civil & Environmental Consultants, Inc. (CEC) conducted a waters delineation for Ameren Missouri's (Ameren's) Millcreek battery energy storage system (BESS) project located in Silex, Lincoln County, Missouri (39.1664, -90.9812; Figure 1). This report includes the findings of a desktop data review and field delineation of current site conditions. The purpose was to identify, characterize, and delineate wetlands, streams, and other waters located within the approximate 328-acre area of interest (AOI). This report presents the methodology and findings.

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill material into waters of the United States (WOTUS) under Section 404 of the federal Clean Water Act (CWA), and the placement of structures in or over navigable waters under Sections 9 and 10 of the Rivers and Harbors Act of 1899. Navigable waters are those waters subject to the ebb and flow of the tide shoreward to the mean high-water mark and/or are presently used, or have been used in the past, or may be susceptible to use in interstate or foreign commerce, as defined in 33 Code of Federal Regulations (CFR) 329.4. Federally jurisdictional WOTUS are defined in 33 CFR Part 328 as traditional navigable waters, their relatively permanent tributaries, adjacent (abutting or indistinguishable) wetlands with a continuous surface connection to jurisdictional waters, and certain other waterbodies (lakes, ponds, impoundments, and captured streams) if not isolated or otherwise categorically excluded. Wetlands, streams, and other waters that meet the guidelines contained in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), referred to hereafter as Corps Manual, applicable Regional Supplement to the Corps Manual, and/or exhibit ordinary high-water marks (OHWM) might be subject to regulation by USACE as WOTUS as defined by 33 CFR 328.3(a).

This report is intended to document potentially jurisdictional waters using regulatory guidelines. The status and extent of waters is subject to jurisdictional determination by the USACE and state agencies. Under the current federal operative WOTUS rules (2023 Conforming Rule amended for *Sackett v. Environmental Protection Agency* (USEPA) 598 U.S. 651 and *Rapanos v. U.S.* 547 U.S. 715 and the Pre-2015 Regulatory Regime) and the March 24, 2025 joint USACE/USEPA memo *WOTUS Notice: The Final Response to SCOTUS*, ephemeral streams may not be considered WOTUS since they may not be Relatively Permanent Waterbodies (RPWs). The relatively permanent standard is flowing or standing water year-round or continuously during certain times of year. "Certain times of the year" is intended to include extended periods (typically at least 3 months) of standing or continuously flowing water occurring in the same geographic feature year after year, except in times of drought. RPWs do not include tributaries with flowing or standing water for only a short duration in direct response to precipitation. No minimum flow duration for RPWs has been established because flow duration qualifying as "continuously during certain times

of year” varies extensively by regional climate. The flow regimes ascribed to the delineated streams is a preliminary opinion based on channel conditions at the time of the field delineation and may require supplemental data for jurisdictional determination purposes. Similarly, isolated streams or wetlands that lack a continuous surface connection to RPWs and Traditional Navigable Waters (TNWs) may also not qualify as WOTUS, but downstream connectivity of the delineated waters may require further investigation to sufficiently determine jurisdictional status according to the continuous surface connection test.

2.0 METHODOLOGY

2.1 ENVIRONMENTAL DATA REVIEW

Prior to the field delineation, the following data sources were consulted to aid in the identification of potential wetlands, streams, and other waters within the AOI:

- U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps;
- U.S. Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS) Soil Survey Geographic (SSURGO) Database;
- Federal Emergency Management Agency (FEMA) flood hazard data;
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI);
- USGS 3D Hydrography Program (3DHP);
- Aerial imagery from various sources; and
- Antecedent Precipitation Tool (APT)

These publicly available data sources aided in overall habitat characterizations and facilitated potential water resource identification within the AOI; topographic depressions, mapped hydric soils, mapped NWI and 3DHP features, and FEMA floodplains have higher potential to contain wetlands, streams, and other surface water features.

2.2 FIELD METHODS

CEC performed a waters delineation to identify and delineate wetlands, streams, and other waters within the AOI. The following sections outline the field methods used to delineate these waters.

2.2.1 Wetland Delineation

CEC ecologists identified, characterized, and delineated wetlands in accordance with the routine, on-site determination methodology described in the Corps Manual, supplemented by the following technical guidance documents:

- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (USACE 2010); (referred to hereafter as Regional Supplement);
- *National Wetland Plant List* (USACE 2022); and

- *Field Indicators of Hydric Soils in the United States Version 9.2* (USDA-NRCS 2025).

CEC ecologists walked the AOI and collected data at representative locations within each plant community cover type and areas with potential water features characteristics (e.g. localized depressions, converging slopes, evident hydrology, etc.). Data collected at each sampling point were recorded on USACE Wetland Determination Data Sheets. The sampling plan was modified as necessary if additional plant community cover types or potential water features characteristics were encountered.

At each sampling point, the following parameters were assessed: vegetation, soils, and hydrology. First, visual estimates of percent absolute cover of plant species were recorded for each of the following strata, when present: tree, sapling/shrub, herb, and woody vine. A determination of whether the plant community was dominated by hydrophytic (wetland) plants was then made using the Rapid Test or Dominance Test indicators. Next, soils were sampled to determine if soils met hydric soil indicators. Lastly, wetland hydrology indicators (e.g., surface water, high water table, saturation, etc.) were recorded, if present. If a parameter was determined to be significantly disturbed or naturally problematic, procedures described in the Corps Manual and Regional Supplement for atypical and problematic situations were applied.

The sampling point data were used to determine whether respective points were located in a wetland or non-wetland (i.e. upland). If a wetland was identified, further sampling was performed to delineate the wetland/non-wetland boundary. Each wetland was also classified according to the NWI classification system developed by the Federal Geographic Data Committee (2013) and Cowardin et al. (1979).

- **Palustrine emergent wetland (PEM):** rooted herbaceous and grass like plants which stand erect above the water or ground surface characterize this wetland class (excluding mosses or lichens). Vegetation is present for most of the growing season in most years. Emergent wetlands include marshes, meadows, and fens.
- **Palustrine scrub-shrub wetland (PSS):** woody vegetation less than 20 feet tall dominate this wetland class. Plant species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions. Scrub-shrub wetlands include shrub swamps and bogs.
- **Palustrine forested wetland (PFO):** woody vegetation 20 feet or taller dominate this wetland class. Forested wetlands generally include an overstory of trees, an understory of young trees and shrubs, and an herbaceous layer.

- **Palustrine unconsolidated bottom (PUB):** nontidal wetland lacking vegetation but is less than 8 hectare (20 acres) in size with a water depth in the deepest part of basin less than 2.5 meters (8.2 feet) at low water. Includes all wetlands and deepwater habitats with at least 25 percent cover of particles smaller than stones (less than 6-7 centimeter), and a vegetative cover less than 30 percent.

If more than one Cowardin classification type was identified within a wetland, the boundary between the types was delineated. Wetland boundaries were recorded using a mapping-grade handheld Global Navigational Satellite System (GNSS) receiver capable of sub-meter accuracy.

Upland habitats were also recorded on USACE Wetland Determination Data Sheets. Upland sampling points were documented adjacent to wetland delineation boundaries, as well as at representative upland habitats throughout the AOI.

2.2.2 Stream and Other Waters Delineation

Concurrent with the wetland delineation, CEC ecologists walked the AOI to identify streams and other waters. These waters were evaluated for the presence of an OHWM in accordance with USACE Regulatory Guidance Letter (RGL) No. 05-05: Ordinary High Water Mark Identification (USACE 2005), USACE *National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams* (USACE 2025), and definitions under 33 CFR 328. As described in these OHWM guidance materials and 33 CFR 328.3(c)(4), an OHWM is established by a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. Potential jurisdiction limits are delineated using OHWM indicators as weight of evidence including geomorphic indicators (e.g. breaks in slope and channel morphology), transition of vegetation types, changes in sediment type, and other indicators demarcating the regular high flow surface water elevation (e.g. observed flow event, wrack, leaf litter disturbed or washed away, or water staining). The uppermost limit of an ephemeral stream was established where the stream loses its defined bed and bank or OHWM.

For streams, physical and biological data were used to infer the stream's hydrologic flow regime, using a weight-of-evidence approach. CEC used field indicators such as flow, substrate composition, presence of defined bed and bank, origin of hydrologic sources, presence/absence of vegetation within the stream channel, and presence/absence of benthic macroinvertebrates, fish, and other aquatic biota to classify onsite stream segments into one of three stream types:

- **Ephemeral:** surface water flows or pools only in direct response to precipitation (e.g., rain or snow fall);
- **Intermittent:** surface water flows continuously during certain times of the year and more than in direct response to precipitation (e.g., seasonally when the groundwater table is elevated or when snowpack melts); and
- **Perennial:** surface water flows continuously year-round during normal rainfall. Ground water provides the primary hydrology.

Stream boundaries were located using a mapping-grade GNSS receiver capable of sub-meter accuracy. The physical characteristics of the streams and field observations were summarized on field data forms.

3.0 RESULTS

3.1 ENVIRONMENTAL DATA REVIEW

The USGS 7.5-minute topographic quadrangle and 3DHP data identified three (3) lakes, eight (8) unnamed streams, and one (1) named stream (Mill Creek) within the AOI (Figures 1 and 2). The NWI data also identified three (3) freshwater ponds and six (6) riverine features within the AOI (Figure 2). The NWI classifies these resources as palustrine, unconsolidated bottom, semipermanently flooded, diked/impounded (PUBFh), palustrine, unconsolidated bottom, intermittently exposed, diked/impounded (PUBGh), riverine, intermittent, streambed, seasonally flooded (R4SBC), and riverine, unknown perennial, unconsolidated bottom, permanently flooded (R5UBH). The FEMA flood hazard data identified a 100-year floodplain associated with Mill Creek located along the southwest boundary of the AOI. The SSURGO data identified four (4) hydric soil map units and six (6) non-hydric soil map units within the AOI (Appendix A and Figure 2).

3.2 FIELD RESULTS

CEC staff conducted a field delineation on December 8, 15, 16, 17, and 22, 2025, to identify, delineate, and classify wetlands, streams, and other waters within the AOI. The AOI consisted of agricultural fields, forested slopes, open water features (ponds/lakes) and open fields. In total, two (2) wetlands, fourteen (14) streams, and two (2) open waters were identified within the AOI (Figure 3 and Figure 4). A photographic summary is included in Appendix B. Wetland Determination Data Sheets are provided in Appendices C.

CEC ran the Antecedent Precipitation Tool (APT) to assess the climatic conditions at the time of the field delineation. The APT compares antecedent or recent rainfall conditions for this location versus the range of normal rainfall conditions that occurred during the preceding 30 years. The APT tool evaluates normal precipitation conditions, assesses the presence of drought conditions, and the approximate dates of wet and dry seasons for a given location. The APT analysis indicated wetter than normal conditions were present at the time of the field delineation. However, the Palmer Drought Severity Index (PDSI) indicated mild drought at the time of the field delineation. The results of the APT analysis are included in Appendix D.

3.2.1 Wetland Delineation

Two (2) PEM wetlands were identified within the AOI. These wetlands were isolated and resulted from old stock ponds. In addition to two (2) sampling points taken within wetlands, five (5) sampling points were taken to document upland habitats within the AOI. Refer to Table 1 for a summary of the wetlands identified within the AOI.

CEC's opinion of jurisdictional status is summarized in Table 1 below.

Table 1 Wetlands Delineated

Wetland ID	Acreage by Cowardin Classification ¹			Total Acreage ¹	Sampling Point(s)	CEC's Opinion of Jurisdictional Status ^{2,3}
	PEM	PSS	PFO			
Wetland 17	0.10	-	-	0.10	SP-31	Non-WOTUS/ Not Jurisdictional
Wetland 18	0.18	-	-	0.18	SP-29	Non-WOTUS/ Not Jurisdictional
Total	0.28	-		0.28		

¹ Acreage includes wetland area within area of interest only

² Based on CEC's interpretation of the Sackett v. U.S. Environmental Protection Agency (No. 21-454) court decision issued May 2023 and the "Revised Definition of 'Waters of the United States'; Conforming" published in the Federal Register and became effective on September 8, 2023, or the Pre-2015 Regulatory Regime as applicable.

³ Waters of the United States (WOTUS)

3.2.2 Stream and Other Waters Delineation

Of the fourteen (14) streams that were identified, eleven (11) included ephemeral stream reaches, and six (6) included intermittent stream reaches (note that several streams consisted of more than one flow regime). The streams identified include Mill Creek, and its unnamed tributaries. These streams are located within the Cuivre River and Mississippi River basins. Refer to Table 2 for a summary of the streams identified within the AOI.

In instances where an ephemeral stream a) transitions to an intermittent or perennial stream within the same hierarchal stream order, and b) where the intermittent or perennial stream is the predominant stream type within that order, the relatively permanent standard is applied universally to all stream segments within that order. Therefore, according to standard USACE practice, if the majority of a stream order is composed of intermittent and/or perennial segments, then the ephemeral portion of that order is also considered an RPW.

The streams within the AOI have narrow, or predominantly narrow, riparian corridors. They are surrounded by active agricultural fields and cattle pasture. This historical and current activity has impacted the hydrology of the watershed.

Ephemeral streams within the AOI shared similar characteristics including somewhat vegetated channels, leaf litter, silt-sand-clay substrates, and no water present or flowing at the time of the delineation. There is one (1) ephemeral reaches that transition into an intermittent reach that would be classified as RPW. The remaining twelve (12) ephemeral reaches would be classified as non-RPWs.

CEC's opinion of jurisdictional status is summarized in Table 2 below.

Table 2 Streams Delineated

Stream ID	Stream Order	Length (LF) by Stream Classification ^{1,3}			Total Length (LF) ²	Average Ordinary High Water Mark (OHWM) Width (LF) ⁴	CEC's Opinion of Jurisdictional Status ^{4,5}
		EPH	INT	PER			
Stream 19D	2nd/3rd	-	3,954	-	3,954	6	WOTUS/ Jurisdictional Predominant flow regime of 2nd order reach is INT, transitioning to 3rd order PER, and continuing outside of the AOI. Therefore, entire 2nd and 3rd order reaches are considered jurisdictional RPWs.
Stream 25B	1st	-	2,166	-	2,166	5	WOTUS/ Jurisdictional
Stream 26A (above Stream 27 confluence)	1st	1,899	-	-	1,899	3	Non-WOTUS/ Not Jurisdictional
Stream 26A (below Stream 27 confluence)	2nd	492	-	-	492		
Stream 26B (back channel)	2nd	40	--	-	40	3	
Stream 26C	2nd	-	300	-	300	3	
Stream 27	1st	118	-	-	118	2.5	Non-WOTUS/ Not Jurisdictional
Stream 28	1st	1,656	-	-	1,656	2.5	Non-WOTUS/ Not Jurisdictional
Stream 29	1st	366	-	-	366	0.5	Non-WOTUS/ Not Jurisdictional
Stream 30A/Mill Creek	1st	295	-	-	295	3	WOTUS/ Jurisdictional
Stream 30B/Mill Creek (above Stream 37 confluence)	1st	-	2,892	-	2,892	10	Predominant flow regime of 1st order reach is INT. Therefore, entire 1st order reach is considered a jurisdictional RPW.

Stream ID	Stream Order	Length (LF) by Stream Classification ¹ _{2 3}			Total Length (LF) ²	Average Ordinary High Water Mark (OHWM) Width (LF) ²	CEC's Opinion of Jurisdictional Status ^{4,5}
		EPH	INT	PER			
Stream 30B/Mill Creek (below Stream 37 confluence)	2nd	-	569	-	569	10	WOTUS/Jurisdictional Predominant flow regime of 2nd order reach is INT. Therefore, entire 2nd order reach is considered a jurisdictional RPW.
Stream 30C/Mill Creek	2nd	-	106	-	106	10	
Stream 30D/Mill Creek	2nd	-	131	-	131	10	
Stream 30E/Mill Creek	2nd	-	456	-	456	10	
Stream 30F/Mill Creek	3rd	-	587	-	587	8	
Stream 31A	1st	143	-	-	143	2	Non-WOTUS/ Not Jurisdictional
Stream 31B	2nd	-	68	-	68	4	WOTUS/Jurisdictional
Stream 31C	2nd	-	20	-	20	4	
Stream 31D	2nd	-	17	-	17	4	
Stream 31E	2nd	-	26	-	26	4	
Stream 31F	2nd	-	1,043	-	1,043	4	
Stream 32	1st	227	-	-	227	1	Non-WOTUS/ Not Jurisdictional
Stream 33	1st	383	-	-	383	3	Non-WOTUS/ Not Jurisdictional
Stream 34A (back channel)	1st	-	984	-	984	4	WOTUS/Jurisdictional
Stream 34B	1st	-	172	-	172	6	
Stream 35	1st	132	-	-	132	2	Non-WOTUS/ Not Jurisdictional
Stream 36	1st	332	-	-	332	1	Non-WOTUS/ Not Jurisdictional
Stream 37	1st	176	-	-	176	2	Non-WOTUS/ Not Jurisdictional

Stream ID	Stream Order	Length (LF) by Stream Classification ¹ _{2, 3}			Total Length (LF) ²	Average Ordinary High Water Mark (OHWM) Width (LF) ²	CEC's Opinion of Jurisdictional Status ^{4,5}
		EPH	INT	PER			
Total		6,259	13,491	0	19,750		

¹ Linear feet (LF), ephemeral (EPH), intermittent (INT), and perennial (PER)

² Includes the portion of the stream within AOI only.

³ Stream classification based on channel condition and observations at time of field delineation.

⁴ Based on CEC's interpretation of the Sackett v. U.S. Environmental Protection Agency (No. 21-454) court decision issued May 2023 and the "Revised Definition of 'Waters of the United States'; Conforming" published in the Federal Register and became effective on September 8, 2023, or the Pre-2015 Regulatory Regime as applicable.

⁵ Waters of the United States (WOTUS)

Two (2) open waters were identified within the AOI. The open waters appear to have been constructed as stock ponds by area landowners. The open waters are not impoundments of WOTUS, do not have a continuous surface connection with WOTUS, and are not indistinguishable from WOTUS. Therefore, it is CEC's professional opinion that the open waters identified within the AOI would not likely be subject to USACE jurisdiction. Refer to Table 3 for a summary of the open waters identified and delineated within the AOI.

Table 3 Open Waters Delineated

Open Water ID	Acreage by Cowardin Classification ¹	CEC's Opinion of Jurisdictional Status ^{2,3}
	PUB	
Open Water 17	0.16	Non-WOTUS/Not Jurisdictional
Open Water 18	0.58	Non-WOTUS/Not Jurisdictional
Total	0.74	

¹ Acreage includes feature area within survey area only

² Based on CEC's interpretation of the Sackett v. U.S. Environmental Protection Agency (No. 21-454) court decision issued May 2023 and the "Revised Definition of 'Waters of the United States'; Conforming" published in the Federal Register and became effective on September 8, 2023, or the Pre-2015 Regulatory Regime as applicable.

³ Waters of the United States (WOTUS)

Sixteen (16) erosional features were also observed during the field delineation. These features did not have defined bed and banks, OHWMs, or other salient characteristics of streams; and did not appear to have groundwater input. These features appear to only convey flow in direct response to precipitation events. Therefore, in CEC's professional opinion, these features would not be subject to USACE jurisdiction.

4.0 CONCLUSIONS

CEC conducted a waters delineation within the AOI on December 8, 15, 16, 17, and 22, 2025. CEC identified the following within the AOI:

- Two (2) wetlands, totaling approximately 0.28 acres.
- Fourteen (14) streams (29 stream reaches), totaling approximately 19,750 LF; and
- Two (2) open waters, totaling approximately 0.74 acres.

It is CEC's opinion that the following features are jurisdictional:

- | | |
|------------------|------------------|
| • Stream 19D | • Stream 31B-31F |
| • Stream 25B | • Stream 34A-34B |
| • Stream 30A-30F | |

These features would likely be considered WOTUS and impacts to these features would be subject to USACE jurisdiction and CWA Section 404 permitting requirements.

It is CEC's opinion that the following features are not jurisdictional:

- | | |
|------------------|--------------|
| • Wetland 17 | • Stream 29 |
| • Wetland 18 | • Stream 31A |
| • Open Water 17 | • Stream 32 |
| • Open Water 18 | • Stream 33 |
| • Stream 26A-26C | • Stream 35 |
| • Stream 27 | • Stream 36 |
| • Stream 28 | • Stream 37 |

These features would likely be considered non-WOTUS and not subject to USACE jurisdiction. However, only the USACE has the authority to determine jurisdictional status of the identified features.

Ditches, erosional gullies, and/or vegetated swales were observed that did not exhibit defined bed and banks, OHWMs, or other salient characteristics of jurisdictional waters. These features appear to be non-jurisdictional features that meet the federal WOTUS exclusions listed under 33 CFR Part 328 (b) as either ditches excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water; and/or swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

5.0 REGULATORY CONSIDERATIONS

The USACE has authority to permit the discharge of dredged or fill material into WOTUS under Section 404 of the federal Clean Water Act, and to permit work and the placement of structures in navigable waters under Sections 9 and 10 of the Rivers and Harbors Act of 1899. Wetlands, streams, and other waters that meet the guidelines contained in the Corps Manual, Regional Supplement, and Regulatory Guidance Letter No. 05-05 are subject to regulation by USACE as WOTUS as defined by 33 CFR 328.3(a), and the currently in effect regulatory definition (SCOTUS 2023).

As a result of ongoing litigation with the January 2023 Revised Definition of 'Waters of the United States' Rule (2023 WOTUS Rule), federal agencies will implement the 2023 WOTUS Rule, as amended by the conforming rule, in 24 states, the District of Columbia, and the U.S. Territories. In the other 26 states (including Missouri) and for certain parties, the agencies are interpreting "WOTUS" consistent with the pre-2015 regulatory regime and the Supreme Court's decision in *Sackett v. Environmental Protection Agency* (May 24, 2023) until further notice.

If CWA Section 404 authorization and/or other federal permits are required for the proposed project, consultation with the USFWS will likely be required pursuant to Section 7 of the Endangered Species Act. Furthermore, consultation with the State Historic Preservation Office may also be required relative to potential effects to resources listed on or eligible for listing on the National Register of Historic Places.

Waters within the AOI were delineated using guidelines set forth by the USACE, which have final regulatory authority on the jurisdiction and extents of wetlands, streams, and other waters.

It is the responsibility of any party that intends to discharge dredge or fill material into WOTUS and/or isolated waters to comply with all applicable regulations.

6.0 LEVEL OF CARE

This waters delineation has been prepared based on the information referenced within this report, interpreted in the light of the investigator's training, experience, and professional judgement in conformance with USACE and other applicable agency guidelines, and with the level of care and skill ordinarily exercised by members of the environmental consulting profession practicing contemporaneously under similar conditions in the locality of the site. The waters boundaries described in this report may change subsequent to CEC's delineation based on changes in the regulatory criteria, seasonal variations in hydrology, alterations to drainage patterns, and other human activities and/or land disturbances.

Report Prepared By:



7/17/2026

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Date



7/17/2026

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Date

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7/17/2026

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Date

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FIGURES

NORTH

WHITE MEMORIAL
STATE WILDLIFE AREAWHITE MEMORIAL
STATE WILDLIFE AREAAREA OF INTEREST (AOI)
(39.1664,-90.9812)

U N I O N

WILLIAM LOGAN
STATE WILDLIFE AREA

Ellis Cem

Wilson Cem

LEGEND

 AREA OF INTEREST (AOI)

SCALE IN FEET

0 2,000 4,000

1. USGS TOPOGRAPHIC MAP / ARCGIS MAP
SERVICE:
ACCESSED 6/23/2026.
AUBURN, MISSOURI QUADRANGLE
PUBLISHED 1985.



ENGINEERING, SURVEYING AND LANDSCAPE ARCHITECTURE IN THE STATE OF NORTH CAROLINA WILL BE PROVIDED BY CEC SURVEYING AND LANDSCAPE ARCHITECTS OF NC, PLLC. SERVICES IN PUERTO RICO WILL BE PROVIDED BY CEC ENGINEERS & CONSULTANTS, LLC. LANDSCAPE ARCHITECTURE SERVICES IN THE STATE OF OHIO WILL BE PROVIDED BY CEC LANDSCAPE ARCHITECTS, LLC.



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MILLCREEK BESS PROJECT
AMEREN
LINCOLN COUNTY, MISSOURI

SITE LOCATION MAP

DRAWN BY:

RRT

CHECKED BY:

LAV

APPROVED BY:

TJR

DATE:

6/22/2026

SCALE:

1" = 2,000'

PROJECT NO:

354-818

FIGURE NO:

Attachment B

*Hand Signature on file



LEGEND

AREA OF INTEREST (AOI)

3DHP FLOWLINE

— RIVER

--- WATERBODY CONNECTOR

3DHP WATERBODY

LAKE

NWI FEATURES

FRESHWATER FORESTED/SHRUB WETLAND

FRESHWATER POND

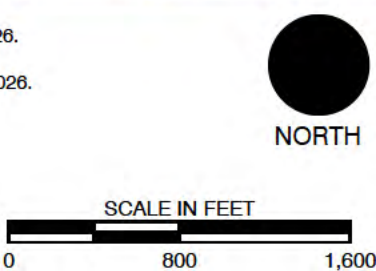
RIVERINE

SOIL MAP UNIT

FLOOD HAZARD AREAS

1% ANNUAL CHANCE FLOOD HAZARD

- REFERENCES**
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE. IMAGERY: 2024. ACCESSED 6/24/2026.
 2. USFWS NATIONAL WETLANDS INVENTORY (NWI) DATA BY STATE, ACCESSED 6/24/2026.
 3. USGS 3D HYDROGRAPHY PROGRAM (3DHP) ACCESSED: 6/24/2026.
 4. FEMA D-FIRM NATIONAL FLOOD HAZARD LAYER ACCESSED 6/24/2026.
 5. USDA, NRCS SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE, ACCESSED 6/24/2026.



