

APPENDIX B – WETLAND DELINEATION REPORT

EASTERN KENTUCKY POWER COOPERATIVE

WETLAND DELINEATION REPORT FOR THE LIBERTY RICE PLANT PROJECT

PROJECT NO. 168547
REVISION 1
DATE: OCTOBER 16, 2024

CONTENTS

1.0	Introduction	1-1
2.0	Methods	2-1
2.1	Existing Data Review	2-1
2.2.1	Hydrophytic Vegetation.....	2-2
2.2.2	Hydric Soil.....	2-2
2.2.3	Wetland Hydrology.....	2-2
2.2.4	Surface Water Assessment - Streams	2-2
2.2.5	Surface Water Assessment - Ponds and Lakes	2-3
2.2.6	Regulatory Considerations.....	2-3
2.2.7	Alternate Wetland Boundary Delineation Method	2-4
3.0	Results.....	3-1
3.1	Existing Data Review	3-1
3.1.1	USGS 7.5-minute Topographic Maps	3-1
3.1.2	FEMA FIRM.....	3-1
3.1.3	USFWS NWI.....	3-1
3.1.4	USGS NHD	3-1
3.1.5	USDA NRCS SSURGO	3-2
3.1.6	USACE Antecedent Precipitation Tool.....	3-2
3.2	Site Investigation Results.....	3-2
3.2.1	Wetlands	3-3
3.2.2	Streams	3-4
3.2.3	Ponds	3-7
4.0	Summary.....	4-1
5.0	References	5-1

APPENDIX A - FIGURES

APPENDIX B - WETLAND DETERMINATION DATA FORMS

APPENDIX C.1 - MARCH 27 & MAY 29, 2024 PHOTOGRAPH LOG

APPENDIX C.2 - AUGUST 19-22, 2024 PHOTOGRAPH LOG

APPENDIX D - ANTECEDENT PRECIPITATION TOOL

1.0 Introduction

East Kentucky Power Cooperative (EKPC) is proposing to construct a new gas-fired reciprocating internal combustion engine (RICE) plant and a rebuild of an approximately 8-mile-long segment of associated transmission lines (Project). The Project is located approximately 4 miles north of the City of Liberty, Casey County, Kentucky approximately at the coordinates 37.370160°, -84.959488° (Figure 1).

EKPC contracted Burns & McDonnell Engineering Company, Inc (Burns & McDonnell) to provide wetland delineation for the proposed Project. The wetland delineation survey was conducted within an approximately 100-acre Project property and an approximately 144-acre transmission corridor (Survey Area). The purpose of this assessment was to identify wetlands and surface waters present within the Survey Area that may be considered “Waters of the United States” [(WOTUS) 40 CFR 120.2(a)] and subject to regulation under Section 404 of the federal Clean Water Act (CWA) by the U.S. Army Corps of Engineers (USACE) and under CWA Section 401 by the Kentucky Division of Water.

Burns & McDonnell conducted a wetland and surface water delineation on March 27 and May 29, 2024 at the 100-acre Project property and resource identification within the transmission corridor August 19-22, 2024, to ascertain the potential location and extent of wetlands and surface waters present within the Survey Area. This report documents the methods and results of the desktop and field investigations conducted to identify wetlands and surface waters for the Project.

2.0 Methods

The following sections summarize the methods used to complete the desktop review of existing data to conduct the field investigations within the Survey Area.

2.1 Existing Data Review

Burns and McDonnell reviewed available background information for the Survey Area prior to conducting the site visits. Information reviewed included the following:

- U.S. Geological Survey (USGS) 7.5-minute topographic maps (Liberty, KY quadrangle)
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM 2011) from the National Flood Hazard Layer (NFHL)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) map (USFWS 2024)
- USGS National Hydrography Dataset (NHD)
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil
- Survey Geographic (SSURGO 2022) digital data for Casey County, Kentucky

Maps generated from this available data are included in Appendix A. Figure 2 contains NWI and NHD data. Figure 3 contains NRCS soils and FEMA flood hazard data.

Desktop data is used to aid in identifying locations of potential wetlands and surface waters. However, as these features may not have been field verified or may have been modified since the data was published, field-collected data will supersede mapped desktop data.

2.2 Wetland Delineation

Identification of wetlands is based on a three-factor approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology, in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* [(1987 Manual), Environmental Laboratory 1987]. An alternate methodology was used during the August survey, and is discussed in Section 2.2.7 below.

The USACE released regional supplements to the 1987 Manual outlining updated technical guidance and procedures for identifying wetland criteria. The Survey Area is located within the *2012 Regional Supplement to the Corps of Engineers Wetland Delineation 1987 Manual: Eastern Mountains and Piedmont Region, Version 2.0* [(Supplement), USACE 2012].

The wetland determination evaluated the hydrophytic vegetation, hydric soil, and wetland hydrology indicators outlined in the Supplement for each sample point. These wetland determination data forms can be found in Appendix B. Photographs of the sample points and

all identified features were taken on site and can be found in Appendix C.1 and Appendix C.2. A general overview of the wetland indicators are provided below.

2.2.1 Hydrophytic Vegetation

To evaluate the presence of hydrophytic vegetation, species coverage data are gathered using a graduated series of plots, one for each vegetation stratum. Plot shape and size are dictated by vegetation strata type being evaluated. Sample plots are typically circular with tree and vine stratum plots having a 30-foot radius, shrub stratum plots having a 15- radius, and herbaceous plots having a 5-foot radius.

The indicator status and percent absolute cover for plants within plots for all vegetation strata are recorded. The indicator status for plant species are based on an estimated probability of occurring in wetlands. This indicator rating system, published by the USACE in 2020 under the title “The National Wetland Plant List, version 3.5” (USACE 2020), identifies species as either obligate wetland plants (OBL), facultative-wet plants (FACW), facultative plants (FAC), facultative upland plants (FACU), or upland plants (UPL). Obligate plant species generally grow in water. Facultative plant species can exist in saturated or dry soil conditions, and upland plants typically require dry soil conditions to exist.

2.2.2 Hydric Soil

A description of the soil profile is used to evaluate the presence of hydric soils. The hydric soil indicators are presented in the Supplement are a subset of the National Technical Committee for Hydric Soils Field Indicators of Hydric Soils in the United States and are regularly modified. The most recent version of Field Indicators of Hydric Soils is Version 8.2 (USDA NRCS 2018) and was used for this delineation.

2.2.3 Wetland Hydrology

Wetland hydrology indicators in the Supplement are separated into four groups divided into a primary or secondary indicator categories. Primary indicators provide stand-alone evidence of a current or recent hydrological event. Secondary indicators provide evidence of recent inundation or saturation when supported by one or more other primary indicators or secondary wetland hydrology indicators but should not be used alone.

Hydrology indicators are affected by the quantity of rainfall preceding fieldwork. If drought conditions exist, that must be considered when evaluating the hydrology indicators. An Antecedent Precipitation Tool developed by the USACE is used to evaluate antecedent rainfall as compared to the 30-year normal range.

2.2.4 Surface Water Assessment - Streams

Surface waters may only have one or two of the wetland criteria listed above. To identify streams, the USACE defines an ordinary high water mark (OHWM) as the boundary of surface waters (33 CFR 328.3(c)(4)), which defines the OHWM as the “...line on the shore established by fluctuations of water and is indicated by physical characteristics such as:

- Clear, natural line impressed on the bank,
- Shelving,

- Changes in the character of soil,
- Destruction of terrestrial vegetation,
- The presence of litter and debris, or
- Other appropriate means that consider the characteristics of the surrounding areas.”

During normal, low streamflow or drought conditions, the OHWM is used to determine the regulatory boundary of a surface water. During extremely high streamflow conditions or flood conditions the OHWM boundaries of surface waters cannot accurately be determined. Therefore, surface water boundaries should not be delineated when high stream flow or flood conditions are present.

Flow regime was based on the Relatively Permanent Standard that relies on the duration and timing of flow. Relatively permanent waters include tributaries that have flowing or standing water year-round or continuously during certain times of year. The phrase “Certain times of the year” is intended to include extended periods of standing or continuously flowing water occurring in the same geographic feature year after year, except in times of drought. Relatively permanent flow may occur seasonally, but the phrase is also intended to encompass tributaries in which extended periods of standing or continuously flowing water are not linked to naturally recurring annual or seasonal cycles.

Relatively permanent waters do not include tributaries with flowing or standing water for only a short duration in direct response to precipitation. The phrase “Direct response to precipitation” is intended to distinguish between episodic periods of flow associated with discrete precipitation events versus continuous flow for extended periods of time (USEPA 2023).

2.2.5 Surface Water Assessment – Ponds and Lakes

Interstate and intrastate lakes, playa lakes, and natural ponds are all considered WOTUS when their use, degradation, or destruction could affect interstate or foreign commerce. Based on the Cowardin classification system (Cowardin et al, 1979), lakes are lacustrine open water systems that are 20 acres or more, with less than 30 percent vegetative coverage, and are greater than 2-meters deep. Ponds are open water palustrine (less than 2-meters deep) or lacustrine (greater than 2-meters deep) systems that are less than 20 acres, with less than 30-percent vegetation.

2.2.6 Regulatory Considerations

The U.S. Army Corps of Engineers decision from the U.S. Supreme Court Case *Sackett v. EPA* led to the revised the definition of a regulated WOTUS. On November 15, 2023, the U.S. Environmental Protection Agency and the USACE issued “*Updates for Tribes and States on “Waters of the United States”*” (88 FR 61964), which is an update to the revised rules relevant for implementing either the 2023 rule or the pre-2015 regulatory regime. In Kentucky, the operative definition of “Waters of the United States” is based on the pre-2015 regulatory regime implemented consistent with the *Sackett* decision. Based on this document and for purposes of this report, the scientific opinions of jurisdictional determination will be based on the USACE’s “Relatively Permanent Standard” for determining if a WOTUS is jurisdictional.

Relatively permanent waters (RPW) include tributaries that have flow or standing water year-round or continuously during certain times of year. RPWs do not include tributaries with flow or standing water for only a short duration in direct response to precipitation. “Direct response to precipitation” is intended to distinguish between episodic periods of flow associated with discrete precipitation events versus continuous flow for extended periods of time (USEPA 2023). Evaluations of jurisdictional status provided in this report are based on this regulatory framework and definition of WOTUS, and the professional scientific opinion of Burns & McDonnell’s wetland staff. Only the USACE can provide a legal determination of a resource’s jurisdictional status.

