Sheet 09

Sheet 08

Sheet 10

KLF_Stream12

KLF_Stream13 (EPH) - Crossing 2
48 lf of fill material (Temporary) for timber mats or temporary culvert ranging from 10-inches to 36-inches in diameter by 30 feet for equipment tracking on an access road and necessary workspace associated with gas pipeline installation activities.

KLF_Stream11

KLF_Wetland17

KLF_Wetland18

KLF_Stream13 (EPH) - Crossing 1
50 lf of fill material (Temporary) for timber mats or temporary culvert ranging from 10-inches to 36-inches in diameter by 30 feet for equipment tracking on an access road and necessary workspace associated with gas pipeline installation activities.

Granny Smith Ln

Wine Sap Ln

Winesap Ln

Apple Knoll Ln

Macintosh Ln

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| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_NWP_AttC |

N
W E
S

0 50 100 Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Existing Road
- Stream Flow
- Feature Continues

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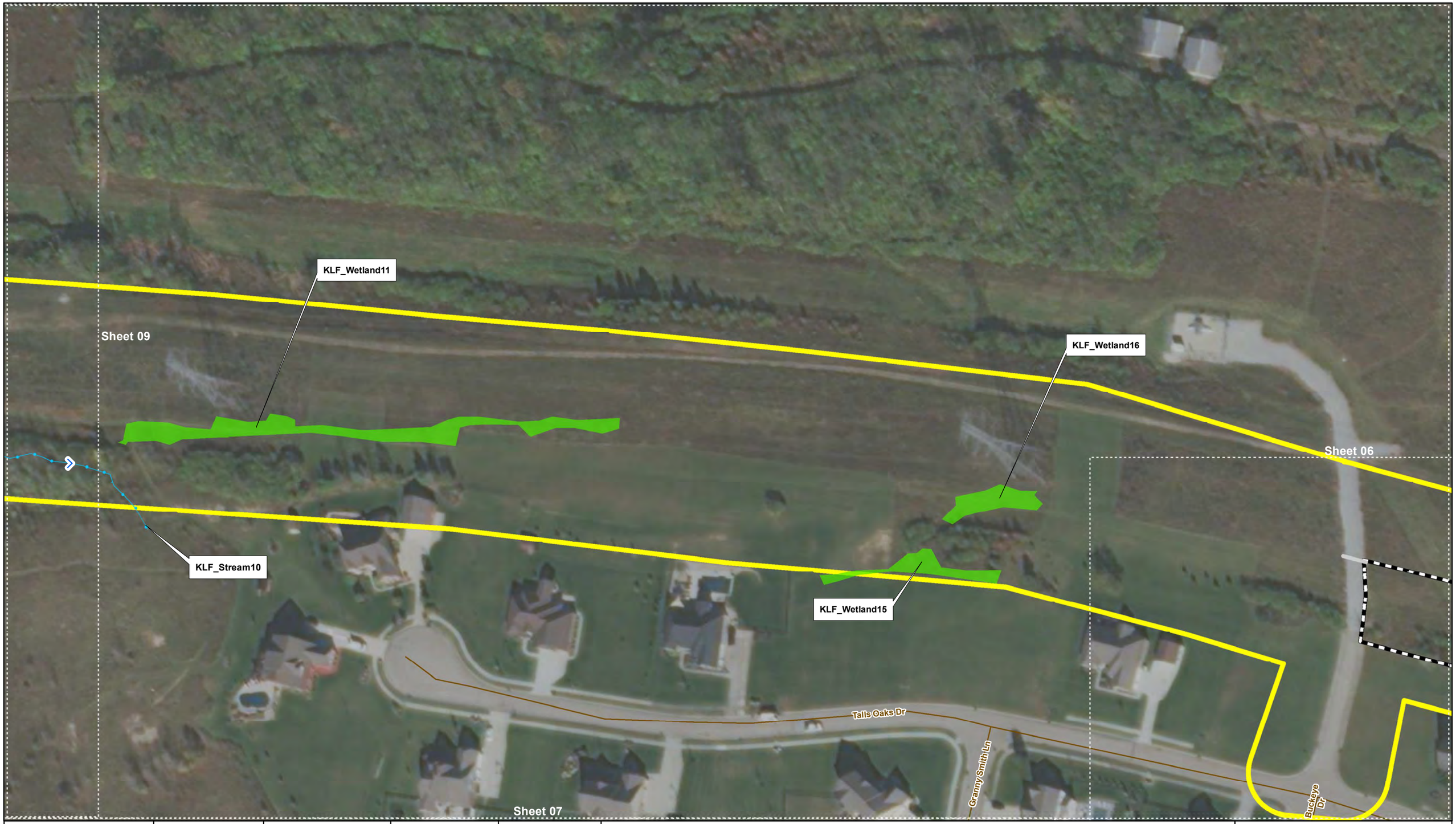
Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022 | Sheet 7 of 19

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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_NWP_AttC |

N
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0 50 100 Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
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- Stormwater Management Facility
- Existing Road
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Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022

KLF_Stream08 (INT)
86 lf of fill material (Temporary) for a 12-inch diameter gas pipeline, native backfill, temporary structure (dam and flume or equivalent) crossing materials, and necessary workspace for construction.

KLF_Wetland08

KLF_Stream08A

KLF_Stream08B

KLF_Stream09

Sheet 08

KLF_Great Miami River

KLF_Wetland12

KLF_Wetland13

KLF_Stream10

KLF_Wetland14

KLF_Stream11

Sheet 10

Sheet 07

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| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_NWP_AttC |

N
W E
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0 50 100 Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
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- Existing Road
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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Existing Road
- Stream Flow
- Feature Continues

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Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022 | Sheet 10 of 19

Sheet 10

KLF_Great Miami River

KLF_Wetland09

KLF_Wetland10

Granny Smith Ln

Apple Ridge Ct

Sheet 12

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| | |
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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_NWP_AttC |

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0 50 100 Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
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- PEM Wetland
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- Existing Road
- Stream Flow
- Feature Continues

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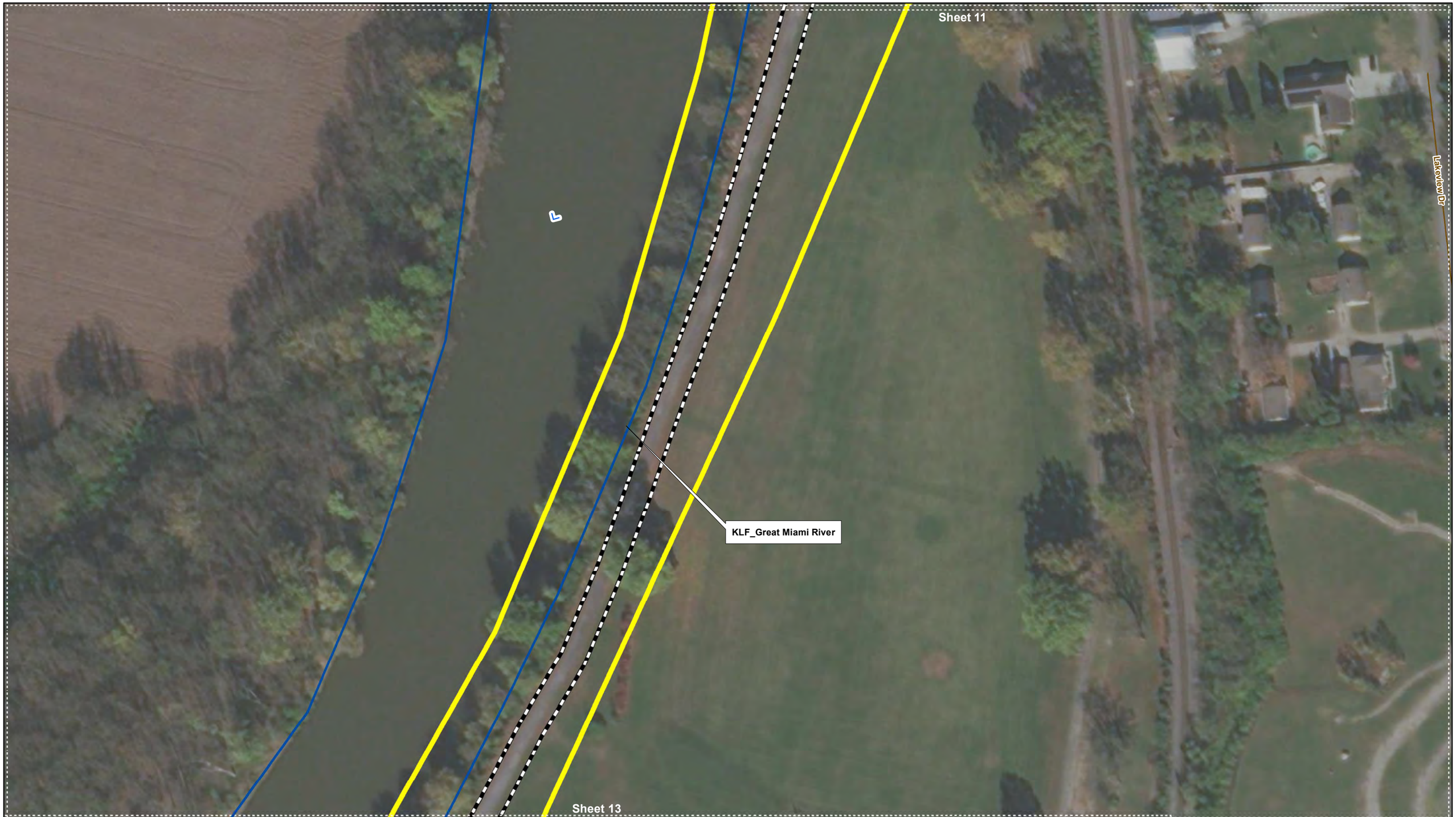
Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022

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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_NWP_AttC |

N
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0 50 100 Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Existing Road
- Stream Flow
- Feature Continues

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Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022 | Sheet 12 of 19

Sheet 12

KLF_Great Miami River

Sheet 14

KLF_Gregory Creek

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| FILE NAME: | ButlerCountyPhasel_NWP_AttC |

N
W E
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0 50 100 Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Existing Road
- Stream Flow
- Feature Continues

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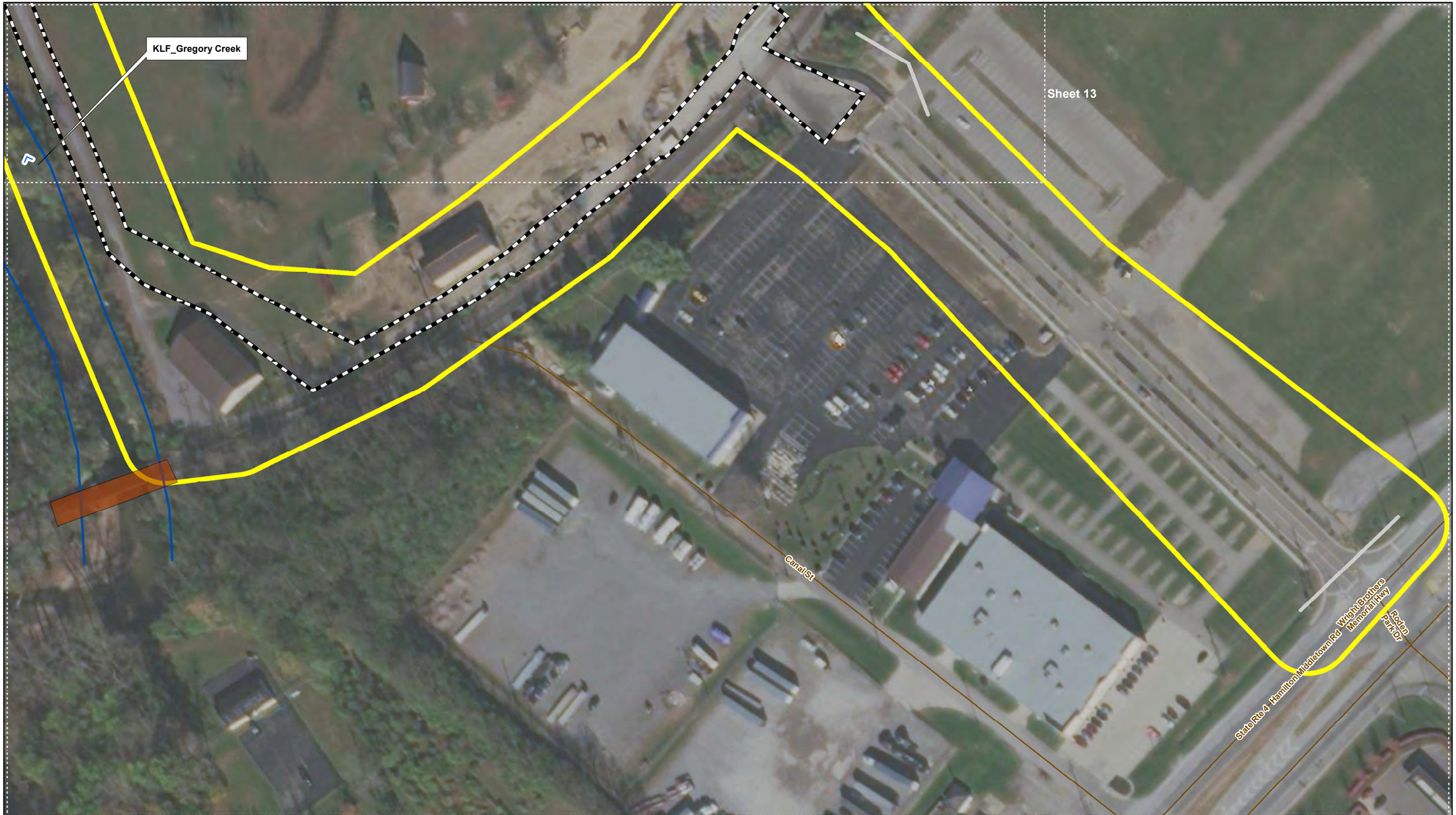
Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022

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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_NWP_AttC |

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0 50 100 Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
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- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Existing Road
- Stream Flow
- Feature Continues

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Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022 | Sheet 14 of 19


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| FILE NAME: | ButlerCountyPhase1_NWP_AttC |

N
W E
S
0 50 100 Ft

**Butler County Ohio**

- BC-6 AOI (1.9 ac)
- BC-6 LOD (0.1 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Existing Road
- Stream Flow
- Feature Continues

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Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022


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| FILE NAME: | ButlerCountyPhase1_NWP_AttC |

N
W E
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0 50 100 Ft

**Butler County Ohio**

- BC-7 AOI (23.1 ac)
- BC-7 LOD (6.8 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Existing Road
- Stream Flow
- Feature Continues

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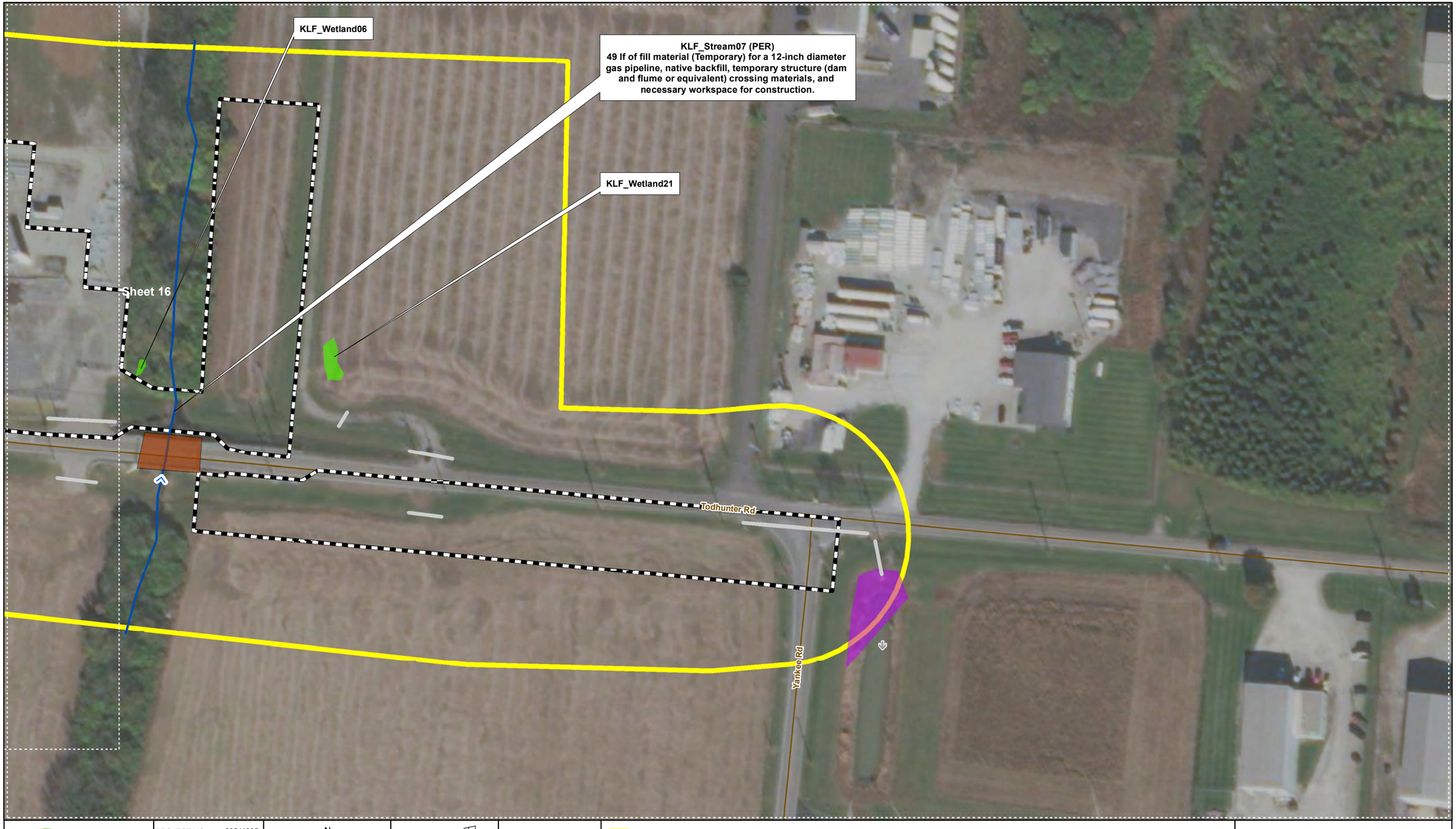
Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022 | Sheet 16 of 19

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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_NWP_AttC |

N
W E
S
0 50 100 Ft

**Butler County Ohio**

- BC-7 AOI (23.1 ac)
- BC-7 LOD (6.8 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
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- Stormwater Management Facility
- Existing Road
- Stream Flow
- Feature Continues

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Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022

KLF_Wetland20

KLF_Wetland19

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| FILE NAME: | ButlerCountyPhase1_NWP_AttC |

N
W E
S
0 50 100 Ft

**Butler County Ohio**

- BC-7 Laydown Yard AOI (5.5 ac)
- BC-7 Laydown Yard LOD (0.9 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Existing Road
- Stream Flow
- Feature Continues

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Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022


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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_NWP_AttC |

N
W E
S

0 50 100 Ft

**Butler County Ohio**

- BC-8 AOI (2.3 ac)
- BC-8 LOD (0.2 ac)
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Attachment C
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07

Date: 1/31/2022

**ATTACHMENT D**

*Discharge of Fill Material Photos*

Photograph 1: View upstream of KLF_Stream03 (PER)

Photograph 2: View downstream of KLF_Stream03 (PER)

Photograph 3: View across of KLF_Stream03 (PER)

Photograph 4: View upstream of KLF_Stream07 (PER)

Photograph 5: View downstream of KLF_Stream07 (PER)

Photograph 6: View across of KLF_Stream07 (PER)

Photograph 7: View upstream of KLF_Stream08 (INT)

Photograph 8: View downstream of KLF_Stream08 (INT)

Photograph 9: View across of KLF_Stream08 (INT)

Photograph 10: View upstream of KLF_Stream13 (EPH) – Crossing 1 & 2

Photograph 11: View downstream of KLF_Stream13 (EPH) – Crossing 1 & 2

Photograph 12: View across of KLF_Stream13 (EPH) – Crossing 1 & 2

Photograph 13: View North of KLF_Wetland01 (PEM)

Photograph 14: View South of KLF_Wetland01 (PEM)

Photograph 15: View East of KLF_Wetland01 (PEM)

Photograph 16: View West of KLF_Wetland01 (PEM)

Photograph 17: View North of KLF_Wetland02 (PEM)

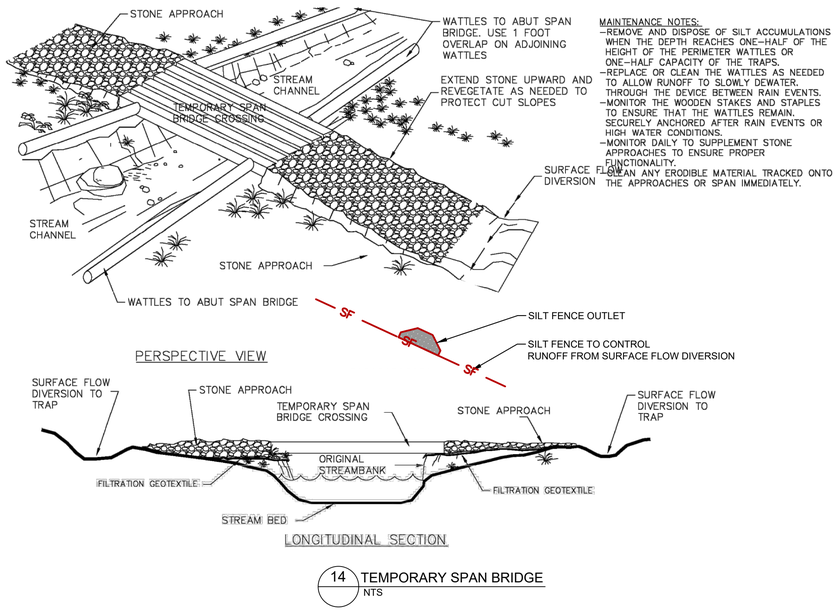
Photograph 18: View South of KLF_Wetland02 (PEM)

Photograph 19: View East of KLF_Wetland02 (PEM)

Photograph 20: View West of KLF_Wetland02 (PEM)

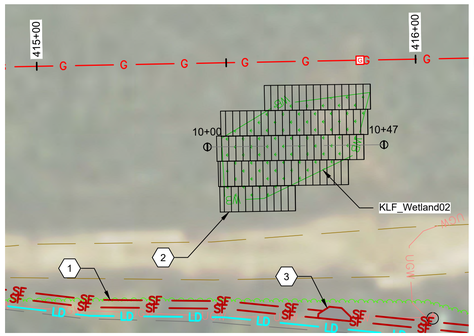
**ATTACHMENT E**

*Crossing Details*




MAINTENANCE NOTES:
- REMOVE AND DISPOSE OF SILT ACCUMULATIONS WHEN THE DEPTH REACHES ONE-HALF OF THE HEIGHT OF THE PERIMETER WATTLES OR ONE-HALF CAPACITY OF THE TRAPS.
- REPLACE OR CLEAN THE WATTLES AS NEEDED TO ALLOW RUNOFF TO SLOWLY DEWATER, THROUGH THE DEVICE BETWEEN RAIN EVENTS.
- MONITOR THE WOODEN STAKES AND STAPLES TO ENSURE THAT THE WATTLES REMAIN, SECURELY ANCHORED AFTER RAIN EVENTS OR HIGH WATER CONDITIONS.
- MONITOR DAILY TO SUPPLEMENT STONE APPROACHES TO ENSURE PROPER FUNCTIONALITY.
- CLEAN ANY ERODIBLE MATERIAL TRACKED ONTO THE APPROACHES OR SPAN IMMEDIATELY.

14 TEMPORARY SPAN BRIDGE
NTS

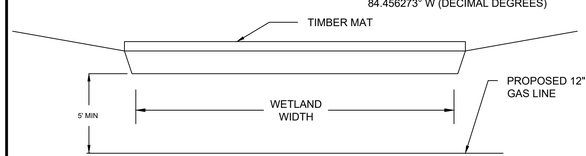



## EROSION & SEDIMENT CONTROL KEY NOTES

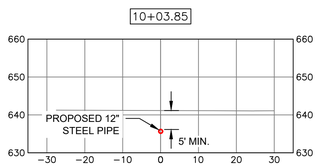
1. FURNISH & INSTALL 2 ROWS OF MINIMUM 16" HIGH FILTER FABRIC FENCE PER DETAIL 02, SHEET 45.
2. FURNISH & INSTALL TIMBER MATTING PER DETAIL 06, SHEET 45.
3. FURNISH & INSTALL TEMPORARY SILT FENCE OUTLET PER DETAIL 03, SHEET 45.

**PLAN VIEW**
SCALE: 1" 20'
WETLAND CROSSING AT BC-4

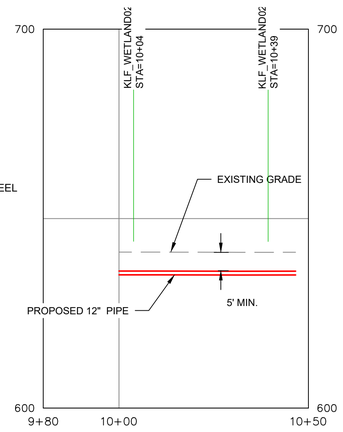
KLF_Wetland02 (PEM)
TEMPORARY ACCESS - TIMBER MAT/
TEMPORARY SPAN BRIDGE TO BE USED
39.448202° N (DECIMAL DEGREES)
84.456273° W (DECIMAL DEGREES)




TYPICAL SUBSURFACE WETLAND CROSS SECTION

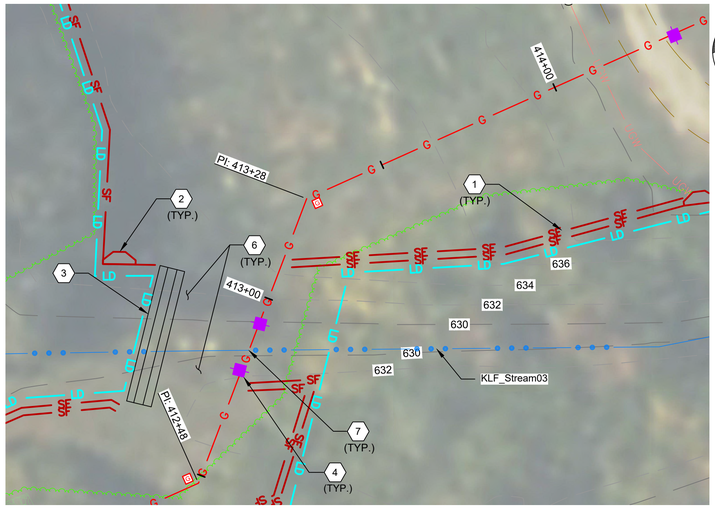



KLF Wetland02
**CROSS SECTION**
HORIZONTAL & VERTICAL SCALE:
1" = 20'




KLF Wetland02
**PROFILE**
HORIZONTAL & VERTICAL SCALE:
1" = 20'

15 BC-4 WETLAND CROSSING DETAILS - KLF Wetland02

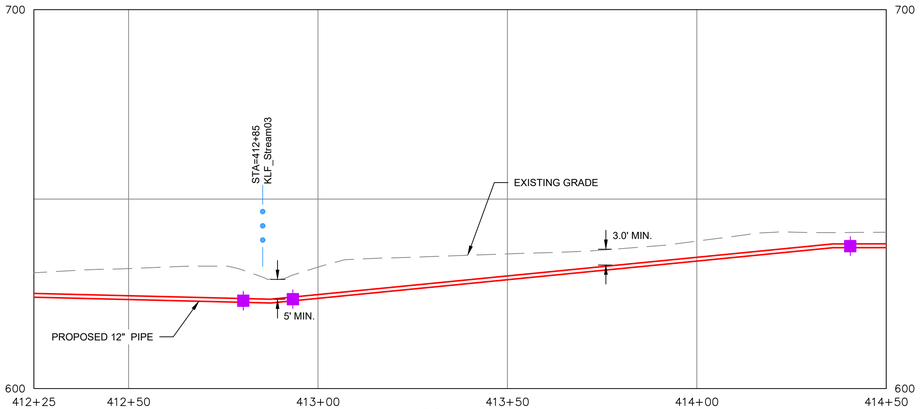



**PLAN VIEW**
SCALE: 1" 20'
STREAM CROSSING AT BC-4

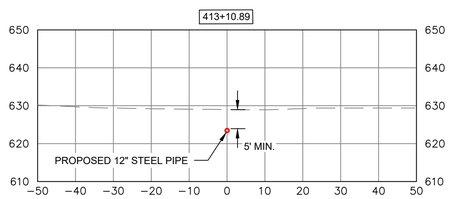
KLF_Stream03 (PER)
OPEN CUT CROSSING
TEMPORARY ACCESS - TIMBER MAT/
TEMPORARY SPAN BRIDGE TO BE USED
39.447449° N (DECIMAL DEGREES)
84.456234° W (DECIMAL DEGREES)

## EROSION & SEDIMENT CONTROL KEY NOTES

1. FURNISH & INSTALL 2 ROWS OF MINIMUM 16" HIGH FILTER FABRIC FENCE PER DETAIL 02, SHEET 45.
2. FURNISH & INSTALL TEMPORARY SILT FENCE OUTLET PER DETAIL 03, SHEET 45.
3. FURNISH & INSTALL TEMPORARY SPAN BRIDGE PER DETAIL 14, THIS SHEET.
4. FURNISH & INSTALL TRENCH PLUG PER DETAIL 07, SHEET 45. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING SLOPES, AND SHALL INSTALL TRENCH PLUGS IN APPROPRIATE INTERVALS NEAR WETLAND/STREAM CROSSINGS.
5. FURNISH & INSTALL TIMBER MATTING PER DETAIL 06, SHEET 45.
6. FURNISH & INSTALL EROSION CONTROL BLANKET OR APPROVED EQUIVALENT ON ALL SLOPES EQUAL TO OR GREATER THAN 3:1, AND ALL AREAS WITHIN 50' OF STREAMS AND WETLANDS, PER DETAIL 11, SHEET 46.
7. INSTALL NEW PIPING AT STREAM CROSSING, AND ALL APPROPRIATE EROSION CONTROL MEASURES, IN ACCORDANCE WITH DETAILS, ON THIS SHEET.




KLF Stream03
**PROFILE**
HORIZONTAL & VERTICAL SCALE:
1" = 20'




KLF Stream03
**CROSS SECTION**
HORIZONTAL & VERTICAL SCALE:
1" = 20'

PROFILE & CROSS SECTION LEGEND
- STREAM
- PROPOSED PIPELINE
- EXISTING GRADE
- PROPOSED 12" PIPELINE
- TRENCH PLUG

NOTE
- THE MINIMUM COVER ABOVE TOP OF PIPE WHEN CROSSING STREAMS, WETLANDS, OR ROADWAYS SHALL BE 5 FEET.

HORIZONTAL & VERTICAL SCALE
0 20 40
SCALE: 1" = 20' SCALE IN FEET

16 BC-4 STREAM CROSSING DETAILS - KLF Stream03

**90% DESIGN**
NOT FOR CONSTRUCTION

| NO. | DATE | REVISION(S) DESCRIPTION | BY | CHK | APPD |
|---|---|---|---|---|---|
| E | 01/21/2022 | 90% PRELIMINARY DRAWINGS | ALS | MNP | SJP |
| D | 10/20/2021 | 30% PRELIMINARY DRAWINGS | ALS | KTL | SJP |
| 0 | 04/05/2021 | ISSUED FOR BID | JAS | DK | JW |
| C | 03/01/2021 | 90% PRELIMINARY DRAWINGS | JAS | DK | JW |
| B | 12/21/2020 | 60% PRELIMINARY DRAWINGS | JAS | DK | JW |
| A | 10/28/2020 | 30% PRELIMINARY DRAWINGS | JAS | RAP | JW |

| DESCRIPTION | |
|---|---|
| AREA CODE | |
| ACCOUNT NUMBER | |
| PROJECT NUMBER | AW2133 |
| DRAWING BY | JAS |
| CHECKER | ---- |
| SIGNATURE | |

| APPROVALS | | |
|---|---|---|
| DATE | SIGNATURE / INITIALS | REGIONAL ENGINEER |
| DATE | SIGNATURE / INITIALS | MGR TECH REC & STD |
| DATE | SIGNATURE / INITIALS | PRINCIPAL ENGINEER |



# BUTLER COUNTY - PH 1 C210 & LP07
# BC-4 CONSTRUCTION DETAILS
# BUTLER COUNTY, OHIO

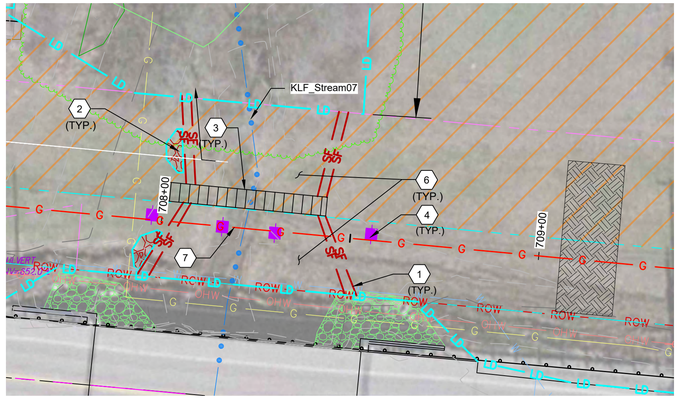
Toddhunter Resource Center Charlotte, Ohio

REF. DWG(S)

| SHEET | 16 | DWG SCALE | AS NOTED |
|---|---|---|---|
| DWG DATE | 01/21/2022 | STATION ID | - |

| DRAWING NUMBER | REVISION |
|---|---|
| PNG-C-042-0001083 | E |

DISCIPLINE / RESOURCE CENTER / LINE NUMBER



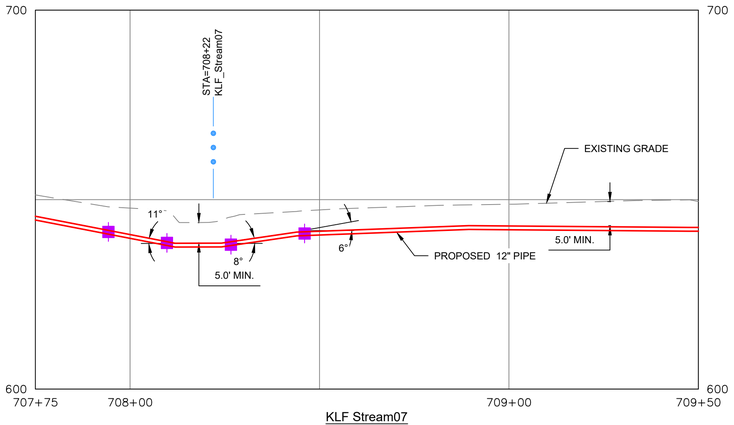

**PLAN VIEW**
SCALE: 1" 20'

STREAM CROSSING AT BC-7

KLF_Stream07 (PER)
OPEN CUT CROSSING
TEMPORARY ACCESS - TIMBER MAT/
TEMPORARY SPAN BRIDGE TO BE USED
39.459552° N (DECIMAL DEGREES)
84.391025° W (DECIMAL DEGREES)

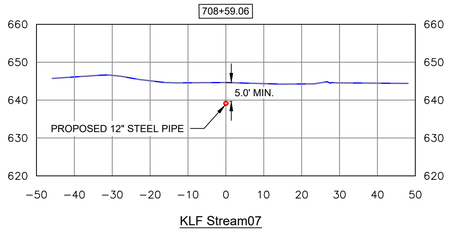
NOTE

- THE MINIMUM COVER ABOVE TOP OF PIPE WHEN CROSSING STREAMS, WETLANDS, ROADWAYS, OR ACTIVE AGRICULTURAL FIELDS SHALL BE 5 FEET.




KLF Stream07

**CROSS SECTION**
HORIZONTAL & VERTICAL SCALE:
1" = 20'




KLF Stream07

**PROFILE**
HORIZONTAL & VERTICAL SCALE:
1" = 20'

1 BC-7 STREAM CROSSING DETAIL - KLF Stream07
NTS

## EROSION & SEDIMENT CONTROL KEY NOTES

1. FURNISH & INSTALL 2 ROWS OF MINIMUM 16" HIGH FILTER FABRIC FENCE PER DETAIL 02, SHEET 45.
2. FURNISH & INSTALL TEMPORARY SILT FENCE OUTLET PER DETAIL 03, SHEET 45.
3. FURNISH & INSTALL TEMPORARY SPAN BRIDGE PER DETAIL 14, THIS SHEET.
4. FURNISH & INSTALL TRENCH PLUG PER DETAIL 07, SHEET 45. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING SLOPES, AND SHALL INSTALL TRENCH PLUGS IN APPROPRIATE INTERVALS NEAR WETLAND/STREAM CROSSINGS.
5. FURNISH & INSTALL TIMBER MATTING PER DETAIL 06, SHEET 45.
6. FURNISH & INSTALL EROSION CONTROL BLANKET OR APPROVED EQUIVALENT ON ALL SLOPES EQUAL TO OR GREATER THAN 3:1, AND ALL AREAS WITHIN 50' OF STREAMS AND WETLANDS, PER DETAIL 11, SHEET 46.
7. INSTALL NEW PIPING AT STREAM CROSSING, AND ALL APPROPRIATE EROSION CONTROL MEASURES, IN ACCORDANCE WITH DETAILS, ON THIS SHEET.

NOTE

- NOTE ADDITIONAL 45° ELBOWS WILL BE SUPPLIED SHOULD THE CONTRACTOR WISH TO USE SEGMENTABLE FITTINGS IN LIEU OF FIELD BENDING.

PROFILE & CROSS SECTION LEGEND

- STREAM
- WETLAND
- PROPOSED PIPELINE
- EXISTING GRADE
- PROPOSED 12" PIPELINE
- TRENCH PLUG

HORIZONTAL & VERTICAL SCALE
0 20 40
SCALE: 1" = 20' SCALE IN FEET

**90% DESIGN**
NOT FOR CONSTRUCTION

| NO. | DATE | REVISION(S) DESCRIPTION | BY | CHK | APPD |
|---|---|---|---|---|---|
| E | 01/212022 | 90% PRELIMINARY DRAWINGS | ALS | MNP | SJP |
| D | 10/20/2021 | 30% PRELIMINARY DRAWINGS | ALS | KTL | SJP |
| 0 | 04/05/2021 | ISSUED FOR BID | JAS | DK | JW |
| C | 03/01/2021 | 90% PRELIMINARY DRAWINGS | JAS | DK | JW |
| B | 12/21/2020 | 60% PRELIMINARY DRAWINGS | JAS | DK | JW |
| A | 10/28/2020 | 30% PRELIMINARY DRAWINGS | JAS | RAP | JW |

| DESCRIPTION | |
|---|---|
| AREA CODE | |
| ACCOUNT NUMBER | |
| PROJECT NUMBER | AW2133 |
| DRAWING BY | JAS |
| CHECKER | ---- |
| SIGNATURE | |

| APPROVALS | | |
|---|---|---|
| DATE | SIGNATURE / INITIALS | REGIONAL ENGINEER |
| DATE | SIGNATURE / INITIALS | MGR TECH REC & STD |
| DATE | SIGNATURE / INITIALS | PRINCIPAL ENGINEER |



# BUTLER COUNTY - PH 1 C210 & LP07
# BC-7 STREAM CROSSING DETAILS
# BUTLER COUNTY, OHIO

Toddhunter Resource Center Charlotte, Ohio

REF. DWG(S)

| SHEET | 40 | DWG SCALE | AS NOTED |
|---|---|---|---|
| DWG DATE | 01/21/2022 | STATION ID | - |
| DRAWING NUMBER | | | REVISION |
| PNG-C-042-0001095 | | | E |
| DISCIPLINE / RESOURCE CENTER / LINE NUMBER | | | |


**PLAN VIEW**
SCALE: 1" 20'
STREAM CROSSING AT BC-5

KLF_Stream13 (EPH) CROSSING 1&2
TEMPORARY ACCESS - TIMBER MAT/ TEMPORARY SPAN BRIDGE TO BE USED
39.452399° N (DECIMAL DEGREES)
84.426175° W (DECIMAL DEGREES)
AND
39.452401° N (DECIMAL DEGREES)
84.426652° W (DECIMAL DEGREES)

## EROSION & SEDIMENT CONTROL KEY NOTES

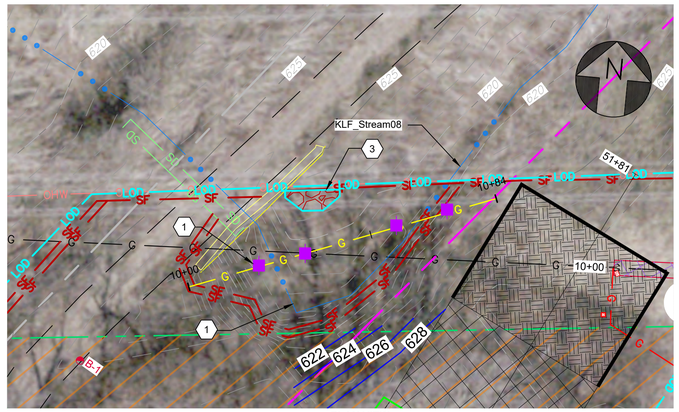
1. FURNISH & INSTALL 2 ROWS OF MINIMUM 16" HIGH FILTER FABRIC FENCE PER DETAIL 02, SHEET 45.
2. FURNISH & INSTALL TIMBER MATTING PER DETAIL 06, SHEET 45.
1. FURNISH & INSTALL TEMPORARY SILT FENCE OUTLET PER DETAIL 03, SHEET 45.

PROFILE & CROSS SECTION LEGEND

- STREAM
- PROPOSED PIPELINE
- EXISTING GRADE
- PROPOSED 12" PIPELINE
- PROPOSED CULVERT

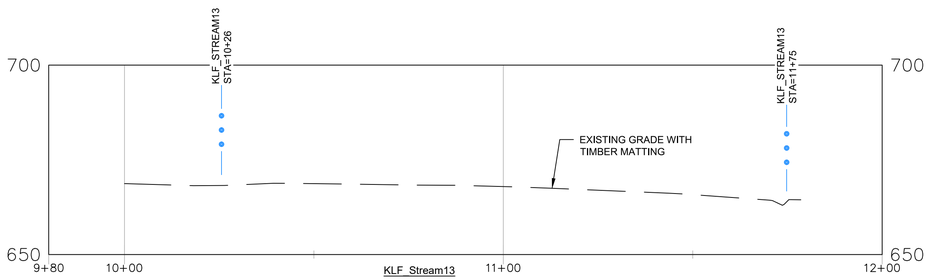
HORIZONTAL & VERTICAL SCALE

0 20 40
SCALE: 1" = 20' SCALE IN FEET



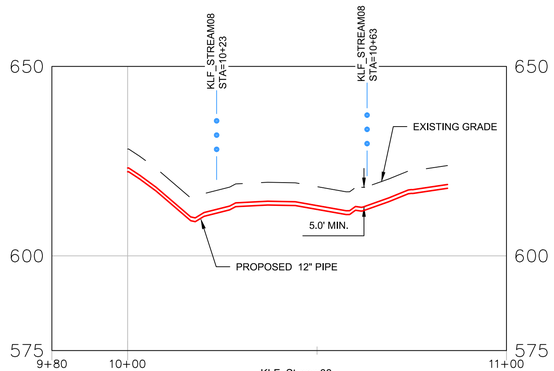

**PLAN VIEW**
SCALE: 1" 20'
STREAM CROSSING AT BC-5

KLF_Stream08 (INT)
TEMPORARY ACCESS
39.454232° N (DECIMAL DEGREES)
84.391021° W (DECIMAL DEGREES)



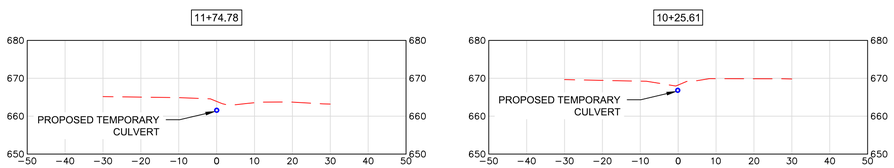

KLF_Stream13

**PROFILE VIEW**
HORIZONTAL & VERTICAL SCALE
SCALE: 1" 20'



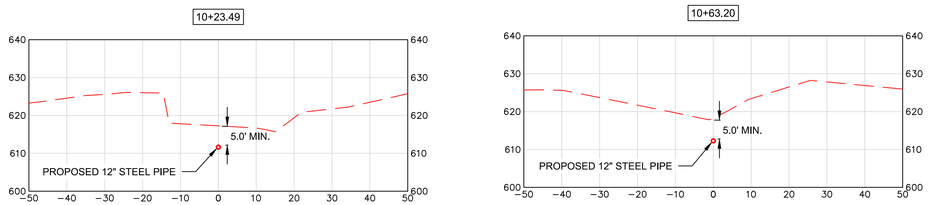

KLF_Stream08

**PROFILE VIEW**
HORIZONTAL & VERTICAL SCALE
SCALE: 1" 20'



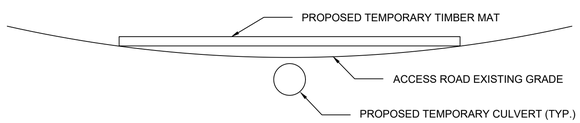

KLF_Stream13

**CROSS SECTION VIEW**
HORIZONTAL & VERTICAL SCALE
SCALE: 1" 20'

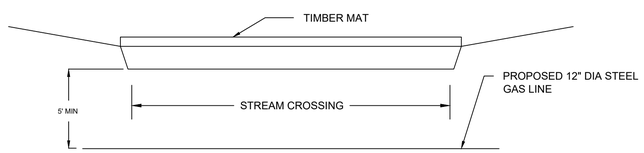



KLF_Stream08

**CROSS SECTION VIEW**
HORIZONTAL & VERTICAL SCALE
SCALE: 1" 20'




TYPICAL CULVERT CROSS SECTION




TYPICAL SUBSURFACE STREAM CROSS SECTION

1 BC-5 STREAM CROSSING DETAILS - KLF Stream13

2 BC-5 STREAM CROSSING DETAILS - KLF Stream08

**90% DESIGN**
NOT FOR CONSTRUCTION

REF. DWG(S)

| NO. | DATE | REVISION(S) DESCRIPTION | BY | CHK | APPD |
|---|---|---|---|---|---|
| B | 01/12/2022 | 90% PRELIMINARY DRAWINGS | ALS | MNP | SJP |
| A | 10/20/2021 | 30% PRELIMINARY DRAWINGS | ALS | KTL | SJP |

| DESCRIPTION | |
|---|---|
| AREA CODE | |
| ACCOUNT NUMBER | |
| PROJECT NUMBER | AW2133 |
| DRAWING BY | JAS |
| CHECKER | ---- |
| SIGNATURE | |

APPROVALS

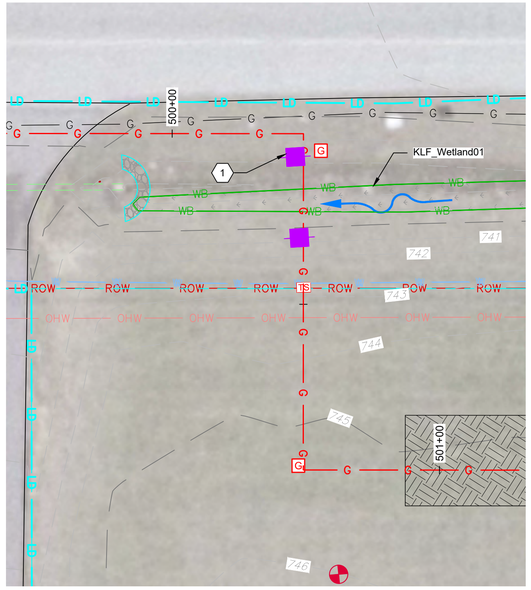
| DATE | SIGNATURE / INITIALS | |
|---|---|---|
| | | REGIONAL ENGINEER |
| | | MGR TECH REC & STD |
| | | PRINCIPAL ENGINEER |



# BUTLER COUNTY - PH 1 C210 & LP07
# BC-5 STREAM CROSSING DETAILS
# BUTLER COUNTY, OHIO

Toddhunter Resource Center Charlotte, Ohio

| SHEET | 23 | DWG SCALE | AS NOTED |
|---|---|---|---|
| DWG DATE | 01/21/2022 | STATION ID | - |
| DRAWING NUMBER | | | REVISION |
| PNG-C-042-0001087 | | | B |
| DISCIPLINE / RESOURCE CENTER / LINE NUMBER | | | |




**PLAN VIEW**
SCALE: 1" 20'
WETLAND CROSSING AT BC-5

KLF_Wetland01 (PEM)
TEMPORARY ACCESS - TIMBER MAT/
TEMPORARY SPAN BRIDGE TO BE USED
39.452513° N (DECIMAL DEGREES)
84.420537° W (DECIMAL DEGREES)

# EROSION & SEDIMENT CONTROL KEY NOTES

1. FURNISH & INSTALL TRENCH PLUG PER DETAIL 07, SHEET 45. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING SLOPES, AND SHALL INSTALL TRENCH PLUGS IN APPROPRIATE INTERVALS NEAR WETLAND/STREAM CROSSINGS.

NOTE

- NOTE ADDITIONAL 45° ELBOWS WILL BE SUPPLIED SHOULD THE CONTRACTOR WISH TO USE SEGMENTABLE FITTINGS IN LIEU OF FIELD BENDING.

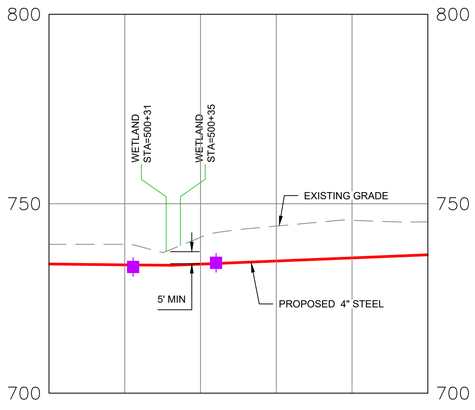
NOTE

- THE MINIMUM COVER ABOVE TOP OF PIPE WHEN CROSSING STREAMS, WETLANDS, ROADWAYS, OR ACTIVE AGRICULTURAL FIELDS SHALL BE 5 FEET.

PROFILE & CROSS SECTION LEGEND

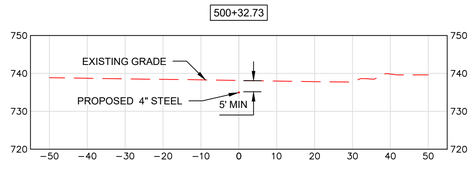
- STREAM
- WETLAND
- PROPOSED PIPELINE
- EXISTING GRADE
- PROPOSED 4" PIPELINE
- TRENCH PLUG

HORIZONTAL & VERTICAL SCALE
0 20 40
SCALE: 1" = 20' SCALE IN FEET




KLF Wetland01

**CROSS SECTION**
HORIZONTAL & VERTICAL SCALE:
1" = 20'




KLF Wetland01

**CROSS SECTION**
HORIZONTAL & VERTICAL SCALE:
1" = 20'

1 BC-5 WETLAND CROSSING DETAIL - KLF Wetland01
NTS

**90% DESIGN**
NOT FOR CONSTRUCTION

REF. DWG(S)

| NO. | DATE | REVISION(S) DESCRIPTION | BY | CHK | APPD |
|---|---|---|---|---|---|
| E | 01/212022 | 90% PRELIMINARY DRAWINGS | ALS | MNP | SJP |
| D | 10/20/2021 | 30% PRELIMINARY DRAWINGS | ALS | KTL | SJP |
| 0 | 04/05/2021 | ISSUED FOR BID | JAS | DK | JW |
| C | 03/01/2021 | 90% PRELIMINARY DRAWINGS | JAS | DK | JW |
| B | 12/21/2020 | 60% PRELIMINARY DRAWINGS | JAS | DK | JW |
| A | 10/28/2020 | 30% PRELIMINARY DRAWINGS | JAS | RAP | JW |

| DESCRIPTION | |
|---|---|
| AREA CODE | |
| ACCOUNT NUMBER | |
| PROJECT NUMBER | AW2133 |
| DRAWING BY | JAS |
| CHECKER | ---- |
| SIGNATURE | |

| APPROVALS | | |
|---|---|---|
| DATE | SIGNATURE / INITIALS | REGIONAL ENGINEER |
| DATE | SIGNATURE / INITIALS | MGR TECH REC & STD |
| DATE | SIGNATURE / INITIALS | PRINCIPAL ENGINEER |



# BUTLER COUNTY - PH 1 C210 & LP07
# BC-5 PLAN & PROFILE
# BUTLER COUNTY, OHIO

Toddhunter Resource Center Charlotte, Ohio

| | | | |
|---|---|---|---|
| SHEET | 17 | DWG SCALE | AS NOTED |
| DWG DATE | 01/21/2022 | STATION ID | - |
| DRAWING NUMBER | | REVISION | |
| PNG-C-042-0001084 | | E | |

DISCIPLINE / RESOURCE CENTER / LINE NUMBER

**ATTACHMENT F**

*Agency Correspondence*

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
Phone: (614) 416-8993 Fax: (614) 416-8994


In Reply Refer To: January 31, 2022
Project Code: 2022-0001024
Project Name: Kleinfelder, Inc.-Duke Energy Ohio, Inc.-Butler Cnty Ph I C210 & LP07 Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

**Migratory Birds**: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see http://www.fws.gov/migratorybirds/RegulationsandPolicies.html.

The MBTA has no provision for allowing take of migratory

Attachment(s):

- Official Species List

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ohio Ecological Services Field Office**
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
(614) 416-8993

# Project Summary

Project Code: 2022-0001024
Event Code: None
Project Name: Kleinfelder, Inc.-Duke Energy Ohio, Inc.-Butler Cnty Ph I C210 & LP07 Project
Project Type: Natural Gas Distribution
Project Description: On behalf of Duke Energy Ohio, Inc. (Duke), Kleinfelder, Inc. is submitting this threatened and endangered (T&E) species technical assistance modification request to notify the United States Fish and Wildlife Service (USFWS) of changes that have occurred to the proposed limits-of-disturbance (LOD) since receipt of USFWS correspondence TAILS# 03E15000-2021-TA-0862 on February 24, 2021 (Attachment A).

Duke is proposing gas line improvements including extensions, relocations, and abandonments at 7 segments (BC-1, BC-2, BC-4, BC-5, BC-6, BC-7, and BC-8) and utilizing 1 laydown yard (BC-7 Laydown Yard) in Lemon, Liberty, and Madison Townships, Butler County, Ohio (OH) (Figure 1) collectively known as the Butler Cnty Ph I C210 & LP07 Project (Project). Since receipt of the February 24, 2021 USFWS correspondence, design changes have occurred to the LODs at BC-2, BC-4, BC-5, BC-7, and BC-8 along with the addition of the BC-7 Laydown Yard, which have increased the area of interest (AOI) from 49.7 acres to 125.1 acres and increased the LOD from 12.7 acres to 24.1 acres (Figure 2). Specifically, the following changes have occurred:

• The BC-2 AOI has increased from 5.6 acres to 5.7 acres and the LOD has been modified but remains 1.3 acres with no additional tree clearing required;
• The BC-4 LOD has increased from 3.9 acres to 4.0 acres with no additional tree clearing required;
• The BC-5 AOI has increased from 4.9 acres to 71.4 acres and the LOD has increased from 0.9 acres to 10.0 acres, which has increased tree clearing from 0.1 acres to 4.1 acres;
• The BC-7 AOI has increased from 19.8 acres to 23.1 acres and the LOD has increased from 5.4 acres to 6.8 acres which has reduced tree clearing so that it is no longer required;
• The BC-8 LOD has been modified but remains 0.2 acres with no additional tree clearing required; and
• The BC-7 Laydown Yard has been added to the Project and consists of a 5.5-acre AOI and a 0.9-acre LOD, which will require no tree clearing.