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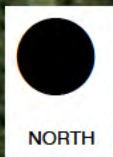
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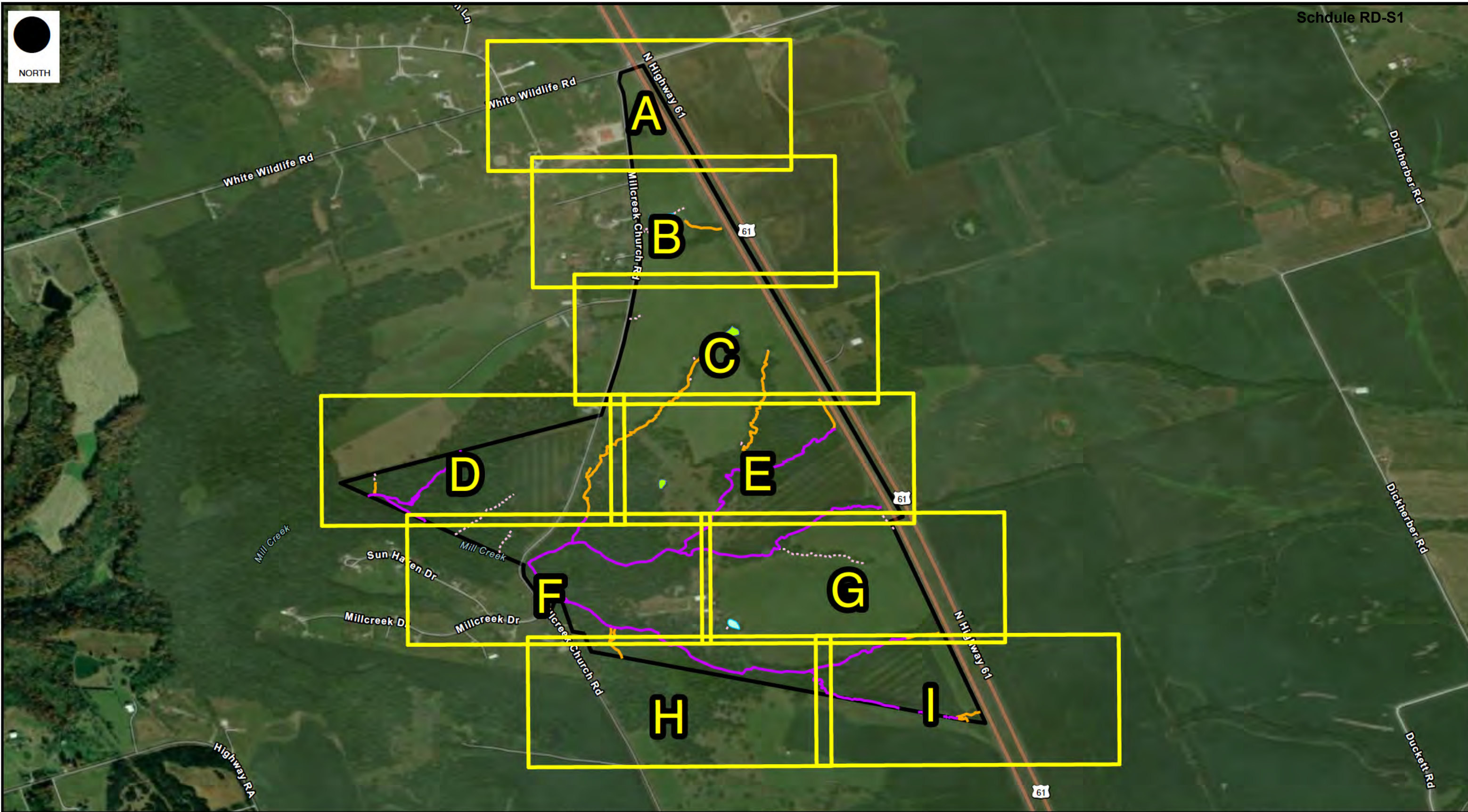
DRAWN BY:	RRT	CHECKED BY:	LAV
DATE:	6/24/2026	SCALE:	1" = 900'

MILLCREEK BESS PROJECT AMEREN LINCOLN COUNTY, MISSOURI	
ENVIRONMENTAL DATA REVIEW MAP	
APPROVED BY:	TJR
PROJECT NO:	354-818
FIGURE NO:	Attachment B

\\cecinc.com\global\Projects\350-000\354-818-GIS\Maps\EC02_AmerenMillcreekREC_Delineation.aprx [354818_EC04_FIG3_WATERS_DELINEATION_OVERVIEW_MAP] 7/2/2026 3:20 PM (vraab

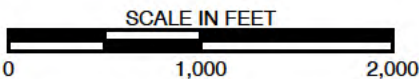


Schedule RD-S1



LEGEND

- | | |
|------------------------|---------------------|
| AREA OF INTEREST (AOI) | UPLAND DRAINAGE |
| MAP INDEX | EPHEMERAL STREAM |
| WETLAND - PEM | INTERMITTENT STREAM |
| OPEN WATER | |



REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE.
IMAGERY DATE: 2024. ACCESSED 7/6/2026.

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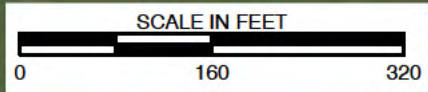
MILLCREEK BESS PROJECT
AMEREN
LINCOLN COUNTY, MISSOURI

WATERS DELINEATION OVERVIEW MAP

DRAWN BY:	TJG	CHECKED BY:	LAV	APPROVED BY:	TJR	FIGURE NO:	Attachment 3 B
DATE:	7/6/2026	SCALE:	1" = 1,000'	PROJECT NO:	354-818		

*Hand Signature on file

\\cecinc.com\global\Projects\350-000\354-818-GIS\Maps\EC02_AmerenMillcreekREC_Delineation.aprx [354818_EC04_FIG3_WATERS_DELINEATION_MAP] 7/6/2026 4:20 PM (vlabel)



Schedule RD-S1

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE.
IMAGERY DATE: 2024. ACCESSED 7/6/2026.



- LEGEND**
-  AREA OF INTEREST (AOI)
 -  PHOTO LOCATION
 -  UPLAND DRAINAGE

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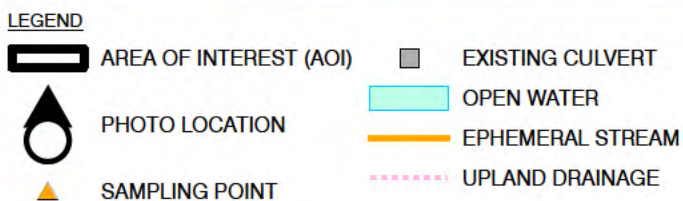
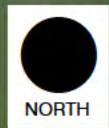
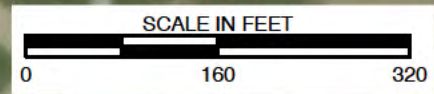
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MILLCREEK BESS PROJECT
AMEREN
LINCOLN COUNTY, MISSOURI

WATERS DELINEATION MAP

DRAWN BY:	TJG	CHECKED BY:	LAV	APPROVED BY:	TJR	FIGURE NO:
DATE:	7/6/2026	SCALE:	1" = 160'	PROJECT NO:	354-818.0002	Attachment 3A

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MILLCREEK BESS PROJECT
AMEREN
LINCOLN COUNTY, MISSOURI

WATERS DELINEATION MAP

DRAWN BY:	TJG	CHECKED BY:	LAV	APPROVED BY:	TJR	FIGURE NO: Attachment B
DATE:	7/6/2026	SCALE:	1" = 160'	PROJECT NO:	354-818.0002	

\\cecinc.com\global\Projects\350-000\354-818\GIS\Maps\EC02_AmerenMillcreekREC_Delineation.aprx [354818_EC04_FIG3_WATERS_DELINEATION_MAP] 7/6/2026 4:20 PM (vlabel)



LEGEND	
	AREA OF INTEREST (AOI)
	PHOTO LOCATION
	SAMPLING POINT
	EXISTING CULVERT
	WETLAND - PEM
	EPHEMERAL STREAM
	UPLAND DRAINAGE

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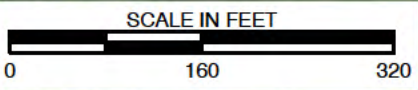
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DRAWN BY:	TJG	CHECKED BY:	LAV
DATE:	7/6/2026	SCALE:	1" = 160'

MILLCREEK BESS PROJECT AMEREN LINCOLN COUNTY, MISSOURI	
WATERS DELINEATION MAP	
APPROVED BY:	TJR
PROJECT NO:	354-818.0002
FIGURE NO:	Attachment 36

*Hand Signature on file

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Schedule RD-31

REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE.
IMAGERY DATE: 2024. ACCESSED 7/6/2026.



- LEGEND**
- | | | | |
|--|------------------------|--|---------------------|
| | AREA OF INTEREST (AOI) | | EPHEMERAL STREAM |
| | PHOTO LOCATION | | INTERMITTENT STREAM |
| | SAMPLING POINT | | UPLAND DRAINAGE |

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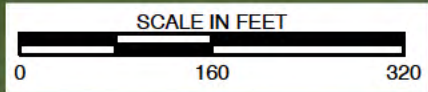
MILLCREEK BESS PROJECT
AMEREN
LINCOLN COUNTY, MISSOURI

WATERS DELINEATION MAP

DRAWN BY:	TJG	CHECKED BY:	LAV	APPROVED BY:	TJR	FIGURE NO:	3D
DATE:	7/6/2026	SCALE:	1" = 160'	PROJECT NO:	354-818.0002	Attachment	

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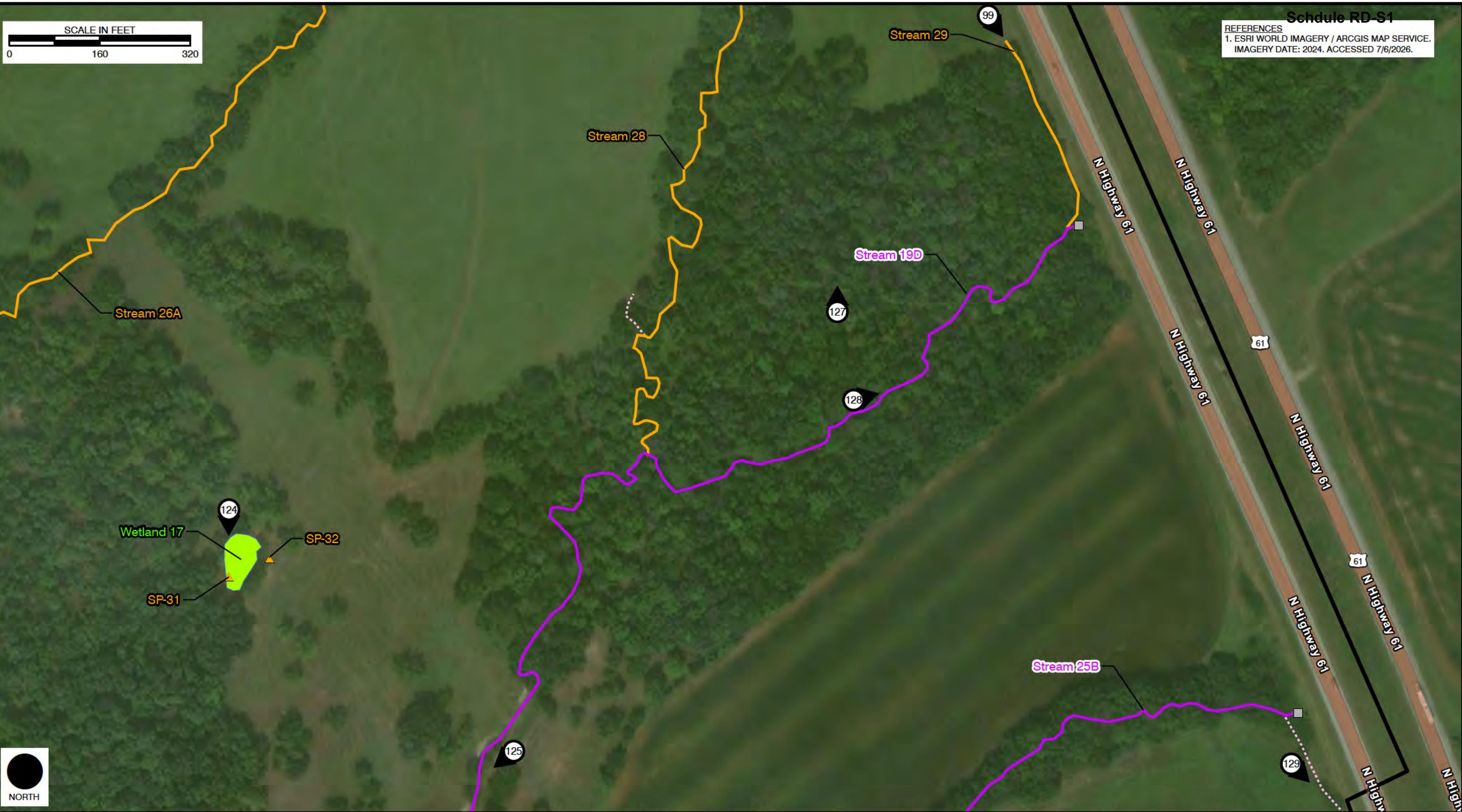
\\cecinc.com\global\Projects\350-000\354-818\GIS\Maps\EC02_AmerenMillcreekREC_Delineation.aprx [354818_EC04_FIG3_WATERS_DELINEATION_MAP] 7/6/2026 4:20 PM (vlabel)



Schedule RD-S1

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE.
IMAGERY DATE: 2024. ACCESSED 7/6/2026.



LEGEND	
	AREA OF INTEREST (AOI)
	PHOTO LOCATION
	SAMPLING POINT
	EXISTING CULVERT
	WETLAND - PEM
	EPHEMERAL STREAM
	INTERMITTENT STREAM
	UPLAND DRAINAGE

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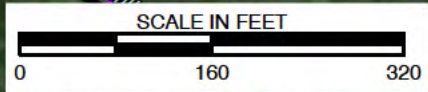
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DRAWN BY:	TJG	CHECKED BY:	LAV
DATE:	7/6/2026	SCALE:	1" = 160'

MILLCREEK BESS PROJECT AMEREN LINCOLN COUNTY, MISSOURI	
WATERS DELINEATION MAP	
APPROVED BY:	TJR
PROJECT NO:	354-818.0002
FIGURE NO:	Attachment 3E

*Hand Signature on file

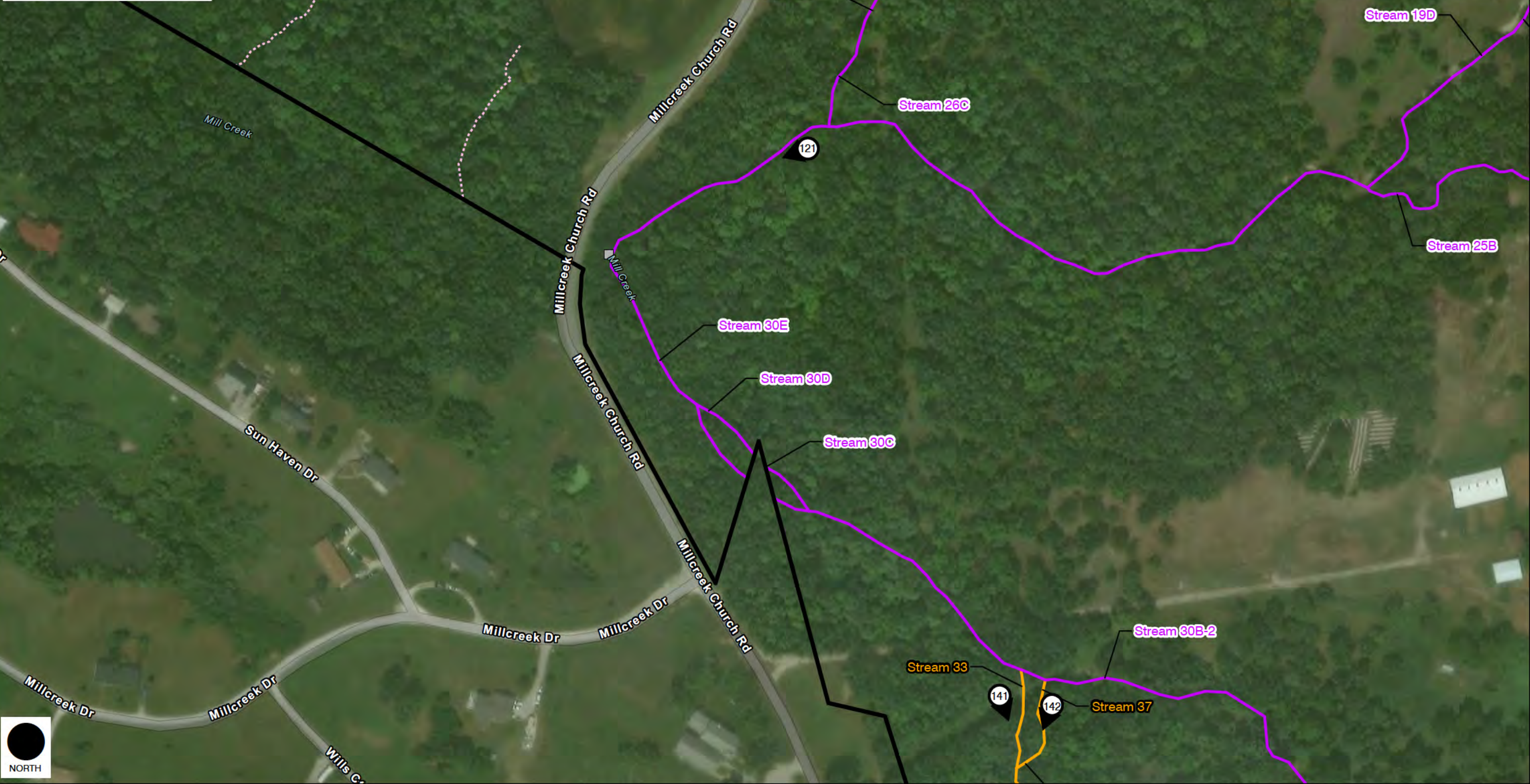
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Schedule RD-S1

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE.
IMAGERY DATE: 2024. ACCESSED 7/6/2026.



LEGEND	
	AREA OF INTEREST (AOI)
	PHOTO LOCATION
	EXISTING CULVERT
	EPHEMERAL STREAM
	INTERMITTENT STREAM
	UPLAND DRAINAGE

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DATE:	7/6/2026	SCALE:	1" = 160'

MILLCREEK BESS PROJECT AMEREN LINCOLN COUNTY, MISSOURI	
WATERS DELINEATION MAP	
APPROVED BY:	TJR
PROJECT NO:	354-818.0002
FIGURE NO:	Attachment 35

*Hand Signature on file

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Schedule RD-S1

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE.
IMAGERY DATE: 2024. ACCESSED 7/6/2026.

Stream 19D

Stream 25B

126

129

N Highway 61

N Highway 61

N Highway 61

N Highway 61

N Highway 61

N Highway 61

145

144

Open Water 17

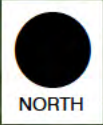
Stream 30B-1

Stream 30A

147

N Highway 61

N Highway 61



LEGEND			
	AREA OF INTEREST (AOI)		EPHEMERAL STREAM
	PHOTO LOCATION		INTERMITTENT STREAM
	OPEN WATER		UPLAND DRAINAGE

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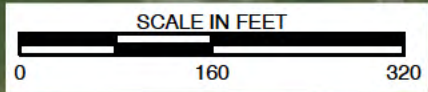
MILLCREEK BESS PROJECT
AMEREN
LINCOLN COUNTY, MISSOURI

WATERS DELINEATION MAP

DRAWN BY:	TJG	CHECKED BY:	LAV	APPROVED BY:	TJR	FIGURE NO:	Attachment 36
DATE:	7/6/2026	SCALE:	1" = 160'	PROJECT NO:	354-818.0002		

*Hand Signature on file

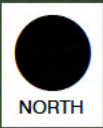
\\cecinc.com\global\Projects\350-000\354-818-GIS\Maps\EC02_AmerenMillcreekREC_Delineation.aprx [354818_EC04_FIG3_WATERS_DELINEATION_MAP] 7/6/2026 4:20 PM (vlabel)



Schedule RD-S1

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE.
IMAGERY DATE: 2024. ACCESSED 7/6/2026.



LEGEND	
	AREA OF INTEREST (AOI)
	EPHEMERAL STREAM
	INTERMITTENT STREAM
	UPLAND DRAINAGE
	PHOTO LOCATION
	SAMPLING POINT

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DATE:	7/6/2026	SCALE:	1" = 160'

MILLCREEK BESS PROJECT AMEREN LINCOLN COUNTY, MISSOURI	
WATERS DELINEATION MAP	
APPROVED BY:	TJR
PROJECT NO:	354-818.0002
FIGURE NO:	Attachment 3b

*Hand Signature on file

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Schedule RD-S1

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE.
IMAGERY DATE: 2024. ACCESSED 7/6/2026.



- LEGEND**
- AREA OF INTEREST (AOI)
 - PHOTO LOCATION
 - EXISTING CULVERT
 - EPHEMERAL STREAM
 - INTERMITTENT STREAM
 - UPLAND DRAINAGE

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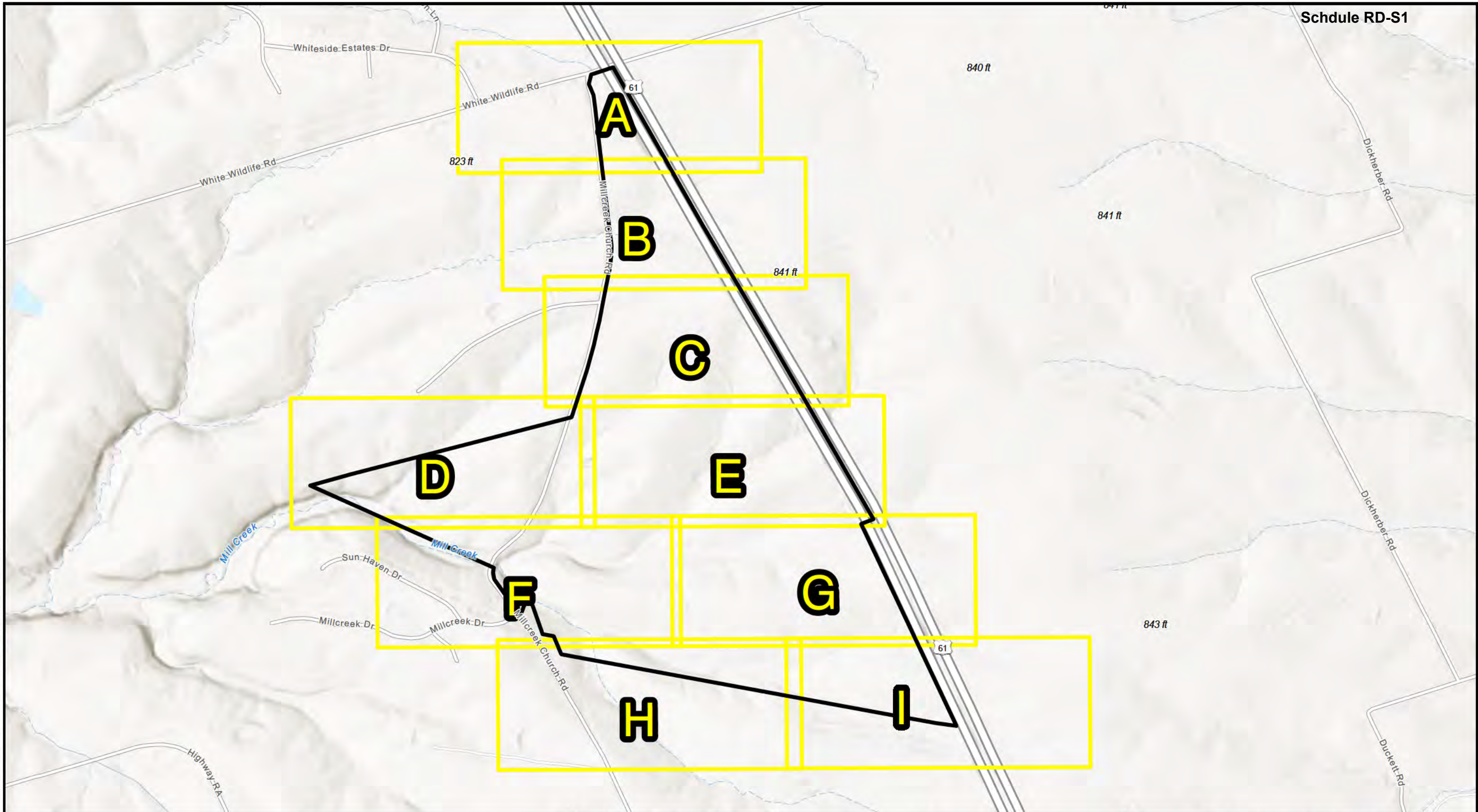
MILLCREEK BESS PROJECT
AMEREN
LINCOLN COUNTY, MISSOURI

WATERS DELINEATION MAP

DRAWN BY:	TJG	CHECKED BY:	LAV	APPROVED BY:	TJR	FIGURE NO:	Attachment 3b
DATE:	7/6/2026	SCALE:	1" = 160'	PROJECT NO:	354-818.0002		

*Hand Signature on file

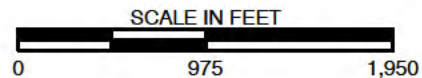
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Schedule RD-S1

LEGEND

- AREA OF INTEREST (AOI)
- MAP INDEX



REFERENCES
1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE.
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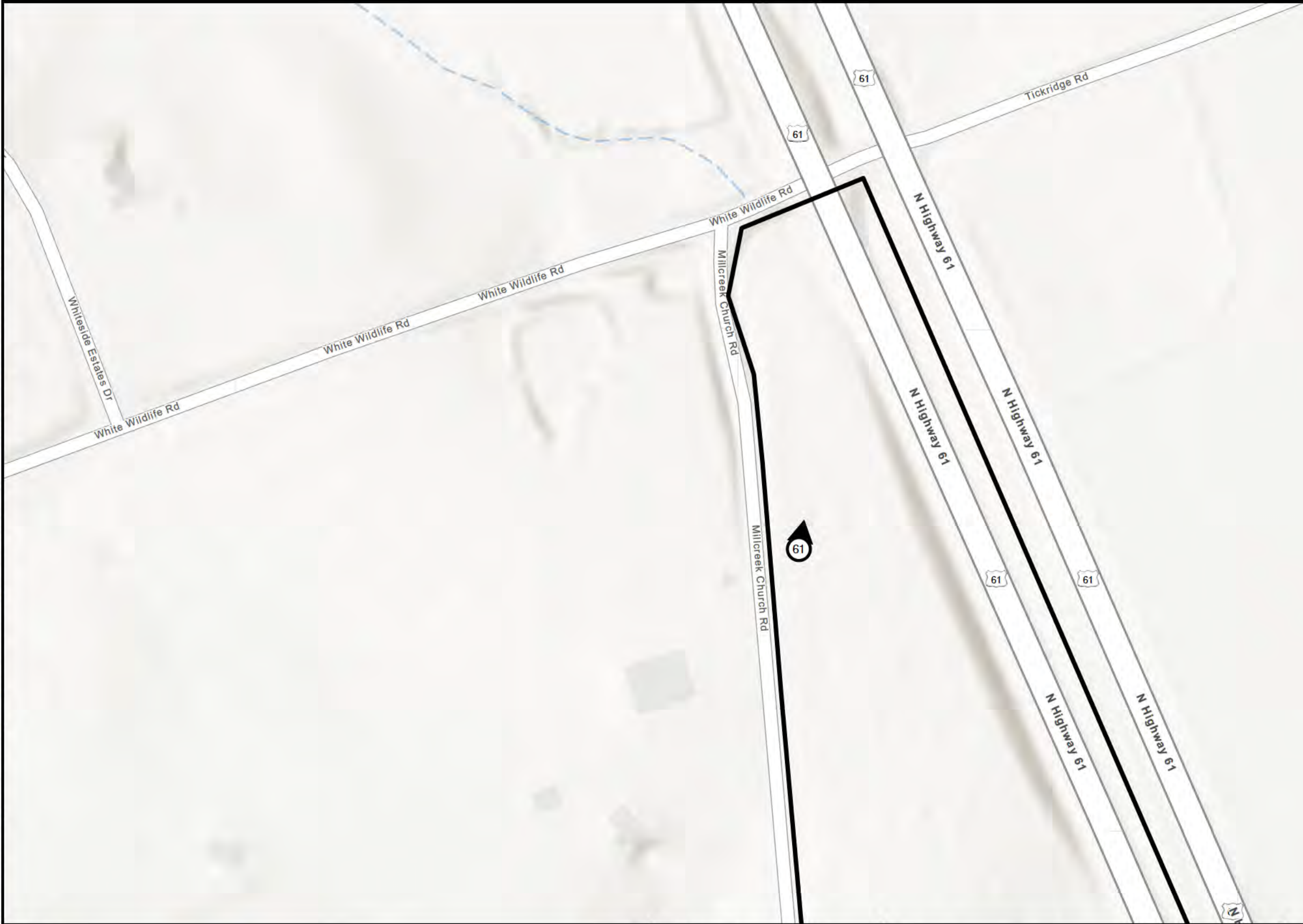
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AMEREN
LINCOLN COUNTY, MISSOURI

TERRAIN OVERVIEW MAP

DRAWN BY:	HDA	CHECKED BY:	LAV	APPROVED BY:	TJR	FIGURE NO:
DATE:	6/24/2026	SCALE:	1" = 1,000'	PROJECT NO:	354-818	Attachment B

*Hand Signature on file



LEGEND

- AREA OF INTEREST (AOI)
- PHOTO LOCATION
- SAMPLING POINT
- EXISTING CULVERT
- WETLAND - PEM
- OPEN WATER
- EPHEMERAL STREAM
- INTERMITTENT STREAM

SCALE IN FEET

0 160 320

REFERENCES

1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE. IMAGERY DATE: 2024. ACCESSED 6/24/2026.