2.2.7 Alternate Wetland Boundary Delineation Method

For the August 19-22, 2024 field work along the transmission line portion of the Project, the methodology for identifying wetlands was modified. For the transmission line, an assumption was made that all wetland resources are avoidable therefore, a less restrictive rapid-approach to identify potential wetlands was employed. Potential wetlands were determined only by the observed presence of a predominance of hydrophytic vegetation; no soil and no hydrology indicators were evaluated. This less restrictive approach could potentially identify a greater quantity or larger size of wetlands, which was intentional to assure avoidance of all wetland resources during construction. Therefore, sample data points were not collected and determination forms were not completed. The wetland/upland boundary was established following the typical method of vegetation observation. The boundaries of any potential wetlands were captured using a sub-meter accurate Global Positioning System (GPS) unit. No modifications were made to the methodology for assessing streams.

3.0 Results

The following sections describe the results of the existing data review and completed wetland delineation.

3.1 Existing Data Review

Burns & McDonnell reviewed available background information for the Survey Area. These sources provide an indication of areas where wetlands and surface waters potentially occur and certain characteristics. A summary of the available background information is presented below and is mapped in the Figures in Appendix A.

3.1.1 USGS 7.5-minute Topographic Maps

The USGS topographic map indicates the Survey Area crosses predominantly rolling hilly areas. The Survey Area also crosses steeper sloping valleys that are associated with named and unnamed blue line streams. (Appendix A, Figures 1 and 2).

3.1.2 FEMA FIRM

The FEMA dataset indicates that the Survey Area crosses three floodplains. The floodplains are associated with Brush Creek, the Green River, and Moccasin Creek (Appendix A, Figure 3).

3.1.3 USFWS NWI

The digital format NWI maps were developed by USFWS in collaboration with the USGS, Water Resource Division using data from 1987 and are periodically updated. The maps are prepared primarily by stereoscopic analysis of high-altitude aerial photographs to produce reconnaissance level information on the location, type, and size of wetlands and deepwater habitats. All potential wetlands are identified based on vegetation, visible hydrology, and geography in accordance with the Cowardin System (Cowardin et al, 1979). According to the USFWS, the aerial photographs reflect conditions during the year and season they were taken; however, there is a margin of error inherent in the use of aerial photographs to identify wetlands. Therefore, wetland boundaries established through interpretation of aerial photographs must be field verified based upon detailed ground survey.

The NWI map indicates one palustrine wetland and ten riverine features located within the Survey Area. There are multiple other palustrine features shown outside of and adjacent to the Survey Area (Appendix A, Figure 2).

3.1.4 USGS NHD

The NHD represents the water drainage network of the United States with features such as rivers, streams, canals, lakes, ponds, coastline, dams, and stream gages. The NHD is updated and maintained through partnerships with states and other collaborative bodies. The NHD data indicates that five streams are located within the Survey Area associated with Brush Creek, an unnamed tributary to Brush Creek, Barger Branch, Moccasin Creek, and Green River (Appendix A, Figure 2).

3.1.5 USDA NRCS SSURGO

The NRCS Web Soil Survey (USDA NRCS 2022a) is generated from the USDA-NRCS certified data. The NRCS Soil Data Access (SDA) Hydric Soils List (USDA NRCS 2022b) contains a compilation of all map units with either a major or minor component that is at least in part hydric. As the list includes both major and minor percentages for map units, in some cases most of the map unit may not be hydric. The list is useful in identifying map units that may contain hydric soils.

The NRCS SSURGO digital data indicates that portions of 20 soil map units are located within the Survey Area (Appendix A, Figure 3). One of these soil units is considered hydric on the national hydric soil lists. The soils present in the Survey Area include:

- CgC - Carpenter gravelly silt loam, 6 to 12 percent slopes
- CoF - Colyer silt loam, 20 to 50 percent slopes
- FdD2 - Faywood silt loam, 12 to 20 percent slopes, eroded
- FfE2 - Faywood-Fairmount-Rock outcrop complex, 20 to 30 percent slopes
- FkC - Frankstown silt loam, 6 to 12 percent slopes
- FkD - Frankstown silt loam, 12 to 20 percent slopes
- FrC - Frederick silt loam, 6 to 12 percent slopes
- GaF - Garmon silt loam, 30 to 60 percent slopes
- Jo - Johnsburg silt loam
- LcE - Lenberg-Carpenter complex, 12 to 30 percent slopes
- Ln - Lindside silt loam
- **Me - Melvin silt loam, 0 to 2 percent slopes (Hydric)**
- Ne - Newark silt loam, 0 to 2 percent slopes
- No - Nolin silt loam, 0 to 2 percent slopes
- PrB - Pricetown silt loam, 2 to 6 percent slopes
- PrC - Pricetown silt loam, 6 to 12 percent slopes
- Sk - Skidmore very gravelly loam
- TeB - Teddy silt loam, 2 to 6 percent slopes
- TrC - Trappist silt loam, 6 to 12 percent slopes
- Yo - Yosemite gravelly silt loam

3.1.6 USACE Antecedent Precipitation Tool

The USACE's Antecedent Precipitation Tool (APT) was run for the previous 30-day period prior to fieldwork. The 30-day running total of rainfall is compared by the tool to the 30-year normal rainfall range. The tool results indicated that both the March and August surveys were completed during normal hydrologic conditions while the May 29 survey was completed during wetter than normal hydrologic conditions. A copy of the results is included in Appendix D.

3.2 Site Investigation Results

A total of 8 wetlands, 71 streams, and 6 ponds were identified. The wetlands, streams, and ponds are summarized in Tables 1, 2, and 3, respectively, and are mapped on Figure 4 in Appendix A. A Wetland Determination Data Form from the Supplement was completed at the RICE plant site to confirm the upland area (Appendix B). Natural color photographs of the sample plot, streams, and all identified features were taken on site (Appendix C). The

locations of these photographs can be seen in Appendix A, Figure 5. Locations of sample plots, surface water boundaries, and other identified features were surveyed using a sub-meter accurate GPS unit. The APT results indicated the Survey Area was experiencing normal conditions at the time of both survey efforts.

3.2.1 Wetlands

During the survey low lying areas with the potential to be wetlands were investigated across the entire Survey Area. As there were no wetlands identified at the RICE plant site, a sample plot was taken to confirm the absence of wetlands in a typical low lying area. Eight wetlands were found within the transmission line portion of the Survey Area. Refer to Table 1 below and Appendix A Figures 4 and 5 for details of each wetland.

Table 1: Summary of Wetlands within the Survey Area

Wetland Number ^a	Wetland Type ^b	Area of Wetland in Survey Area (acre)	Figure 4 Page Number	Anticipated Federally Regulated WOTUS (Y/N) ^c
W1	PEM	0.02	10	N
W2	PSS	0.76	6	Y
W3	PEM	0.04	6	N
W4	PSS	0.08	6	N
W5	PEM	0.01	3	Y
W6	PEM	0.04	4	Y
W7	PEM	0.01	8	N
W8	PEM	0.25	7	N
Total:		1.21		

(a) Assigned by Burns & McDonnell staff during the Site Investigation; W = Wetland

(b) Symbols for wetland type; PEM = Palustrine Emergent Wetland, PSS = Palustrine Scrub-Shrub

(c) Anticipated jurisdiction is based on professional scientific judgement using the pre 2015 regulatory regime consistent with the 2023 Sackett v. Environmental Protection Agency decision. Final determination is made by the USACE.

3.2.2 Streams

A total of 71 streams were delineated within the Survey Area. Refer to Table 2 below and Appendix A Figures 4 and 5 for details of each stream.

Table 2: Summary of Streams within the Survey Area

Stream Number ^a	Stream Type ^b	Flow Regime ^c	Anticipated Federally Regulated WOTUS (Y/N) ^d	Stream Name ^e	OHWM Width (feet)	OHWM Depth (feet)	Length of Delineated Stream in Survey Area (feet)	Figure 4 Page
S1	I	RPW	Y	UNT	2.00	0.25	401.96	1
S2	P	RPW	Y	UNT	9.00	0.50	1525.08	1
	I	RPW	Y	UNT	3.00	0.25	415.00	
S3	E	N	N	UNT	0.75	0.10	89.23	1
S4	I	RPW	Y	UNT	4.00	0.10	181.15	1
S5	I	RPW	Y	UNT	4.00	0.20	900.48	1
	E	N	N	UNT	1.00	0.20	67.87	1
S6	E	N	N	UNT	2.50	0.20	345.24	1
S7	E	N	N	UNT	1.50	0.10	325.79	1
S8	I	RPW	Y	UNT	4.00	0.25	746.02	1
	E	N	N	UNT	1.00	0.10	166.71	
S9	I	RPW	Y	UNT	3.00	0.10	53.23	1
S10	I	RPW	Y	UNT	2.00	0.10	104.41	1
S11	I	RPW	Y	UNT	2.00	0.25	89.56	1
	E	N	N	UNT	3.00	0.10	371.54	
S12	E	N	N	UNT	1.80	0.10	52.67	1
S13	E	N	N	UNT	1.00	0.25	92.41	1
S14	I	RPW	Y	UNT	2.00	0.50	168.87	2
S15	P	RPW	Y	UNT	5.00	1.50	173.23	2
S16	I	RPW	Y	UNT	3.00	0.10	173.01	2
S17	P	RPW	Y	UNT	8.00	0.20	177.38	2
S18	P	RPW	Y	Brush Creek	83.00	0.30	156.42	3
S19	I	RPW	Y	UNT	2.50	0.50	24.51	3
S20	E	N	N	UNT	0.75	0.25	152.13	3
S21	E	N	N	UNT	2.00	1.00	13.19	10
S22	I	RPW	Y	UNT	2.50	0.60	157.20	10
S23	E	N	N	UNT	1.50	0.30	218.67	10
S24	P	RPW	Y	UNT	1.50	0.10	155.95	10
S25	P	RPW	Y	Moccasin Creek	18.00	0.30	663.17	8
S26	E	N	N	UNT	4.00	0.30	9.34	8
S27	P	RPW	Y	UNT	12.00	0.10	15.01	8
S28	E	N	N	UNT	1.00	0.20	222.64	8

