



MEMO

TO	Lynn Bark Energy Center, LLC
FROM	Environmental Resources Management, Inc.
DATE	25 October 2024
REFERENCE	Lynn Bark Energy Center
SUBJECT	Protected Species Habitat Assessment

1. INTRODUCTION

On behalf of Lynn Bark Energy Center, LLC (Lynn Bark), Environmental Resources Management, Inc. (ERM) is pleased to provide the following Protected Species Habitat Assessment for the proposed Lynn Bark Energy Center (Project). The purpose of this memorandum is to establish compliance with applicable federal and state environmental regulations. ERM recognizes that the U.S. Fish and Wildlife Service (USFWS) and the Office of Kentucky Nature Preserves (OKNP) have responsibility for the protection of various natural resources. Figures are included as Attachment A.

The Project is situated on approximately 1,514 acres of undeveloped, forested land on a reclaimed surface mine in the western-central portion of Martin County, Kentucky with stream corridors dissecting the area (Site). The Site is accessed by State Highway 3 and Lynn Bark Road. Additionally, several undeveloped pathways from the former mine traversed the Site (Attachment A; Figure 1 and 2).

2. DESKTOP DATA REVIEW

ERM reviewed published occurrence records of protected species from available online data sources including obtaining a USFWS Information for Planning and Consultation (IPaC) and an OKNP Biological Assessment Tool (KYBAT) report. ERM additionally requested karst and cave location data from the Kentucky Speleological Society (KSS) and waterway data from Kentucky Division of Water (KDOW).

The results of the IPaC report identified three protected species (Attachment B; USFWS 2024):

- tricolored bat (*Perimyotis subflavus*) – federal proposed endangered and state listed threatened
- gray bat (*Myotis grisescens*) – federal listed endangered
- Indiana bat (*Myotis sodalis*) – federal listed endangered

No migratory bird species were listed in the IPaC report as birds of particular concern in or near the Site. Bird species are specifically listed either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention.

Additionally, there are no documented cases of bald or golden eagles (*Haliaeetus leucocephalus*; *Aquila chrysaetos*), protected by the Bald and Golden Eagle Protection Act, being present at the Site. No designated USFWS critical habitat is known to occur within the Site (Attachment B; USFWS 2024). Additionally, monarch butterfly (*Danaus Plexippus*) was identified within the IPaC report for the Site listed as a federal candidate species which are not currently protected by the Endangered Species Act or Kentucky law, however, given the species potential to be uplisted to federal threatened or endangered in the immediate future, this species warrants assessment of the Project's potential impact to its existence and assessment of monarch butterfly was included as a best management practice.

The OKNP KYBAT was utilized to assess potential natural resources and protected species within a two-mile radius of the Site. KYBAT did not identify protected species or protected species habitat occurrences within the Site. The following state protected species were identified within the KYBAT report within a 2-mile search radius of the Site (Attachment C; OKNP 2024):

- northern long-eared bat (*Myotis septentrionalis*; NLEB) – federal and state listed endangered.
- common raven (*Corvus corax*) – state listed threatened
- Rafinesque's big-eared bat (*Corynorhinus rafinesquii*) – state listed special concern

KSS data was not received at the completion of this assessment and the assessment will be updated upon reception.

Based on waterway information obtained from KDOW and the results of the wetland and waterbody delineation, completed September 10, 2024. Several small, isolated emergent wetlands occur throughout the Site. Perennial and intermittent streams were identified in steep areas (Figure 3). None of the identified waterways are present within the Site that would require a special use or cold-water habitat designation. (e.g., Outstanding State Resource Waters, Coldwater Aquatic Habitats, or other Special Use Waters) from KDOW (KDOW 2024).

3. FIELD HABITAT ASSESSMENT

ERM biologists conducted a field habitat assessment of the Site from August 9-11, 2024, to identify ecological communities and land uses to determine whether the Site could support protected species identified in the USFWS IPaC. Assessments were conducted in conjunction with a routine wetland delineation and consisted of meander surveys and targeted habitat reviews with a focus on known protected species habitat requirements. Photographs representative of site conditions are included in Attachment D.

3.1 OVERALL CONDITIONS

The site is a reclaimed surface mine and is currently utilized by local sportsman as a hunting park. There are several open field clearings surrounded by shrub-scrub with the dominant species including autumn olive (*Elaeagnus umbellata*), black locust (*Robinia pseudoacacia*), and tulip poplar (*Liriodendron tulipifera*). The understory of these areas is densely vegetated with blackberry (*Rubus sp.*).

Mixed deciduous forest was present along the steep slopes of the Site, where mining activities did not occur. Dominant species in these areas include white oak (*Quercus alba*), Hickory (*Carya sp.*), American Beech (*Fagus grandifolia*), and southern red oak (*Quercus rubra*).

3.2 PROTECTED SPECIES ASSESSMENT

Determinations of potential protected species, identified from desktop resources analyzed in Section 2, habitat and presence were made from observations and assessment from the site survey. Table 1 presents a summary of the federal and state listed species, their suitable habitats, and related findings. A figure depicting observed habitat is included as Figure 4.

TABLE 1. PROTECTED SPECIES POTENTIALLY OCCURRING AT OR IN A 2-MILE RADIUS VICINITY OF THE SITE.

Taxonomic Group	Species	Protection Status	Preferred Habitat	Preferred Habitat Observed on Site?	Likelihood for Occurrence on Site	USFWS Effects Finding
Mammals	tricolored bat (<i>Perimyotis subflavus</i>)	PFE, ST	Mixed, hardwood, and coniferous forests and riparian areas. Hibernation occurs in caves and abandoned mines. Roosts live and dead leaf clusters hanging the canopy of large trees. Often use bridges and culverts to roost as well.	Yes	Possible; suitable forested habitat observed on the Site.	If no tree removal, May Affect – Not Likely to Adversely Affect. If tree removal, survey warranted.
	Rafinesque’s big-eared bat (<i>Corynorhinus rafinesquii</i>)	SSC	Roosts in cave entrances, hollow trees, abandoned buildings and under bridges and in the forests.	Yes	Possible; suitable forested habitat observed on the Site.	Not likely to jeopardize the continued existence of the species.
	northern long-eared bat (<i>Myotis septentrionalis</i>)	FE, SE	May be found roosting singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags, or dead trees. Males and non-reproductive females may also roost in cooler places, like caves and mines.	Yes	Possible; suitable forested habitat observed on the Site.	If no tree removal, May Affect – Not Likely to Adversely Affect. If tree removal, survey warranted.
Insects	monarch butterfly (<i>Danaus plexippus</i>)	FC	Breeding exclusively occurs on patches of milkweed; otherwise, may occupy old fields and mixed woodland habitats.	Yes	Possible; old fields and milkweed are present within the Site.	Not likely to jeopardize the continued existence of the species.

Taxonomic Group	Species	Protection Status	Preferred Habitat	Preferred Habitat Observed on Site?	Likelihood for Occurrence on Site	USFWS Effects Finding
Birds	common raven (<i>Corvus corax</i>)	ST	Extremely common in woodlands, usually in coniferous forests and along rocky coastlines.	Yes	Possible; suitable habitat is present throughout the Site.	Not likely to jeopardize the continued existence of the species.

Note: FE = Federally Endangered; FC = Federal Candidate; FT = Federally Threatened; PFE = Proposed Federally Endangered; SE = State Endangered; ST = State Threatened; SSC = State Listed Special Concern.