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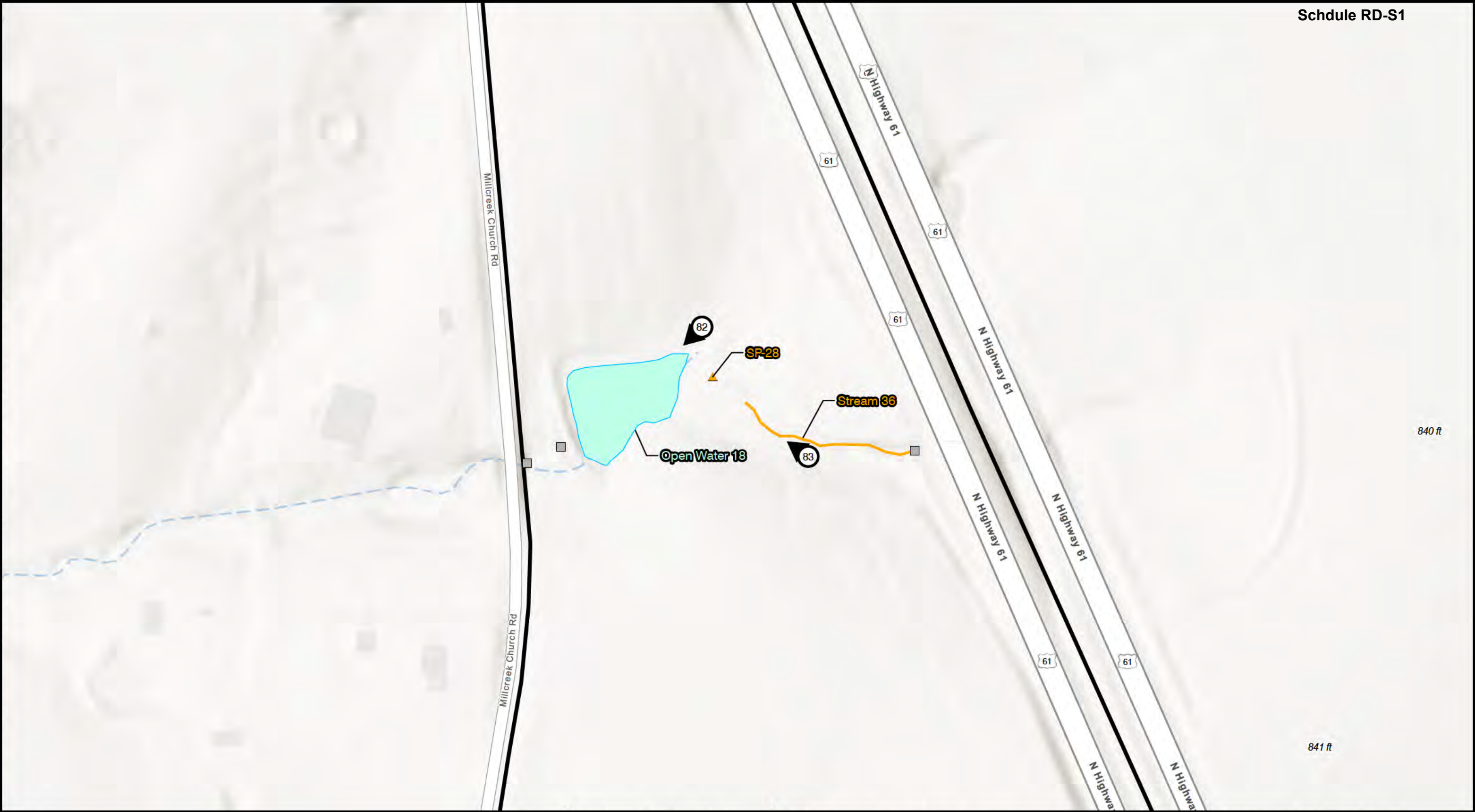
MILLCREEK BESS PROJECT
AMEREN
LINCOLN COUNTY, MISSOURI

TERRAIN MAP

DRAWN BY: RRT	CHECKED BY: LAV	APPROVED BY: TJR	FIGURE NO: Attachment 4A
DATE: 6/24/2026	SCALE: 1" = 160'	PROJECT NO: 354-818	

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LEGEND

	AREA OF INTEREST (AOI)		WETLAND - PEM
	PHOTO LOCATION		OPEN WATER
	SAMPLING POINT		EPHEMERAL STREAM
	EXISTING CULVERT		INTERMITTENT STREAM

SCALE IN FEET

0 160 320

REFERENCES

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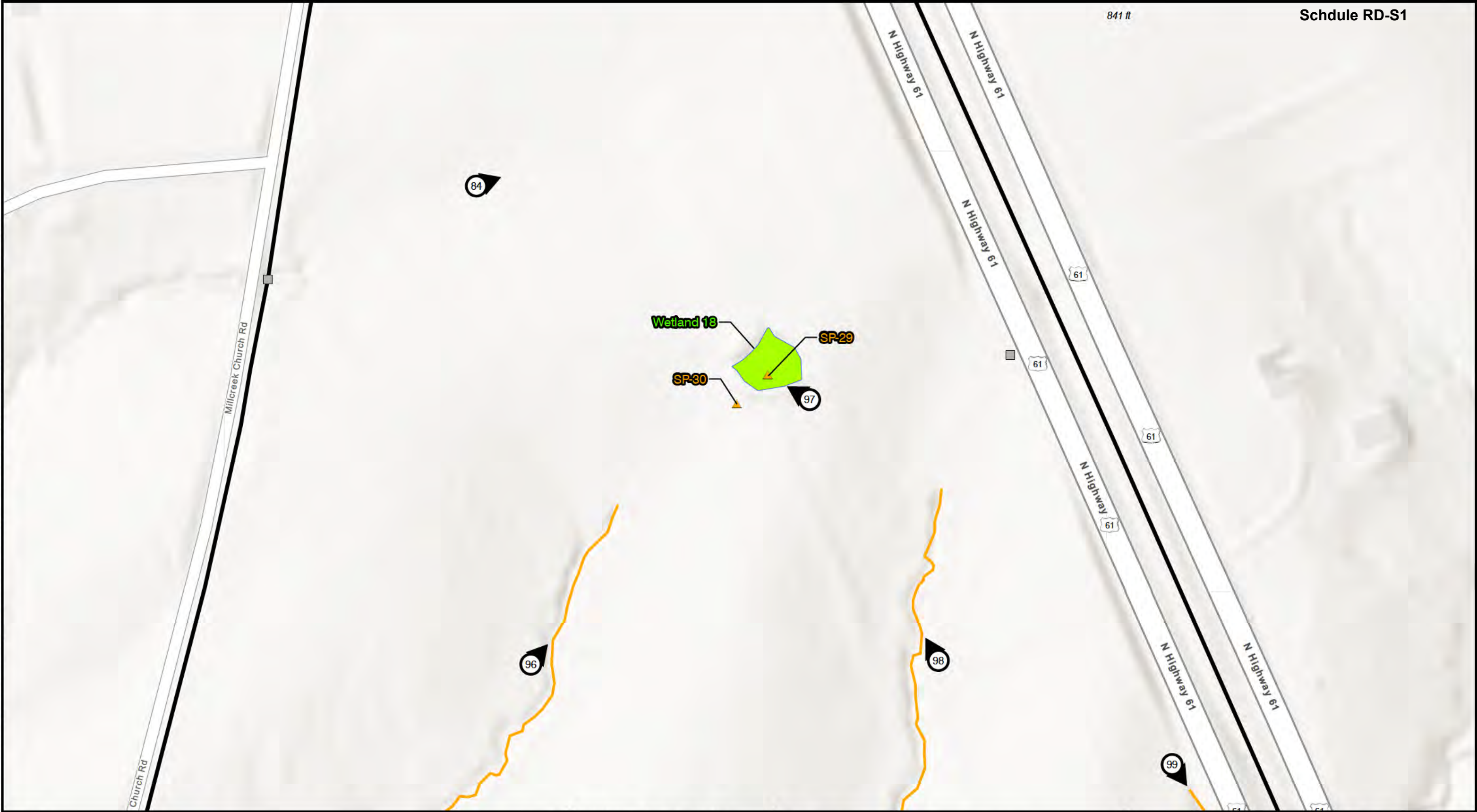
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**MILLCREEK BESS PROJECT
AMEREN
LINCOLN COUNTY, MISSOURI**

TERRAIN MAP

DRAWN BY:	RRT	CHECKED BY:	LAV	APPROVED BY:	TJR	FIGURE NO:	Attachment 4B
DATE:	6/24/2026	SCALE:	1" = 160'	PROJECT NO:	354-818		

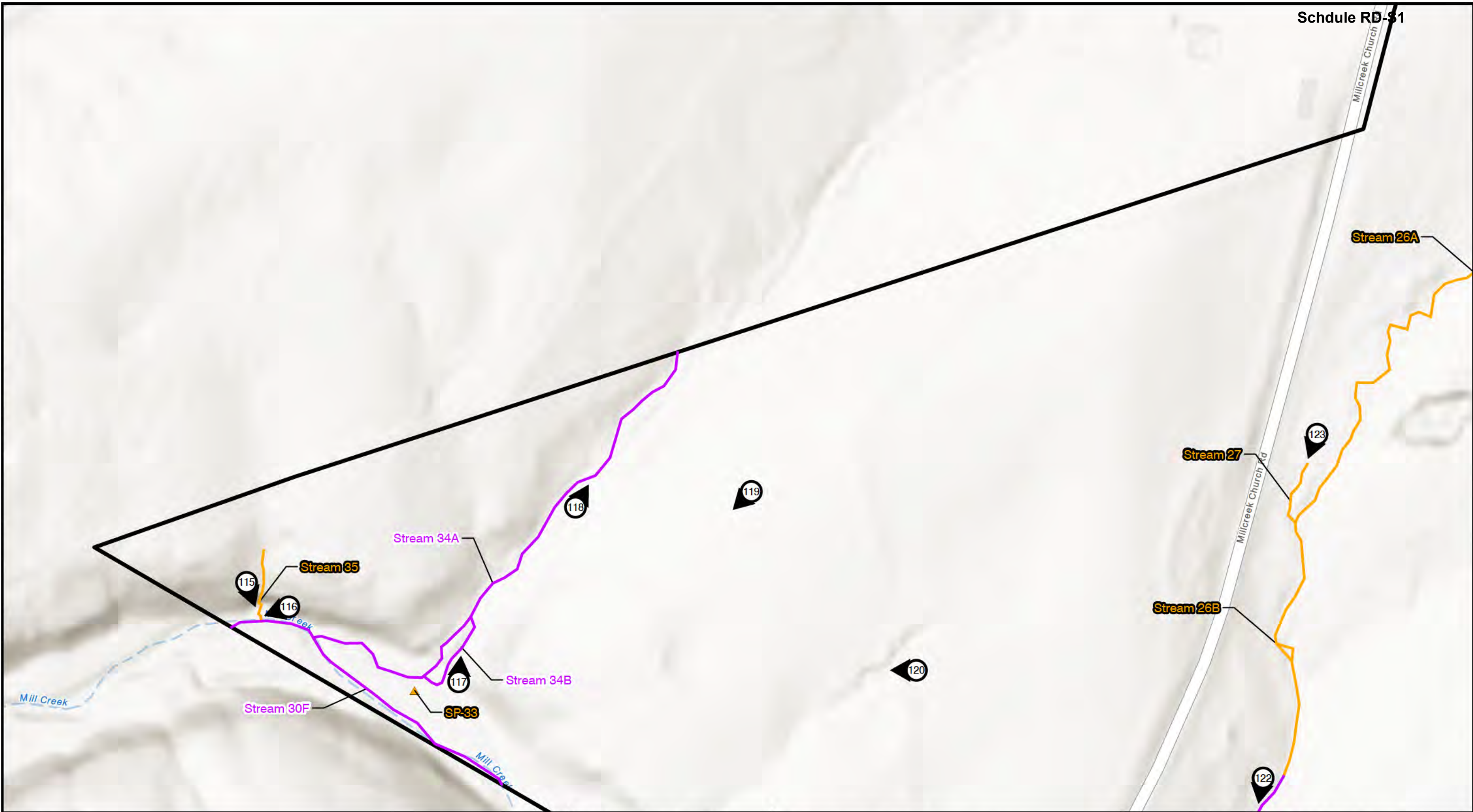
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SCALE IN FEET 0 160 320											
AREA OF INTEREST (AOI)	WETLAND - PEM	REFERENCES 1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE. IMAGERY DATE: 2024. ACCESSED 6/24/2026.		DRAWN BY: RRT DATE: 6/24/2026		CHECKED BY: LAV SCALE: 1" = 160'		APPROVED BY: TJR PROJECT NO: 354-818		FIGURE NO: 46 Attachment	
PHOTO LOCATION	OPEN WATER										
SAMPLING POINT	EPHEMERAL STREAM										
EXISTING CULVERT	INTERMITTENT STREAM										

*Hand Signature on file

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AREA OF INTEREST (AOI)		WETLAND - PEM		SCALE IN FEET 0 160 320		DATE: 6/24/2026		SCALE: 1" = 160'		APPROVED BY: TJR		FIGURE NO: 4B	
PHOTO LOCATION		OPEN WATER											
SAMPLING POINT		EPHEMERAL STREAM											
EXISTING CULVERT		INTERMITTENT STREAM											

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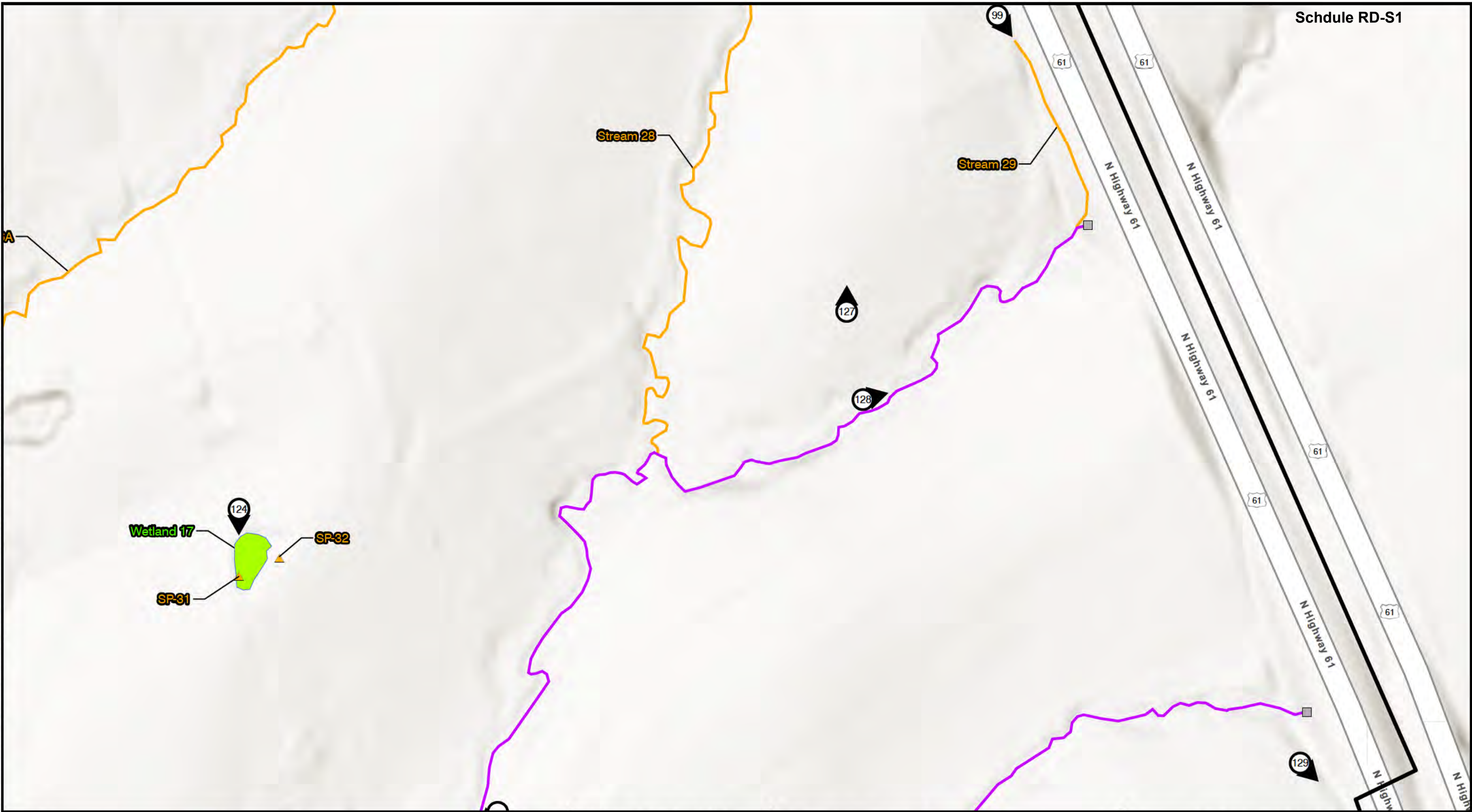
TERRAIN MAP

PROJECT NO: 354-818

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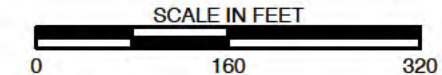
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Schedule RD-S1



LEGEND

- AREA OF INTEREST (AOI)
- WETLAND - PEM
- OPEN WATER
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PHOTO LOCATION
- SAMPLING POINT
- EXISTING CULVERT



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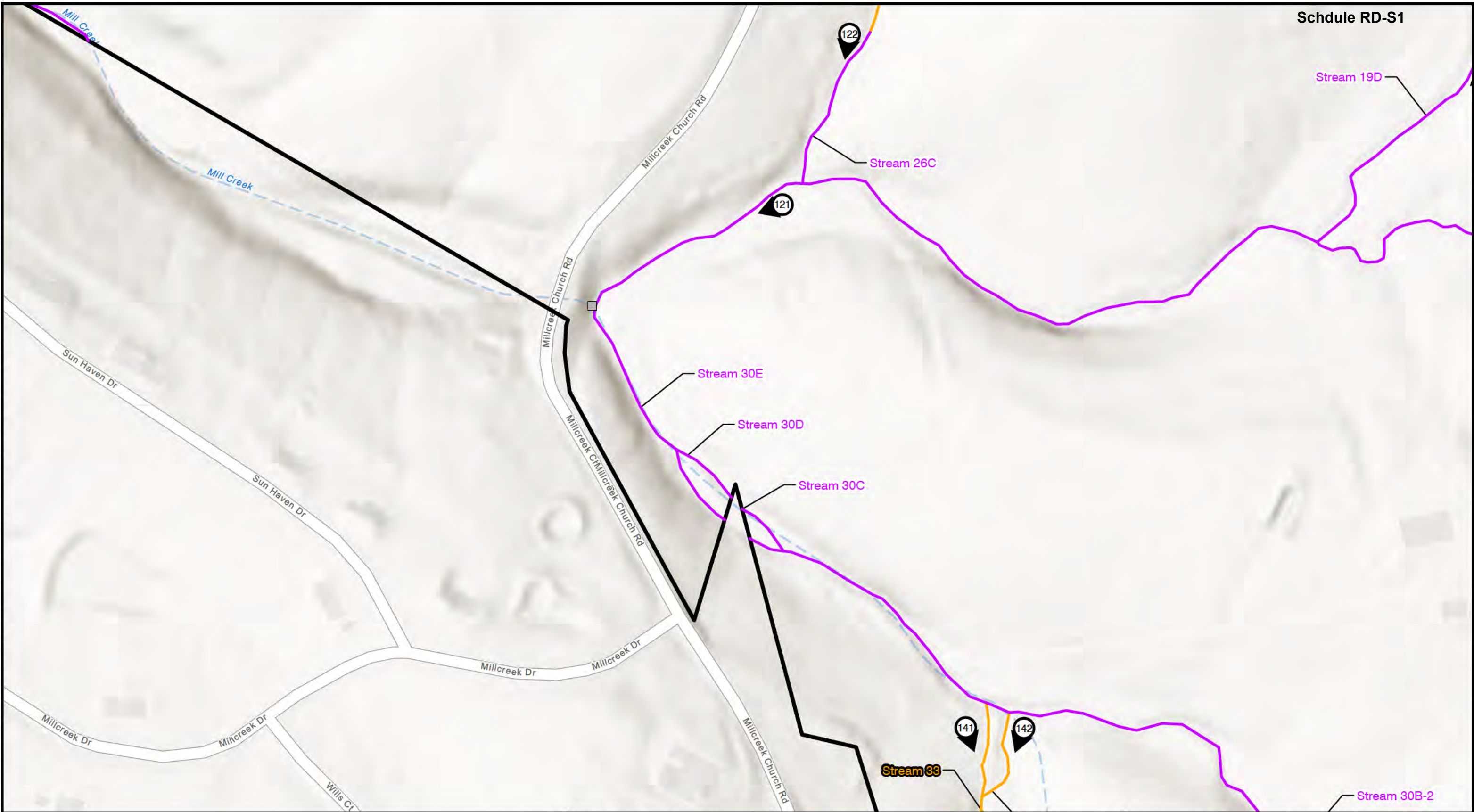
MILLCREEK BESS PROJECT
AMEREN
LINCOLN COUNTY, MISSOURI

TERRAIN MAP

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DATE:	6/24/2026	SCALE:	1" = 160'	PROJECT NO:	354-818	Attachment 4E

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Schedule RD-S1

Stream 19D

Stream 26C

Stream 30E

Stream 30D

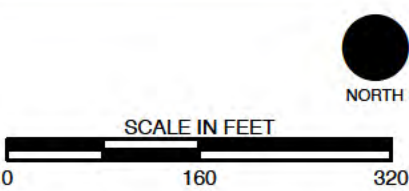
Stream 30C

Stream 33

Stream 30B-2

LEGEND

- AREA OF INTEREST (AOI)
- WETLAND - PEM
- PHOTO LOCATION
- OPEN WATER
- SAMPLING POINT
- EPHEMERAL STREAM
- EXISTING CULVERT
- INTERMITTENT STREAM