Stream Number ^a	Stream Type ^b	Flow Regime ^c	Anticipated Federally Regulated WOTUS (Y/N) ^d	Stream Name ^e	OHWM Width (feet)	OHWM Depth (feet)	Length of Delineated Stream in Survey Area (feet)	Figure 4 Page
S29	E	N	N	UNT	9.00	0.50	401.85	8
S30	E	N	N	UNT	1.00	0.50	160.97	9
S31	I	RPW	Y	UNT	2.00	1.50	168.21	9
S32	E	N	N	UNT	1.50	0.30	92.25	9
S33	E	N	N	UNT	1.00	1.00	37.48	9
S34	E	N	N	UNT	0.75	1.00	38.71	9
S35	I	RPW	Y	UNT	3.00	0.75	185.46	9
S36	E	N	N	UNT	1.00	0.20	103.06	9
S37	E	N	N	UNT	1.00	0.50	33.74	9
S38	E	N	N	UNT	1.00	0.50	64.22	9
S39	I	RPW	Y	UNT	5.00	2.00	172.33	9
S40	I	RPW	Y	UNT	1.20	0.75	191.77	9
S41	I	RPW	Y	UNT	2.25	0.75	172.73	9
S42	P	RPW	Y	Green River	160.00	3.50	187.31	6
S43	E	N	N	UNT	1.00	1.00	36.15	6
S44	P	RPW	Y	Barger Branch	10.00	0.40	207.01	6
S45	E	N	N	UNT	1.00	0.10	4.34	6
S46	E	N	N	UNT	1.50	0.05	34.02	5
S47	I	RPW	Y	UNT	3.25	1.25	161.32	5
S48	P	RPW	Y	UNT	4.50	2.50	1525.51	5
S49	E	N	N	UNT	1.50	0.20	77.07	5
S50	E	N	N	UNT	1.00	0.20	25.77	5
S51	E	N	N	UNT	1.50	0.50	133.08	5
S52	E	N	N	UNT	1.00	1.00	83.19	5
S53	E	N	N	UNT	1.00	1.00	103.18	5
S54	I	RPW	Y	UNT	1.00	0.75	262.82	5
S55	E	N	N	UNT	1.50	1.00	88.72	5
S56	E	N	N	UNT	1.00	0.50	14.73	5
S57	P	RPW	Y	UNT	4.00	0.10	85.35	3
S58	E	N	N	UNT	1.50	1.00	55.14	3
S59	P	RPW	Y	UNT	4.50	3.00	160.33	4
S60	P	RPW	Y	UNT	4.50	0.50	178.76	4
S61	I	RPW	Y	UNT	5.00	0.10	156.51	4
S62	P	RPW	Y	UNT	3.50	2.50	181.91	4
S63	P	RPW	Y	UNT	3.00	0.25	353.67	4
S64	E	N	N	UNT	1.00	0.25	26.94	4
S65	E	N	N	UNT	0.75	0.30	121.28	8
S66	I	RPW	Y	UNT	2.25	0.75	187.49	8

Stream Number ^a	Stream Type ^b	Flow Regime ^c	Anticipated Federally Regulated WOTUS (Y/N) ^d	Stream Name ^e	OHWM Width (feet)	OHWM Depth (feet)	Length of Delineated Stream in Survey Area (feet)	Figure 4 Page
S67	E	N	N	UNT	1.00	0.10	118.77	8
S68	E	N	N	UNT	0.50	0.75	215.85	8
S69	E	N	N	UNT	1.00	0.30	57.92	8
S70	E	N	N	UNT	1.50	0.50	82.52	7
S71	I	RPW	Y	UNT	1.50	0.75	167.56	7
						Total:	15,531.10	

(a) Assigned by Burns & McDonnell staff during the Site Investigation; S = stream

(b) P = Perennial, I = Intermittent, E = Ephemeral

(c) RPW= relatively permanent water, N= non-relatively permanent water

(d) Anticipated jurisdiction is based on professional scientific judgement using the pre 2015 regulatory regime consistent with the 2023 Sackett v. Environmental Protection Agency decision. Final determination is made by the USACE.

(e) Stream name follows the USGS topographic map, NHD, or state/local data source; UNT = Unnamed tributary

3.2.3 Ponds

Six PUB open water ponds were identified within the Survey Area. Refer to Table 3 below and Appendix A Figure 4 and Figure 5 for details on each pond.

Table 3: Summary of Ponds within the Survey Area

Pond Number ^a	Area of Pond in Survey Area (acre)	Figure 4 Page Number	WOTUS (Y/N) ^b
P1	0.06	1	N
P2	0.21	2	N
P3	0.04	10	Y
P4	0.08	4	Y
P5	0.29	3	N
P6	0.26	7	N
Total:	0.95		

(a) Assigned by Burns & McDonnell staff during the Site Investigation; P = PUB/Pond

(b) Anticipated jurisdiction is based on professional scientific judgement using the pre 2015 regulatory regime consistent with the 2023 Sackett v. Environmental Protection Agency decision. Final determination is made by the USACE.

4.0 Summary

Burns & McDonnell conducted a delineation of the Survey Area to identify the potential presence of wetlands and other waterbodies. A total of 8 potential wetlands, 6 open water ponds, and 71 streams were identified within the Survey Area. It is Burns & McDonnell's professional opinion that three of the potential wetlands, 36 of the streams, and 2 of the ponds would be considered jurisdictional by the USACE. The jurisdictional status of delineated features in the Survey Area is only determined by the USACE.

5.0 References

Cowardin, L. M., Carter, V., Golet, F. C., and LaRoe, E. T. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. 131pp. Accessed on September 19, 2024

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. Accessed on September 19, 2024

Federal Emergency Management Agency. Flood Insurance Rate Map, Casey County, Kentucky. Accessed on September 19, 2024

Federal Geographic Data Committee. 2013. Classification of wetlands and deepwater habitats of the United States. FGDC-STD-004-2013. Second Edition. Wetlands Subcommittee, Federal Geographic Data Committee and U.S. Fish and Wildlife Service, Washington, DC. Accessed on September 19, 2024

Federal Register, 2020. "85 FR Part 29689 National Wetland Plant List," U.S. Government Printing Office, Washington, DC. Accessed on September 19, 2024

United States Environmental Protection Agency (USEPA). 2023. Updates for Tribes and States on "Waters of the United States" Accessed at https://www.epa.gov/system/files/documents/2023-11/wotus-overview_tribes-and-states_11-15-23_508.pdf on September 19, 2024

U.S. Army Corps of Engineers. 2005. Ordinary High Water Mark Identification. <https://www.nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl05-05.pdf>. No. 05-05 Accessed on September 19, 2024

U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0*, ed. J. F. Berkowitz, J. S. Wakeley, R. W. Lichvar, C. V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center. Accessed on April 9, 2024

U.S. Army Corps of Engineers 2020. National Wetland Plant List, version 3.5. <http://wetland-plants.usace.army.mil/>. U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH. Accessed on April 9, 2024

U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS). 2018. Field Indicators of Hydric Soils in the United States, A Guide for Identifying and Delineating Hydric Soils, Version 8.2, 2018. April 9, 2024

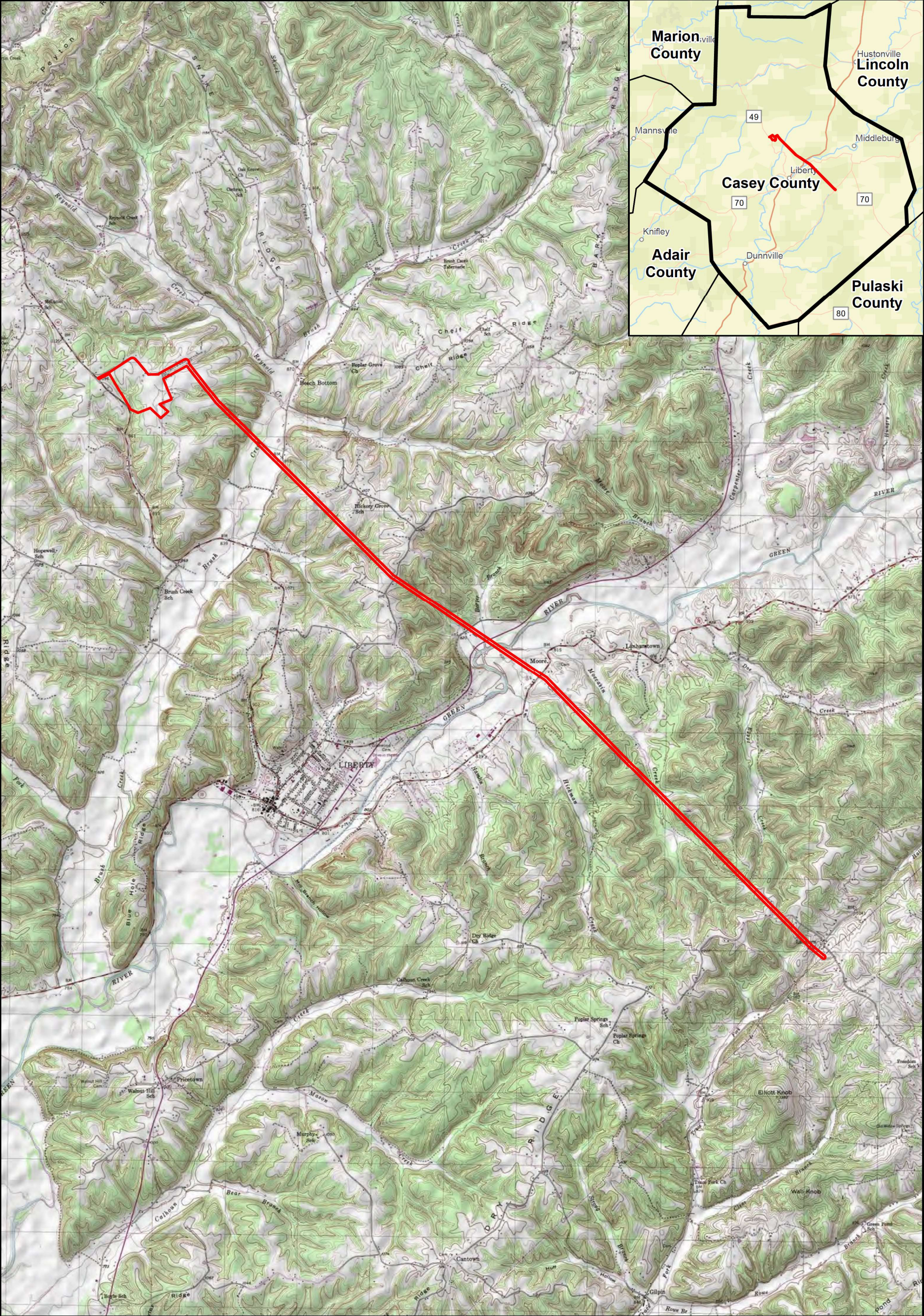
U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS). 2022a. Web Soil Survey. <http://websoilsurvey.nrcs.usda.gov/>. Accessed on September 19, 2024




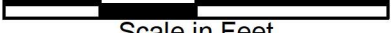

U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS). 2022b. List of Hydric Soils, Washington D.C.,
<https://www.nrcs.usda.gov/publications/Lists%20of%20Hydric%20Soils%20-%20Query%20by%20Soil%20Survey%20Area%20Map%20Unit%20Rating.html>.
Accessed on September 19, 2024