Based on the above Project changes, Duke is requesting revised information regarding T&E species, or their habitats that may be impacted by the proposed Project.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.46006375,-84.39181030461681,14z


Counties: Butler County, Ohio

# Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. 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.

## Mammals

| NAME | STATUS |
|---|---|
| Indiana Bat *Myotis sodalis*<br>There is **final** critical habitat for this species. The location of the critical habitat is not available.<br>Species profile: https://ecos.fws.gov/ecp/species/5949 | Endangered |
| Northern Long-eared Bat *Myotis septentrionalis*<br>No critical habitat has been designated for this species.<br>This species only needs to be considered under the following conditions:<br>▪ Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html<br>Species profile: https://ecos.fws.gov/ecp/species/9045 | Threatened |

## Clams

| NAME | STATUS |
|---|---|
| Rayed Bean *Villosa fabalis*<br>No critical habitat has been designated for this species.<br>Species profile: https://ecos.fws.gov/ecp/species/5862 | Endangered |

## Insects

| NAME | STATUS |
| --- | --- |
| Monarch Butterfly *Danaus plexippus* | Candidate |

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

January 31, 2022

Dan Everson
U.S. Fish and Wildlife Service
Ohio Field Office
4625 Morse Rd Suite 104
Columbus, OH 43230

**Re: Threatened and Endangered Species Technical Assistance Modification Request**
Butler Cnty Ph I C210 & LP07 Project (TAILS# 03E15000-2021-TA-0862)
Lemon, Liberty, and Madison Townships, Butler County, Ohio
Duke Energy Ohio, Inc.

Dear Mr. Everson:

On behalf of Duke Energy Ohio, Inc. (Duke), Kleinfelder, Inc. is submitting this threatened and endangered (T&E) species technical assistance modification request to notify the United States Fish and Wildlife Service (USFWS) of changes that have occurred to the proposed limits-of-disturbance (LOD) since receipt of USFWS correspondence TAILS# 03E15000-2021-TA-0862 on February 24, 2021 (Attachment A).

Duke is proposing gas line improvements including extensions, relocations, and abandonments at 7 segments (BC-1, BC-2, BC-4, BC-5, BC-6, BC-7, and BC-8) and utilizing 1 laydown yard (BC-7 Laydown Yard) in Lemon, Liberty, and Madison Townships, Butler County, Ohio (OH) (Figure 1) collectively known as the Butler Cnty Ph I C210 & LP07 Project (Project). Since receipt of the February 24, 2021 USFWS correspondence, design changes have occurred to the LODs at BC-2, BC-4, BC-5, BC-7, and BC-8 along with the addition of the BC-7 Laydown Yard, which have increased the area of interest (AOI) from 49.7 acres to 125.1 acres and increased the LOD from 12.7 acres to 24.1 acres (Figure 2). Specifically, the following changes have occurred:

- The BC-2 AOI has increased from 5.6 acres to 5.7 acres and the LOD has been modified but remains 1.3 acres with no additional tree clearing required;
- The BC-4 LOD has increased from 3.9 acres to 4.0 acres with no additional tree clearing required;
- The BC-5 AOI has increased from 4.9 acres to 71.4 acres and the LOD has increased from 0.9 acres to 10.0 acres, which has increased tree clearing from 0.1 acres to 4.1 acres;
- The BC-7 AOI has increased from 19.8 acres to 23.1 acres and the LOD has increased from 5.4 acres to 6.8 acres which has reduced tree clearing so that it is no longer required;
- The BC-8 LOD has been modified but remains 0.2 acres with no additional tree clearing required; and
- The BC-7 Laydown Yard has been added to the Project and consists of a 5.5-acre AOI and a 0.9-acre LOD, which will require no tree clearing.

Based on the above Project changes, Duke is requesting revised information regarding T&E species, or their habitats that may be impacted by the proposed Project.


51 Dutilh Road, Suite 240, Cranberry Township, PA 16066 p|724.772.7072 f|724.203.6737

Please address any questions or comments regarding this modification to:

Stephen R. Lane
Lead Environmental Scientist/Planner - Siting and Licensing Support
Duke Energy Ohio, Inc.
139 East Fourth Street, Room EM740
Cincinnati, OH 45202
(513) 287-2379
steve.lane@duke-energy.com

Sincerely,

Kleinfelder, Inc.

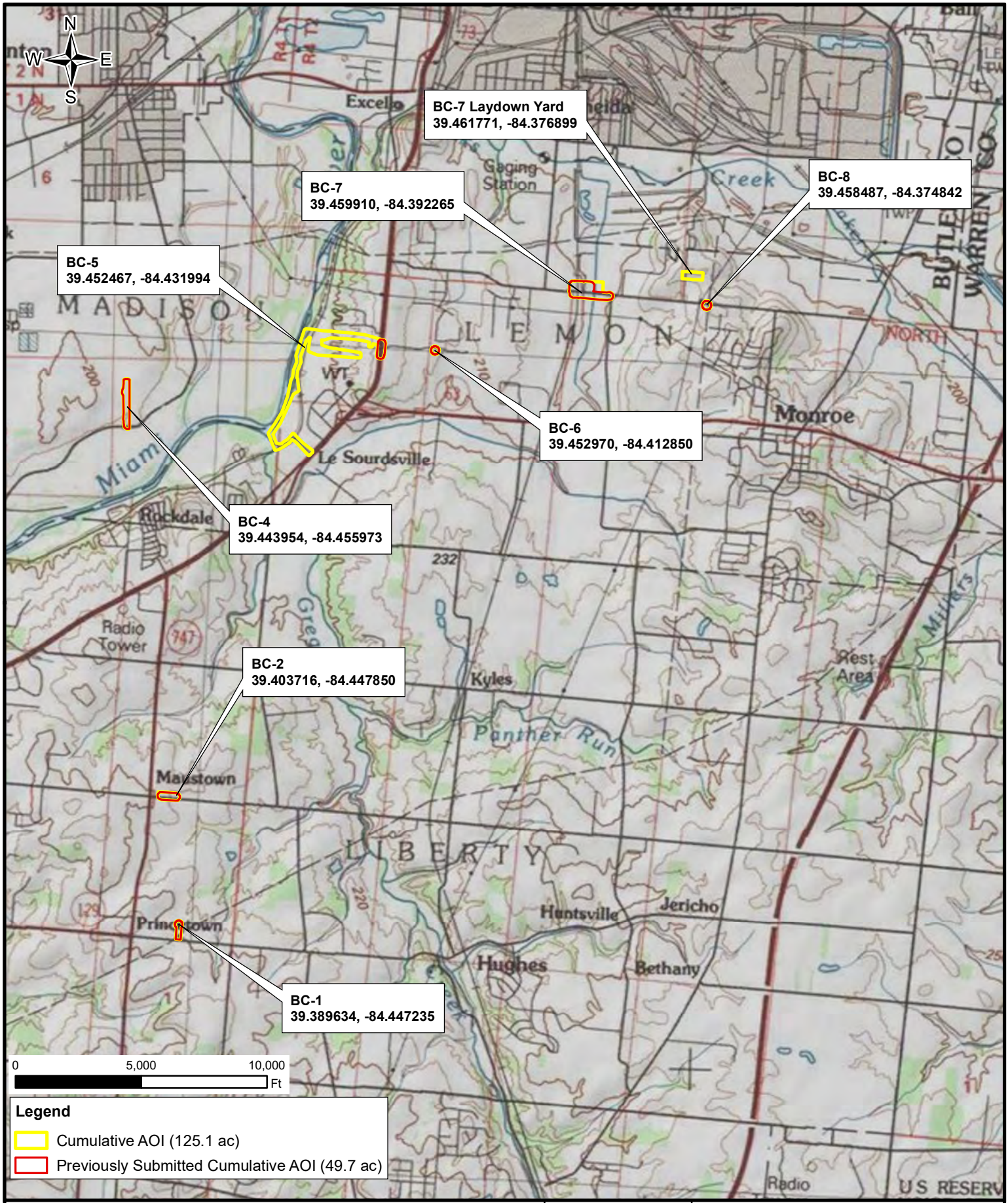
Matthew J. Albright
Project Manager

John A. Lewis
Project Professional

cc: Stephen R. Lane, Duke Energy Ohio, Inc.

Enclosures:
Figure 1 – Vicinity Map
Figure 2 - Aerial Imagery Map
Attachment A - Agency Correspondence

**FIGURE 1**
**VICINITY MAP**

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Monroe & Trenton, OH
7.5' USGS Quadrangle

Lemon, Liberty & Madison Township, Butler County, Ohio



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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_USFWS_Fig1 |

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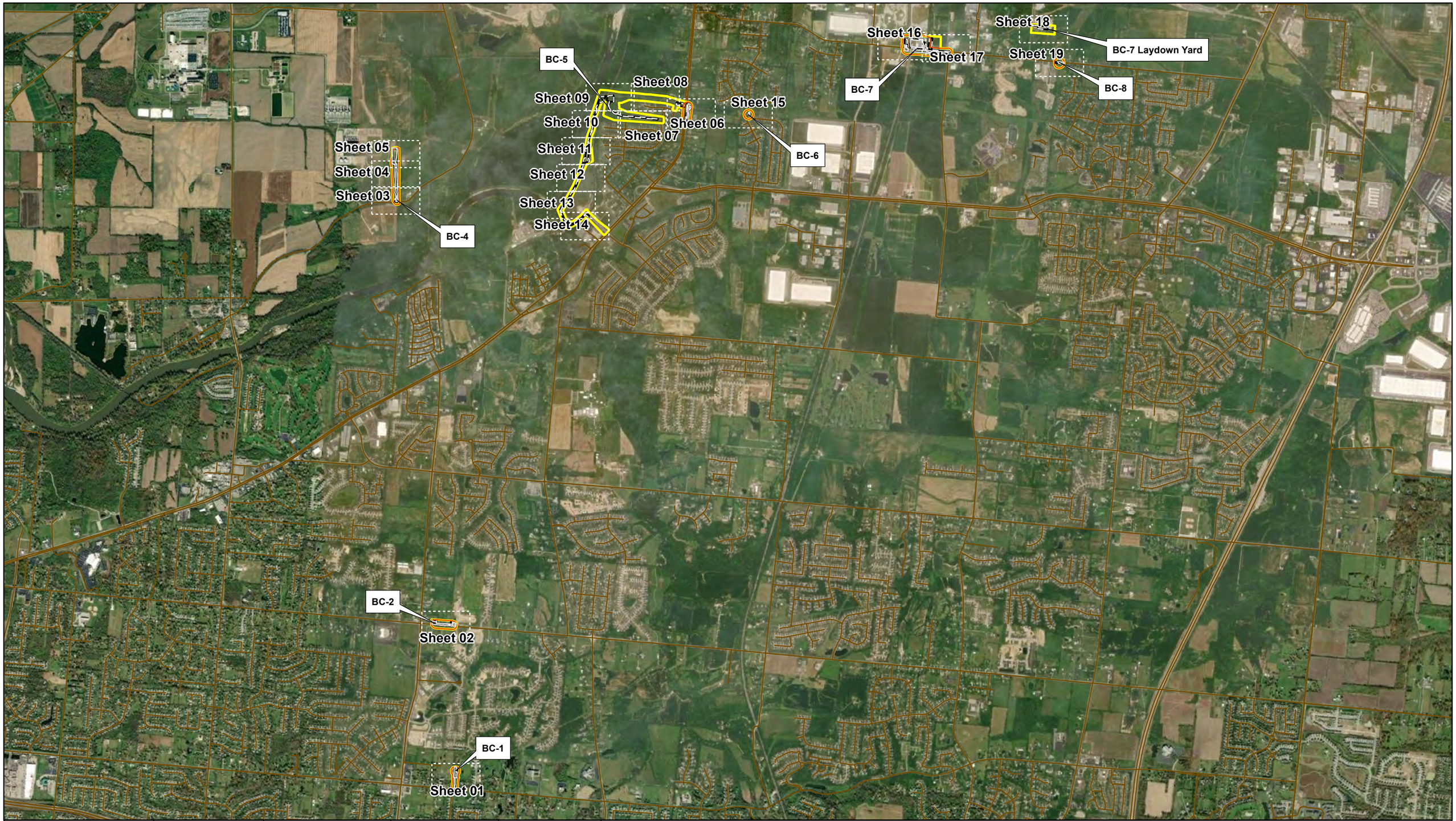
Figure 1
Vicinity Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Version: 1

**FIGURE 2**
**AERIAL IMAGERY MAP**



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| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2_Idx |

N
W E
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0 1,750 3,500 Ft

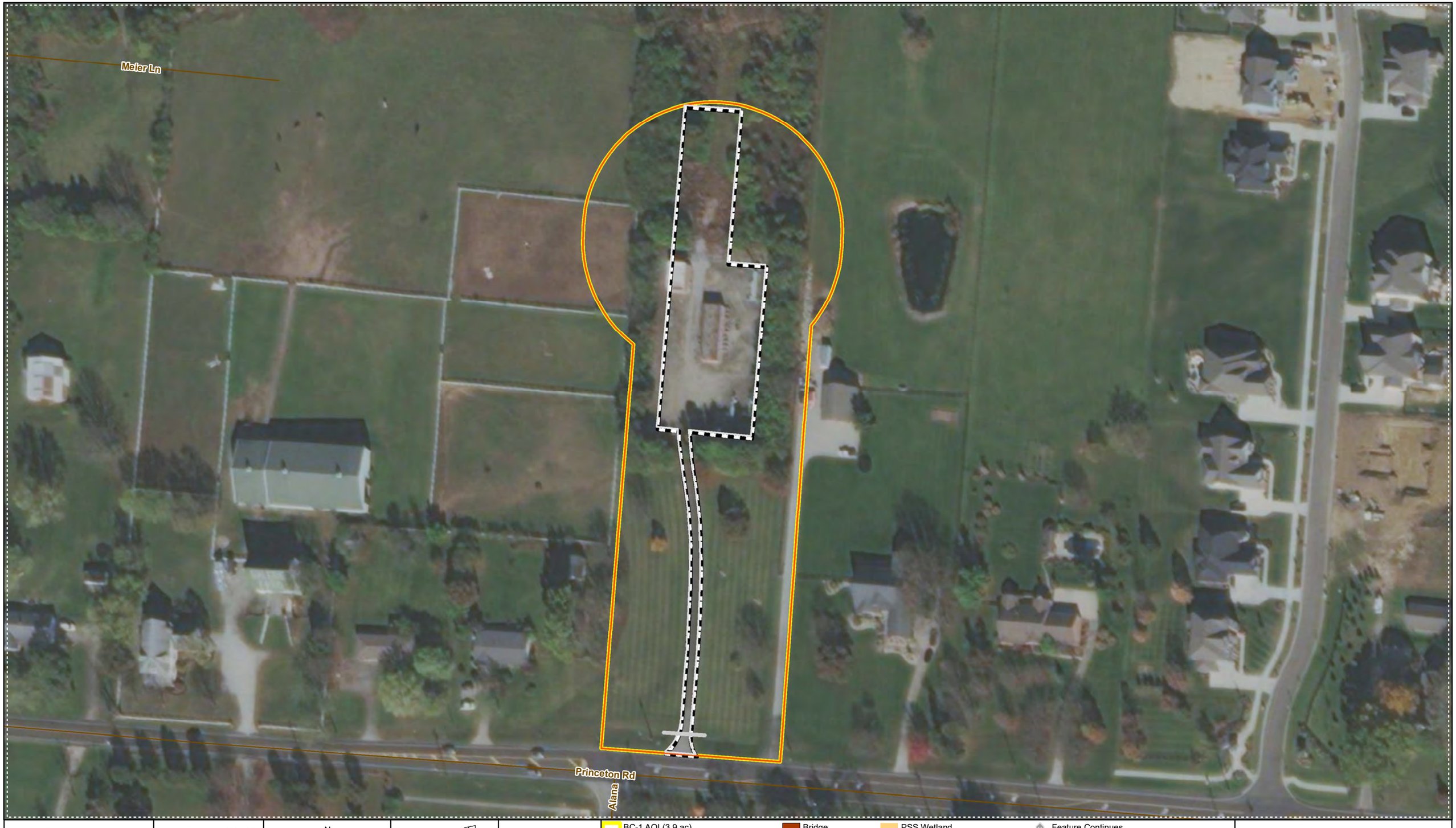
**Butler County Ohio**

- Cumulative AOI (125.1 ac)
- Cumulative LOD (24.1 ac)
- Previously Submitted Cumulative AOI (49.7 ac)
- Previously Submitted Cumulative LOD (12.7 ac)
- USFWS Critical Habitat (N/A)
- Existing Road

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Index Map

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| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N
W E
S
0 50 100 Ft

**Butler County Ohio**

- BC-1 AOI (3.9 ac)
- BC-1 LOD (0.9 ac)
- Previously Submitted BC-1 AOI (3.9 ac)
- Previously Submitted BC-1 LOD (0.9 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 1 of 19


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| FILE NAME: | ButlerCountyPhaseI_USFWS_Fig2 |

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**Butler County Ohio**

- BC-2 AOI (5.7 ac)
- BC-2 LOD (1.3 ac)
- Previously Submitted BC-2 AOI (5.6 ac)
- Previously Submitted BC-2 LOD (1.3 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 2 of 19

Sheet 04

KLF_Stream05

Woodsdale Rd

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| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N
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0 50 100 Ft

**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (4.0 ac)
- Previously Submitted BC-4 AOI (11.3 ac)
- Previously Submitted BC-4 LOD (3.9 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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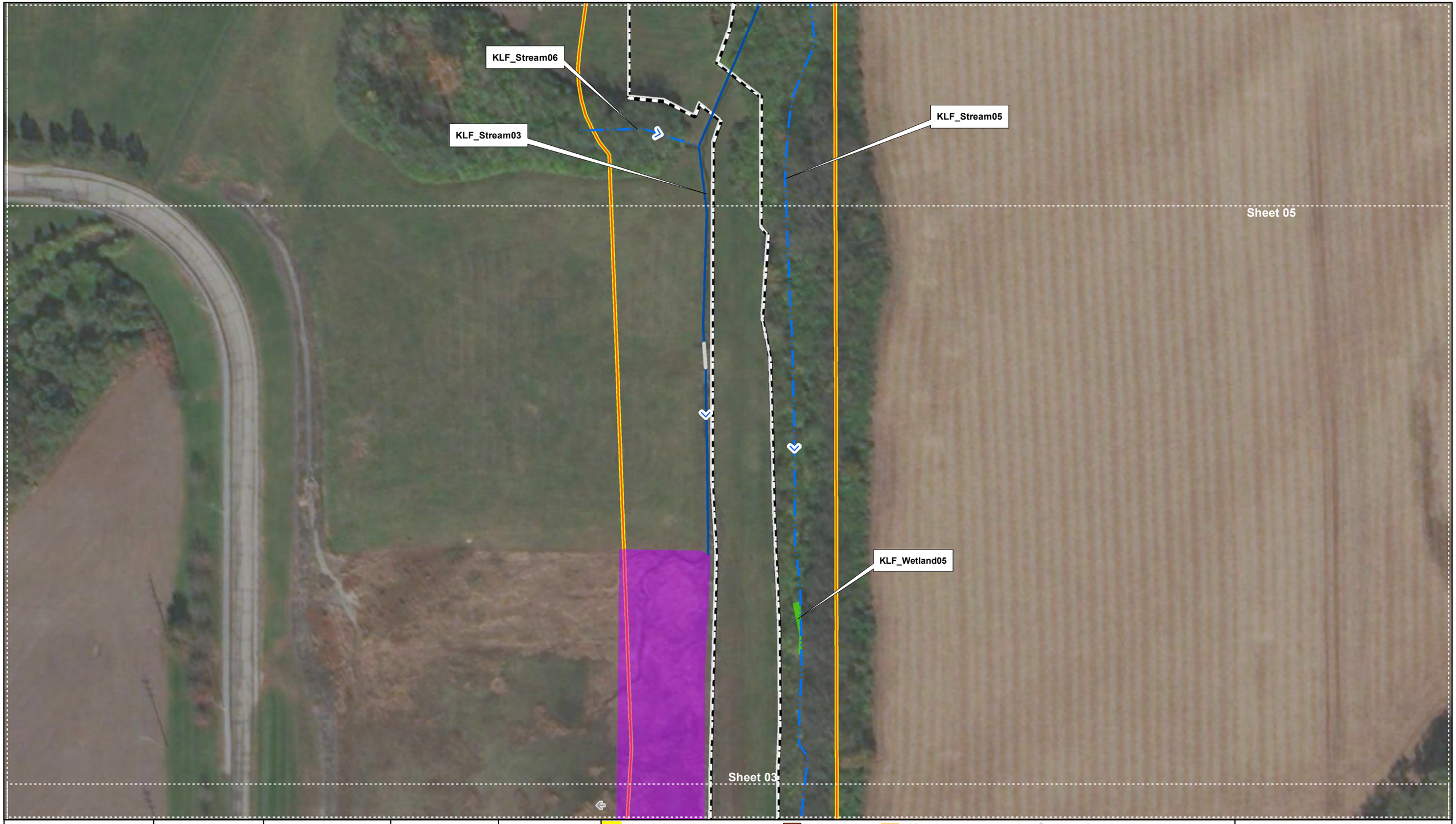
Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022

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| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

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0 50 100 Ft

**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (4.0 ac)
- Previously Submitted BC-4 AOI (11.3 ac)
- Previously Submitted BC-4 LOD (3.9 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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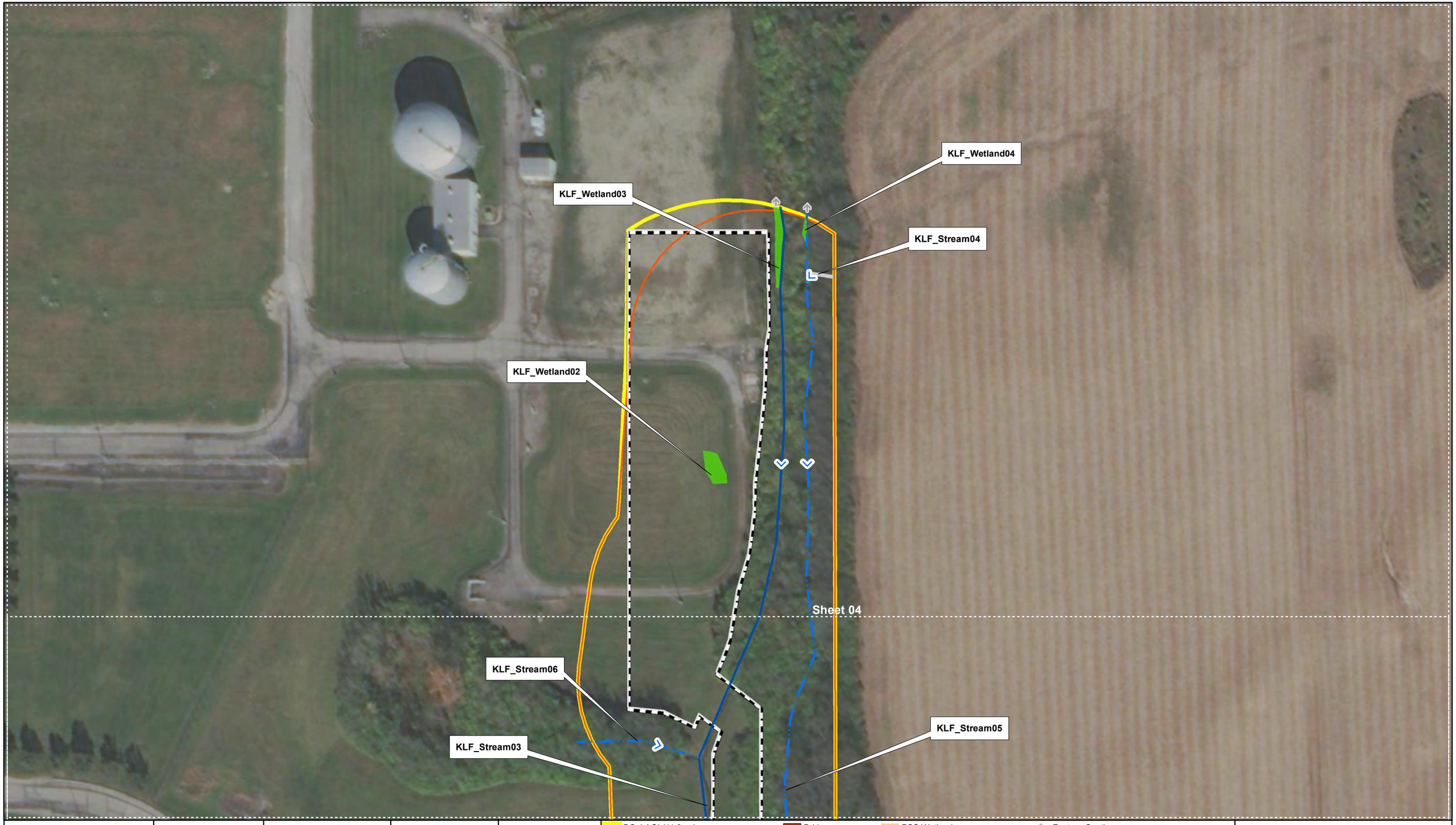
Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 4 of 19

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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N
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0 50 100 Ft

**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (4.0 ac)
- Previously Submitted BC-4 AOI (11.3 ac)
- Previously Submitted BC-4 LOD (3.9 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 5 of 19


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| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N
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0 50 100
Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Previously Submitted BC-5 AOI (4.9 ac)
- Previously Submitted BC-5 LOD (0.9 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 6 of 19

Sheet 09

Sheet 08

KLF_Stream12

KLF_Stream13

Sheet 10

KLF_Stream11

KLF_Wetland17

KLF_Wetland18

Granny Smith Ln

Apple Knoll Ln

Winesap Ln Winesap Ln

Macintosh Ln

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| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N
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0 50 100 Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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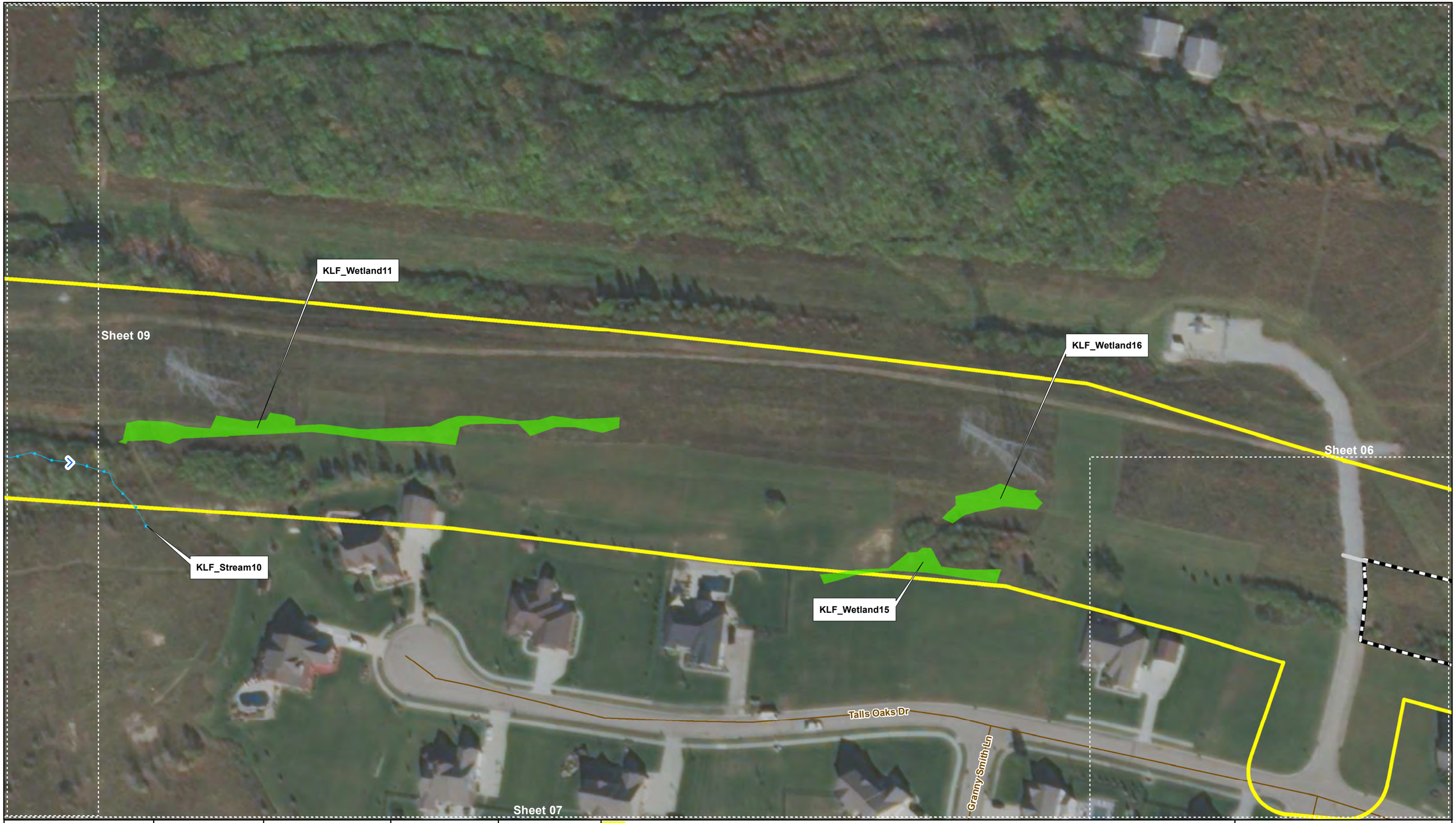
Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022

Sheet 7 of 19

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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N W E S

0 50 100 Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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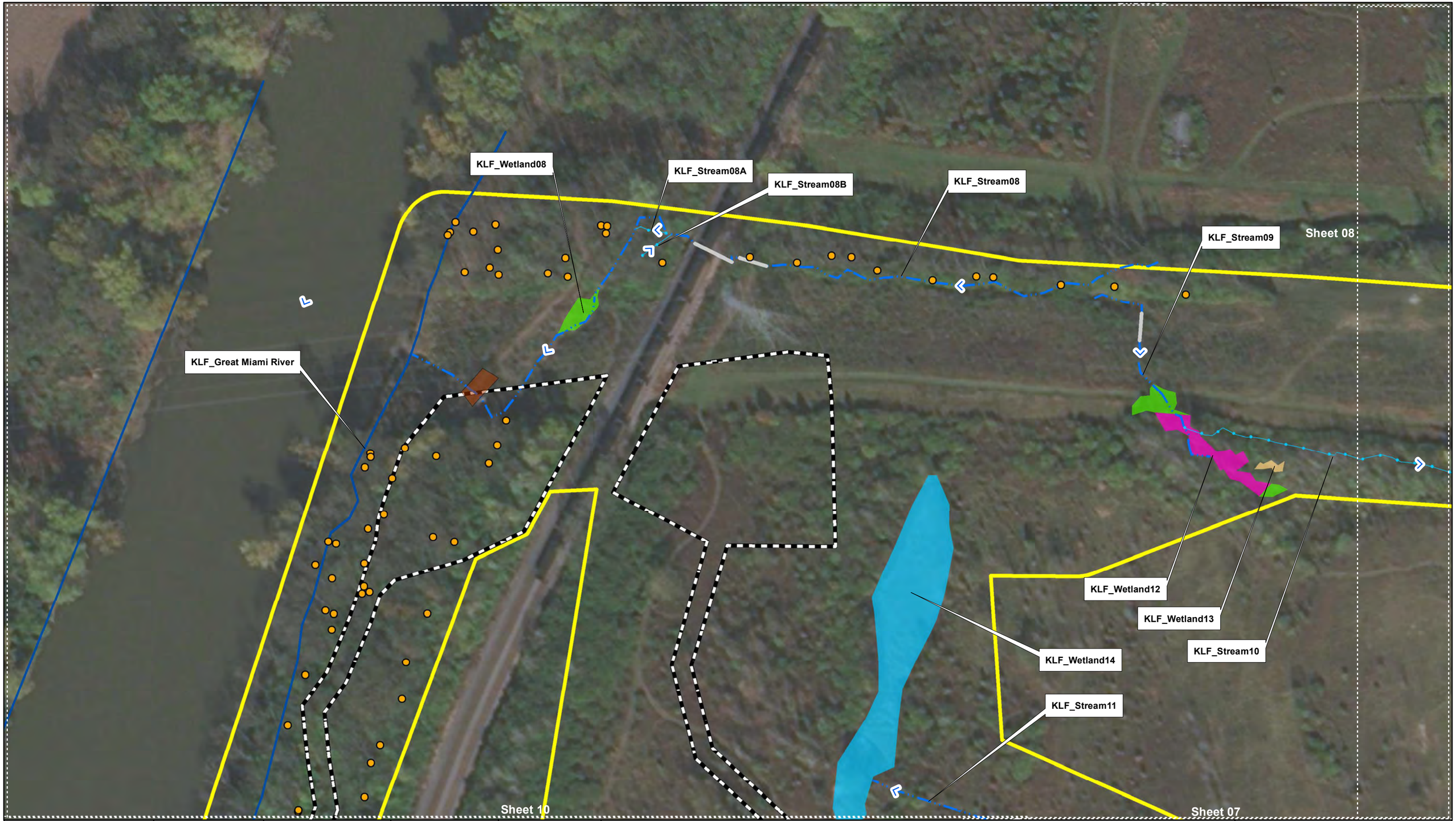
Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 8 of 19

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| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N
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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
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- PUB Wetland
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- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 10 of 19


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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N
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0 50 100 Ft

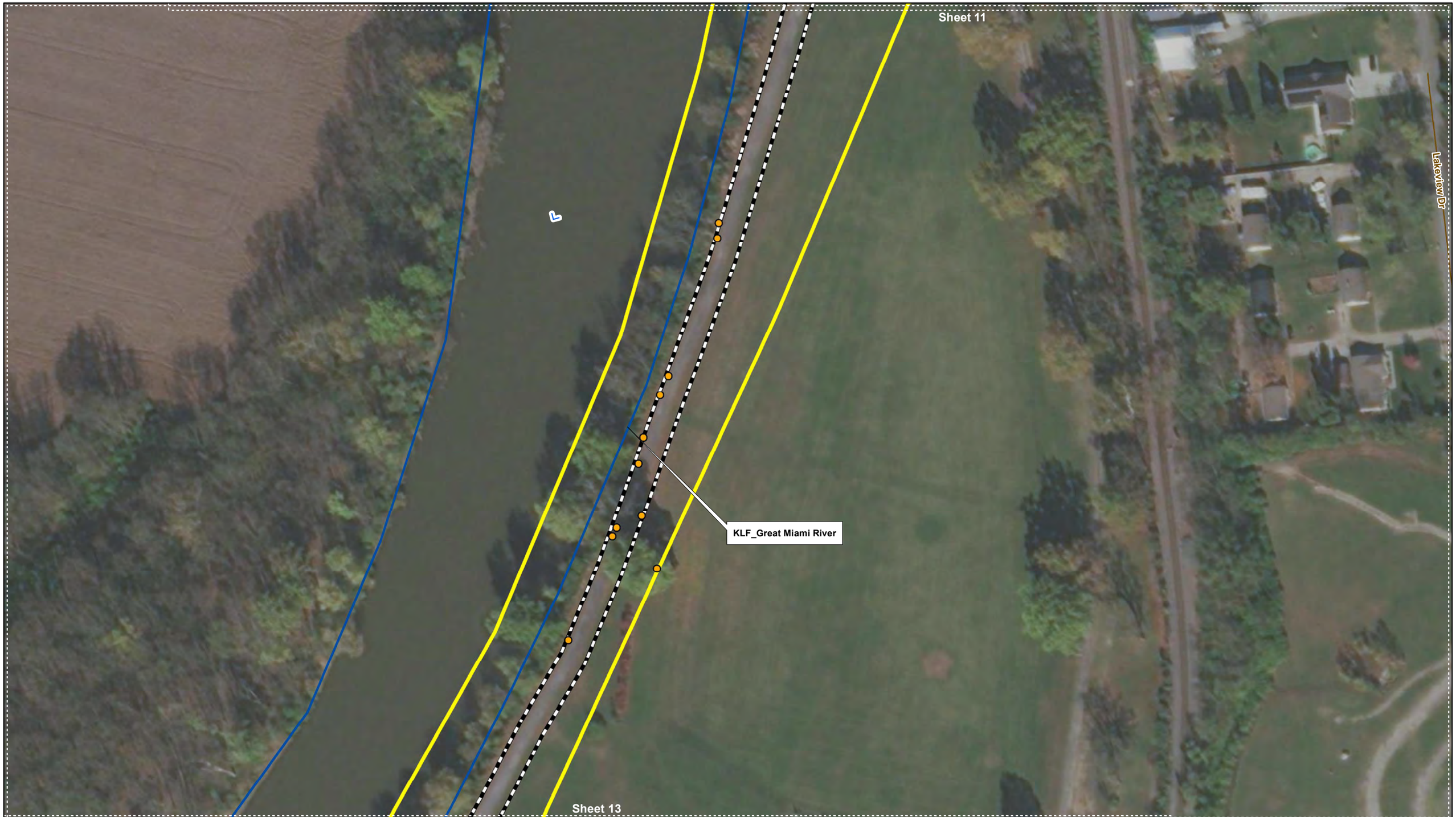
**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022

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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N
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0 50 100 Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 12 of 19

Sheet 12

KLF_Great Miami River

Sheet 14

KLF_Gregory Creek

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N
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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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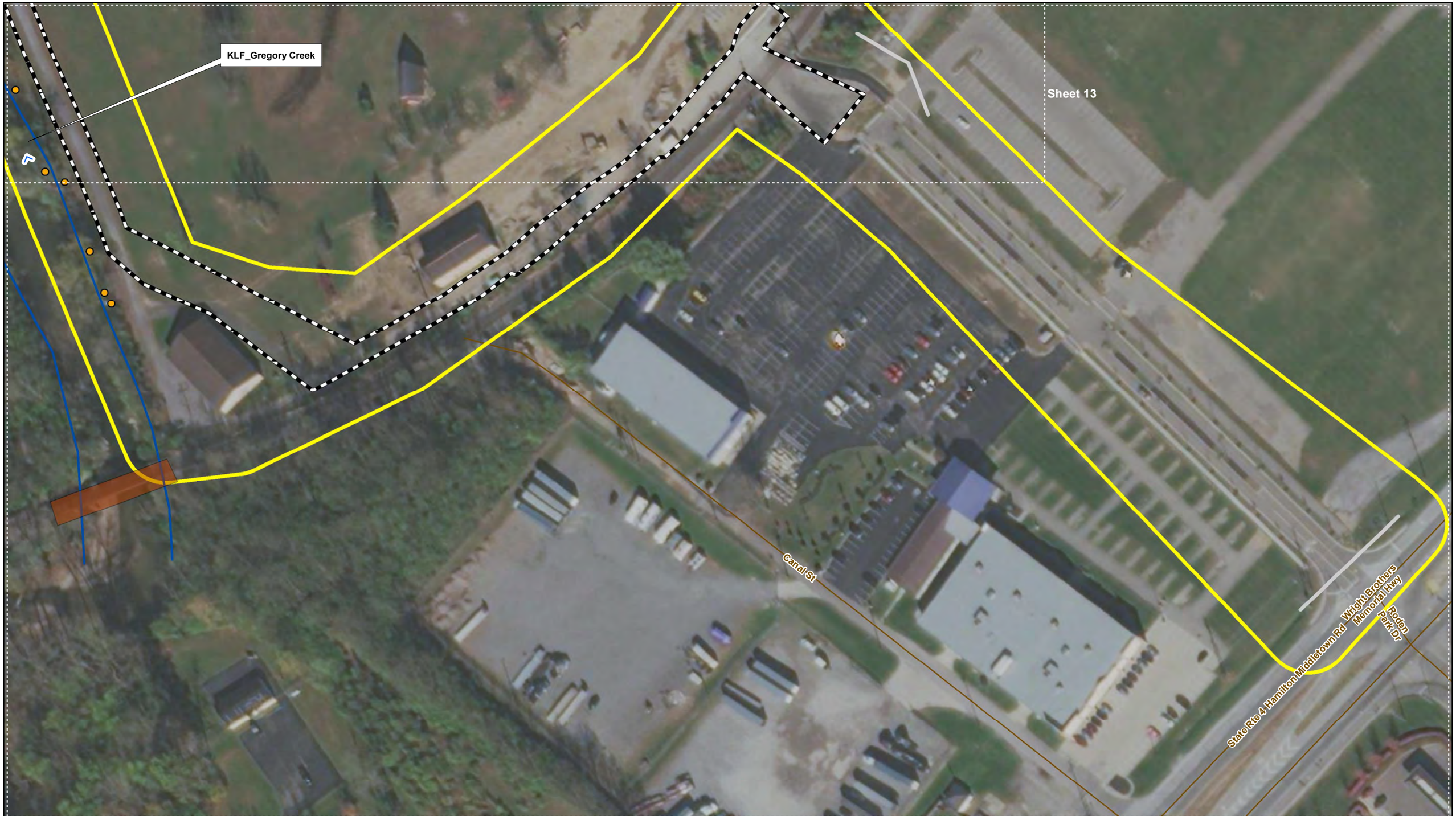
Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022

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0 50 100 Ft

**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 14 of 19


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| FILE NAME: | ButlerCountyPhasel_USFWS_Fig2 |

N
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S
0 50 100 Ft

**Butler County Ohio**

- BC-6 AOI (1.9 ac)
- BC-6 LOD (0.1 ac)
- Previously Submitted BC-6 AOI (1.9 ac)
- Previously Submitted BC-6 LOD (0.1 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 15 of 19


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| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N
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0 50 100 Ft

**Butler County Ohio**

- BC-7 AOI (23.1 ac)
- BC-7 LOD (6.8 ac)
- Previously Submitted BC-7 AOI (19.8 ac)
- Previously Submitted BC-7 LOD (5.4 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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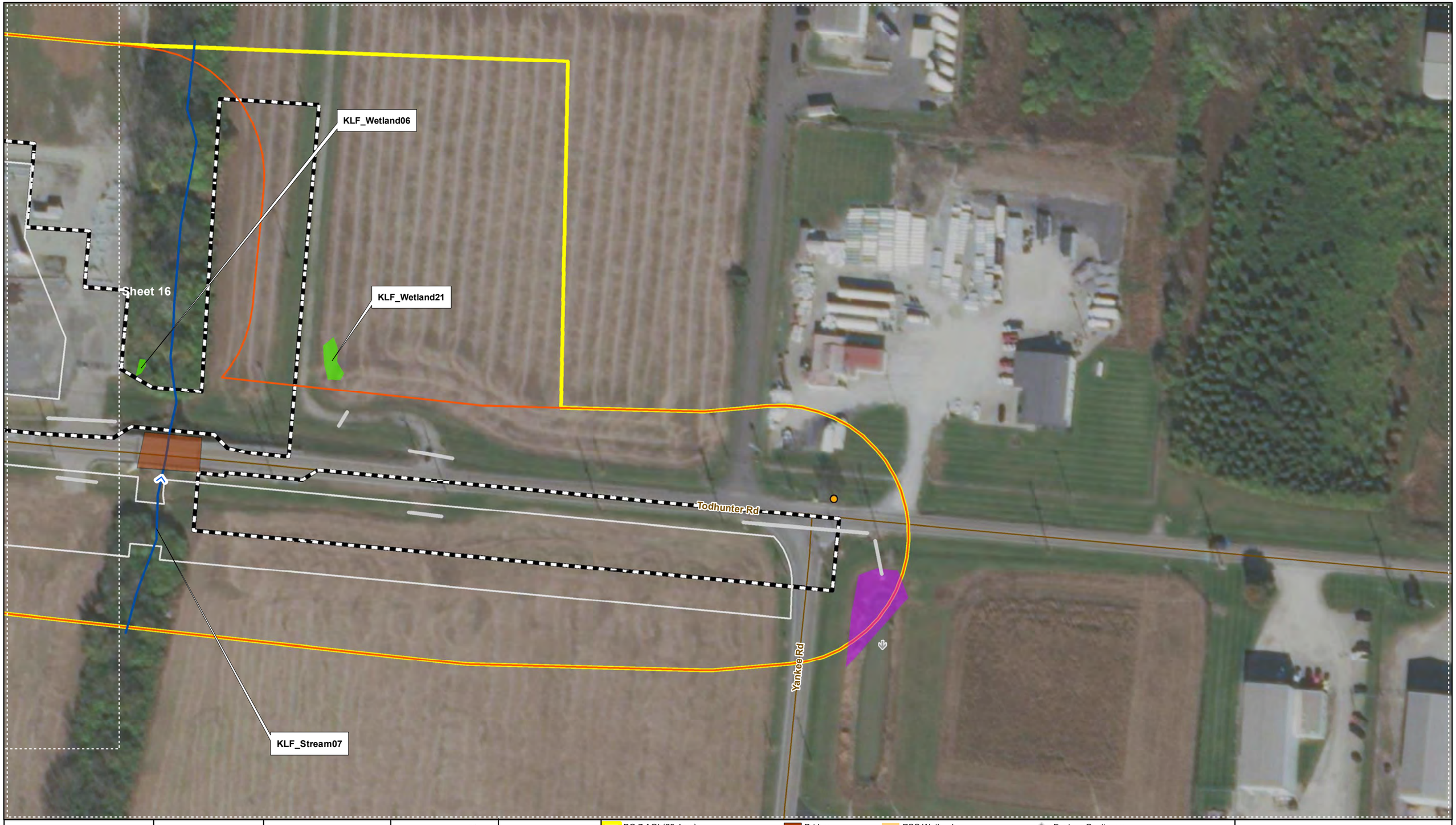
Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 16 of 19

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| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N W E S

0 50 100 Ft

**Butler County Ohio**

- BC-7 AOI (23.1 ac)
- BC-7 LOD (6.8 ac)
- Previously Submitted BC-7 AOI (19.8 ac)
- Previously Submitted BC-7 LOD (5.4 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022

KLF_Wetland20

KLF_Wetland19

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|---|---|
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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_USFWS_Fig2 |

N
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0 50 100 Ft

**Butler County Ohio**

- BC-7 Laydown Yard AOI (5.5 ac)
- BC-7 Laydown Yard LOD (0.9 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022


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| FILE NAME: | ButlerCountyPhaseI_USFWS_Fig2 |

N
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0 50 100 Ft

**Butler County Ohio**

- BC-8 AOI (2.3 ac)
- BC-8 LOD (0.2 ac)
- Previously Submitted BC-8 (2.3 ac)
- Previously Submitted BC-8 LOD (0.2 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Sheet 19 of 19

**ATTACHMENT A**
**AGENCY CORRESPONDENCE**

## Matthew Albright

**From:** Ohio, FW3 <ohio@fws.gov>
**Sent:** Wednesday, February 24, 2021 12:42 PM
**To:** Matthew Albright
**Cc:** Lane, Steve; Seth Sanders; Jill Vovaris
**Subject:** Duke Energy, Butler County Phase I, C210 & LP07 Project (Gas Line Improvements)

**External Email**

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UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994

TAILS# 03E15000-2021-TA-0862

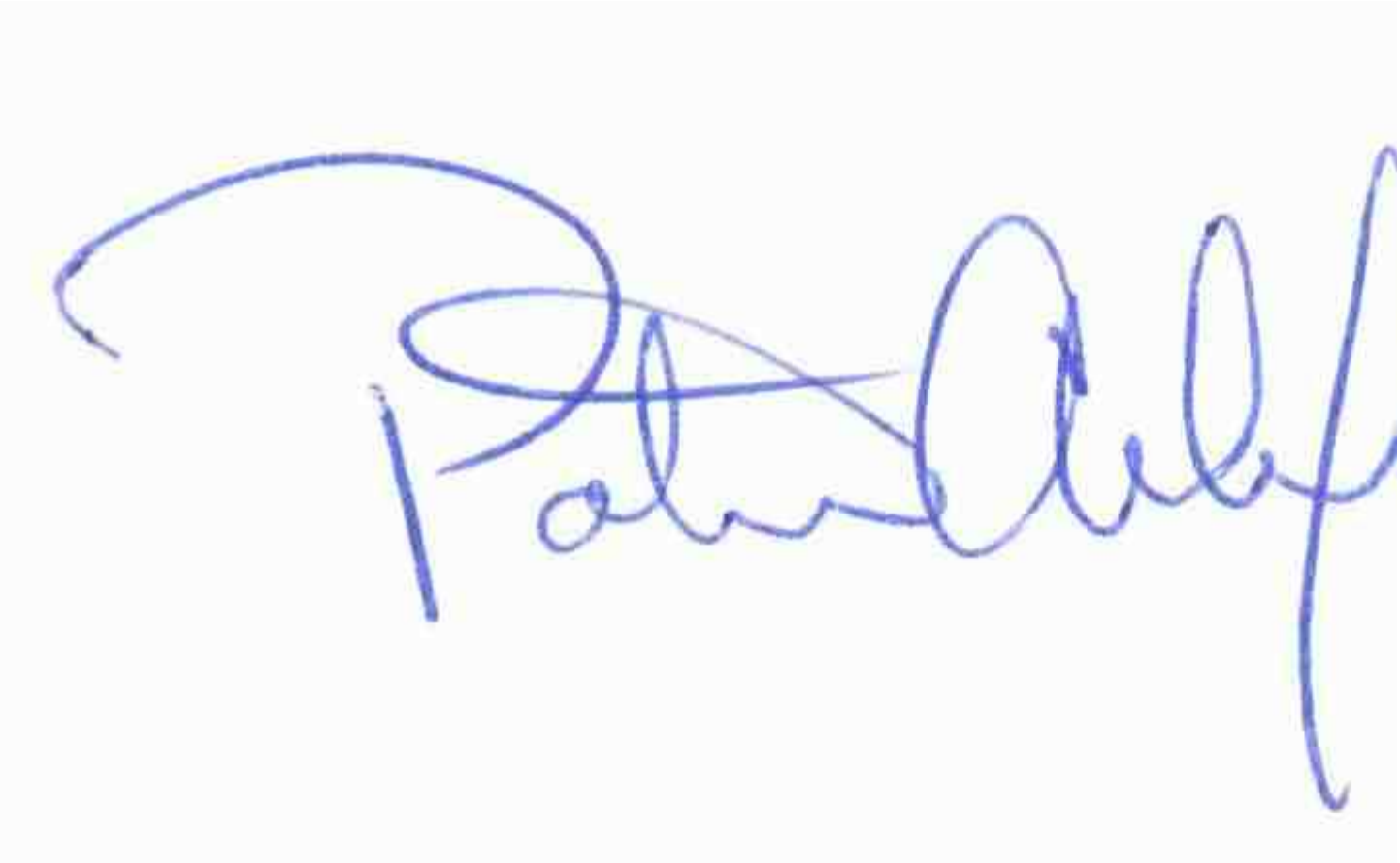
Dear Mr. Albright,

The U.S. Fish and Wildlife Service (Service) received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse effects to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: Due to the project, type, size, and location, we do not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat. If there are any project modifications during the term of this action, or additional information for listed or proposed species or their critical habitat becomes available, or if new information reveals effects of the action that were not previously considered, then please contact us for additional project review.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,



Patrice M. Ashfield
Field Office Supervisor

## Matthew Albright

**From:** Ohio, FW3 <ohio@fws.gov>
**Sent:** Wednesday, February 24, 2021 12:42 PM
**To:** Matthew Albright
**Cc:** Lane, Steve; Seth Sanders; Jill Vovaris
**Subject:** Duke Energy, Butler County Phase I, C210 & LP07 Project (Gas Line Improvements)

**External Email**

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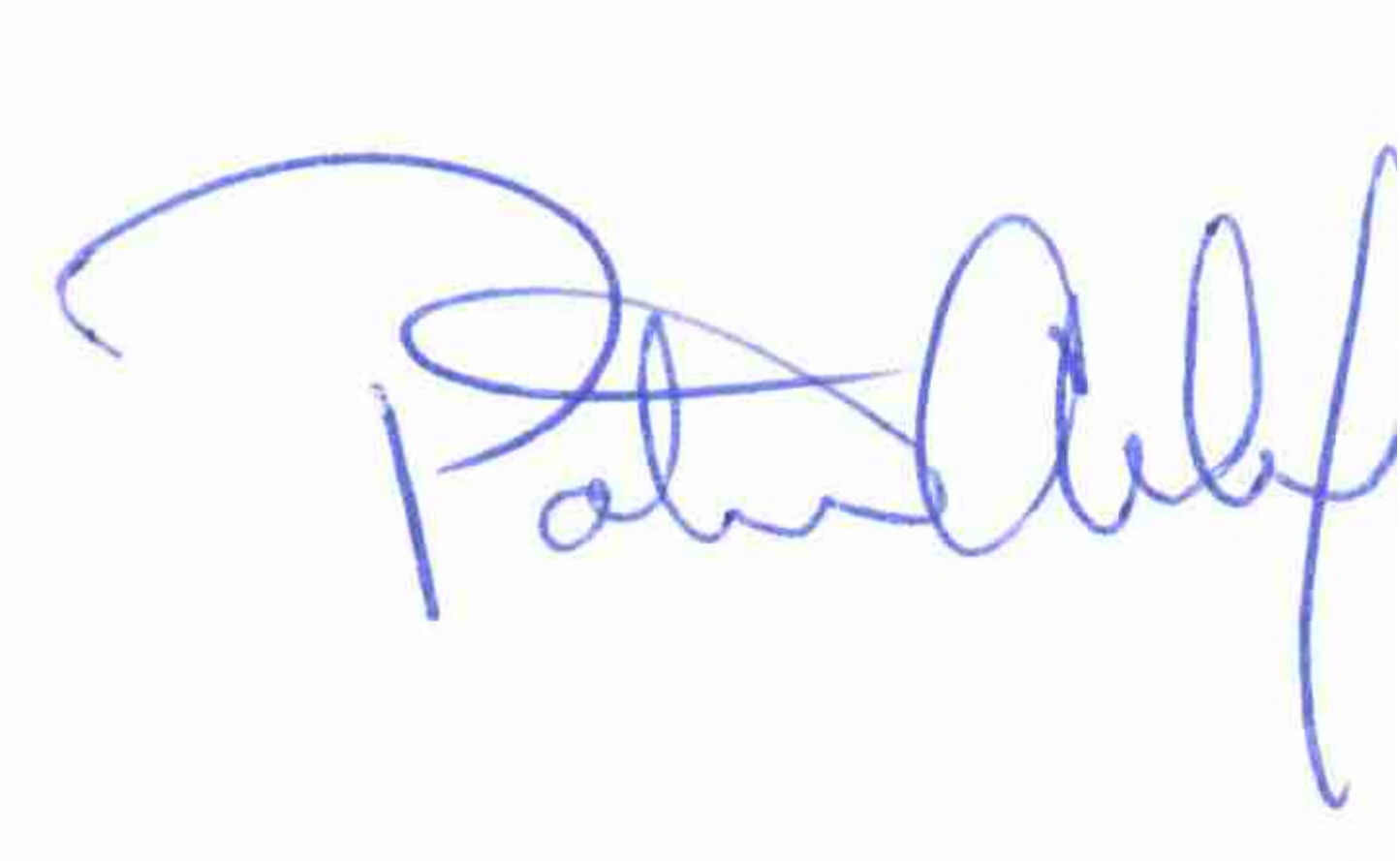

Patrice M. Ashfield
Field Office Supervisor

February 16, 2021

Dan Everson
U.S. Fish and Wildlife Service
Ohio Field Office
4625 Morse Rd Suite 104
Columbus, OH 43230

**Re: Threatened and Endangered Species Technical Assistance Letter**
Butler Cnty Ph I C210 & LP07
Lemon, Liberty, and Madison Townships, Butler County, Ohio
Duke Energy Ohio, Inc.