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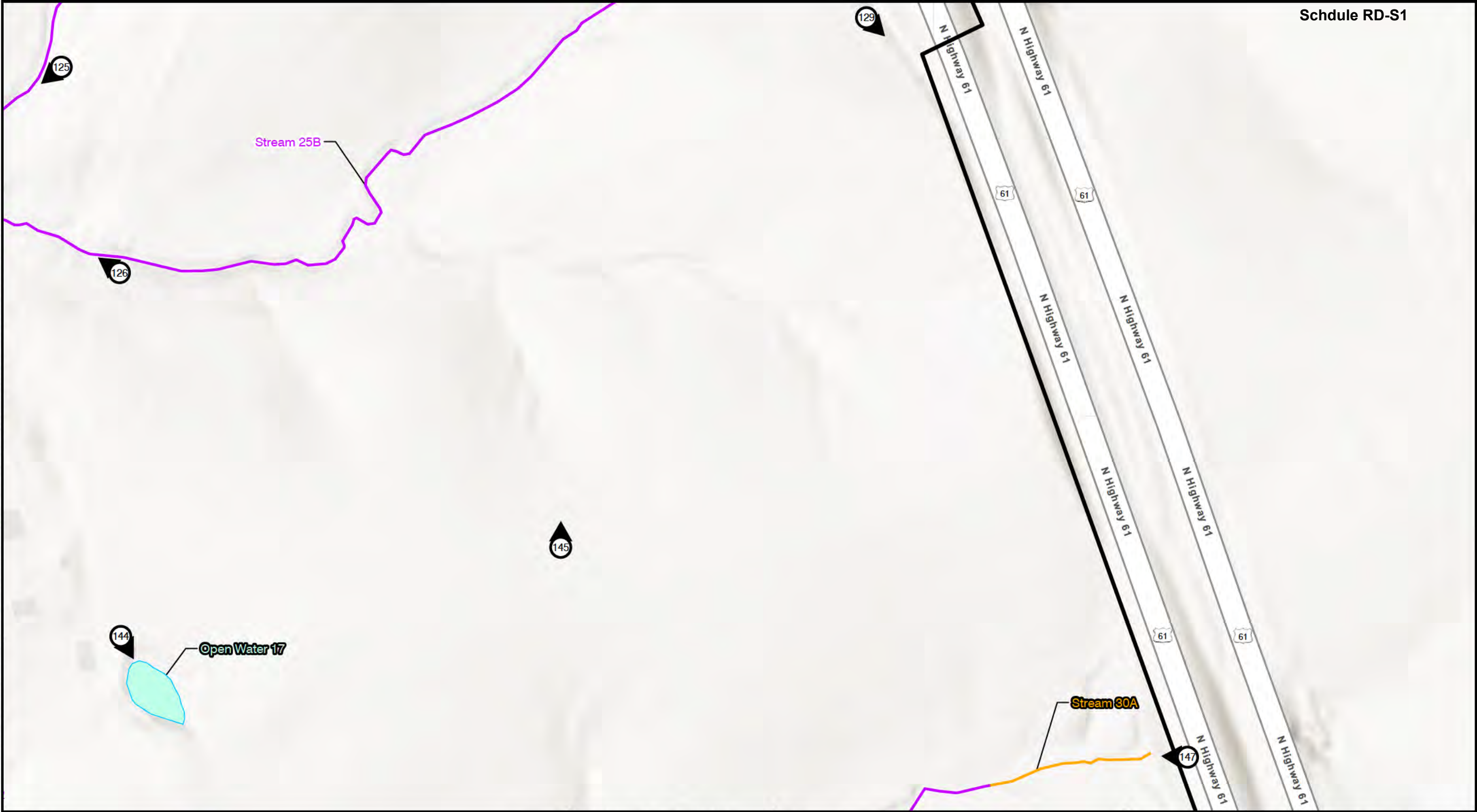
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AMEREN
LINCOLN COUNTY, MISSOURI

TERRAIN MAP

DRAWN BY:	RRT	CHECKED BY:	LAV	APPROVED BY:	TJR	FIGURE NO:
DATE:	6/24/2026	SCALE:	1" = 160'	PROJECT NO:	354-818	Attachment 4B

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LEGEND

	AREA OF INTEREST (AOI)		WETLAND - PEM
	PHOTO LOCATION		OPEN WATER
	SAMPLING POINT		EPHEMERAL STREAM
	EXISTING CULVERT		INTERMITTENT STREAM

SCALE IN FEET

0 160 320

REFERENCES

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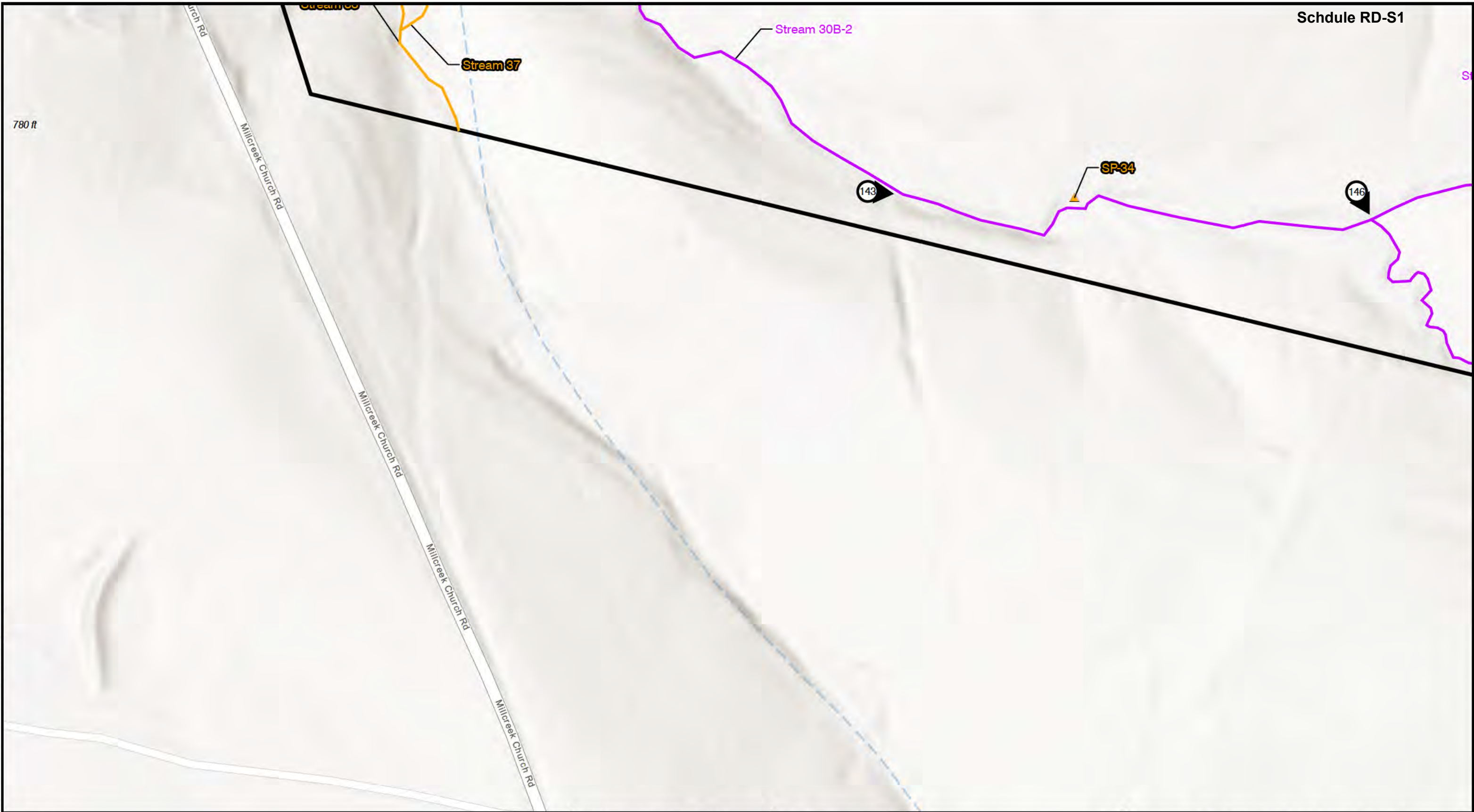
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**MILLCREEK BESS PROJECT
AMEREN
LINCOLN COUNTY, MISSOURI**

TERRAIN MAP

DRAWN BY:	RRT	CHECKED BY:	LAV	APPROVED BY:	TJR	FIGURE NO:	Attachment 46
DATE:	6/24/2026	SCALE:	1" = 160'	PROJECT NO:	354-818		

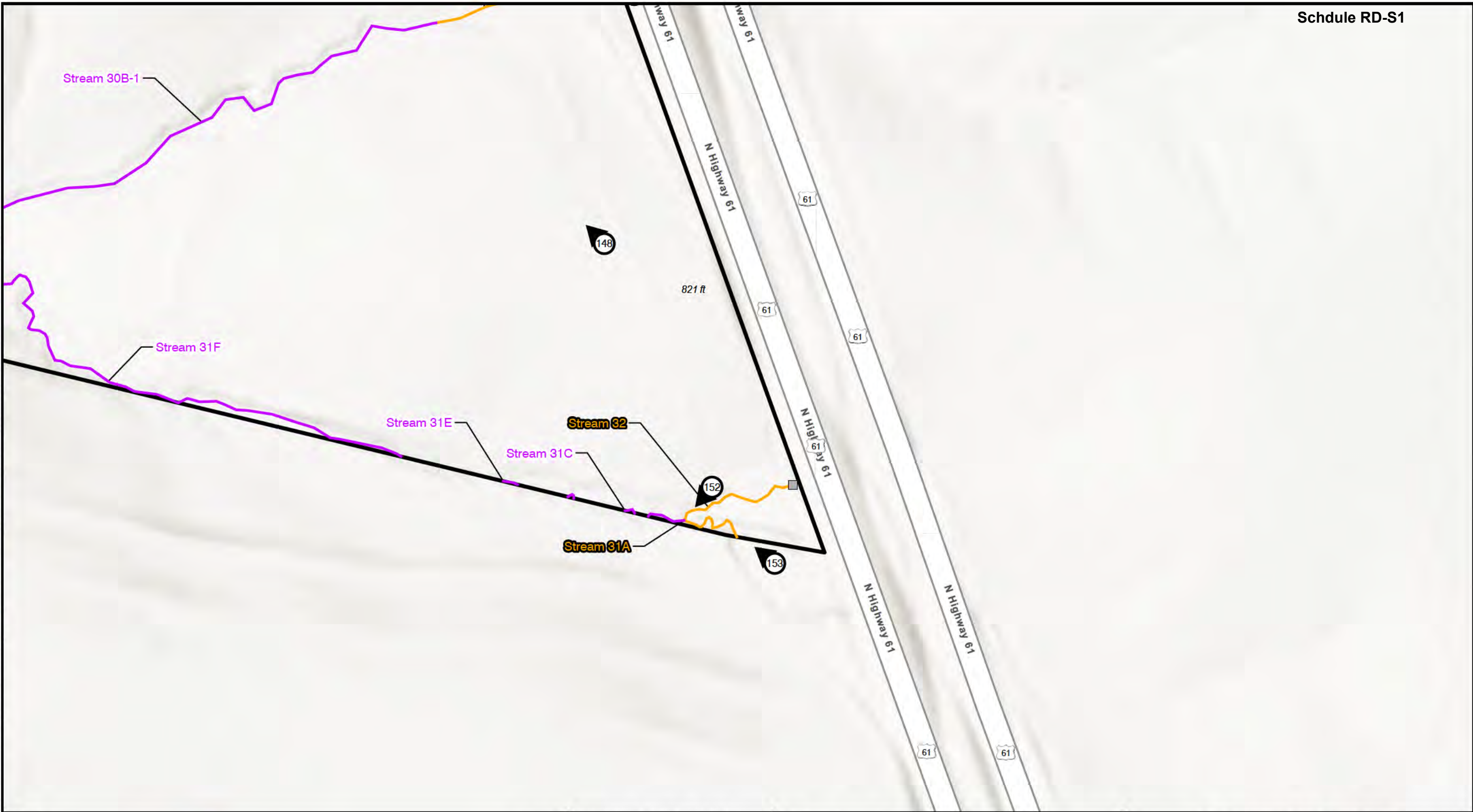
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AREA OF INTEREST (AOI)		WETLAND - PEM		 SCALE IN FEET 0 160 320		NORTH		TERRAIN MAP	
PHOTO LOCATION		OPEN WATER							
SAMPLING POINT		EPHEMERAL STREAM							
EXISTING CULVERT		INTERMITTENT STREAM							
REFERENCES 1. ESRI WORLD IMAGERY / ARCGIS MAP SERVICE. IMAGERY DATE: 2024. ACCESSED 6/24/2026.				DRAWN BY: RRT		CHECKED BY: LAV		APPROVED BY: TJR	
				DATE: 6/24/2026		SCALE: 1" = 160'		PROJECT NO: 354-818	
								FIGURE NO: Attachment 4	

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LEGEND

	AREA OF INTEREST (AOI)		WETLAND - PEM
	PHOTO LOCATION		OPEN WATER
	SAMPLING POINT		EPHEMERAL STREAM
	EXISTING CULVERT		INTERMITTENT STREAM

SCALE IN FEET

0 160 320

REFERENCES

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AMEREN
LINCOLN COUNTY, MISSOURI

TERRAIN MAP

DRAWN BY:	RRT	CHECKED BY:	LAV	APPROVED BY:	TJR	FIGURE NO:	Attachment 4b
DATE:	6/24/2026	SCALE:	1" = 160'	PROJECT NO:	354-818		

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APPENDIX A

SOILS INFORMATION



United States
Department of
Agriculture

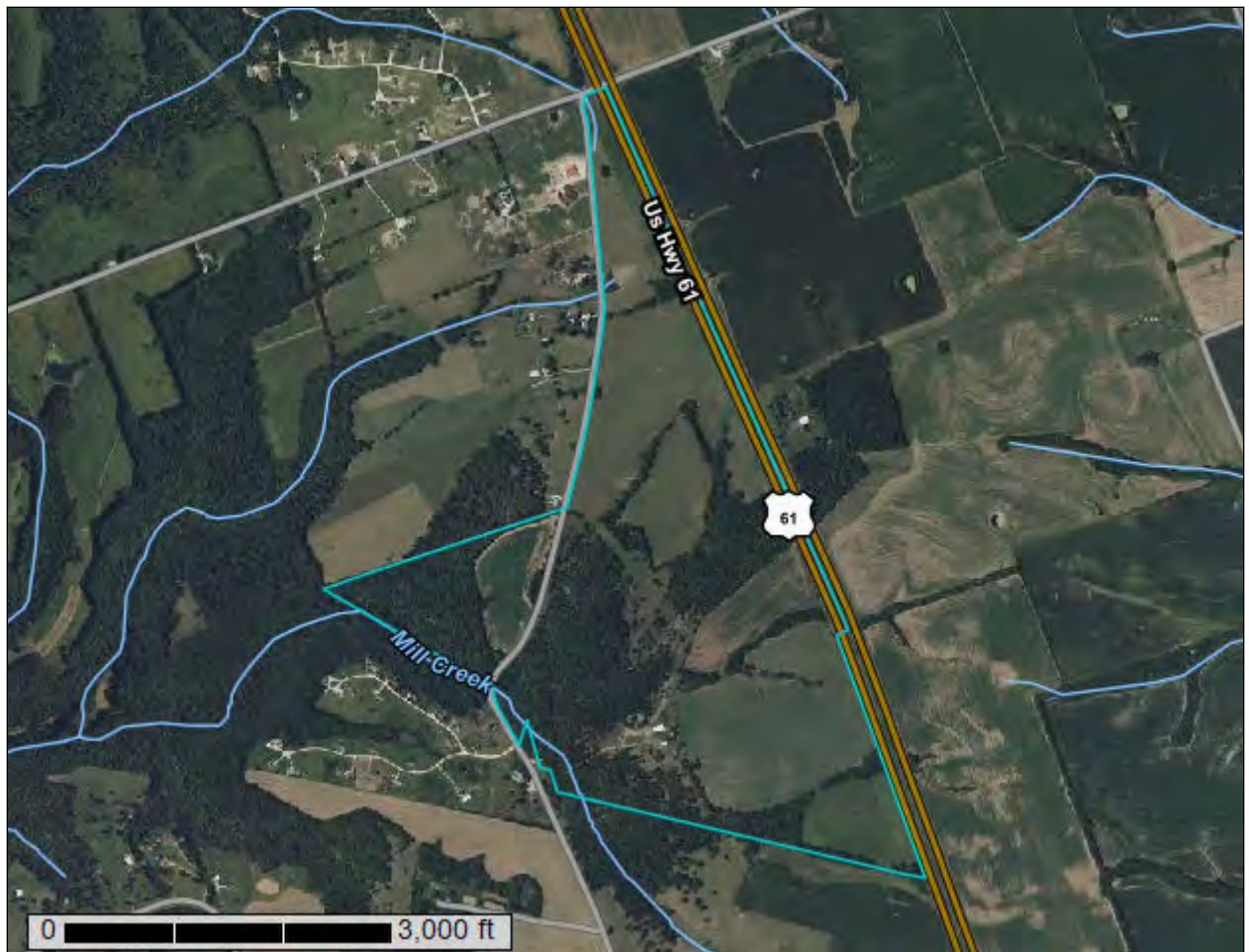
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Schedule RD-S1

Custom Soil Resource Report for Lincoln County, Missouri



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Schdule RD-S1



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout
 Borrow Pit
 Clay Spot
 Closed Depression
 Gravel Pit
 Gravelly Spot
 Landfill
 Lava Flow
 Marsh or swamp
 Mine or Quarry
 Miscellaneous Water
 Perennial Water
 Rock Outcrop
 Saline Spot
 Sandy Spot
 Severely Eroded Spot
 Sinkhole
 Slide or Slip
 Sodic Spot

 Spoil Area
 Stony Spot
 Very Stony Spot
 Wet Spot
 Other
 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lincoln County, Missouri
 Survey Area Data: Version 29, Sep 2, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 12, 2022—Aug 30, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
50008	Keswick silt loam, 5 to 9 percent slopes, eroded	40.8	12.5%
50009	Keswick silt loam, 9 to 14 percent slopes, eroded	30.0	9.2%
50058	Mexico silt loam, 0 to 2 percent slopes	3.6	1.1%
50059	Mexico silt loam, 1 to 4 percent slopes, eroded	42.1	12.9%
60073	Bucklick silty clay loam, 5 to 9 percent slopes, eroded	9.4	2.9%
60074	Bucklick silty clay loam, 9 to 14 percent slopes, eroded	28.2	8.6%
60084	Crider silt loam, 5 to 9 percent slopes, eroded	25.0	7.6%
60086	Crider silt loam, 9 to 14 percent slopes, eroded	7.6	2.3%
60120	Goss-Gasconade-Brussels complex, 9 to 70 percent slopes, very stony	120.6	36.8%
60129	Hatton silt loam, 5 to 9 percent slopes	20.4	6.2%
Totals for Area of Interest		327.5	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a

particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Lincoln County, Missouri

50008—Keswick silt loam, 5 to 9 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2y8d3

Landscape: Till plains

Elevation: 610 to 980 feet

Mean annual precipitation: 37 to 47 inches

Mean annual air temperature: 52 to 57 degrees F

Frost-free period: 185 to 225 days

Farmland classification: Not prime farmland

Map Unit Composition

Keswick and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Keswick

Setting

Landscape: Till plains

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Pedisediment over till

Typical profile

Ap - 0 to 7 inches: silt loam

2Bt - 7 to 20 inches: clay

2Btg - 20 to 79 inches: clay loam

Properties and qualities

Slope: 5 to 9 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 12 to 36 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: D

Ecological site: F109XY007MO - Till Upland Woodland

Hydric soil rating: No

Minor Components**Lindley***Percent of map unit:* 5 percent*Landscape:* Till plains*Landform:* Hillslopes*Landform position (two-dimensional):* Backslope*Landform position (three-dimensional):* Side slope*Down-slope shape:* Convex*Across-slope shape:* Convex*Ecological site:* F109XY009MO - Till Protected Backslope Forest, F109XY022MO

- Till Exposed Backslope Woodland

Hydric soil rating: No**Leonard***Percent of map unit:* 5 percent*Landscape:* Till plains*Landform:* Hillslopes*Landform position (two-dimensional):* Shoulder*Landform position (three-dimensional):* Head slope*Down-slope shape:* Concave*Across-slope shape:* Concave*Ecological site:* R113XY002MO - Loess Upland Prairie*Hydric soil rating:* Yes**50009—Keswick silt loam, 9 to 14 percent slopes, eroded****Map Unit Setting***National map unit symbol:* 31hhj*Landscape:* Till plains*Elevation:* 740 to 1,100 feet*Mean annual precipitation:* 37 to 45 inches*Mean annual air temperature:* 52 to 57 degrees F*Frost-free period:* 177 to 209 days*Farmland classification:* Not prime farmland**Map Unit Composition***Keswick and similar soils:* 85 percent*Minor components:* 15 percent*Estimates are based on observations, descriptions, and transects of the mapunit.***Description of Keswick****Setting***Landscape:* Till plains*Landform:* Hillslopes*Landform position (two-dimensional):* Backslope*Landform position (three-dimensional):* Side slope*Down-slope shape:* Convex

Custom Soil Resource Report

Across-slope shape: Convex

Parent material: Loess and/or pedis sediment over till

Typical profile

A - 0 to 4 inches: silt loam

Bt - 4 to 19 inches: silty clay loam

2Bt - 19 to 79 inches: clay loam

Properties and qualities

Slope: 9 to 14 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 12 to 24 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: C/D

Ecological site: F109XY007MO - Till Upland Woodland

Hydric soil rating: No

Minor Components**Lindley**

Percent of map unit: 10 percent

Landscape: Till plains

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Ecological site: F109XY022MO - Till Exposed Backslope Woodland

Hydric soil rating: No

Leonard

Percent of map unit: 5 percent

Landscape: Till plains

Landform: Hillslopes

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Head slope

Down-slope shape: Concave

Across-slope shape: Concave

Ecological site: R113XY002MO - Loess Upland Prairie

Hydric soil rating: Yes

50058—Mexico silt loam, 0 to 2 percent slopes**Map Unit Setting***National map unit symbol: 2wvc4**Landscape: Till plains**Elevation: 600 to 920 feet**Mean annual precipitation: 37 to 41 inches**Mean annual air temperature: 52 to 54 degrees F**Frost-free period: 189 to 212 days**Farmland classification: Farmland of statewide importance***Map Unit Composition***Mexico and similar soils: 90 percent**Minor components: 10 percent**Estimates are based on observations, descriptions, and transects of the mapunit.***Description of Mexico****Setting***Landscape: Till plains**Landform: Ridges**Landform position (two-dimensional): Summit**Landform position (three-dimensional): Interfluve**Down-slope shape: Linear**Across-slope shape: Convex**Parent material: Loess over pedisediment***Typical profile***Ap - 0 to 9 inches: silt loam**Btg1 - 9 to 15 inches: silt loam**Btg2 - 15 to 34 inches: clay**Btg3 - 34 to 42 inches: silty clay loam**2Btg4 - 42 to 79 inches: silty clay loam***Properties and qualities***Slope: 0 to 2 percent**Depth to restrictive feature: More than 80 inches**Drainage class: Poorly drained**Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)**Depth to water table: About 6 to 18 inches**Frequency of flooding: None**Frequency of ponding: None**Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)**Available water supply, 0 to 60 inches: High (about 9.8 inches)***Interpretive groups***Land capability classification (irrigated): None specified**Land capability classification (nonirrigated): 3w**Hydrologic Soil Group: D*

Custom Soil Resource Report

Ecological site: R113XY001MO - Claypan Summit Prairie
Hydric soil rating: Yes

Minor Components**Putnam**

Percent of map unit: 10 percent
Landscape: Till plains
Landform: Divides
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R113XY001MO - Claypan Summit Prairie
Hydric soil rating: Yes

50059—Mexico silt loam, 1 to 4 percent slopes, eroded**Map Unit Setting**

National map unit symbol: 2wvc5
Landscape: Till plains
Elevation: 570 to 920 feet
Mean annual precipitation: 37 to 41 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 189 to 212 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Mexico and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mexico**Setting**

Landscape: Till plains
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loess over pedis sediment

Typical profile

Ap - 0 to 7 inches: silt loam
Btg1 - 7 to 15 inches: silt loam
Btg2 - 15 to 34 inches: clay
Btg3 - 34 to 42 inches: silty clay loam
2Btg4 - 42 to 79 inches: silty clay loam

Properties and qualities

Slope: 1 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: R113XY001MO - Claypan Summit Prairie
Hydric soil rating: Yes

Minor Components**Armstrong**

Percent of map unit: 7 percent
Landscape: Till plains
Landform: Interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: R109XY006MO - Till Upland Prairie
Hydric soil rating: No

Putnam

Percent of map unit: 5 percent
Landscape: Till plains
Landform: Divides
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R113XY001MO - Claypan Summit Prairie
Hydric soil rating: Yes

Leonard

Percent of map unit: 3 percent
Landscape: Till plains
Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Head slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R113XY002MO - Loess Upland Prairie
Hydric soil rating: Yes

60073—Bucklick silty clay loam, 5 to 9 percent slopes, eroded**Map Unit Setting**

National map unit symbol: 2qp4w

Landscape: Hills

Elevation: 500 to 900 feet

Mean annual precipitation: 37 to 47 inches

Mean annual air temperature: 52 to 57 degrees F

Frost-free period: 184 to 228 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Bucklick and similar soils: 90 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bucklick**Setting**

Landscape: Hills

Landform: Ridges, Hillslopes

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Crest, side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loess over residuum weathered from dolomite

Typical profile

Ap - 0 to 7 inches: silty clay loam

Bt1 - 7 to 31 inches: silty clay

2Bt2 - 31 to 45 inches: silty clay

2Bt3/Cr - 45 to 53 inches: bedrock

2R - 53 to 80 inches: bedrock

Properties and qualities

Slope: 5 to 9 percent

Depth to restrictive feature: 40 to 60 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Custom Soil Resource Report

Hydrologic Soil Group: C
 Ecological site: F115XB005MO - Loamy Upland Woodland
 Hydric soil rating: No

Minor Components**Crider**

Percent of map unit: 10 percent
 Landscape: Hills
 Landform: Divides
 Landform position (two-dimensional): Summit
 Landform position (three-dimensional): Interfluve
 Down-slope shape: Convex
 Across-slope shape: Convex
 Ecological site: F116AY032MO - Loamy Footslope Forest
 Hydric soil rating: No

60074—Bucklick silty clay loam, 9 to 14 percent slopes, eroded**Map Unit Setting**

National map unit symbol: 668l
 Landscape: Hills
 Elevation: 500 to 1,200 feet
 Mean annual precipitation: 37 to 47 inches
 Mean annual air temperature: 52 to 57 degrees F
 Frost-free period: 184 to 228 days
 Farmland classification: Farmland of statewide importance

Map Unit Composition

Bucklick and similar soils: 90 percent
 Minor components: 10 percent
 Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bucklick**Setting**

Landscape: Hills
 Landform: Ridges, Hillslopes
 Landform position (two-dimensional): Summit, backslope
 Landform position (three-dimensional): Crest, side slope
 Down-slope shape: Convex
 Across-slope shape: Convex
 Parent material: Loess over residuum weathered from dolomite

Typical profile

Ap - 0 to 7 inches: silty clay loam
 Bt1 - 7 to 31 inches: silty clay
 2Bt2 - 31 to 45 inches: silty clay
 2Bt3/Cr - 45 to 53 inches: bedrock
 2R - 53 to 80 inches: bedrock

Properties and qualities

Slope: 9 to 14 percent
Depth to restrictive feature: 40 to 60 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F115XB005MO - Loamy Upland Woodland
Hydric soil rating: No