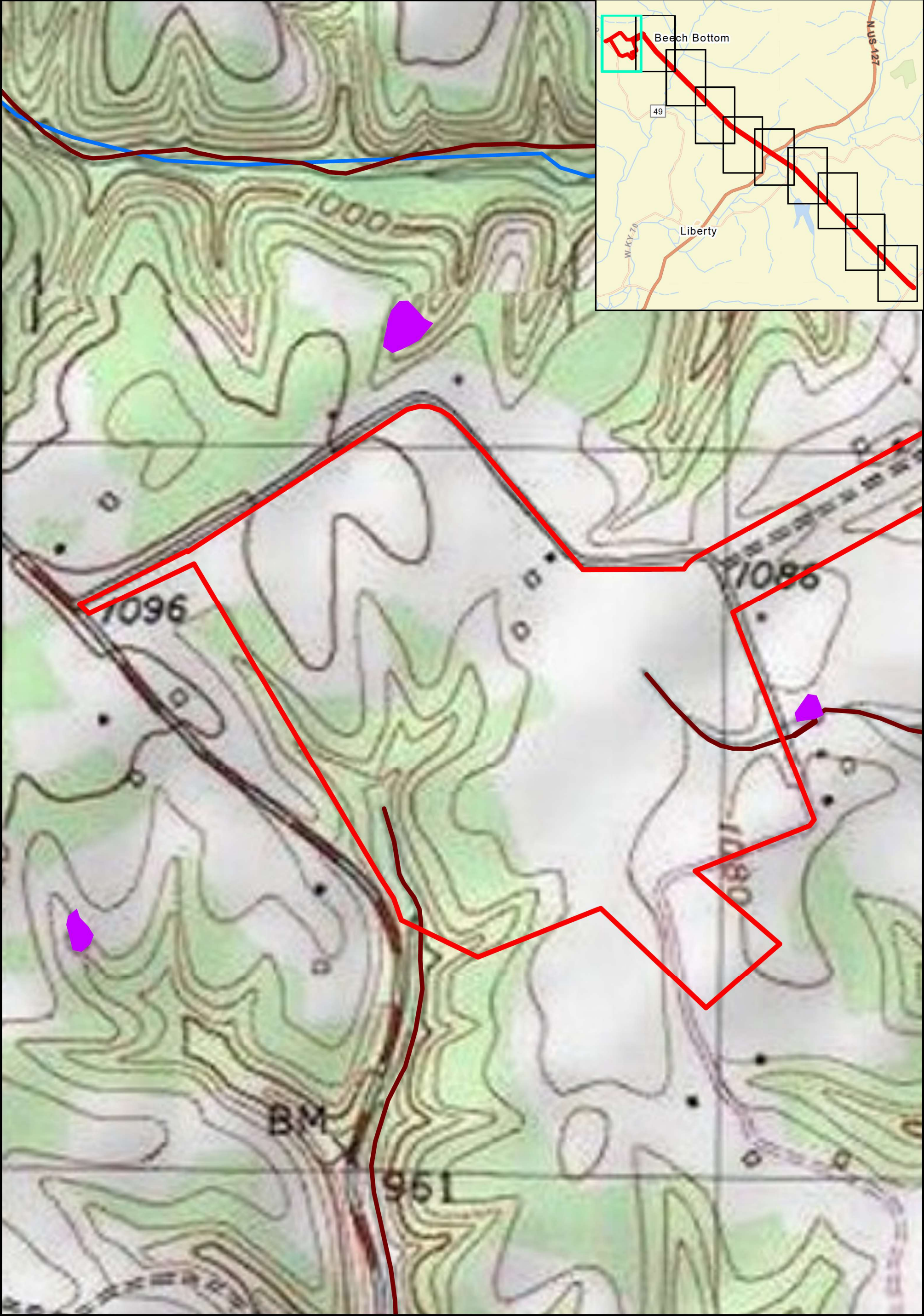
U.S. Fish and Wildlife Service. 2024. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. <http://www.fws.gov/nwi/>.
Accessed on September 19, 2024

U.S. Geological Survey (USGS). 2024. 7.5-minute topographic maps. Liberty, KY Quadrangle.
Accessed on September 19, 2024

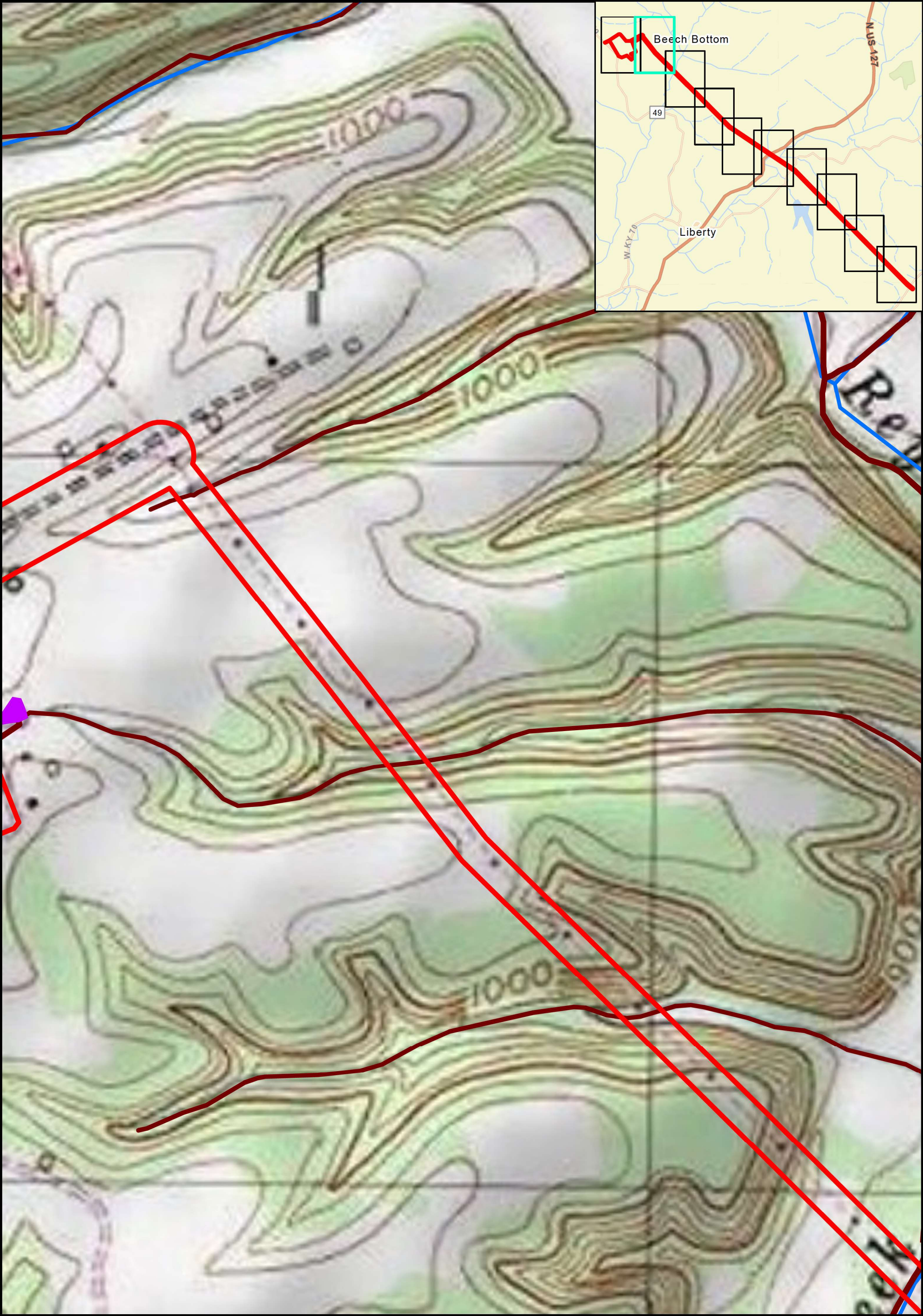
APPENDIX A – FIGURES



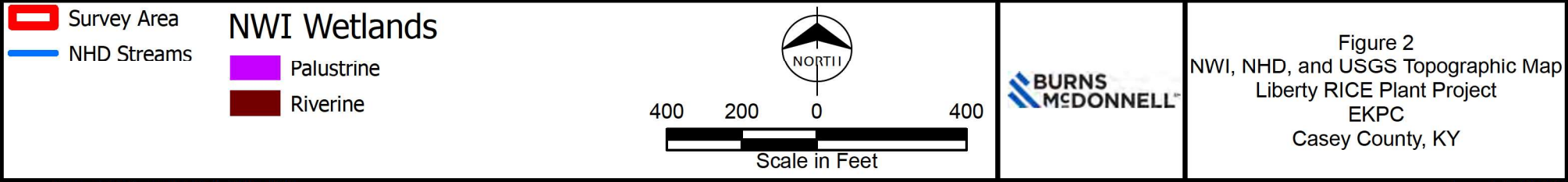
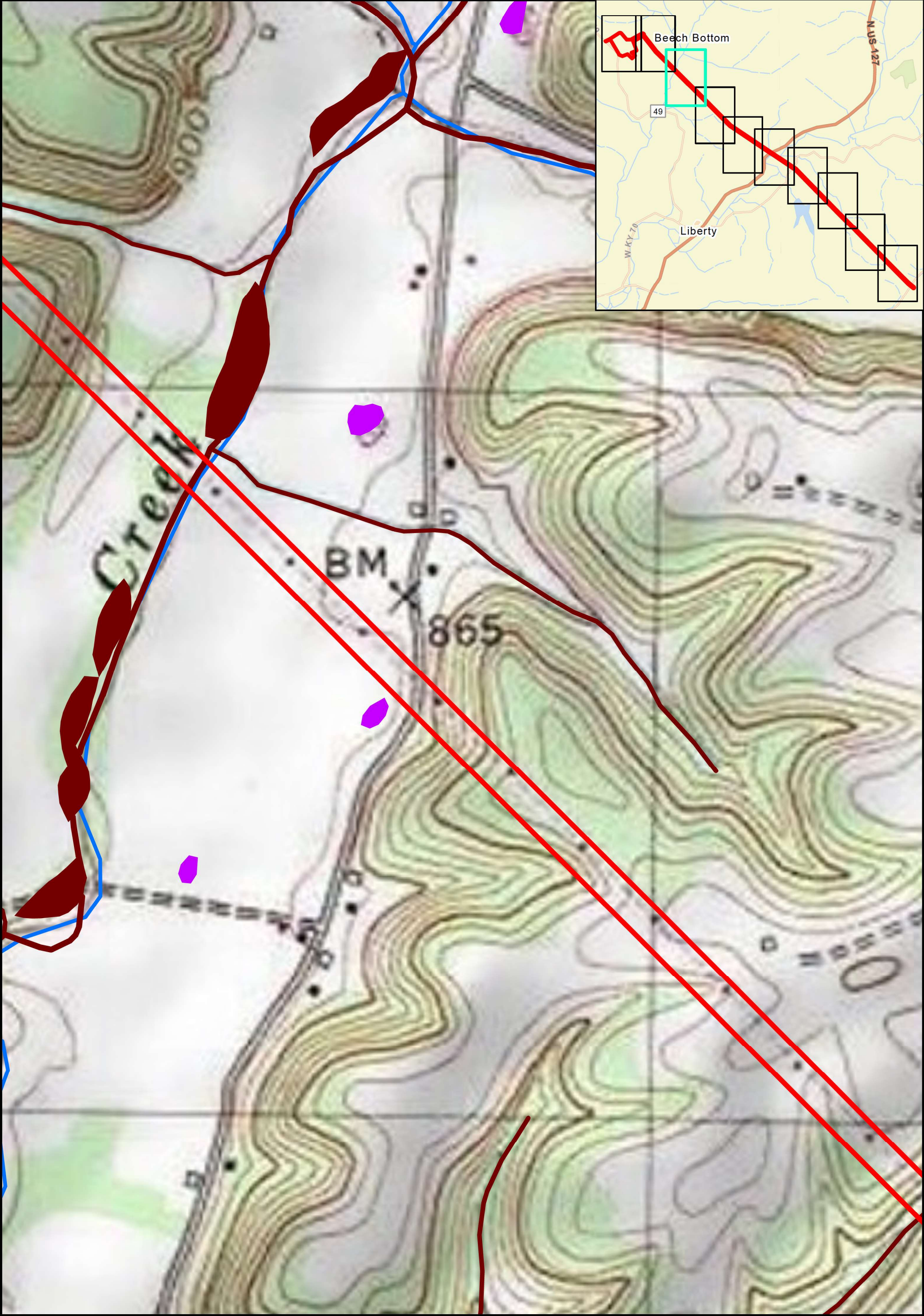
 Survey Area		 4,000 2,000 0 4,000  Scale in Feet		<p>Figure 1 Site Location Map Liberty RICE Plant Project EKPC Casey County, KY</p>
--	---	--	---	--