Source: USFWS 2024; OKNP 2024

3.3 FEDERALLY PROTECTED SPECIES

3.3.1 BATS

During the summer, NLEB and Indiana bat roost underneath bark, in cavities, and in crevices of live and dead trees that provide suitable roosting habitat, with access to nearby open areas for foraging opportunities. The tricolored bat roosts in live and/or dead leaf clusters in the foliage of live and dead trees and sometimes utilize bridges and culverts for roosting. The gray bat uses caves year-round and forages over open water when it is not hibernating. No caves were observed within the Project, but the Site provides suitable foraging habitat for the gray bat. Suitable roosting and maternity trees for the tricolored, Indiana, and NLEB are sparse within the disturbed portions of the Site and are primarily concentrated within the narrow valleys not disturbed during mining activities. Foraging habitat within the Site is medium quality due to native vegetative cover. If tree clearing is anticipated to occur for this Project, timing restrictions for tree clearing and/or additional bat-specific surveys may be required. The inactive season for bats in Kentucky is from November 15 – March 31.

3.3.2 MONARCH BUTTERFLY

The monarch butterfly can be found in a variety of habitats, such as forests, agricultural fields, and meadows; however, wildflowers for feeding adults and native milkweeds (*Asclepias* spp.) as host plants must be available. Common milkweed (*Asclepias syriaca*) was encountered in upland fields throughout the Site. Additionally, two monarch butterflies were observed in the Site. Since the monarch butterfly is currently a candidate species, no additional coordination with USFWS is required regarding this species. If the species is listed prior to project completion, additional coordination may be necessary.

3.3.3 BALD EAGLE

There are no documented occurrences of eagles within the Project Site or surrounding areas. No bald eagles or bald eagle nests were observed during the habitat assessment.

3.4 STATE PROTECTED SPECIES

Kentucky state statuses for protected species are found in Title XII, Chapter 150 of the Kentucky Revised Statutes. Taking or harassing a species designated as state endangered or threatened is a violation of state law.

3.4.1 BIRDS

Suitable forested areas were identified within the Site which could be classified as potential habitat for the common raven. The Project should incorporate avoidance and

minimizations measures of these forested habitats and initiate coordination with OKNP to determine additional measures to minimize risk of disturbance to common ravens.

3.4.2 BATS

The forested areas identified within the Site are considered potential habitat for the Rafinesque's big-eared bat. Areas identified as suitable habitat should be avoided during the maternity season and recommendations from OKNP should be implemented in site design and construction to avoid impacts to these species. Species specific presence/absence surveys for bats may be required dependent on tree clearing and direction from OKNP.

4. CONCLUSIONS AND RECOMMENDATIONS

Suitable habitat was observed for multiple federal and state protected species. No designated critical habitat is present at the Site. Based on the habitat assessment, considerations of the above-mentioned species, and current design plans, ERM concludes that there is potential for federally listed threatened and endangered species to occur on the Site and that the development of the proposed project has the potential to affect species under the jurisdiction of the USFWS and OKNP.

Consultation with USFWS is required under Section 7 of the Endangered Species Act if the Project has a federal nexus, such as Clean Water Act, Section 404 permitting, to determine potential Project impacts to federally listed species and recommended mitigation measures to ensure compliance, however, informal consultation is recommended as a best management practice.

The following summarizes recommendations of next steps:

- Avoid and/or minimize impacts to forested areas to the greatest extent practicable.
- Initiate correspondence with USFWS and OKNP for further comment and recommendations for the project to de-risk potential impacts to protected species.
- If the Project cannot avoid cutting trees and under the direction of USFWS and OKNP, perform applicable species presence/probable absence surveys.

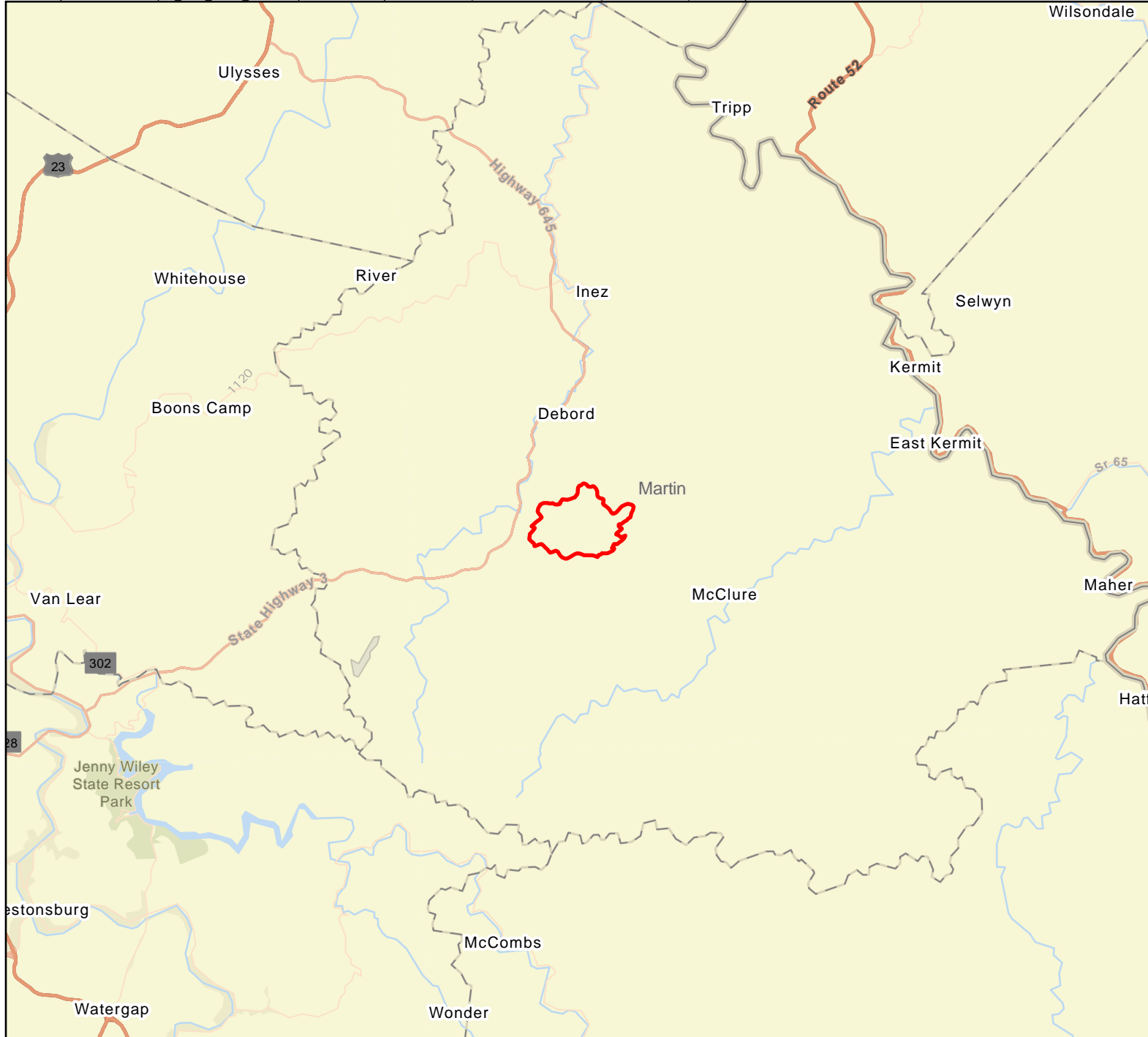
5. REFERENCES


United States Fish and Wildlife Service Information for Planning and Consultation (USFWS IPaC). 2024. <https://ecos.fws.gov/ipac/>. Accessed August 2024.

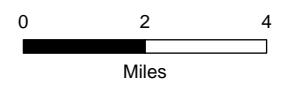
Office of Kentucky Nature Preserves (OKNP). 2024. Kentucky Biological Assessment Data Request. Kentucky Energy and Environment Cabinet. August 30, 2024.