Minor Components**Goss**

Percent of map unit: 10 percent
Landscape: Hills
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F115XB011MO - Chert Protected Backslope Forest,
 F115XB048MO - Chert Exposed Backslope Woodland
Hydric soil rating: No

60084—Crider silt loam, 5 to 9 percent slopes, eroded**Map Unit Setting**

National map unit symbol: 2qp52
Landscape: Hills
Elevation: 350 to 2,500 feet
Mean annual precipitation: 37 to 49 inches
Mean annual air temperature: 52 to 59 degrees F
Frost-free period: 172 to 232 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Crider and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crider**Setting**

Landscape: Hills
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess over residuum weathered from dolomite

Typical profile

Ap - 0 to 8 inches: silt loam
Bt1 - 8 to 37 inches: silty clay loam
2Bt2 - 37 to 60 inches: silty clay loam

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F115XB005MO - Loamy Upland Woodland
Hydric soil rating: No

Minor Components**Bucklick**

Percent of map unit: 10 percent
Landscape: Hills
Landform: Divides
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluvium
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F116AY030MO - Loamy Protected Backslope Forest,
 F116AY046MO - Loamy Exposed Backslope Woodland
Hydric soil rating: No

Goss

Percent of map unit: 5 percent
Landscape: Hills
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope

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Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F115XB011MO - Chert Protected Backslope Forest,
 F115XB048MO - Chert Exposed Backslope Woodland
Hydric soil rating: No

60086—Crider silt loam, 9 to 14 percent slopes, eroded**Map Unit Setting**

National map unit symbol: 2qp53
Landscape: Hills
Elevation: 350 to 2,500 feet
Mean annual precipitation: 37 to 49 inches
Mean annual air temperature: 52 to 59 degrees F
Frost-free period: 172 to 232 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Crider and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crider**Setting**

Landscape: Hills
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess over residuum weathered from dolomite

Typical profile

Ap - 0 to 11 inches: silt loam
Bt1 - 11 to 37 inches: silty clay loam
2Bt2 - 37 to 60 inches: silty clay loam

Properties and qualities

Slope: 9 to 14 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.7 inches)

Interpretive groups*Land capability classification (irrigated):* None specified*Land capability classification (nonirrigated):* 4e*Hydrologic Soil Group:* C*Ecological site:* F115XB005MO - Loamy Upland Woodland*Hydric soil rating:* No**Minor Components****Bucklick***Percent of map unit:* 10 percent*Landscape:* Hills*Landform:* Divides*Landform position (two-dimensional):* Summit*Landform position (three-dimensional):* Interfluve*Down-slope shape:* Convex*Across-slope shape:* Convex*Ecological site:* F116AY030MO - Loamy Protected Backslope Forest,

F116AY046MO - Loamy Exposed Backslope Woodland

Hydric soil rating: No**Goss***Percent of map unit:* 5 percent*Landscape:* Hills*Landform:* Hillslopes*Landform position (two-dimensional):* Backslope*Landform position (three-dimensional):* Side slope*Down-slope shape:* Convex*Across-slope shape:* Convex*Ecological site:* F115XB011MO - Chert Protected Backslope Forest,

F115XB048MO - Chert Exposed Backslope Woodland

Hydric soil rating: No**60120—Goss-Gasconade-Brussels complex, 9 to 70 percent slopes, very stony****Map Unit Setting***National map unit symbol:* 2qp5l*Landscape:* Hills*Elevation:* 300 to 1,200 feet*Mean annual precipitation:* 37 to 47 inches*Mean annual air temperature:* 52 to 57 degrees F*Frost-free period:* 184 to 230 days*Farmland classification:* Not prime farmland**Map Unit Composition***Goss and similar soils:* 45 percent*Brussels and similar soils:* 26 percent*Gasconade and similar soils:* 24 percent

Custom Soil Resource Report

Minor components: 5 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Goss**Setting**

Landscape: Hills

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Slope alluvium over residuum weathered from dolomite

Typical profile

A - 0 to 6 inches: gravelly silt loam

E - 6 to 19 inches: extremely gravelly silt loam

Bt1 - 19 to 60 inches: very gravelly silty clay loam

2Bt2 - 60 to 80 inches: cobbly clay

Properties and qualities

Slope: 9 to 70 percent

Surface area covered with cobbles, stones or boulders: 2.0 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: C

Ecological site: F115XB011MO - Chert Protected Backslope Forest,

F115XB048MO - Chert Exposed Backslope Woodland

Hydric soil rating: No

Description of Brussels**Setting**

Landscape: Hills

Landform: Hillslopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Colluvium

Typical profile

A - 0 to 5 inches: very channery silty clay loam

Bw1 - 5 to 35 inches: very flaggy silty clay

Bw2 - 35 to 60 inches: extremely flaggy silty clay

Properties and qualities

Slope: 9 to 70 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F115XC010IL - Chert Exposed Backslope Woodland
Hydric soil rating: No

Description of Gasconade**Setting**

Landscape: Hills
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from limestone

Typical profile

A - 0 to 10 inches: very channery silty clay loam
Bw - 10 to 13 inches: channery silty clay
R - 13 to 80 inches: bedrock

Properties and qualities

Slope: 9 to 70 percent
Surface area covered with cobbles, stones or boulders: 2.0 percent
Depth to restrictive feature: 4 to 20 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D

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Ecological site: R115XB009MO - Shallow Limestone/Dolomite Upland Glade/
Woodland
Hydric soil rating: No

Minor Components**Menfro**

Percent of map unit: 5 percent
Landscape: Hills
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F115XB003MO - Deep Loess Protected Backslope Forest,
F115XB043MO - Deep Loess Exposed Backslope Woodland
Hydric soil rating: No

60129—Hatton silt loam, 5 to 9 percent slopes**Map Unit Setting**

National map unit symbol: 2qp5r
Landscape: Till plains
Elevation: 660 to 1,000 feet
Mean annual precipitation: 36 to 47 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 184 to 228 days
Farmland classification: Not prime farmland

Map Unit Composition

Hatton and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hatton**Setting**

Landscape: Till plains
Landform: Hillslopes, Ridges
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess over pedisediment

Typical profile

Ap - 0 to 3 inches: silt loam
E - 3 to 6 inches: silt

Bt - 6 to 32 inches: silty clay
2Btx - 32 to 48 inches: silty clay loam
2Bt - 48 to 60 inches: silt loam

Properties and qualities

Slope: 5 to 9 percent
Depth to restrictive feature: 27 to 38 inches to undefined
Drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: D
Ecological site: F115XB004MO - Loess Upland Woodland
Hydric soil rating: No

Minor Components

Keswick

Percent of map unit: 10 percent
Landscape: Till plains
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F109XY007MO - Till Upland Woodland
Hydric soil rating: No

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Rating by Map Unit

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

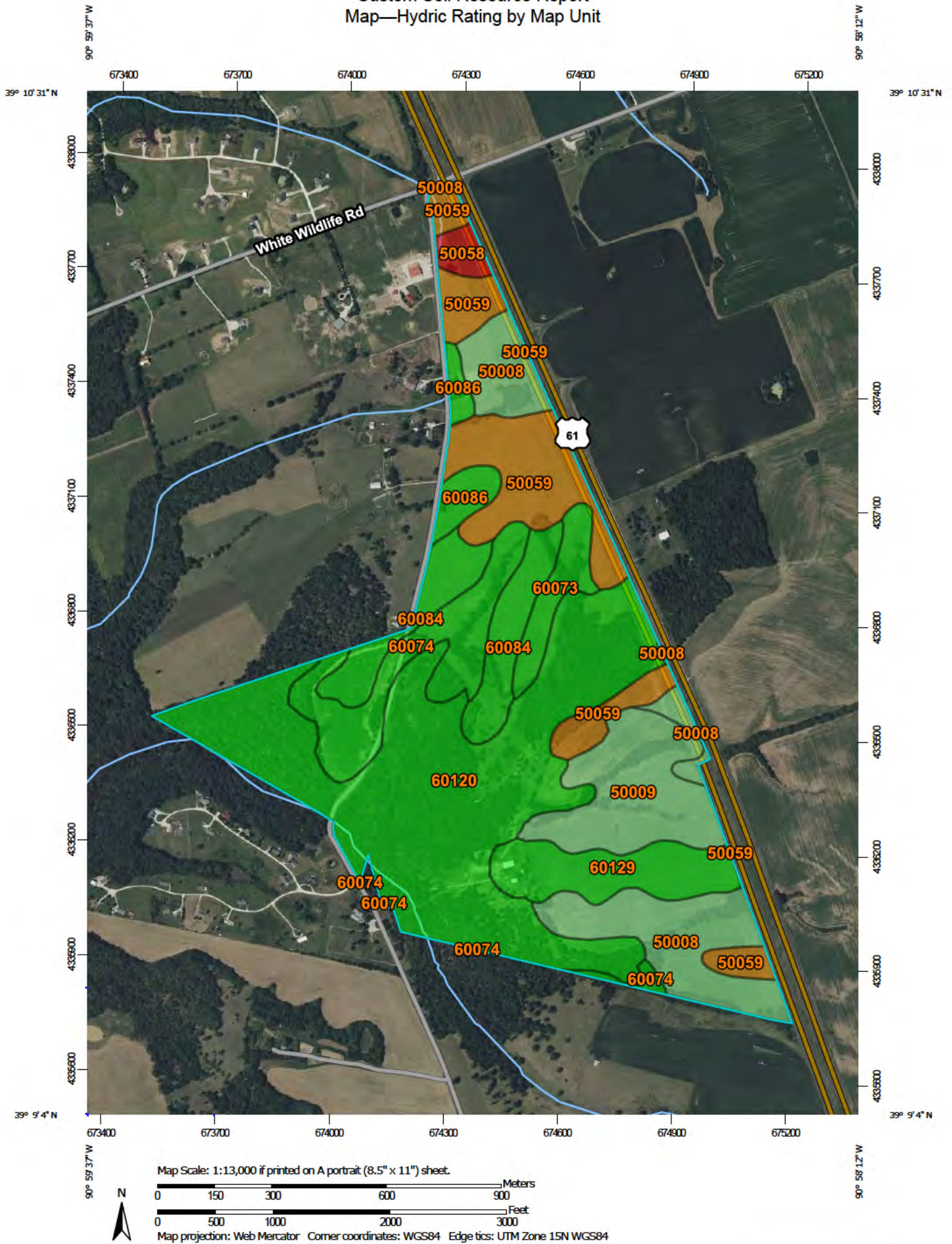
Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Custom Soil Resource Report
Map—Hydric Rating by Map Unit

Schedule RD-S1



Attachment B

Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lincoln County, Missouri
Survey Area Data: Version 29, Sep 2, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 12, 2022—Aug 30, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
50008	Keswick silt loam, 5 to 9 percent slopes, eroded	5	40.8	12.5%
50009	Keswick silt loam, 9 to 14 percent slopes, eroded	5	30.0	9.2%
50058	Mexico silt loam, 0 to 2 percent slopes	100	3.6	1.1%
50059	Mexico silt loam, 1 to 4 percent slopes, eroded	93	42.1	12.9%
60073	Bucklick silty clay loam, 5 to 9 percent slopes, eroded	0	9.4	2.9%
60074	Bucklick silty clay loam, 9 to 14 percent slopes, eroded	0	28.2	8.6%
60084	Crider silt loam, 5 to 9 percent slopes, eroded	0	25.0	7.6%
60086	Crider silt loam, 9 to 14 percent slopes, eroded	0	7.6	2.3%
60120	Goss-Gasconade-Brussels complex, 9 to 70 percent slopes, very stony	0	120.6	36.8%
60129	Hatton silt loam, 5 to 9 percent slopes	0	20.4	6.2%
Totals for Area of Interest			327.5	100.0%

Rating Options—Hydric Rating by Map Unit*Aggregation Method: Percent Present**Component Percent Cutoff: None Specified**Tie-break Rule: Lower*

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

APPENDIX B

PHOTOGRAPHIC SUMMARY



Photo Number: 61
Description: Agricultural field. DOV is northeast.
Date Taken: 12/15/2025



Photo Number: 82
Description: Open Water 18. DOV is southwest.
Date Taken: 12/15/2025



Photo Number: 83
Description: Ephemeral Stream 36 looking upstream. DOV is northwest.
Date Taken: 12/15/2025



Photo Number: 84
Description: Agricultural field. DOV is northeast.
Date Taken: 12/15/2025



Civil & Environmental Consultants, Inc.

Project Name: Millcreek Solar Project

Client Name: Ameren Missouri

Project Number: 354-818



Photo Number: 96
Description: Ephemeral Stream 26A looking upstream. DOV is northeast.
Date Taken: 12/15/2025



Photo Number: 97
Description: SP-29 and PEM Wetland 18. DOV is northwest.
Date Taken: 12/16/2025



Photo Number: 98
Description: Ephemeral Stream 28 looking upstream. DOV is northwest.
Date Taken: 12/15/2025



Photo Number: 99
Description: Ephemeral Stream 29 looking downstream. DOV is southeast.
Date Taken: 12/22/2025



Civil & Environmental Consultants, Inc.

Project Name: Millcreek Solar Project

Client Name: Ameren Missouri

Project Number: 354-818



Photo Number: 115
Description: Ephemeral Stream 35. DOV is southeast.
Date Taken: 12/15/2025



Photo Number: 116
Description: Intermittent Stream 30F looking downstream. DOV is southeast.
Date Taken: 12/15/2025



Photo Number: 117
Description: Intermittent Stream 34B (backchannel) looking upstream. DOV is northeast.
Date Taken: 12/15/2025



Photo Number: 118
Description: Intermittent Stream 34A looking upstream. DOV is northeast.
Date Taken: 12/15/2025



Civil & Environmental Consultants, Inc.

Project Name: Millcreek BESS Project

Client Name: Ameren

Project Number: 354-818



Photo Number: 119
Description: Forested area. DOV is southwest.
Date Taken: 12/15/2025



Photo Number: 120
Description: Upland drainage looking downslope. DOV is west.
Date Taken: 12/15/2025



Photo Number: 121
Description: Intermittent Stream 19D looking downstream. DOV is southwest.
Date Taken: 12/15/2025



Photo Number: 122
Description: Intermittent Stream 26C looking downstream. DOV is southwest.
Date Taken: 12/15/2025



Civil & Environmental Consultants, Inc.

Project Name: Millcreek BESS Project

Client Name: Ameren

Project Number: 354-818



Photo Number: 123
Description: Ephemeral Stream 27 looking downstream. DOV is southwest.
Date Taken: 12/15/2025



Photo Number: 124
Description: SP-31 and PEM Wetland 17. DOV is south.
Date Taken: 12/16/2025



Photo Number: 125
Description: Intermittent Stream 19D looking downstream. DOV is southwest.
Date Taken: 12/15/2025



Photo Number: 126
Description: Intermittent Stream 25B looking downstream. DOV is northwest.
Date Taken: 12/16/2025



Civil & Environmental Consultants, Inc.

Project Name: Millcreek BESS Project

Client Name: Ameren

Project Number: 354-818



Photo Number: 127
Description: Forested area. DOV is north.
Date Taken: 12/16/2025



Photo Number: 128
Description: Intermittent Stream 19D looking upstream. DOV is northeast.
Date Taken: 12/15/2025



Photo Number: 129
Description: Upland drainage looking upslope. DOV is southeast.
Date Taken: 12/22/2025



Photo Number: 141
Description: Ephemeral Stream 33 looking upstream. DOV is southeast.
Date Taken: 12/15/2025



Civil & Environmental Consultants, Inc.

Project Name: Millcreek BESS Project

Client Name: Ameren

Project Number: 354-818



Photo Number: 142
Description: Ephemeral Stream 37 looking upstream. DOV is southwest.
Date Taken: 12/15/2025



Photo Number: 143
Description: Intermittent Stream 30B looking upstream. DOV is east.
Date Taken: 12/15/2025



Photo Number: 144
Description: Open Water 17. DOV is southeast.
Date Taken: 12/16/2025



Photo Number: 145
Description: Agricultural field. DOV is north.
Date Taken: 12/16/2025



Civil & Environmental Consultants, Inc.

Project Name: Millcreek BESS Project

Client Name: Ameren

Project Number: 354-818



Photo Number: 146
Description: Intermittent Stream 31F looking upstream. DOV is southeast.
Date Taken: 12/15/2025



Photo Number: 147
Description: Ephemeral Stream 30A looking downstream. DOV is west.
Date Taken: 12/22/2025



Photo Number: 148
Description: Agricultural field. DOV is northwest.
Date Taken: 12/15/2025



Photo Number: 152
Description: Ephemeral Stream 32 looking downstream. DOV is southwest.
Date Taken: 12/15/2025



Civil & Environmental Consultants, Inc.

Project Name: Millcreek BESS Project

Client Name: Ameren

Project Number: 354-818



Photo Number: 153
Description: Ephemeral Stream 31A looking downstream. DOV is northwest.
Date Taken: 12/22/2025


Civil & Environmental Consultants, Inc.

Project Name: Millcreek BESS Project

Client Name: Ameren

Project Number: 354-818

APPENDIX C

WETLAND DETERMINATION DATA SHEETS

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region

Project/Site: Millcreek Solar Project City/County: Silex/Lincoln Sampling Date: 12/16/2025
 Applicant/Owner: Ameren State: MO Sampling Point: SP-28
 Investigator(s): STG, CAR Section, Township, Range: Private Ownership/Not PLS
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None (flat)
 Slope (%): 0-2% Lat: 39.168713 Long: -90.981507 Datum: NAD83 (2011)
 Soil Map Unit Name: Keswick silt loam, 5 to 9 percent slopes, eroded NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: The sample point was taken in an herbaceous area adjacent to a pond. Climatic conditions were wetter than normal at the time of the delineation. Area does not meet all 3 wetland parameters.	
Wetland ID: <u>N/A</u> ; Cowardin Class: <u> </u>	

VEGETATION – Use scientific names of plants.

Tree Stratum Plot size: <u>30 ft radius</u> <table style="width:100%;"> <thead> <tr> <th></th> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>None</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr> <td align="right" colspan="2">= Total Cover</td> <td></td> <td></td> </tr> <tr> <td align="right">50% of total cover: <u> </u></td> <td align="right">20% of total cover: <u> </u></td> <td></td> <td></td> </tr> </tbody> </table> Sapling/Shrub Stratum Plot size: <u>15 ft radius</u> <table style="width:100%;"> <thead> <tr> <th></th> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>None</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr> <td align="right" colspan="2">= Total Cover</td> <td></td> <td></td> </tr> <tr> <td align="right">50% of total cover: <u> </u></td> <td align="right">20% of total cover: <u> </u></td> <td></td> <td></td> </tr> </tbody> </table> Herb Stratum Plot size: <u>5 ft radius</u> <table style="width:100%;"> <thead> <tr> <th></th> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Dactylis glomerata</u></td><td align="center"><u>50</u></td><td align="center"><u>Y</u></td><td align="center"><u>FACU</u></td></tr> <tr><td>2. <u>Phleum pratense</u></td><td align="center"><u>50</u></td><td align="center"><u>Y</u></td><td align="center"><u>FACU</u></td></tr> <tr><td>3. <u>Setaria pumila</u></td><td align="center"><u>5</u></td><td align="center"><u>N</u></td><td align="center"><u>FAC</u></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u> </u></td><td></td><td></td><td></td></tr> <tr> <td align="right" colspan="2">= Total Cover</td> <td></td> <td></td> </tr> <tr> <td align="right">50% of total cover: <u>52.5</u></td> <td align="right">20% of total cover: <u>21</u></td> <td></td> <td></td> </tr> </tbody> </table> Woody Vine Stratum Plot size: <u>30 ft radius</u> <table style="width:100%;"> <thead> <tr> <th></th> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>None</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td></tr> <tr> <td align="right" colspan="2">= Total Cover</td> <td></td> <td></td> </tr> <tr> <td align="right">50% of total cover: <u> </u></td> <td align="right">20% of total cover: <u> </u></td> <td></td> <td></td> </tr> </tbody> </table>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>None</u>				2. <u> </u>				3. <u> </u>				4. <u> </u>				5. <u> </u>				= Total Cover				50% of total cover: <u> </u>	20% of total cover: <u> </u>				Absolute % Cover	Dominant Species?	Indicator Status	1. <u>None</u>				2. <u> </u>				3. <u> </u>				4. <u> </u>				5. <u> </u>				= Total Cover				50% of total cover: <u> </u>	20% of total cover: <u> </u>				Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Dactylis glomerata</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	2. <u>Phleum pratense</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>	3. <u>Setaria pumila</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	4. <u> </u>				5. <u> </u>				6. <u> </u>				7. <u> </u>				8. <u> </u>				9. <u> </u>				10. <u> </u>				= Total Cover				50% of total cover: <u>52.5</u>	20% of total cover: <u>21</u>				Absolute % Cover	Dominant Species?	Indicator Status	1. <u>None</u>				2. <u> </u>				= Total Cover				50% of total cover: <u> </u>	20% of total cover: <u> </u>			Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B) Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <table style="width:100%;"> <tr><td>OBL species</td><td align="right">x 1 =</td><td><u> </u></td></tr> <tr><td>FACW species</td><td align="right">x 2 =</td><td><u> </u></td></tr> <tr><td>FAC species</td><td align="right">x 3 =</td><td><u> </u></td></tr> <tr><td>FACU species</td><td align="right">x 4 =</td><td><u> </u></td></tr> <tr><td>UPL species</td><td align="right">x 5 =</td><td><u> </u></td></tr> <tr> <td>Column Totals:</td> <td align="right">(A)</td> <td align="right">(B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A = <u> </u></td> </tr> </table> Hydrophytic Vegetation Indicators: <u>No</u> 1 - Rapid Test for Hydrophytic Vegetation <u>No</u> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ <u>No</u> 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) <u>No</u> Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	OBL species	x 1 =	<u> </u>	FACW species	x 2 =	<u> </u>	FAC species	x 3 =	<u> </u>	FACU species	x 4 =	<u> </u>	UPL species	x 5 =	<u> </u>	Column Totals:	(A)	(B)	Prevalence Index = B/A = <u> </u>		
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1. <u>Dactylis glomerata</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>																																																																																																																																																											
2. <u>Phleum pratense</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>																																																																																																																																																											
3. <u>Setaria pumila</u>	<u>5</u>	<u>N</u>	<u>FAC</u>																																																																																																																																																											
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	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																																											
1. <u>None</u>																																																																																																																																																														
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Remarks: (include photo numbers here or on a separate sheet.)																																																																																																																																																														

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 3/2	100					Loam/Clayey	
8-16	10YR 4/2	95	5YR 4/6	5	C	M	Loam/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☒ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Iron Monosulfide (A18)	☐ Depleted Dark Surface (F7)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)
☐ 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present?	Yes ☐	No ☒	Depth (inches): _____
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region

Project/Site: Millcreek Solar Project City/County: Silex/Lincoln Sampling Date: 12/16/2025
 Applicant/Owner: Ameren State: MO Sampling Point: SP-29
 Investigator(s): STG, CAR Section, Township, Range: Private Ownership/Not PLS
 Landform (hillside, terrace, etc.): Excavated pond Local relief (concave, convex, none): Concave
 Slope (%): 0-2% Lat: 39.165190 Long: -90.979885 Datum: NAD83 (2011)
 Soil Map Unit Name: Mexico silt loam, 1 to 4 percent slopes, eroded NWI classification: PUBFh
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: The sample point was taken in an herbaceous depression that was formerly a pond. The pond has transitioned into a PEM wetland over time. Climatic conditions were wetter than normal at the time of the delineation.	
Wetland ID: <u>Wetland 18</u> ; Cowardin Class: <u>PEM</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum	Plot size: <u>30 ft radius</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. <u>None</u>					
2. _____					
3. _____					
4. _____					
5. _____					
50% of total cover: _____		= Total Cover			
20% of total cover: _____					
Sapling/Shrub Stratum	Plot size: <u>15 ft radius</u>				Hydrophytic Vegetation Indicators: <u>No</u> 1 - Rapid Test for Hydrophytic Vegetation <u>Yes</u> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ <u>No</u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>No</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>None</u>					
2. _____					
3. _____					
4. _____					
50% of total cover: _____		= Total Cover			
20% of total cover: _____					
Herb Stratum	Plot size: <u>5 ft radius</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. <u>Carex vulpinoidea</u>		55	Y	FACW	
2. <u>Poa pratensis</u>		20	Y	FAC	
3. <u>Ambrosia artemisiifolia</u>		10	N	FACU	
4. <u>Stellaria media</u>		5	N	FACU	
5. <u>Trifolium repens</u>		5	N	FACU	
6. _____					
7. _____					
8. _____					
9. _____					
10. _____					
50% of total cover: <u>47.5</u>		95 = Total Cover			
20% of total cover: <u>19</u>					
Woody Vine Stratum	Plot size: <u>30 ft radius</u>				
1. <u>None</u>					
2. _____					
50% of total cover: _____		= Total Cover			
20% of total cover: _____					

Remarks: (include photo numbers here or on a separate sheet.)

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 4/2	85	5YR 4/6	15	C	PL,M	Loam/Clayey	

¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

² Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☒ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Iron Monosulfide (A18)	☐ Depleted Dark Surface (F7)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)
☐ 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present?	Yes ☐	No ☒	Depth (inches): _____
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region

Project/Site: Millcreek Solar Project City/County: Silex/Lincoln Sampling Date: 12/16/2025
 Applicant/Owner: Ameren State: MO Sampling Point: SP-30
 Investigator(s): STG, CAR Section, Township, Range: Private Ownership/ Not PLS
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None (flat)
 Slope (%): 0-2% Lat: 39.165042 Long: -90.980081 Datum: NAD83 (2011)
 Soil Map Unit Name: Crider silt loam, 5 to 9 percent slopes, eroded NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: The sample point was taken in an herbaceous area adjacent to a depression. Climatic conditions were wetter than normal at the time of the delineation.	
Wetland ID: <u>N/A</u> ; Cowardin Class: <u> </u>	

VEGETATION – Use scientific names of plants.