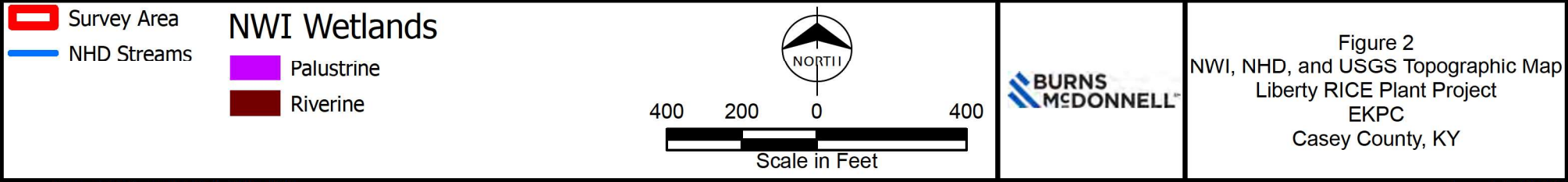
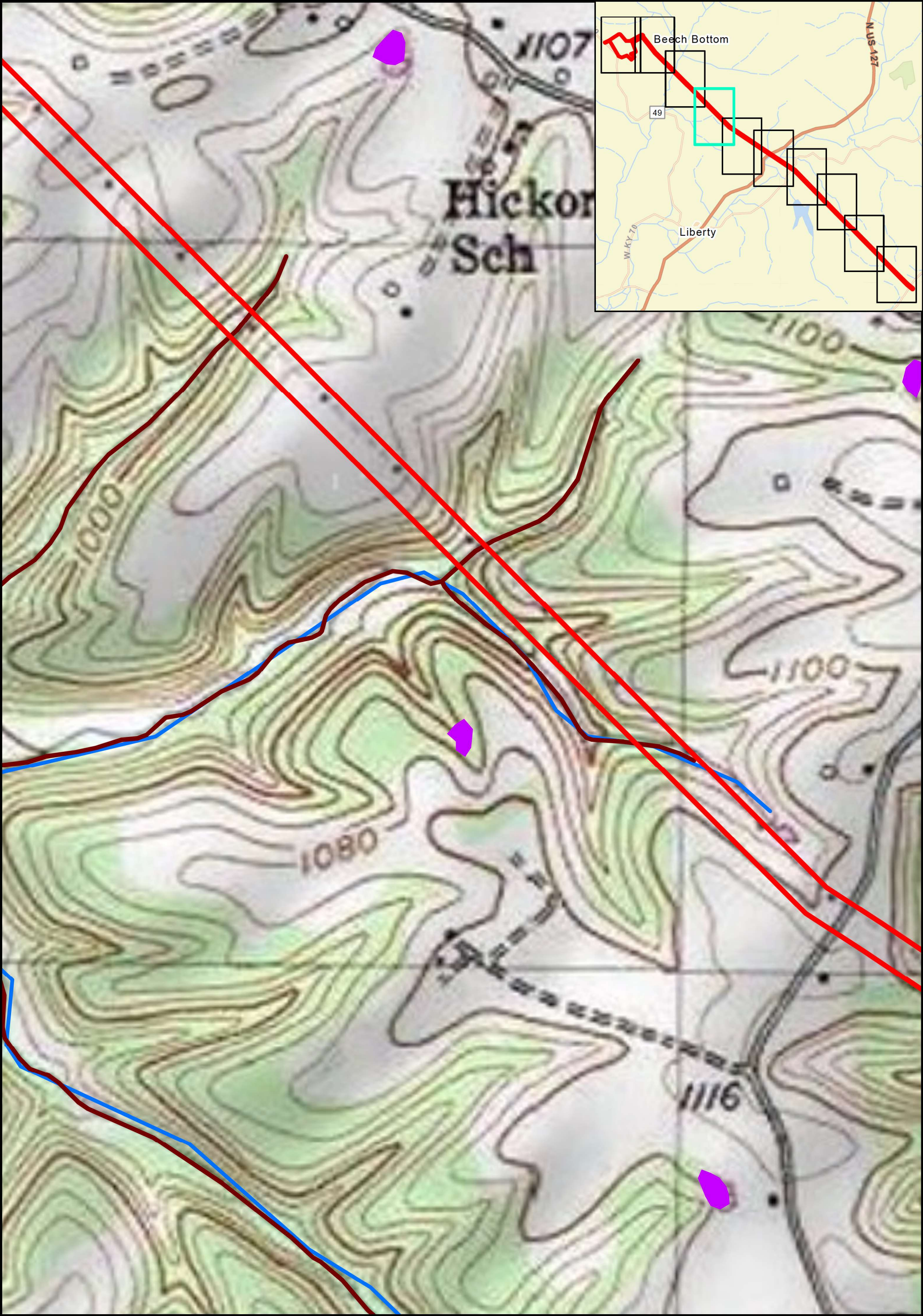


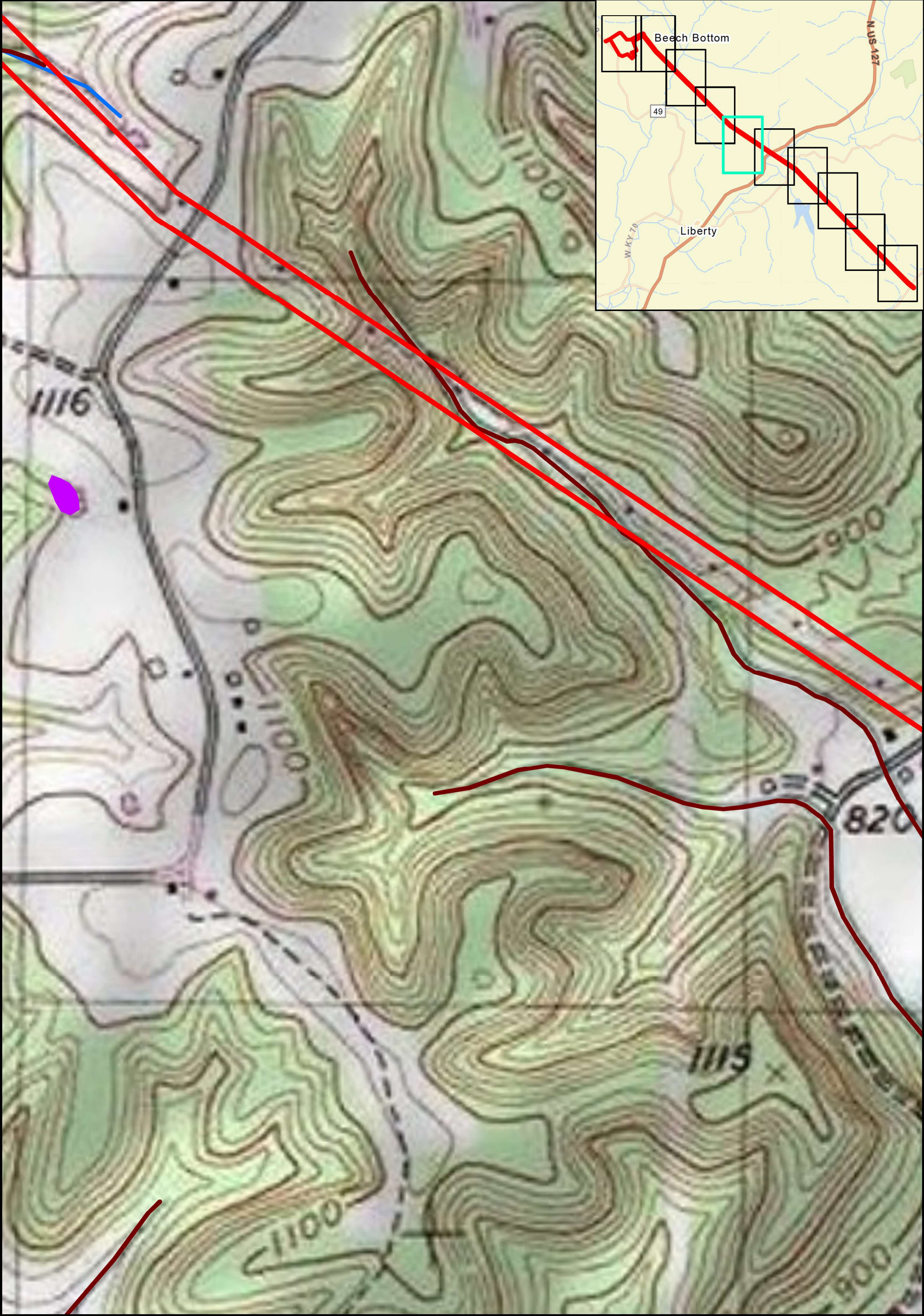
<div><div></div> Survey Area</div> <div><div></div> NHD Streams</div>	<div>NWI Wetlands</div> <div><div></div> Palustrine</div> <div><div></div> Riverine</div>	<div><div></div><div>NORTH</div></div> <div><div>4002000400</div><div>Scale in Feet</div></div>	<div><div></div><div>BURNS MCDONNELL</div></div>	<div>Figure 2</div> <div>NWI, NHD, and USGS Topographic Map</div> <div>Liberty RICE Plant Project</div> <div>EKPC</div> <div>Casey County, KY</div>
---	---	---	--	---