Dear Mr. Everson:

Kleinfelder, Inc. (Kleinfelder) is submitting this consultation on behalf of Duke Energy Ohio, Inc. (Duke) for the proposed Butler Cnty Ph I C210 & LP07 Project.

Please address any questions or comments regarding this consultation to:

Stephen R. Lane
Lead Environmental Scientist/Planner - Siting and Licensing Support
Duke Energy Ohio, Inc.
139 East Fourth Street, Room EM740
Cincinnati, OH 45202
(513) 287-2379
steve.lane@duke-energy.com

## 1.0 SITE DESCRIPTION

Duke is proposing gas line improvements including extensions, relocations, and abandonments at 7 different locations in Lemon, Liberty, and Madison Townships, Butler County, Ohio (OH) (Figure 1) collectively known as the Butler Cnty Ph I C210 & LP07 Project (Project). Figures 2 and 3 present the Project on an aerial imagery map and natural land cover dataset map, respectively.

The proposed Project includes 7 segments throughout Butler County, OH, which have a cumulative area of investigation (AOI) of approximately 49.7 acres and are individually described below.

- BC-1 has an approximately 3.9-acre AOI. This portion of the AOI is located in Liberty Township at 39.389634, -84.447235. Land cover within the AOI consists of industrial use, road right-of-way (ROW), utility ROW, forested and open field areas. Land use is dominated by industrial use.
- BC-2 has an approximately 5.6-acre AOI. This portion of the AOI is located in Liberty Township, at 39.4036274, -84.450058. Land cover within the AOI consists of road ROW, utility ROW, and residential areas. Land use is dominated by residential use.

- BC-4 has an approximately 11.3-acre AOI. This portion of the AOI is located in Madison Township at 39.443954, -84.455973. Land cover within the AOI consists of industrial use, including two stormwater management facilities, road ROW, forested and open field areas. Land use is dominated by industrial use.
- BC-5 has an approximately 4.9-acre AOI. This portion of the AOI is located in Lemon Township, at 39.452186, -84.420642. Land cover within the AOI consists of commercial use, road ROW, utility ROW, residential, and agricultural areas. Land use is dominated by residential, commercial, and agricultural use.
- BC-6 has an approximately 1.9-acre AOI. This portion of the AOI is located in Lemon Township, at 39.452907, -84.413036. Land cover within the AOI consists of road ROW, utility ROW, and residential areas. Land use is dominated by residential use.
- BC-7 has an approximately 19.8-acre AOI. This portion of the AOI is located in Lemon Township at 39.459418, -84.392426. Land cover within the AOI consists of industrial use, road ROW, utility ROW, and agricultural areas. Land use is dominated by industrial and agricultural use.
- BC-8 has an approximately 2.3-acre AOI. This portion of the AOI is located in Lemon Township at 39.458487, -84.374842. Land cover within the AOI consists of industrial use, road ROW, utility ROW, and residential use. Land use is dominated by industrial and residential use.

Kleinfelder biologists conducted stream and wetland investigations on September 3 and 10, 2020, October 21, 2020, and December 15, 2020 to identify streams, wetlands, and potential Indiana bat and northern long-eared bat (NLEB) habitat within a cumulative 49.7-acre AOI. Dominant tree species among the Project locations included Callery pear (*Pyrus calleryana*), flowering dogwood (*Cornus florida*), red elm (*Ulmus rubra*), and black walnut (*Juglans nigra*). Dominant sapling/shrub species among the Project locations included black willow (*Salix nigra*) and Herder Amur honeysuckle (*Lonicera maackii*).

## 2.0 THREATENED AND ENDANGERED SPECIES

The Project LOD was reviewed through the use of the United States Fish and Wildlife Services (USFWS) Information for Planning and Consultation (IPaC) (https://ecos.fws.gov/ipac/) to generate the initial screening of species listed under the Endangered Species Act that are known or expected to be on or near the Project (Attachment A). The table below summarizes the three species that are federally threatened or endangered and are known or expected to be on or near the Project as identified by IPaC. Kleinfelder understands the information contained within IPaC is routinely updated as new information on species distributions becomes available.


51 Dutilh Road, Suite 240, Cranberry Township, PA 16066 p|724.772.7072 f|724.772.7079

## Table 1: Threatened and Endangered Species Identified by IPaC

| Common Name | Scientific Name | Habitat | Status |
|---|---|---|---|
| Indiana Bat | *Myotis sodalis* | There is final critical habitat for this species; however, the location of the critical habitat is not available. | Endangered |
| Northern Long-Eared Bat | *Myotis septentrionalis* | No critical habitat has been designated for this species. | Threatened |
| Running Buffalo Clover | *Trifolium stoloniferum* | No critical habitat has been designated for this species. | Endangered |

## 3.0 POTENTIAL THREATENED AND ENDANGERED SPECIES HABITAT IN THE AOI

**Indiana Bat and NLEB**

The Indiana bat is identified as an endangered species within Ohio. Summer roosting habitat for the Indiana bat includes living, dead (snags), or decaying trees ≥ 5 inches diameter at breast height (DBH) that contain exfoliating bark, cracks, crevices, and/or hollows. The NLEB is identified as a threatened species within Ohio. Summer roosting habitat for the NLEB consists of living, dead, or decaying trees ≥ 3 inches DBH that contain exfoliating bark, cracks, crevices, and/or hollows.

In Ohio, presence of the Indiana bat and NLEB is assumed wherever suitable habitat occurs. As a result of this requirement and due to the proposed Project construction schedule, Kleinfelder contracted Encarna, LLC. (Encarna) on behalf of Duke to conduct a summer acoustic survey to determine the presence/probable absence of threatened and/or endangered bat species within the Project during the summer maternity season. Prior to conducting the acoustic survey, a study plan was submitted to the USFWS Ohio Field Office (OHFO) and Ohio Department of Natural Resources (ODNR) on August 9, 2020 proposing an acoustic survey for 4 of the 7 Project segments. The USFWS OHFO and ODNR concurred with the proposal on August 11, 2020 and August 12, 2020, respectively. Between August 12, 2020 and August 14, 2020, acoustic surveys were performed at the BC-1, BC-4, and BC-7. Acoustic surveys were not performed at BC-2 due to land access issues. Data collected from the acoustic surveys were analyzed using the USFWS approved Kaleidoscope Pro Version 5.1.0, which includes a Maximum Likelihood Estimator (MLE) that statistically evaluates the risk of false positives within each individual species result. The MLE generated by Kaleidoscope had confidence in five species: big brown bat (*Eptesicus fuscus*), Eastern red bat (*Lasiurus borealis*), little brown bat (*Myotis lucifugus*), evening bat (*Nycticeius humeralis*), and tricolored bat (*Perimyotis subflavus*). The Indiana bat (*Myotis sodalis*) and NLEB (*Myotis septentrionalis*) were found not likely to be present. The results of the acoustic surveys were submitted to USFWS and ODNR on August 24, 2020.

Correspondence from USFWS (TAILS# 03E15000-2020-TA-2218) on August 25, 2020 indicated tree clearing on the project site at any time of the year is unlikely to result in adverse impacts to the Indiana bats and will not result in any unauthorized incidental take of NLEB. In addition, USFWS did not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species due to the Project type, size, and location. Correspondence from ODNR on August 25 and 26, 2020 recommended no side-trimming or cutting of any trees in the Project area that have clusters of dead leaves in the upper third of the tree and no cutting of any trees with a DBH ≥ 20 inches prior to October 1st and after March 31st in order to limit impacts to tricolored bats. Additionally, in order to limit impacts to little brown bats, ODNR recommended no clearing of trees with the following characteristics unless they pose a hazard: dead or live trees of any size with loose, shaggy bark and/or crevices, holes, or cavities. USFWS and ODNR correspondence associated with the acoustic surveys are included as Attachment B.

Due to the recommendation outlined by ODNR, Kleinfelder biologists assessed the onsite habitat within the 49.7-acre AOI to determine suitability for bats (Figures 2 and 3), and recorded GPS coordinates of trees exhibiting ≥20-inch DBH. The results of this habitat assessment can be found on Figure 2. The AOI was primarily comprised of agricultural fields, riparian areas, energy infrastructure, fence rows, early successional and secondary growth forests, residential developments, roads, ROWs, and herbaceous openings. The roads, pipeline ROW, and open fields may serve as migratory corridors for both the Indiana bat and NLEB. Forested hillslopes, forested edges, and riparian areas may serve as potential foraging or roosting habitat for both the Indiana bat and the NLEB.

In winter, both the Indiana bat and NLEB hibernate in caves and abandoned mines. A desktop review was conducted within a 1/4-mile radius of the proposed Project using topographic and aerial maps and the Ohio Department of Natural Resources Ohio Mines Viewer, which revealed no caves or portals within the AOI. In addition, site visits by Kleinfelder did not identify the presence of caves or portals within the AOI.

**Running Buffalo Clover**

Running Buffalo Clover (*Trifolium stoloniferum)* previously existed in 9 states; however, the current range consists of dispersed fragments likely due to habitat loss or modification. Running buffalo clover occurs in mesic habitats of partial to filtered sunlight, where there is a prolonged pattern of moderate periodic disturbance, such as mowing, trampling, or grazing. It is most often found in regions underlain with limestone or other calcareous bedrock. The primary threat to running buffalo clover is habitat alteration. Factors that contribute to this threat include natural forest succession and subsequent canopy closure, competition by invasive plant species, permanent habitat loss through development or road construction, and may include the elimination of bison and other large herbivores.

According to guidance provided by the USFWS in 2019, the proposed Project is not located in a township or county designated by the USFWS that “may effect” the listed species.


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## 4.0 PROPOSED IMPACTS

The Project proposes an overall LOD of approximately 12.7-acres. Of the 12.7-acres, approximately 1.9 acres are forested, and 10.8-acres are open agricultural fields, scrub shrub habitat, residential property, and existing infrastructure (based on site observations and a GIS review of aerial photography, see Table 2). Photographs providing a representation of habitat are included in Attachment C.

**Potential Habitat Impacts**

Duke proposes to conduct tree clearing of 1.9-acres of suitable forested habitat. Based on site observations, the trees present within the LOD may provide marginal Indiana bat and NLEB roosting habitat, based on the lack of suitable characteristics including loose, shaggy bark and/or crevices, holes, or cavities. The open fields and existing roads may provide migratory and foraging habitat.

**Table 2: Potential Impacted Habitat in the LOD, AOI and ¼ Mile Buffer**

| Cumulative | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Study Area | Total Area (Acres) | Forested Area | | Non-Forested Area | | Tree Clearing | | Forested Area Remaining | |
| | | Acres | % | Acres | % | Acres | % | Acres | % |
| LOD | 12.7 | 1.9 | 14.6% | 10.8 | 85.4% | 1.9 | 100.0% | 0.0 | 0.0% |
| AOI | 49.7 | 7.5 | 15.1% | 42.2 | 84.9% | | 24.8% | 5.6 | 75.2% |
| Buffer | 1279.2 | 186.5 | 14.6% | 1092.7 | 85.4% | | 1.0% | 184.6 | 99.0% |

| Individual Segments | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Segment | Study Area | Total Area (Acres) | Forested Area | | Non-Forested Area | | Tree Clearing | | Forested Area Remaining | |
| | | | Acres | % | Acres | % | Acres | % | Acres | % |
| BC-1 | LOD | 0.9 | 0.1 | 11.4% | 0.8 | 88.6% | 0.1 | 100.0% | 0.0 | 0.0% |
| | AOI | 3.9 | 1.2 | 29.7% | 2.7 | 70.3% | | 8.6% | 1.9 | 91.4% |
| | Buffer | 175.7 | 16.0 | 9.1% | 159.7 | 90.9% | | 0.6% | 15.89 | 99.4% |
| BC-2 | LOD | 1.3 | 0.3 | 22.3% | 1.0 | 77.7% | 0.3 | 100.0% | 0.0 | 0.0% |
| | AOI | 5.6 | 0.4 | 6.4% | 5.2 | 93.6% | | 84.0% | 0.1 | 16.0% |
| | Buffer | 184.6 | 20.6 | 11.2% | 164.0 | 88.8% | | 1.5% | 20.3 | 98.5% |
| BC-4 | LOD | 3.9 | 1.1 | 27.7% | 2.8 | 72.3% | 1.1 | 100.0% | 0.0 | 0.0% |
| | AOI | 11.3 | 4.8 | 42.7% | 6.5 | 57.3% | | 22.1% | 3.8 | 77.9% |
| | Buffer | 249.9 | 32.1 | 12.8% | 217.8 | 87.2% | | 3.3% | 31.0 | 96.7% |
| BC-5 | LOD | 0.9 | 0.1 | 11.7% | 0.8 | 88.3% | 0.1 | 100.0% | 0.0 | 0.0% |
| | AOI | 4.9 | 0.1 | 2.3% | 4.8 | 97.7% | | 96.2% | 0.0 | 3.8% |
| | Buffer | 172.3 | 40.7 | 23.6% | 131.6 | 76.4% | | 0.3% | 40.6 | 99.7% |

| Individual Segments | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Segment | Study Area | Total Area (Acres) | Forested Area | | Non-Forested Area | | Tree Clearing | | Forested Area Remaining | |
| | | | Acres | % | Acres | % | Acres | % | Acres | % |
| BC-6 | LOD | 0.1 | 0.0 | 0.0% | 0.1 | 100.0% | 0.0 | 0.0% | 0.0 | 0.0% |
| | AOI | 1.9 | 0.0 | 0.0% | 1.9 | 100.0% | | 0.0% | 0.0 | 0.0% |
| | Buffer | 133.9 | 14.7 | 11.0% | 119.3 | 89.1% | | 0.0% | 14.7 | 100.0% |
| BC-7 | LOD | 5.4 | 0.2 | 4.3% | 5.2 | 95.7% | 0.2 | 100.0% | 0.0 | 0.0% |
| | AOI | 19.8 | 1.4 | 7.0% | 18.4 | 93.0% | | 16.5% | 1.2 | 83.5% |
| | Buffer | 241.3 | 22.3 | 9.2% | 219.0 | 90.8% | | 1.0% | 22.1 | 99.0% |
| BC-8 | LOD | 0.2 | 0.1 | 21.0% | 0.2 | 79.0% | 0.1 | 100.0% | 0.0 | 0.0% |
| | AOI | 2.3 | 0.1 | 2.2% | 2.3 | 97.8% | | 91.8% | 0.0 | 8.2% |
| | Buffer | 140.4 | 39.1 | 27.9% | 101.3 | 72.2% | | 0.1% | 39.1 | 99.9% |

## 5.0 AVOIDANCE & MINIMIZATION

Duke has designed the proposed Project to minimize and avoid encroachments to aquatic resources, sensitive species, and forested habitat (Figure 2). Several options for design were evaluated with final plans representing the best possible design for the Project, which minimizes impacts to sensitive species and critical habitat. No impacts to aquatic resources, which may serve as habitat for endangered aquatic species are proposed. Duke proposes to conduct tree clearing of 1.9-acrs of forested habitat. After proposed tree removal has occurred, forested area within the 1/4-mile buffer will remain 99.0% intact (184.6 forested acres remaining). The initial 49.7-acre AOI has been minimized to a 12.7-acre LOD and the amount of forest clearing within the LOD (1.9-acres) has been reduced to the least amount practical to still allow for construction.


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## 6.0 SUMMARY

Duke proposes to conduct tree clearing of 1.9-acres of forested habitat. It is Kleinfelder's professional opinion that the Project will not likely adversely affect the running buffalo clover, Indiana bat, or NLEB.

Duke requests concurrence that the site will not adversely affect the running buffalo clover, Indiana bat, NLEB, or other state or federally listed species.

Sincerely,

Kleinfelder, Inc.

Matthew J. Albright
Project Manager

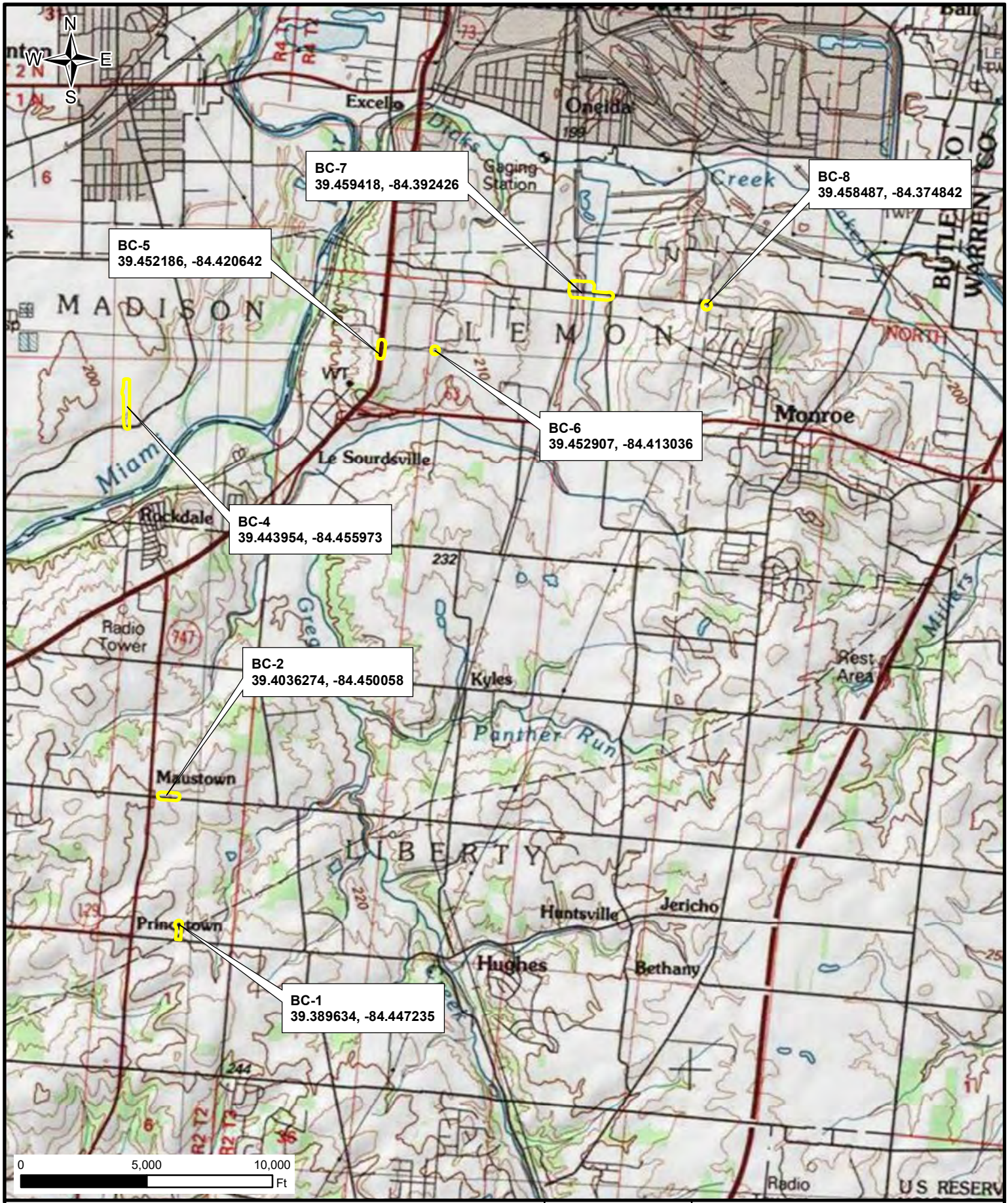
Jill M. Vovaris
Senior Professional

c: John Kessler, Ohio Division of Natural Resources

Enclosures:
Figure 1 – Vicinity Map
Figure 2 - Aerial Imagery Map
Figure 3 - National Land Cover Dataset 1/4 Mile Buffer Map
Attachment A - Information for Planning and Consultation
Attachment B – Acoustic Survey and USFWS & ODNR Correspondence
Attachment C – Potential Habitat Photographs


51 Dutilh Road, Suite 240, Cranberry Township, PA 16066 p|724.772.7072 f|724.772.7079

**FIGURE 1**
**VICINITY MAP**

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Monroe & Trenton, OH
7.5' USGS Quadrangle

Lemon, Liberty & Monroe Township, Butler County, Ohio



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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_RTE_Fig1 |

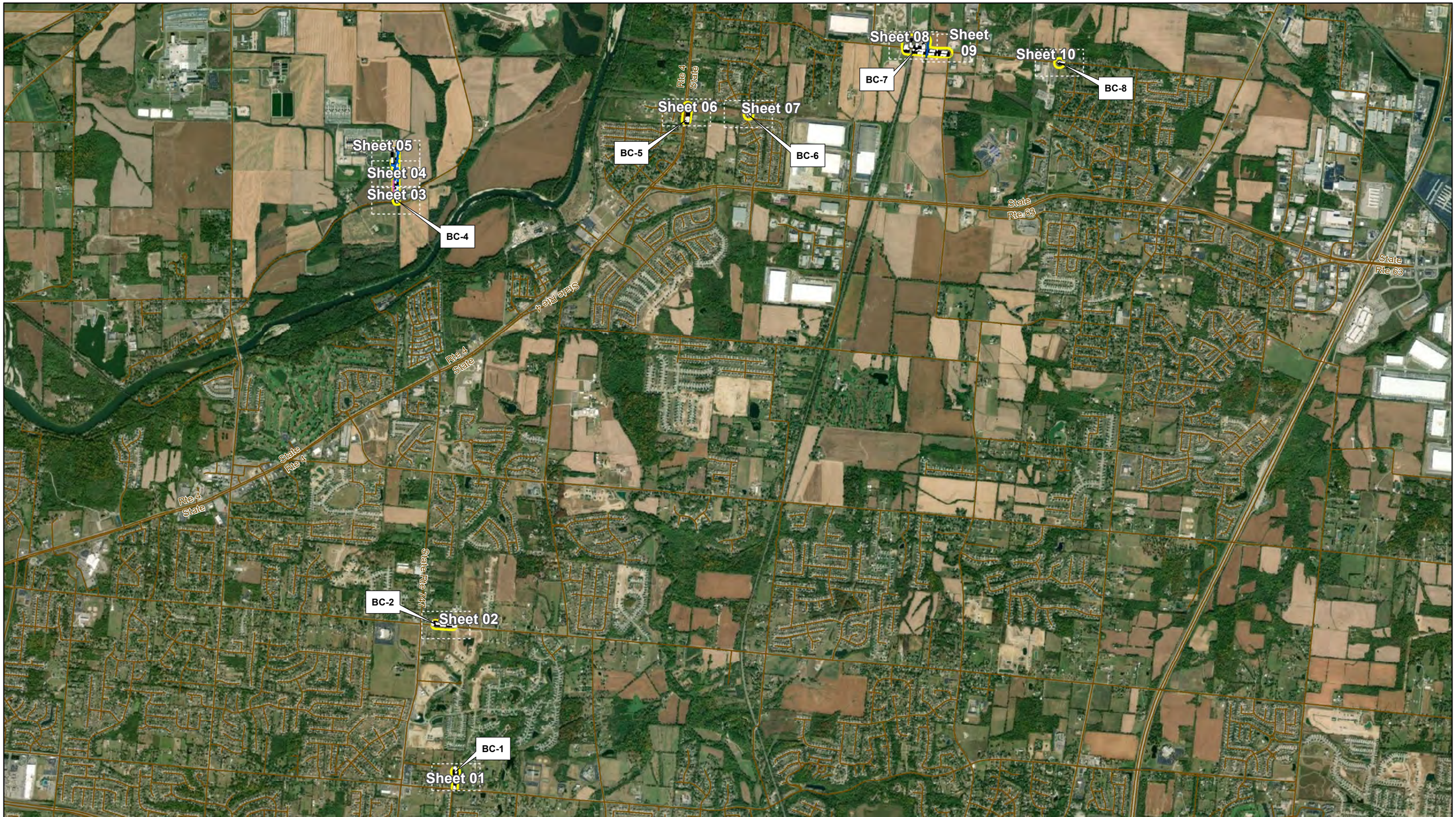
Duke Energy Ohio, Inc.

Figure 1
Vicinity Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021

Version: 1

**FIGURE 2**
**AERIAL IMAGERY MAP**

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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2_Idx |

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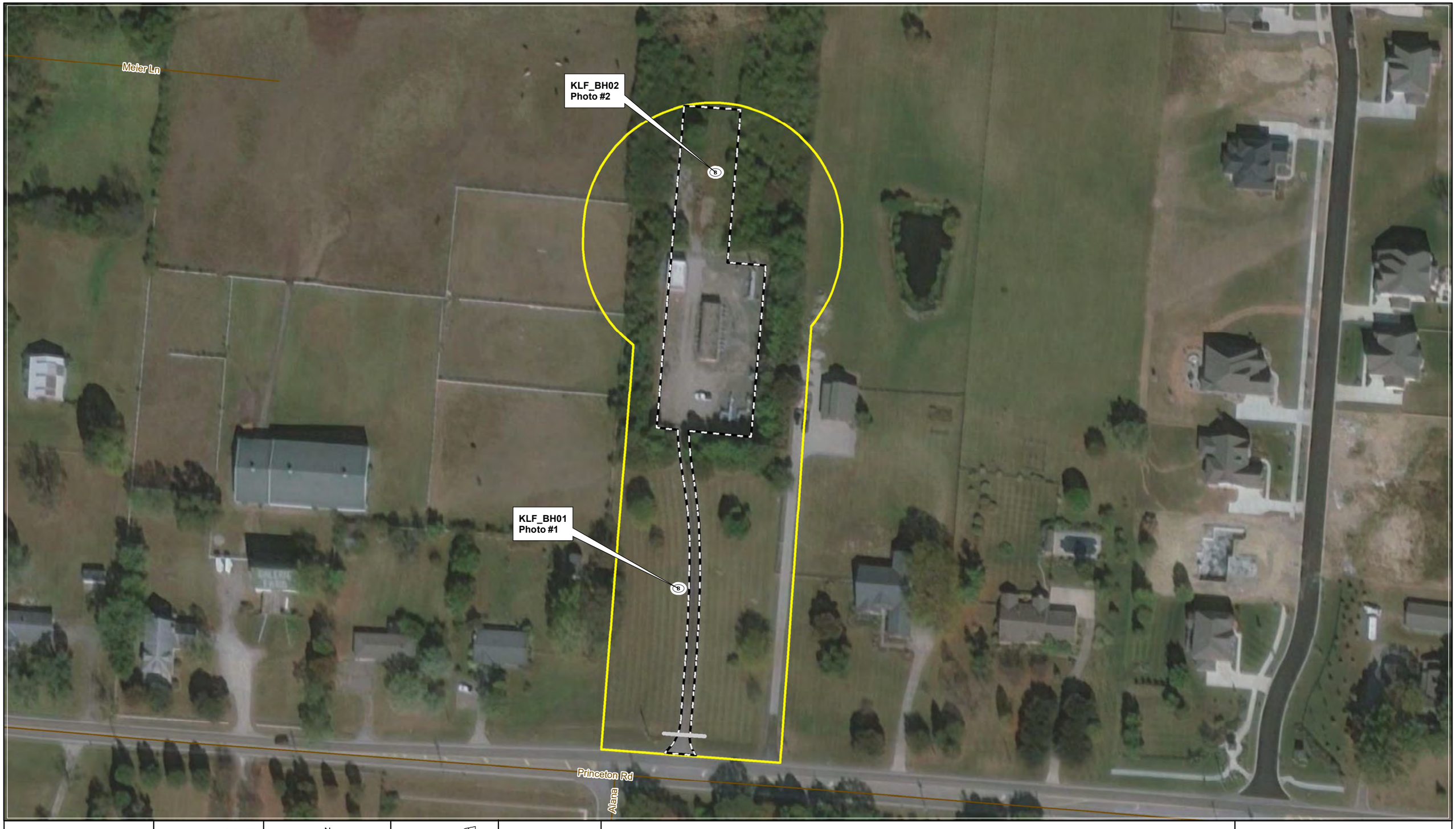
**Butler County Ohio**

- Cumulative AOI (49.7 ac)
- Cumulative LOD (12.7 ac)
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Index Map

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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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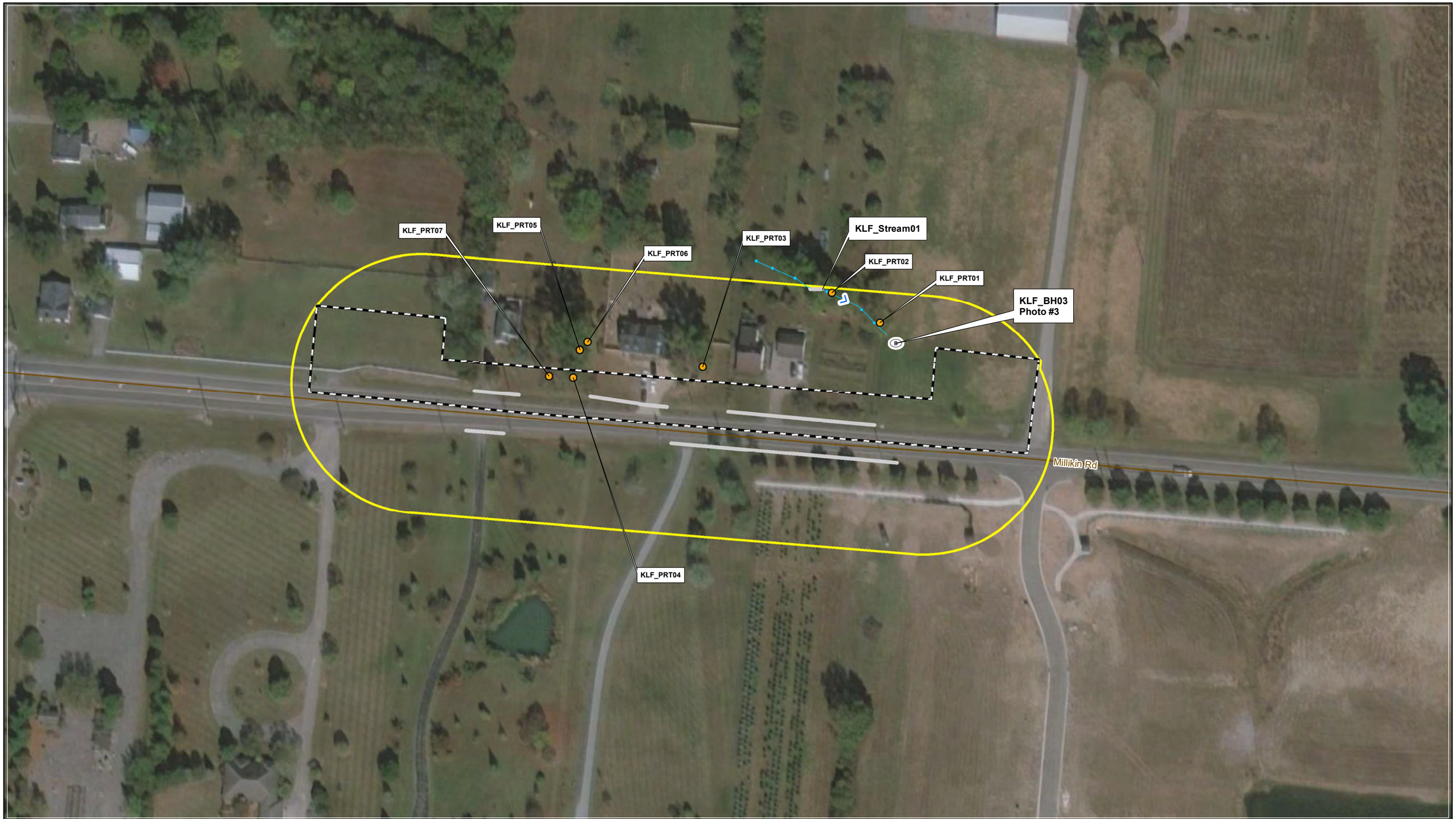
**Butler County Ohio**

- BC-1 AOI (3.9 ac)
- BC-1 LOD (0.9 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 1 of 10

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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-2 AOI (5.6 ac)
- BC-2 LOD (1.3 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 2 of 10

Sheet 04

KLF_BH05
Photo #5

KLF_SWMF01

KLF_SWMF02

KLF_Stream05

Woodsdale Rd

KLF_PRT12

KLF_BH04
Photo #4

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| | |
|---|---|
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| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (3.9 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021

KLF_Stream06

KLF_Stream03

KLF_Stream05

Sheet 05

KLF_BH06
Photo #6

KLF_Wetland05

KLF_SWMF01

Sheet 03

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| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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W E
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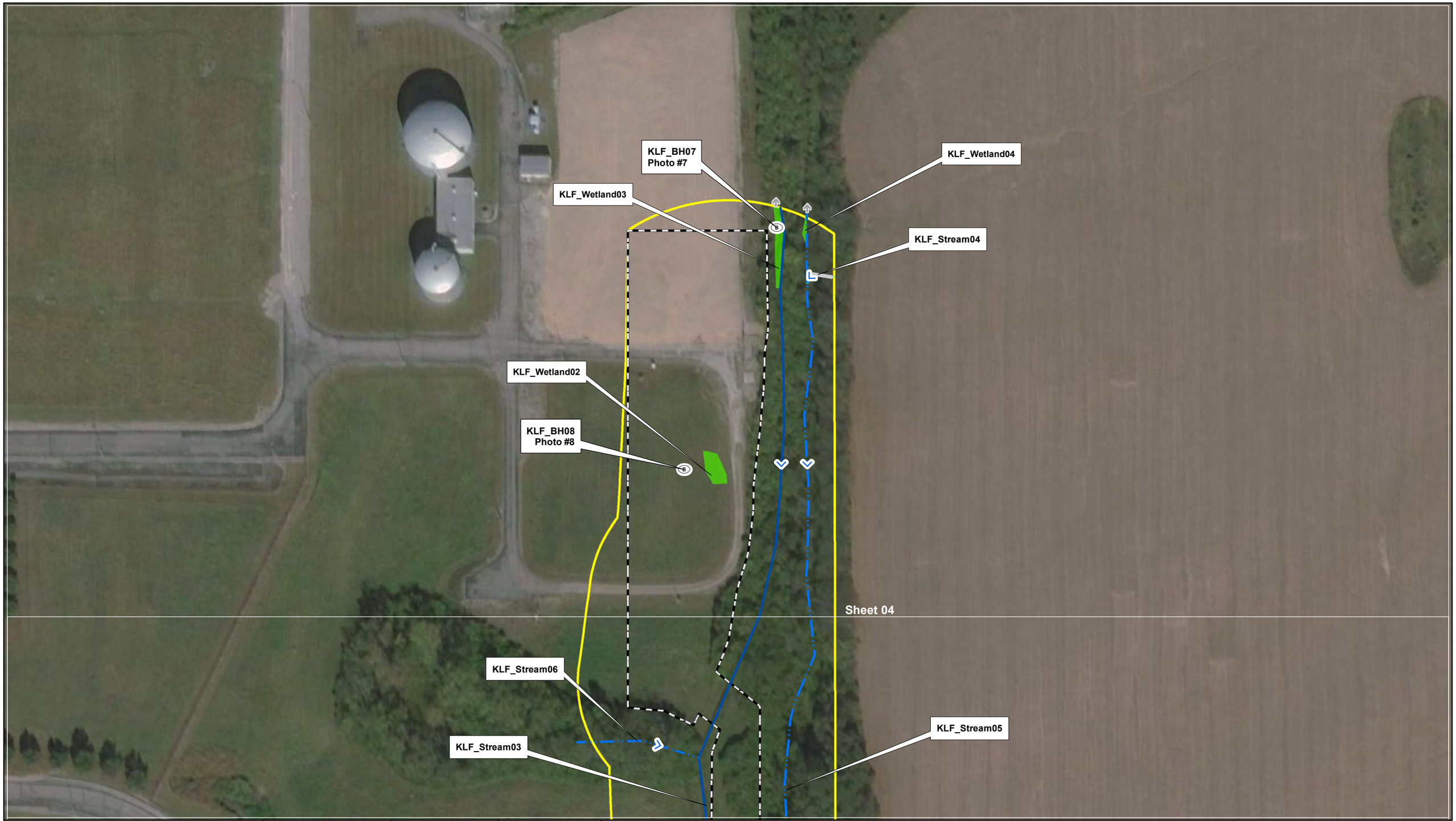
**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (3.9 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021

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| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

N
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0 50 100 Ft

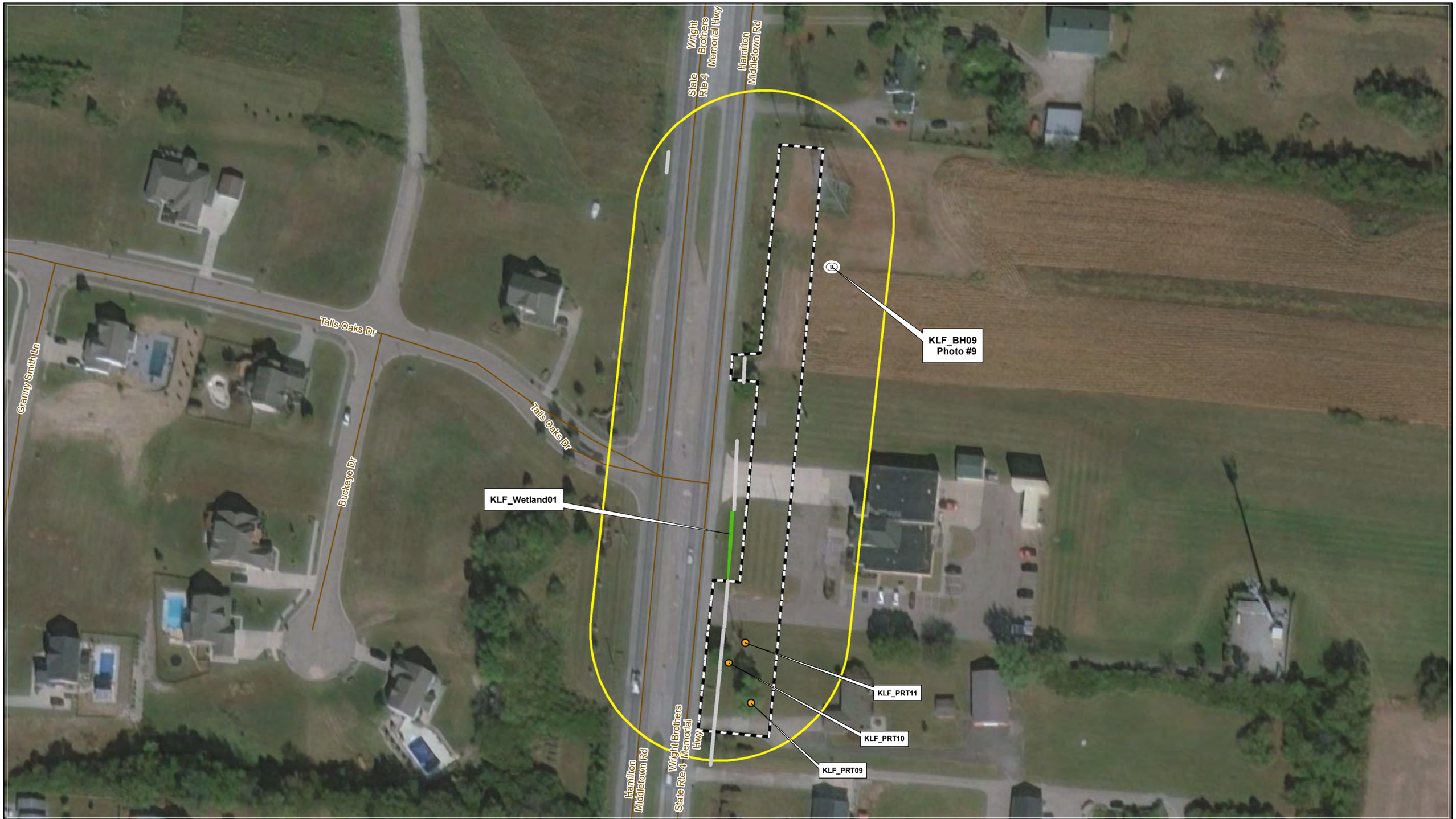
**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (3.9 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 5 of 10

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| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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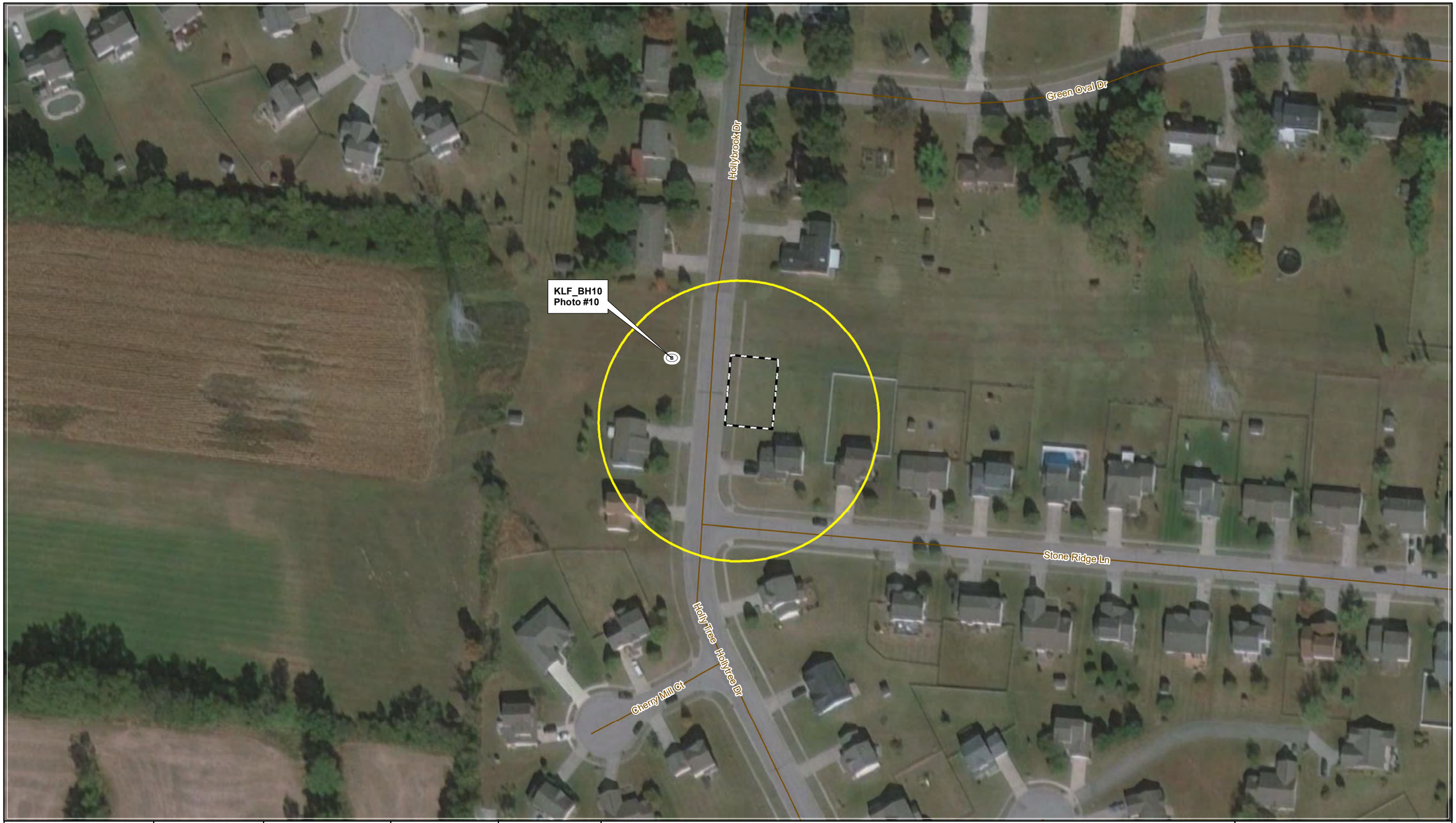
**Butler County Ohio**

- BC-5 AOI (4.9 ac)
- BC-5 LOD (0.9 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 6 of 10

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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhasel_RTE_Fig2 |

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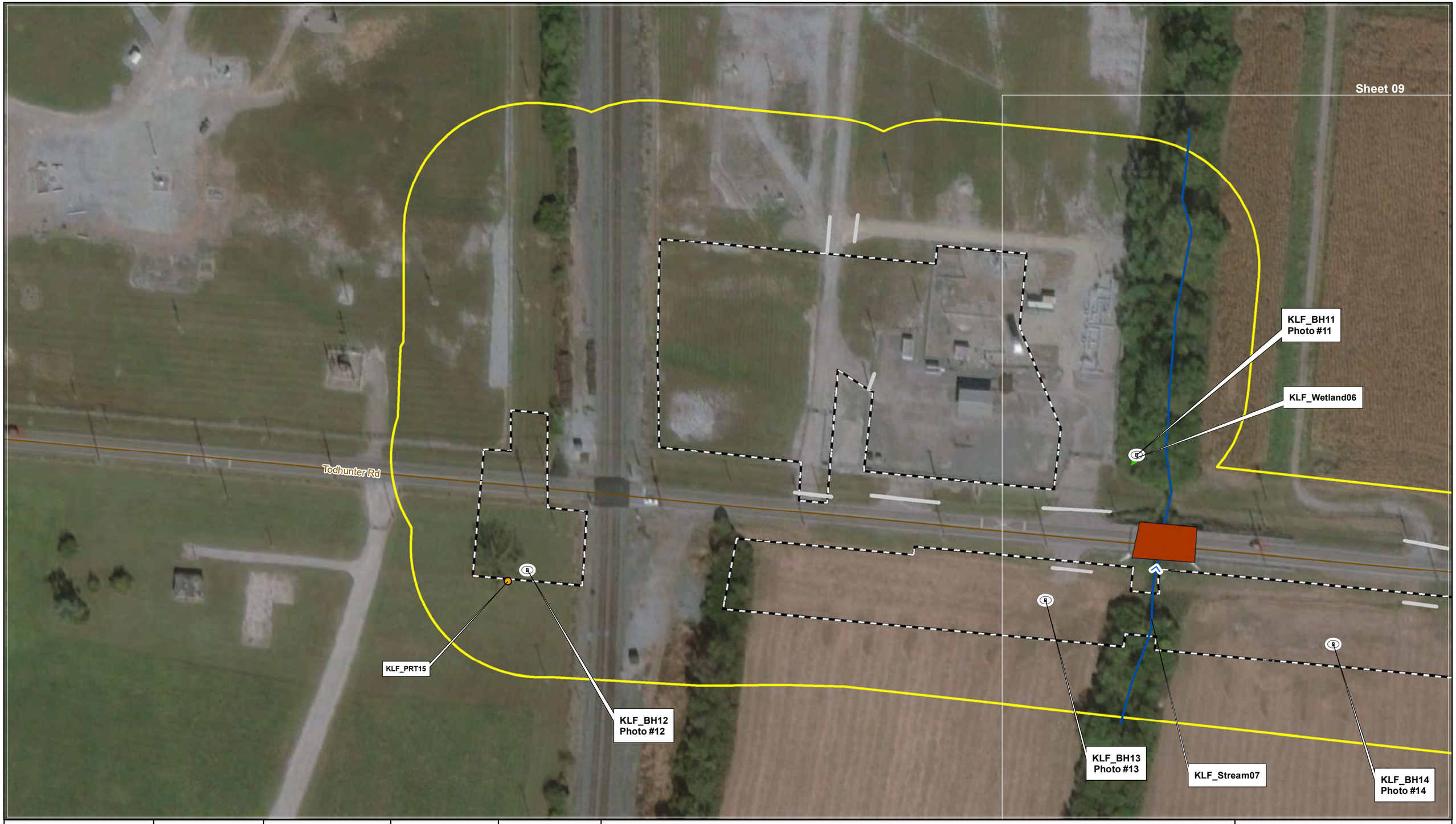
**Butler County Ohio**

- BC-6 AOI (1.9 ac)
- BC-6 LOD (0.1 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 7 of 10

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| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_RTE_Fig2 |

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**Butler County Ohio**

- BC-7 AOI (19.8 ac)
- BC-7 LOD (5.4 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 8 of 10

Sheet 08

KLF_BH11
Photo #11

KLF_Wetland06

KLF_BH13
Photo #13

KLF_Stream07

KLF_BH14
Photo #14

KLF_PRT14

Todhunter Rd

KLF_BH15
Photo #15

KLF_SWMF03

Yankee Rd

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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-7 AOI (19.8 ac)
- BC-7 LOD (5.4 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 9 of 10


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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

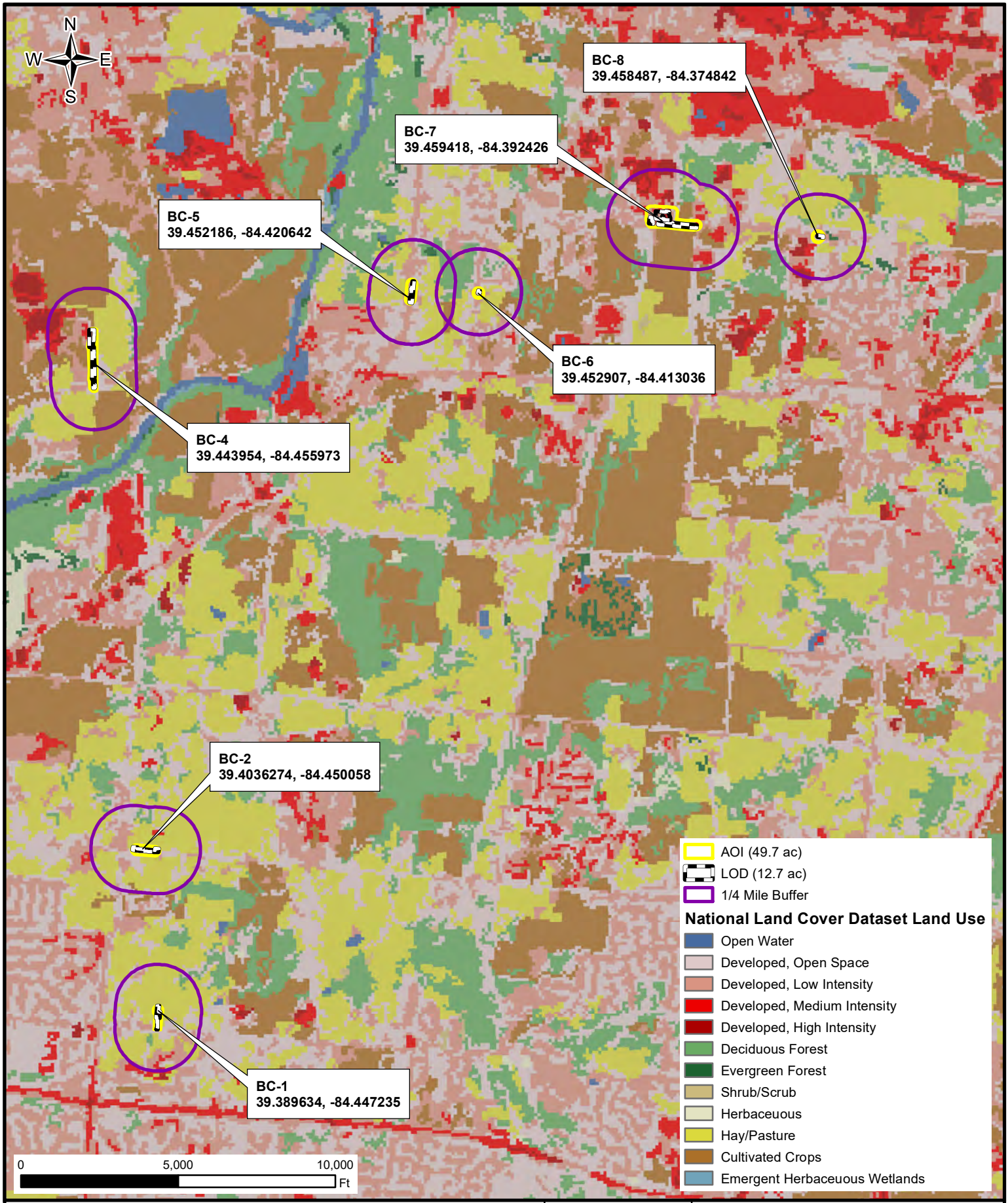
- BC-8 AOI (2.3 ac)
- BC-8 LOD (0.2 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021

**FIGURE 3**
**NATIONAL LAND COVER DATASET 1/4 MILE BUFFER MAP**

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Monroe & Trenton, OH
7.5' USGS Quadrangle

Lemon, Liberty & Monroe Township, Butler County, Ohio



| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_RTE_Fig3 |

Duke Energy Ohio, Inc.

Figure 3
National Land Cover Dataset ¼ Buffer Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Version: 1

# ATTACHMENT A
# INFORMATION FOR PLANNING AND CONSULTATION

# 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

Butler County, Ohio


## Local office

Ohio Ecological Services Field Office

(614) 416-8993
(614) 416-8994

4625 Morse Road, Suite 104
Columbus, OH 43230-8355

# 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 species[1] 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 Fisheries[2]).

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.



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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 |
|---|---|

Indiana Bat Myotis sodalis — Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/5949

Northern Long-eared Bat Myotis septentrionalis — Threatened

Wherever found

This species only needs to be considered if the following condition applies:

- Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9045

# Flowering Plants

| NAME | STATUS |
|---|---|
| Running Buffalo Clover Trifolium stoloniferum | Endangered |

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2529

# 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.



# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.



| NAME | BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.) |
|---|---|
| Bald Eagle Haliaeetus leucocephalus<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Oct 15 to Aug 31 |

| | |
|---|---|
| Henslow's Sparrow Ammodramus henslowii<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/3941 | Breeds May 1 to Aug 31 |
| Prothonotary Warbler Protonotaria citrea<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 1 to Jul 31 |
| Red-headed Woodpecker Melanerpes erythrocephalus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Rusty Blackbird Euphagus carolinus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Wood Thrush Hylocichla mustelina<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |



# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season** (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

---

**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 migratory birds potentially occurring 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 AKN Phenology 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, migrating or present year-round in my project 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 refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. 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

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 tuberficid 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.