Kentucky Division of Water (KDOW). 2024. Water Maps Portal. <https://watermaps.ky.gov/>. Accessed October 3, 2024

ATTACHMENT A FIGURES

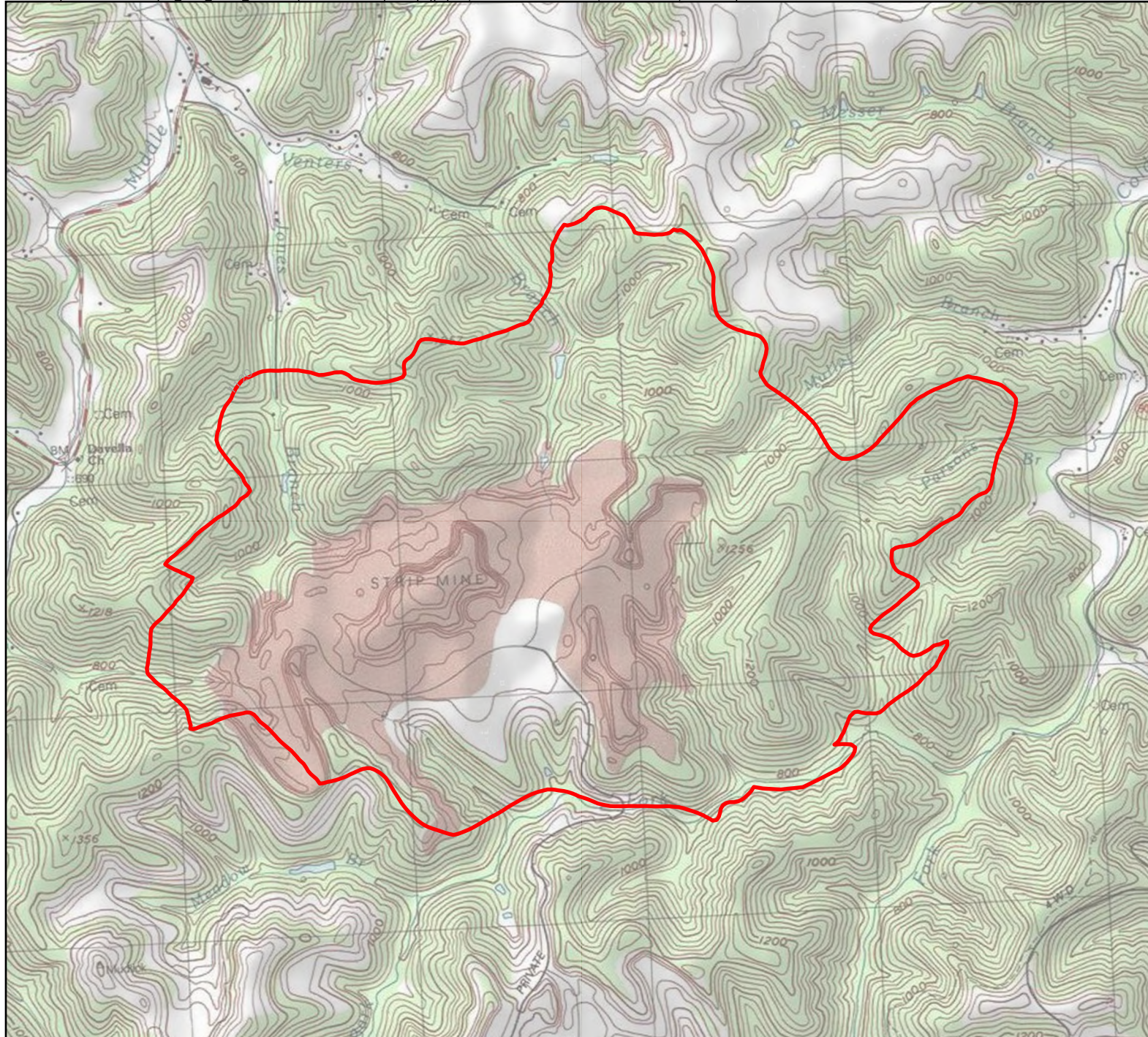



Legend
 Project Boundary



**Figure 1
 Site Map**
 Lynn Bark Energy Center
 Lynn Bark Energy Center, LLC
 Martin County, Kentucky





Legend
 Project Boundary

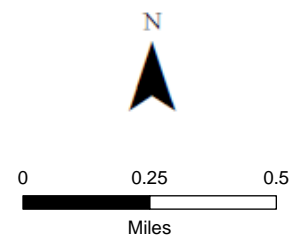
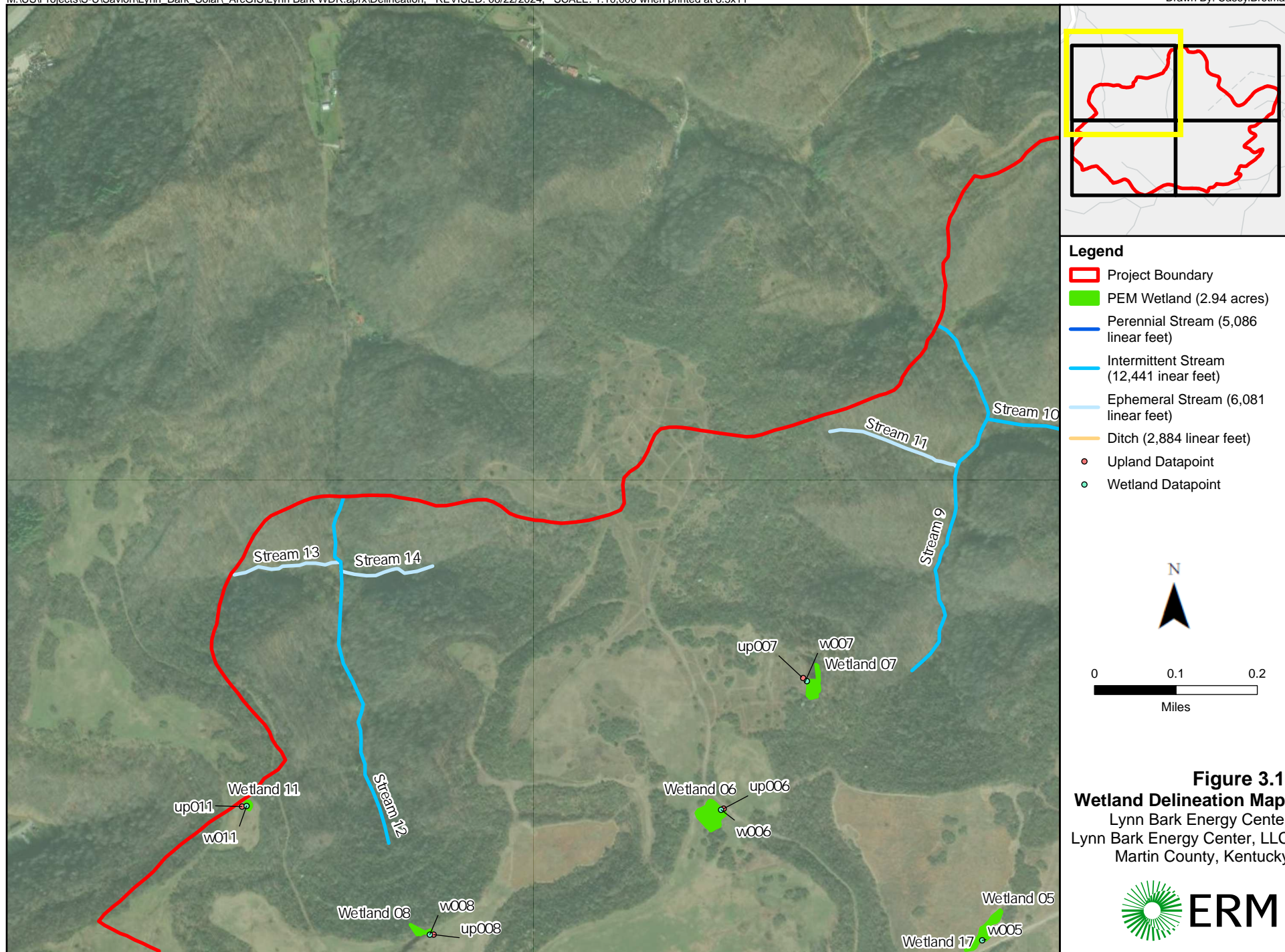