<div><div></div> Survey Area</div> <div><div></div> NHD Streams</div>	<div>NWI Wetlands</div> <div><div></div> Palustrine</div> <div><div></div> Riverine</div>	<div><div><div></div><div>NORTH</div></div><div><div>400</div><div>200</div><div>0</div><div>400</div></div><div>Scale in Feet</div></div>	<div><div><div></div><div>BURNS</div><div>MCDONNELL</div></div></div>	<div><div>Figure 2</div><div>NWI, NHD, and USGS Topographic Map</div><div>Liberty RICE Plant Project</div><div>EKPC</div><div>Casey County, KY</div></div>
---	--	--	---	--







Survey Area

NHD Streams

NWI Wetlands

Palustrine

Riverine

0

200

400

Scale in Feet

BURNS

MCDONNELL

Figure 2

NWI, NHD, and USGS Topographic Map

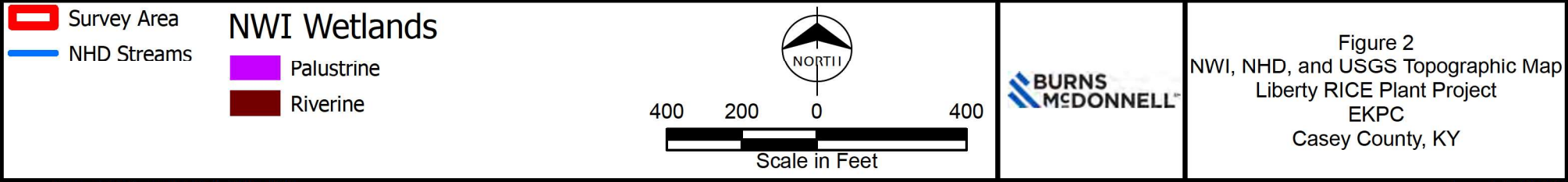
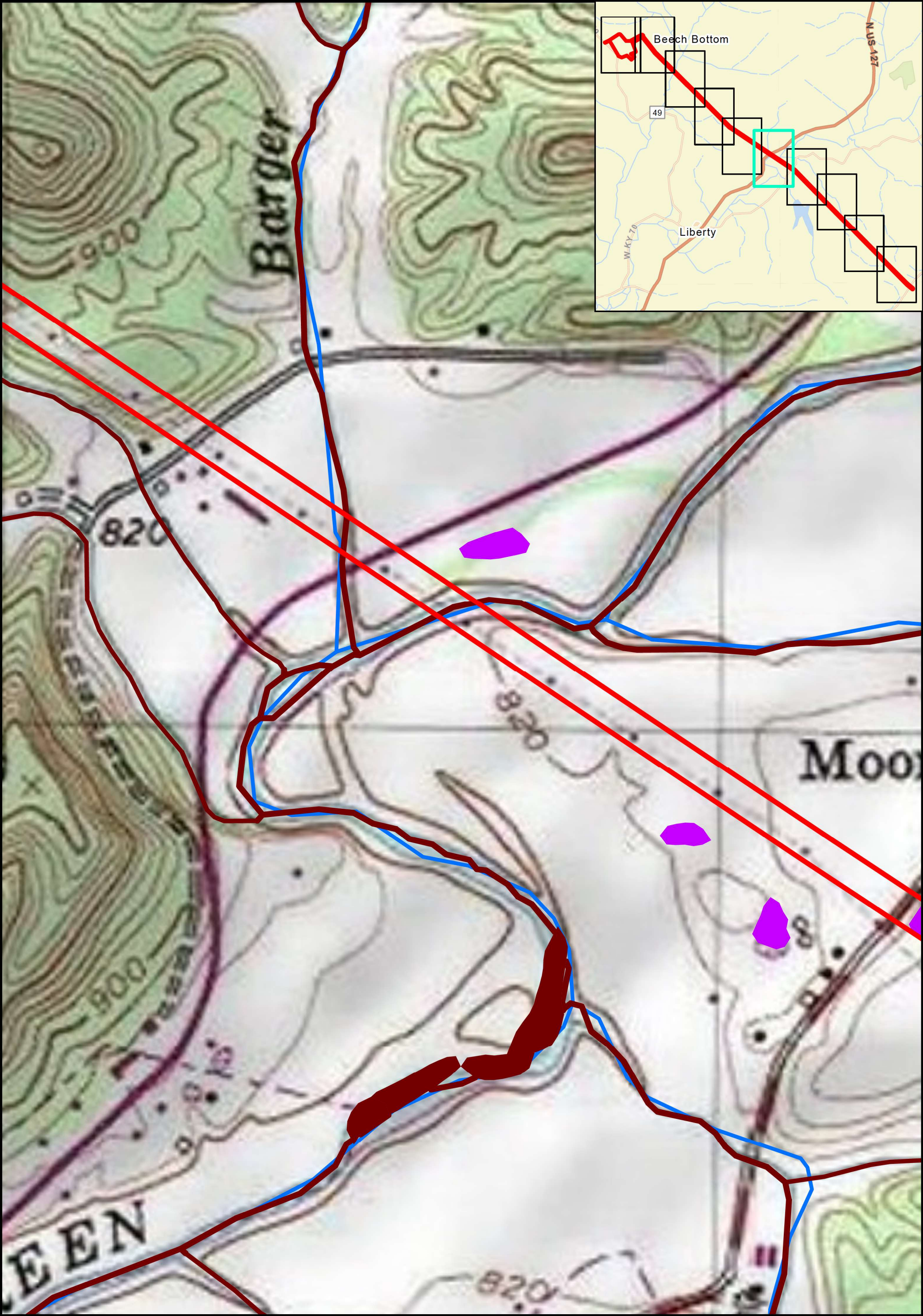
Liberty RICE Plant Project

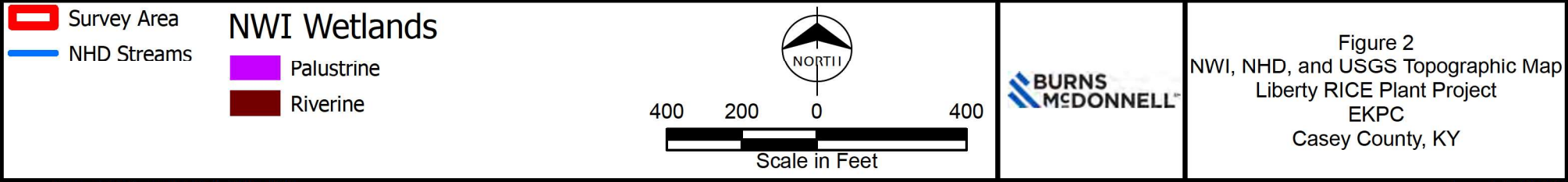
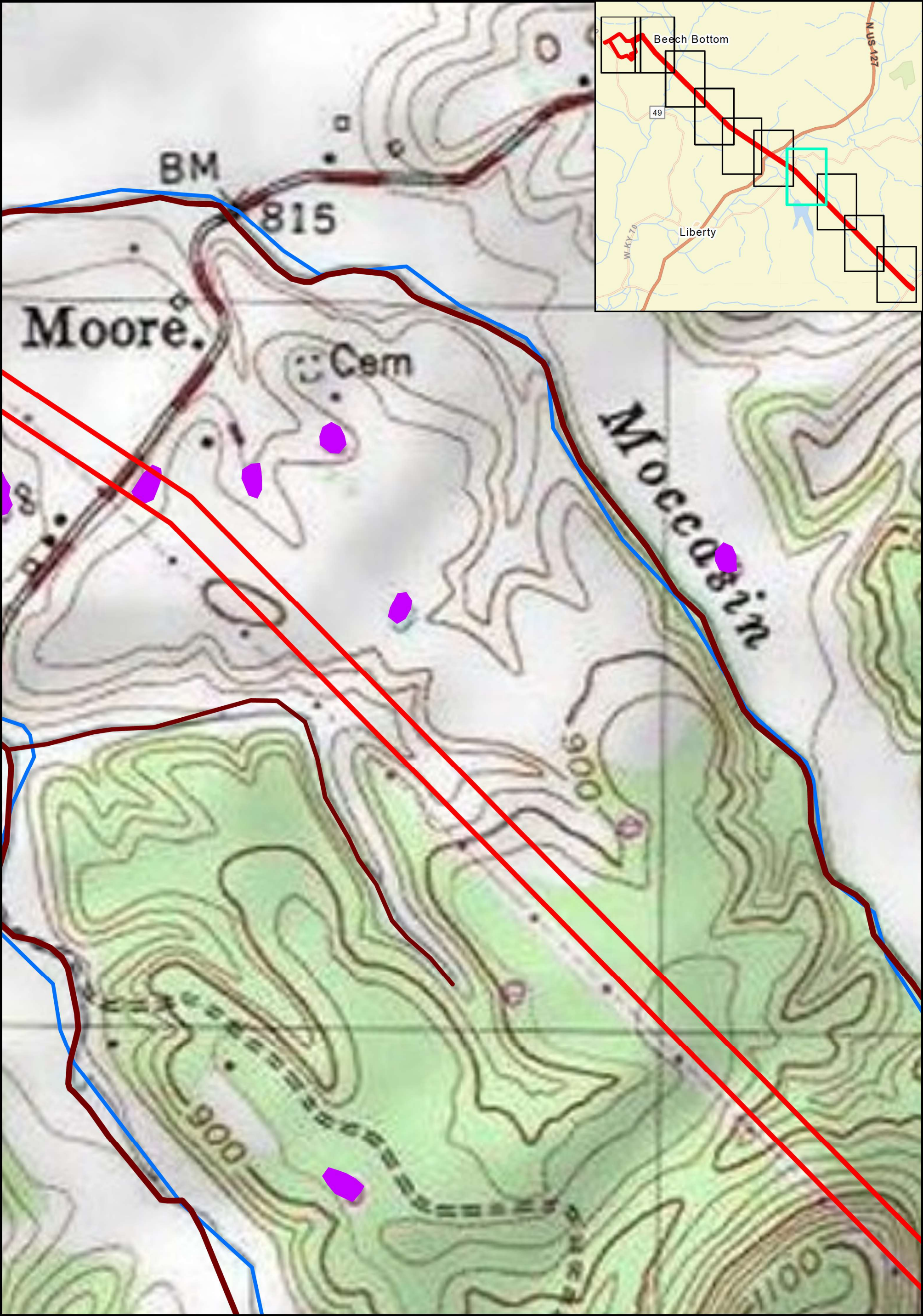
EKPC