**ATTACHMENT B**
**ACOUSTIC SURVEY AND USFWS & ODNR CORRESPONDENCE**

## Spencer Chronister

**From:** Ohio, FW3 <ohio@fws.gov>
**Sent:** Tuesday, August 25, 2020 11:54 AM
**To:** Jill Vovaris
**Cc:** Boyer, Angela; nathan.reardon@dnr.state.oh.us; Parsons, Kate; sarah.stankavich@dnr.state.oh.us; Hazelton, Erin; Lane, Steve; Seth Sanders; Matthew Albright
**Subject:** Butler County Integrity Upgrades - Survey #20-042

**External Email.**

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UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994

TAILS# 03E15000-2020-TA-2218

Dear Ms. Vovaris,

We have received your summer bat survey report for the subject project. The survey was conducted following current U.S. Fish and Wildlife Service (Service) guidelines. No Indiana bats (*Myotis sodalis*) were detected, demonstrating probable absence of Indiana bats in the project area. Currently, the Service has no known hibernacula or maternity roost records for northern long-eared bat (*Myotis septentrionalis*) in the vicinity of the project. Therefore, the 4(d) rule for the northern long-eared bat could be applied (see: http://www.fws.gov/midwest/endangered/mammals/nleb/index.html). Tree clearing on the project site at any time of the year is unlikely to result in adverse impacts to Indiana bats and will not result in any unauthorized incidental take of northern long-eared bats. Negative Indiana bat summer surveys are valid for five years. Therefore, **no tree clearing should occur on the site after March 31, 2025** without further coordination with this office.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the Endangered Species Act, between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

This letter provides technical assistance only and does not serve as a completed section 7 consultation document. If project plans change, if portions of the proposed project were not evaluated, or if additional information on listed or proposed species or their critical habitat becomes available, it is our recommendation that you reinitiate coordination with this office. We recommend that the project be coordinated with the Ohio

Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

Patrice M. Ashfield
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Kate Parsons, ODNR-DOW

## Spencer Chronister

**From:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Sent:** Wednesday, September 23, 2020 5:18 PM
**To:** Matthew Albright
**Subject:** FW: Duke Acoustic Survey Report Links

Jill Vovaris
Kleinfelder
VP- Ohio River Valley Operations
724.757.6210

---

**From:** Sarah.Stankavich@dnr.state.oh.us <Sarah.Stankavich@dnr.state.oh.us>
**Sent:** Wednesday, August 26, 2020 1:54 PM
**To:** Jill Vovaris <JVovaris@Kleinfelder.com>; Susan_Zimmermann@fws.gov; angela_boyer@fws.gov
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** RE: Duke Acoustic Survey Report Links

**External Email.**

---

ODNR-DOW recommends no side-trimming or cutting of any trees in the project area that have clusters of dead leaves in the upper third of the tree and no cutting of any trees with a DBH ≥ 20 inches prior to October 1 in order to limit impacts to tricolored bats. Additionally, in order to limit impacts to little brown bats, ODNR-DOW recommends no clearing trees with the following characteristics unless they pose a hazard: dead or live trees of any size with loose, shaggy bark and/or crevices, holes, or cavities.

Please let me know if you have any questions.

Sarah

---

**From:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Sent:** Tuesday, August 25, 2020 9:51 AM
**To:** Stankavich, Sarah <Sarah.Stankavich@dnr.state.oh.us>; Susan_Zimmermann@fws.gov; angela_boyer@fws.gov; Hazelton, Erin <Erin.Hazelton@dnr.state.oh.us>
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** RE: Duke Acoustic Survey Report Links

Thanks for the quick response Sarah.

Please provide ODNR recommendations for roost season cutting related to the little brown and the tri-colored species.

Thanks.

Jill Vovaris
Kleinfelder
VP- Ohio River Valley Operations
724.757.6210

**From:** Sarah.Stankavich@dnr.state.oh.us <Sarah.Stankavich@dnr.state.oh.us>
**Sent:** Tuesday, August 25, 2020 8:40 AM
**To:** Jill Vovaris <JVovaris@Kleinfelder.com>; Susan_Zimmermann@fws.gov; angela_boyer@fws.gov; Erin.Hazelton@dnr.state.oh.us
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** RE: Duke Acoustic Survey Report Links

**External Email.**

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Hi Jill –

We received the reports for the Duke Energy Maineville to Morrow and the Butler Phase I projects. Acoustic surveys for both of these sites established the likely presence of two state endangered bat species, *Myotis lucifugus* and *Perimyotis subflavus.* Therefore, DOW recommends that no cutting take place at these sites prior to Oct 1. If tree cutting is necessary before this date, we can provide recommendations for limited cutting upon request.

Sarah

Sarah Stankavich
Wildlife Technician (bats/pollinators)
ODNR Division of Wildlife
2045 Morse Road
Columbus, OH 43229
Phone: 614-265-6764
Email: sarah.stankavich@dnr.state.oh.us



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**From:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Sent:** Monday, August 24, 2020 5:49 PM
**To:** Susan_Zimmermann@fws.gov; Stankavich, Sarah <Sarah.Stankavich@dnr.state.oh.us>; angela_boyer@fws.gov; Hazelton, Erin <Erin.Hazelton@dnr.state.oh.us>
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** FW: Duke Acoustic Survey Report Links

Hello,

Please see below for the links to the Duke Energy Maineville to Morrow and the Butler Phase I Acoustic Survey Reports.

Please contact me with any questions.

Thanks,
Jill

Jill Vovaris
Kleinfelder
VP- Ohio River Valley Operations
724.757.6210

# Files Available on the Kleinfelder File Transfer Site

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From: **Matthew Albright**
Workspace: **Albright_Matthew**
Date: **08/24/20 at 12:41 pm PDT**

1. **2020.009 - Butler County Integrity Upgrades Acoustic Survey Report-FINAL.pdf** (58.44 MB) in Albright_Matthew
https://kleinfelder.filegenius.com/downloadPublic/p2l3lzdxypn3ngg/pmurfukj7bstkep

2. **2020.008 - Maineville Morrow Loop Line Acoustic Survey Report-FINAL.pdf** (55.34 MB) in Albright_Matthew
https://kleinfelder.filegenius.com/downloadPublic/p68ykfqrzglrvsn/sq8lf4x39iufo3g

These links will expire on **09/03/20 at 12:41 pm PDT**

This email was sent to the following recipients: **Matthew Albright**, malbright@kleinfelder.com

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**Transaction Source:** Kleinfelder FILETRANSFER SITE, https://kleinfelder.filegenius.com
**Time/Date of Transaction:** 08/24/20 at 12:41 pm PDT

A Survey Report Prepared for:

**Kleinfelder, Inc.**

# SURVEY REPORT FOR A PRESENCE/PROBABLE ABSENCE ACOUSTIC SURVEY FOR FEDERALLY THREATENED OR ENDANGERED BAT SPECIES FOR THE PROPOSED BUTLER COUNTY INTEGRITY UPGRADES – PHASE 1 PROJECT IN BUTLER COUNTY, OHIO.

Prepared by:

Chance Osborne

**Encarna, LLC.**

August 21, 2020

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## APPENDICES



## TABLES

# 1 INTRODUCTION

## 1.1 Project Introduction

Duke Energy Ohio, Inc. (Duke) is proposing to bolster pressure in small diameter feeder lines in Liberty Township, Hamilton, and Middletown in Butler County, Ohio, known as the Butler County Integrity Upgrades – Phase 1 Project (Project). Increasing this pressure will better position assets to create a future loop to provide an alternate gas path for alternate supply from Dick's Creek to south of Huntsville, Ohio. The Project was initially reviewed using the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC). Based upon the information obtained from the IPaC, it was determined that the Project may provide suitable summer habitat for the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*). A copy of the IPaC report is available within the USFWS Ohio Field Office (USFWS OHFO) and Ohio Department of Natural Resources (ODNR) approved Study Plan (Study Plan) found in Appendix A. The Project has an area of interest (AOI) of approximately 44.3 acres and a limit of disturbance (LOD) of approximately 15.1 acres, which will result in the removal of less than 1.0 acres of suitable forested habitat (Appendix B, Figure 2).

Kleinfelder, Inc. (Kleinfelder) contracted Encarna, LLC. (Encarna) on behalf of Duke to conduct a summer acoustic survey to determine the presence/probable absence of threatened and/or endangered bat species within the Project area during the summer maternity season. The following survey report details the findings of the approved Study Plan (Appendix A) that was conducted between 12 August 2020 and 14 August 2020. The Project is located on the Trenton 7.5-Minute U.S. Geological Survey topographic quadrangle near Woodsdale, Ohio (Appendix B, Figure 1).

## 1.2 Habitat Present Within Project Area

Land cover types present within and surrounding the proposed Project AOI were comprised of agricultural fields, riparian areas, existing energy infrastructure, fence rows, early successional and secondary growth forests, residential developments, existing roads, existing right-of-ways, and herbaceous openings. Dominant tree species among the site locations included American sycamore (*Platanus occidentalis*), box elder (*Acer negundo*), crabapple tree (*Malus sylvestris*), black locust (*Robinia pseudoacacia*), honey locust (*Gleditsia triacanthos*), tree-of-heaven (*Ailanthus altissima*), black walnut (*Juglans nigra*), black willow (*Salix nigra*), and Kentucky coffeetree (*Gymnocladus dioicus*).

## 2 METHODS

### 2.1 Acoustic Survey

Prior to conducting the acoustic survey, a study plan was submitted to the USFWS OHFO and ODNR on 9 August 2020 proposing an acoustic survey for the entire alignment of the Project. The USFWS OHFO concurred with the proposal on 11 August 2020 and ODNR provided authorization to proceed on 12 August 2020. Copies of the approved Study Plan and agency correspondence can be found in Appendix A.

To address the presence/probable absence of threatened and/or endangered bat species within the Project survey area during the summer maternity season, Encarna conducted a summer acoustic survey pursuant to the USFWS "2020 Indiana Bat Summer Survey Guidelines" (USFWS 2020) from 12 August 2020 to 14 August 2020. Based upon those guidelines, linear projects in the Indiana Bat Midwest Recovery Unit require a minimum of two detector nights per kilometer (0.6 miles) of suitable forested habitat to determine the presence/probable absence of federally threatened and/or endangered bat species (USFWS 2020). A detector night is defined as the operation and deployment of one acoustic monitoring device from sunset to sunrise for one calendar night. The acoustic survey had an effort of one detector per kilometer block at four different locations for two calendar nights, resulting in a total level of effort of eight detector nights. Acoustic detector locations are depicted on Figures 2 – 7 in Appendix B and in Table 3.

Final acoustic detector locations were determined by USFWS approved bat biologist Chance Osborne (USFWS Native Endangered and Threatened Species Recovery Permit No. TE62778B-1) in the field and their locations were recorded using a Trimble Geo 7x Global Positioning System. Detectors were placed in suitable habitat locations (forest openings, riparian corridors, woodland edges, etc.) within the Project area that were most likely to capture high quality bat call sequences based on available land access. Photographs of the erected detector assemblies at each survey location can be found in Appendix E.

The survey effort was originally proposed for five detectors at five different site locations for a total of 10 detector nights. Due to access issues, site BC-2 was not surveyed and will not be included in the request for concurrence. Additionally, one site location (BC-7) varied from the proposed locations within the study plan due to access issues. Access was only granted at one location within the kilometer block and the detector was placed below a tree line near a small stream.

The acoustic survey was completed using Titley Scientific Anabat SD2 Active Bat Detectors. Field verification of detector functionality was completed by creating ultrasonic sounds (finger rubs, finger snaps) in front of the microphone prior to the start and at the finish of each survey. To provide data in settings where the amount of light may be variable due to the habitat present (deeper/dark forested valleys or corridors, ridge tops, open areas, etc.) and to avoid missing early-flying bats, detectors were set to record from 10 minutes prior to sunset to 10 minutes after sunrise.

To aid in improving recording quality, each detector was deployed at a height greater than three meters above ground level vegetation on an extendable pole and microphones were positioned in the center of the potential flight path/zone in areas with no vegetation within at least 10 meters (33 feet) in front of the microphone. The detector at site BC-7 was deployed on a tripod (approximately 1.5 meters) instead of an extendable pole due to overhead power lines. The stream within the small tree line was very dense, and this allowed the directional microphone to be placed in the optimal potential flight path/zone where an opening for the stream occurred. All acoustic sites were spaced at least 656 feet (200 meters) apart and no weatherproofing equipment was used.

Each detector was equipped with at least an 8-gigabyte compact flash memory card (CF card) to store all data and recorded files for zero-crossing analysis using a division ratio of 16 and at a sensitivity level of six. Recorded data was downloaded daily to ensure data organization and protection and the CF cards were erased and recalibrated before each deployment.

USFWS recommends that if temperatures fall below 50° Fahrenheit (10° Celsius) during the first five hours; precipitation, including rain and/or fog, that does not stop within 30 minutes or continues intermittently; and sustained winds greater than nine miles/hour (four meters/second; 3 on Beaufort scale) for 30 minutes or more, then sampling for that night must be repeated (USFWS 2020). Nightly weather conditions were checked using the nearest NOAA National Weather Service Station, and surveys at all locations were conducted in weather conditions that satisfied USFWS recommendations.

For each night at every survey location, the date, survey start and end time, site description, site coordinates, detector specifics, and weather conditions were recorded. Sunset times were at approximately 20:35 and sunrise times were at approximately 06:49 during the survey effort. Detectors were set to record from 20:25 to 07:00

each night. Weather data can be found in Appendix C and completed acoustic survey datasheets can be found in Appendix D.

### 2.2 Analysis of Recorded Echolocation Calls

Encarna used Kaleidoscope Pro Version 5.1.0, with a classification of North America 5.1.0, sensitivity level set to zero (balanced), and a minimum pulse setting of five to conduct automated acoustic analysis for all site locations. This version of Kaleidoscope is currently approved by USFWS and when using the program for auto-identification, it identifies each file to the species level and filters out noise files to a separate folder. It also includes a Maximum Likelihood Estimator (MLE) that statistically evaluates the risk of false positives within each individual species result. The MLE function generates p-values for the likely presence of each species within a site location by night. A low p-value (p-value ≤0.05) indicates a high confidence level of species presence at the site for the night being evaluated. Conversely, a high p-value would suggest those species are not likely present or could be false positive identifications for each species respectively.

## 3 RESULTS

During the survey effort over three calendar nights, four acoustic detectors were deployed. Kaleidoscope Pro identified a total of 1,217 bat call files and of those,1,103 files (90.6%) were identified to the species level. The MLE generated by Kaleidoscope had confidence in five species: big brown bat (*Eptesicus fuscus*), Eastern red bat (*Lasiurus borealis*), little brown bat (*Myotis lucifugus*), evening bat (*Nycticeius humeralis*), and tricolored bat (*Perimyotis subflavus*). The Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) were found not likely to be present.

Surveys were conducted between the nights of 12 August 2020 and 14 August 2020. All detectors functioned properly and surveys at all site locations were conducted in weather conditions that satisfied USFWS recommendations, which yielded eight valid detector nights of survey effort. Table 1 includes a summary of call identifications by site and night. Table 2 provides the MLE p-values for each species identification at each site and night. Both tables can be found in Appendix C.

## 4 SUMMARY

Duke is proposing to bolster pressure in small diameter feeder lines which will better position assets to create a future loop to provide alternate gas supply in Butler County, Ohio. The Project has an AOI of approximately 44.3 acres and a LOD of approximately 15.1 acres, which will result in the removal of less than 1.0 acres of suitable forested habitat. A summer acoustic survey was conducted with the appropriate level of effort and under the appropriate conditions to investigate the presence/probable absence of threatened and/or endangered bat species. Five bat species were considered to likely be present within the Project area: big brown bat, Eastern red bat, little brown bat, evening bat and tricolored bat. No sites resulted in a p-value that would suggest Indiana bats or northern long-eared bats are present within the Project area.

The results of this acoustic survey indicate that the Project will not likely adversely affect threatened and/or endangered bat species populations within the Project area. On behalf of Duke, Encarna would like to request concurrence that at sites BC-1, BC-3, BC-4 and BC-7, the Project will not adversely affect threatened and/or endangered bat species. In addition, Encarna would also like to request that Duke can remove the proposed acreage of suitable forested habitat outside of the seasonal tree clearing window (October 1 – March 31).

## 5 REFERENCES

U.S. Fish and Wildlife Service (USFWS). 2020. 2020 Range-Wide Indiana Bat Summer Survey Guidelines (March 2020). USFWS Endangered Species Program: Midwest Region.

# APPENDIX A: Approved Study Plan & Agency Coordination

A Study Plan Prepared for:

**Kleinfelder, Inc.**

# STUDY PLAN FOR A PRESENCE/ABSENCE ACOUSTIC SURVEY FOR FEDERALLY THREATENED OR ENDANGERED BAT SPECIES FOR THE PROPOSED BUTLER COUNTY INTEGRITY UPGRADES – PHASE 1 PROJECT IN BUTLER COUNTY, OHIO.


Prepared by:

Chance Osborne

**Encarna, LLC.**


August 9, 2020

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## APPENDICES

# 1 INTRODUCTION

Duke Energy (Duke) is proposing to bolster pressure in small diameter feeder lines in Liberty Township, Hamilton, and Middletown in Butler County, Ohio, known as the Butler County Integrity Upgrades – Phase 1 (Project). Increasing this pressure will better position assets to create a future loop to provide an alternate gas path for alternate supply from Dick's Creek to south of Hunstville, Ohio. The Project has an area of interest (AOI) of approximately 44.3 acres and a limit of disturbance (LOD) of approximately 15.1 acres, which will result in the removal of less than 1.0 acres of suitable forested habitat (Appendix B, Figure 1). The Project was reviewed using the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC). Based upon the information obtained from the IPaC, it was determined that the Project may provide suitable summer habitat for the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*). A copy of the IPaC report is available in Appendix A.

Kleinfelder, Inc. (Kleinfelder) contracted Encarna, LLC. (Encarna) on behalf of Duke to develop a study plan to determine if federally threatened or endangered bats are present within the Project area during the summer maternity season. The survey methods within the study plan described herein are in accordance with the current USFWS "2020 Range-Wide Indiana Bat Survey Guidelines" to conduct acoustic surveys for bats (USFWS 2020).

The results from this survey will be used to assess the amount of risk to threatened and/or endangered bat species within the Project area, and to determine if avoidance and minimization efforts are required for the Project. The positive identification of echolocation calls from threatened and/or endangered bat species will be considered evidence that bats are currently occupying the potentially suitable forested habitat within the Project area. The lack of positively identified calls from threatened and/or endangered bat species will be considered sufficient evidence that these species are not present within the Project area during the summer maternity season.

# 2 METHODS

## 2.1 Acoustic Survey

Encarna will conduct an acoustic survey in order to determine the presence/probable absence of federally threatened or endangered bat species within the Project area during the summer survey season. Acoustic sampling will be conducted between August 13 and August 15, 2020. For linear projects in the Indiana Bat

Midwest Recovery Unit, the current USFWS Guidelines require a minimum of 2 detector nights per kilometer (0.6 miles) of suitable forested habitat to determine the presence/probable absence of federally threatened and/or endangered bat species (USFWS 2020). A detector night is defined as the operation and deployment of one acoustic monitoring device for one night. The proposed acoustic survey will have an effort of one detector at five locations for two nights, resulting in a total level of effort of 10 detector nights. Proposed potential acoustic detector locations are depicted on Figures 2 – 7 in Appendix B.

Acoustic monitoring will begin at sunset and continue until sunrise for each night of sampling, and detectors will be positioned at suitable sites within the Project area where access is permitted. These sites can include forest canopy openings, nearby water sources, forested fence lines, areas where potential roost trees are present, road and/or stream corridors with open canopies, and forest edges. Each detector will be deployed at a height greater than three meters above ground level vegetation, where feasible, to aid in improving recording quality. Omnidirectional microphones will be deployed horizontally in the center of the potential flight path/zone. Additionally, all acoustic sites will be spaced at least 656 feet (200 meters) apart.

In the event that adverse weather conditions occur during the survey period such as temperatures that fall below 50° Fahrenheit (10° Celsius) during the first five hours; precipitation, including rain and/or fog, that does not stop within 30 minutes or continues intermittently; and sustained winds greater than nine miles/hour (four meters/second; 3 on Beaufort scale) for 30 minutes or more, then sampling for that night must be repeated (USFWS 2020).

For each survey night, the date, survey start and end time, site description and coordinates, detector specifics (detector model, detector location, detector orientation, habitat type where detector is deployed), and weather conditions will be recorded.

## 2.2 Analysis of Recorded Echolocation Calls

Coarse screening for high frequency (HF) or myotid calls will take place following the procurement of all data from each site location. In the event a positive detection of HF or myotid calls is found, then automated acoustic analysis of each site that has a positive identification will be conducted. Encarna will review the recorded data from night one at each acoustic site location and then run each night's data through Kaleidoscope, which is an approved acoustic bat ID program from USFWS. If threatened or endangered bat presence is considered likely

at one or more sites, then qualitative analysis of recorded calls to the species level will be conducted. This qualitative analysis will include a comparison of the results from each site and night.

Encarna will provide the results of this acoustic survey to the Ohio Department of Natural Resources (ODNR) and the USFWS Ohio Ecological Services Field Office within 10 days of completing the survey.

## 3 REFERENCES

U.S. Fish and Wildlife Service (USFWS). 2020. 2020 Range-Wide Indiana Bat Summer Survey Guidelines (March 2020). USFWS Endangered Species Program: Midwest Region.

## APPENDIX A: U.S. FISH AND WILDLIFE SERVICE INFORMATION FOR PLANNING AND CONSULTATION REPORT

**IPaC** **U.S. Fish & Wildlife Service**

Last login August 08, 2020 04:36 PM MDT

# 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

Butler County, Ohio

# Local office

Ohio Ecological Services Field Office

(614) 416-8993
(614) 416-8994

4625 Morse Road, Suite 104
Columbus, OH 43230-8355

# 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 species[1] 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 Fisheries[2]).

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.
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 |
|---|---|
| Indiana Bat Myotis sodalis<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>https://ecos.fws.gov/ecp/species/5949 | Endangered |
| Northern Long-eared Bat Myotis septentrionalis<br>This species only needs to be considered if the following condition applies:<br>• Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/9045 | Threatened |

# Flowering Plants

| NAME | STATUS |
|---|---|
| Running Buffalo Clover Trifolium stoloniferum<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/2529 | Endangered |

# 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.

# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.) |
|---|---|
| **Bald Eagle** *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Oct 15 to Aug 31 |
| **Black-billed Cuckoo** *Coccyzus erythropthalmus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |
| **Bobolink** *Dolichonyx oryzivorus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Jul 31 |
| **Henslow's Sparrow** *Ammodramus henslowii*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/3941 | Breeds May 1 to Aug 31 |

| | |
|---|---|
| Lesser Yellowlegs Tringa flavipes<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9679 | Breeds elsewhere |
| Prothonotary Warbler Protonotaria citrea<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 1 to Jul 31 |
| Red-headed Woodpecker Melanerpes erythrocephalus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Rusty Blackbird Euphagus carolinus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Short-billed Dowitcher Limnodromus griseus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9480 | Breeds elsewhere |
| Wood Thrush Hylocichla mustelina<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |

# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season** (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

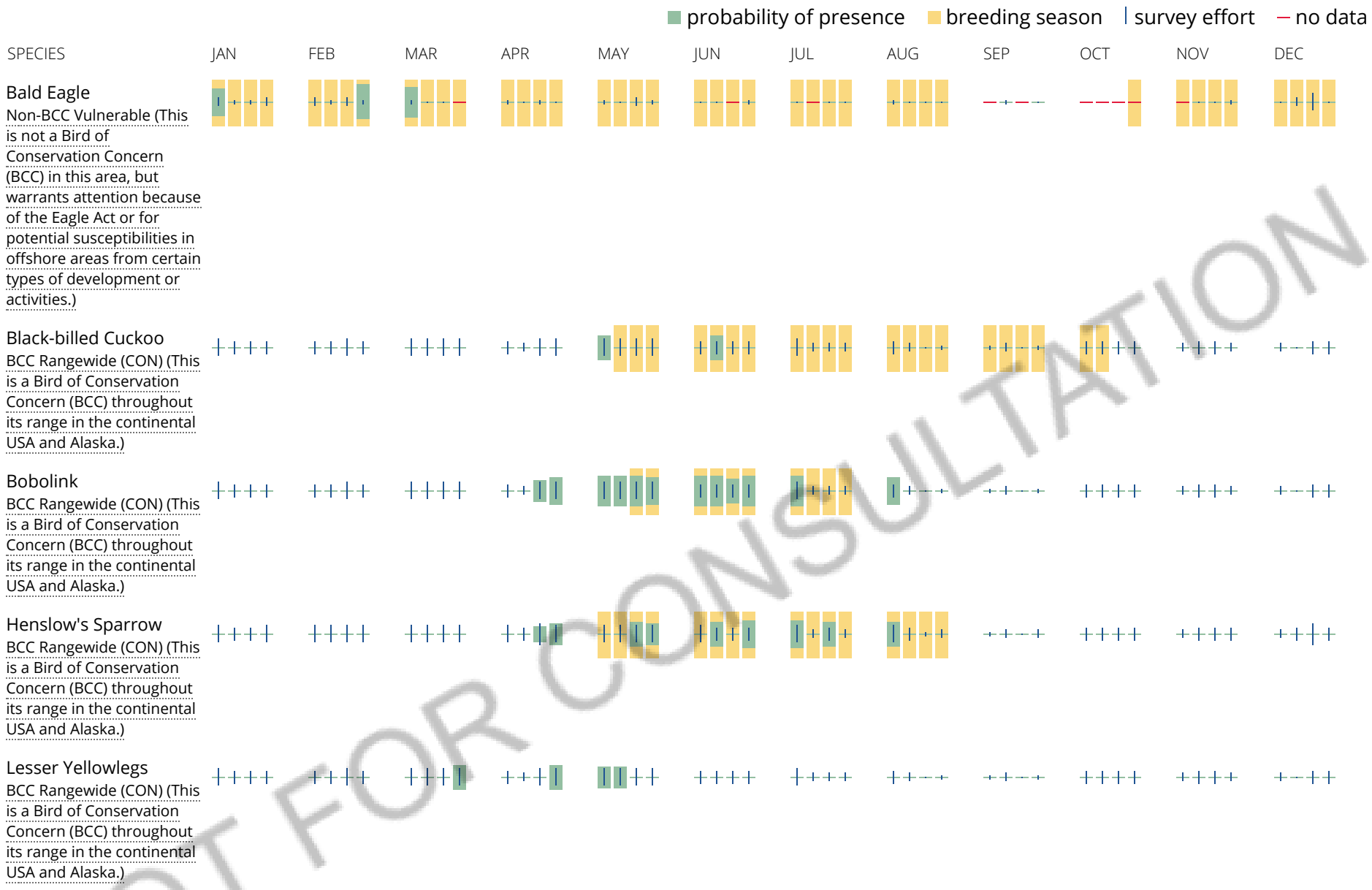
**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

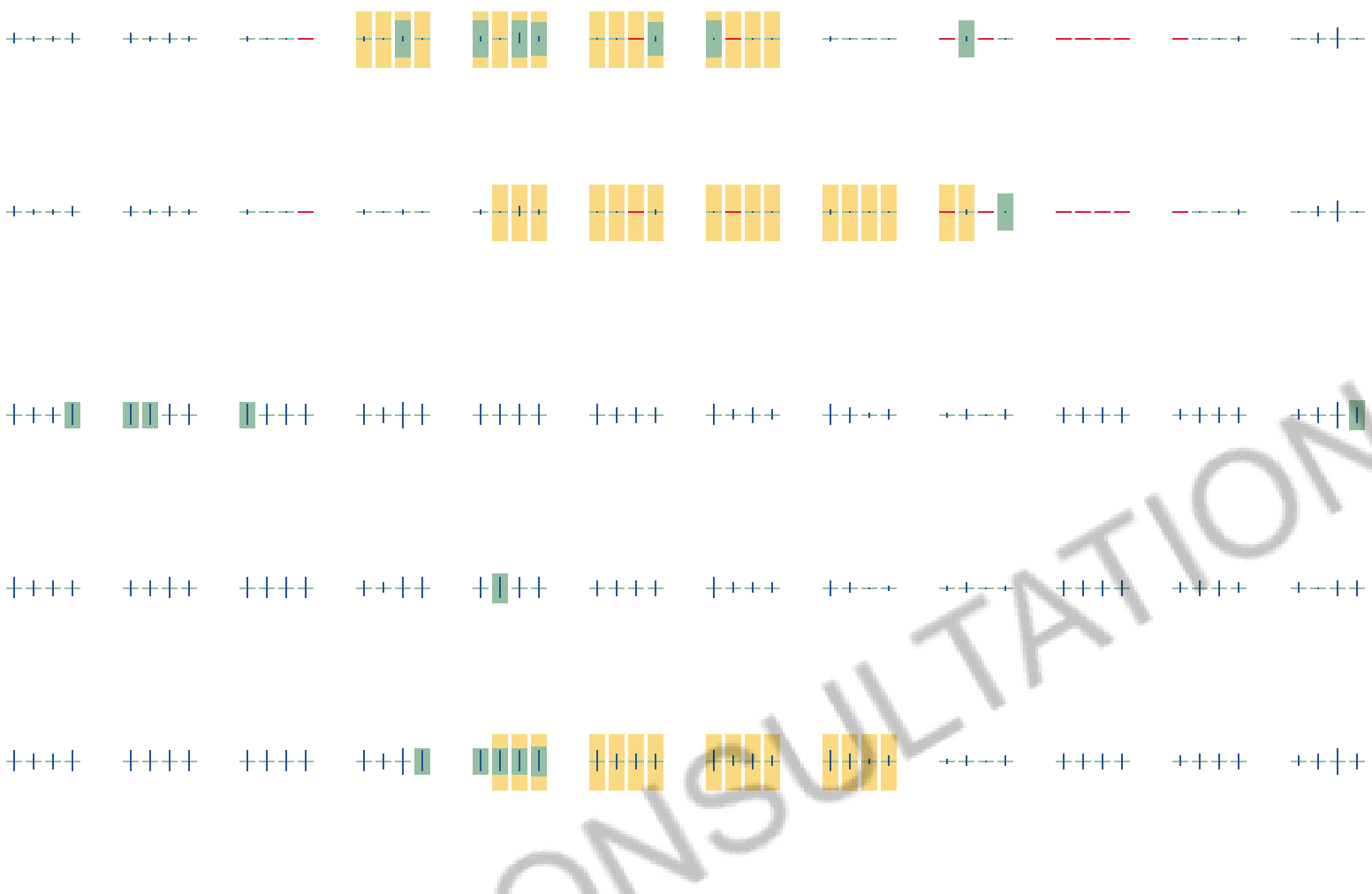
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Prothonotary Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Red-headed Woodpecker
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Rusty Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wood Thrush
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



**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 and/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 migratory birds potentially occurring 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 AKN Phenology 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, migrating or present year-round in my project 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 refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. 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

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**

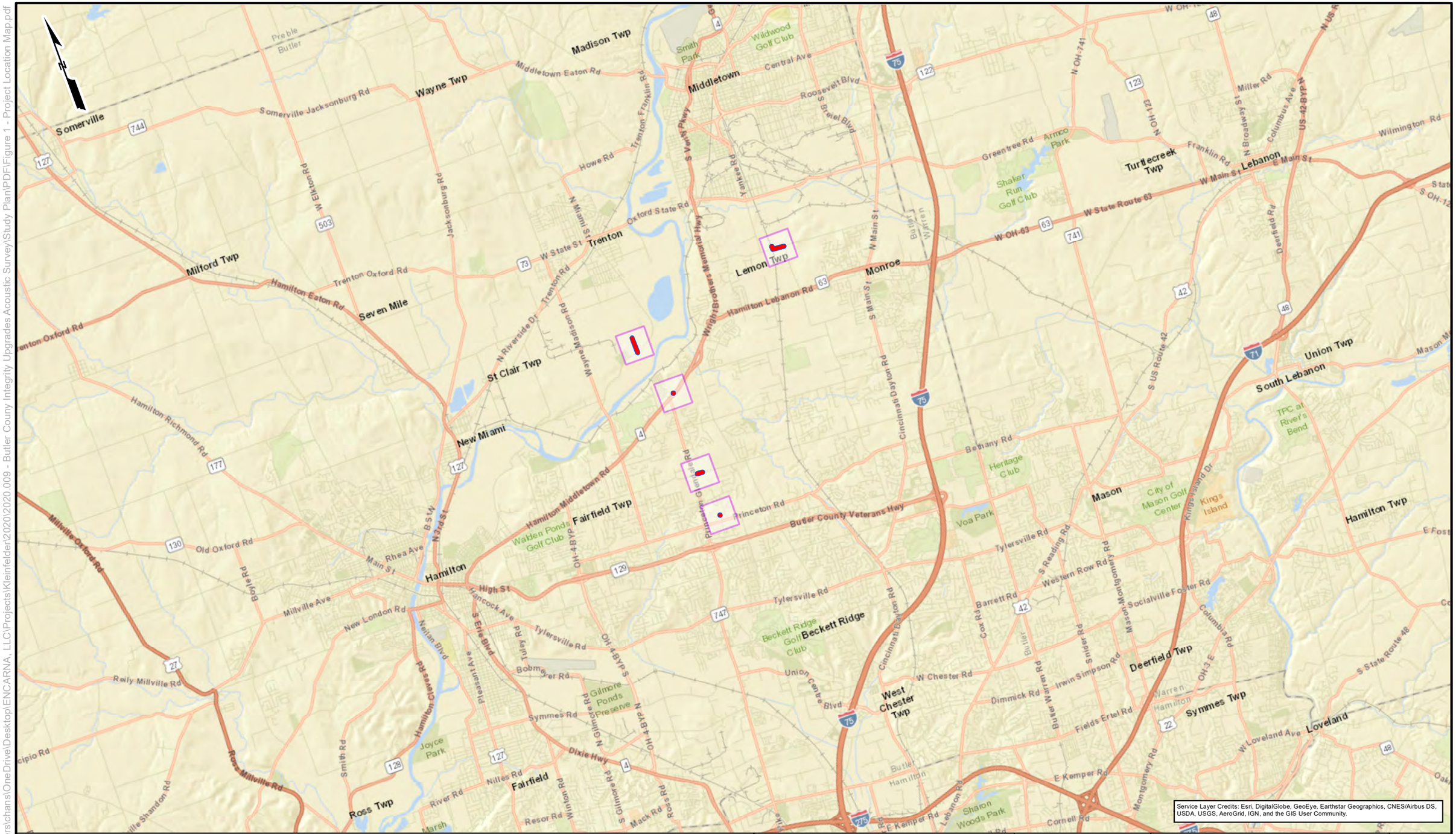
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid 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.

## APPENDIX B: PROJECT MAPPING

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\2020.009 - Butler County Integrity Upgrades Acoustic Survey\Study Plan\PDF\Figure 1 - Project Location Map.pdf




## Legend

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project Alignment
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))

0 5,500 11,000 22,000 Feet

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|---|---|
| PROJECT NO. | 2020.008 |
| DRAWN: | 08/08/2020 |
| DRAWN BY: | CTO |
| FILE NAME: | See File Path |

# Project Location Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE
1


**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))
- Kilometer Block
- Potential Acoustic Site Locations
- Proposed Project Alignment

0 2,200 4,400 8,800 Feet

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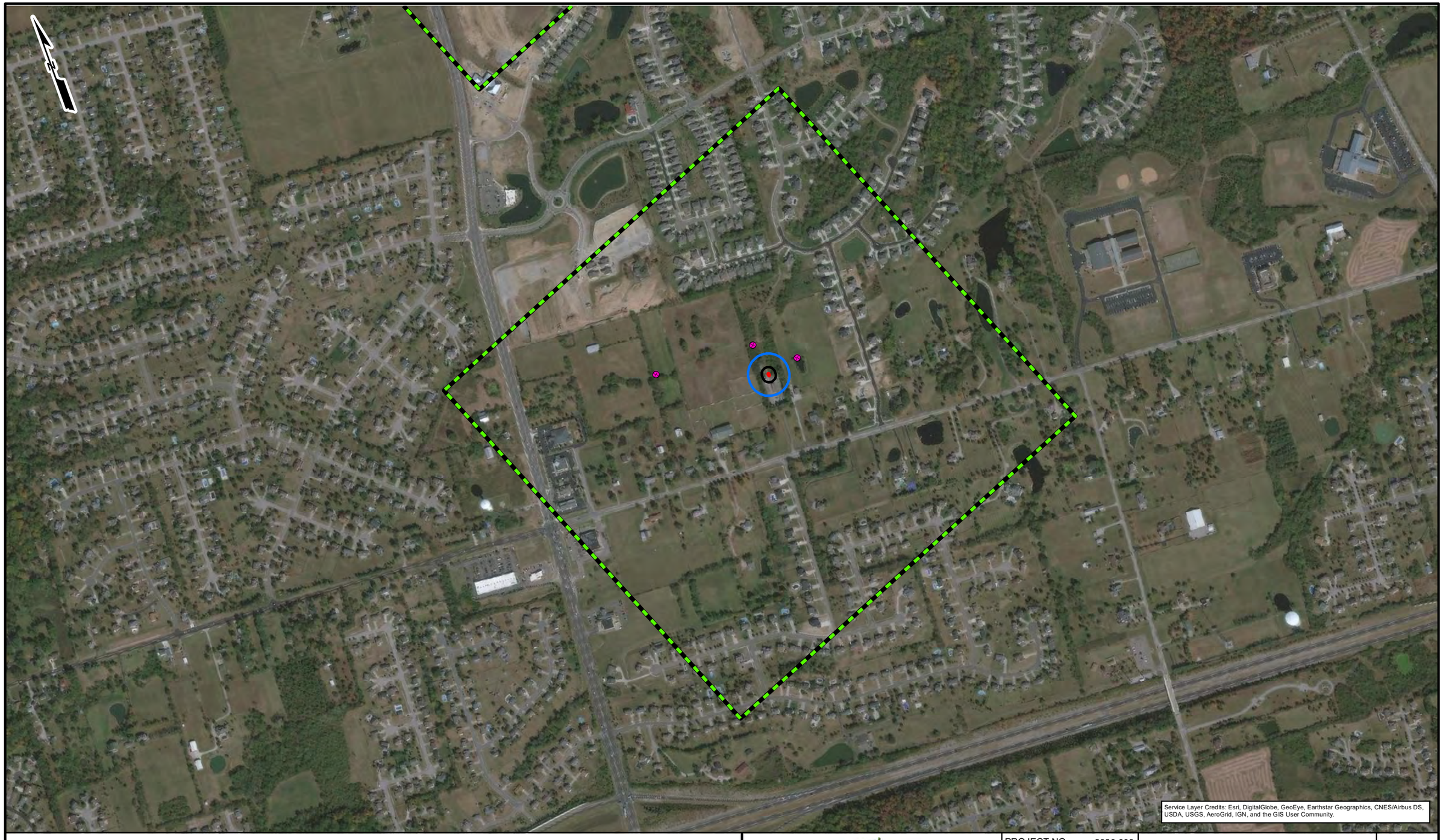
| FILE NAME: | See File Path |

Potential Acoustic Site Locations Overview Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE 2

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\2020.009 - Butler County Integrity Upgrades Acoustic Survey\MXD\Figure 2 - Potential Acoustic Site Locations Overview Map.mxd




**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))
- Kilometer Block
- Potential Acoustic Site Locations
- Proposed Project Alignment

0 370 740 1,480 Feet

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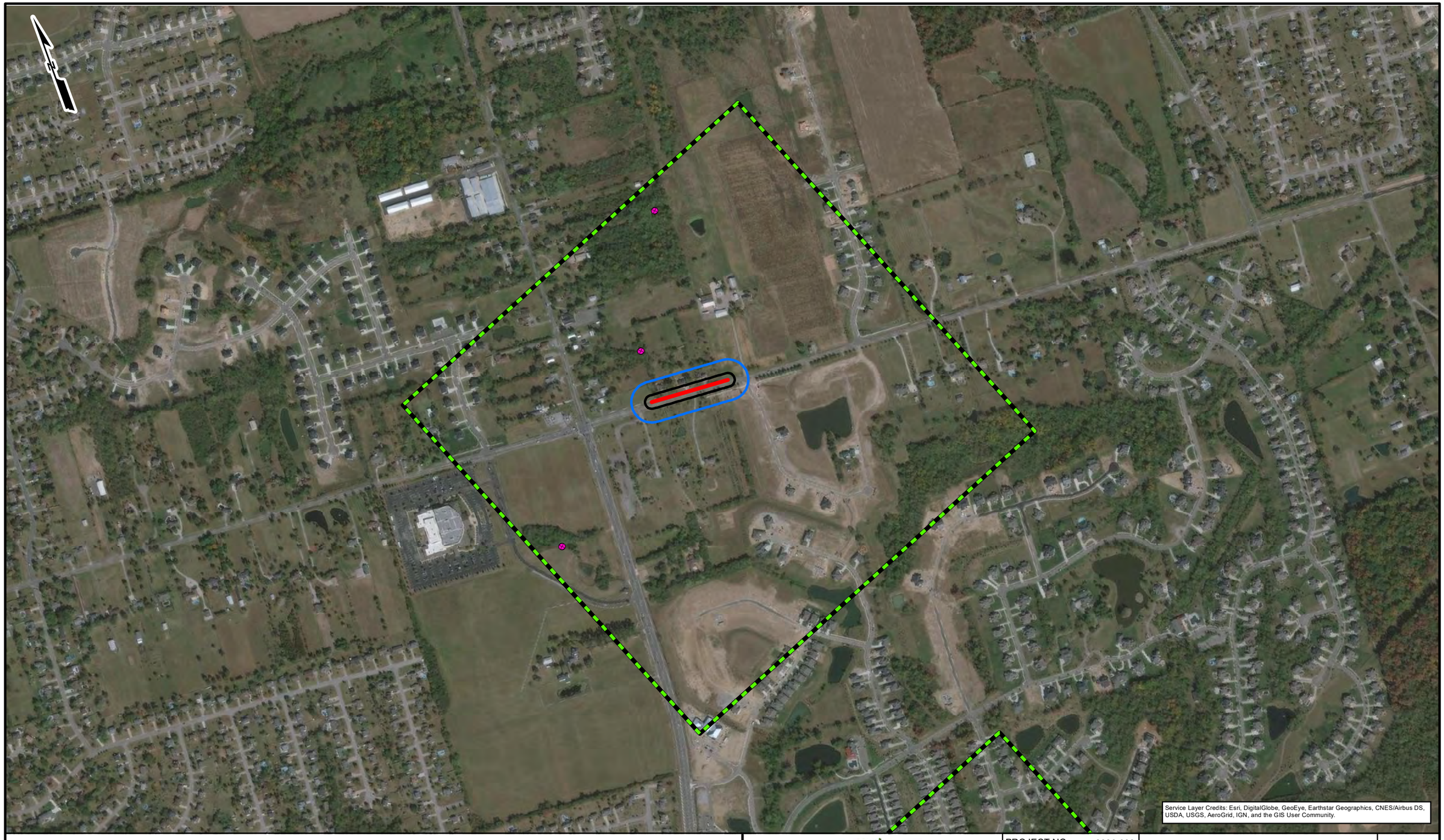
BC-1 Potential Acoustic Site Locations Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE 3

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\2020.009 - Butler County Integrity Upgrades Acoustic Survey\MXD\Figure 3 - Potential Acoustic Site Locations Map.mxd




**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))
- Kilometer Block
- Potential Acoustic Site Locations
- Proposed Project Alignment

0 370 740 1,480 Feet

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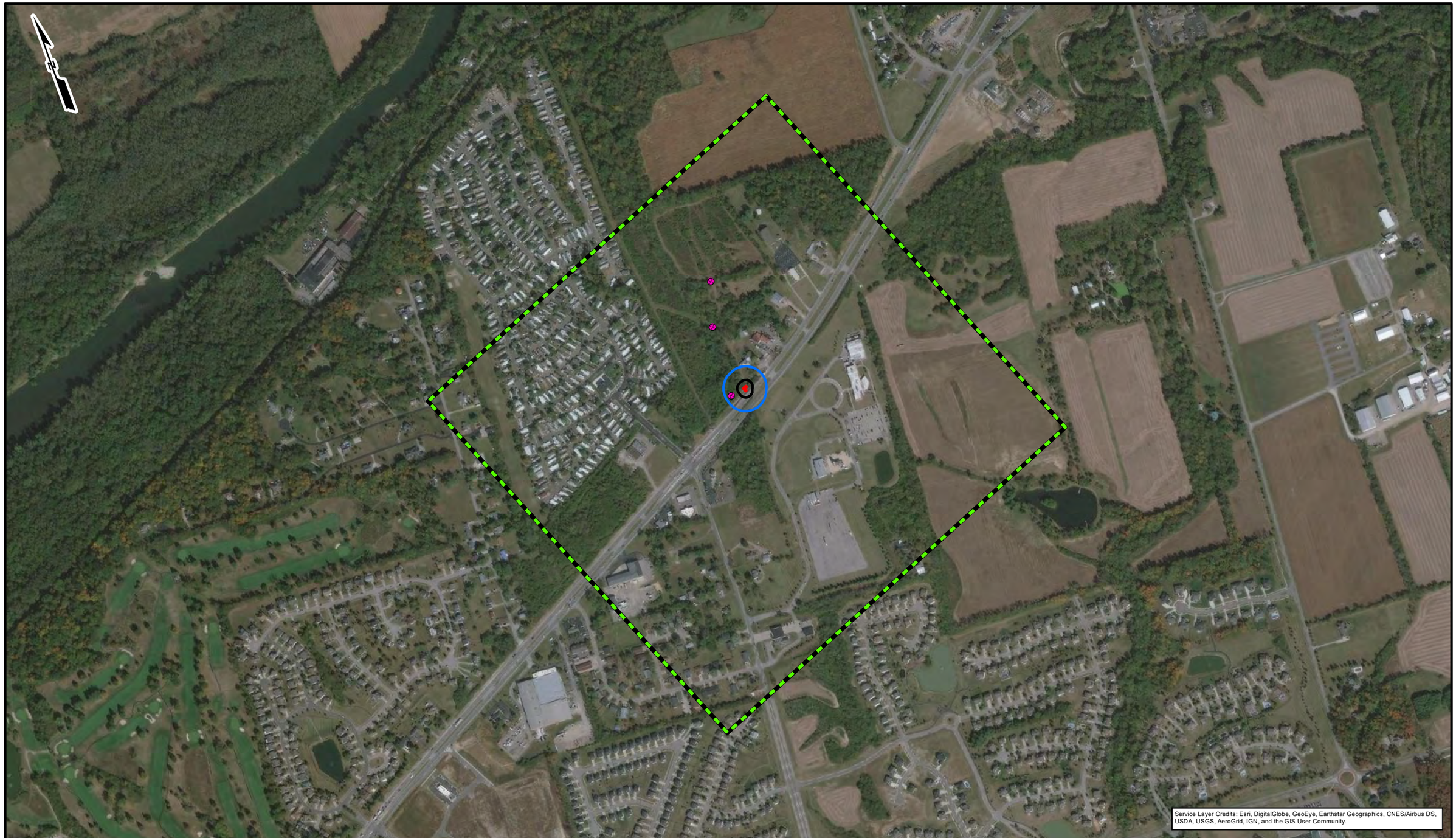
BC-2 Potential Acoustic Site Locations Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE
4




**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))
- Kilometer Block
- Potential Acoustic Site Locations
- Proposed Project Alignment

0 370 740 1,480 Feet

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BC-3 Potential Acoustic Site Locations Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE 5

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\2020.009 - Butler County Integrity Upgrades Acoustic Survey\MXD\Figure 5 - Potential Acoustic Site Locations Map.mxd


**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))
- Kilometer Block
- Potential Acoustic Site Locations
- Proposed Project Alignment

0 370 740 1,480 Feet

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| DRAWN BY: | CTO |
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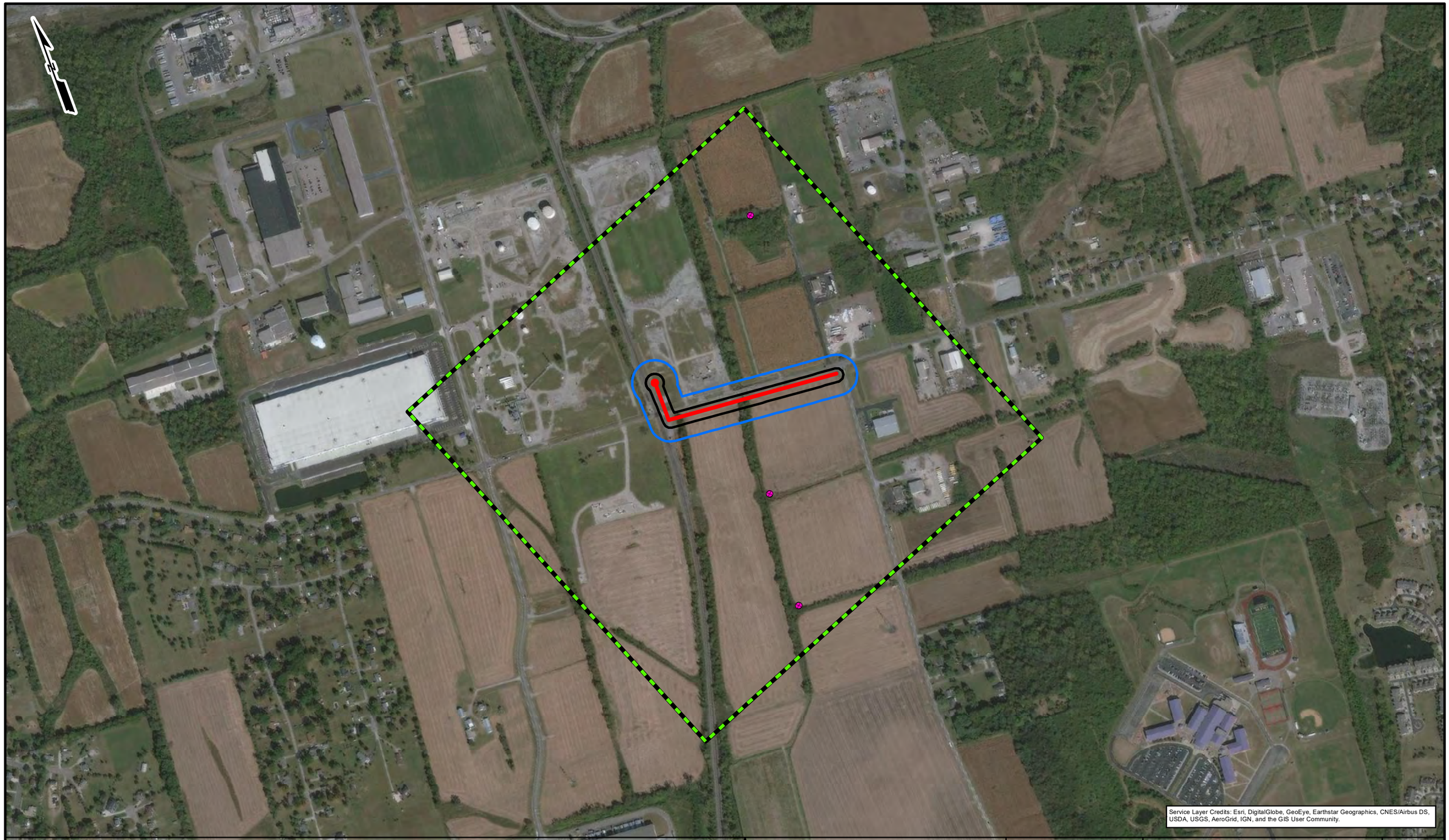
BC-4 Potential Acoustic Site Locations Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE 6

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\2020.009 - Butler County Integrity Upgrades Acoustic Survey\MXD\Figure 6 - Potential Acoustic Site Locations Map.mxd




**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))
- Kilometer Block
- Potential Acoustic Site Locations
- Proposed Project Alignment

0 370 740 1,480 Feet

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|---|---|
| PROJECT NO. | 2020.008 |
| DRAWN: | 08/08/2020 |
| DRAWN BY: | CTO |
| FILE NAME: | See File Path |

BC-7 Potential Acoustic Site Locations Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE 7

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\2020.009 - Butler County Integrity Upgrades Acoustic Survey\MXD\Figure 7 - Potential Acoustic Site Locations Map.mxd

Gmail **Chance Osborne <chance@encarnaenv.com>**

# Fwd: [EXTERNAL] Duke Energy - Maineville to Morrow Pipeline / Phase 1 Butler County Upgrades

1 message

**Jill Vovaris** <JVovaris@kleinfelder.com> Tue, Aug 11, 2020 at 9:21 AM
To: Chance Osborne <chance@encarnaenv.com>, Matthew Albright <MAlbright@kleinfelder.com>

Jill Vovaris
Kleinfelder
VP- Ohio River Valley Operations
724.757.6210

Begin forwarded message:

**From:** "Boyer, Angela" <angela_boyer@fws.gov>
**Date:** August 11, 2020 at 9:15:21 AM EDT
**To:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Cc:** "Steve.Lane@duke-energy.com" <Steve.Lane@duke-energy.com>, "Klein, David Anthony" <David.Klein@duke-energy.com>, Seth Sanders <SDSanders@Kleinfelder.com>, "Sarah.Stankavich@dnr.state.oh.us" <Sarah.Stankavich@dnr.state.oh.us>, "Zimmermann, Susan C" <Susan_Zimmermann@fws.gov>
**Subject: Re: [EXTERNAL] Duke Energy - Maineville to Morrow Pipeline / Phase 1 Butler County Upgrades**

**External Email.**

Jill,

This response provides U.S. Fish and Wildlife Service approval of your proposed acoustic surveys for the Duke Energy – Mainesville to Morrow Pipeline Project and the Phase 1 Butler County Upgrades Project in Warren and Butler Counties, Ohio. Please note that plans must also be reviewed and approved by the Ohio Division of Wildlife (contact Sarah Stankavich) before any surveys take place. This surveys has been assigned the reference numbers **20-041 (Mainesville) and 20-042 (Phase 1)**. Please include this project reference number in all correspondence to the U.S. Fish and Wildlife Service and the Ohio Division of Wildlife. This surveys will serve as a summer presence/absence survey for the Indiana bat and northern long-eared bat.

By January 31, 2021, we request that you submit an annual report of your Ohio acoustic survey work to this office using the Midwestern U.S. Spreadsheet in electronic format. Be sure to include data for the site even if no bats were detected. The 2020 Midwestern U.S. Spreadsheet and

instructions are found here: http://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html.

Please notify me if any surveys are cancelled or otherwise not completed this field season. Please contact me if you have questions.

Sincerely,
Angela Boyer
Endangered Species Coordinator for Ohio
U.S. Fish and Wildlife Service
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993, ext. 122
(614) 416-8994 FAX

---

**From:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Sent:** Sunday, August 9, 2020 9:39 PM
**To:** Boyer, Angela <angela_boyer@fws.gov>; Zimmermann, Susan C <Susan_Zimmermann@fws.gov>
**Cc:** Steve.Lane@duke-energy.com <Steve.Lane@duke-energy.com>; Klein, David Anthony <David.Klein@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** [EXTERNAL] Duke Energy - Maineville to Morrow Pipeline / Phase 1 Butler County Upgrades



Good evening Angela and Susan,

Our client, Duke Energy, is proposing to construct approximately 4.1 miles of an 8-inch diameter steel gas pipeline from Maineville to Morrow in Warren County, Ohio, known as the Maineville Morrow Loop Line C231 (Project). The proposed project will increase the reliability of the existing system by upgrading the capacity in the surrounding area. And, as a second project, Duke is proposing to bolster pressure in small diameter feeder lines in Liberty Township, Hamilton, and Middletown, Ohio, known as the Butler County Integrity Upgrades – Phase 1 (Project) in Butler County, Ohio. Increasing this pressure will better position assets to create a future loop to provide an alternate gas path for alternate supply from Dick's Creek to south of Hunstville, Ohio.