Figure 2
Topographic Map
Lynn Bark Energy Center
Lynn Bark Energy Center, LLC
Martin County, Kentucky





- Project Boundary
- PEM Wetland (2.94 acres)
- Perennial Stream (5,086 linear feet)
- Intermittent Stream (12,441 linear feet)
- Ephemeral Stream (6,081 linear feet)
- Ditch (2,884 linear feet)
- Upland Datapoint
- Wetland Datapoint

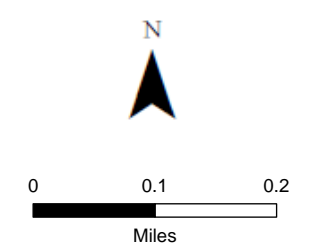
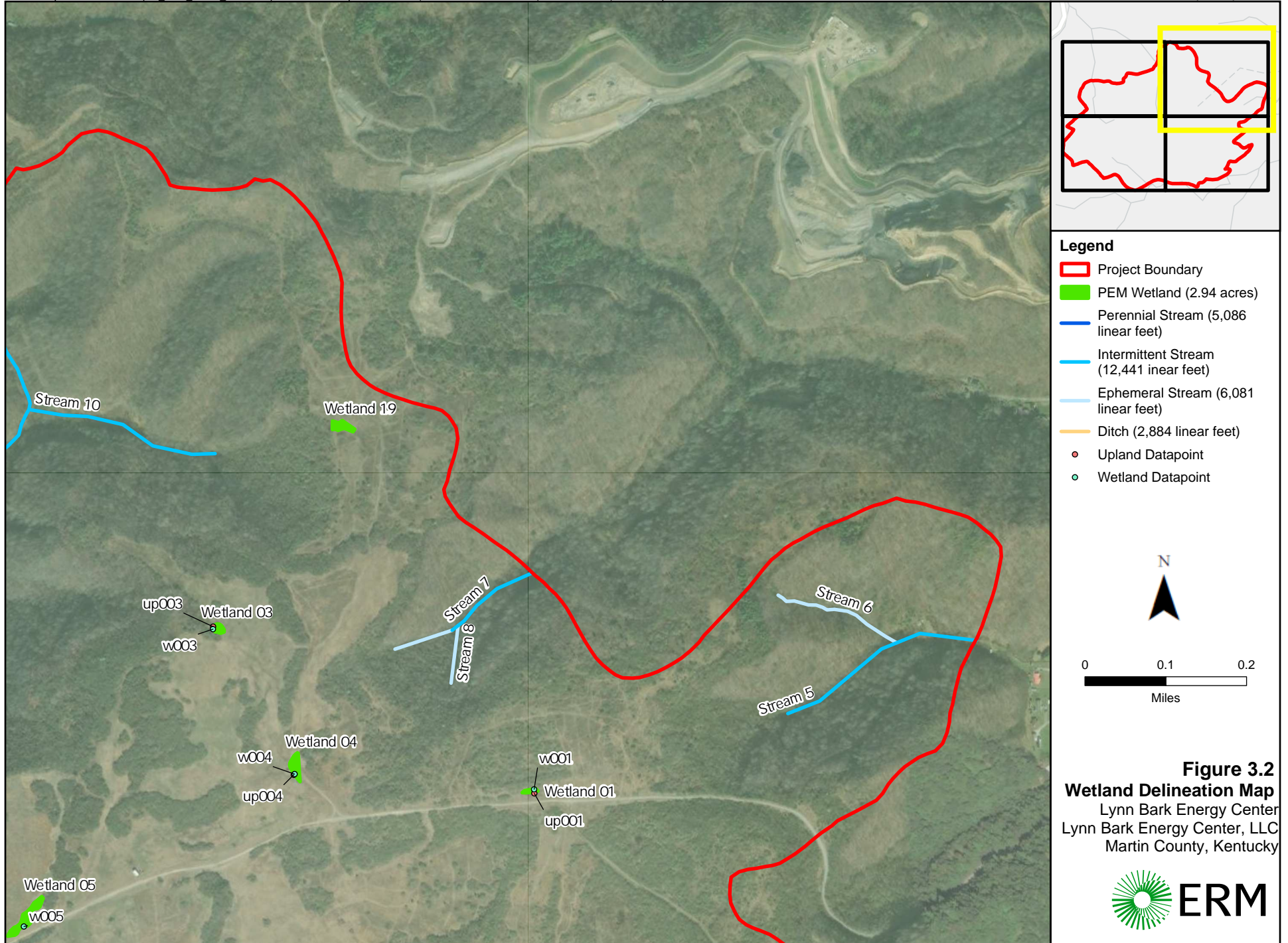










Figure 3.1
Wetland Delineation Map
Lynn Bark Energy Center
Lynn Bark Energy Center, LLC
Martin County, Kentucky





Legend

-  Project Boundary
-  PEM Wetland (2.94 acres)
-  Perennial Stream (5,086 linear feet)
-  Intermittent Stream (12,441 linear feet)
-  Ephemeral Stream (6,081 linear feet)
-  Ditch (2,884 linear feet)
-  Upland Datapoint
-  Wetland Datapoint