<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Tree Stratum</th> <th>Plot size: <u>30 ft radius</u></th> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> <tr><td>1. <u>None</u></td><td></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td align="center">= Total Cover</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">50% of total cover: <u> </u></td> <td colspan="3">20% of total cover: <u> </u></td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum</th> <th>Plot size: <u>15 ft radius</u></th> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> <tr><td>1. <u>None</u></td><td></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td align="center">= Total Cover</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">50% of total cover: <u> </u></td> <td colspan="3">20% of total cover: <u> </u></td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Herb Stratum</th> <th>Plot size: <u>5 ft radius</u></th> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> <tr><td>1. <u>Phleum pratense</u></td><td></td><td align="center">100</td><td align="center">Y</td><td align="center">FACU</td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>6. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>7. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>8. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>9. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>10. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td align="center">100 = Total Cover</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">50% of total cover: <u>50</u></td> <td colspan="3">20% of total cover: <u>20</u></td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Woody Vine Stratum</th> <th>Plot size: <u>30 ft radius</u></th> <th>Absolute % Cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> <tr><td>1. <u>None</u></td><td></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="2"></td> <td align="center">= Total Cover</td> <td colspan="2"></td> </tr> <tr> <td colspan="2">50% of total cover: <u> </u></td> <td colspan="3">20% of total cover: <u> </u></td> </tr> </table>	Tree Stratum	Plot size: <u>30 ft radius</u>	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>None</u>					2. <u> </u>					3. <u> </u>					4. <u> </u>					5. <u> </u>							= Total Cover			50% of total cover: <u> </u>		20% of total cover: <u> </u>			Sapling/Shrub Stratum	Plot size: <u>15 ft radius</u>	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>None</u>					2. <u> </u>					3. <u> </u>					4. <u> </u>					5. <u> </u>							= Total Cover			50% of total cover: <u> </u>		20% of total cover: <u> </u>			Herb Stratum	Plot size: <u>5 ft radius</u>	Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Phleum pratense</u>		100	Y	FACU	2. <u> </u>					3. <u> </u>					4. <u> </u>					5. <u> </u>					6. <u> </u>					7. <u> </u>					8. <u> </u>					9. <u> </u>					10. <u> </u>							100 = Total Cover			50% of total cover: <u>50</u>		20% of total cover: <u>20</u>			Woody Vine Stratum	Plot size: <u>30 ft radius</u>	Absolute % Cover	Dominant Species?	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Yes <u> </u> No <u>X</u> </td> </tr> </table>	Dominance Test worksheet:		Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)	Total Number of Dominant Species Across All Strata:	<u>1</u> (B)	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0%</u> (A/B)	Prevalence Index worksheet:		Total % Cover of:	Multiply by:	OBL species <u> </u>	x 1 = <u> </u>	FACW species <u> </u>	x 2 = <u> </u>	FAC species <u> </u>	x 3 = <u> </u>	FACU species <u> </u>	x 4 = <u> </u>	UPL species <u> </u>	x 5 = <u> </u>	Column Totals: <u> </u> (A)	<u> </u> (B)	Prevalence Index = B/A = <u> </u>		Hydrophytic Vegetation Indicators:		<u>No</u> 1 - Rapid Test for Hydrophytic Vegetation		<u>No</u> 2 - Dominance Test is >50%		3 - Prevalence Index is ≤3.0 ¹		<u>No</u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		<u>No</u> Problematic Hydrophytic Vegetation ¹ (Explain)		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
Tree Stratum	Plot size: <u>30 ft radius</u>	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																																																																																																
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SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 4/4	100					Loam/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Iron Monosulfide (A18)	☐ Depleted Dark Surface (F7)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)
☐ 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:
Depth (inches):

Hydric Soil Present? Yes No X

Remarks:**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> </u>
Water Table Present?	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> </u>
Saturation Present?	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> </u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region

Project/Site: Millcreek Solar Project City/County: Silex/Lincoln Sampling Date: 12/16/2025
 Applicant/Owner: Ameren State: MO Sampling Point: SP-31
 Investigator(s): STG, CAR Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Excavated pond Local relief (concave, convex, none): Concave
 Slope (%): 0-2% Lat: 39.160573 Long: -90.982085 Datum: NAD83 (2011)
 Soil Map Unit Name: Crider silt loam, 5 to 9 percent slopes, eroded NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: The sample point was taken in an herbaceous depression that was formerly a pond. The pond has since transitioned into a PEM wetland. Climatic conditions were wetter than normal at the time of the delineation.	
Wetland ID: <u>Wetland 17</u> ; Cowardin Class: <u>PEM</u>	

VEGETATION – Use scientific names of plants.

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	50% of total cover: <u>47.5</u>	95 = Total Cover																																																																																																																																																																																																																			
		20% of total cover: <u>19</u>																																																																																																																																																																																																																			
Woody Vine Stratum	Plot size: <u>30 ft radius</u>	Absolute % Cover	Dominant Species?	Indicator Status																																																																																																																																																																																																																	
1. <u>None</u>																																																																																																																																																																																																																					
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Dominance Test worksheet:																																																																																																																																																																																																																					
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)																																																																																																																																																																																																																				
Total Number of Dominant Species Across All Strata:	<u>2</u> (B)																																																																																																																																																																																																																				
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100%</u> (A/B)																																																																																																																																																																																																																				
Prevalence Index worksheet:																																																																																																																																																																																																																					
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<u>No</u> 1 - Rapid Test for Hydrophytic Vegetation																																																																																																																																																																																																																					
<u>Yes</u> 2 - Dominance Test is >50%																																																																																																																																																																																																																					
3 - Prevalence Index is ≤3.0 ¹																																																																																																																																																																																																																					
<u>No</u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)																																																																																																																																																																																																																					
<u>No</u> Problematic Hydrophytic Vegetation ¹ (Explain)																																																																																																																																																																																																																					
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																																																																																																																																																																																																					
Hydrophytic Vegetation Present?	Yes <u>X</u> No _____																																																																																																																																																																																																																				
Remarks: (include photo numbers here or on a separate sheet.)																																																																																																																																																																																																																					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 4/2	85	5YR 4/6	15	C	PL,M	Loam/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☒ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Iron Monosulfide (A18)	☐ Depleted Dark Surface (F7)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)
☐ 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☒ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ☐	No ☒	Depth (inches): _____
Water Table Present?	Yes ☐	No ☒	Depth (inches): _____
Saturation Present?	Yes ☐	No ☒	Depth (inches): _____
(includes capillary fringe)			

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region

Project/Site: Millcreek Solar Project City/County: Silex/Lincoln Sampling Date: 12/16/2025
 Applicant/Owner: Ameren State: MO Sampling Point: SP-32
 Investigator(s): STG, CAR Section, Township, Range: _____
 Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave
 Slope (%): 2-10% Lat: 39.160644 Long: -90.981833 Datum: NAD83 (2011)
 Soil Map Unit Name: Crider silt loam, 5 to 9 percent slopes, eroded NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: The sample point was taken on an herbaceous hillslope adjacent to a depression. Climatic conditions were wetter than normal at the time of the delineation.	
Wetland ID: <u>N/A</u> ; Cowardin Class: _____	

VEGETATION – Use scientific names of plants.

Tree Stratum Plot size: <u>30 ft radius</u> 1. <u>None</u> 2. _____ 3. _____ 4. _____ 5. _____ 50% of total cover: _____ = Total Cover 20% of total cover: _____ Sapling/Shrub Stratum Plot size: <u>15 ft radius</u> 1. <u>None</u> 2. _____ 3. _____ 4. _____ 5. _____ 50% of total cover: _____ = Total Cover 20% of total cover: _____ Herb Stratum Plot size: <u>5 ft radius</u> 1. <u>Phleum pratense</u> 100 Y FACU 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 50% of total cover: <u>50</u> 100 = Total Cover 20% of total cover: <u>20</u> Woody Vine Stratum Plot size: <u>30 ft radius</u> 1. <u>None</u> 2. _____ 50% of total cover: _____ = Total Cover 20% of total cover: _____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B) Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: <u>No</u> 1 - Rapid Test for Hydrophytic Vegetation <u>No</u> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ <u>No</u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>No</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Remarks: (include photo numbers here or on a separate sheet.)	

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 4/4	100					Loam/Clayey	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Iron Monosulfide (A18)	☐ Depleted Dark Surface (F7)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)
☐ 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒ X

Remarks:**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ☒ X	Depth (inches): _____
Water Table Present?	Yes _____	No ☒ X	Depth (inches): _____
Saturation Present?	Yes _____	No ☒ X	Depth (inches): _____
(includes capillary fringe)			

Wetland Hydrology Present? Yes _____ No ☒ X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region

Project/Site: Millcreek Solar Project City/County: Silex/Lincoln Sampling Date: 12/15/2025
 Applicant/Owner: Ameren State: MO Sampling Point: SP-33
 Investigator(s): STG, CAR Section, Township, Range: Private Ownership/Not PLS
 Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None (flat)
 Slope (%): 0-2% Lat: 39.159963 Long: -90.989767 Datum: NAD83 (2011)
 Soil Map Unit Name: Goss-Gasconade-Brussels complex, 9 to 70 percent slopes, very stony NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: The sample point was taken in a forested floodplain. Climatic conditions were wetter than normal at the time of the delineation.	
Wetland ID: <u>N/A</u> ; Cowardin Class: <u> </u>	

VEGETATION – Use scientific names of plants.

Tree Stratum	Plot size: <u>30 ft radius</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>28.57%</u> (A/B)
1. <u>Juglans nigra</u>		<u>20</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Platanus occidentalis</u>		<u>20</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Ulmus rubra</u>		<u>15</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Acer saccharum</u>		<u>10</u>	<u>N</u>	<u>FACU</u>	
5. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
50% of total cover: <u>32.5</u>		65 = Total Cover		20% of total cover: <u>13</u>	
Sapling/Shrub Stratum	Plot size: <u>15 ft radius</u>	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u>Lonicera maackii</u>		<u>50</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Smilax tamnoides</u>		<u>20</u>	<u>Y</u>	<u>NA</u>	
3. <u>Celtis occidentalis</u>		<u>4</u>	<u>N</u>	<u>FAC</u>	
4. <u>Acer negundo</u>		<u>4</u>	<u>N</u>	<u>FAC</u>	
5. <u>Carpinus caroliniana</u>		<u>4</u>	<u>N</u>	<u>FAC</u>	
50% of total cover: <u>51</u>		102 = Total Cover		20% of total cover: <u>20.4</u>	
Herb Stratum	Plot size: <u>5 ft radius</u>	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>No</u> 1 - Rapid Test for Hydrophytic Vegetation <u>No</u> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ <u>No</u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>No</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>Festuca subverticillata</u>		<u>15</u>	<u>Y</u>	<u>FACU</u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
9. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
10. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
50% of total cover: <u>7.5</u>		15 = Total Cover		20% of total cover: <u>3</u>	
Woody Vine Stratum	Plot size: <u>30 ft radius</u>	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>
1. <u>None</u>		<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>		<u> </u>	<u> </u>	<u> </u>	
50% of total cover: <u> </u>		= Total Cover		20% of total cover: <u> </u>	

Remarks: (include photo numbers here or on a separate sheet.)

VEGETATION Continued (Four Strata) – Use scientific names of plants.

Sampling Point: SP-33

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Definitions of Vegetation Strata:
6. _____	_____	_____	_____	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants less than 3.28 ft tall. Woody Vine – All woody vines greater than 3.28 ft in height.
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
_____ 65 = Total Cover 50% of total cover: 32.5 20% of total cover: 13				
Sapling/Shrub Stratum				
6. <i>Rosa multiflora</i>	20	Y	FACU	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
_____ 102 = Total Cover 50% of total cover: 51 20% of total cover: 20.4				
Herb Stratum				
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
13. _____	_____	_____	_____	
14. _____	_____	_____	_____	
15. _____	_____	_____	_____	
16. _____	_____	_____	_____	
17. _____	_____	_____	_____	
18. _____	_____	_____	_____	
19. _____	_____	_____	_____	
20. _____	_____	_____	_____	
21. _____	_____	_____	_____	
22. _____	_____	_____	_____	
_____ 15 = Total Cover 50% of total cover: 7.5 20% of total cover: 3				
Wood Vine Stratum				
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 3/2	100					Loam/Clayey	

¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

² Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

☐ Histosol (A1)	☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2)	☐ Sandy Redox (S5)
☐ Black Histic (A3)	☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4)	☐ Dark Surface (S7)
☐ Stratified Layers (A5)	☐ Loamy Mucky Mineral (F1)
☐ 2 cm Muck (A10)	☐ Loamy Gleyed Matrix (F2)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Matrix (F3)
☐ Thick Dark Surface (A12)	☐ Redox Dark Surface (F6)
☐ Iron Monosulfide (A18)	☐ Depleted Dark Surface (F7)
☐ Sandy Mucky Mineral (S1)	☐ Redox Depressions (F8)
☐ 5 cm Mucky Peat or Peat (S3)	

Indicators for Problematic Hydric Soils³:

☐ Iron-Manganese Masses (F12)
☐ Red Parent Material (F21)
☐ Very Shallow Dark Surface (F22)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type:
Depth (inches):

Hydric Soil Present? Yes No X

Remarks:**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

☐ Surface Water (A1)	☐ Water-Stained Leaves (B9)
☐ High Water Table (A2)	☐ Aquatic Invertebrates (B13)
☐ Saturation (A3)	☐ True Aquatic Plants (B14)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8)	☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

☐ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> </u>
Water Table Present?	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> </u>
Saturation Present?	Yes <u> </u>	No <u> X </u>	Depth (inches): <u> </u>
(includes capillary fringe)			

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region

Project/Site: Millcreek Solar Project City/County: Silex/Lincoln Sampling Date: 12/16/2025
 Applicant/Owner: Ameren State: MO Sampling Point: SP-34
 Investigator(s): STG, CAR Section, Township, Range: Private Ownership/Not PLS
 Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): None (flat)
 Slope (%): 0-2% Lat: 39.155074 Long: -90.979416 Datum: NAD83 (2011)
 Soil Map Unit Name: Goss-Gasconade-Brussels complex, 9 to 70 percent slopes, very stony NWI classification: N/A
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☐ No ☒ (If no, explain in Remarks.)
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒
Hydric Soil Present? Yes ☐ No ☒	
Wetland Hydrology Present? Yes ☐ No ☒	
Remarks: The sample point was taken in an upland herbaceous field adjacent to a stream. Climatic conditions were wetter than normal at the time of the delineation.	
Wetland ID: <u>N/A</u> ; Cowardin Class:	

VEGETATION – Use scientific names of plants.

Tree Stratum	Plot size: <u>30 ft radius</u>	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. <u>None</u>					
2. _____					
3. _____					
4. _____					
5. _____					
50% of total cover: _____		= Total Cover			
20% of total cover: _____					
Sapling/Shrub Stratum	Plot size: <u>15 ft radius</u>				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. <u>None</u>					
2. _____					
3. _____					
4. _____					
5. _____					
50% of total cover: _____		= Total Cover			
20% of total cover: _____					
Herb Stratum	Plot size: <u>5 ft radius</u>				Hydrophytic Vegetation Indicators: <u>No</u> 1 - Rapid Test for Hydrophytic Vegetation <u>No</u> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ <u>No</u> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u>No</u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes ☐ No ☒
1. <u>Setaria pumila</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>		
2. <u>Phleum pratense</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>		
3. <u>Panicum dichotomiflorum</u>	<u>10</u>	<u>N</u>	<u>FACW</u>		
4. <u>Poa pratensis</u>	<u>10</u>	<u>N</u>	<u>FAC</u>		
5. <u>Ambrosia trifida</u>	<u>8</u>	<u>N</u>	<u>FAC</u>		
6. <u>Xanthium strumarum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>		
7. _____					
8. _____					
9. _____					
10. _____					
50% of total cover: <u>49</u>		98 = Total Cover			
20% of total cover: <u>19.6</u>					
Woody Vine Stratum	Plot size: <u>30 ft radius</u>				
1. <u>None</u>					
2. _____					
50% of total cover: _____		= Total Cover			
20% of total cover: _____					
Remarks: (include photo numbers here or on a separate sheet.)					

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 3/2	100					Loam/Clayey	

¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

² Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Gleyed Matrix (S4) |
| ☐ Histic Epipedon (A2) | ☐ Sandy Redox (S5) |
| ☐ Black Histic (A3) | ☐ Stripped Matrix (S6) |
| ☐ Hydrogen Sulfide (A4) | ☐ Dark Surface (S7) |
| ☐ Stratified Layers (A5) | ☐ Loamy Mucky Mineral (F1) |
| ☐ 2 cm Muck (A10) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Matrix (F3) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Dark Surface (F6) |
| ☐ Iron Monosulfide (A18) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ 5 cm Mucky Peat or Peat (S3) | |

Indicators for Problematic Hydric Soils³:

- ☐ Iron-Manganese Masses (F12)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (F22)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No **X**

Remarks:**HYDROLOGY****Wetland Hydrology Indicators:**

Primary Indicators (minimum of one is required; check all that apply)

- | | |
|--|---|
| ☐ Surface Water (A1) | ☐ Water-Stained Leaves (B9) |
| ☐ High Water Table (A2) | ☐ Aquatic Invertebrates (B13) |
| ☐ Saturation (A3) | ☐ True Aquatic Plants (B14) |
| ☐ Water Marks (B1) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) | ☐ Oxidized Rhizospheres on Living Roots (C3) |
| ☐ Drift Deposits (B3) | ☐ Presence of Reduced Iron (C4) |
| ☐ Algal Mat or Crust (B4) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Iron Deposits (B5) | ☐ Thin Muck Surface (C7) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Gauge or Well Data (D9) |
| ☐ Sparsely Vegetated Concave Surface (B8) | ☐ Other (Explain in Remarks) |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches): _____
Water Table Present?	Yes _____	No X	Depth (inches): _____
Saturation Present?	Yes _____	No X	Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

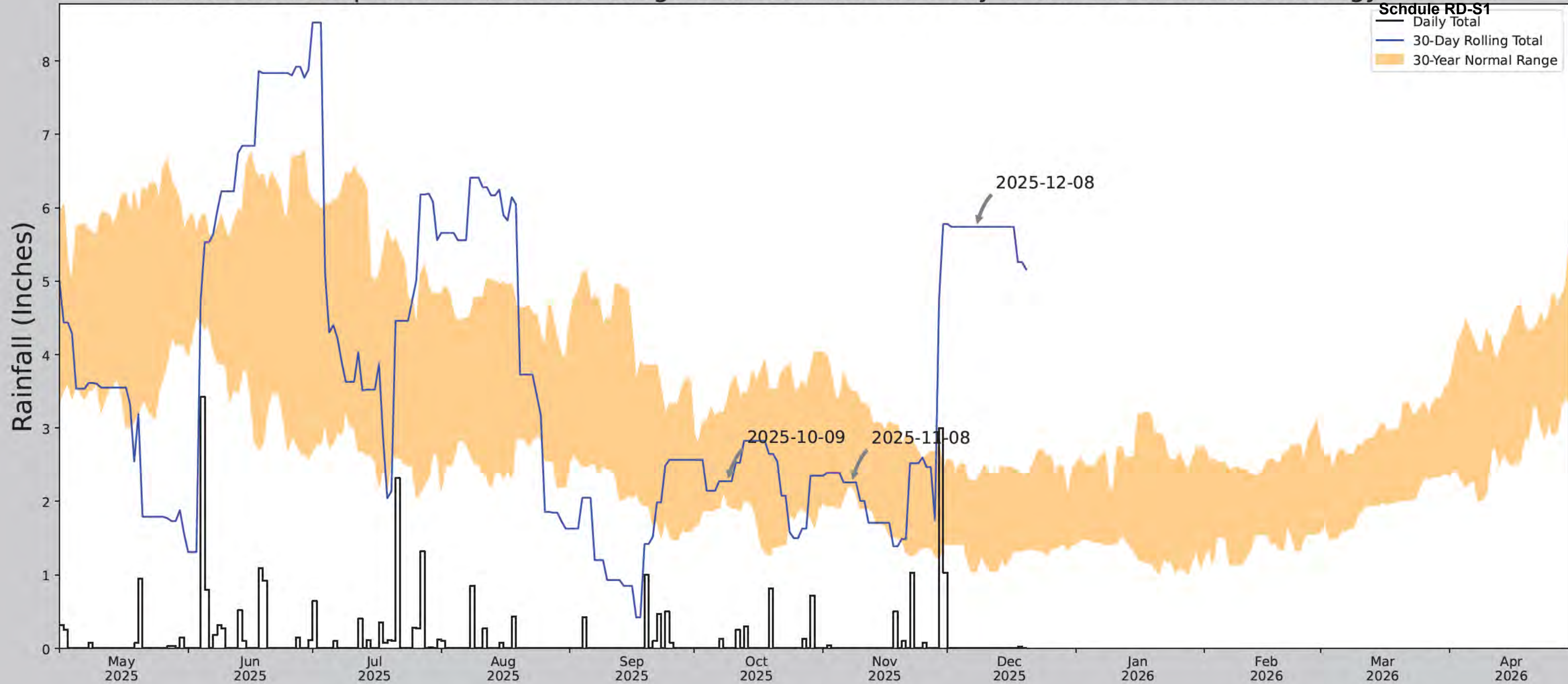
APPENDIX D

ANTECEDENT PRECIPITATION TOOL ANALYSIS

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Schedule RD-S1

Daily Total
30-Day Rolling Total
30-Year Normal Range



Coordinates	39.16763, -90.97105
Observation Date	2025-12-08
Elevation (ft)	841.603
Drought Index (PDSI)	Mild drought (2025-11)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-12-08	1.043701	2.268898	5.740158	Wet	3	3	9
2025-11-08	2.209055	3.497244	2.259843	Normal	2	2	4
2025-10-09	1.958268	3.366536	2.275591	Normal	2	1	2
Result							Wetter than Normal - 15

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0



Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BOWLING GREEN 1 E	39.3444, -91.1711	895.013	16.24	53.41	8.175	10247	86
BOWLING GREEN 0.6 SE	39.3326, -91.1884	895.997	1.233	0.984	0.556	207	1
LOUISIANA	39.4517, -91.0464	470.144	9.965	424.869	8.718	852	0
VANDALIA	39.3075, -91.4925	764.108	17.366	130.905	10.088	45	3
SILEX 3E	39.1328, -91.0047	685.039	17.119	209.974	11.298	1	0
CLARKSVILLE L&D 24	39.3736, -90.9061	459.974	14.3	435.039	12.656	1	0

Attachment B

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Schedule RD-S1

— Daily Total
— 30-Day Rolling Total
30-Year Normal Range

Rainfall (Inches)



Coordinates	39.16763, -90.97105
Observation Date	2025-12-15
Elevation (ft)	841.603
Drought Index (PDSI)	Mild drought (2025-11)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-12-15	1.125984	2.456693	5.740158	Wet	3	3	9
2025-11-15	1.704724	3.056299	1.708661	Normal	2	2	4
2025-10-16	1.763386	3.629921	2.826772	Normal	2	1	2
Result							Wetter than Normal - 15

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0



Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BOWLING GREEN 1 E	39.3444, -91.1711	895.013	16.24	53.41	8.175	10247	86
BOWLING GREEN 0.6 SE	39.3326, -91.1884	895.997	1.233	0.984	0.556	207	1
LOUISIANA	39.4517, -91.0464	470.144	9.965	424.869	8.718	852	0
VANDALIA	39.3075, -91.4925	764.108	17.366	130.905	10.088	45	3
SILEX 3E	39.1328, -91.0047	685.039	17.119	209.974	11.298	1	0
CLARKSVILLE L&D 24	39.3736, -90.9061	459.974	14.3	435.039	12.656	1	0

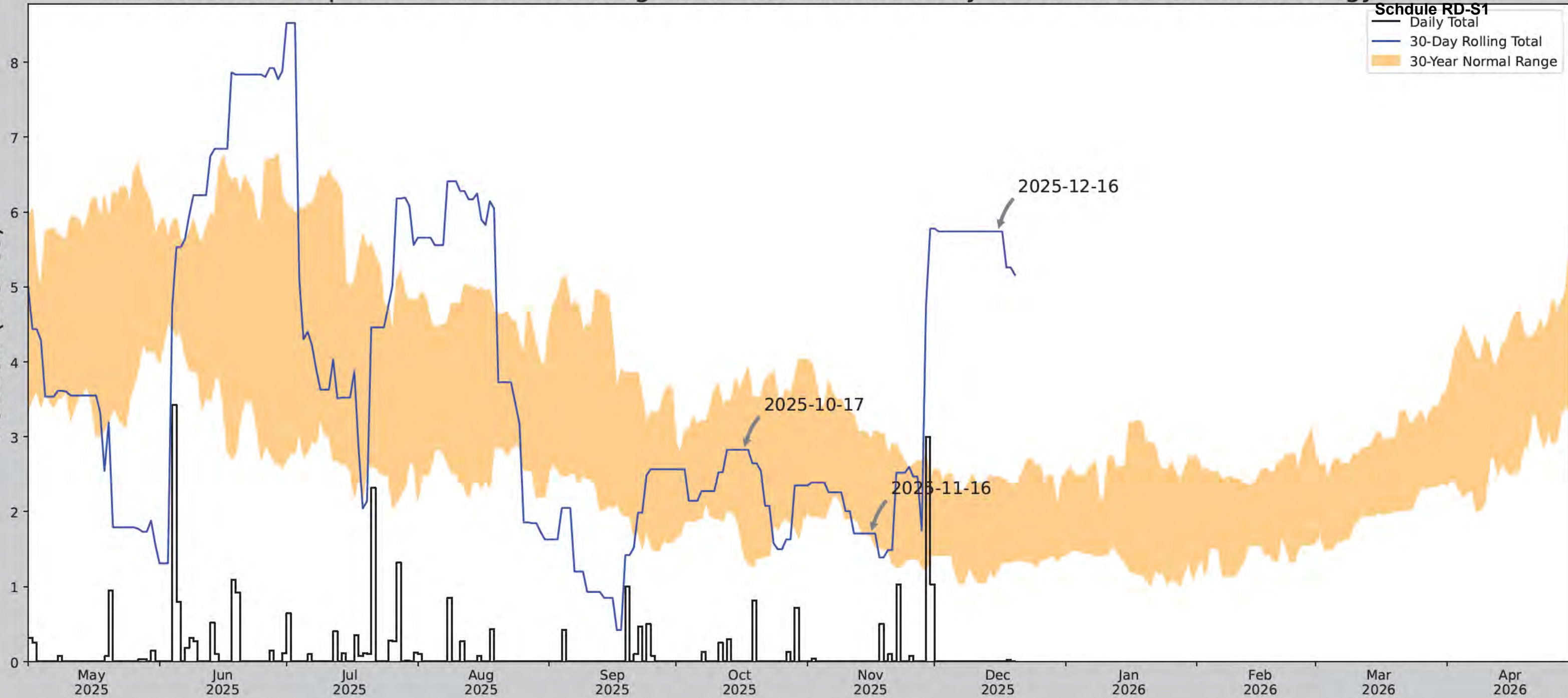
Attachment B

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Schedule RD-S1

— Daily Total
— 30-Day Rolling Total
30-Year Normal Range

Rainfall (Inches)