The proposed design for the projects will likely result in less than 5 acres and less than 1 acre, respectively, for the two projects. Understanding that there remains a moratorium on mist net surveys, we would like to conduct acoustic surveys for both projects. Also knowing that the survey window closes on Saturday, August 15, we are requesting that you review the study plans at the following links. I know that this is an expedited request and that we are asking for extremely quick turn around time. However, with the pandemic this year and budgetary and schedule constraints, I am hoping that you could accommodate this request so that we can get into the field on Wednesday at the very latest.

Please download the study plans at the following links:

1. **2020.008 - Maineville Morrow Loop Line Acoustic Survey Study Plan FINAL.pdf** (5.44 MB)
https://kleinfelder.filegenius.com/downloadPublic/cd294ntcdlyv5c2/3g6c7cjcffyjazc

2. **2020.009 - Butler Couny Integrity Upgrades Acoustic Survey Study Plan FINAL.pdf** (41.93 MB)
https://kleinfelder.filegenius.com/downloadPublic/gscub8xoc1ewos5/vfzmeph9cxv1814

I have also attached our bat biologists permits to this email. I will contact you both in the morning to discuss.

Thank you so much in advance for your consideration of this expedited and accelerated request.

Sincerely,

Jill Vovaris

**Jill Vovaris**

Vice President – Ohio River Valley Operations Manager

51 Dutilh Road, Suite 240

Cranberry Township, PA 16066

180 White Oaks Blvd., Suite 110
Bridgeport, WV 26330-9770

o| +724.772.7072

d| +724.200.7501

f| +724.772.7079

m| +724.757.6210


**4 attachments**

**TE 62778B-1 Osborne Signed Permit.pdf**
121K

**ATT00001.htm**
1K

**Osborne_ODNR_Permit.pdf**
1940K

**ATT00002.htm**
1K

Gmail

**Chance Osborne <chance@encarnaenv.com>**

# Fwd: Request for review from ODNR - Acoustic Surveys

1 message

**Jill Vovaris** <JVovaris@kleinfelder.com> Wed, Aug 12, 2020 at 7:52 AM
To: Matthew Albright <MAlbright@kleinfelder.com>, Chance Osborne <chance@encarnaenv.com>

Good morning,

See below for approval from ODNR.

Matt,

Can you please pull what Erin is asking?

Thanks.

Jill Vovaris
Kleinfelder
VP- Ohio River Valley Operations
724.757.6210

Begin forwarded message:

**From:** "Erin.Hazelton@dnr.state.oh.us" <Erin.Hazelton@dnr.state.oh.us>
**Date:** August 12, 2020 at 7:22:31 AM EDT
**To:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Cc:** "angela_boyer@fws.gov" <angela_boyer@fws.gov>, "Sarah.Stankavich@dnr.state.oh.us" <Sarah.Stankavich@dnr.state.oh.us>, "Steve.Lane@duke-energy.com" <Steve.Lane@duke-energy.com>, Seth Sanders <SDSanders@Kleinfelder.com>, "Klein, David Anthony" <David.Klein@duke-energy.com>
**Subject: RE: Request for review from ODNR - Acoustic Surveys**

**External Email.**

Hi Jill,

I'm going to be out of the office most of today so please consider this an approval to move forward with the acoustics for these two projects. I'm having trouble accessing the study plans via the link—can you please send in PDF? Also, please send me a shapefile of the project boundary (limit of tree cutting) and I'll check our database for any existing state bat buffers and respond with any updated information.

Thank you,

Erin

Erin Hazelton

Wind Energy Administrator

ODNR Division of Wildlife

2045 Morse Rd. Bldg G-3

Columbus, OH 43229

1-800-WILDLIFE

Office: 614-265-6349

Email: erin.hazelton@dnr.state.oh.us

Support Ohio's wildlife. Buy a license or stamp at wildohio.gov.



---

**From:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Sent:** Tuesday, August 11, 2020 9:42 AM
**To:** Hazelton, Erin <Erin.Hazelton@dnr.state.oh.us>

**Cc:** angela_boyer@fws.gov; Stankavich, Sarah <Sarah.Stankavich@dnr.state.oh.us>; Steve.Lane@duke-energy.com; Seth Sanders <SDSanders@Kleinfelder.com>; Klein, David Anthony <David.Klein@duke-energy.com>
**Subject:** Request for review from ODNR - Acoustic Surveys
**Importance:** High

Good morning Erin,

As I understand it Sarah is out of the office until Thursday, so I'm reaching out to you.

Our client, Duke Energy, is proposing to construct approximately 4.1 miles of an 8-inch diameter steel gas pipeline from Maineville to Morrow in Warren County, Ohio, known as the Maineville Morrow Loop Line C231 (Project). The proposed project will increase the reliability of the existing system by upgrading the capacity in the surrounding area. And, as a second project, Duke is proposing to bolster pressure in small diameter feeder lines in Liberty Township, Hamilton, and Middletown, Ohio, known as the Butler County Integrity Upgrades – Phase 1 (Project) in Butler County, Ohio. Increasing this pressure will better position assets to create a future loop to provide an alternate gas path for alternate supply from Dick's Creek to south of Hunstville, Ohio.

The proposed design for the projects will likely result in less than 5 acres and less than 1 acre, respectively, for the two projects. Understanding that there remains a moratorium on mist net surveys, we would like to conduct acoustic surveys for both projects. Also knowing that the survey window closes on Saturday, August 15, we are requesting that you review the study plans at the following links. I know that this is an expedited request and that we are asking for extremely quick turnaround time. However, with the pandemic this year and budgetary and schedule constraints, I am hoping that you could accommodate this request so that we can get into the field on Wednesday at the very latest.

**USFWS provided approval this morning for these two projects. I have attached the email.**

Please download the study plans at the following links:

1. **2020.008 - Maineville Morrow Loop Line Acoustic Survey Study Plan FINAL.pdf** (5.44 MB) in Albright_Matthew
https://kleinfelder.filegenius.com/downloadPublic/cd294ntcdlyv5c2/3g6c7cjcffyjazc

2. **2020.009 - Butler Couny Integrity Upgrades Acoustic Survey Study Plan FINAL.pdf** (41.93 MB) in Albright_Matthew
https://kleinfelder.filegenius.com/downloadPublic/gscub8xoc1ewos5/vfzmeph9cxv1814

These links will expire on **08/19/20 at 05:00 pm PDT**

Please let me know if you have any issue downloading the files or have any questions. I really appreciate your attention to this.

Thanks,

**Jill Vovaris**

Vice President – Ohio River Valley Operations Manager

51 Dutilh Road, Suite 240

Cranberry Township, PA 16066

180 White Oaks Blvd., Suite 110
Bridgeport, WV 26330-9770

o| +724.772.7072

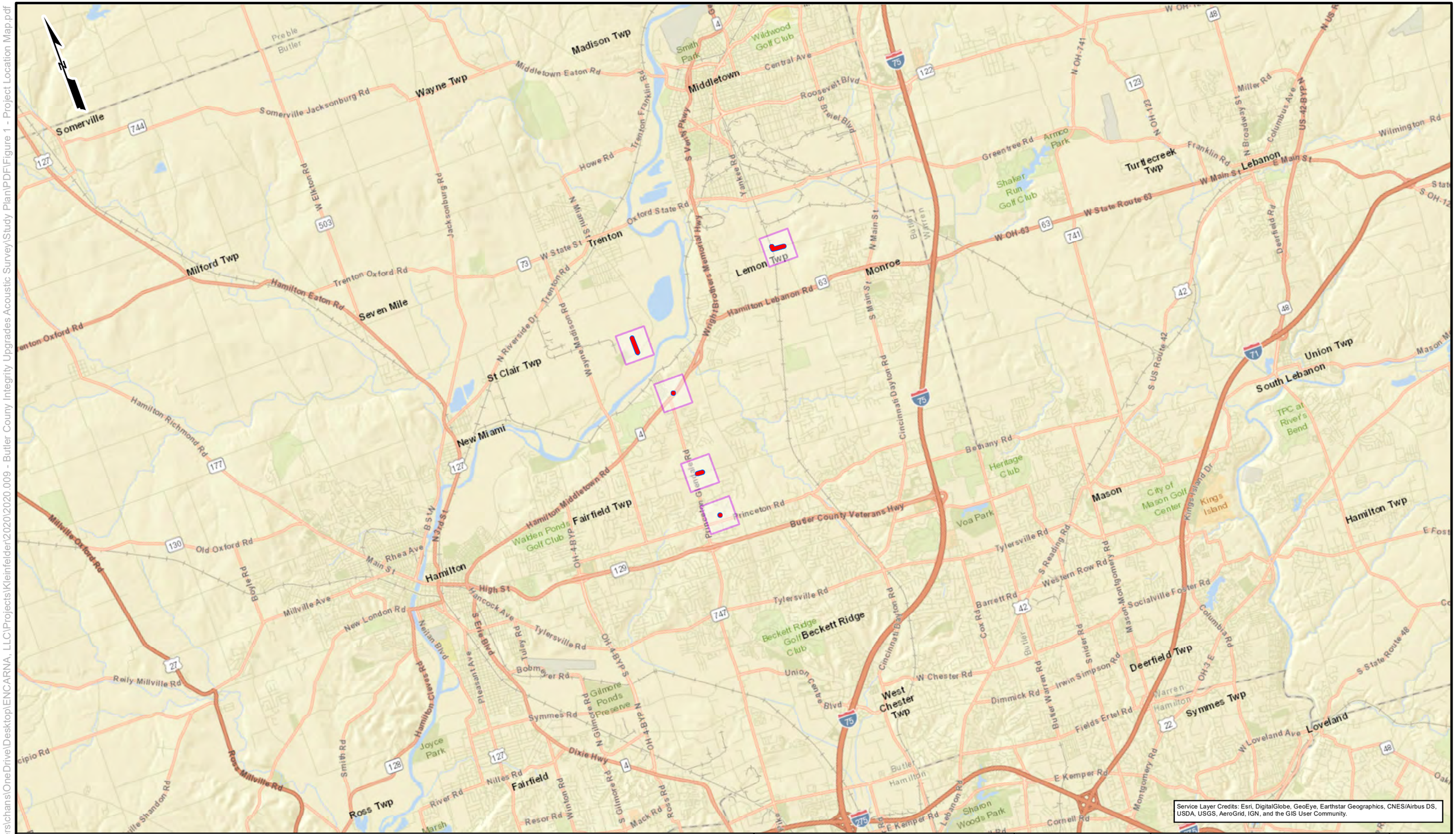
d| +724.200.7501

f| +724.772.7079

m| +724.757.6210

# APPENDIX B: Project Mapping

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\2020.009 - Butler County Integrity Upgrades Acoustic Survey\Study Plan\PDF\Figure 1 - Project Location Map.pdf




## Legend

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project Alignment
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))

0 5,500 11,000 22,000 Feet

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| | |
|---|---|
| PROJECT NO. | 2020.008 |
| DRAWN: | 08/08/2020 |
| DRAWN BY: | CTO |
| FILE NAME: | See File Path |

# Project Location Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE
1


**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))
- Kilometer Blocks Surveyed
- Acoustic Site Locations
- Proposed Project Alignment
- Kilometer Blocks Not Surveyed

0 2,200 4,400 8,800 Feet

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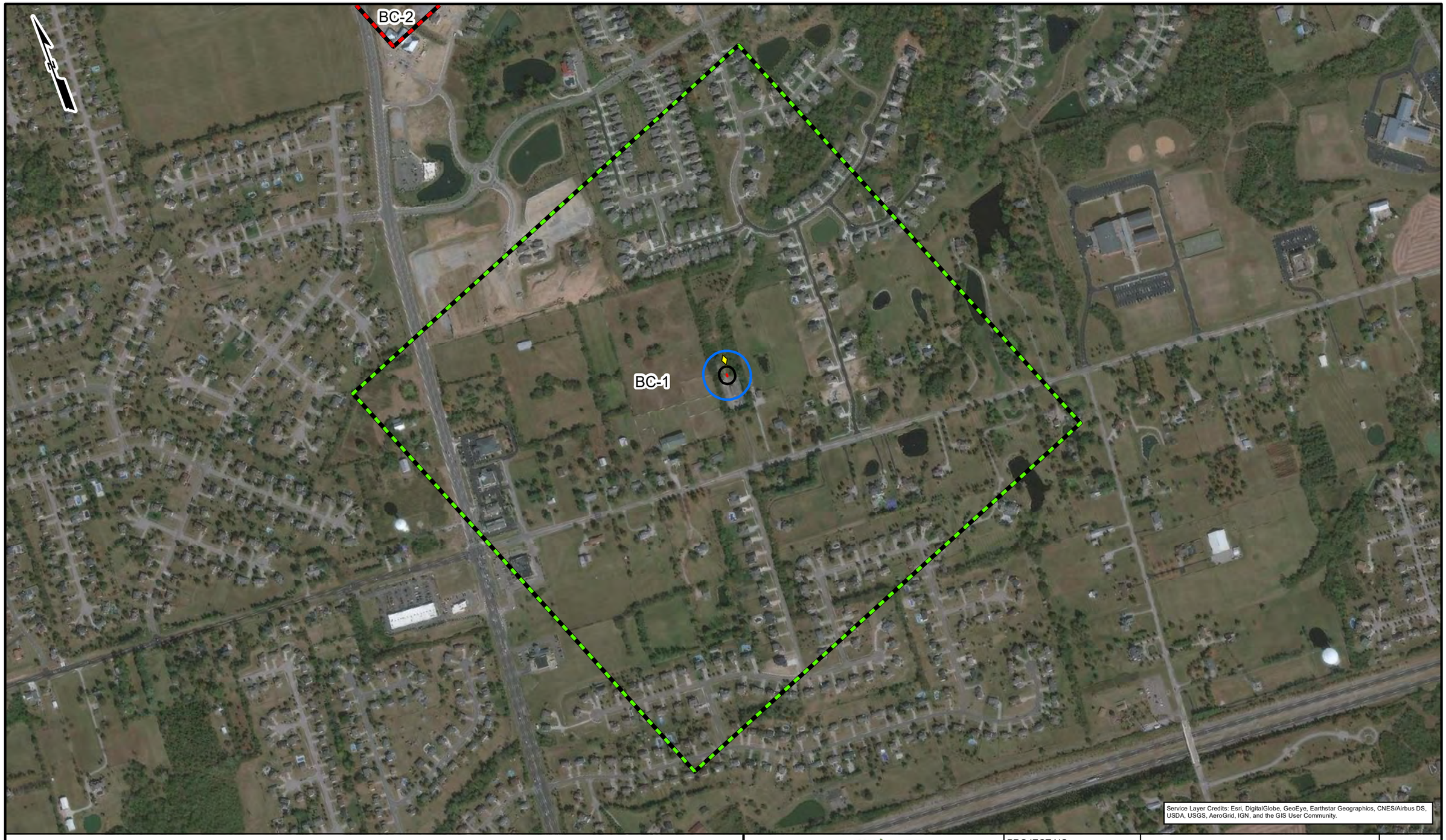
Acoustic Site Locations Overview Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE 2

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\Duke Energy\2020.009 - Butler County Integrity Upgrades Acoustic Survey\Report\Report Mapping\Figure 2 - Acoustic Site Locations Overview Map.mxd




Service Layer Credits: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGrid, IGN, and the GIS User Community.

**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))
- Kilometer Blocks Surveyed
- Acoustic Site Locations
- Proposed Project Alignment
- Kilometer Blocks Not Surveyed

0 320 640 1,280 Feet

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| DRAWN BY: | CTO |
| FILE NAME: | See File Path |

BC-1 Acoustic Site Location Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE 3

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\Duke Energy\2020.009 - Butler County Integrity Upgrades Acoustic Survey\Report\Report Mapping\Figure 3 - BC-1 Acoustic Site Location Map.mxd


**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))
- Kilometer Blocks Surveyed
- Acoustic Site Locations
- Proposed Project Alignment
- Kilometer Blocks Not Surveyed

0 320 640 1,280 Feet

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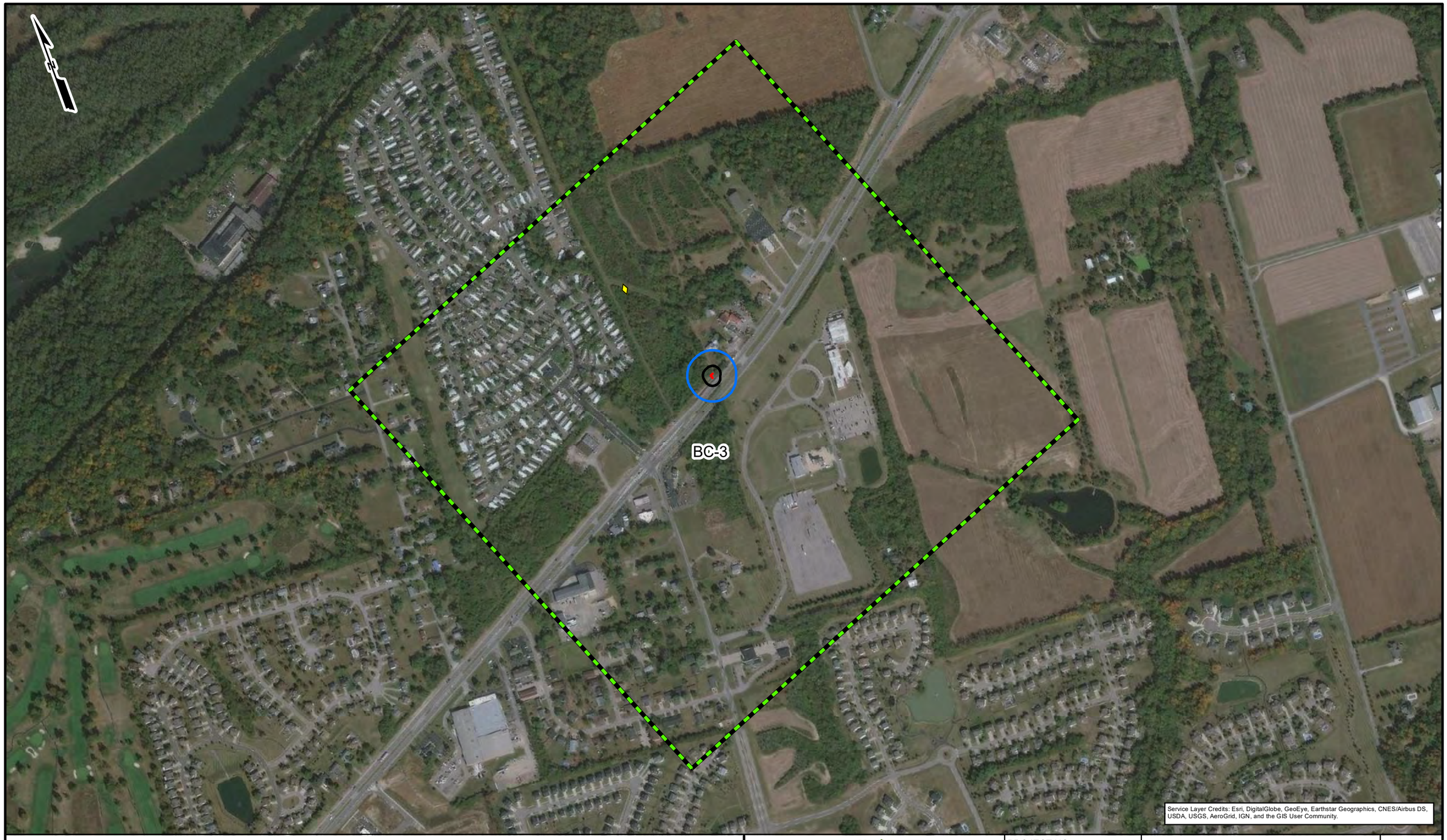
| DRAWN: | 08/19/2020 |
| DRAWN BY: | CTO |
| FILE NAME: | See File Path |

BC-2 Acoustic Site Location Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE 4

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\Duke Energy\2020.009 - Butler County Integrity Upgrades Acoustic Survey\Report\Report Mapping\Figure 4 - BC-2 Acoustic Site Location Map.mxd




**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))
- Kilometer Blocks Surveyed
- Acoustic Site Locations
- Proposed Project Alignment
- Kilometer Blocks Not Surveyed

0 320 640 1,280 Feet

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|---|---|
| PROJECT NO. | 2020.009 |
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| DRAWN BY: | CTO |
| FILE NAME: | See File Path |

BC-3 Acoustic Site Location Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE 5

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\Duke Energy\2020.009 - Butler County Integrity Upgrades Acoustic Survey\Report\Report Mapping\Figure 5 - BC-3 Acoustic Site Location Map.mxd


**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))
- Kilometer Blocks Surveyed
- Acoustic Site Locations
- Proposed Project Alignment
- Kilometer Blocks Not Surveyed

0 320 640 1,280 Feet

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|---|---|
| PROJECT NO. | 2020.009 |
| DRAWN: | 08/19/2020 |
| DRAWN BY: | CTO |
| FILE NAME: | See File Path |

BC-4 Acoustic Site Location Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE 6

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\Duke Energy\2020.009 - Butler County Integrity Upgrades Acoustic Survey\Report\Report Mapping\Figure 6 - BC-4 Acoustic Site Location Map.mxd


**Legend**

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres)
- Kilometer Blocks Surveyed
- Acoustic Site Locations
- Proposed Project Alignment
- Kilometer Blocks Not Surveyed

0 320 640 1,280 Feet



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| | |
|---|---|
| PROJECT NO. | 2020.009 |
| DRAWN: | 08/19/2020 |
| DRAWN BY: | CTO |
| FILE NAME: | See File Path |

BC-7 Acoustic Site Location Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE 7

# APPENDIX C: Project Data Tables

Table 1. Kaleidoscope Pro V.5.1.0 Output of Species Identifications by Site and Night.

| Site | Date | Big brown bat | Eastern red bat | Hoary bat | Silver-haired bat | Eastern small-footed bat | Little brown bat | Northern long-eared bat | Indiana bat | Evening bat | Tricolored bat |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BC-1 | 08/12/2020 | 89 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| BC-1 | 08/13/2020 | 10 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 |
| BC-3 | 08/13/2020 | 134 | 0 | 1 | 15 | 0 | 3 | 0 | 0 | 2 | 1 |
| BC-3 | 08/14/2020 | 489 | 0 | 17 | 35 | 0 | 5 | 0 | 0 | 23 | 12 |
| BC-4 | 08/13/2020 | 51 | 2 | 4 | 4 | 0 | 1 | 0 | 0 | 2 | 0 |
| BC-4 | 08/14/2020 | 119 | 1 | 0 | 8 | 0 | 1 | 0 | 0 | 7 | 1 |
| BC-7 | 08/12/2020 | 21 | 0 | 2 | 8 | 0 | 2 | 0 | 0 | 0 | 0 |
| BC-7 | 08/13/2020 | 23 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |

Table 2. Kaleidoscope V.5.1.0 Output of P-Values for the Maximum Likelihood Estimator.

| Site | Date | Big brown bat | Eastern red bat | Hoary bat | Silver-haired bat | Eastern small-footed bat | Little brown bat | Northern long-eared bat | Indiana bat | Evening bat | Tricolored bat |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BC-1 | 08/12/2020 | **0.0000** | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| BC-1 | 08/13/2020 | **0.0000** | 1.0000 | 1.0000 | 1.0000 | 1.0000 | **0.0001** | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| BC-3 | 08/13/2020 | **0.0000** | 1.0000 | 1.0000 | 1.0000 | 1.0000 | **0.0031** | 1.0000 | 1.0000 | **0.0485** | 0.1820 |
| BC-3 | 08/14/2020 | **0.0000** | 1.0000 | 1.0000 | 1.0000 | 1.0000 | **0.0003** | 1.0000 | 1.0000 | 0.0000 | **0.0000** |
| BC-4 | 08/13/2020 | **0.0000** | **0.0441** | 0.5664 | 1.0000 | 1.0000 | 0.6404 | 1.0000 | 1.0000 | 0.4148 | 1.0000 |
| BC-4 | 08/14/2020 | **0.0000** | 0.7041 | 1.0000 | 1.0000 | 1.0000 | 0.4333 | 1.0000 | 1.0000 | **0.0002** | 0.4838 |
| BC-7 | 08/12/2020 | **0.0000** | 1.0000 | 0.7901 | 0.0720 | 1.0000 | **0.0113** | 1.0000 | 1.0000 | 1.0000 | 1.0000 |
| BC-7 | 08/13/2020 | **0.0000** | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 0.1915 | 1.0000 |
| **Low p-values in bold (p≤0.05) indicate high confidence level in species presence.** | | | | | | | | | | | |

Table 3. Location of Bat Acoustic Sites and Microphone Orientation.

| Bat Acoustic Site | Latitude °N | Longitude °W | Microphone Orientation (degrees) |
|---|---|---|---|
| BC-1 | 39.389899 | -84.447180 | 4 |
| BC-3 | 39.430799 | -84.449430 | 116 |
| BC-4 | 39.447505 | -84.456275 | 188 |
| BC-7 | 39.459603 | -84.391006 | 240 |

Table 4. Weather Data Through Survey Sampling Period.

| Survey Night | Date | Time | Temp (°F) | Dew Point (°F) | Humidity % | Wind Direction | Wind Speed (MPH) | Gust Speed (MPH) | Precipitation (inches) | Events |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 08/12/2020 | 20:34 | 79.1 | 72.0 | 79 | NE | 0.5 | 1.4 | 0.00 | N/A |
| 1 | 08/12/2020 | 21:34 | 76.2 | 71.0 | 84 | E | 0.2 | 1.0 | 0.00 | N/A |
| 1 | 08/12/2020 | 22:34 | 73.1 | 69.7 | 89 | WSW | 0.0 | 0.0 | 0.00 | N/A |
| 1 | 08/12/2020 | 23:34 | 72.5 | 70.0 | 92 | SSE | 0.0 | 0.0 | 0.00 | N/A |
| 1 | 08/13/2020 | 00:34 | 72.1 | 70.0 | 93 | SW | 0.0 | 0.0 | 0.00 | N/A |
| 1 | 08/13/2020 | 01:34 | 70.5 | 69.0 | 95 | ESE | 0.0 | 1.0 | 0.00 | N/A |
| 1 | 08/13/2020 | 02:34 | 70.3 | 68.8 | 95 | SW | 0.0 | 1.0 | 0.00 | N/A |
| 1 | 08/13/2020 | 03:34 | 69.2 | 68.3 | 97 | S | 0.1 | 0.3 | 0.00 | N/A |
| 1 | 08/13/2020 | 04:34 | 67.4 | 66.8 | 98 | SW | 0.0 | 0.0 | 0.00 | N/A |
| 1 | 08/13/2020 | 05:34 | 66.7 | 66.4 | 99 | NNW | 0.0 | 0.0 | 0.00 | N/A |
| 1 | 08/13/2020 | 06:34 | 66.8 | 66.5 | 99 | SSW | 0.0 | 0.0 | 0.00 | N/A |
| 2 | 08/13/2020 | 20:34 | 80.3 | 70..9 | 73 | E | 1.5 | 2.5 | 0.00 | N/A |
| 2 | 08/13/2020 | 21:34 | 77.5 | 70.5 | 79 | ESE | 0.1 | 0.5 | 0.00 | N/A |
| 2 | 08/13/2020 | 22:34 | 73.6 | 68.9 | 86 | SW | 0.0 | 0.0 | 0.00 | N/A |
| 2 | 08/13/2020 | 23:34 | 71.9 | 68.8 | 90 | SW | 0.0 | 0.0 | 0.00 | N/A |
| 2 | 08/14/2020 | 00:34 | 70.7 | 68.3 | 92 | W | 0.0 | 0.0 | 0.00 | N/A |
| 2 | 08/14/2020 | 01:34 | 70.2 | 68.1 | 93 | SW | 0.0 | 0.0 | 0.00 | N/A |
| 2 | 08/14/2020 | 02:34 | 69.8 | 67.7 | 93 | E | 0.0 | 0.0 | 0.00 | N/A |
| 2 | 08/14/2020 | 03:34 | 68.5 | 66.7 | 94 | W | 0.0 | 0.0 | 0.00 | N/A |
| 2 | 08/14/2020 | 04:34 | 67.1 | 66.2 | 97 | SW | 0.0 | 0.0 | 0.00 | N/A |
| 2 | 08/14/2020 | 05:34 | 67.5 | 67.2 | 99 | SW | 0.0 | 0.0 | 0.00 | N/A |
| 2 | 08/14/2020 | 06:34 | 67.1 | 66.8 | 99 | NNW | 0.0 | 0.0 | 0.00 | N/A |
| 3 | 08/14/2020 | 20:34 | 77.8 | 71.9 | 82 | SSE | 0.0 | 0.5 | 0.00 | N/A |
| 3 | 08/14/2020 | 21:34 | 75.7 | 72.2 | 89 | ESE | 0.0 | 0.5 | 0.00 | N/A |
| 3 | 08/14/2020 | 22:34 | 72.7 | 70.2 | 92 | SE | 2.4 | 3.6 | 0.00 | N/A |
| 3 | 08/14/2020 | 23:34 | 70.9 | 69.4 | 95 | E | 3.7 | 4.3 | 0.00 | N/A |
| 3 | 08/15/2020 | 00:34 | 70.5 | 69.3 | 96 | ESE | 2.8 | 4.6 | 0.00 | N/A |
| 3 | 08/15/2020 | 01:34 | 70.3 | 69.4 | 97 | E | 0.6 | 1.7 | 0.00 | N/A |
| 3 | 08/15/2020 | 02:34 | 69.1 | 68.8 | 99 | SSW | 0.0 | 0.0 | 0.00 | N/A |
| 3 | 08/15/2020 | 03:34 | 66.9 | 66.6 | 99 | SSW | 0.0 | 0.0 | 0.00 | N/A |
| 3 | 08/15/2020 | 04:34 | 66.7 | 66.4 | 99 | E | 0.9 | 1.2 | 0.00 | N/A |
| 3 | 08/15/2020 | 05:34 | 67.8 | 67.5 | 99 | E | 1.6 | 2.5 | 0.00 | N/A |
| 3 | 08/15/2020 | 06:34 | 67.8 | 67.5 | 99 | E | 2.5 | 3.5 | 0.00 | N/A |

# APPENDIX D: Completed Acoustic Survey Datasheets

## Acoustic Survey Datasheet

Site: BC-1 Project: Butler County Integrity Upgrades - Phase 1 Date: 12 August 2020

Latitude: 39.389899 Longitude: -84.447180

County: Butler State: OH Surveyors: Chance Osborne, Anthony Marinelli

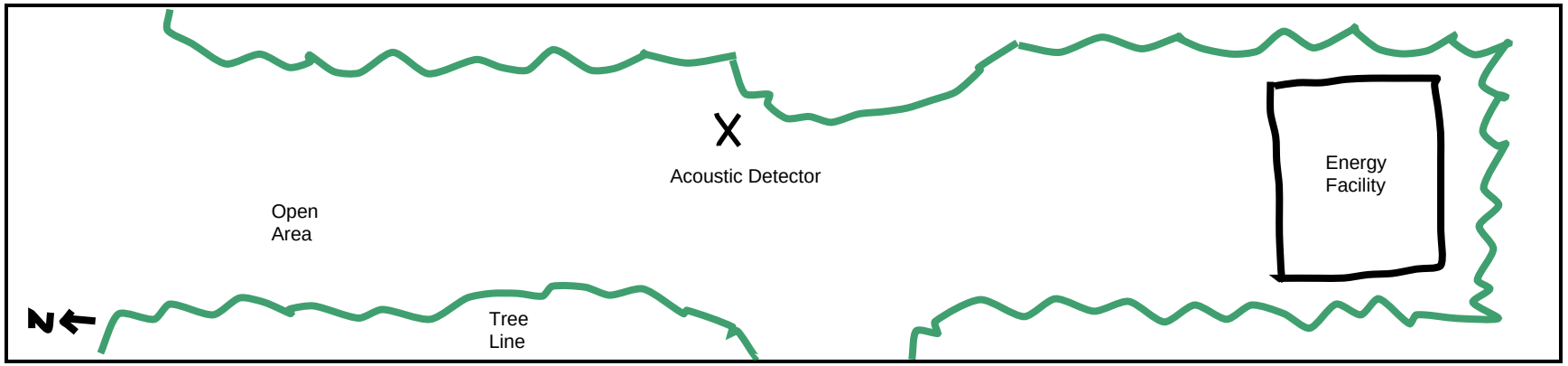
Detector Type: Anabat SD2 Active Placement: Forest Edge/Pond Elevated: Y or N – Pole

Weatherproofing: None Microphone Height (m): 4.0 Microphone Azimuth: 60

Habitat Description:

Site is located along a forested tree line facing towards an open foraging area within an existing energy facility. Dominant tree species present include crabapple tree, tree of heaven, black willow, Eastern red cedar and Kentucky coffeetree.

Site Drawing:



## Acoustic Survey Datasheet

Site: BC-3 Project: Butler County Integrity Upgrades - Phase 1 Date: 13 August 2020

Latitude: 39.430799 Longitude: -84.449430

County: Butler State: OH Surveyors: Chance Osborne, Anthony Marinelli

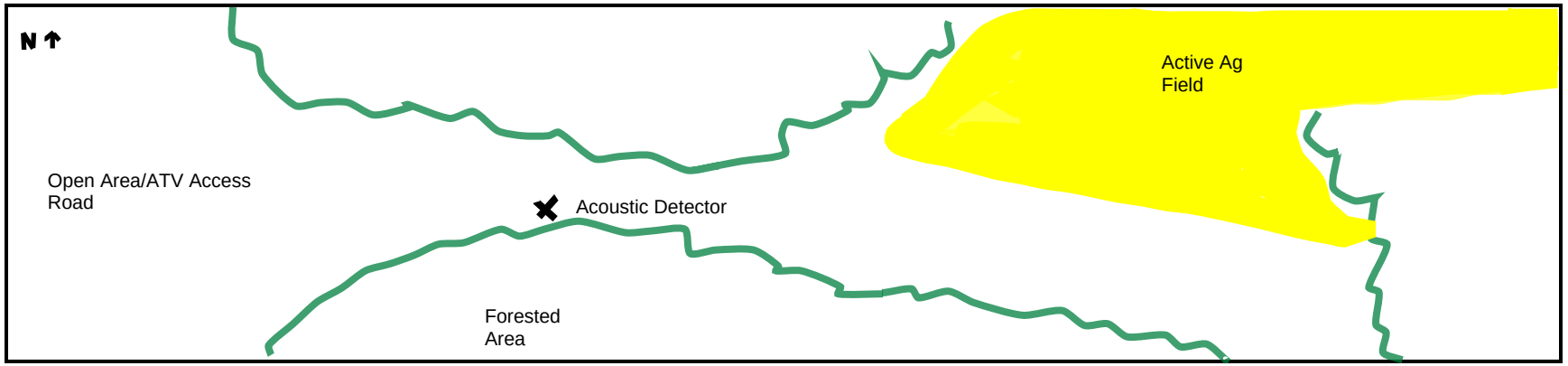
Detector Type: Anabat SD2 Active Placement: Forest Edge/Pond Elevated: Y or N – Pole

Weatherproofing: None Microphone Height (m): 4.0 Microphone Azimuth: 116

Habitat Description:

Site is along edge of tree line in potential foraging corridor and facing towards an open area leading towards a forested block where multiple snags are present. Dominant tree species present include tree of heaven, box elder, black locust, black walnut, and crabapple tree. It should be noted that aerial imagery does not dictate the active ag field present.

Site Drawing:



## Acoustic Survey Datasheet

Site: BC-4 Project: Butler County Integrity Upgrades - Phase 1 Date: 13 August 2020

Latitude: 39.447505 Longitude: -84.456275

County: Butler State: OH Surveyors: Chance Osborne, Anthony Marinelli

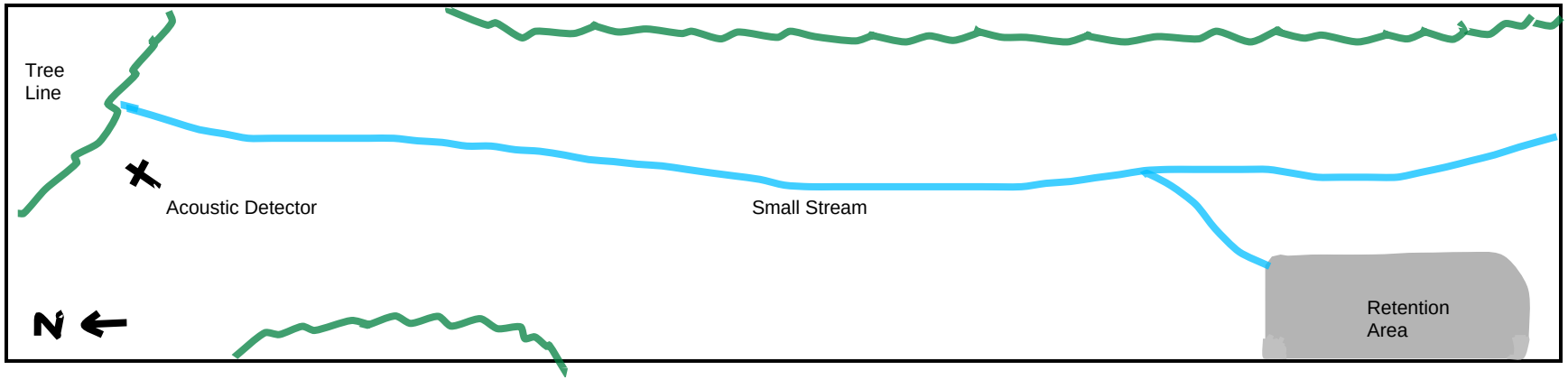
Detector Type: Anabat SD2 Active Placement: Forest Edge/Pond Elevated: Y or N – Pole

Weatherproofing: None Microphone Height (m): 4.0 Microphone Azimuth: 60

Habitat Description:

Site is located on an existing energy facility. Portions of tree lines were accessible within fenced in area where access was granted and detector was placed on edge of tree line facing where a small stream was flowing south in an open maintained field. Dominant tree species present include American sycamore, black walnut, black locust, honey locust and sugar maple.

Site Drawing:



## Acoustic Survey Datasheet

Site: BC-7 Project: Butler County Integrity Upgrades - Phase 1 Date: 12 August 2020

Latitude: 39.459603 Longitude: -84.391006

County: Butler State: OH Surveyors: Chance Osborne, Anthony Marinelli

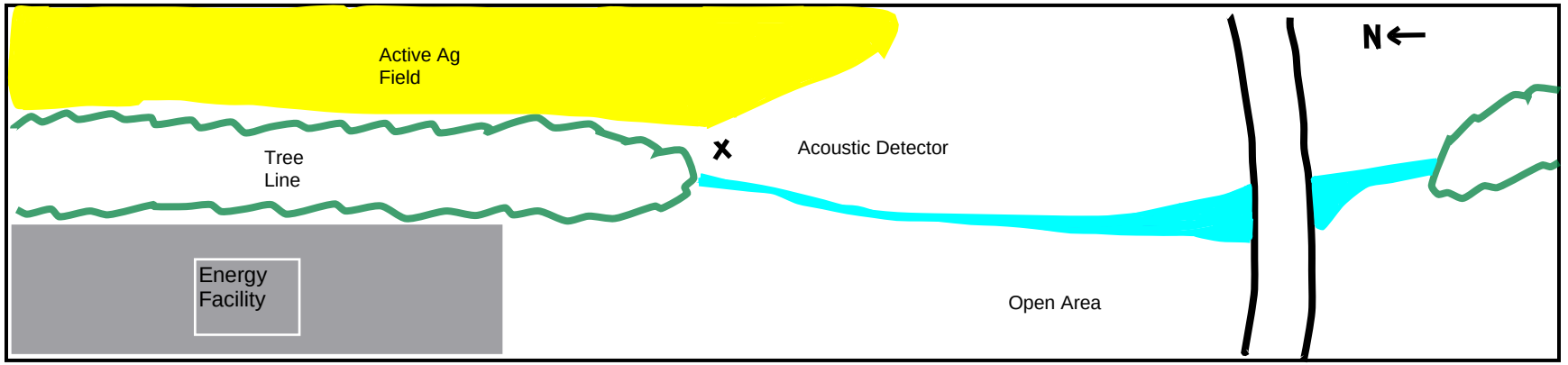
Detector Type: Anabat SD2 Active Placement: Forest Edge/Pond Elevated: Y or N – Pole

Weatherproofing: None Microphone Height (m): 1.5 Microphone Azimuth: 240

Habitat Description:

Site is at the bottom of a cluttered tree line where the stream exits the forest and continues under a bridge. An existing energy facility is due west and and active agricultural field is to the east. Only access available within KM block. Dominant tree species include box elder, green ash, and Kentucky coffeetree. Multiple snags are present within tree line. Detector is facing toward stream.

Site Drawing:



# APPENDIX E: Acoustic Site Photographs

BC-1: Acoustic detector (Hank) along forest edge facing towards open foraging area.

BC-3: Acoustic detector (Q) along edge of potential flight corridor facing towards opening and snags.

BC-4: Acoustic detector (Pele) along forested edge facing towards open area and small stream.

BC-7: Acoustic detector (Tad) along forested edge open area and stream.
(Power lines are overhead; Tripod deployed instead of extendable pole)

**ATTACHMENT C**
**POTENTIAL HABITAT PHOTOGRAPHS**

Photograph 1 – KLF_BH01 view North (BC-1)

Photograph 2 – KLF_BH02 view South (BC-1)

Photograph 3 – KLF_BH03 view South (BC-2)

Photograph 4 – KLF_BH04 view West (BC-4)

Photograph 5 – KLF_BH05 view West (BC-4)

Photograph 6 – KLF_BH06 view North (BC-4)

Photograph 7 – KLF_BH07 view North (BC-4)

Photograph 8 – KLF_BH08 view West (BC-4)

Photograph 9 – KLF_BH09 view South (BC-5)

Photograph 10 – KLF_BH10 view South (BC-6)

Photograph 11 – KLF_BH11 view North (BC-7)

Photograph 12 – KLF_BH12 view West (BC-7)

Photograph 13 – KLF_BH13 view South (BC-7)

Photograph 14 – KLF_BH14 view West (BC-7)

Photograph 15 – KLF_BH15 view South (BC-7)

Photograph 16 – KLF_BH16 view South (BC-8)

February 1, 2022

Ms. Sarah Tebbe
Ohio Department of Natural Resources-Office of Real Estate
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693

**Re: Threatened and Endangered Species Technical Assistance Modification Request & Desktop Habitat Assessment (ODNR Docket #21-0225)**
Butler Cnty Ph I C210 & LP07 Project
Lemon, Liberty, and Madison Townships, Butler County, Ohio
Duke Energy Ohio, Inc.

Dear Ms. Tebbe:

On behalf of Duke Energy Ohio, Inc. (Duke), Kleinfelder, Inc. (Kleinfelder) is submitting this combined threatened and endangered (T&E) species technical assistance modification request and desktop habitat assessment to the Ohio Department of Natural Resources (ODNR).

## PROJECT CHANGES

Duke is proposing gas line improvements including extensions, relocations, and abandonments at 7 segments (BC-1, BC-2, BC-4, BC-5, BC-6, BC-7, and BC-8) and 1 laydown yard (BC-7 Laydown Yard) in Lemon, Liberty, and Madison Townships, Butler County, Ohio (OH) (Figure 1) collectively known as the Butler Cnty Ph I C210 & LP07 Project (Project). Since receipt of the April 27, 2021 ODNR technical assistance comments (Attachment A; Docket #21-0225), design changes have occurred at BC-2, BC-4, BC-5, BC-7, and BC-8 along with the addition of the BC-7 Laydown Yard, which have increased the area of interest (AOI) from 49.7 acres to 125.1 acres and increased the limits-of-disturbance (LOD) from 12.7 acres to 24.1 acres (Figure 2). Specifically, the following changes have occurred:

- The BC-2 AOI has increased from 5.6 acres to 5.7 acres and the LOD has been modified but remains 1.3 acres with no additional tree clearing required;
- The BC-4 LOD has increased from 3.9 acres to 4.0 acres with no additional tree clearing required;
- The BC-5 AOI has increased from 4.9 acres to 71.4 acres and the LOD has increased from 0.9 acres to 10.0 acres, which has increased tree clearing from 0.1 acres to 4.1 acres;
- The BC-7 AOI has increased from 19.8 acres to 23.1 acres and the LOD has increased from 5.4 acres to 6.8 acres, which has reduced tree clearing so that it is no longer required;
- The BC-8 LOD has been modified but remains 0.2 acres with no additional tree clearing required; and
- The BC-7 Laydown Yard has been added to the Project and consists of a 5.5-acre AOI and a 0.9-acre LOD, which will require no tree clearing.

Based on the above Project changes, Duke is requesting revised information regarding T&E species, or their habitats that may be impacted by the proposed Project. In addition, Duke has developed the following desktop habitat assessment to address recommendations provided in ODNR's April 27, 2021 correspondence.

Winter tree clearing (between October 1st and March 31st) associated with the Project is currently anticipated with the exception to BC-1, BC-4, and BC-7. Acoustic surveys were performed at these segments between August 12, 2020 and August 14, 2020 and will avoid side-trimming or cutting of any trees in the Project area that have clusters of dead leaves in the upper third of the tree and no cutting of any trees with a diameter at breast height (DBH) ≥ 20 inches prior to October 1st and after March 31st to limit impacts to tricolored bats as recommended in ODNR's August 25 and 26, 2020 correspondence (Attachment B). Additionally, in order to limit impacts to little brown bats, ODNR recommended no clearing of trees with the following characteristics unless they pose a hazard: dead or live trees of any size with loose, shaggy bark and/or crevices, holes, or cavities.

## DESKTOP HABITAT ASSESSMENT BACKGROUND

Select segments of the Project are under the jurisdiction of the Ohio Power Siting Board (OPSB). As such, an application will be filed with the OPSB for a Certificate of Environmental Compatibility and Public Need in February 2022. The desktop habitat assessment included in this document addresses only those segments of the Project that are under OPSB jurisdiction, which include all of or select portions of BC-1, BC-2, BC-4, BC-5, BC-7, and BC-7 Laydown Yard as shown on Figure 2.

Kleinfelder submitted a T&E species technical assistance letter for the Project to ODNR on February 16, 2021. A response letter was received on April 27, 2021, which requested a desktop habitat assessment for six state-listed species (tonguetied minnow [*Exoglossum laurae*], American eel [*Anguilla rostrata*], black-crowned night heron [*Nycticorax nycticorax*], least bittern [*Ixobrychus exilis*], lark sparrow [*Chondestes grammacus*], and upland sandpiper [*Bartramia longicauda*]) that may occur within the Project area.

In addition, four state-species (rayed bean [*Villosa fabalis*], fawnsfoot [*Truncilla donaciformis*], Kirtland's snake [*Clonophis kirtlandii*], and cave salamander [*Eurycea lucifuga*]) were also identified by ODNR as potentially occurring within the Project area. For these particular species, the ODNR response letter indicated that due to the location, the type of habitat within the Project area, and the type of work proposed, the Project is not likely to impact these species; therefore, a desktop habitat assessment was not completed for these species.

Furthermore, ODNR indicated that the Project was within the range of the Indiana bat (*Myotis sodalis*), the northern long-eared bat (*Myotis septentrionalis*), the little brown bat (*Myotis lucifugus*), and the tricolored bat (*Perimyotis subflavus*). ODNR recommended limiting tree clearing to October 1st through March 31st. If unable to comply, ODNR recommended a mist net survey or acoustic survey be conducted from June 1 through August 15. ODNR also recommended a desktop review, and potentially subsequent field review, of potential hibernacula.

In response to the ODNR technical assistance comments, Kleinfelder performed a desktop evaluation for T&E species habitat that may exist specifically within the OPSB jurisdictional areas of the Project. The sections below summarize the methodologies undertaken to identify areas of potential habitat.

## DESKTOP HABITAT ASSESSMENT AND METHODOLOGY

Duke is proposing gas line improvements including extensions, relocations, and abandonments to bolster pressure in lines at different locations throughout Butler County, OH (Figure 1). The proposed improvements will result in an overall LOD of approximately 24.1 acres and will be accessed via existing and proposed access roads. A description of the existing land cover and land use within the LOD of the OPSB jurisdictional areas are provided below.

- BC-1 has an approximately 0.9-acre LOD. This portion of the LOD is located in Liberty Township at 39.389634, -84.447235. Land cover within the LOD consists of industrial use, road right-of-way (ROW), utility ROW, and open field areas. Land use is dominated by industrial use.
- BC-2 has an approximately 1.3-acre LOD. This portion of the LOD is located in Liberty Township at 39.403716, -84.447850. Land cover within the LOD consists of road ROW, utility ROW, and residential areas. Land use is dominated by residential use.
- BC-4 has an approximately 4.0-acre LOD. This portion of the LOD is located in Madison Township at 39.443954, -84.455973. Land cover within the LOD consists of industrial use, including one stormwater management facility, road ROW, forested and open field areas. Land use is dominated by industrial use and open fields.
- BC-5 has an approximately 10.0-acre LOD. This portion of the LOD is located in Lemon Township at 39.452467, -84.431994. Land cover within the LOD consists of commercial use, road ROW, utility ROW, railroad ROW, and early successional forest habitat. Land use is dominated by early successional forest habitat, road ROW, and utility ROW.
- BC-7 has an approximately 6.8-acre LOD. This portion of the LOD is located in Lemon Township at 39.459910, -84.392265. Land cover within the LOD consists of industrial use, road ROW, utility ROW, and agricultural areas. Land use is dominated by industrial and agricultural use.
- BC-7 Laydown Yard has an approximately 0.9-acre LOD. This portion of the LOD is located in Lemon Township at 39.461771, -84.376899. Land cover within the LOD consists of industrial use, road ROW, utility ROW, and agricultural areas. Land use is dominated by industrial and agricultural use.

To identify potential suitable habitat for the species via a desktop review, a variety of readily available digital data was reviewed from various sources, which includes, but was not limited to the following:

- Project specific data
- Aerial imagery
- eBird data (Cornell Lab of Ornithology)
- National Wetland Inventory (NWI)
- National Hydrography Dataset (NHD)
- Federal Emergency Management Agency (FEMA) Floodplain data
- ODNR karst feature and mine data

In addition to these data sources, environmental data collected as part of the field delineations of each segment (September, October and December 2020; May and December 2021; and January 2022) were also utilized in this review. Each of these data sets were reviewed to identify and categorize habitats for each species based on their habitat requirements. Desktop evaluated habitat areas are shown on Figure 2. The following habitat descriptions and desktop assessment categories were used to assess the Project for potential species habitat:

**Tonguetied Minnow (*Exoglossum laurae*)**

Listing: State Endangered Species

Morphology: This is a relatively small (approximately 3-5 inches) fish, which is part of the *Cyprinidae* (carps and minnows) family. The tonguetied minnow is unique in that it has a bony sheath that projects forward from the center of the lower jaw.

Habitat: Habitat for the tonguetied minnow includes forested and undercut perennial stream banks with alternating riffle-pool habitats. This species is very intolerant of turbid waters and requires clean gravel and pebble substrate types.

Range: According to ODNR, this species is only found in the Great Miami and Little Miami river systems in southwest Ohio. This species historically occurred in the upper portion of both river systems but is only located in the Mad River and associated tributaries present day. However, there may be some tonguetied minnows in the extreme upper portion of the Little Miami River.

Habitat Ratings: Habitat types for the tonguetied minnow were divided into the following qualifying categories in order to quantify the amount of potential habitat that may be present within the OPSB jurisdictional areas.

- No habitat – non-stream habitats, ephemeral streams, intermittent streams, and perennial streams that are separated from a downstream waterbody by a physical barrier and/or are susceptible to high levels of turbidity.
- Marginal habitat – streams with perennial flow but lack forested and undercut banks, consist of poor-quality riffle-pool habitat, and are susceptible to moderate levels of turbidity.
- Good habitat – streams with perennial flow, low levels of turbidity (stable stream channels), forested and undercut stream banks, and contain substrate types consisting of gravel and pebbles.

Habitat Result: Based on the desktop assessment to identify potential habitat for the tonguetied minnow, one area of marginal habitat (approximately 49-feet) was identified within the BC-7 LOD at the KLF_Stream07 crossing. The marginal habitat consisted of a perennial stream within an existing herbaceous underground utility ROW situated immediately adjacent to Todhunter Road. This stream reach lacked undercut banks and is likely susceptible to increased turbidity from the surrounding commercial, industrial, and agricultural land use. The remainder of the OPSB jurisdictional areas did not contain habitat suitable to the species. The potential habitat area is depicted on Figure 2.

**American Eel (*Anguilla rostrata*)**

Listing: State Threatened Species

Morphology: This fish has a long snake like body (approximately 15-40 inches in length) and is part of the *Anguillidae* (freshwater eels) family. The American eel is brown in color and has a long dorsal fin running more than half the length of the body. When threatened, adult eels can secrete a slimy substance.

Habitat: American eel habitat commonly includes semi-large to large rivers with perennial flow and moderately low turbidity. Eels are lucrative and will seek deep pools with cover until they come out at night to feed.

Range: According to ODNR, this species can be found throughout the state of Ohio.

Habitat Rating: Habitat types for the American eel were divided into the following qualifying categories in order to quantify the amount of potential habitat that may be present within the OPSB jurisdictional areas.

- No habitat – non-stream habitats, ephemeral streams, intermittent streams, perennial streams that are separated from a downstream waterbody by a physical barrier and/or are susceptible to high levels of turbidity.
- Marginal habitat – small perennial streams with occasional deep pools and are moderately susceptible to increased turbidity.
- Good habitat – semi-large to large rivers with perennial flow, deep pools, and moderately low turbidity.

Habitat Result: Based on the desktop assessment to identify potential habitat for the American eel, one area of moderate habitat (approximately 49-feet) was identified within the BC-7 LOD at the KLF_Stream07 crossing. The marginal habitat consisted of a perennial stream within an existing herbaceous underground utility ROW situated immediately adjacent to Todhunter Road. This stream reach lacked deep pools and is likely susceptible to increased turbidity from the surrounding commercial, industrial, and agricultural land use. The remainder of the OPSB jurisdictional areas did not contain habitat suitable to the species. The potential habitat area is depicted on Figure 2.

**Black-crowned Night-Heron (*Nycticorax nycticorax*)**

Listing: State Threatened Species

Morphology: The black-crowned night-heron (night-heron) is relatively small, ranging in length from approximately 23-26 inches and having a wingspan of approximately 45-46 inches. The night-heron has red eyes, a pale gray body, and a black crown and back.

Feeding: The night-heron is appropriately named for its nocturnal and crepuscular feeding habits. The night-heron forages on a variety of terrestrial and aquatic insects, but its diet consists primarily of fish, frogs, leeches, and worms.

Habitat: The night-heron is often found roosting in trees with dense vegetation located near streams, lakes, and wetlands during the day. The night-heron will nest close to bodies of water in small trees, saplings, shrubs and occasionally on the ground.

Range: The night-heron once occurred in wetlands throughout Ohio. The majority of nesting night herons are located north of the Project on islands in Lake Erie; however, breeding colonies have been reported near Cincinnati, Youngstown, Bucyrus, and Grand Lake St. Mary's, Ohio.