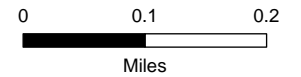
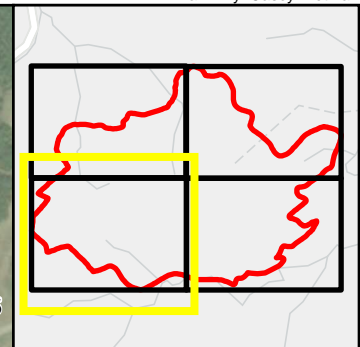
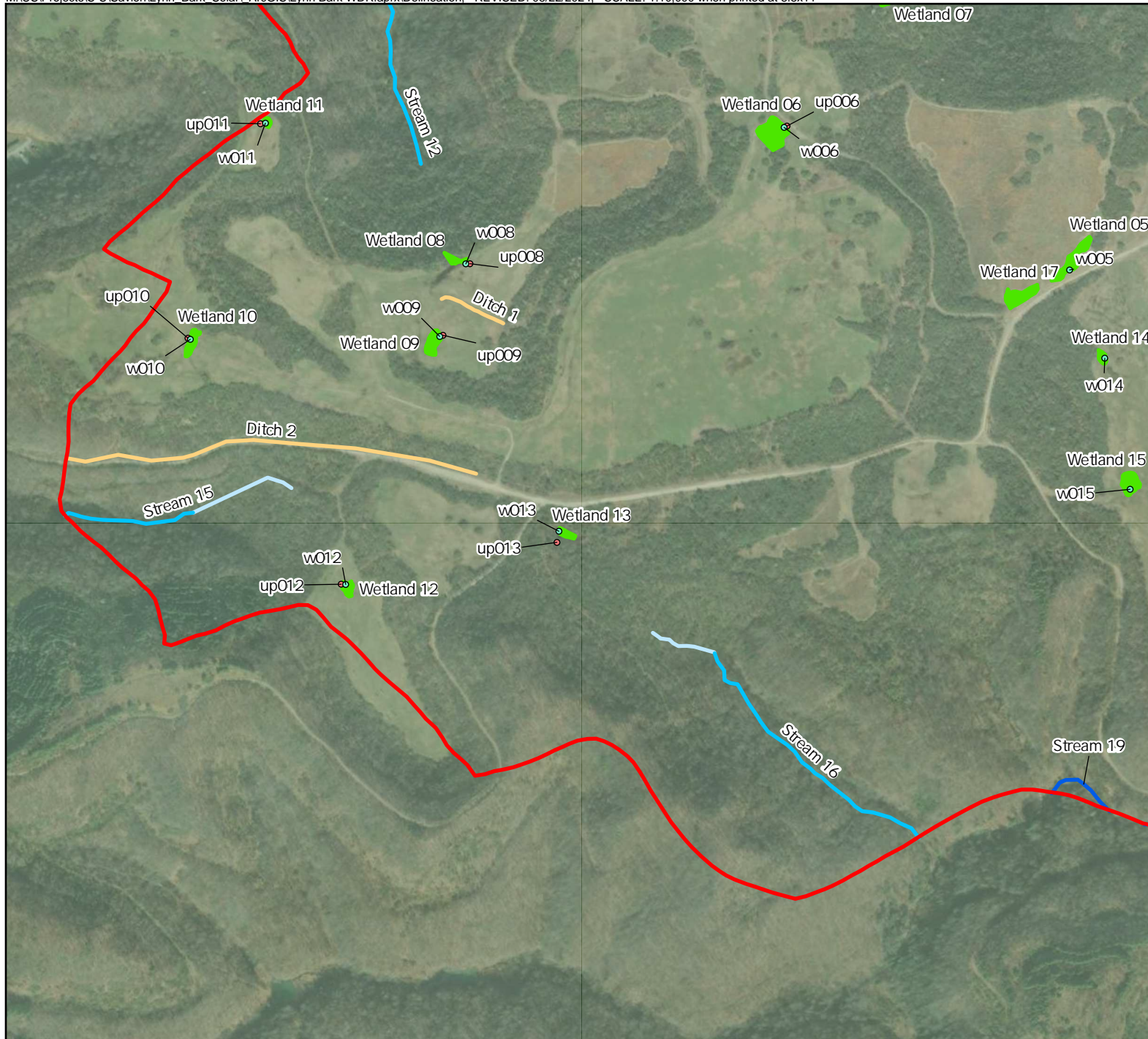


Figure 3.2
Wetland Delineation Map
Lynn Bark Energy Center
Lynn Bark Energy Center, LLC
Martin County, Kentucky





- Legend**
- ▭ Project Boundary
 - ▭ PEM Wetland (2.94 acres)
 - ▬ Perennial Stream (5,086 linear feet)
 - ▬ Intermittent Stream (12,441 linear feet)
 - ▬ Ephemeral Stream (6,081 linear feet)
 - ▬ Ditch (2,884 linear feet)
 - Upland Datapoint
 - Wetland Datapoint

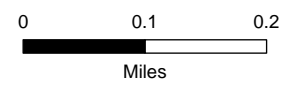
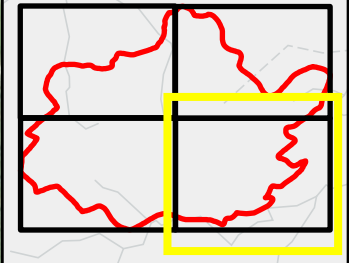
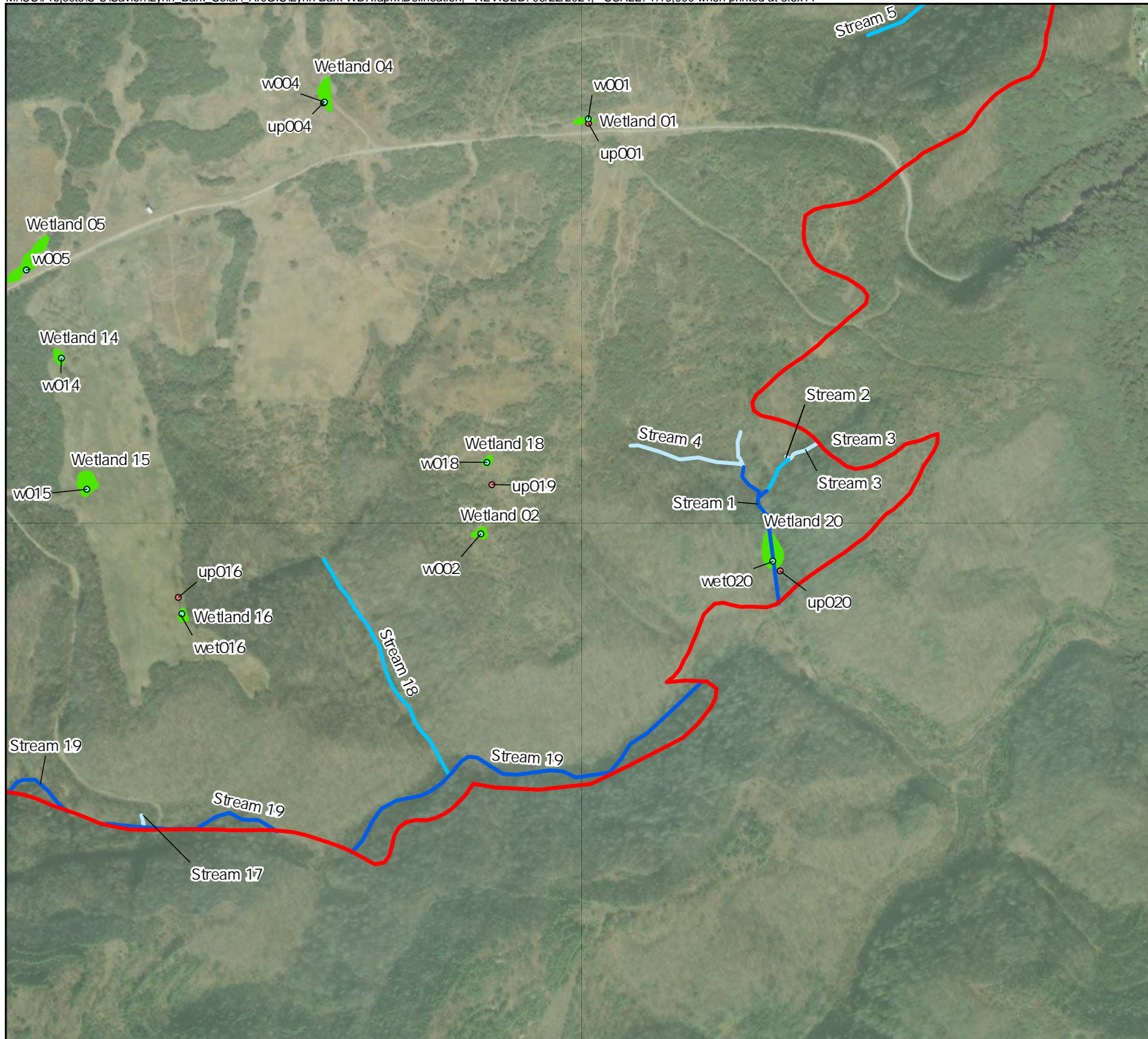


Figure 3.3
Wetland Delineation Map
 Lynn Bark Energy Center
 Lynn Bark Energy Center, LLC
 Martin County, Kentucky