Coordinates	39.16763, -90.97105
Observation Date	2025-12-16
Elevation (ft)	841.603
Drought Index (PDSI)	Mild drought (2025-11)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-12-16	1.229921	2.470473	5.740158	Wet	3	3	9
2025-11-16	1.677165	2.962205	1.708661	Normal	2	2	4
2025-10-17	1.408661	3.770473	2.826772	Normal	2	1	2
Result							Wetter than Normal - 15

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0



Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

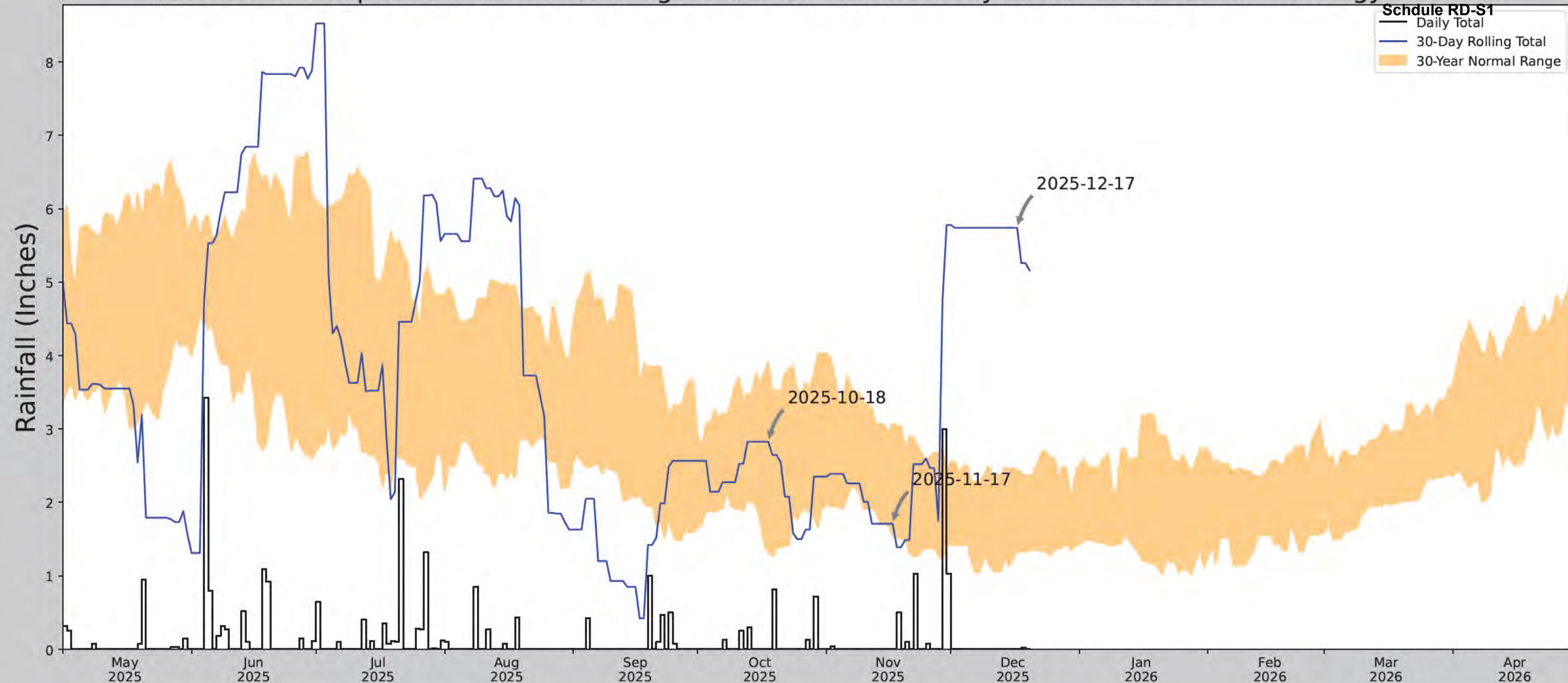
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BOWLING GREEN 1 E	39.3444, -91.1711	895.013	16.24	53.41	8.175	10247	86
BOWLING GREEN 0.6 SE	39.3326, -91.1884	895.997	1.233	0.984	0.556	207	1
LOUISIANA	39.4517, -91.0464	470.144	9.965	424.869	8.718	852	0
VANDALIA	39.3075, -91.4925	764.108	17.366	130.905	10.088	45	3
SILEX 3E	39.1328, -91.0047	685.039	17.119	209.974	11.298	1	0
CLARKSVILLE L&D 24	39.3736, -90.9061	459.974	14.3	435.039	12.656	1	0

Attachment B

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Schedule RD-S1

Daily Total
30-Day Rolling Total
30-Year Normal Range



Coordinates	39.16763, -90.97105
Observation Date	2025-12-17
Elevation (ft)	841.603
Drought Index (PDSI)	Mild drought (2025-11)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-12-17	1.325984	2.444488	5.740158	Wet	3	3	9
2025-11-17	1.538189	3.082677	1.708661	Normal	2	2	4
2025-10-18	1.32126	3.922835	2.826772	Normal	2	1	2
Result							Wetter than Normal - 15

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0



Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

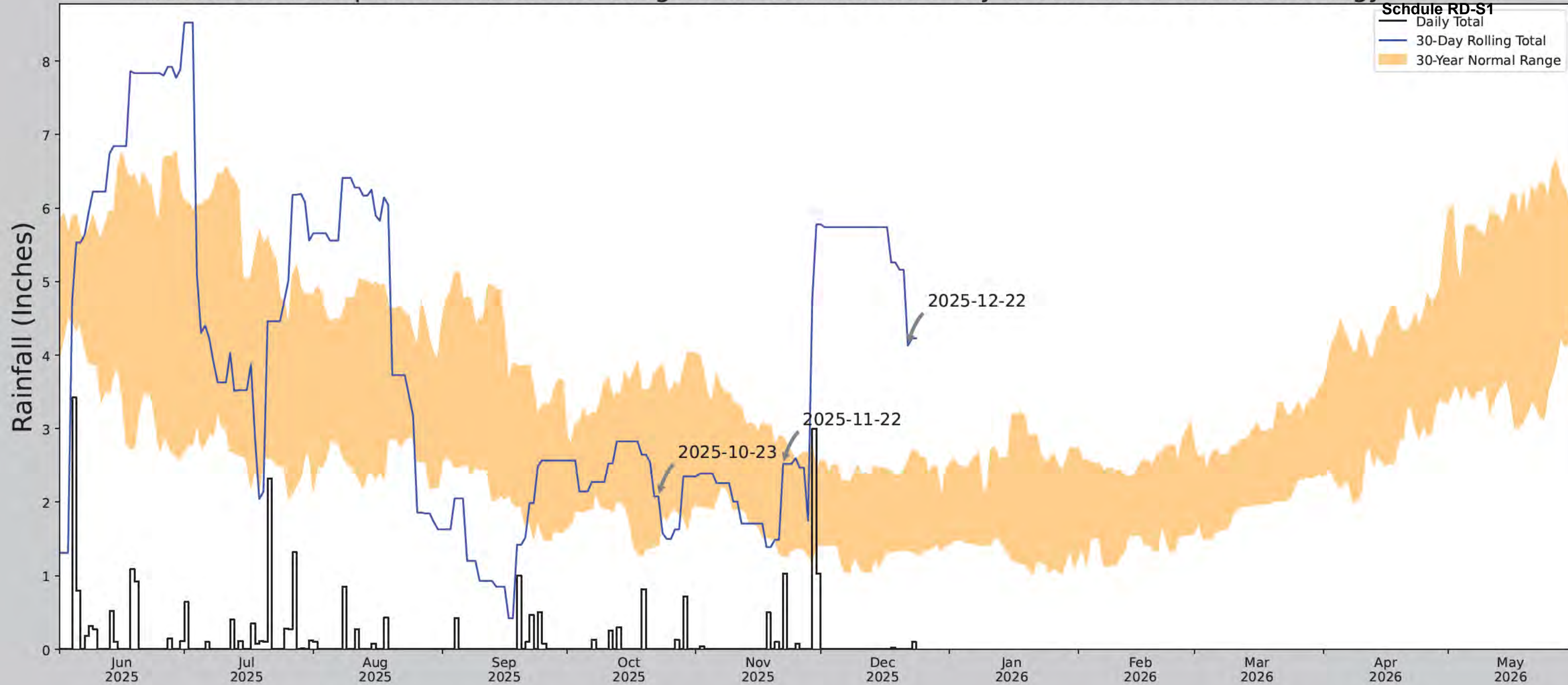
Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BOWLING GREEN 1 E	39.3444, -91.1711	895.013	16.24	53.41	8.175	10247	86
BOWLING GREEN 0.6 SE	39.3326, -91.1884	895.997	1.233	0.984	0.556	207	1
LOUISIANA	39.4517, -91.0464	470.144	9.965	424.869	8.718	852	0
VANDALIA	39.3075, -91.4925	764.108	17.366	130.905	10.088	45	3
SILEX 3E	39.1328, -91.0047	685.039	17.119	209.974	11.298	1	0
CLARKSVILLE L&D 24	39.3736, -90.9061	459.974	14.3	435.039	12.656	1	0

Attachment B

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network

Schedule RD-S1

— Daily Total
— 30-Day Rolling Total
30-Year Normal Range



Coordinates	39.16763, -90.97105
Observation Date	2025-12-22
Elevation (ft)	841.603
Drought Index (PDSI)	Mild drought (2025-11)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-12-22	1.337795	2.554724	4.129921	Wet	3	3	9
2025-11-22	1.262205	2.88937	2.519685	Normal	2	2	4
2025-10-23	1.408268	3.812205	2.07874	Normal	2	1	2
Result							Wetter than Normal - 15

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0



Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
BOWLING GREEN 1 E	39.3444, -91.1711	895.013	16.24	53.41	8.175	10247	86
BOWLING GREEN 0.6 SE	39.3326, -91.1884	895.997	1.233	0.984	0.556	207	1
LOUISIANA	39.4517, -91.0464	470.144	9.965	424.869	8.718	852	0
VANDALIA	39.3075, -91.4925	764.108	17.366	130.905	10.088	45	3
SILEX 3E	39.1328, -91.0047	685.039	17.119	209.974	11.298	1	0
CLARKSVILLE L&D 24	39.3736, -90.9061	459.974	14.3	435.039	12.656	1	0

Attachment B

ONSITE FLOOD STUDY REPORT

Millcreek BESS Lincoln County, MO

PREPARED FOR

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PREPARED BY



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August 18, 2026

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Figure 4. HEC-RAS Study Map
Figure 5. 100-Year Depth Map Existing Condition
Figure 6. NRCS WSS Site Soil Map
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EXECUTIVE SUMMARY

Ameren is proposing to construct Millcreek BESS development, which encompasses approximately 40 acres of mainly agricultural land located in Lincoln County, Missouri. The site is bounded by Highway 61 to the east, Millcreek Church Road to the west, and Mill Creek to the south. The location of the proposed development is shown below in Figure 1.



Figure 1: Millcreek BESS Project Location

The purpose of this drainage study is to provide the results of the onsite and offsite drainage analysis and to estimate the 100-year inundation depths at the Millcreek BESS site under existing conditions. This report describes the methodology used to perform this analysis and determine existing drainage patterns.

Drainage patterns were determined from a two-dimensional (2-D) hydrologic and hydraulic analysis using the U.S. Army Corp of Engineers' Hydrologic Center River Analysis System (HEC-RAS) version 6.6.

Expected flooding for the 100-year, 24-hour storm event was modeled for the Millcreek BESS site. Flooding depths were calculated for existing terrain conditions in the project area. Results from the model show that a majority of the onsite areas experience water depths of less than 1 foot and select onsite areas reach up to two feet in depth. Areas that experience depths near two feet are generally confined to channelized flow. The model setup and results can be viewed in the exhibits in the Appendix A.

1 INTRODUCTION

1.1 PROJECT BACKGROUND

Kimley-Horn was retained by Ameren to conduct a hydrologic and hydraulic analysis for the proposed Millcreek BESS Site. The project area is located in Lincoln County, MO, about 1.5 miles east of Whiteside, MO (**Figure 1**). The proposed development is located between Highway 61 to the east, Millcreek Church Road to the west, and Mill Creek to the south. The purpose of this report is to provide the results of the onsite and offsite drainage analysis for existing conditions.

1.2 SITE DESCRIPTION

The project site is approximately 40 acres located in Lincoln County, MO. The site is primarily agricultural land. From the NRCS (Natural Resources Conservation Service) Web Soil Survey database (**Figure 6**), the majority of onsite soils are hydrologic soil group C and D.

Onsite and offsite site topography is shown in (**Figure 2**) with 10-ft and 20-ft contours developed from publicly available Digital Elevation Model (DEM) data and surveyed topography data. Elevations range from approximately 494 to 930 feet for the model area.

The site is shown on FEMA Flood Insurance Rate Map (FIRM) Panel 29113C0090D (**Figure 7**), dated September 29, 2010. The site is mapped as FEMA Special Flood Hazard Area (SFHA) Zone X, which indicates areas of minimal flood risk. Further downstream, there is a FEMA SFHA Zone A present, associated with Mill Creek. Zone A SFHAs indicate areas where FEMA has identified a flood risk in the 100-year floodplain, but Base Flood Elevations (BFEs) have not been developed.

2 ENGINEERING METHODOLOGY

Existing onsite and offsite drainage patterns were determined by a two-dimensional (2-D) hydrologic and hydraulic analysis (**Figure 3**). The 2-D analysis boundary extends beyond the project site to capture both onsite and offsite runoff that impacts flood patterns on the site. Boundary conditions were set along the sides of the 2-D analysis boundary where runoff enters and exits the analysis. Publicly available LiDAR data with 1-meter grid cell size was obtained from the USGS National Map and was used as the base terrain for the 2-D analysis. Site specific topographic survey was obtained and incorporated into the public LiDAR to perform the subsequent drainage analysis.

2.1 MODEL SELECTION

To model the runoff and drainage patterns during a 100-year rainfall event, a 2-D hydrodynamic model was used. Specifically, the U.S Army Corp of Engineers' Hydrologic Center River Analysis System (HEC-RAS) version 6.6 was used to perform the 2-D analysis.

Runoff was estimated based on a direct rainfall method wherein the model applies the 100-year rainfall directly to the 2-D grid mesh. The model then simulates rainfall transformation to runoff and routes the runoff across a 2-D grid.

2.2 HYDROLOGIC ANALYSIS

2.2.1 ONSITE HYDROLOGY

Hydrology was simulated as rainfall runoff on the 2-D grid. To account for infiltration, the SCS Curve Number (CN) loss method was utilized. The base land cover layer was sourced from the National Land Cover Dataset (NLCD). Important hydraulic features like roadways and streams were delineated and refined based on aerial photography, elevation data, and inundation depth results. **Table 1** below lists the Manning's "n" values for friction losses used in the 2-D model.

Land Use Classification	Manning's n-Value
Straight Row Crops – Poor Condition	0.060
Woods, Good Condition	0.150
¼ Acre Residential	0.090
Open Space, Good Condition	0.060
Emergent Herbaceous Wetland	0.050
Pasture, Good Condition	0.080
Open Water	0.020
Woods-Grass Combination – Good Condition	0.050
Streets – Curb & Gutter	0.020
Dirt Roads	0.020
River and Immediate Overbank	0.045

Table 1: Land Use Parameters and Manning's n-Values

Soil data was obtained from NRCS and classified by Hydrologic Soil Group (HSG) (**Figure 6**). Most onsite soils are HSG Class C and D and therefore display moderate to low infiltration rates and slow rates of water transmission.

2.2.2 PRECIPITATION

The precipitation model used in this analysis was based on a frequency storm with a rainfall duration of 24 hours. The 100-year (1% annual chance), 24-hour rainfall frequency event was analyzed for this study. A rainfall depth of 6.74 inches was selected based on NOAA Atlas 14 Precipitation Frequency Data Server (PFDS). A hyetograph was developed for the rainfall distribution using the MSE Type 4 rainfall distribution curve. The resulting hyetograph was applied to the HEC-RAS hydrologic model as a precipitation gage. This model was used to generate an excess precipitation time series for the 2-D model area.

Precipitation excess, the accumulated rainfall that exceeds the initial abstraction and infiltration, was calculated using HEC-RAS 6.6. HEC-RAS calculates an infiltration layer based on a land cover layer

and soils layer input by the user. The infiltration layer results in a weighted curve number value, initial abstraction value, and minimum infiltration rate value for every spatial location within the 2-D model mesh. As rainfall is applied to the 2-D model area, the amount of excess rainfall, or rainfall that results in runoff, is calculated across the entire 2-D model domain. The total excess rainfall was 4.31 inches. Precipitation quantities are summarized in **Table 2**.

Precipitation Type	Quantity (in)
Rainfall Depth	6.74
Excess Depth	4.31

Table 2: Precipitation Type and Associated Quantities

2.3 HYDRAULIC ANALYSIS

The study area was modeled using the 2-D option in HEC-RAS. For the existing conditions analysis, the terrain surface was built from a combination of publicly available LiDAR and surveyed topography.

A computational grid was created for the surface to develop a group of rating tables for the stage storage volume in each computational grid cell. HEC-RAS also cuts cross sections at each cell face of the computational grid to simulate flow more accurately between cells. The entire onsite area has been included in the 2-D model surface. The computational grid outside of the project area was developed with a 100-foot maximum cell size. A refinement region was added around the project site to increase computation detail. The maximum cell size in the refinement region is 50 feet.

The computational grid mesh was further refined by adding breaklines to subdivide cells along important hydraulic features such as culverts, channels, roads, and berms (**Figure 4**). The minimum and maximum computation grid size associated with breaklines is 10 ft and 15 ft, respectively. Existing culverts in the ALTA survey were provided by the client, with critical hydraulic structures included in the model as SA/2D connections. Other culverts were modeled as modifications of the terrain in order to simulate flow from the upstream side of a weir to the downstream side. A total of 9 culverts and 65 terrain modifications were included in the model.

Outflow boundary conditions were defined at the limits of the 2-D model area. The model has six outflows spread around its entire perimeter. One of these outflow areas ties into a FEMA Zone AE, and has a known BFE of 519 ft. This boundary condition utilizes a Stage Hydrograph method to model outflow. The stage hydrograph was created by beginning at the ground elevation, then set to have the water surface elevation gradually rise until it reached the BFE slightly before the peak rainfall volume was applied to the model. For the remaining five boundary conditions, corresponding BFE's were not available, therefore boundary conditions were set to calculate the normal depth based on the slope of the terrain in their respective areas. Slopes used in these boundary conditions range from 0.005 ft/ft to 0.01 ft/ft.

2.4 INUNDATION DEPTH CALCULATION SUMMARY

Predicted flooding depths for site conditions were calculated based on the 2-D modeling simulation and were mapped within the study area. **Figure 5** shows the inundation depths for existing conditions. The mapping reflects depths that are expected to equal or exceed 0.25 feet. Shallower depths were removed from the mapping as is typically done for models based on the direct rainfall method, as this method produces depth in every grid cell of the mesh, requiring filtering of the results based on depths.

Within the project site, the majority of ponding remains close to the tributary channels. A majority of the ponding on the site is less than 1.0 foot; however, flood depths within channelized areas can close to 2.0 feet. Areas near Mill Creek show can reach deeper depths, with the intersection of Mill Creek and Millcreek Church Road reaching depths higher than 7 feet to the west of the project site.

Appendix A – Figures



**FIGURE 1:
SITE LOCATION MAP**

MILLCREEK BESS
FACILITY

LINCOLN COUNTY, MISSOURI



Legend

 Limits of Disturbance



0 500 1,000
Feet

PREPARED BY

Kimley»Horn

Ameren

AUGUST 2026

**FIGURE 2:
ON-SITE TOPOGRAPHIC
WORK MAP**

MILLCREEK BESS
FACILITY

LINCOLN COUNTY, MISSOURI



Legend

- 2-D Model Area
- Limits of Disturbance
- Onsite Contours (5-ft)
- Offsite Contours (20-ft)



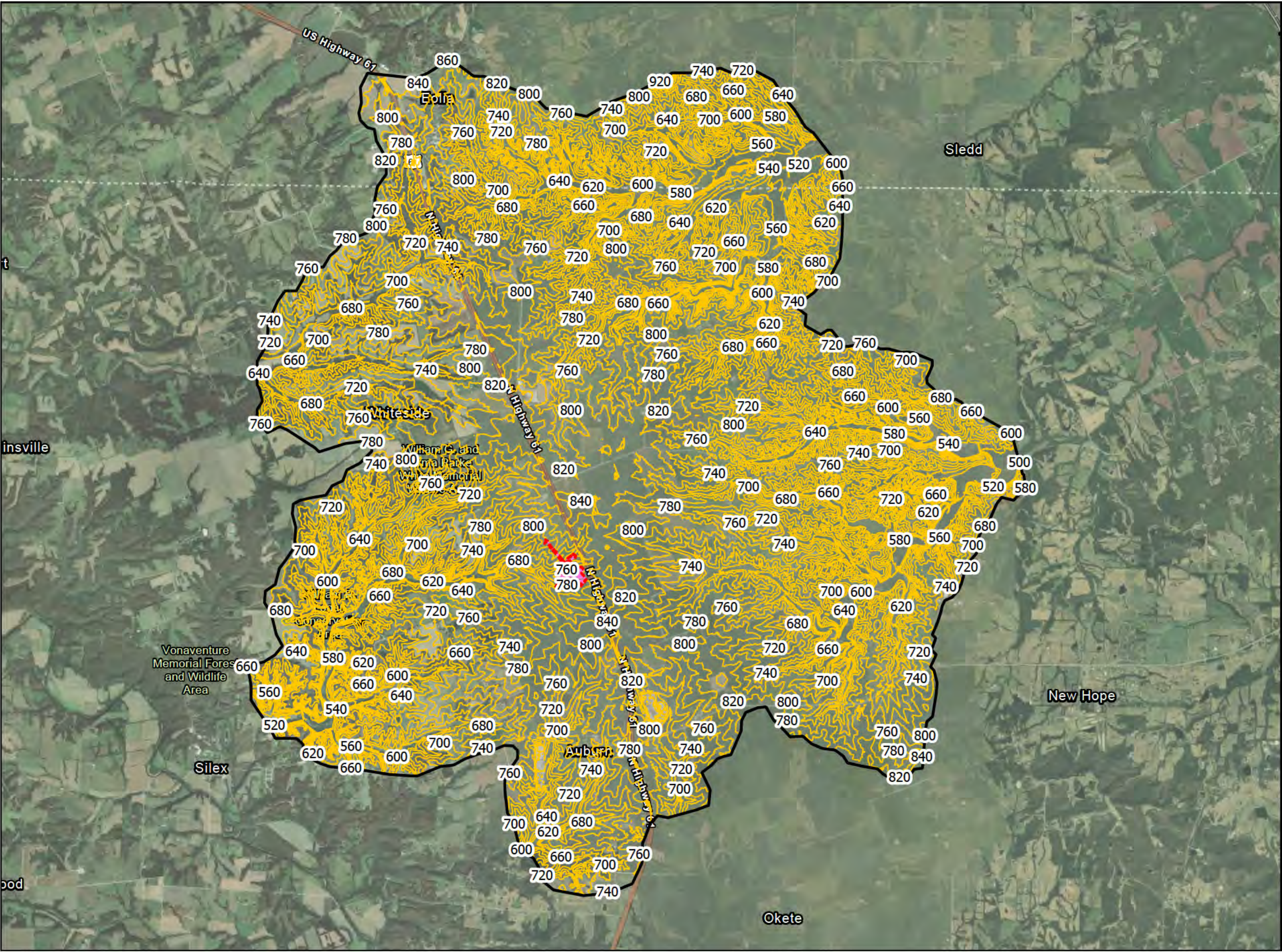
Page 1 of 2

0 3,700 7,400
Feet

PREPARED BY
Kimley»Horn

Ameren

AUGUST 2026



**FIGURE 2:
ON-SITE TOPOGRAPHIC
WORK MAP**

MILLCREEK BESS
FACILITY

LINCOLN COUNTY, MISSOURI



Legend

- 2-D Model Area
- Limits of Disturbance
- Onsite Contours (5-ft)
- Offsite Contours (20-ft)