According to eBird data, a night-heron was observed on April 21, 2021 at the edge of a residential subdivision along the Villages of Providence Trail, approximately 2.9 miles southwest of the BC-1 LOD; the nearest OPSB jurisdictional area. However, the credibility of the sighting may be compromised due to review of readily available aerial imagery appearing to show further subdivision development of the area. Furthermore, due to the time of year, it is likely that the night-heron was migrating through the area and not nesting.

Habitat Rating: Habitat types for the night-heron were divided into the following qualifying categories in order to quantify the amount of potential habitat that may be present within the OPSB jurisdictional areas.

- No habitat – developed areas, uplands, small wetlands that do not regularly support surface water throughout the summer months, and ephemeral and intermittent streams.
- Marginal habitat – disturbed perennial stream and riparian corridors, residential ponds and lake edges, stormwater ponds that support wetland vegetation, and wetlands that may support little surface water during the summer months.
- Good habitat – undisturbed large wetlands with tall dense vegetation, stable perennial surface waters, and riparian areas with small trees and saplings/shrubs for nesting.

Habitat Result: Based on the desktop assessment to identify potential habitat for the night-heron, two areas of marginal stream and/or wetland habitat (approximately 0.11 acres) were identified within the BC-4 and BC-7 LOD segments. The marginal habitat within the BC-4 LOD of approximately 0.1 acres includes a stormwater management facility comprised of herbaceous hydrophytes less than 3.28 feet in height and appears to be predominantly dry during the summer months. Regular disturbances to the stormwater management facility are highly likely from the industrial complex mowing/ maintaining adjacent fields, motor vehicles regularly passing by on Woodsdale Road, and disruptions from the nearby residential dwelling. The marginal habitat within the BC-7 LOD of approximately 0.01 acres consisted of a perennial stream (KLF_Stream07), which appeared to have stable perennial surface water and bait fish present for foraging; however, the habitat is located immediately adjacent to Todhunter Road and is located within an existing herbaceous ROW, surrounded by industrial development and agricultural fields. The remainder of the OPSB jurisdictional areas did not contain habitat suitable to the species. The potential habitat areas are depicted on Figure 2.

**Least Bittern (*Ixobrychus exilis*)**

Listing: State Threatened Species

Morphology: The least bittern is the smallest heron found in the Americas, ranging from 11-14 inches in length, and having a wingspan of 16-18 inches. The back of the least bittern is black while the underside of the bird is pale. Males have two distinct white stripes on their back.

Feeding: The least bittern uses their long toes to grasp tall emergent vegetation while hunting for small fish and invertebrates.

Habitat: Habitat consists of larger fresh or brackish cattail wetlands (5-10 acres) comprised of tall dense vegetation. Least bitterns need stable wetlands where water levels do not vary considerably or become dry. They tend to be found in wetlands with low to moderate water depths (2-4 inches). The least bittern may use smaller wetlands and narrow strips of cattails bordering ponds and lakes during migration.

Range: The least bittern can be found throughout large wetlands in Ohio during the summer months to breed and raise young.

According to eBird data, a least bittern was observed on August 7, 2021 in the Ellis Lake Wetlands, approximately 3.5 miles southwest of the BC-1 LOD; the nearest OPSB jurisdictional area to a species siting.

Habitat Rating: Habitat types for the least bittern were divided into the following qualifying categories in order to quantify the amount of potential habitat that may be present within the OPSB jurisdictional areas.

- No habitat – uplands, developed areas, wetlands that lack stands of dense emergent vegetation, and small wetlands that do not offer stable perennial surface water.
- Marginal habitat – residential ponds and stormwater facilities with surface water that supports emergent vegetation.
- Good habitat – large undisturbed wetlands with tall dense emergent vegetation and a stable perennial surface water.

Habitat Result: Based on the desktop assessment to identify potential habitat for the least bittern, one area of marginal habitat (approximately 0.1 acre) was identified within the BC-4 LOD due to the presence of a stormwater management facility. The marginal habitat within the BC-4 LOD includes a stormwater management facility comprised of herbaceous hydrophytes less than 3.28 feet in height and appears to be predominantly dry during the summer months. Regular disturbances to the stormwater management facility are highly likely from the industrial complex mowing/maintaining adjacent fields, motor vehicles regularly passing by on Woodsdale Road, and disruptions from the nearby residential dwelling. The remainder of the OPSB jurisdictional areas did not contain habitat suitable to the species. The potential habitat area is depicted on Figure 2.

**Lark Sparrow (*Chondestes grammacus*)**

Listing: State Endangered Species

Morphology: The lark sparrow ranges from approximately 6-7 inches in length and has a wingspan of approximately 11 inches. The lark sparrow has a distinct head pattern consisting of dark, light, and chestnut-colored stripes. The lark sparrow has a broad beak and a noticeable black spot in the center of its white chest.

Feeding: The lark sparrow feeds primarily from the ground, consuming grass seeds and insects such as grasshoppers.

Habitat: The lark sparrow's habitat consists of grasslands, prairies, pasture fields, and fallow fields with sporadic bushes and trees.

Range: Lark sparrows are known to occur in the West and the Great Plains; including the central and western portions of Ohio.

According to eBird data, a Lark Sparrow was observed on June 18, 2012, approximately 3.7 miles southwest of the BC-1 LOD; the nearest OPSB jurisdictional area to a species siting.

Habitat Rating: Habitat types for the lark sparrow were divided into the following qualifying categories in order to quantify the amount of potential habitat that may be present within the OPSB jurisdictional areas.

- No habitat – waterbodies (stream and wetlands), active agriculture fields comprised of row crops, roads, and developed areas.
- Marginal habitat – cleared utility ROW and early successional habitat.
- Good habitat – grasslands, prairies, pasture fields, and fallow fields, with sporadic bushes and trees.

Habitat Result: Based on the desktop assessment to identify potential habitat for the lark sparrow, areas of marginal habitat (approximately 2.1 acres) were identified within the BC-1 and BC-5 LODs. Marginal habitat within the BC-1 LOD of approximately 0.2 acres included existing underground utility ROW comprised of herbaceous species and early successional habitat. It is likely that this habitat is routinely disturbed from the surrounding industrial infrastructure, adjacent residential and agricultural properties, and routine maintenance of the ROW. The marginal habitat at BC-5 of approximately 1.9 acres consisted of herbaceous fields and early successional habitat within a highly urbanized area. It is likely that these areas are routinely disturbed by recreational users hiking trails to access the Great Miami River as well as routine ROW maintenance and disturbances from the adjacent residential and agricultural parcels. The remainder of the OPSB jurisdictional areas did not contain habitat suitable to the species. The potential habitat areas are depicted on Figure 2.

**Upland Sandpiper (*Bartramia longicauda*)**

Listing: State Endangered Species

Morphology: The adult upland sandpiper has a marbled golden brown to blackish back and a white breast with dark streaks on the chest and sides.

Feeding: Upland sandpipers consume mostly insects from the ground or low vegetation which can include grasshoppers, crickets, weevils, ants, centipedes, millipedes, snails, spiders, ticks, and earthworms. Upland sandpipers also eat grass, weed seeds, and berries.

Habitat: Upland sandpipers are most numerous in native prairies in the great plains. Their habitat consists of low, relatively flat, grassy fields, fallow fields, ungrazed meadows, hayfields, and pastures where the vegetation is normally 1–2 feet high with little woody vegetation and bare ground. Their preferred breeding habitats contain fence posts, telephone poles, and other types of tall structures, which are used for territorial lookouts.

Range: Upland sandpipers can be found throughout most of Ohio but are less common in southeast Ohio.

According to eBird data, an upland sandpiper was observed on April 29, 2018, approximately 3.5 miles southwest of the BC-1 LOD; the nearest OPSB jurisdictional area to a species siting.

Habitat Rating: Habitat types for the upland sandpiper were divided into the following qualifying categories in order to quantify the amount of potential habitat that may be present within the OPSB jurisdictional areas.

- No habitat – waterbodies (stream and wetlands), active agriculture fields comprised of row crops, roads, and developed areas.
- Marginal habitat – mostly herbaceous utility ROW with sporadic early successional habitat.
- Good habitat – low, relatively flat, grassy fields, fallow fields, ungrazed meadows, hayfields, and pastures where the vegetation is normally 1–2 feet high with little woody vegetation and bare ground.

Habitat Result: Based on the desktop assessment to identify potential habitat for the upland sandpiper, areas of marginal habitat (approximately 1.8 acres) were identified within the BC-1 and BC-5 LODs. Marginal habitat within the BC-1 LOD of approximately 0.2 acres included existing underground utility ROW comprised of mostly herbaceous species and early successional habitat. It is likely that this habitat is routinely disturbed from the surrounding industrial infrastructure, adjacent residential and agricultural properties, and routine maintenance of the ROW. The marginal habitat within the BC-5 LOD of approximately 1.6 acres consisted of herbaceous fields and early successional habitat within a highly urbanized area. It is likely that these areas are routinely disturbed by recreational users hiking trails to access the Great Miami River as well as routine ROW maintenance and disturbances from the adjacent residential and agricultural parcels. The remainder of the OPSB jurisdictional areas did not contain habitat suitable to the species. The potential habitat areas are depicted on Figure 2.

**Bat Habitat**

ODNR indicated that the Project was in the range of the Indiana bat, a state endangered and federally endangered species; the northern long-eared bat (NLEB), a state endangered and federally threatened species; the little brown bat, a state endangered species; and the tricolored bat, a state endangered species.

In Ohio, presence of the Indiana bat and NLEB is assumed wherever suitable habitat occurs. As a result of this requirement and due to the proposed Project construction schedule, Kleinfelder contracted Encarna, LLC. on behalf of Duke to conduct a summer acoustic survey to determine the presence/probable absence of threatened and/or endangered bat species within the Project during the summer maternity season. Prior to conducting the acoustic survey, a study plan was submitted to the United States Fish and Wildlife Service (USFWS) and ODNR on August 9, 2020 proposing an acoustic survey for 4 of the 8 Project locations. The USFWS and ODNR concurred with the proposal on August 11, 2020 and August 12, 2020, respectively. Between August 12, 2020 and August 14, 2020, acoustic surveys were performed at BC-1, BC-4, and BC-7. Data collected from the acoustic surveys were analyzed using the USFWS approved Kaleidoscope Pro Version 5.1.0, which includes a Maximum Likelihood Estimator (MLE) that statistically evaluates the risk of false positives within each individual species result. The MLE generated by Kaleidoscope had confidence in five species: big brown bat (*Eptesicus fuscus*), Eastern red bat (*Lasiurus borealis*), little brown bat (*Myotis lucifugus*), evening bat (*Nycticeius humeralis*), and tricolored bat (*Perimyotis subflavus*). The Indiana bat and NLEB were found not likely to be present. The results of the acoustic surveys were submitted to USFWS and ODNR on August 24, 2020.

Correspondence from USFWS (TAILS# 03E15000-2020-TA-2218) on August 25, 2020 indicated tree clearing on the project site at any time of the year is unlikely to result in adverse impacts to Indiana bats and will not result in any unauthorized incidental take of NLEB. In addition, USFWS did not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species due to the Project type, size, and location. Correspondence from ODNR on August 25 and 26, 2020 recommended no side-trimming or cutting of any trees in the Project area that have clusters of dead leaves in the upper third of the tree and no cutting of any trees with a DBH ≥ 20 inches prior to October 1st and after March 31st in order to limit impacts to tricolored bats. Additionally, in order to limit impacts to little brown bats, ODNR recommended no clearing of trees with the following characteristics unless they pose a hazard: dead or live trees of any size with loose, shaggy bark and/or crevices, holes, or cavities. USFWS and ODNR correspondence associated with the acoustic surveys are included as Attachment B.

Due to the recommendation outlined by ODNR, Kleinfelder biologists assessed the on-site habitat within the overall 125.1-acre AOI to determine suitability for bats and recorded geographic positioning system (GPS) coordinates of trees exhibiting ≥20-inch DBH. The results of this habitat assessment found the following number of trees with a ≥20-inch DBH inside the AOI: 0 trees at BC-1, 7 trees at BC-2, 1 tree at BC-4, 143 trees at BC-5, 0 trees at BC-6, 2 trees at BC-7, 0 trees at BC-8, and 1 tree at BC-7 Laydown Yard (Figure 2). Of the 154 trees with ≥20-inch DBH, 32 trees are located within the LOD, all of which are in the BC-5 LOD. Within the BC-5 LOD, 31 trees are located within the OPSB jurisdictional area. All other OPSB jurisdictional areas of the Project avoid impacts to trees ≥20-inch DBH.

In winter, the Indiana bat, NLEB, little brown bat, and tricolored bat hibernate in caves and abandoned mines. A desktop review was conducted within a ¼-mile radius of the proposed Project using topographic and aerial maps and the ODNR Ohio Mines Viewer, which revealed 8 abandoned underground mines exist within a ¼-mile radius of the BC-7 LOD; two of which overlap with the LOD. These abandoned mines appear to be underground caverns associated with past facility operations that used them for propane and butane storage. Site visits by Kleinfelder did not identify the presence of mines, caves, or portals within the Project LOD. Furthermore, since southwest Ohio is an area know to contain karst features, which is conducive to cave formation, Kleinfelder performed a desktop review of Ohio's Karst Interactive Map Viewer and determined that no karst features or probable karst features are located within a ¼-mile radius of the Project (Figure 3).

**FIELD ASSESSMENT**

This desktop habitat assessment is being provided to ODNR for review and comment to determine if a field assessment is required. Based on this desktop habitat assessment, it is not anticipated that a field assessment would be required since 'good' habitat for any of the species indicated above was not identified. Likewise, no karst features were identified within a 1/4-mile radius of the OPSB jurisdictional areas.

However, if ODNR determines 'good' habitat may exist within an OPSB jurisdictional area, the habitat will be ground truthed and field verified as landowner permissions allow to determine if the presence of suitable habitat for each species exists. Potential habitat areas will be assessed for the preferred characteristics of each species, delineated with a GPS unit, and photographed. Furthermore, if ODNR determines presence/absence surveys for the relevant species are

required within an OPSB jurisdictional area, the surveys would be conducted during the appropriate time of year for each species according to ODNR guidance and a report would be provided to ODNR for review.

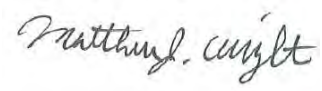
**CONCLUSION**

Duke has designed the proposed Project to minimize and avoid encroachments to aquatic resources, sensitive species, and forested habitat (Figure 2). Based on the results of the desktop habitat assessment, impacts to T&E species are not anticipated. The overall AOI of 125.1 acres has been reduced to an overall LOD of 24.1 acres and the amount of forest clearing within the overall LOD (5.6 acres) has been reduced to the least amount practical to still allow for construction. Duke proposes winter tree clearing (between October 1st and March 31st) with the exception to BC-1, BC-4, and BC-7. Acoustic surveys were performed at these segments between August 12, 2020 and August 14, 2020 and will avoid side-trimming or cutting of any trees in the Project area that have clusters of dead leaves in the upper third of the tree and no cutting of any trees with a DBH ≥ 20 inches prior to October 1st and after March 31st to limit impacts to tricolored bats as recommended in ODNR's August 25 and 26, 2020 correspondence. Additionally, in order to limit impacts to little brown bats, Duke will avoid clearing trees with the following characteristics unless they pose a hazard: dead or live trees of any size with loose, shaggy bark and/or crevices, holes, or cavities.

Please address any questions or comments regarding this submission to:

Stephen R. Lane
Lead Environmental Scientist/Planner - Siting and Licensing Support
Duke Energy Ohio, Inc.
139 East Fourth Street, Room EM740
Cincinnati, OH 45202
(513) 287-2379
steve.lane@duke-energy.com

Sincerely,
Kleinfelder, Inc.



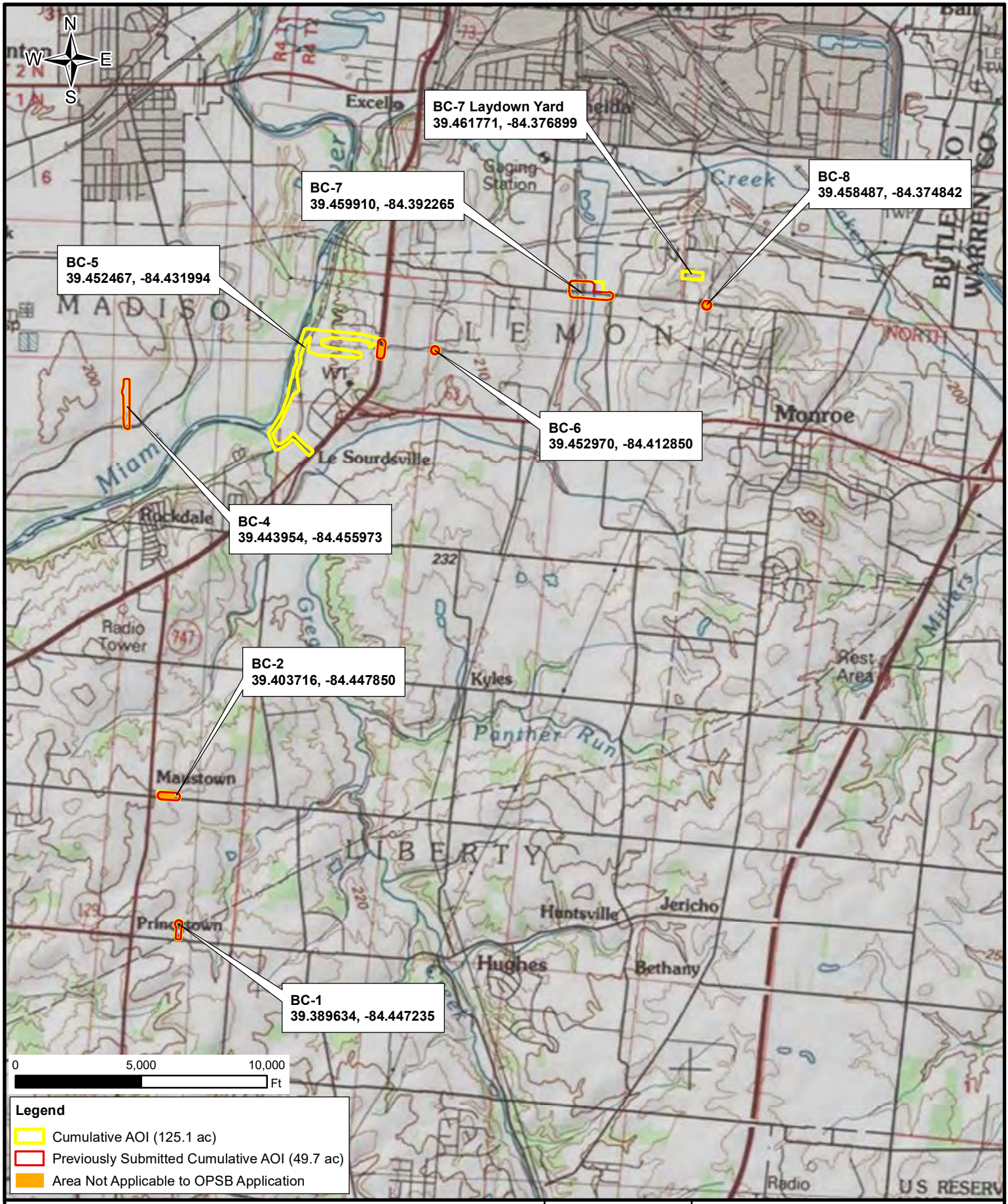
Matthew J. Albright
Project Manager

John A. Lewis
Project Professional

cc: Stephen R. Lane, Duke Energy Ohio, Inc.

Enclosures:
Figure 1 – USGS Topographic Map
Figure 2 – Desktop Delineated Habitat Map
Figure 3 – Desktop Hibernacula Assessment Map
Attachment A – ODNR Correspondence from Technical Assistance
Attachment B – ODNR & USFWS Correspondence from Acoustic Survey

**FIGURE 1**
**USGS TOPOGRAPHIC MAP**

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Monroe & Trenton, OH
7.5' USGS Quadrangle

Lemon, Liberty & Madison Township, Butler County, Ohio



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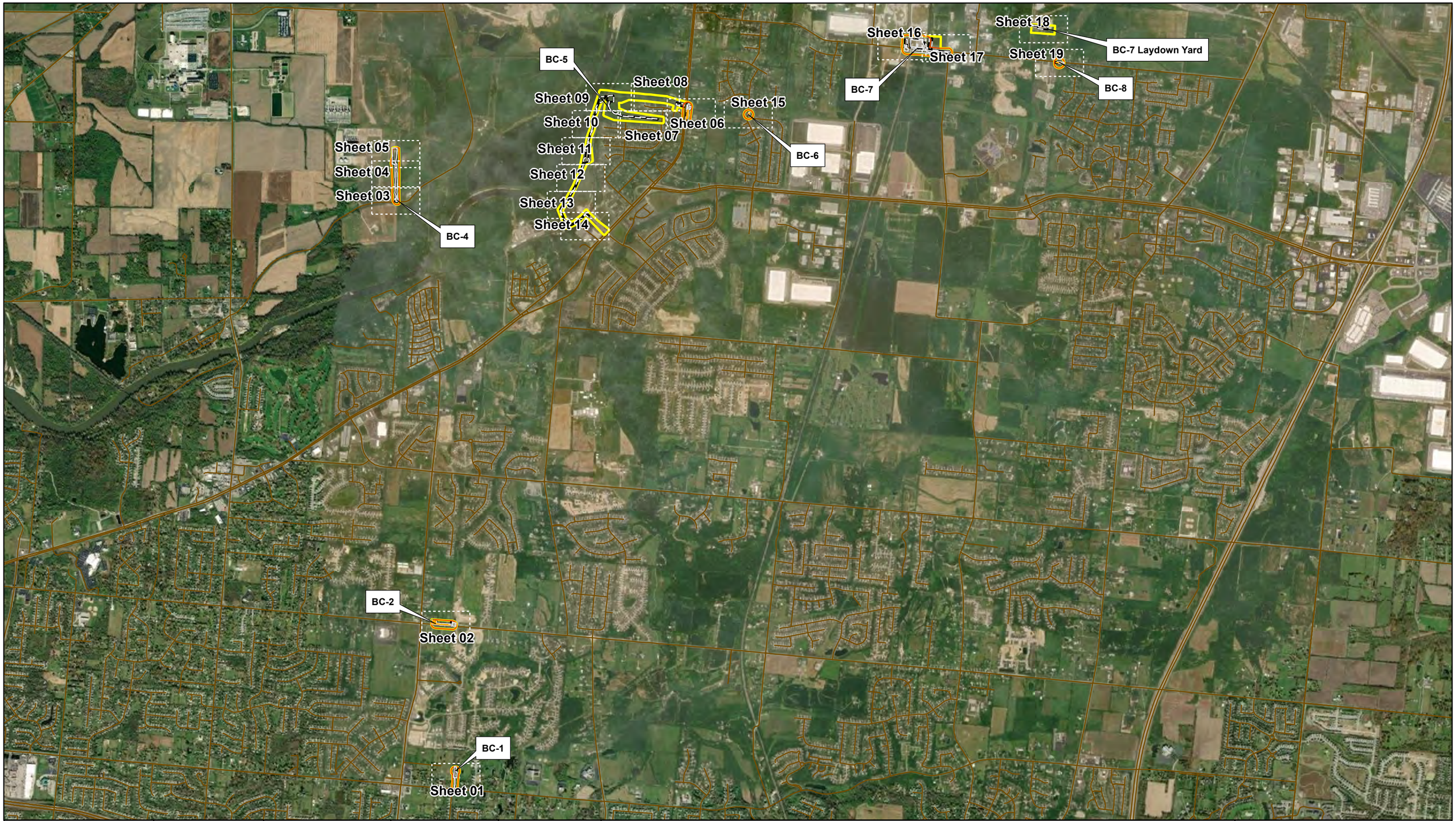
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_RTE_Fig1 |

Duke Energy Ohio, Inc.

Figure 1
USGS Topographic Map
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Version: 1

**FIGURE 2**
**DESKTOP DELINEATED HABITAT MAP**

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|---|---|---|---|---|---|
| KLEINFELDER Bright People. Right Solutions. www.kleinfelder.com | PROJECT NO. 20211395 | N W E S | | **Butler County Ohio** | Duke Energy Ohio, Inc. |
| | DRAWN BY: S. Williams | 0 1,750 3,500 Ft | | Cumulative AOI (125.1 ac) | Area Not Applicable to OPSB Application | Figure 2 Desktop Delineated Habitat Map Butler Cnty Ph I C210 & LP07 Project |
| | CHECKED BY: M. Albright | | | Cumulative LOD (24.1 ac) | USFWS Critical Habitat (N/A) | |
| | FILE NAME: ButlerCountyPhase1_RTE_Fig2_Idx | | | Previously Submitted Cumulative AOI (49.7 ac) | Existing Road | Date: 2/1/2022 \| Index Map |
| | | | | Previously Submitted Cumulative LOD (12.7 ac) | | |

Meier Ln

Upland Sandpiper
(Marginal Habitat)

Lark Sparrow
(Marginal Habitat)

Princeton Rd

Alana

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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-1 AOI (3.9 ac)
- BC-1 LOD (0.9 ac)
- Previously Submitted BC-1 AOI (3.9 ac)
- Previously Submitted BC-1 LOD (0.9 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Lark Sparrow, Marginal Habitat (0.2 ac)
- Upland Sandpiper, Marginal Habitat (0.2 ac)
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

Duke Energy Ohio, Inc.

Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 1 of 19


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| FILE NAME: | ButlerCountyPhaseI_RTE_Fig2 |

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**Butler County Ohio**

- BC-2 AOI (5.7 ac)
- BC-2 LOD (1.3 ac)
- Previously Submitted BC-2 AOI (5.6 ac)
- Previously Submitted BC-2 LOD (1.3 ac)
- Area Not Applicable to OPSB
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

Duke Energy Ohio, Inc.

Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 2 of 19

Sheet 04

KLF_Stream05

Black-Crowned Night Heron (Marginal Habitat)

Least Bittern (Marginal Habitat)

Woodsdale Rd

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| FILE NAME: | ButlerCountyPhasel_RTE_Fig2 |

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**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (4.0 ac)
- Previously Submitted BC-4 AOI (11.3 ac)
- Previously Submitted BC-4 LOD (3.9 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Black-Crowned Night Heron, Marginal Habitat (0.1 ac)
- Least Bittern, Marginal Habitat (0.1 ac)
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

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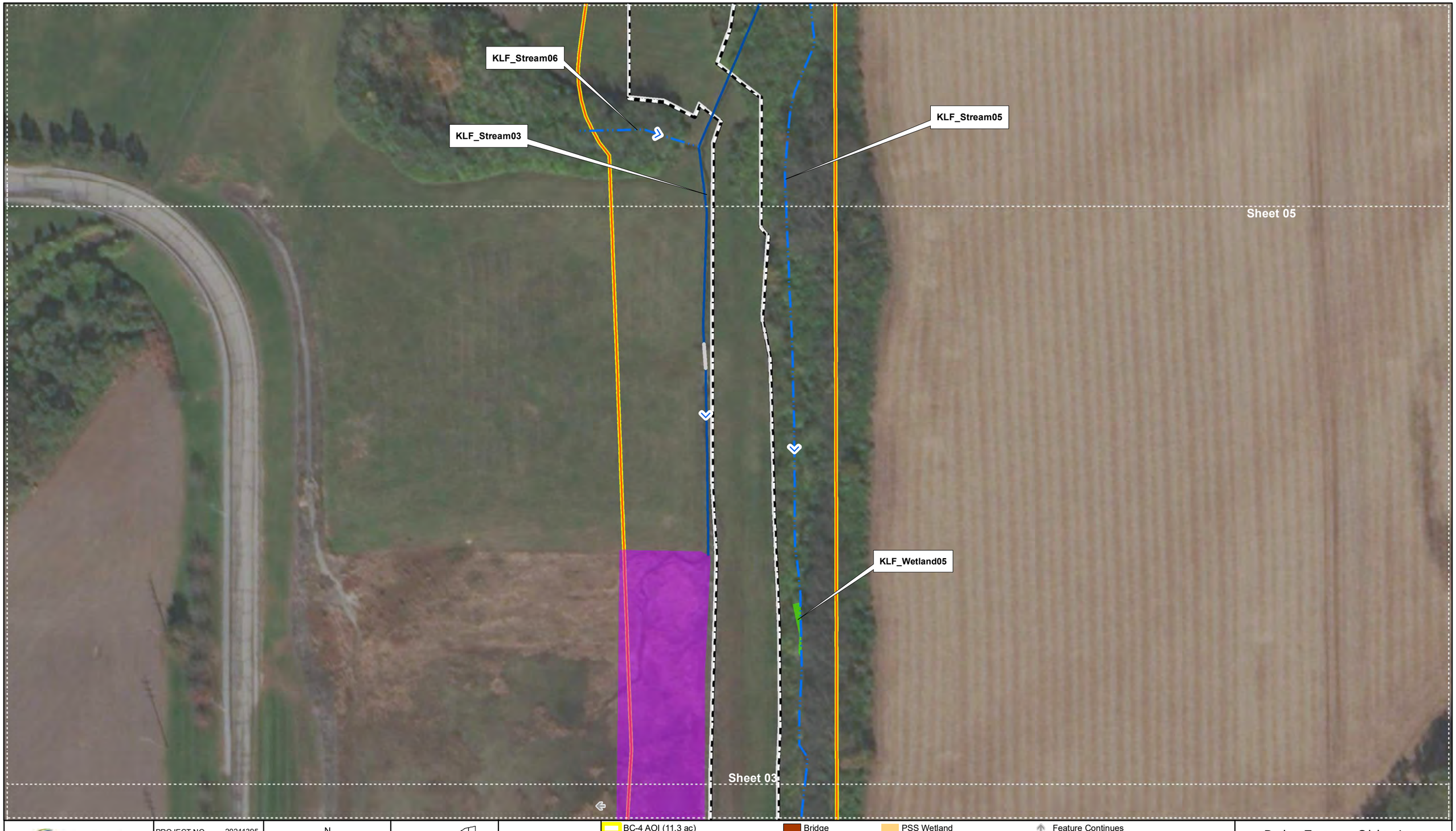
Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022

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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_RTE_Fig2 |

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**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (4.0 ac)
- Previously Submitted BC-4 AOI (11.3 ac)
- Previously Submitted BC-4 LOD (3.9 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

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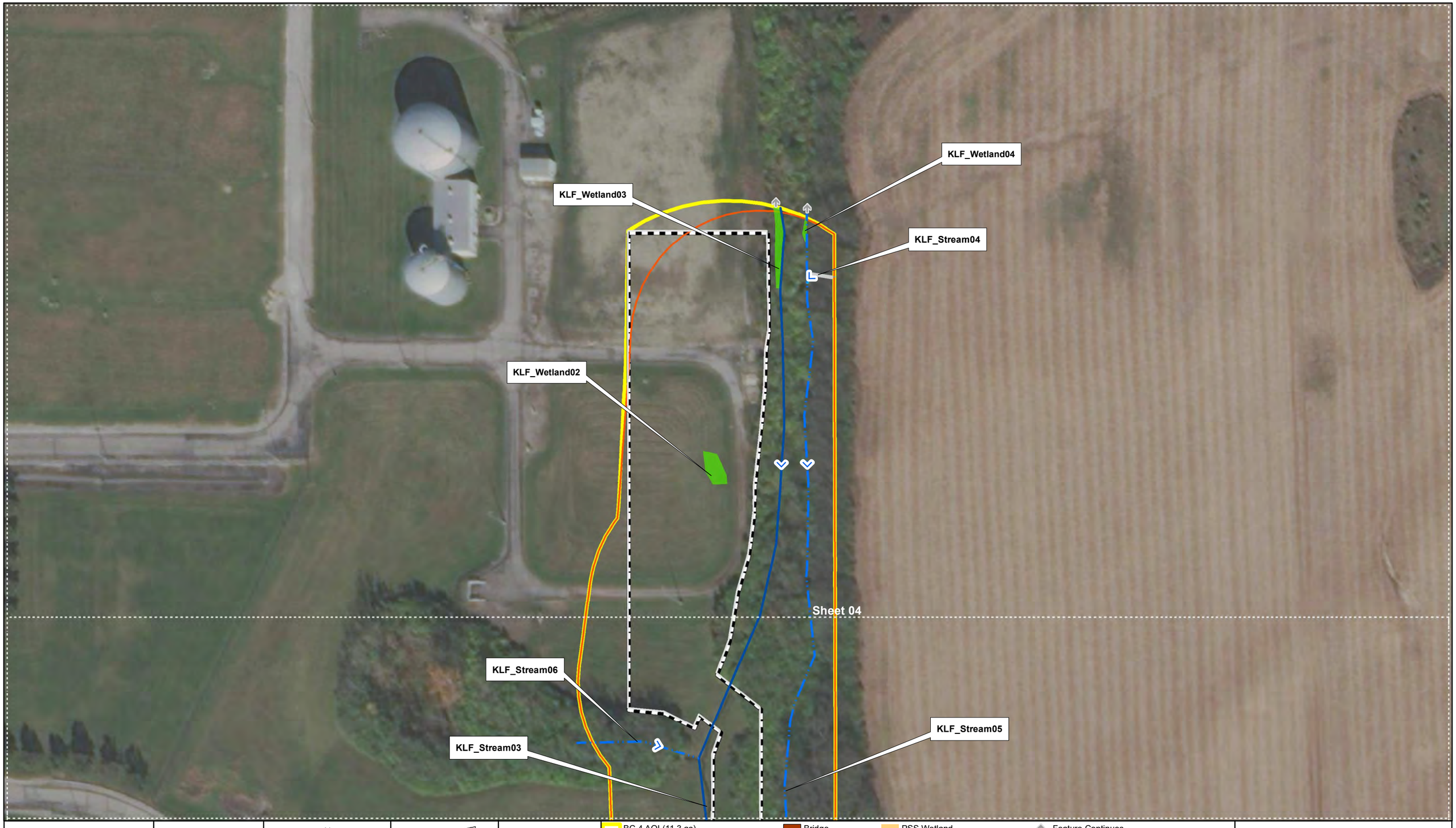
Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 4 of 19

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**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (4.0 ac)
- Previously Submitted BC-4 AOI (11.3 ac)
- Previously Submitted BC-4 LOD (3.9 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

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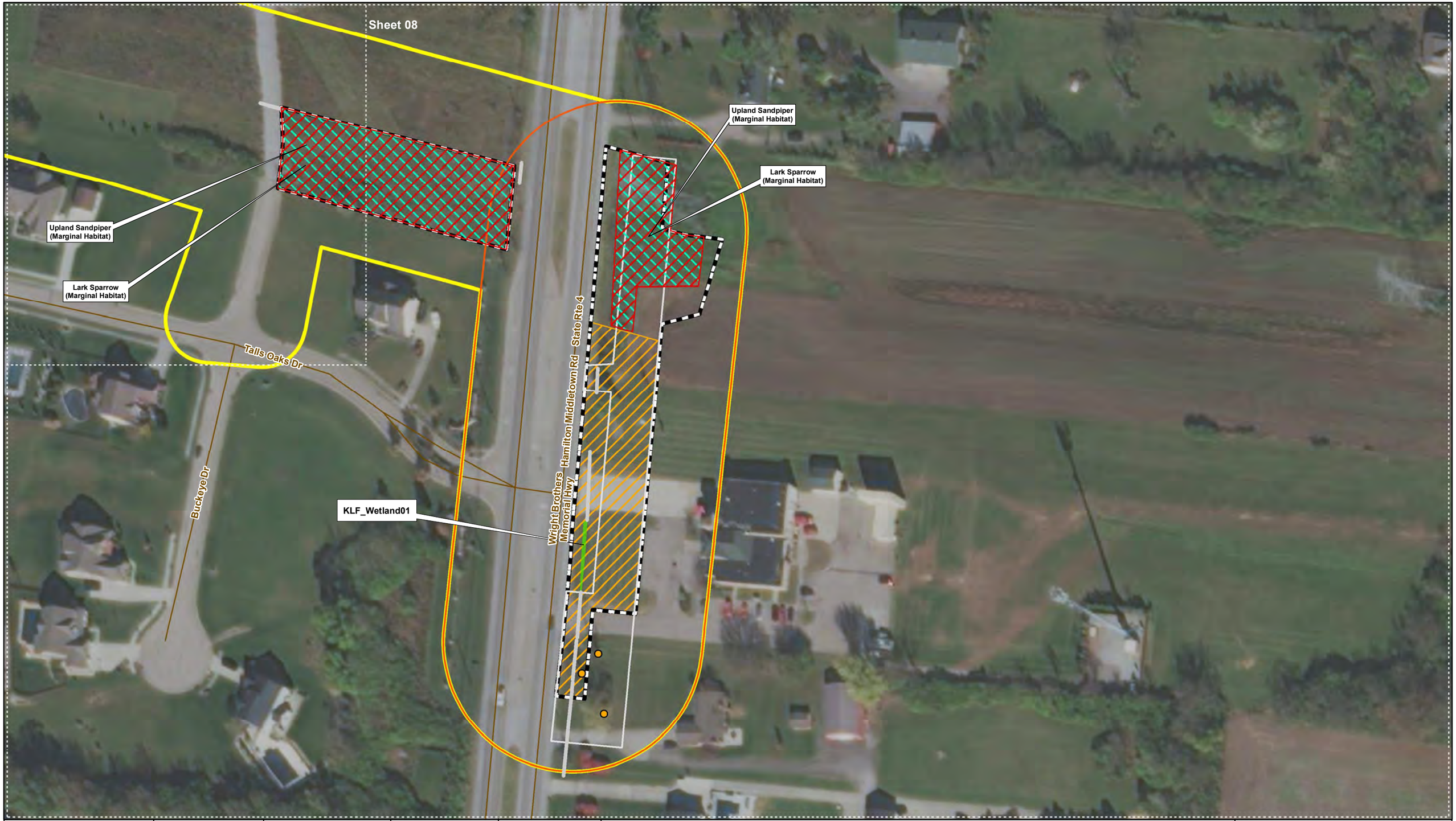
Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 5 of 19

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| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Previously Submitted BC-5 AOI (4.9 ac)
- Previously Submitted BC-5 LOD (0.9 ac)
- Area Not Applicable to OPSB
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Lark Sparrow, Marginal Habitat (1.9 ac)
- Upland Sandpiper, Marginal Habitat (1.6 ac)
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

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Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 6 of 19


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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- Lark Sparrow, Marginal Habitat (1.9 ac)
- Upland Sandpiper, Marginal Habitat (1.6 ac)
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

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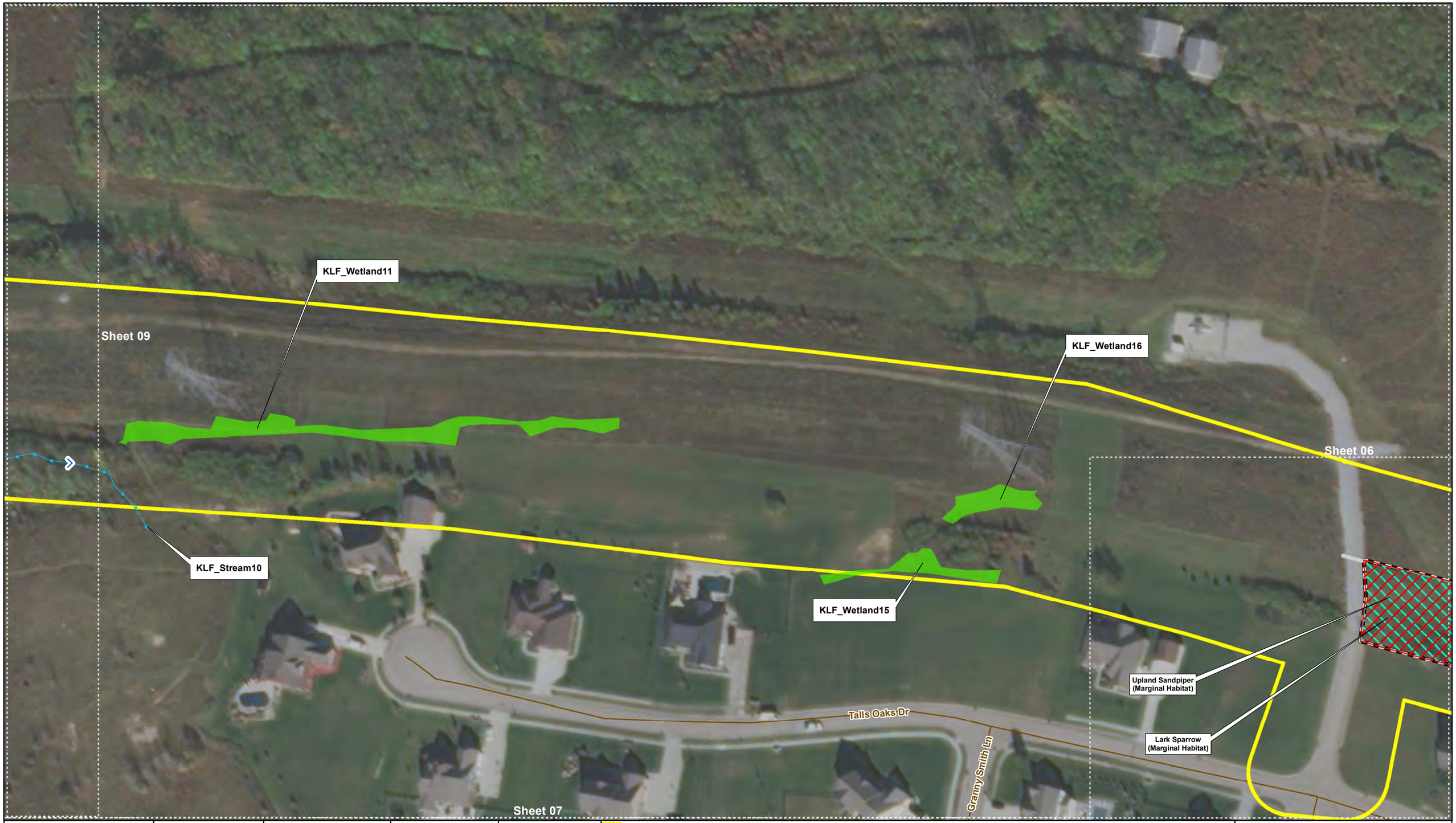
Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 7 of 19

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| FILE NAME: | ButlerCountyPhasel_RTE_Fig2 |

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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
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- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

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Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 8 of 19


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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
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- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

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Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
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- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

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Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 10 of 19


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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhasel_RTE_Fig2 |

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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
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- Intermittent Stream
- Perennial Stream
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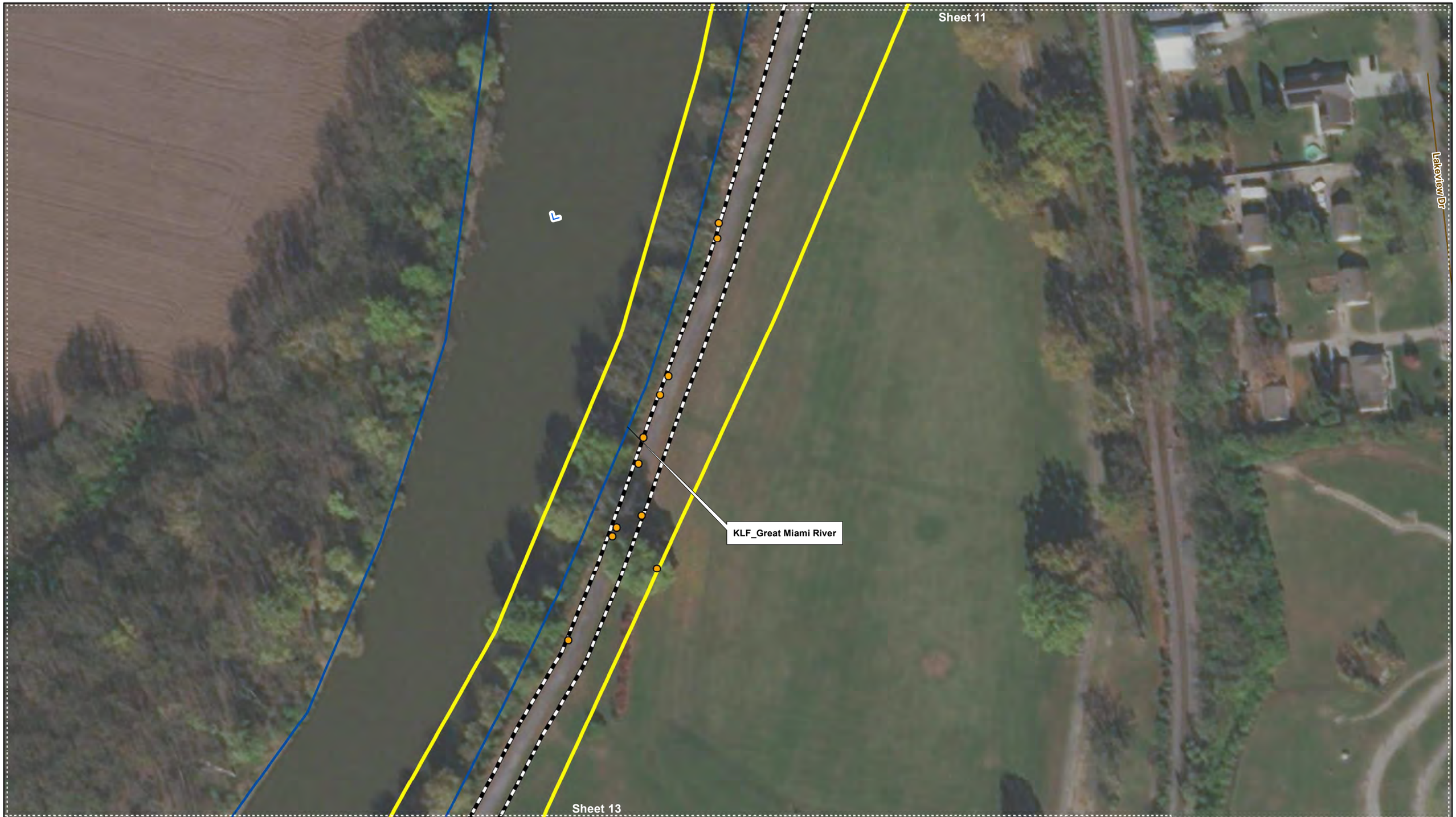
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

Duke Energy Ohio, Inc.

Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 11 of 19

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| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
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- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

Duke Energy Ohio, Inc.

Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022

Sheet 12

KLF_Great Miami River

Sheet 14

KLF_Gregory Creek

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| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
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- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
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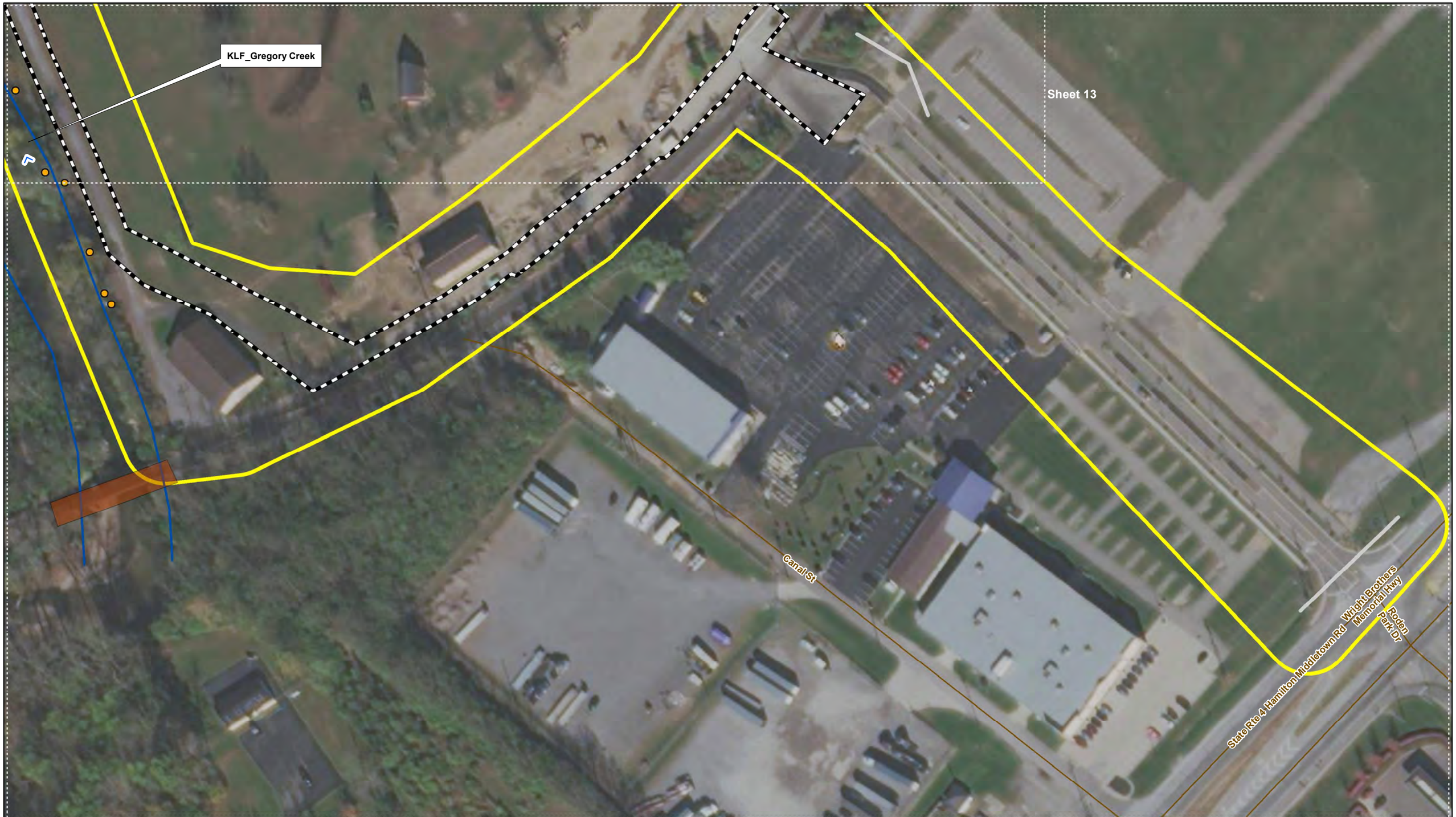
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

Duke Energy Ohio, Inc.

Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022

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| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

N
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**Butler County Ohio**

- BC-5 AOI (71.4 ac)
- BC-5 LOD (10.0 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

Duke Energy Ohio, Inc.

Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 14 of 19


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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-6 AOI (1.9 ac)
- BC-6 LOD (0.1 ac)
- Previously Submitted BC-6 AOI (1.9 ac)
- Previously Submitted BC-6 LOD (0.1 ac)
- Area Not Applicable to OPSB
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

Duke Energy Ohio, Inc.

Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 15 of 19


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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

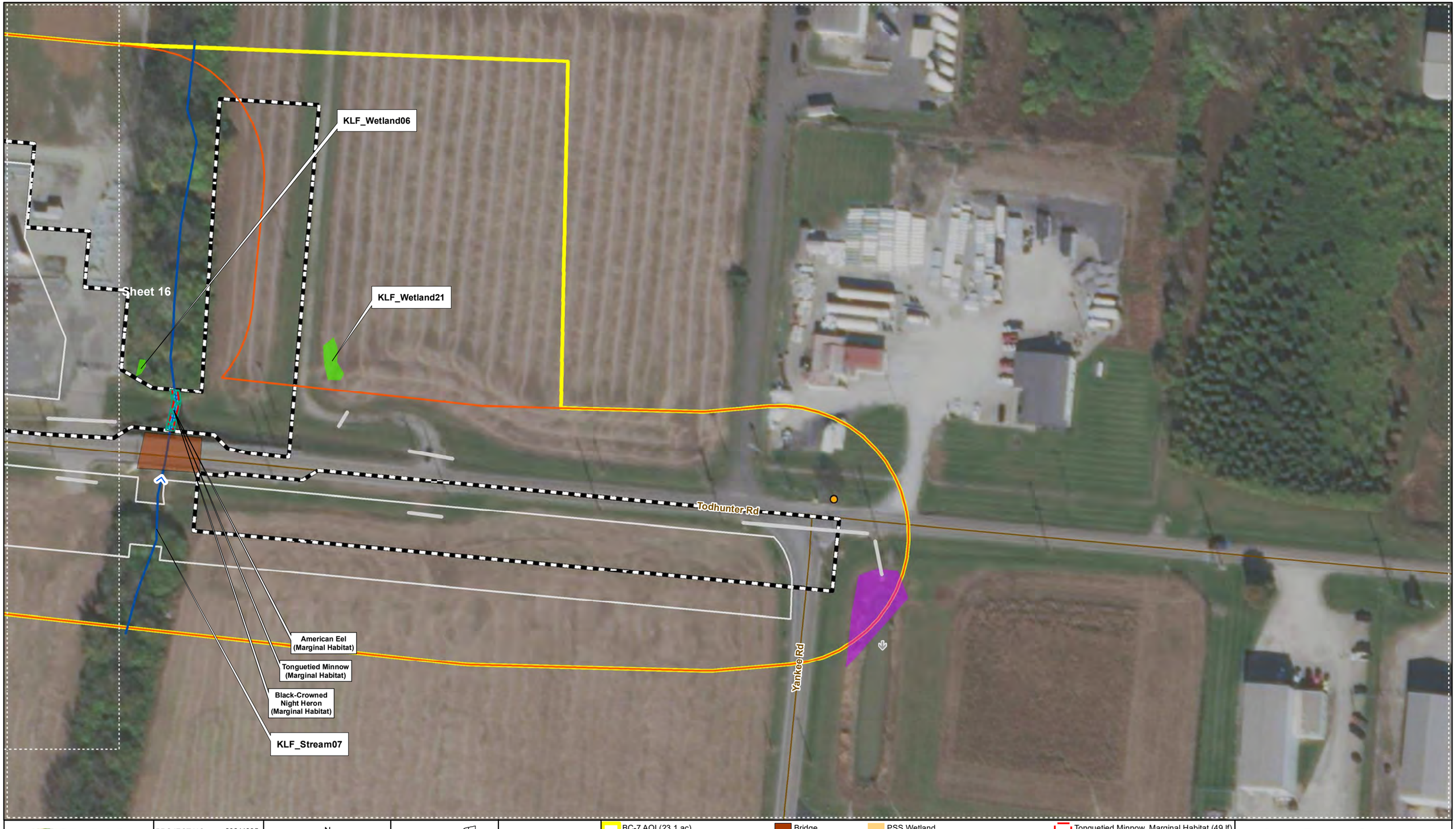
- BC-7 AOI (23.1 ac)
- BC-7 LOD (6.8 ac)
- Previously Submitted BC-7 AOI (19.8 ac)
- Previously Submitted BC-7 LOD (5.4 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

Duke Energy Ohio, Inc.

Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 16 of 19

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| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-7 AOI (23.1 ac)
- BC-7 LOD (6.8 ac)
- Previously Submitted BC-7 AOI (19.8 ac)
- Previously Submitted BC-7 LOD (5.4 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- American Eel, Marginal Habitat (49 lf)
- Black-Crowned Night Heron, Marginal Habitat (0.01 ac)
- Tonguetied Minnow, Marginal Habitat (49 lf)
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

Duke Energy Ohio, Inc.

Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 17 of 19

KLF_Wetland20

KLF_Wetland19

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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-7 Laydown Yard AOI (5.5 ac)
- BC-7 Laydown Yard LOD (0.9 ac)
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

* DBH refers to the tree diameter measured at 4.5' above the ground.