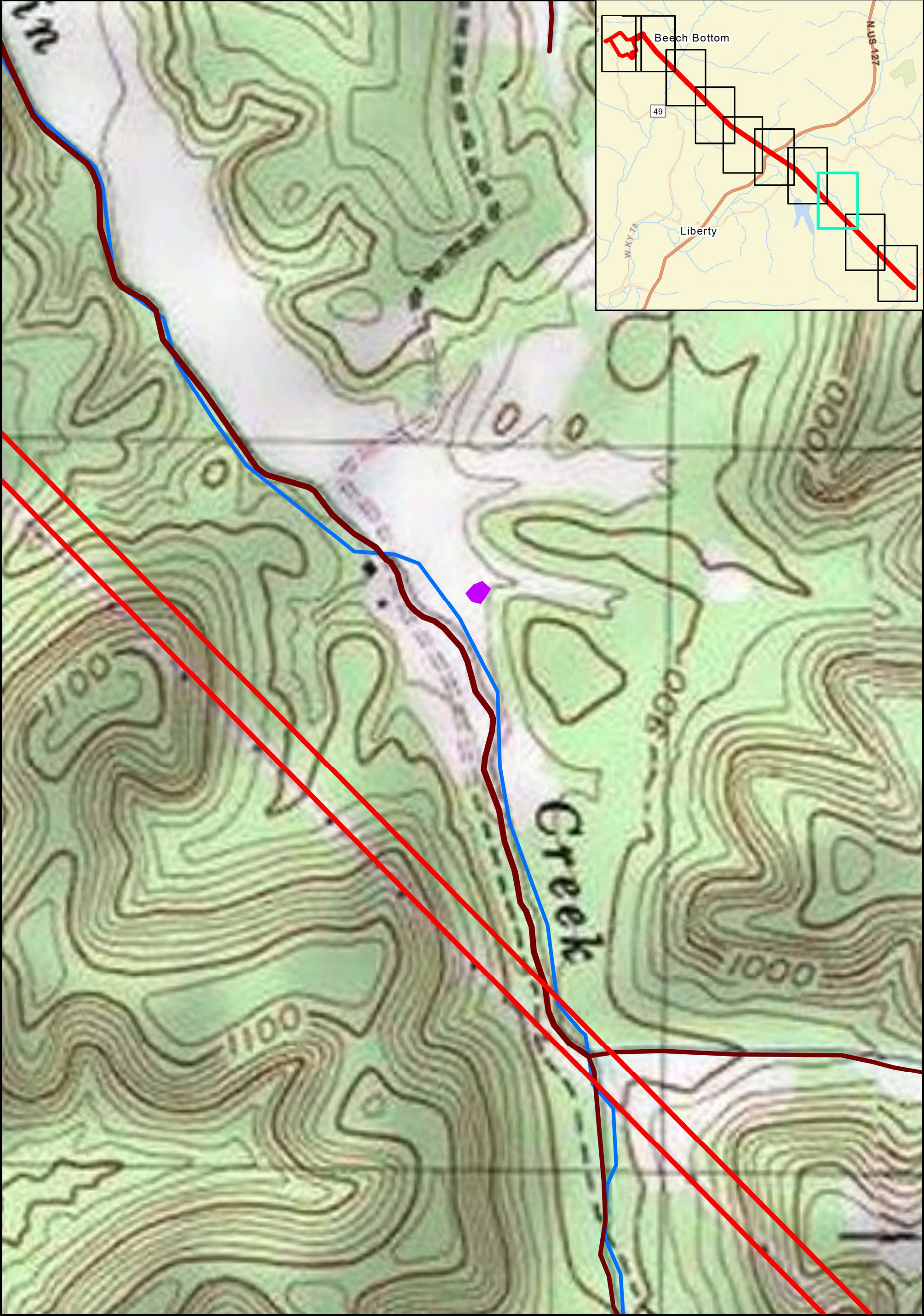
Casey County, KY

Source: Burns & McDonnell, ESRI, NHD, NWI

Issued: 9/24/2024







Survey Area

NHD Streams

NWI Wetlands

Palustrine

Riverine

NORTH

400

200

0

400

Scale in Feet

BURNS

MCDONNELL

Figure 2

NWI, NHD, and USGS Topographic Map

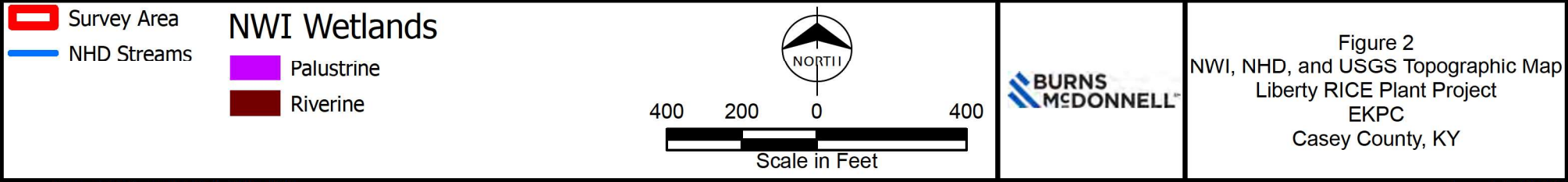
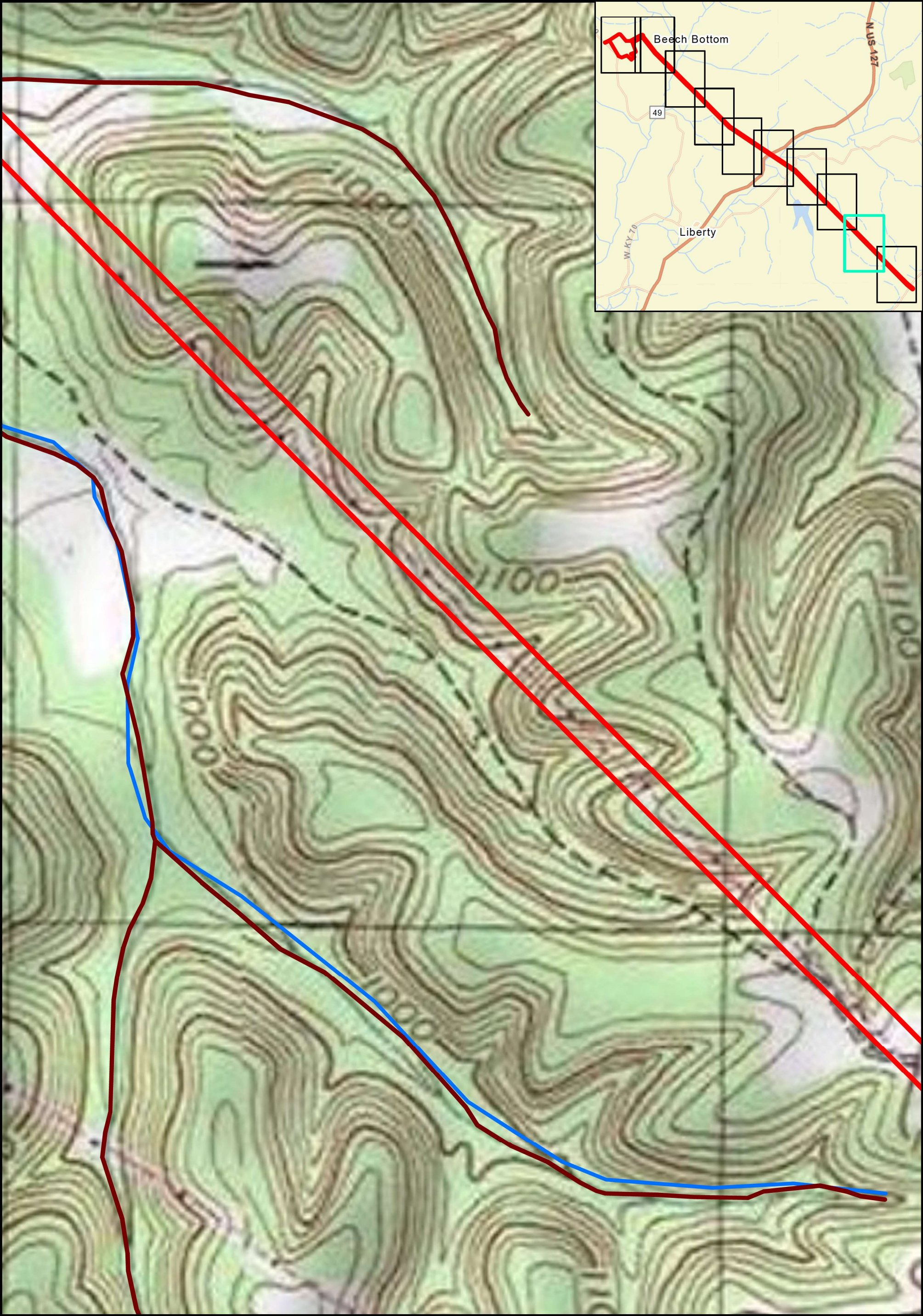
Liberty RICE Plant Project