Legend

- ▭ Project Boundary
- ▭ PEM Wetland (2.94 acres)
- ▬ Perennial Stream (5,086 linear feet)
- ▬ Intermittent Stream (12,441 linear feet)
- ▬ Ephemeral Stream (6,081 linear feet)
- ▬ Ditch (2,884 linear feet)
- Upland Datapoint
- Wetland Datapoint

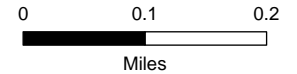
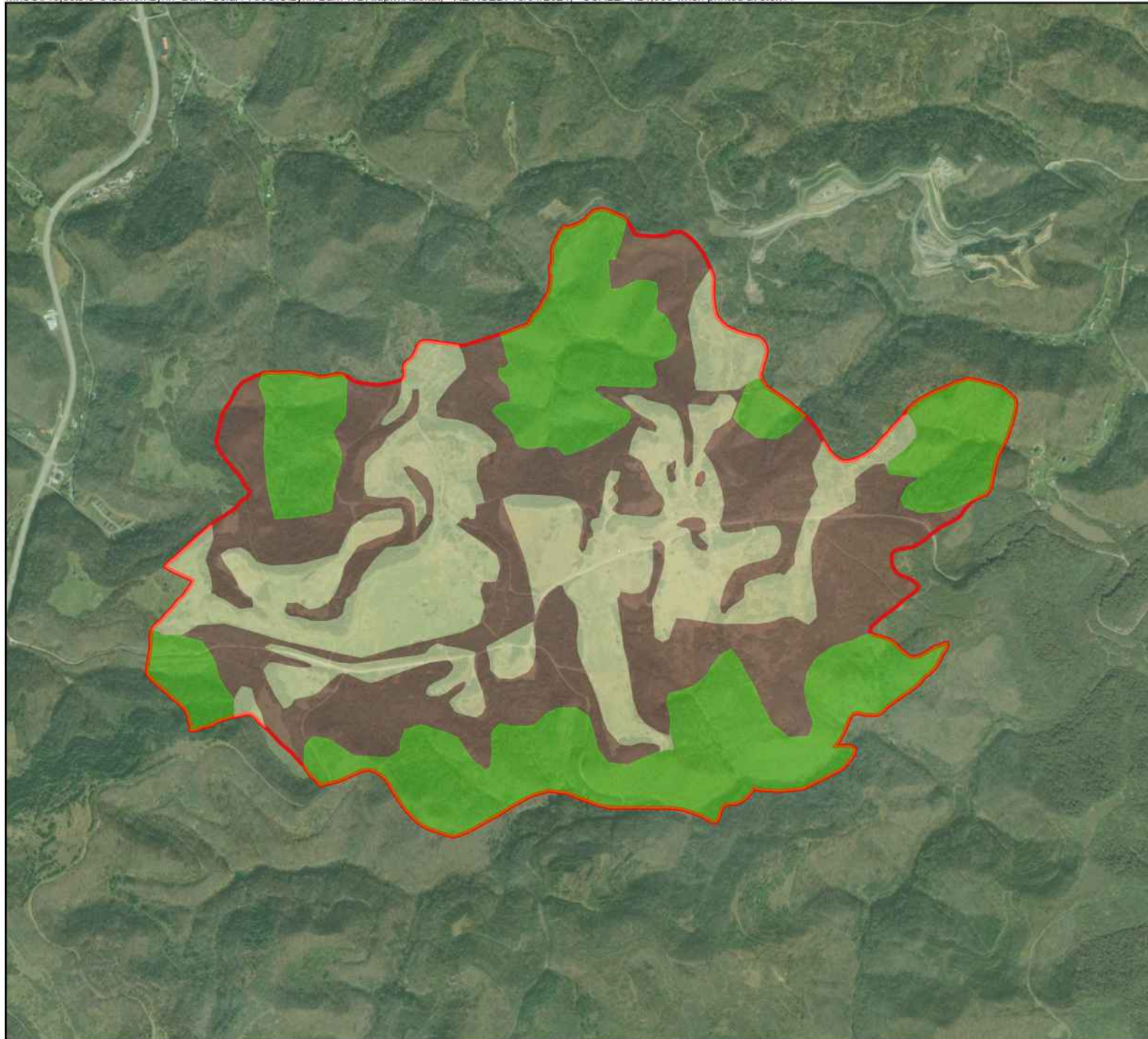


Figure 3.4
Wetland Delineation Map
 Lynn Bark Energy Center
 Lynn Bark Energy Center, LLC
 Martin County, Kentucky





- Legend**
-  Project Boundary
 -  Disturbed forest with autumn olive, black locust, and tulip poplar
 -  Forested habitat with white oak, southern red oak, hickory and American beech
 -  Open pasture with milkweed

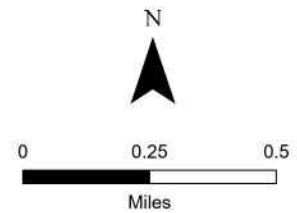


Figure 4
Habitat Map
Lynn Bark Energy Center
Lynn Bark Energy Center, LLC
Martin County, Kentucky



ATTACHMENT B USFWS IPAC RESULTS

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Martin County, Kentucky



Local office

Kentucky Ecological Services Field Office

☎ (502) 695-0467

📠 (502) 695-1024

✉ kentuckyes@fws.gov

J C Watts Federal Building, Room 265
330 West Broadway
Frankfort, KY 40601-8670

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
<p>Gray Bat <i>Myotis grisescens</i> Wherever found This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none">• The project area includes potential gray bat habitat. <p>No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6329</p>	Endangered
<p>Indiana Bat <i>Myotis sodalis</i> Wherever found This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none">• The project area includes 'potential' habitat. All activities in this location should consider possible effects to this species. <p>There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5949</p>	Endangered
<p>Tricolored Bat <i>Perimyotis subflavus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515</p>	Proposed Endangered

Insects

NAME	STATUS
<p>Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743</p>	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The [data](#) in this location indicates there are no migratory [birds of conservation concern](#) expected to occur in this area.

There may be migratory birds in your project area, but we don't have any survey data available to provide further direction. For additional information, please refer to the links above for recommendations to minimize impacts to migratory birds or contact your local FWS office.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of

presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

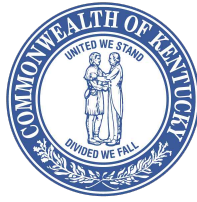
Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