Duke Energy Ohio, Inc.

Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022


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| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-8 AOI (2.3 ac)
- BC-8 LOD (0.2 ac)
- Previously Submitted BC-8 (2.3 ac)
- Previously Submitted BC-8 LOD (0.2 ac)
- Area Not Applicable to OPSB
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- PFO Wetland
- PSS Wetland
- PUB Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

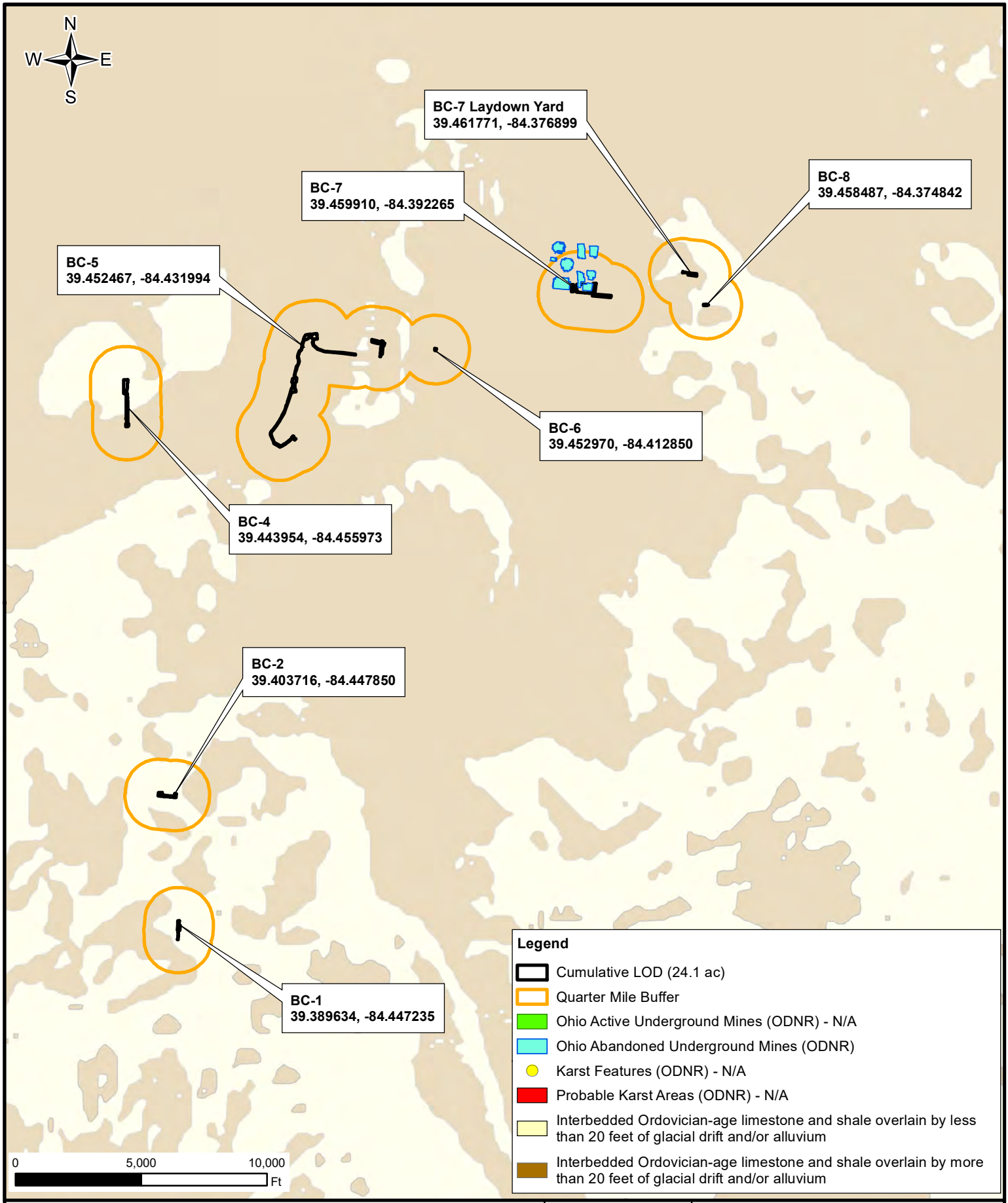
* DBH refers to the tree diameter measured at 4.5' above the ground.

Duke Energy Ohio, Inc.

Figure 2
Desktop Delineated Habitat Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/1/2022 | Sheet 19 of 19

**FIGURE 3**
**DESKTOP HIBERNACULA ASSESSMENT MAP**

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Monroe & Trenton, OH
7.5' USGS Quadrangle

Lemon, Liberty & Madison Township, Butler County, Ohio

| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_RTE_Karst_Fig3 |

Duke Energy Ohio, Inc.

Figure 3
Desktop Hibernacula Assessment
Butler Cnty Ph I C210 & LP07 Project

Date: 1/31/2022 | Version: 1

**ATTACHMENT A**
**ODNR CORRESPONDENCE FROM TECHNICAL ASSISTANCE**

**Office of Real Estate**
*John Kessler, Chief*
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
*Phone: (614) 265-6621*
*Fax: (614) 267-4764*

April 27, 2021

Stephen Lane
Duke Energy Ohio, Inc.
139 East Fourth Street, Room EM740
Cincinnati, OH 45202

**Re:** 21-0225; Duke Energy - Butler County Ph I C210 & LP07

**Project:** The proposed Project includes 7 segments throughout Butler County

**Location:** The proposed project is located in Lemon, Liberty, and Madison Townships, Butler County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

**Natural Heritage Database:** The Natural Heritage Database has the following record at or within a one-mile radius of the project area:

Rentschler Forest Preserve – Butler Co. MetroParks

**Fish and Wildlife:** The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting

only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "*OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING*". https://ohiodnr.gov/static/documents/wildlife/wildlife-management/Bat+Survey+Guidelines.pdf

If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31, however, limited summer tree cutting may be acceptable after consultation with DOW (contact Sarah Stankavich, sarah.stankavich@dnr.state.oh.us).

The DOW also recommends that a desktop habitat assessment, followed by a field assessment if needed, is conducted to determine if there are potential hibernaculum(a) present within the project area. Information about how to conduct habitat assessments can be found in the current USFWS "*Range-wide Indiana Bat Survey Guidelines*." If a habitat assessment finds that potential hibernacula are present within 0.25 miles of the project area, please send this information to Sarah Stankavich, sarah.stankavich@dnr.state.oh.us for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.
impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the rayed bean (*Villosa fabalis*), a state endangered and federally endangered mussel, and the fawnsfoot (*Truncilla donaciformis*), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact these species.

The project is within the range of the tonguetied minnow (*Exoglossum laurae*), a state endangered fish, and the American eel (*Anguilla rostrata*), a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet fields and meadows. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the cave salamander (*Eurycea lucifuga*), a state endangered species. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the black-crowned night-heron *(Nycticorax nycticorax*), a state-threatened bird. Night-herons are so named because they are nocturnal, conducting most of their foraging in the evening hours or at night, and roost in trees near wetlands and waterbodies during the day. Night herons are migratory and are typically found in Ohio from April 1 through December 1 but can be found in more urbanized areas with reliable food sources year-round.

Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. In the Oak Openings area west of Toledo, lark sparrows occupy open grass and shrubby fields along sandy beach ridges. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the U.S. Fish & Wildlife Service.

**Water Resources:** The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf

ODNR appreciates the opportunity to provide these comments. Please contact Sarah Tebbe, Environmental Specialist, at Sarah.Tebbe@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting)

**ATTACHMENT B**
**ODNR & USFWS CORRESPONDENCE FROM ACOUSTIC SURVEY**

## Spencer Chronister

**From:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Sent:** Wednesday, September 23, 2020 5:18 PM
**To:** Matthew Albright
**Subject:** FW: Duke Acoustic Survey Report Links

Jill Vovaris
Kleinfelder
VP- Ohio River Valley Operations
724.757.6210

---

**From:** Sarah.Stankavich@dnr.state.oh.us <Sarah.Stankavich@dnr.state.oh.us>
**Sent:** Wednesday, August 26, 2020 1:54 PM
**To:** Jill Vovaris <JVovaris@Kleinfelder.com>; Susan_Zimmermann@fws.gov; angela_boyer@fws.gov
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** RE: Duke Acoustic Survey Report Links

**External Email.**

---

ODNR-DOW recommends no side-trimming or cutting of any trees in the project area that have clusters of dead leaves in the upper third of the tree and no cutting of any trees with a DBH ≥ 20 inches prior to October 1 in order to limit impacts to tricolored bats. Additionally, in order to limit impacts to little brown bats, ODNR-DOW recommends no clearing trees with the following characteristics unless they pose a hazard: dead or live trees of any size with loose, shaggy bark and/or crevices, holes, or cavities.

Please let me know if you have any questions.

Sarah

---

**From:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Sent:** Tuesday, August 25, 2020 9:51 AM
**To:** Stankavich, Sarah <Sarah.Stankavich@dnr.state.oh.us>; Susan_Zimmermann@fws.gov; angela_boyer@fws.gov; Hazelton, Erin <Erin.Hazelton@dnr.state.oh.us>
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** RE: Duke Acoustic Survey Report Links

Thanks for the quick response Sarah.

Please provide ODNR recommendations for roost season cutting related to the little brown and the tri-colored species.

Thanks.

Jill Vovaris
Kleinfelder
VP- Ohio River Valley Operations
724.757.6210

**From:** Sarah.Stankavich@dnr.state.oh.us <Sarah.Stankavich@dnr.state.oh.us>
**Sent:** Tuesday, August 25, 2020 8:40 AM
**To:** Jill Vovaris <JVovaris@Kleinfelder.com>; Susan_Zimmermann@fws.gov; angela_boyer@fws.gov; Erin.Hazelton@dnr.state.oh.us
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** RE: Duke Acoustic Survey Report Links

**External Email.**

---

Hi Jill –

We received the reports for the Duke Energy Maineville to Morrow and the Butler Phase I projects. Acoustic surveys for both of these sites established the likely presence of two state endangered bat species, *Myotis lucifugus* and *Perimyotis subflavus.* Therefore, DOW recommends that no cutting take place at these sites prior to Oct 1. If tree cutting is necessary before this date, we can provide recommendations for limited cutting upon request.

Sarah

Sarah Stankavich
Wildlife Technician (bats/pollinators)
ODNR Division of Wildlife
2045 Morse Road
Columbus, OH 43229
Phone: 614-265-6764
Email: sarah.stankavich@dnr.state.oh.us



---

**From:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Sent:** Monday, August 24, 2020 5:49 PM
**To:** Susan_Zimmermann@fws.gov; Stankavich, Sarah <Sarah.Stankavich@dnr.state.oh.us>; angela_boyer@fws.gov; Hazelton, Erin <Erin.Hazelton@dnr.state.oh.us>
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** FW: Duke Acoustic Survey Report Links

Hello,

Please see below for the links to the Duke Energy Maineville to Morrow and the Butler Phase I Acoustic Survey Reports.

Please contact me with any questions.

Thanks,
Jill

Jill Vovaris
Kleinfelder
VP- Ohio River Valley Operations
724.757.6210

# Files Available on the Kleinfelder File Transfer Site

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From: **Matthew Albright**
Workspace: **Albright_Matthew**
Date: **08/24/20 at 12:41 pm PDT**

1. **2020.009 - Butler County Integrity Upgrades Acoustic Survey Report-FINAL.pdf** (58.44 MB) in Albright_Matthew
https://kleinfelder.filegenius.com/downloadPublic/p2l3lzdxypn3ngg/pmurfukj7bstkep

2. **2020.008 - Maineville Morrow Loop Line Acoustic Survey Report-FINAL.pdf** (55.34 MB) in Albright_Matthew
https://kleinfelder.filegenius.com/downloadPublic/p68ykfqrzglrvsn/sq8lf4x39iufo3g

These links will expire on **09/03/20 at 12:41 pm PDT**

This email was sent to the following recipients: **Matthew Albright**, malbright@kleinfelder.com

---

**Transaction Source:** Kleinfelder FILETRANSFER SITE, https://kleinfelder.filegenius.com
**Time/Date of Transaction:** 08/24/20 at 12:41 pm PDT

## Matthew Albright

**From:** Ohio, FW3 <ohio@fws.gov>
**Sent:** Wednesday, February 24, 2021 12:42 PM
**To:** Matthew Albright
**Cc:** Lane, Steve; Seth Sanders; Jill Vovaris
**Subject:** Duke Energy, Butler County Phase I, C210 & LP07 Project (Gas Line Improvements)

**External Email**

---

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994

TAILS# 03E15000-2021-TA-0862

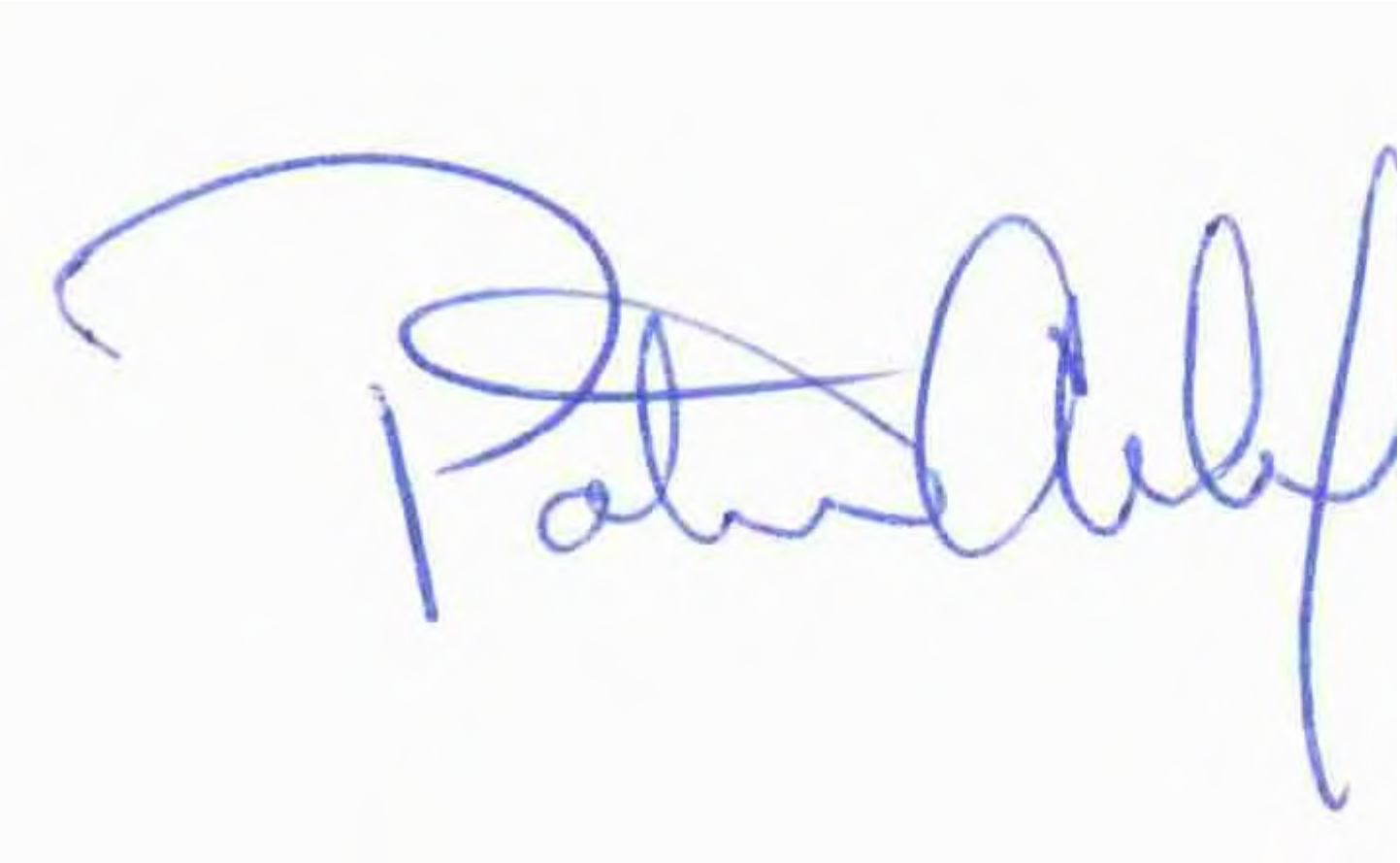
Dear Mr. Albright,

The U.S. Fish and Wildlife Service (Service) received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse effects to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: Due to the project, type, size, and location, we do not anticipate adverse effects to federally endangered, threatened, or proposed species or proposed or designated critical habitat. If there are any project modifications during the term of this action, or additional information for listed or proposed species or their critical habitat becomes available, or if new information reveals effects of the action that were not previously considered, then please contact us for additional project review.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,



Patrice M. Ashfield
Field Office Supervisor

Ohio Department of Natural Resources
MIKE DEWINE, GOVERNOR MARY MERTZ, DIRECTOR

**Office of Real Estate**
*John Kessler, Chief*
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
*Phone: (614) 265-6621*
*Fax: (614) 267-4764*

April 27, 2021

Stephen Lane
Duke Energy Ohio, Inc.
139 East Fourth Street, Room EM740
Cincinnati, OH 45202

**Re:** 21-0225; Duke Energy - Butler County Ph I C210 & LP07

**Project:** The proposed Project includes 7 segments throughout Butler County

**Location:** The proposed project is located in Lemon, Liberty, and Madison Townships, Butler County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

**Natural Heritage Database:** The Natural Heritage Database has the following record at or within a one-mile radius of the project area:

Rentschler Forest Preserve – Butler Co. MetroParks

**Fish and Wildlife:** The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting

only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "*OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING*". https://ohiodnr.gov/static/documents/wildlife/wildlife-management/Bat+Survey+Guidelines.pdf

If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31, however, limited summer tree cutting may be acceptable after consultation with DOW (contact Sarah Stankavich, sarah.stankavich@dnr.state.oh.us).

The DOW also recommends that a desktop habitat assessment, followed by a field assessment if needed, is conducted to determine if there are potential hibernaculum(a) present within the project area. Information about how to conduct habitat assessments can be found in the current USFWS "*Range-wide Indiana Bat Survey Guidelines*." If a habitat assessment finds that potential hibernacula are present within 0.25 miles of the project area, please send this information to Sarah Stankavich, sarah.stankavich@dnr.state.oh.us for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.
impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the rayed bean (*Villosa fabalis*), a state endangered and federally endangered mussel, and the fawnsfoot (*Truncilla donaciformis*), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact these species.

The project is within the range of the tonguetied minnow (*Exoglossum laurae*), a state endangered fish, and the American eel (*Anguilla rostrata*), a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet fields and meadows. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the cave salamander (*Eurycea lucifuga*), a state endangered species. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the black-crowned night-heron *(Nycticorax nycticorax*), a state-threatened bird. Night-herons are so named because they are nocturnal, conducting most of their foraging in the evening hours or at night, and roost in trees near wetlands and waterbodies during the day. Night herons are migratory and are typically found in Ohio from April 1 through December 1 but can be found in more urbanized areas with reliable food sources year-round.

Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the least bittern (*Ixobrychus exilis*), a state threatened bird. This secretive marsh species prefers dense emergent wetlands with thick stands of cattails, sedges, sawgrass or other semiaquatic vegetation interspersed with woody vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. In the Oak Openings area west of Toledo, lark sparrows occupy open grass and shrubby fields along sandy beach ridges. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the U.S. Fish & Wildlife Service.

**Water Resources:** The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf

ODNR appreciates the opportunity to provide these comments. Please contact Sarah Tebbe, Environmental Specialist, at Sarah.Tebbe@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting)

February 16, 2021

John Kessler
Ohio Department of Natural Resources-Office of Real Estate
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693

**Re: Threatened and Endangered Species Technical Assistance Letter**
Butler Cnty Ph I C210 & LP07
Lemon, Liberty, and Madison Townships, Butler County, Ohio
Duke Energy Ohio, Inc.

Dear Mr. Kessler:

Kleinfelder, Inc. (Kleinfelder) is submitting this consultation on behalf of Duke Energy Ohio, Inc. (Duke) for the proposed Butler Cnty Ph I C210 & LP07 Project.

Please address any questions or comments regarding this consultation to:

Stephen R. Lane
Lead Environmental Scientist/Planner - Siting and Licensing Support
Duke Energy Ohio, Inc.
139 East Fourth Street, Room EM740
Cincinnati, OH 45202
(513) 287-2379
steve.lane@duke-energy.com

## 1.0 SITE DESCRIPTION

Duke is proposing gas line improvements including extensions, relocations, and abandonments at 7 different locations in Lemon, Liberty, and Madison Townships, Butler County, Ohio (OH) (Figure 1) collectively known as the Butler Cnty Ph I C210 & LP07 Project (Project). Figures 2 and 3 present the Project on an aerial imagery map and natural land cover dataset map, respectively.

The proposed Project includes 7 segments throughout Butler County, OH, which have a cumulative area of investigation (AOI) of approximately 49.7 acres and are individually described below.

- BC-1 has an approximately 3.9-acre AOI. This portion of the AOI is located in Liberty Township at 39.389634, -84.447235. Land cover within the AOI consists of industrial use, road right-of-way (ROW), utility ROW, forested and open field areas. Land use is dominated by industrial use.
- BC-2 has an approximately 5.6-acre AOI. This portion of the AOI is located in Liberty Township, at 39.4036274, -84.450058. Land cover within the AOI consists of road ROW, utility ROW, and residential areas. Land use is dominated by residential use.

- BC-4 has an approximately 11.3-acre AOI. This portion of the AOI is located in Madison Township at 39.443954, -84.455973. Land cover within the AOI consists of industrial use, including two stormwater management facilities, road ROW, forested and open field areas. Land use is dominated by industrial use.
- BC-5 has an approximately 4.9-acre AOI. This portion of the AOI is located in Lemon Township, at 39.452186, -84.420642. Land cover within the AOI consists of commercial use, road ROW, utility ROW, residential, and agricultural areas. Land use is dominated by residential, commercial, and agricultural use.
- BC-6 has an approximately 1.9-acre AOI. This portion of the AOI is located in Lemon Township, at 39.452907, -84.413036. Land cover within the AOI consists of road ROW, utility ROW, and residential areas. Land use is dominated by residential use.
- BC-7 has an approximately 19.8-acre AOI. This portion of the AOI is located in Lemon Township at 39.459418, -84.392426. Land cover within the AOI consists of industrial use, road ROW, utility ROW, and agricultural areas. Land use is dominated by industrial and agricultural use.
- BC-8 has an approximately 2.3-acre AOI. This portion of the AOI is located in Lemon Township at 39.458487, -84.374842. Land cover within the AOI consists of industrial use, road ROW, utility ROW, and residential use. Land use is dominated by industrial and residential use.

Kleinfelder biologists conducted stream and wetland investigations on September 3 and 10, 2020, October 21, 2020, and December 15, 2020 to identify streams, wetlands, and potential Indiana bat and northern long-eared bat (NLEB) habitat within a cumulative 49.7-acre AOI. Dominant tree species among the Project locations included Callery pear (*Pyrus calleryana*), flowering dogwood (*Cornus florida*), red elm (*Ulmus rubra*), and black walnut (*Juglans nigra*). Dominant sapling/shrub species among the Project locations included black willow (*Salix nigra*) and Herder Amur honeysuckle (*Lonicera maackii*).

## 2.0 THREATENED AND ENDANGERED SPECIES

The Project LOD was reviewed through the use of the United States Fish and Wildlife Services (USFWS) Information for Planning and Consultation (IPaC) (https://ecos.fws.gov/ipac/) to generate the initial screening of species listed under the Endangered Species Act that are known or expected to be on or near the Project (Attachment A). The table below summarizes the three species that are federally threatened or endangered and are known or expected to be on or near the Project as identified by IPaC. Kleinfelder understands the information contained within IPaC is routinely updated as new information on species distributions becomes available.

## Table 1: Threatened and Endangered Species Identified by IPaC

| Common Name | Scientific Name | Habitat | Status |
|---|---|---|---|
| Indiana Bat | *Myotis sodalis* | There is final critical habitat for this species; however, the location of the critical habitat is not available. | Endangered |
| Northern Long-Eared Bat | *Myotis septentrionalis* | No critical habitat has been designated for this species. | Threatened |
| Running Buffalo Clover | *Trifolium stoloniferum* | No critical habitat has been designated for this species. | Endangered |

## 3.0 POTENTIAL THREATENED AND ENDANGERED SPECIES HABITAT IN THE AOI

**Indiana Bat and NLEB**

The Indiana bat is identified as an endangered species within Ohio. Summer roosting habitat for the Indiana bat includes living, dead (snags), or decaying trees ≥ 5 inches diameter at breast height (DBH) that contain exfoliating bark, cracks, crevices, and/or hollows. The NLEB is identified as a threatened species within Ohio. Summer roosting habitat for the NLEB consists of living, dead, or decaying trees ≥ 3 inches DBH that contain exfoliating bark, cracks, crevices, and/or hollows.

In Ohio, presence of the Indiana bat and NLEB is assumed wherever suitable habitat occurs. As a result of this requirement and due to the proposed Project construction schedule, Kleinfelder contracted Encarna, LLC. (Encarna) on behalf of Duke to conduct a summer acoustic survey to determine the presence/probable absence of threatened and/or endangered bat species within the Project during the summer maternity season. Prior to conducting the acoustic survey, a study plan was submitted to the USFWS Ohio Field Office (OHFO) and Ohio Department of Natural Resources (ODNR) on August 9, 2020 proposing an acoustic survey for 4 of the 7 Project segments. The USFWS OHFO and ODNR concurred with the proposal on August 11, 2020 and August 12, 2020, respectively. Between August 12, 2020 and August 14, 2020, acoustic surveys were performed at the BC-1, BC-4, and BC-7. Acoustic surveys were not performed at BC-2 due to land access issues. Data collected from the acoustic surveys were analyzed using the USFWS approved Kaleidoscope Pro Version 5.1.0, which includes a Maximum Likelihood Estimator (MLE) that statistically evaluates the risk of false positives within each individual species result. The MLE generated by Kaleidoscope had confidence in five species: big brown bat (*Eptesicus fuscus*), Eastern red bat (*Lasiurus borealis*), little brown bat (*Myotis lucifugus*), evening bat (*Nycticeius humeralis*), and tricolored bat (*Perimyotis subflavus*). The Indiana bat (*Myotis sodalis*) and NLEB (*Myotis septentrionalis*) were found not likely to be present. The results of the acoustic surveys were submitted to USFWS and ODNR on August 24, 2020.

Correspondence from USFWS (TAILS# 03E15000-2020-TA-2218) on August 25, 2020 indicated tree clearing on the project site at any time of the year is unlikely to result in adverse impacts to the Indiana bats and will not result in any unauthorized incidental take of NLEB. In addition, USFWS did not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species due to the Project type, size, and location. Correspondence from ODNR on August 25 and 26, 2020 recommended no side-trimming or cutting of any trees in the Project area that have clusters of dead leaves in the upper third of the tree and no cutting of any trees with a DBH ≥ 20 inches prior to October 1st and after March 31st in order to limit impacts to tricolored bats. Additionally, in order to limit impacts to little brown bats, ODNR recommended no clearing of trees with the following characteristics unless they pose a hazard: dead or live trees of any size with loose, shaggy bark and/or crevices, holes, or cavities. USFWS and ODNR correspondence associated with the acoustic surveys are included as Attachment B.

Due to the recommendation outlined by ODNR, Kleinfelder biologists assessed the onsite habitat within the 49.7-acre AOI to determine suitability for bats (Figures 2 and 3), and recorded GPS coordinates of trees exhibiting ≥20-inch DBH. The results of this habitat assessment can be found on Figure 2. The AOI was primarily comprised of agricultural fields, riparian areas, energy infrastructure, fence rows, early successional and secondary growth forests, residential developments, roads, ROWs, and herbaceous openings. The roads, pipeline ROW, and open fields may serve as migratory corridors for both the Indiana bat and NLEB. Forested hillslopes, forested edges, and riparian areas may serve as potential foraging or roosting habitat for both the Indiana bat and the NLEB.

In winter, both the Indiana bat and NLEB hibernate in caves and abandoned mines. A desktop review was conducted within a 1/4-mile radius of the proposed Project using topographic and aerial maps and the Ohio Department of Natural Resources Ohio Mines Viewer, which revealed no caves or portals within the AOI. In addition, site visits by Kleinfelder did not identify the presence of caves or portals within the AOI.

**Running Buffalo Clover**

Running Buffalo Clover (*Trifolium stoloniferum)* previously existed in 9 states; however, the current range consists of dispersed fragments likely due to habitat loss or modification. Running buffalo clover occurs in mesic habitats of partial to filtered sunlight, where there is a prolonged pattern of moderate periodic disturbance, such as mowing, trampling, or grazing. It is most often found in regions underlain with limestone or other calcareous bedrock. The primary threat to running buffalo clover is habitat alteration. Factors that contribute to this threat include natural forest succession and subsequent canopy closure, competition by invasive plant species, permanent habitat loss through development or road construction, and may include the elimination of bison and other large herbivores.

According to guidance provided by the USFWS in 2019, the proposed Project is not located in a township or county designated by the USFWS that “may effect” the listed species.


51 Dutilh Road, Suite 240, Cranberry Township, PA 16066 p|724.772.7072 f|724.772.7079

## 4.0 PROPOSED IMPACTS

The Project proposes an overall LOD of approximately 12.7-acres. Of the 12.7-acres, approximately 1.9 acres are forested, and 10.8-acres are open agricultural fields, scrub shrub habitat, residential property, and existing infrastructure (based on site observations and a GIS review of aerial photography, see Table 2). Photographs providing a representation of habitat are included in Attachment C.

**Potential Habitat Impacts**

Duke proposes to conduct tree clearing of 1.9-acres of suitable forested habitat. Based on site observations, the trees present within the LOD may provide marginal Indiana bat and NLEB roosting habitat, based on the lack of suitable characteristics including loose, shaggy bark and/or crevices, holes, or cavities. The open fields and existing roads may provide migratory and foraging habitat.

**Table 2: Potential Impacted Habitat in the LOD, AOI and ¼ Mile Buffer**

| Cumulative | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Study Area | Total Area (Acres) | Forested Area | | Non-Forested Area | | Tree Clearing | | Forested Area Remaining | |
| | | Acres | % | Acres | % | Acres | % | Acres | % |
| LOD | 12.7 | 1.9 | 14.6% | 10.8 | 85.4% | 1.9 | 100.0% | 0.0 | 0.0% |
| AOI | 49.7 | 7.5 | 15.1% | 42.2 | 84.9% | | 24.8% | 5.6 | 75.2% |
| Buffer | 1279.2 | 186.5 | 14.6% | 1092.7 | 85.4% | | 1.0% | 184.6 | 99.0% |

| Individual Segments | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Segment | Study Area | Total Area (Acres) | Forested Area | | Non-Forested Area | | Tree Clearing | | Forested Area Remaining | |
| | | | Acres | % | Acres | % | Acres | % | Acres | % |
| BC-1 | LOD | 0.9 | 0.1 | 11.4% | 0.8 | 88.6% | 0.1 | 100.0% | 0.0 | 0.0% |
| | AOI | 3.9 | 1.2 | 29.7% | 2.7 | 70.3% | | 8.6% | 1.9 | 91.4% |
| | Buffer | 175.7 | 16.0 | 9.1% | 159.7 | 90.9% | | 0.6% | 15.89 | 99.4% |
| BC-2 | LOD | 1.3 | 0.3 | 22.3% | 1.0 | 77.7% | 0.3 | 100.0% | 0.0 | 0.0% |
| | AOI | 5.6 | 0.4 | 6.4% | 5.2 | 93.6% | | 84.0% | 0.1 | 16.0% |
| | Buffer | 184.6 | 20.6 | 11.2% | 164.0 | 88.8% | | 1.5% | 20.3 | 98.5% |
| BC-4 | LOD | 3.9 | 1.1 | 27.7% | 2.8 | 72.3% | 1.1 | 100.0% | 0.0 | 0.0% |
| | AOI | 11.3 | 4.8 | 42.7% | 6.5 | 57.3% | | 22.1% | 3.8 | 77.9% |
| | Buffer | 249.9 | 32.1 | 12.8% | 217.8 | 87.2% | | 3.3% | 31.0 | 96.7% |
| BC-5 | LOD | 0.9 | 0.1 | 11.7% | 0.8 | 88.3% | 0.1 | 100.0% | 0.0 | 0.0% |
| | AOI | 4.9 | 0.1 | 2.3% | 4.8 | 97.7% | | 96.2% | 0.0 | 3.8% |
| | Buffer | 172.3 | 40.7 | 23.6% | 131.6 | 76.4% | | 0.3% | 40.6 | 99.7% |

| Individual Segments | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Segment | Study Area | Total Area (Acres) | Forested Area | | Non-Forested Area | | Tree Clearing | | Forested Area Remaining | |
| | | | Acres | % | Acres | % | Acres | % | Acres | % |
| BC-6 | LOD | 0.1 | 0.0 | 0.0% | 0.1 | 100.0% | 0.0 | 0.0% | 0.0 | 0.0% |
| | AOI | 1.9 | 0.0 | 0.0% | 1.9 | 100.0% | | 0.0% | 0.0 | 0.0% |
| | Buffer | 133.9 | 14.7 | 11.0% | 119.3 | 89.1% | | 0.0% | 14.7 | 100.0% |
| BC-7 | LOD | 5.4 | 0.2 | 4.3% | 5.2 | 95.7% | 0.2 | 100.0% | 0.0 | 0.0% |
| | AOI | 19.8 | 1.4 | 7.0% | 18.4 | 93.0% | | 16.5% | 1.2 | 83.5% |
| | Buffer | 241.3 | 22.3 | 9.2% | 219.0 | 90.8% | | 1.0% | 22.1 | 99.0% |
| BC-8 | LOD | 0.2 | 0.1 | 21.0% | 0.2 | 79.0% | 0.1 | 100.0% | 0.0 | 0.0% |
| | AOI | 2.3 | 0.1 | 2.2% | 2.3 | 97.8% | | 91.8% | 0.0 | 8.2% |
| | Buffer | 140.4 | 39.1 | 27.9% | 101.3 | 72.2% | | 0.1% | 39.1 | 99.9% |

## 5.0 AVOIDANCE & MINIMIZATION

Duke has designed the proposed Project to minimize and avoid encroachments to aquatic resources, sensitive species, and forested habitat (Figure 2). Several options for design were evaluated with final plans representing the best possible design for the Project, which minimizes impacts to sensitive species and critical habitat. No impacts to aquatic resources, which may serve as habitat for endangered aquatic species are proposed. Duke proposes to conduct tree clearing of 1.9-acrs of forested habitat. After proposed tree removal has occurred, forested area within the 1/4-mile buffer will remain 99.0% intact (184.6 forested acres remaining). The initial 49.7-acre AOI has been minimized to a 12.7-acre LOD and the amount of forest clearing within the LOD (1.9-acres) has been reduced to the least amount practical to still allow for construction.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## 6.0 SUMMARY

Duke proposes to conduct tree clearing of 1.9-acres of forested habitat. It is Kleinfelder's professional opinion that the Project will not likely adversely affect the running buffalo clover, Indiana bat, or NLEB.

Duke requests concurrence that the site will not adversely affect the running buffalo clover, Indiana bat, NLEB, or other state or federally listed species.

Sincerely,

Kleinfelder, Inc.

Matthew J. Albright
Project Manager

Jill M. Vovaris
Senior Professional

c: Dan Everson, USFWS

Enclosures:
Figure 1 – Vicinity Map
Figure 2 - Aerial Imagery Map
Figure 3 - National Land Cover Dataset 1/4 Mile Buffer Map
Attachment A - Information for Planning and Consultation
Attachment B – Acoustic Survey and USFWS & ODNR Correspondence
Attachment C – Potential Habitat Photographs


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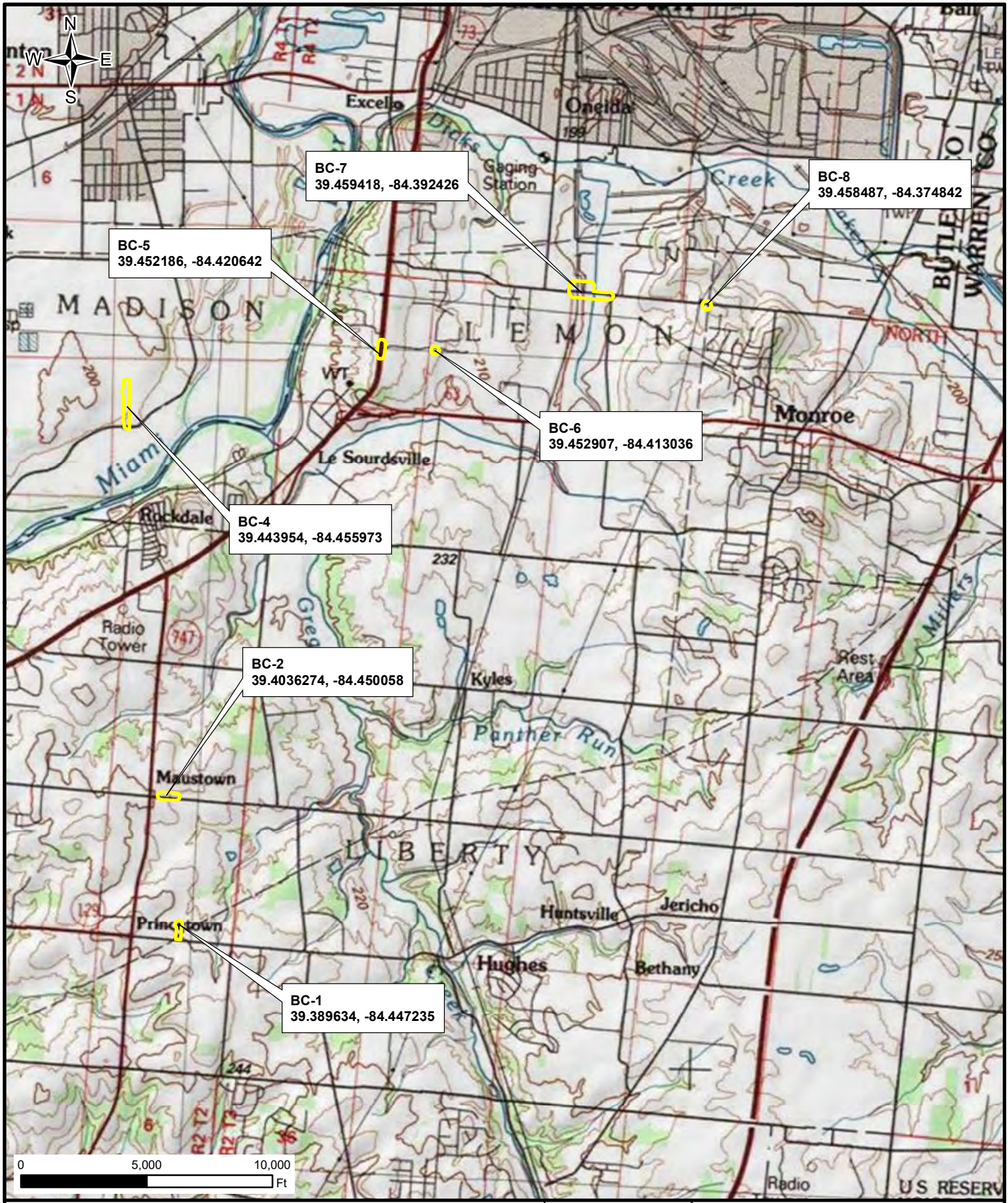
**FIGURE 1**
**VICINITY MAP**

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Monroe & Trenton, OH
7.5' USGS Quadrangle

Lemon, Liberty & Monroe Township, Butler County, Ohio



| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_RTE_Fig1 |

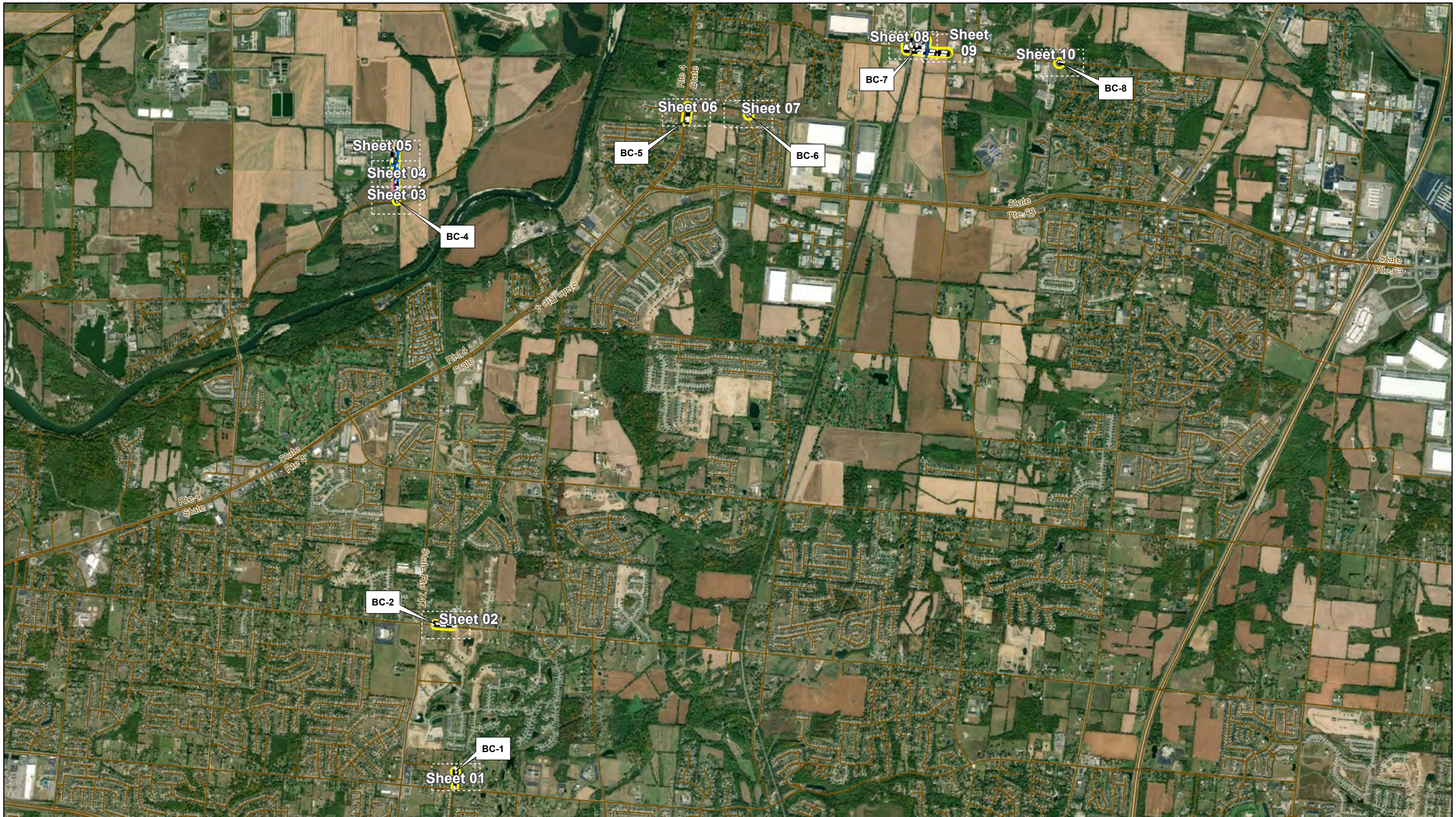
Duke Energy Ohio, Inc.

Figure 1
Vicinity Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021

Version: 1

**FIGURE 2**
**AERIAL IMAGERY MAP**

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| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2_Idx |

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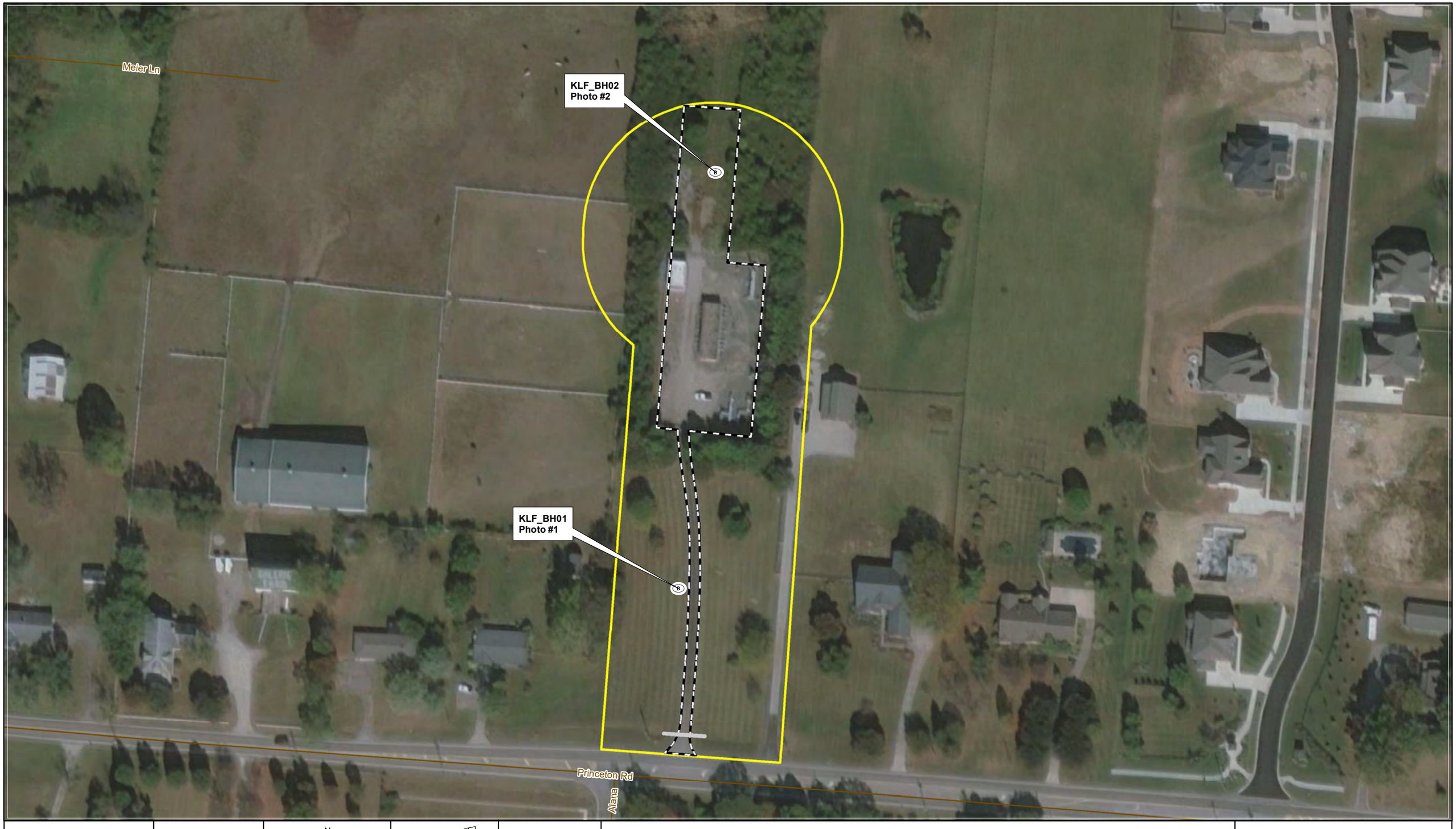
**Butler County Ohio**

- Cumulative AOI (49.7 ac)
- Cumulative LOD (12.7 ac)
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Index Map

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| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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0 50 100 Ft

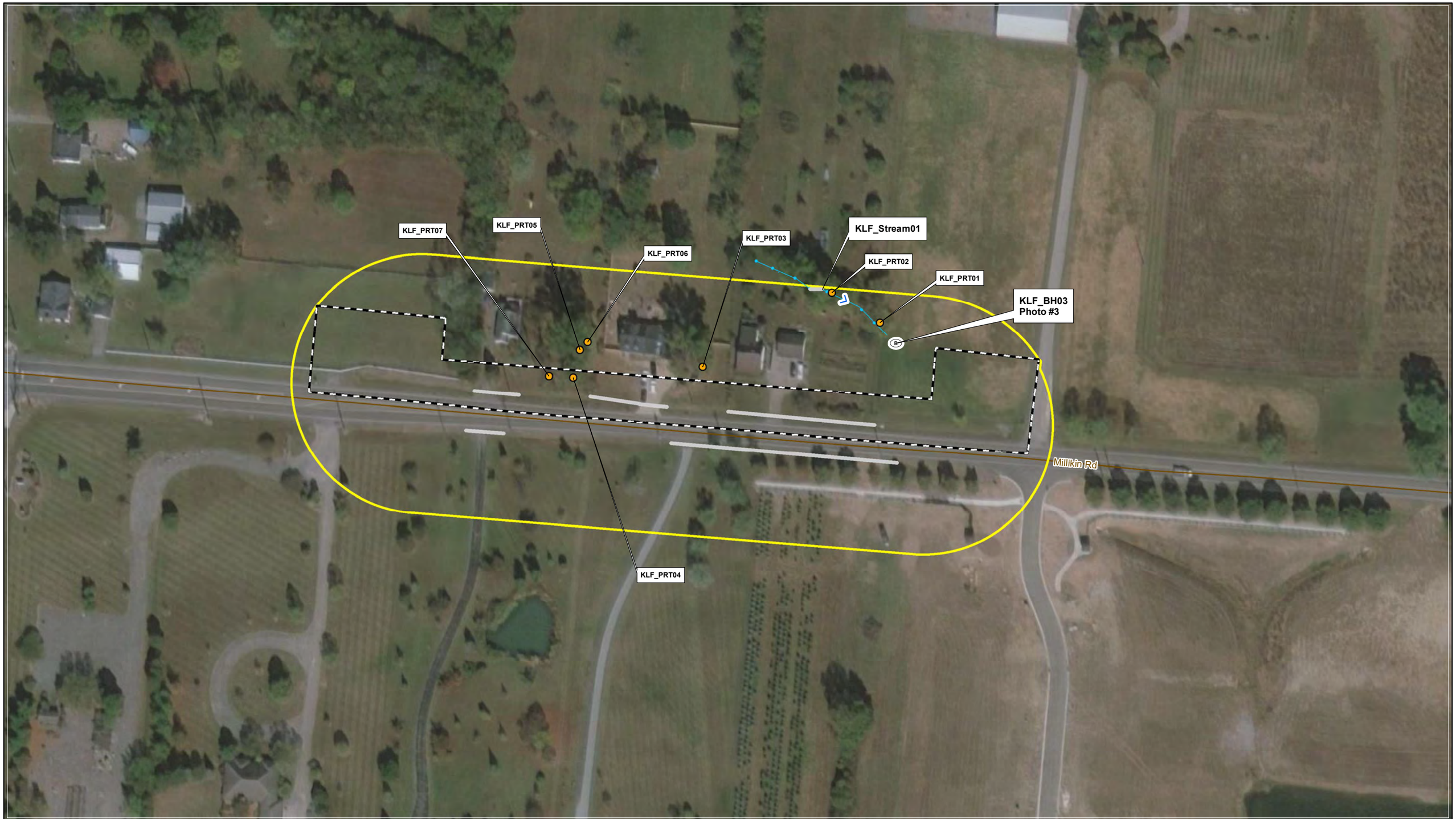
**Butler County Ohio**

- BC-1 AOI (3.9 ac)
- BC-1 LOD (0.9 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 1 of 10

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| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-2 AOI (5.6 ac)
- BC-2 LOD (1.3 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 2 of 10

Sheet 04

KLF_BH05
Photo #5

KLF_SWMF01

KLF_SWMF02

KLF_Stream05

Woodsdale Rd

KLF_PRT12

KLF_BH04
Photo #4

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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (3.9 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021

KLF_Stream06

KLF_Stream03

KLF_Stream05

Sheet 05

KLF_BH06
Photo #6

KLF_Wetland05

KLF_SWMF01

Sheet 03

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| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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0 50 100 Ft

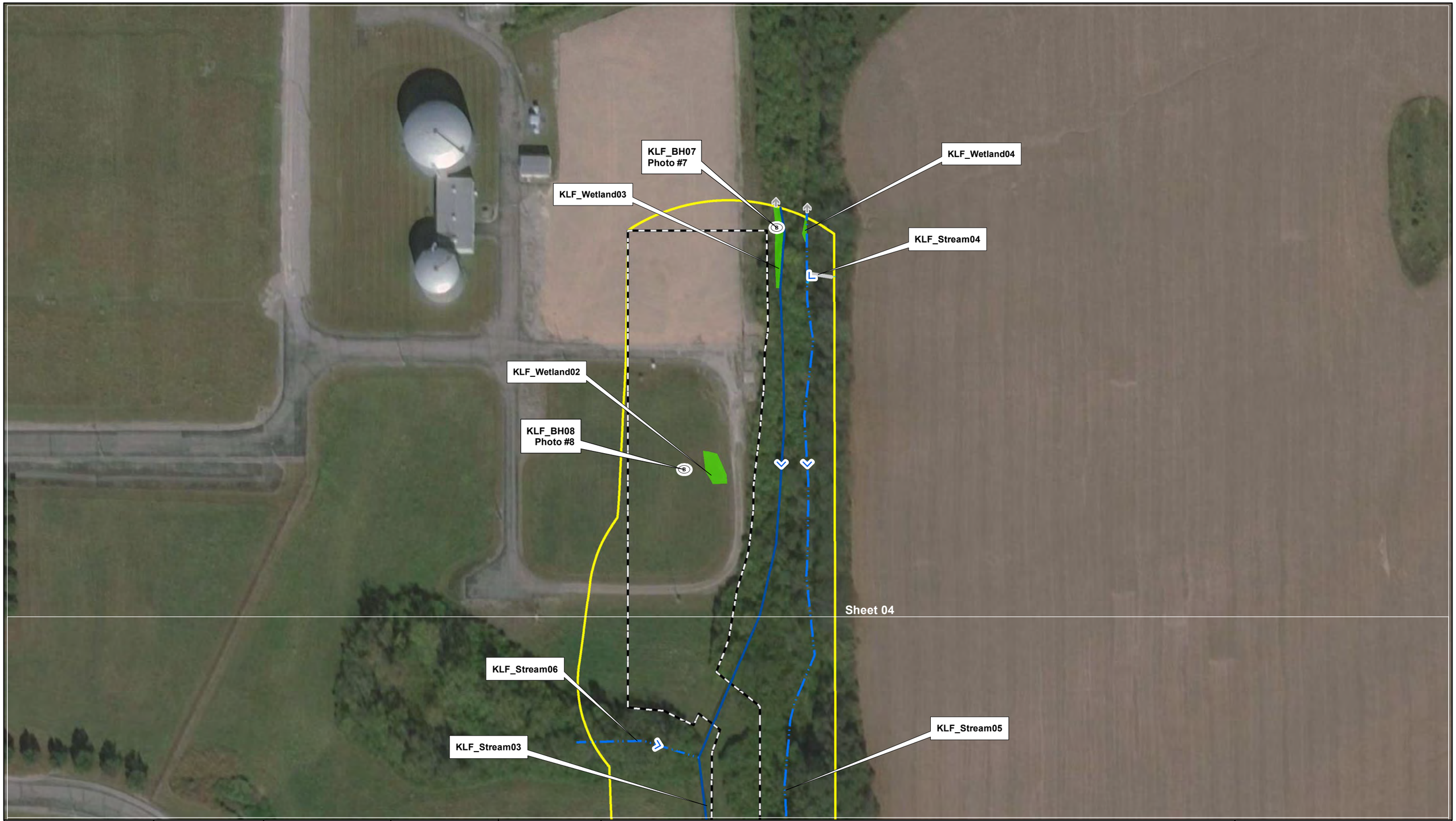
**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (3.9 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021