Page 2 of 2

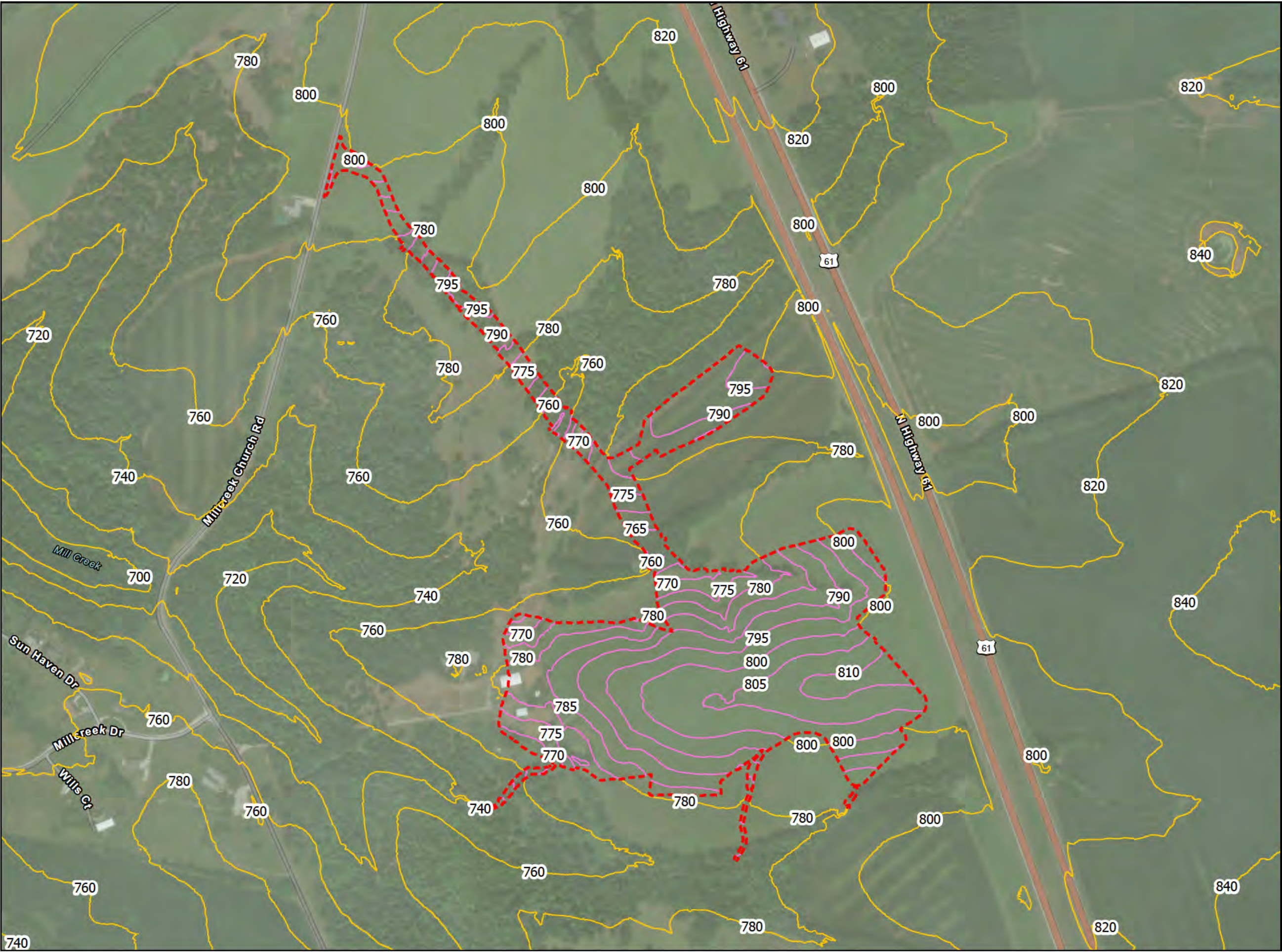
0 255 510
Feet

PREPARED BY

Kimley»Horn

Ameren

AUGUST 2026



**FIGURE 3:
DRAINAGE AREA MAP**

MILLCREEK BESS
FACILITY

LINCOLN COUNTY, MISSOURI



Legend

- 2-D Model Area
- Limits of Disturbance
- HUC-12 Hydrologic Unit: Subwatershed
- Flowlines



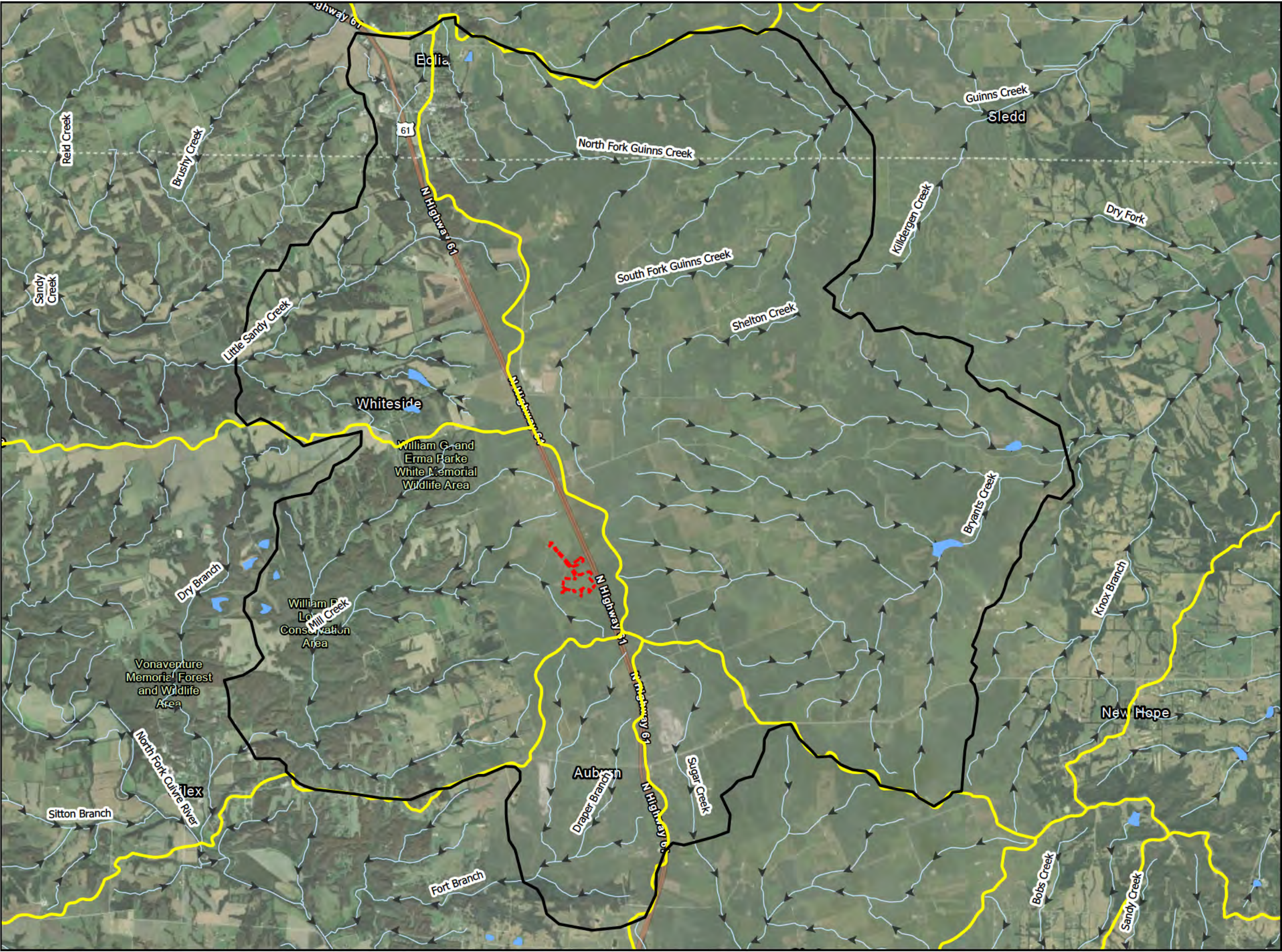
0 4,500 9,000
Feet

PREPARED BY

Kimley»Horn

Ameren

AUGUST 2026



**FIGURE 4:
HEC-RAS STUDY MAP**

MILLCREEK
BESS FACILITY

LINCOLN COUNTY, MISSOURI



Legend

- 2-D Model Area
- Limits of Disturbance
- Refinement Region
- 2-D Mesh Grid
- Breaklines
- Boundary Conditions
- Culverts
- Terrain Modifications



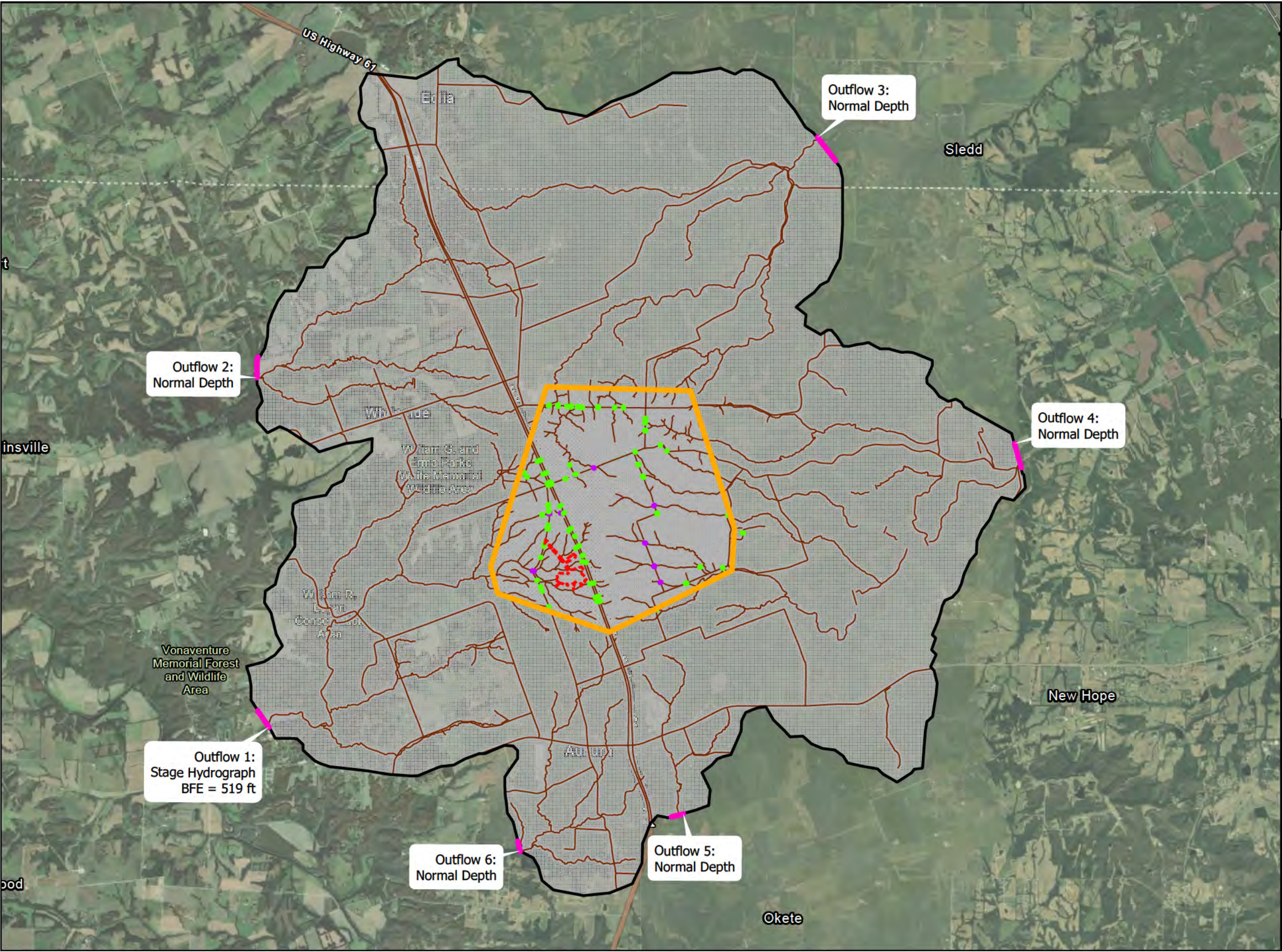
Page 1 of 2
0 3,450 6,900
Feet

PREPARED BY

Kimley»Horn

Ameren

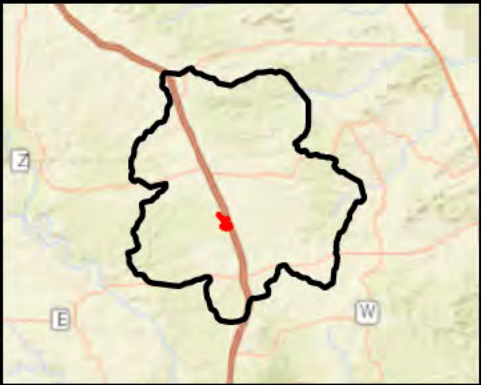
AUGUST 2026



**FIGURE 4:
HEC-RAS STUDY MAP**

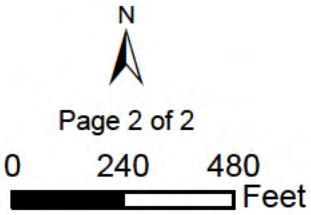
MILLCREEK
BESS FACILITY

LINCOLN COUNTY, MISSOURI



Legend

- 2-D Model Area
- Limits of Disturbance
- Refinement Region
- 2-D Mesh Grid
- Breaklines
- Boundary Conditions
- Culverts
- Terrain Modifications



PREPARED BY
Kimley»Horn

Ameren

AUGUST 2026

**FIGURE 5:
100-YEAR DEPTH MAP
EXISTING CONDITION**

MILLCREEK
BESS FACILITY

LINCOLN COUNTY, MISSOURI



Legend

 Limits of Disturbance	 1.99 - 2.49
 2-D Model Area	 2.49 - 2.99
 Inundation Depth (ft) 0.25 - 0.49	 2.99 - 3.99
 0.49 - 0.99	 3.99 - 4.99
 0.99 - 1.49	 4.99 - 5.99
 1.49 - 1.99	 5.99 - 6.99
	 Above 7



0 375 750 Feet

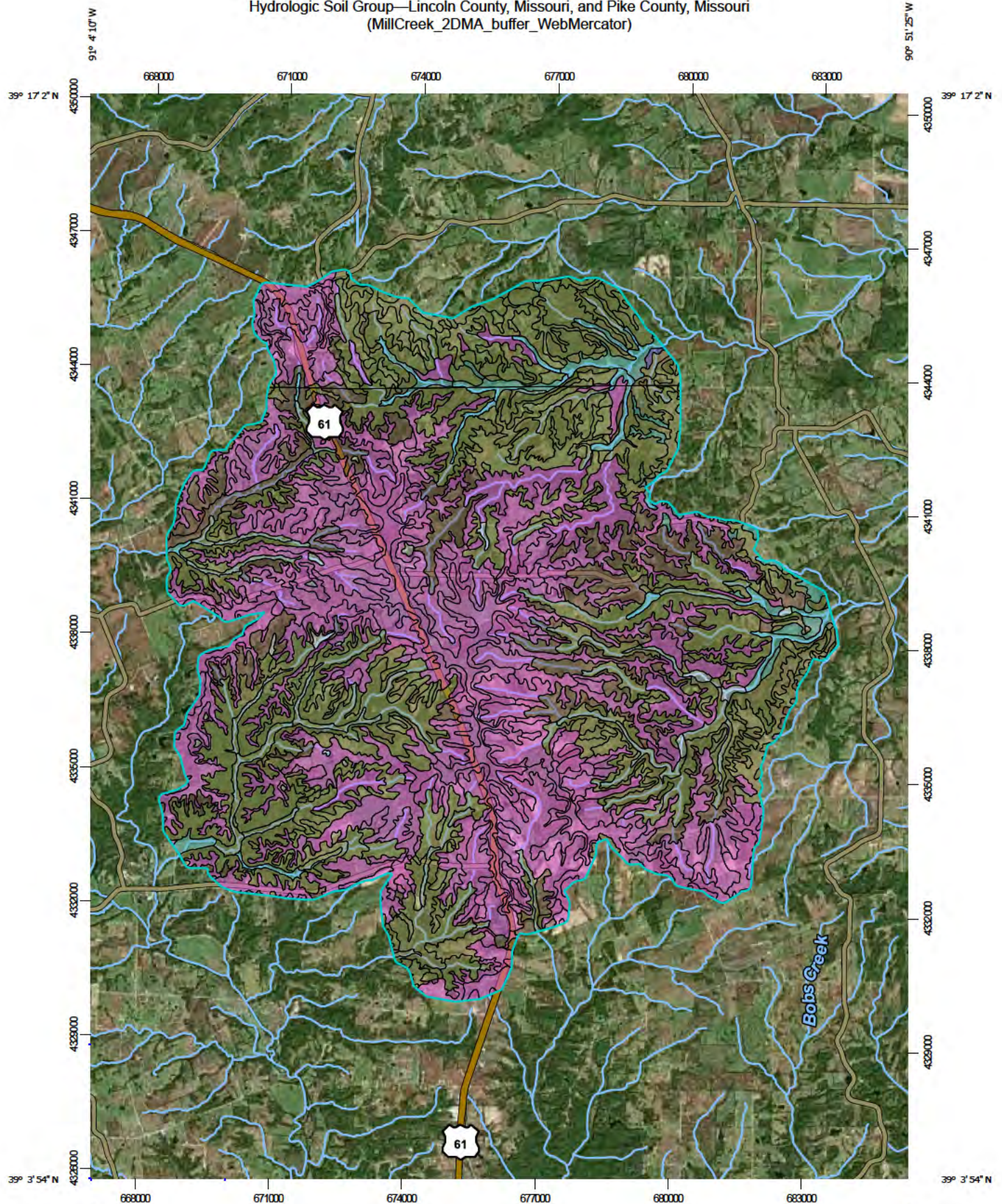
PREPARED BY

Kimley»Horn

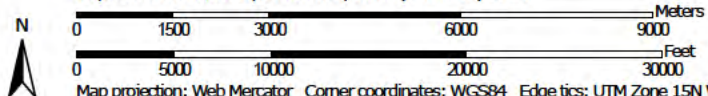
Ameren

AUGUST 2026

Hydrologic Soil Group—Lincoln County, Missouri, and Pike County, Missouri
(MillCreek_2DMA_buffer_WebMercator)



Map Scale: 1:118,000 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

Attachment C
Page 1 of 8

Hydrologic Soil Group—Lincoln County, Missouri, and Pike County, Missouri
(MillCreek_2DMA_buffer_WebMercator)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lincoln County, Missouri
 Survey Area Data: Version 29, Sep 2, 2025

Soil Survey Area: Pike County, Missouri
 Survey Area Data: Version 28, Sep 2, 2025

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 8, 2020—Aug 30, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
30066	Gorin silt loam, 2 to 5 percent slopes	C	20.9	0.1%
30068	Gorin silt loam, 5 to 9 percent slopes, eroded	C	26.6	0.1%
34018	Moniteau silt loam, 0 to 3 percent slopes, rarely flooded	C/D	202.4	0.5%
36020	Kennebec silt loam, 0 to 2 percent slopes, occasionally flooded	C	126.9	0.3%
50008	Keswick silt loam, 5 to 9 percent slopes, eroded	D	5,915.5	14.3%
50009	Keswick silt loam, 9 to 14 percent slopes, eroded	C/D	3,724.3	9.0%
50058	Mexico silt loam, 0 to 2 percent slopes	D	1,412.1	3.4%
50059	Mexico silt loam, 1 to 4 percent slopes, eroded	D	2,950.6	7.1%
60003	Menfro silt loam, 9 to 14 percent slopes, eroded	B	199.5	0.5%
60015	Goss gravelly silt loam, 9 to 14 percent slopes, eroded	C	7.3	0.0%
60028	Weller silt loam, 5 to 9 percent slopes, eroded	D	0.5	0.0%
60031	Winfield silt loam, 9 to 14 percent slopes, eroded	C	1.8	0.0%
60066	Brevator loam, 14 to 30 percent slopes	C	1,632.8	3.9%
60072	Bucklick silty clay loam, 14 to 20 percent slopes, eroded	C	455.1	1.1%
60073	Bucklick silty clay loam, 5 to 9 percent slopes, eroded	C	756.7	1.8%
60074	Bucklick silty clay loam, 9 to 14 percent slopes, eroded	C	1,413.3	3.4%



Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
60081	Crider silt loam, 14 to 20 percent slopes	C	373.6	0.9%
60084	Crider silt loam, 5 to 9 percent slopes, eroded	C	922.4	2.2%
60086	Crider silt loam, 9 to 14 percent slopes, eroded	C	1,245.2	3.0%
60103	Gasconade-Rock outcrop complex, 9 to 70 percent slopes, very stony	D	1,426.1	3.4%
60112	Goss very gravelly silt loam, 14 to 45 percent slopes	C	97.0	0.2%
60120	Goss-Gasconade-Brussels complex, 9 to 70 percent slopes, very stony	C	4,534.5	10.9%
60126	Hatton silt loam, 2 to 5 percent slopes	D	3,630.2	8.8%
60129	Hatton silt loam, 5 to 9 percent slopes	D	2,821.2	6.8%
60165	Menfro silt loam, 2 to 5 percent slopes	C	236.8	0.6%
60168	Menfro silt loam, 5 to 9 percent slopes, eroded	C	787.4	1.9%
60244	Winfield silt loam, 5 to 10 percent slopes, eroded	C	8.4	0.0%
64040	Weller silt loam, terraces, 2 to 5 percent slopes	D	69.2	0.2%
66001	Dameron silt loam, 0 to 2 percent slopes, frequently flooded	C	286.0	0.7%
66014	Haymond silt loam, 0 to 3 percent slopes, frequently flooded	B	331.1	0.8%
66077	Dameron silt loam, 0 to 3 percent slopes, occasionally flooded	C	34.8	0.1%
66116	Haymond silt loam, 0 to 2 percent slopes, occasionally flooded	B	92.7	0.2%
66135	Dameron silt loam, 1 to 4 percent slopes, occasionally flooded	C	586.1	1.4%



Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
67012	Cedargap silt loam, 1 to 3 percent slopes, frequently flooded, cool	B	105.6	0.3%
67035	Haymond silt loam, 1 to 3 percent slopes, frequently flooded	B	31.5	0.1%
67521	Cedargap silt loam, 0 to 3 percent slopes, frequently flooded, cool	B	46.0	0.1%
99000	Pits, quarry		3.0	0.0%
99001	Water		199.6	0.5%
Subtotals for Soil Survey Area			36,714.4	88.5%
Totals for Area of Interest			41,487.2	100.0%

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
30066	Gorin silt loam, 2 to 5 percent slopes	C	89.3	0.2%
30068	Gorin silt loam, 5 to 9 percent slopes, eroded	C	108.8	0.3%
50008	Keswick silt loam, 5 to 9 percent slopes, eroded	D	274.9	0.7%
50009	Keswick silt loam, 9 to 14 percent slopes, eroded	C/D	88.6	0.2%
50012	Putnam silt loam, 0 to 1 percent slopes	D	8.8	0.0%
50018	Armstrong loam, 3 to 7 percent slopes, eroded	D	122.3	0.3%
50020	Calwoods silt loam, 2 to 5 percent slopes	D	12.2	0.0%
50058	Mexico silt loam, 0 to 2 percent slopes	D	147.9	0.4%
50059	Mexico silt loam, 1 to 4 percent slopes, eroded	D	356.6	0.9%
60003	Menfro silt loam, 9 to 14 percent slopes, eroded	B	12.6	0.0%
60008	Menfro silt loam, 20 to 45 percent slopes	C	20.2	0.0%
60015	Goss gravelly silt loam, 9 to 14 percent slopes, eroded	C	452.8	1.1%



Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
60031	Winfield silt loam, 9 to 14 percent slopes, eroded	C	457.1	1.1%
60055	Winfield silt loam, 2 to 5 percent slopes	C	111.4	0.3%
60066	Brevator loam, 14 to 30 percent slopes	C	2.8	0.0%
60070	Bucklick silt loam, 9 to 14 percent slopes	C	217.8	0.5%
60081	Crider silt loam, 14 to 20 percent slopes	C	29.6	0.1%
60084	Crider silt loam, 5 to 9 percent slopes, eroded	C	3.2	0.0%
60086	Crider silt loam, 9 to 14 percent slopes, eroded	C	14.0	0.0%
60112	Goss very gravelly silt loam, 14 to 45 percent slopes	C	571.9	1.4%
60120	Goss-Gasconade-Brussels complex, 9 to 70 percent slopes, very stony	C	54.7	0.1%
60165	Menfro silt loam, 2 to 5 percent slopes	C	66.0	0.2%
60168	Menfro silt loam, 5 to 9 percent slopes, eroded	C	12.8	0.0%
60193	Minnith silt loam, 5 to 9 percent slopes, eroded	C	106.6	0.3%
60212	Ranacker flaggy silty clay loam, 9 to 14 percent slopes	D	49.6	0.1%
60229	Vanmeter silty clay loam, 14 to 35 percent slopes, eroded	D	137.0	0.3%
60234	Weller silt loam, 2 to 5 percent slopes	D	0.1	0.0%
60244	Winfield silt loam, 5 to 10 percent slopes, eroded	C	778.3	1.9%
64040	Weller silt loam, terraces, 2 to 5 percent slopes	D	14.2	0.0%
66014	Haymond silt loam, 0 to 3 percent slopes, frequently flooded	B	28.3	0.1%



Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
66078	Dameron, occasionally flooded-Cedargap, frequently flooded complex, 0 to 3 percent slopes	B	173.5	0.4%
66107	Tice silt loam, 0 to 2 percent slopes, occasionally flooded	B/D	18.5	0.0%
67012	Cedargap silt loam, 1 to 3 percent slopes, frequently flooded, cool	B	85.1	0.2%
67013	Cedargap-Dameron complex, 1 to 3 percent slopes, frequently flooded	B	75.4	0.2%
67521	Cedargap silt loam, 0 to 3 percent slopes, frequently flooded, cool	B	69.6	0.2%
Subtotals for Soil Survey Area			4,772.8	11.5%
Totals for Area of Interest			41,487.2	100.0%



Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher



NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Missouri East State Plane Coordinate System. The horizontal datum was NAD83. Differences in datum, spheroid, projection or state plane zones used in the production of FIRM for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242 or visit its website at <http://www.ngs.noaa.gov/>.

Base map information shown on this FIRM was derived from U.S. Geological Survey Digital Orthophoto Quadrangles (DOQs) produced at a scale of 1:12,000 from photography dated 1996 or later.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the FEMA Map Service Center at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://msc.fema.gov/>.

If you have questions about this map or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/fhfr/>.

The profile baselines depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the profile baseline, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A No Base Flood Elevations determined.
- ZONE AE Base Flood Elevations determined.
- ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99 Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet*

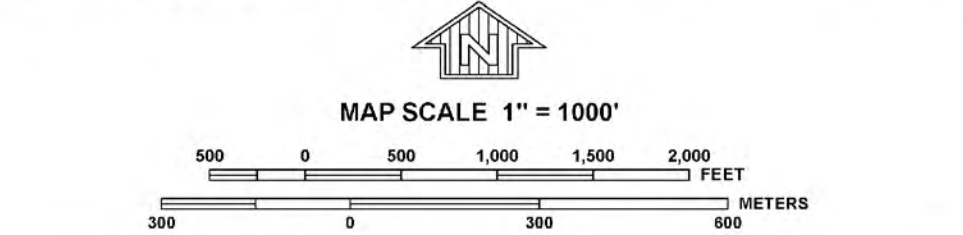
* Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 1000-meter Universal Transverse Mercator grid ticks, zone 15
- 5000-foot grid values: Missouri State Plane coordinate system, East Zone (FIPSZONE 2401), Transverse Mercator projection
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index
EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
September 29, 2010
EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-658-6620.



NFIP
NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0090D
FIRM
FLOOD INSURANCE RATE MAP
LINCOLN COUNTY,
MISSOURI
AND INCORPORATED AREAS

PANEL 90 OF 480
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)
CONTAINS:
COMMUNITY
LINCOLN COUNTY
NUMBER
290869
PANEL
0090
SUFFIX
D

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.
MAP NUMBER
29113C0090D
EFFECTIVE DATE
SEPTEMBER 29, 2010
Federal Emergency Management Agency
Attachment C