DATE
4 October 2024

REFERENCE
Lynn Bark Energy Center

ATTACHMENT C KYBAT REPORT



Andy Beshear
Governor

Energy and Environment Cabinet Office of Kentucky Nature Preserves

300 Sower Boulevard
Frankfort, Kentucky 40601
Telephone: 502-782-7828
EEC.KYBAT@ky.gov

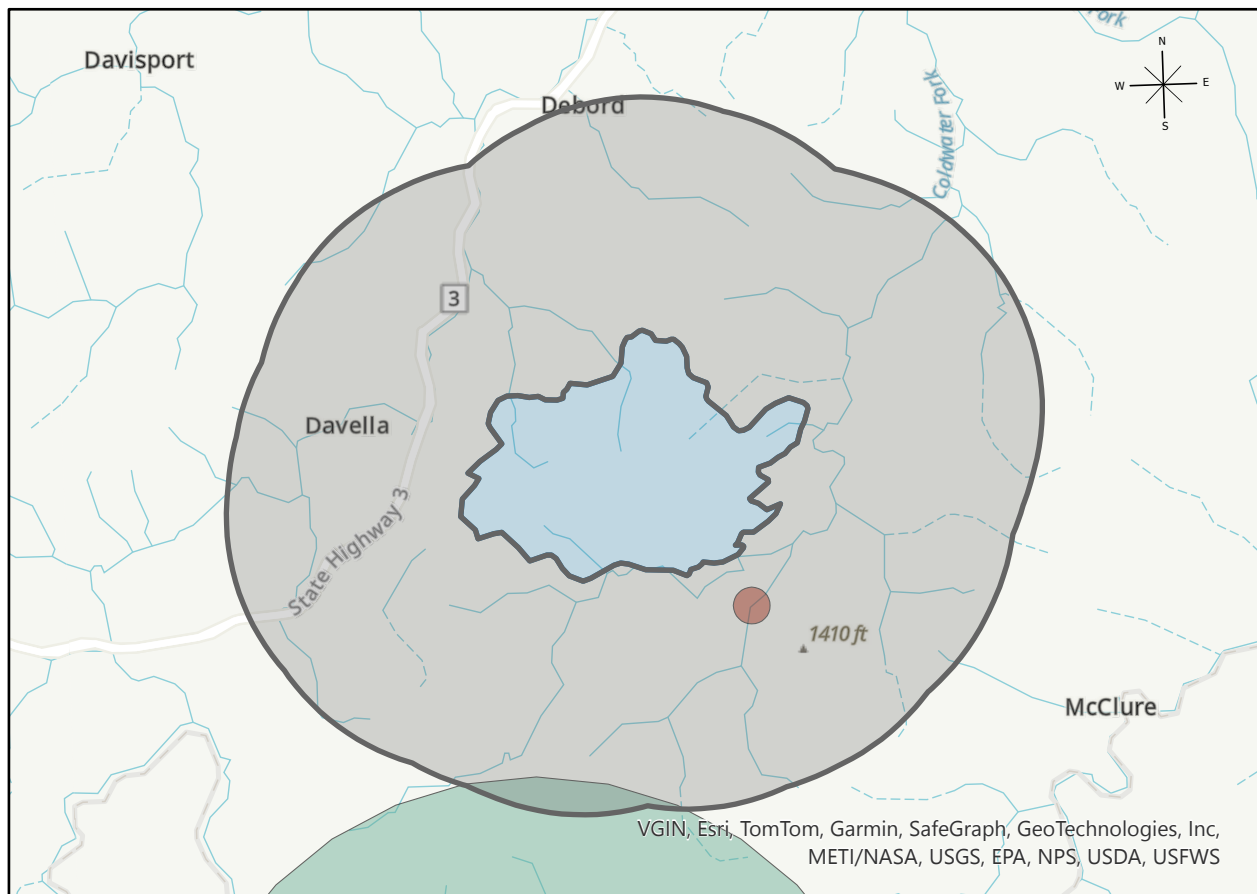
Rebecca W. Goodman
Secretary

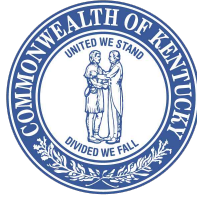
Sunni Carr
Executive Director

Requested on Friday, August 30, 2024 by Tobias Parrish, ERM

Re: Kentucky Biological Assessment Data Request 240830T02
Lynn Bark Solar, LLC - Lynn Bark Solar Project
Other, 2 mile buffer.
MARTIN County, Kentucky

This letter is in response to your data request for the project referenced above. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants, animals, features or exemplary natural communities monitored by the Office of Kentucky Nature Preserves are noted within your submitted project area.





Andy Beshear
Governor

Energy and Environment Cabinet Office of Kentucky Nature Preserves

300 Sower Boulevard
Frankfort, Kentucky 40601
Telephone: 502-782-7828
EEC.KYBAT@ky.gov

Rebecca W. Goodman
Secretary

Sunni Carr
Executive Director

This report includes the following items:

- A - A report for occurrences which intersect the project area
- B - A report for occurrences which intersect the buffer around the project area
- C - A list of best management practices relevant to occurrences near to or within the project area
- D - A list of best management practices relevant to the chosen project type

Thank you for using Office of Kentucky Nature Preserves' Biological Assessment Tool.

We would like to take this opportunity to remind you of the [terms](#) of the data request license, which you agreed upon in order to submit your request. The license agreement states "Data and data products received from the Office of Kentucky Nature Preserves, including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Office of Kentucky Nature Preserves." The exact location of plants, animals, and natural communities, if released by the Office of Kentucky Nature Preserves, may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester, and may not be redistributed, resold or copied without the written permission of the Office of Kentucky Nature Preserves Biological Assessment Branch (300 Sower Blvd - 4th Floor, Frankfort, KY, 40601. Phone: 502-782-7828).

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed and new plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the occurrences being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information obtained as a result of on-site surveys.

If you have any questions, or if we can be of further assistance, please do not hesitate to contact our office by email at EEC.KYBAT@ky.gov or by phone at 502-782-7828.

Sincerely,




Alexis R. Schoenlaub
Geoprocessing Specialist
Office of Kentucky Nature Preserves

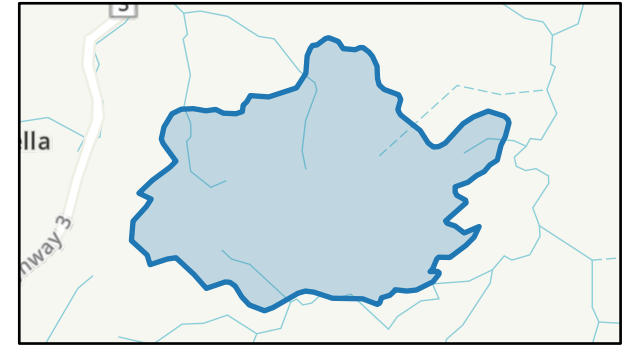
A.1. Project Area - Occurrence Report

The following table outlines occurrences found within your project footprint (if any). You can find more information about global and state rank status definitions on our [Standard Occurrence Report Key](#) . Please note that certain sensitive occurrences found within the buffer area may be listed in this table but are not represented on the map. Please contact the appropriate source as outlined in the “Directions” column should you have further questions related to sensitive occurrences found within the project area.



Map Credits: VGIN, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

- Botanical 
- Ecological 
- Zoological 






There were no occurrences found within your project footprint based on available data.

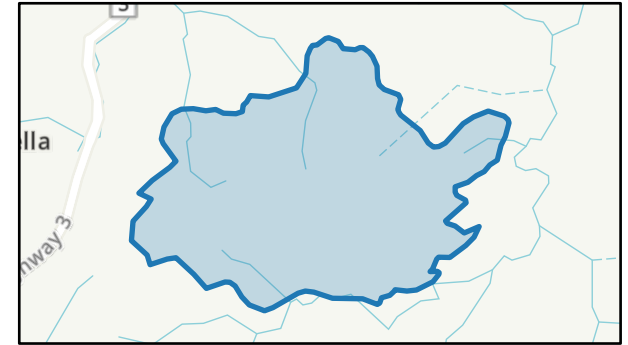
A.2. Project Area – Occurrence Habitat and Location

The following table provides supplemental occurrence information found within your project footprint (if any). You can find more information about global and state rank status definitions on our [Standard Occurrence Report Key](#) . Please note that certain sensitive occurrences found within the buffer area may be listed in this table but are not represented on the map. Please contact the appropriate source as outlined in the “Directions” column should you have further questions related to sensitive occurrences found within the



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- Botanical 
- Ecological 
- Zoological 



There were no occurrences found within your project footprint based on available data.