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| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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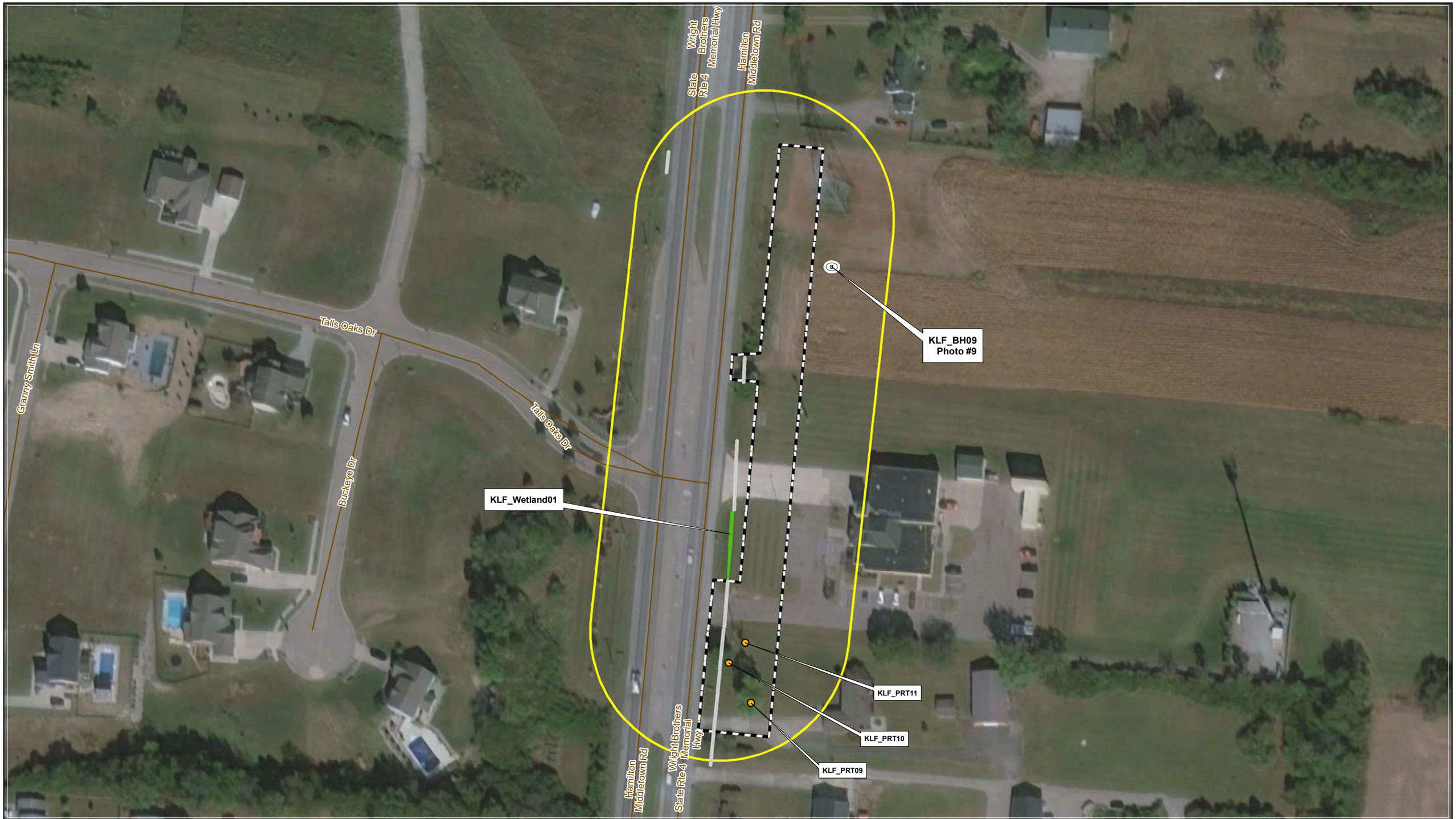
**Butler County Ohio**

- BC-4 AOI (11.3 ac)
- BC-4 LOD (3.9 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 5 of 10

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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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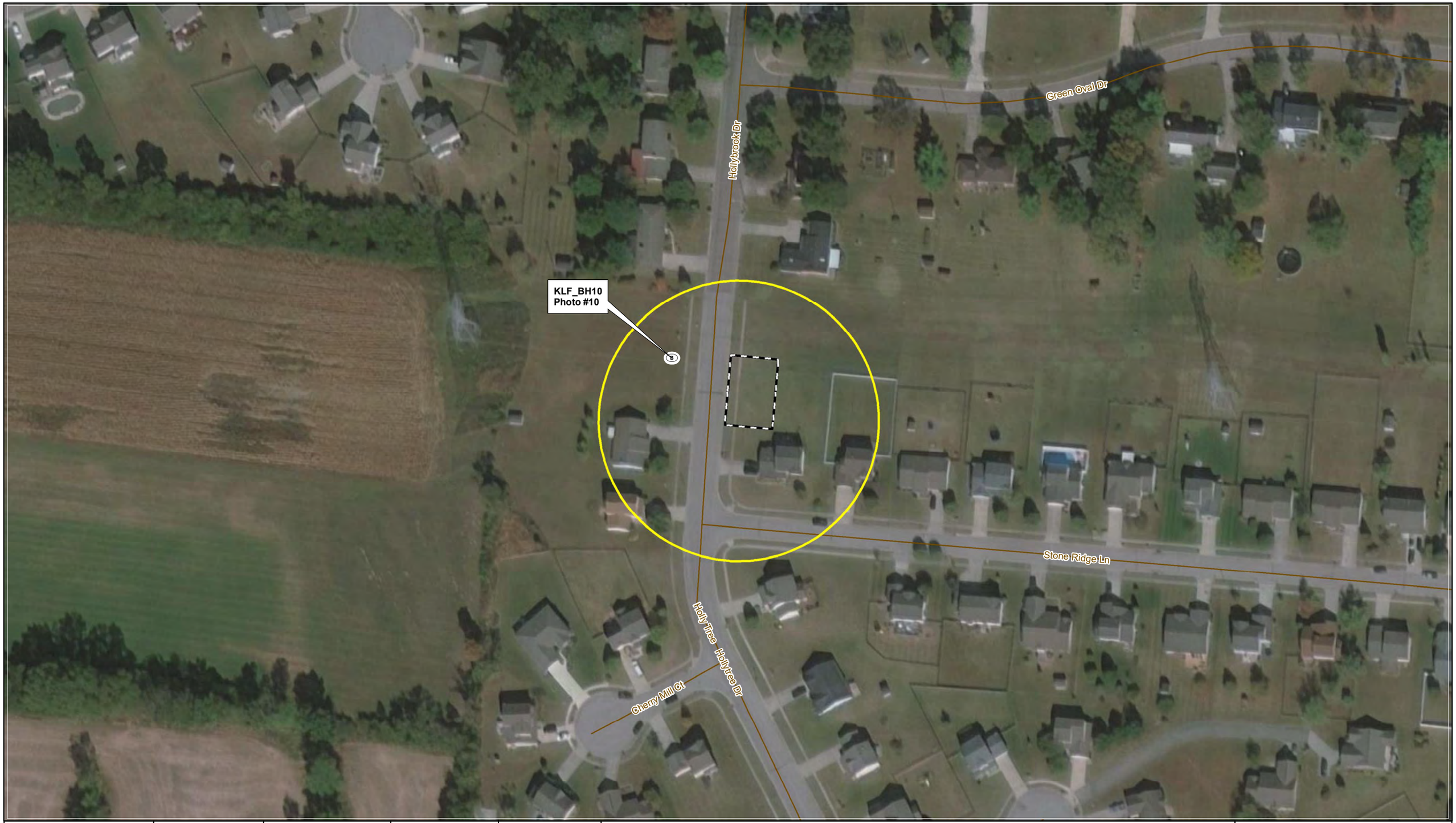
**Butler County Ohio**

- BC-5 AOI (4.9 ac)
- BC-5 LOD (0.9 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 6 of 10

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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhasel_RTE_Fig2 |

N
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0 50 100 Ft

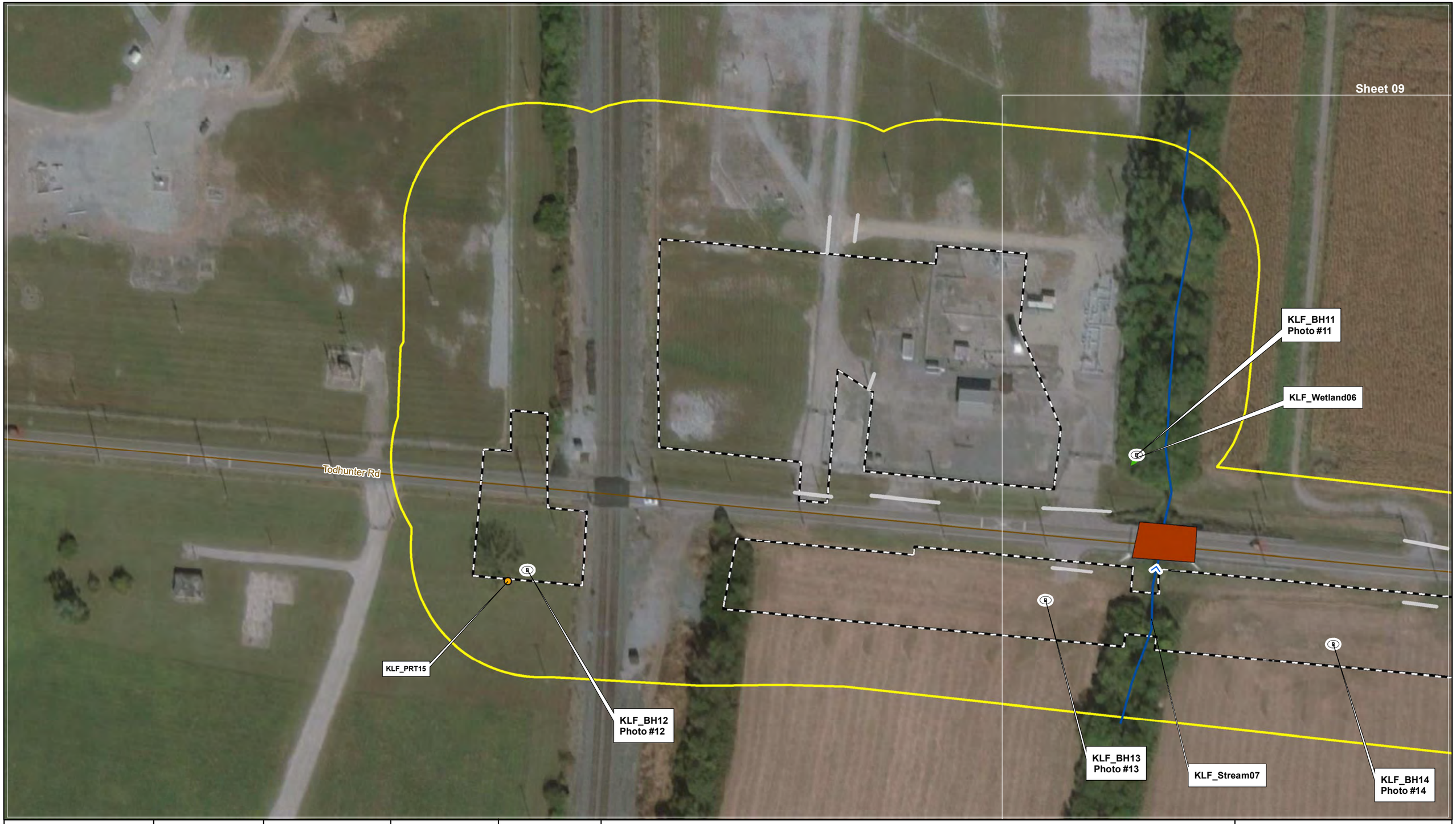
**Butler County Ohio**

- BC-6 AOI (1.9 ac)
- BC-6 LOD (0.1 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 7 of 10

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| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_RTE_Fig2 |

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**Butler County Ohio**

- BC-7 AOI (19.8 ac)
- BC-7 LOD (5.4 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 8 of 10

Sheet 08

KLF_BH11
Photo #11

KLF_Wetland06

KLF_BH13
Photo #13

KLF_Stream07

KLF_BH14
Photo #14

KLF_PRT14

Todhunter Rd

KLF_BH15
Photo #15

KLF_SWMF03

Yankee Rd

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| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

- BC-7 AOI (19.8 ac)
- BC-7 LOD (5.4 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

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Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Sheet 9 of 10


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|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhase1_RTE_Fig2 |

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**Butler County Ohio**

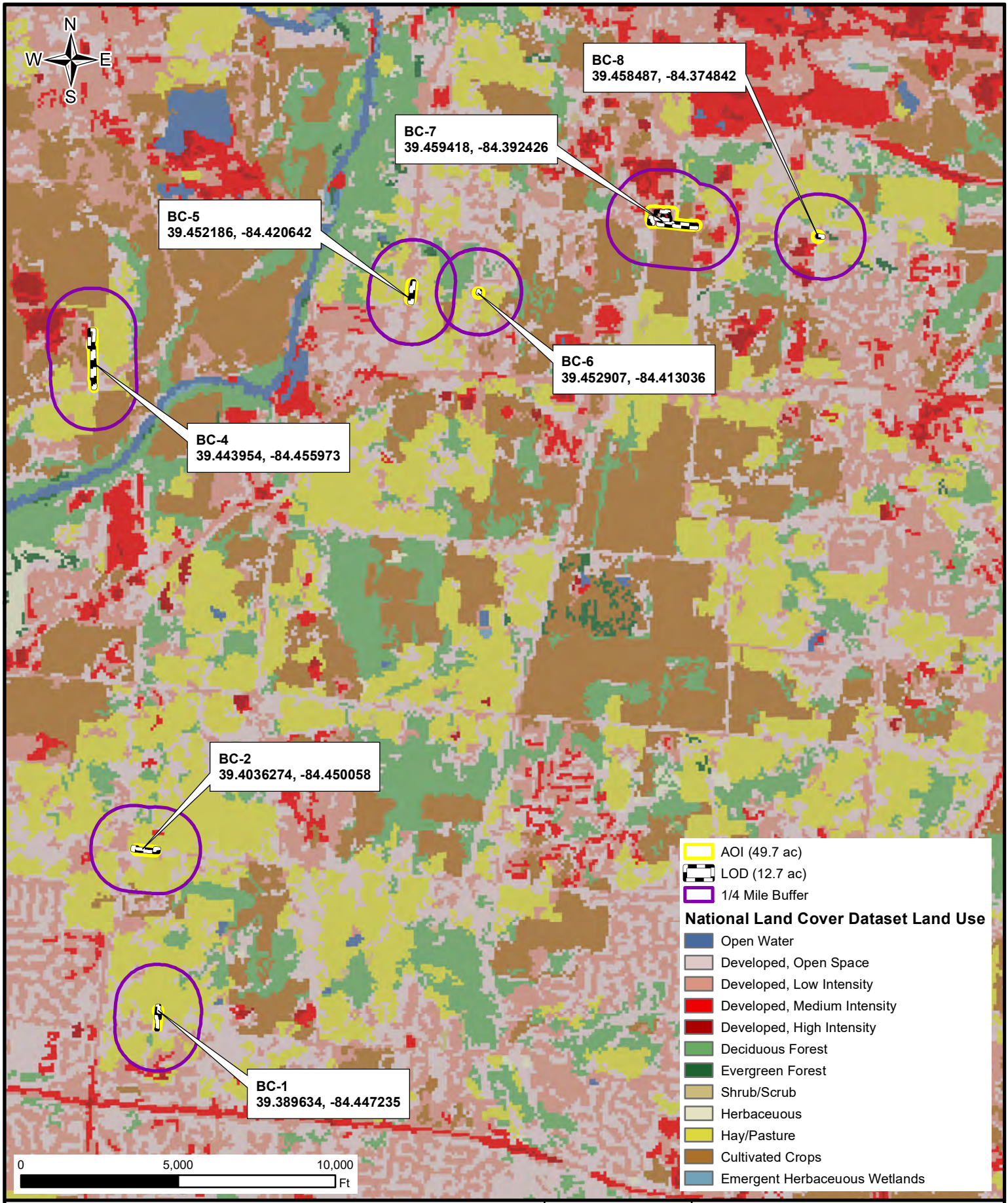
- BC-8 AOI (2.3 ac)
- BC-8 LOD (0.2 ac)
- Bat Habitat Location
- Trees >/= 20" DBH*
- Existing Culvert
- Bridge
- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- PEM Wetland
- Stormwater Management Facility
- USFWS Critical Habitat (N/A)
- Existing Road
- Stream Flow
- Feature Continues

Duke Energy Ohio, Inc.

Figure 2
Aerial Imagery Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021

**FIGURE 3**
**NATIONAL LAND COVER DATASET 1/4 MILE BUFFER MAP**

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Monroe & Trenton, OH
7.5' USGS Quadrangle

Lemon, Liberty & Monroe Township, Butler County, Ohio



| | |
|---|---|
| PROJECT NO. | 20211395 |
| DRAWN BY: | S. Williams |
| CHECKED BY: | M. Albright |
| FILE NAME: | ButlerCountyPhaseI_RTE_Fig3 |

Duke Energy Ohio, Inc.

Figure 3
National Land Cover Dataset ¼ Buffer Map
Butler Cnty Ph I C210 & LP07 Project

Date: 2/12/2021 | Version: 1

# ATTACHMENT A
# INFORMATION FOR PLANNING AND CONSULTATION

# 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

Butler County, Ohio


## Local office

Ohio Ecological Services Field Office

(614) 416-8993
(614) 416-8994

4625 Morse Road, Suite 104
Columbus, OH 43230-8355

# 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 species[1] 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 Fisheries[2]).

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 |
|---|---|

Indiana Bat Myotis sodalis — Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/5949

Northern Long-eared Bat Myotis septentrionalis — Threatened

Wherever found

This species only needs to be considered if the following condition applies:

- Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9045

# Flowering Plants

| NAME | STATUS |
|---|---|
| Running Buffalo Clover Trifolium stoloniferum | Endangered |

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2529

# 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.



# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.



| NAME | BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.) |
|---|---|
| Bald Eagle Haliaeetus leucocephalus<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Oct 15 to Aug 31 |

| | |
|---|---|
| Henslow's Sparrow Ammodramus henslowii<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/3941 | Breeds May 1 to Aug 31 |
| Prothonotary Warbler Protonotaria citrea<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 1 to Jul 31 |
| Red-headed Woodpecker Melanerpes erythrocephalus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Rusty Blackbird Euphagus carolinus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Wood Thrush Hylocichla mustelina<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |



# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season** (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

---

**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 migratory birds potentially occurring 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 AKN Phenology 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, migrating or present year-round in my project 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 refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. 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

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 tuberficid 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.

**ATTACHMENT B**
**ACOUSTIC SURVEY AND USFWS & ODNR CORRESPONDENCE**

## Spencer Chronister

**From:** Ohio, FW3 <ohio@fws.gov>
**Sent:** Tuesday, August 25, 2020 11:54 AM
**To:** Jill Vovaris
**Cc:** Boyer, Angela; nathan.reardon@dnr.state.oh.us; Parsons, Kate; sarah.stankavich@dnr.state.oh.us; Hazelton, Erin; Lane, Steve; Seth Sanders; Matthew Albright
**Subject:** Butler County Integrity Upgrades - Survey #20-042

**External Email.**

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UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994

TAILS# 03E15000-2020-TA-2218

Dear Ms. Vovaris,

We have received your summer bat survey report for the subject project. The survey was conducted following current U.S. Fish and Wildlife Service (Service) guidelines. No Indiana bats (*Myotis sodalis*) were detected, demonstrating probable absence of Indiana bats in the project area. Currently, the Service has no known hibernacula or maternity roost records for northern long-eared bat (*Myotis septentrionalis*) in the vicinity of the project. Therefore, the 4(d) rule for the northern long-eared bat could be applied (see: http://www.fws.gov/midwest/endangered/mammals/nleb/index.html). Tree clearing on the project site at any time of the year is unlikely to result in adverse impacts to Indiana bats and will not result in any unauthorized incidental take of northern long-eared bats. Negative Indiana bat summer surveys are valid for five years. Therefore, **no tree clearing should occur on the site after March 31, 2025** without further coordination with this office.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the Endangered Species Act, between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be initiated to assess any potential impacts.

This letter provides technical assistance only and does not serve as a completed section 7 consultation document. If project plans change, if portions of the proposed project were not evaluated, or if additional information on listed or proposed species or their critical habitat becomes available, it is our recommendation that you reinitiate coordination with this office. We recommend that the project be coordinated with the Ohio

Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

Patrice M. Ashfield
Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Kate Parsons, ODNR-DOW

## Spencer Chronister

**From:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Sent:** Wednesday, September 23, 2020 5:18 PM
**To:** Matthew Albright
**Subject:** FW: Duke Acoustic Survey Report Links

Jill Vovaris
Kleinfelder
VP- Ohio River Valley Operations
724.757.6210

---

**From:** Sarah.Stankavich@dnr.state.oh.us <Sarah.Stankavich@dnr.state.oh.us>
**Sent:** Wednesday, August 26, 2020 1:54 PM
**To:** Jill Vovaris <JVovaris@Kleinfelder.com>; Susan_Zimmermann@fws.gov; angela_boyer@fws.gov
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** RE: Duke Acoustic Survey Report Links

**External Email.**

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ODNR-DOW recommends no side-trimming or cutting of any trees in the project area that have clusters of dead leaves in the upper third of the tree and no cutting of any trees with a DBH ≥ 20 inches prior to October 1 in order to limit impacts to tricolored bats. Additionally, in order to limit impacts to little brown bats, ODNR-DOW recommends no clearing trees with the following characteristics unless they pose a hazard: dead or live trees of any size with loose, shaggy bark and/or crevices, holes, or cavities.

Please let me know if you have any questions.

Sarah

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**From:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Sent:** Tuesday, August 25, 2020 9:51 AM
**To:** Stankavich, Sarah <Sarah.Stankavich@dnr.state.oh.us>; Susan_Zimmermann@fws.gov; angela_boyer@fws.gov; Hazelton, Erin <Erin.Hazelton@dnr.state.oh.us>
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** RE: Duke Acoustic Survey Report Links

Thanks for the quick response Sarah.

Please provide ODNR recommendations for roost season cutting related to the little brown and the tri-colored species.

Thanks.

Jill Vovaris
Kleinfelder
VP- Ohio River Valley Operations
724.757.6210

**From:** Sarah.Stankavich@dnr.state.oh.us <Sarah.Stankavich@dnr.state.oh.us>
**Sent:** Tuesday, August 25, 2020 8:40 AM
**To:** Jill Vovaris <JVovaris@Kleinfelder.com>; Susan_Zimmermann@fws.gov; angela_boyer@fws.gov; Erin.Hazelton@dnr.state.oh.us
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** RE: Duke Acoustic Survey Report Links

**External Email.**

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Hi Jill –

We received the reports for the Duke Energy Maineville to Morrow and the Butler Phase I projects. Acoustic surveys for both of these sites established the likely presence of two state endangered bat species, *Myotis lucifugus* and *Perimyotis subflavus.* Therefore, DOW recommends that no cutting take place at these sites prior to Oct 1. If tree cutting is necessary before this date, we can provide recommendations for limited cutting upon request.

Sarah

Sarah Stankavich
Wildlife Technician (bats/pollinators)
ODNR Division of Wildlife
2045 Morse Road
Columbus, OH 43229
Phone: 614-265-6764
Email: sarah.stankavich@dnr.state.oh.us



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**From:** Jill Vovaris <JVovaris@Kleinfelder.com>
**Sent:** Monday, August 24, 2020 5:49 PM
**To:** Susan_Zimmermann@fws.gov; Stankavich, Sarah <Sarah.Stankavich@dnr.state.oh.us>; angela_boyer@fws.gov; Hazelton, Erin <Erin.Hazelton@dnr.state.oh.us>
**Cc:** Lane, Steve <Steve.Lane@duke-energy.com>; Seth Sanders <SDSanders@Kleinfelder.com>
**Subject:** FW: Duke Acoustic Survey Report Links

Hello,

Please see below for the links to the Duke Energy Maineville to Morrow and the Butler Phase I Acoustic Survey Reports.

Please contact me with any questions.

Thanks,
Jill

Jill Vovaris
Kleinfelder
VP- Ohio River Valley Operations
724.757.6210

# Files Available on the Kleinfelder File Transfer Site

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From: **Matthew Albright**
Workspace: **Albright_Matthew**
Date: **08/24/20 at 12:41 pm PDT**

1. **2020.009 - Butler County Integrity Upgrades Acoustic Survey Report-FINAL.pdf** (58.44 MB) in Albright_Matthew
https://kleinfelder.filegenius.com/downloadPublic/p2l3lzdxypn3ngg/pmurfukj7bstkep

2. **2020.008 - Maineville Morrow Loop Line Acoustic Survey Report-FINAL.pdf** (55.34 MB) in Albright_Matthew
https://kleinfelder.filegenius.com/downloadPublic/p68ykfqrzglrvsn/sq8lf4x39iufo3g

These links will expire on **09/03/20 at 12:41 pm PDT**

This email was sent to the following recipients: **Matthew Albright**, malbright@kleinfelder.com

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**Transaction Source:** Kleinfelder FILETRANSFER SITE, https://kleinfelder.filegenius.com
**Time/Date of Transaction:** 08/24/20 at 12:41 pm PDT

A Survey Report Prepared for:

**Kleinfelder, Inc.**

# SURVEY REPORT FOR A PRESENCE/PROBABLE ABSENCE ACOUSTIC SURVEY FOR FEDERALLY THREATENED OR ENDANGERED BAT SPECIES FOR THE PROPOSED BUTLER COUNTY INTEGRITY UPGRADES – PHASE 1 PROJECT IN BUTLER COUNTY, OHIO.

Prepared by:

Chance Osborne

**Encarna, LLC.**

August 21, 2020

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## APPENDICES



## TABLES

# 1 INTRODUCTION

## 1.1 Project Introduction

Duke Energy Ohio, Inc. (Duke) is proposing to bolster pressure in small diameter feeder lines in Liberty Township, Hamilton, and Middletown in Butler County, Ohio, known as the Butler County Integrity Upgrades – Phase 1 Project (Project). Increasing this pressure will better position assets to create a future loop to provide an alternate gas path for alternate supply from Dick's Creek to south of Huntsville, Ohio. The Project was initially reviewed using the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC). Based upon the information obtained from the IPaC, it was determined that the Project may provide suitable summer habitat for the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*). A copy of the IPaC report is available within the USFWS Ohio Field Office (USFWS OHFO) and Ohio Department of Natural Resources (ODNR) approved Study Plan (Study Plan) found in Appendix A. The Project has an area of interest (AOI) of approximately 44.3 acres and a limit of disturbance (LOD) of approximately 15.1 acres, which will result in the removal of less than 1.0 acres of suitable forested habitat (Appendix B, Figure 2).

Kleinfelder, Inc. (Kleinfelder) contracted Encarna, LLC. (Encarna) on behalf of Duke to conduct a summer acoustic survey to determine the presence/probable absence of threatened and/or endangered bat species within the Project area during the summer maternity season. The following survey report details the findings of the approved Study Plan (Appendix A) that was conducted between 12 August 2020 and 14 August 2020. The Project is located on the Trenton 7.5-Minute U.S. Geological Survey topographic quadrangle near Woodsdale, Ohio (Appendix B, Figure 1).

## 1.2 Habitat Present Within Project Area

Land cover types present within and surrounding the proposed Project AOI were comprised of agricultural fields, riparian areas, existing energy infrastructure, fence rows, early successional and secondary growth forests, residential developments, existing roads, existing right-of-ways, and herbaceous openings. Dominant tree species among the site locations included American sycamore (*Platanus occidentalis*), box elder (*Acer negundo*), crabapple tree (*Malus sylvestris*), black locust (*Robinia pseudoacacia*), honey locust (*Gleditsia triacanthos*), tree-of-heaven (*Ailanthus altissima*), black walnut (*Juglans nigra*), black willow (*Salix nigra*), and Kentucky coffeetree (*Gymnocladus dioicus*).

## 2 METHODS

### 2.1 Acoustic Survey

Prior to conducting the acoustic survey, a study plan was submitted to the USFWS OHFO and ODNR on 9 August 2020 proposing an acoustic survey for the entire alignment of the Project. The USFWS OHFO concurred with the proposal on 11 August 2020 and ODNR provided authorization to proceed on 12 August 2020. Copies of the approved Study Plan and agency correspondence can be found in Appendix A.

To address the presence/probable absence of threatened and/or endangered bat species within the Project survey area during the summer maternity season, Encarna conducted a summer acoustic survey pursuant to the USFWS "2020 Indiana Bat Summer Survey Guidelines" (USFWS 2020) from 12 August 2020 to 14 August 2020. Based upon those guidelines, linear projects in the Indiana Bat Midwest Recovery Unit require a minimum of two detector nights per kilometer (0.6 miles) of suitable forested habitat to determine the presence/probable absence of federally threatened and/or endangered bat species (USFWS 2020). A detector night is defined as the operation and deployment of one acoustic monitoring device from sunset to sunrise for one calendar night. The acoustic survey had an effort of one detector per kilometer block at four different locations for two calendar nights, resulting in a total level of effort of eight detector nights. Acoustic detector locations are depicted on Figures 2 – 7 in Appendix B and in Table 3.

Final acoustic detector locations were determined by USFWS approved bat biologist Chance Osborne (USFWS Native Endangered and Threatened Species Recovery Permit No. TE62778B-1) in the field and their locations were recorded using a Trimble Geo 7x Global Positioning System. Detectors were placed in suitable habitat locations (forest openings, riparian corridors, woodland edges, etc.) within the Project area that were most likely to capture high quality bat call sequences based on available land access. Photographs of the erected detector assemblies at each survey location can be found in Appendix E.

The survey effort was originally proposed for five detectors at five different site locations for a total of 10 detector nights. Due to access issues, site BC-2 was not surveyed and will not be included in the request for concurrence. Additionally, one site location (BC-7) varied from the proposed locations within the study plan due to access issues. Access was only granted at one location within the kilometer block and the detector was placed below a tree line near a small stream.

The acoustic survey was completed using Titley Scientific Anabat SD2 Active Bat Detectors. Field verification of detector functionality was completed by creating ultrasonic sounds (finger rubs, finger snaps) in front of the microphone prior to the start and at the finish of each survey. To provide data in settings where the amount of light may be variable due to the habitat present (deeper/dark forested valleys or corridors, ridge tops, open areas, etc.) and to avoid missing early-flying bats, detectors were set to record from 10 minutes prior to sunset to 10 minutes after sunrise.

To aid in improving recording quality, each detector was deployed at a height greater than three meters above ground level vegetation on an extendable pole and microphones were positioned in the center of the potential flight path/zone in areas with no vegetation within at least 10 meters (33 feet) in front of the microphone. The detector at site BC-7 was deployed on a tripod (approximately 1.5 meters) instead of an extendable pole due to overhead power lines. The stream within the small tree line was very dense, and this allowed the directional microphone to be placed in the optimal potential flight path/zone where an opening for the stream occurred. All acoustic sites were spaced at least 656 feet (200 meters) apart and no weatherproofing equipment was used.

Each detector was equipped with at least an 8-gigabyte compact flash memory card (CF card) to store all data and recorded files for zero-crossing analysis using a division ratio of 16 and at a sensitivity level of six. Recorded data was downloaded daily to ensure data organization and protection and the CF cards were erased and recalibrated before each deployment.

USFWS recommends that if temperatures fall below 50° Fahrenheit (10° Celsius) during the first five hours; precipitation, including rain and/or fog, that does not stop within 30 minutes or continues intermittently; and sustained winds greater than nine miles/hour (four meters/second; 3 on Beaufort scale) for 30 minutes or more, then sampling for that night must be repeated (USFWS 2020). Nightly weather conditions were checked using the nearest NOAA National Weather Service Station, and surveys at all locations were conducted in weather conditions that satisfied USFWS recommendations.

For each night at every survey location, the date, survey start and end time, site description, site coordinates, detector specifics, and weather conditions were recorded. Sunset times were at approximately 20:35 and sunrise times were at approximately 06:49 during the survey effort. Detectors were set to record from 20:25 to 07:00

each night. Weather data can be found in Appendix C and completed acoustic survey datasheets can be found in Appendix D.

### 2.2 Analysis of Recorded Echolocation Calls

Encarna used Kaleidoscope Pro Version 5.1.0, with a classification of North America 5.1.0, sensitivity level set to zero (balanced), and a minimum pulse setting of five to conduct automated acoustic analysis for all site locations. This version of Kaleidoscope is currently approved by USFWS and when using the program for auto-identification, it identifies each file to the species level and filters out noise files to a separate folder. It also includes a Maximum Likelihood Estimator (MLE) that statistically evaluates the risk of false positives within each individual species result. The MLE function generates p-values for the likely presence of each species within a site location by night. A low p-value (p-value ≤0.05) indicates a high confidence level of species presence at the site for the night being evaluated. Conversely, a high p-value would suggest those species are not likely present or could be false positive identifications for each species respectively.

## 3 RESULTS

During the survey effort over three calendar nights, four acoustic detectors were deployed. Kaleidoscope Pro identified a total of 1,217 bat call files and of those,1,103 files (90.6%) were identified to the species level. The MLE generated by Kaleidoscope had confidence in five species: big brown bat (*Eptesicus fuscus*), Eastern red bat (*Lasiurus borealis*), little brown bat (*Myotis lucifugus*), evening bat (*Nycticeius humeralis*), and tricolored bat (*Perimyotis subflavus*). The Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) were found not likely to be present.

Surveys were conducted between the nights of 12 August 2020 and 14 August 2020. All detectors functioned properly and surveys at all site locations were conducted in weather conditions that satisfied USFWS recommendations, which yielded eight valid detector nights of survey effort. Table 1 includes a summary of call identifications by site and night. Table 2 provides the MLE p-values for each species identification at each site and night. Both tables can be found in Appendix C.

## 4 SUMMARY

Duke is proposing to bolster pressure in small diameter feeder lines which will better position assets to create a future loop to provide alternate gas supply in Butler County, Ohio. The Project has an AOI of approximately 44.3 acres and a LOD of approximately 15.1 acres, which will result in the removal of less than 1.0 acres of suitable forested habitat. A summer acoustic survey was conducted with the appropriate level of effort and under the appropriate conditions to investigate the presence/probable absence of threatened and/or endangered bat species. Five bat species were considered to likely be present within the Project area: big brown bat, Eastern red bat, little brown bat, evening bat and tricolored bat. No sites resulted in a p-value that would suggest Indiana bats or northern long-eared bats are present within the Project area.

The results of this acoustic survey indicate that the Project will not likely adversely affect threatened and/or endangered bat species populations within the Project area. On behalf of Duke, Encarna would like to request concurrence that at sites BC-1, BC-3, BC-4 and BC-7, the Project will not adversely affect threatened and/or endangered bat species. In addition, Encarna would also like to request that Duke can remove the proposed acreage of suitable forested habitat outside of the seasonal tree clearing window (October 1 – March 31).

## 5 REFERENCES

U.S. Fish and Wildlife Service (USFWS). 2020. 2020 Range-Wide Indiana Bat Summer Survey Guidelines (March 2020). USFWS Endangered Species Program: Midwest Region.

# APPENDIX A: Approved Study Plan & Agency Coordination

A Study Plan Prepared for:

**Kleinfelder, Inc.**

# STUDY PLAN FOR A PRESENCE/ABSENCE ACOUSTIC SURVEY FOR FEDERALLY THREATENED OR ENDANGERED BAT SPECIES FOR THE PROPOSED BUTLER COUNTY INTEGRITY UPGRADES – PHASE 1 PROJECT IN BUTLER COUNTY, OHIO.


Prepared by:

Chance Osborne

**Encarna, LLC.**


August 9, 2020

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## APPENDICES

# 1 INTRODUCTION

Duke Energy (Duke) is proposing to bolster pressure in small diameter feeder lines in Liberty Township, Hamilton, and Middletown in Butler County, Ohio, known as the Butler County Integrity Upgrades – Phase 1 (Project). Increasing this pressure will better position assets to create a future loop to provide an alternate gas path for alternate supply from Dick's Creek to south of Hunstville, Ohio. The Project has an area of interest (AOI) of approximately 44.3 acres and a limit of disturbance (LOD) of approximately 15.1 acres, which will result in the removal of less than 1.0 acres of suitable forested habitat (Appendix B, Figure 1). The Project was reviewed using the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC). Based upon the information obtained from the IPaC, it was determined that the Project may provide suitable summer habitat for the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*). A copy of the IPaC report is available in Appendix A.

Kleinfelder, Inc. (Kleinfelder) contracted Encarna, LLC. (Encarna) on behalf of Duke to develop a study plan to determine if federally threatened or endangered bats are present within the Project area during the summer maternity season. The survey methods within the study plan described herein are in accordance with the current USFWS "2020 Range-Wide Indiana Bat Survey Guidelines" to conduct acoustic surveys for bats (USFWS 2020).

The results from this survey will be used to assess the amount of risk to threatened and/or endangered bat species within the Project area, and to determine if avoidance and minimization efforts are required for the Project. The positive identification of echolocation calls from threatened and/or endangered bat species will be considered evidence that bats are currently occupying the potentially suitable forested habitat within the Project area. The lack of positively identified calls from threatened and/or endangered bat species will be considered sufficient evidence that these species are not present within the Project area during the summer maternity season.

# 2 METHODS

## 2.1 Acoustic Survey

Encarna will conduct an acoustic survey in order to determine the presence/probable absence of federally threatened or endangered bat species within the Project area during the summer survey season. Acoustic sampling will be conducted between August 13 and August 15, 2020. For linear projects in the Indiana Bat

Midwest Recovery Unit, the current USFWS Guidelines require a minimum of 2 detector nights per kilometer (0.6 miles) of suitable forested habitat to determine the presence/probable absence of federally threatened and/or endangered bat species (USFWS 2020). A detector night is defined as the operation and deployment of one acoustic monitoring device for one night. The proposed acoustic survey will have an effort of one detector at five locations for two nights, resulting in a total level of effort of 10 detector nights. Proposed potential acoustic detector locations are depicted on Figures 2 – 7 in Appendix B.

Acoustic monitoring will begin at sunset and continue until sunrise for each night of sampling, and detectors will be positioned at suitable sites within the Project area where access is permitted. These sites can include forest canopy openings, nearby water sources, forested fence lines, areas where potential roost trees are present, road and/or stream corridors with open canopies, and forest edges. Each detector will be deployed at a height greater than three meters above ground level vegetation, where feasible, to aid in improving recording quality. Omnidirectional microphones will be deployed horizontally in the center of the potential flight path/zone. Additionally, all acoustic sites will be spaced at least 656 feet (200 meters) apart.

In the event that adverse weather conditions occur during the survey period such as temperatures that fall below 50° Fahrenheit (10° Celsius) during the first five hours; precipitation, including rain and/or fog, that does not stop within 30 minutes or continues intermittently; and sustained winds greater than nine miles/hour (four meters/second; 3 on Beaufort scale) for 30 minutes or more, then sampling for that night must be repeated (USFWS 2020).

For each survey night, the date, survey start and end time, site description and coordinates, detector specifics (detector model, detector location, detector orientation, habitat type where detector is deployed), and weather conditions will be recorded.

## 2.2 Analysis of Recorded Echolocation Calls

Coarse screening for high frequency (HF) or myotid calls will take place following the procurement of all data from each site location. In the event a positive detection of HF or myotid calls is found, then automated acoustic analysis of each site that has a positive identification will be conducted. Encarna will review the recorded data from night one at each acoustic site location and then run each night's data through Kaleidoscope, which is an approved acoustic bat ID program from USFWS. If threatened or endangered bat presence is considered likely

at one or more sites, then qualitative analysis of recorded calls to the species level will be conducted. This qualitative analysis will include a comparison of the results from each site and night.

Encarna will provide the results of this acoustic survey to the Ohio Department of Natural Resources (ODNR) and the USFWS Ohio Ecological Services Field Office within 10 days of completing the survey.

## 3 REFERENCES

U.S. Fish and Wildlife Service (USFWS). 2020. 2020 Range-Wide Indiana Bat Summer Survey Guidelines (March 2020). USFWS Endangered Species Program: Midwest Region.

## APPENDIX A: U.S. FISH AND WILDLIFE SERVICE INFORMATION FOR PLANNING AND CONSULTATION REPORT

**IPaC** **U.S. Fish & Wildlife Service**

Last login August 08, 2020 04:36 PM MDT

# 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

Butler County, Ohio

# Local office

Ohio Ecological Services Field Office

(614) 416-8993
(614) 416-8994

4625 Morse Road, Suite 104
Columbus, OH 43230-8355

# 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 species[1] 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 Fisheries[2]).

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.
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 |
|---|---|
| Indiana Bat Myotis sodalis<br>There is **final** critical habitat for this species. Your location is outside the critical habitat.<br>https://ecos.fws.gov/ecp/species/5949 | Endangered |
| Northern Long-eared Bat Myotis septentrionalis<br>This species only needs to be considered if the following condition applies:<br>• Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/9045 | Threatened |

# Flowering Plants

| NAME | STATUS |
|---|---|
| Running Buffalo Clover Trifolium stoloniferum<br>No critical habitat has been designated for this species.<br>https://ecos.fws.gov/ecp/species/2529 | Endangered |

# 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.

# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.) |
|---|---|
| **Bald Eagle** *Haliaeetus leucocephalus*<br>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.<br>https://ecos.fws.gov/ecp/species/1626 | Breeds Oct 15 to Aug 31 |
| **Black-billed Cuckoo** *Coccyzus erythropthalmus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9399 | Breeds May 15 to Oct 10 |
| **Bobolink** *Dolichonyx oryzivorus*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Jul 31 |
| **Henslow's Sparrow** *Ammodramus henslowii*<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/3941 | Breeds May 1 to Aug 31 |

| | |
|---|---|
| Lesser Yellowlegs Tringa flavipes<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9679 | Breeds elsewhere |
| Prothonotary Warbler Protonotaria citrea<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds Apr 1 to Jul 31 |
| Red-headed Woodpecker Melanerpes erythrocephalus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Sep 10 |
| Rusty Blackbird Euphagus carolinus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Short-billed Dowitcher Limnodromus griseus<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.<br>https://ecos.fws.gov/ecp/species/9480 | Breeds elsewhere |
| Wood Thrush Hylocichla mustelina<br>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 10 to Aug 31 |

# Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

**Probability of Presence** (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

**Breeding Season** (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

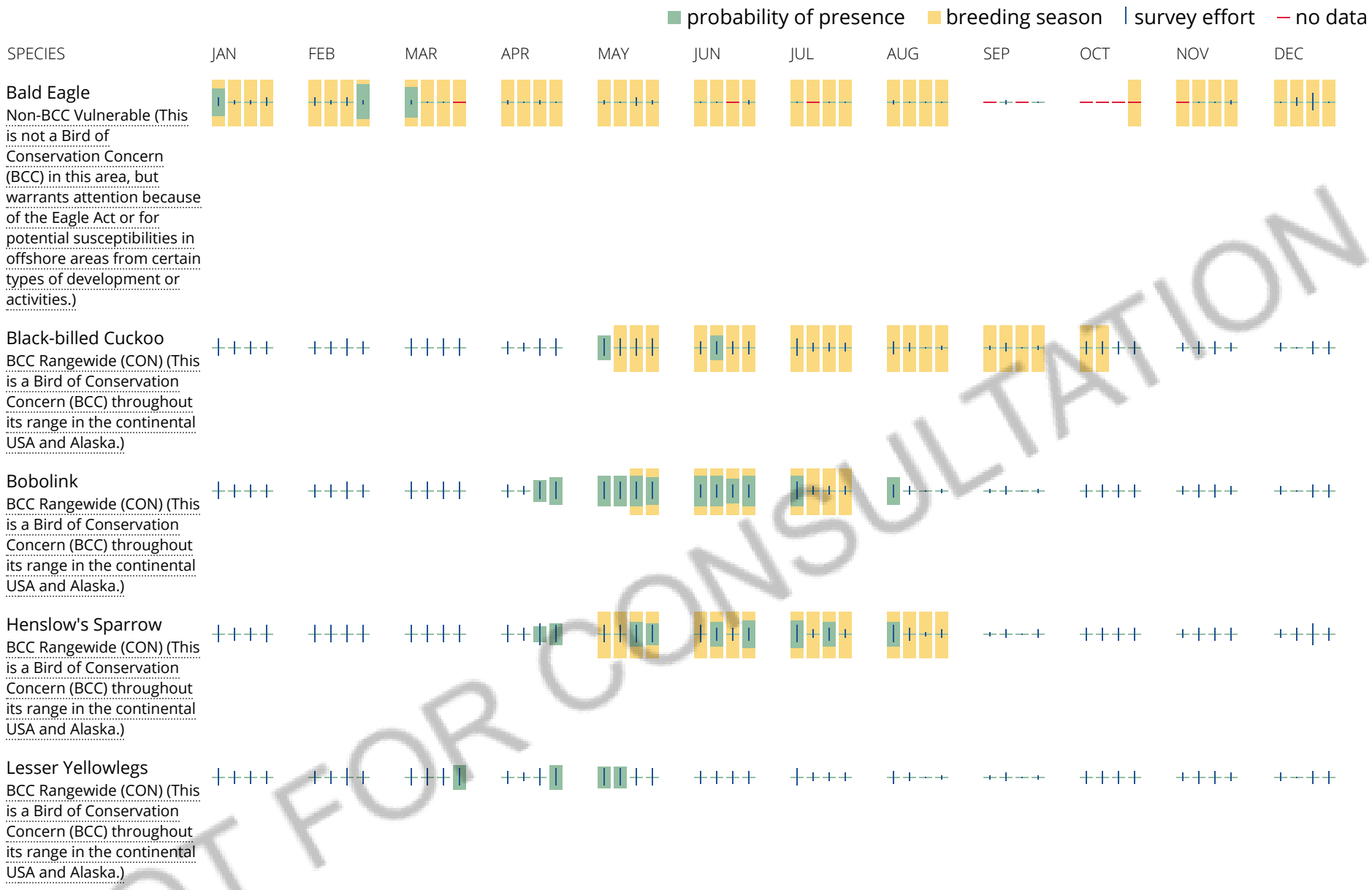
**Survey Effort** (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

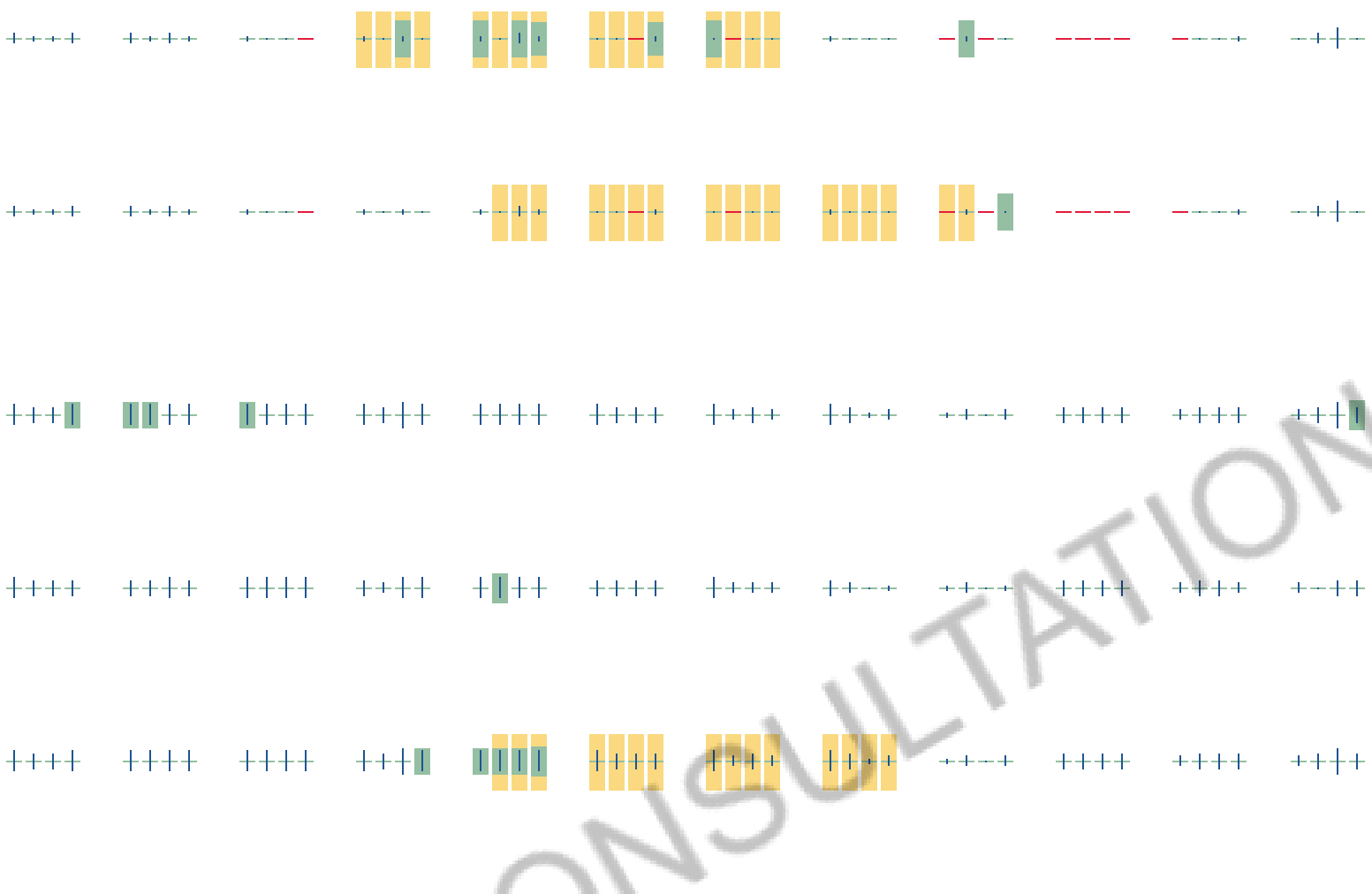
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

**No Data** (–)
A week is marked as having no data if there were no survey events for that week.

**Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Prothonotary Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Red-headed Woodpecker
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Rusty Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wood Thrush
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



**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 and/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 migratory birds potentially occurring 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 AKN Phenology 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, migrating or present year-round in my project 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 refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. 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

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**

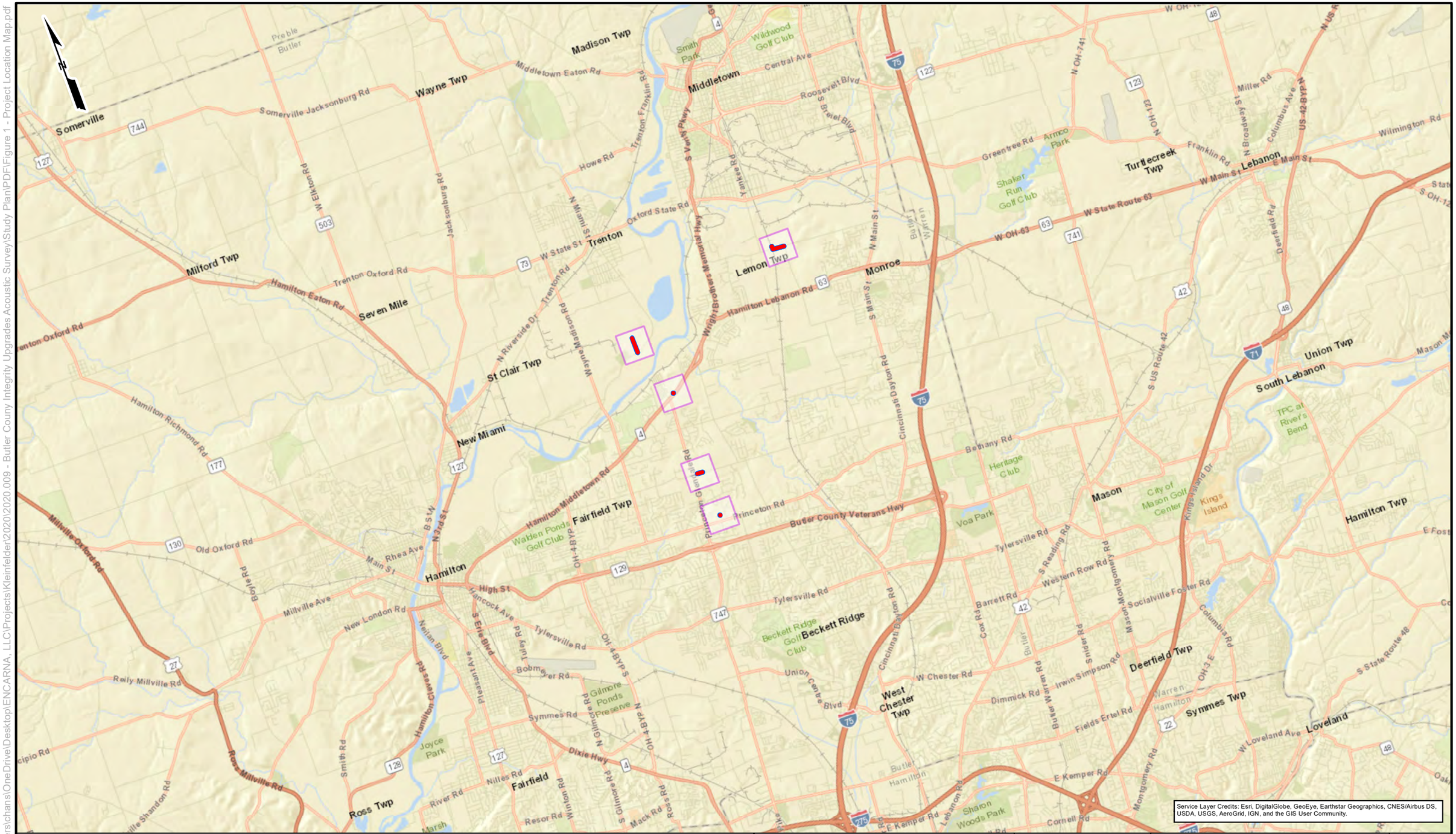
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid 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.

## APPENDIX B: PROJECT MAPPING

Document Path: C:\Users\chans\OneDrive\Desktop\ENCARNA, LLC\Projects\Kleinfelder\2020\2020.009 - Butler County Integrity Upgrades Acoustic Survey\Study Plan\PDF\Figure 1 - Project Location Map.pdf




## Legend

- Proposed Project LOD (Proposed Project LOD (±15.1 Acres))
- Proposed Project Alignment
- Proposed Project AOI (Proposed Project LOD (±44.3 Acres))

0 5,500 11,000 22,000 Feet

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|---|---|
| PROJECT NO. | 2020.008 |
| DRAWN: | 08/08/2020 |
| DRAWN BY: | CTO |
| FILE NAME: | See File Path |

# Project Location Map

Duke Energy
Butler County Integrity Upgrades - Phase 1
Butler County, Ohio

FIGURE
1