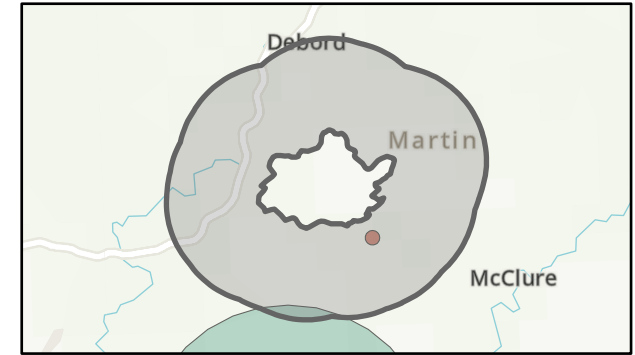
B. Buffer Area - Occurrence Report

The following table outlines occurrences found within your buffered project footprint (if any). You can find more information about global and state rank status definitions on our [Standard Occurrence Report Key](#). Please note that certain sensitive occurrences found within the buffer area may be listed in this table but are not represented on the map. Please contact the appropriate source as outlined in the “Directions” column should you have further questions related to sensitive occurrences found within the project area.



Map Credits: VGIN, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

- Botanical
- Ecological
- Zoological






EO ID	Scientific Name	Common Name	G Rank	S Rank	Fed. Status	State Status	SWAP	Precision	Last Obs. Date
22598	<i>Myotis septentrionalis</i>	Northern Long-Eared Bat	G2G3	S1	LE	E	Y	S	2008-08-08
25486	<i>Myotis septentrionalis</i>	Northern Long-Eared Bat	G2G3	S1	LE	E	Y	S	2008-08-07
25489	<i>Myotis septentrionalis</i>	Northern Long-Eared Bat	G2G3	S1	LE	E	Y	S	2008-08-11
25490	<i>Myotis septentrionalis</i>	Northern Long-Eared Bat	G2G3	S1	LE	E	Y	S	2008-08-08
24236	<i>Cladonia apodocarpa</i>	Stalkless Cladonia	G3G5	S3?	None	N		G	1962-02-26
12579	<i>Corvus corax</i>	Common Raven	G5	S1S2	None	T	Y	M	2007-10-19
12423	<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S3	None	S	Y	S	2008-08-11

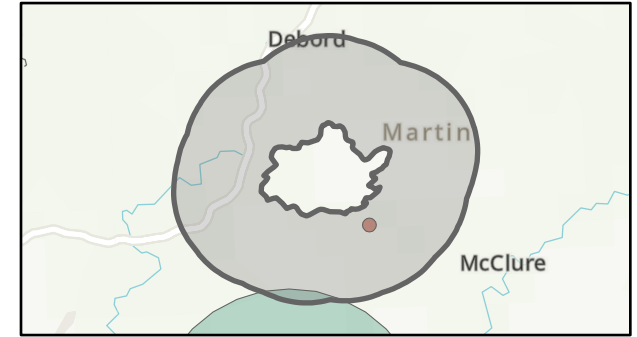
C. Occurrence References and Recommendations (1 of 2)

OKNP references the following references and recommendations regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact the applicable office should you have further questions with regard to these references and recommendations related to the project area.



Map Credits: VGIN, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

- Botanical 
- Ecological 
- Zoological 



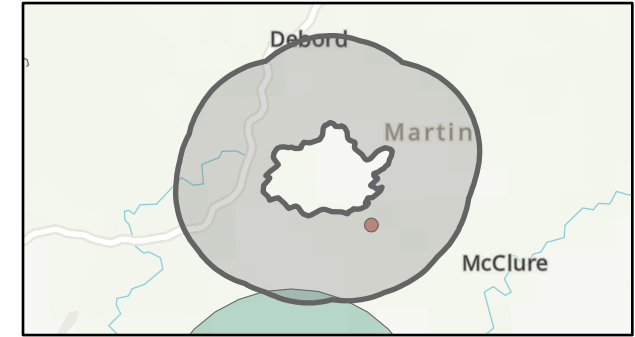
C. Occurrence References and Recommendations (2 of 2)

OKNP references the following references and recommendations regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact the applicable office should you have further questions with regard to these references and recommendations related to the project area.



Map Credits: VGIN, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

- Botanical
- Ecological
- Zoological



Per the U.S. Fish and Wildlife Service's recommendations: Birds covered under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) should be considered during project reviews. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish & Wildlife Service (50 C.F.R. § 10.12 and 16 U.S.C. § 668(a)). For more information regarding these acts go to: <http://www.fws.gov/migratorybirds/RegulationsandPolicies.html>.

The MBTA currently has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within a NEPA document (if there is a federal nexus), a Bird- or Eagle-specific Conservation Plan, or both. Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds to the project-related stressors; proponents should also implement a rigorous plan to monitor the effectiveness of conservation measure. For more information on avian stressors and recommended conservation measures go to: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/BirdHazards.html>.

In addition to MBTA and BGEPA, Executive Order 13186: Responsibilities of Federal Agencies to Protect Migratory Birds, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <http://www.fws.gov/migratorybirds/AboutUS.html>.




There are federally known Northern long-eared bat habitats (Summer 1) within your project footprint. Contact USFWS at (502) 695-0468 or KentuckyES@fws.gov

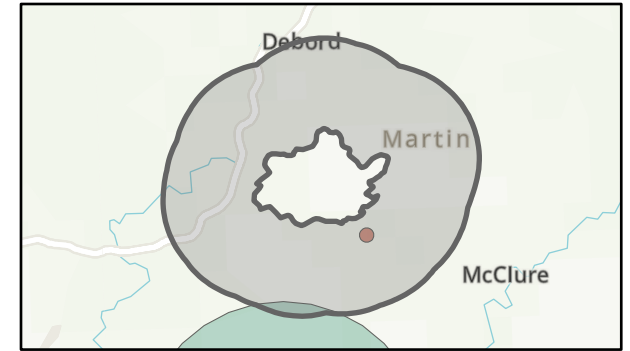
D. Project References and Recommendations (1 of 1)

OKNP references the following references and recommendations regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact the applicable office should you have further questions with regard to these references and recommendations related to the project area.



Map Credits: VGIN, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

- Botanical 
- Ecological 
- Zoological 





Thank you for using the Office of Kentucky Nature Preserves
Biological Assessment Tool.

OKNP's species dataset relies on continuous monitoring and surveying for species of concern throughout the state. Any records of species of concern found within this project area would greatly benefit the quality and comprehensiveness of the statewide dataset for rare, threatened and endangered species. If you would like to contribute any additional species information, please do not hesitate to contact our office by email at EEC.KYBAT@ky.gov or by phone at 502-782-7828.



DATE
4 October 2024

REFERENCE
Lynn Bark Energy Center

ATTACHMENT D PHOTOGRAPH LOG

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 0718084



PHOTO 1

Dense autumn olive (*Elaeagnus umbellata*) throughout Project site.



PHOTO 2

Typical edge habitat with dense autumn olive and tulip poplar (*Liriodendron tulipifera*).

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 0718084



PHOTO 3

Typical edge habitat with autumn olive, tulip poplar, and black locust (*Robinia pseudoacacia*).



PHOTO 4

Common milkweed (*Asclepias syriaca*) observed throughout the open fields. Two monarch butterflies (*Danaus plexippus*) were observed

CLIENT: Lynn Bark Energy Center,
LLC

SITE LOCATION: Martin County,
Kentucky

PROJECT NO.: 0718084



PHOTO 5
Typical forested habitat on the steep slopes of the Project.



PHOTO 6
Typical forest habitat



PHOTO 7
Photo of Venter's Branch, facing upstream



PHOTO 8
Photo of Venter's Branch, facing downstream



PHOTO 9
Upstream photo of typical stream in the Project



PHOTO 10
Downstream photo of typical stream in the Project