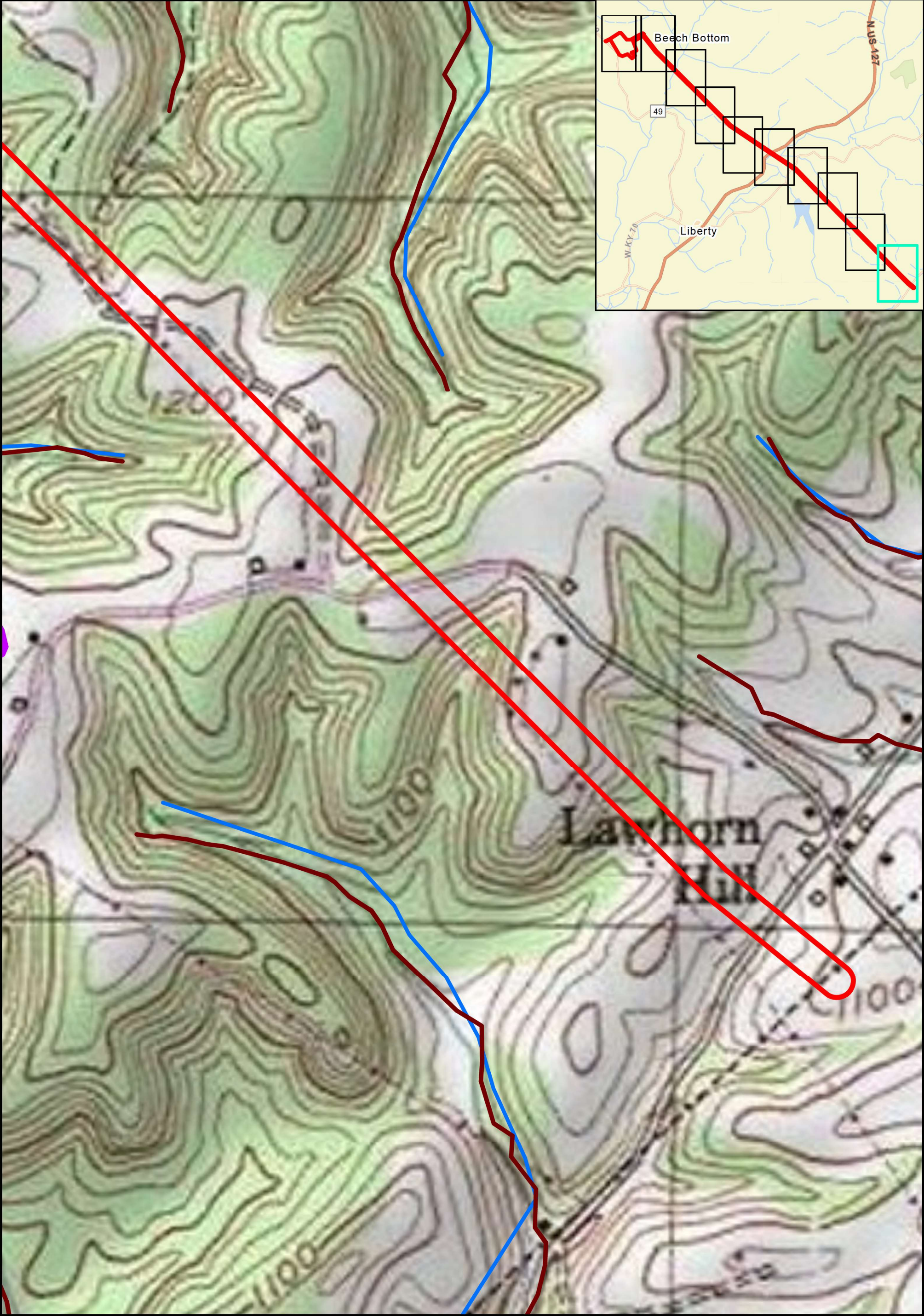
EKPC

Casey County, KY

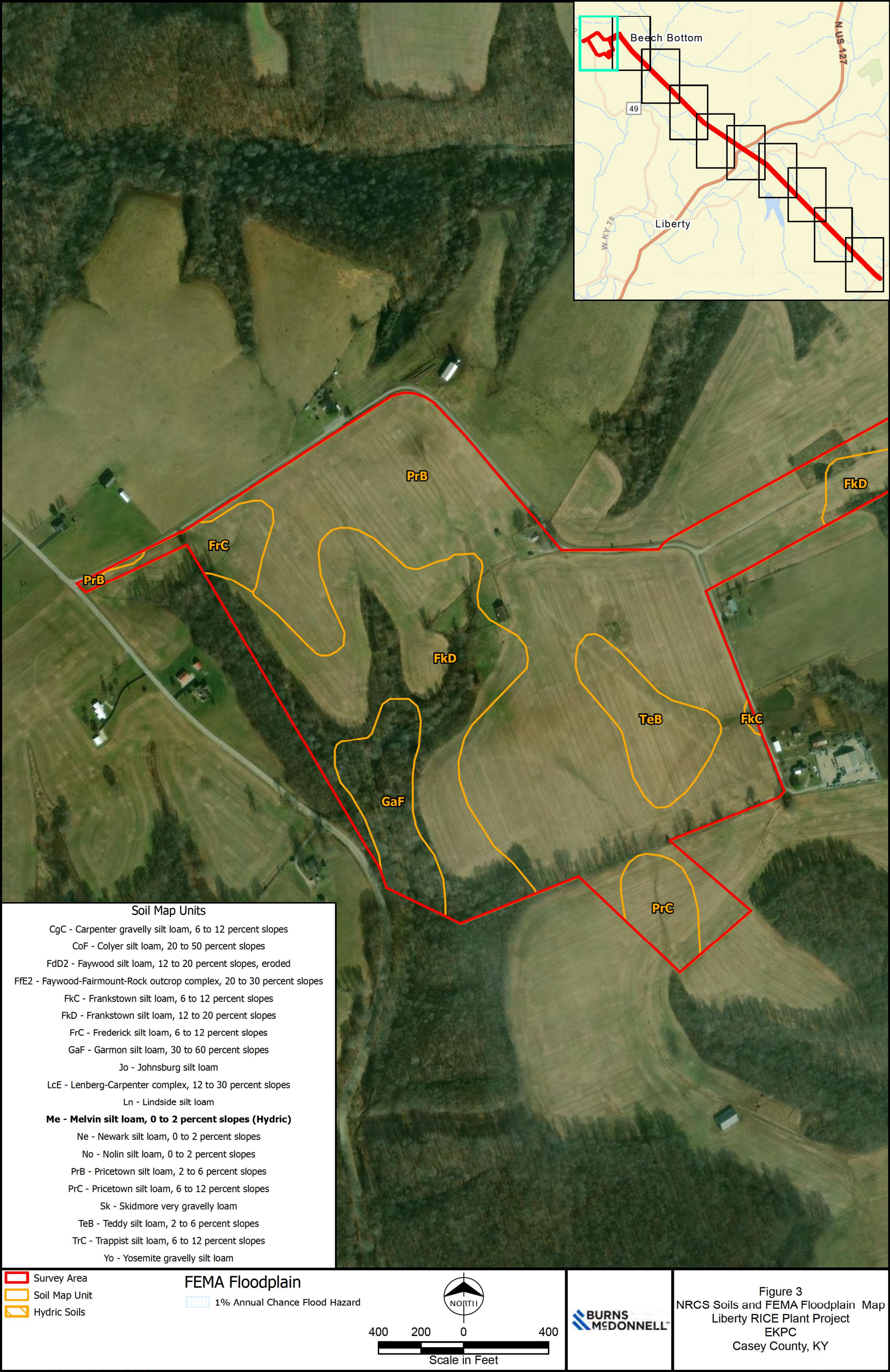
Source: Burns & McDonnell, ESRI, NHD, NWI

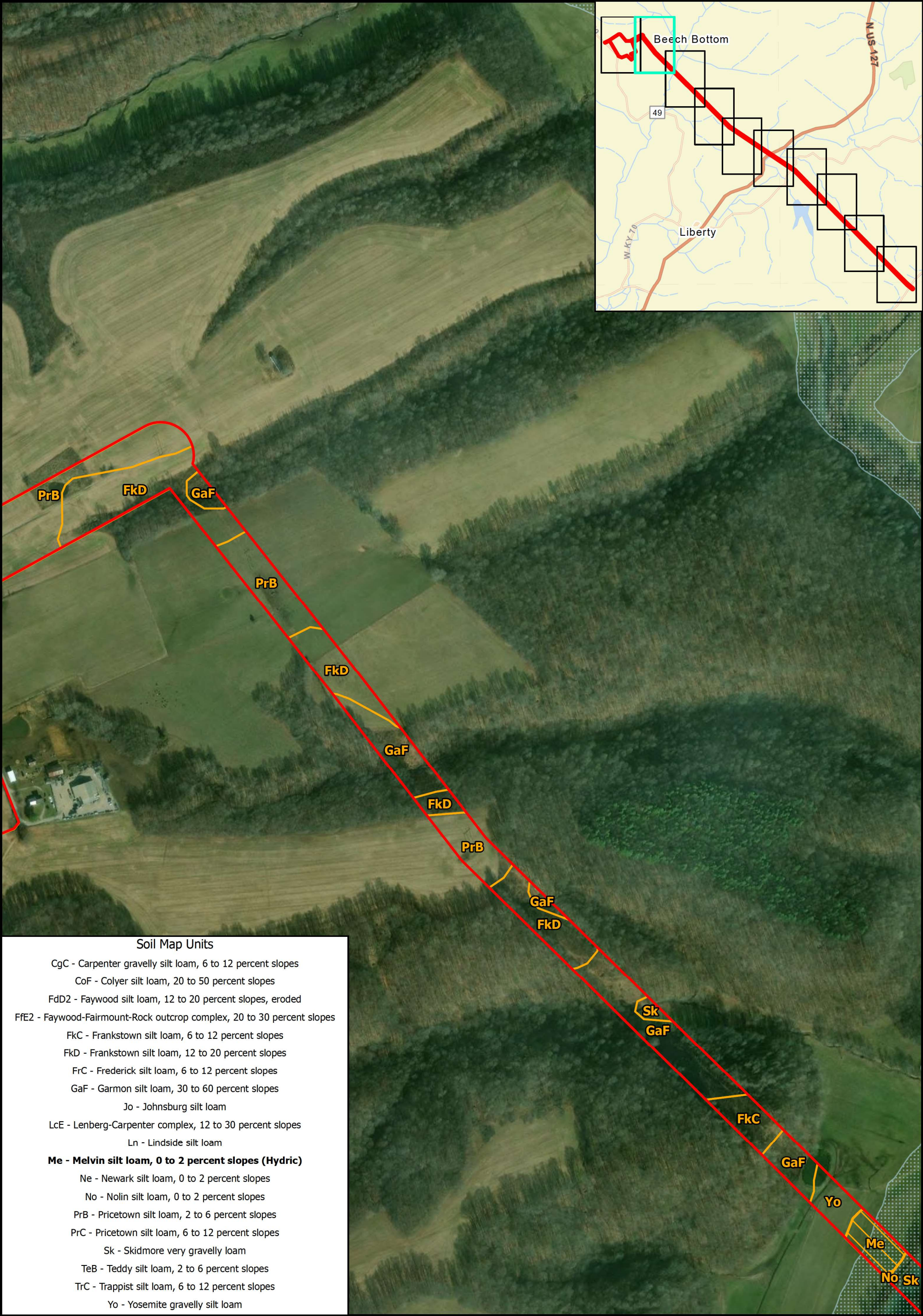
Issued: 9/24/2024

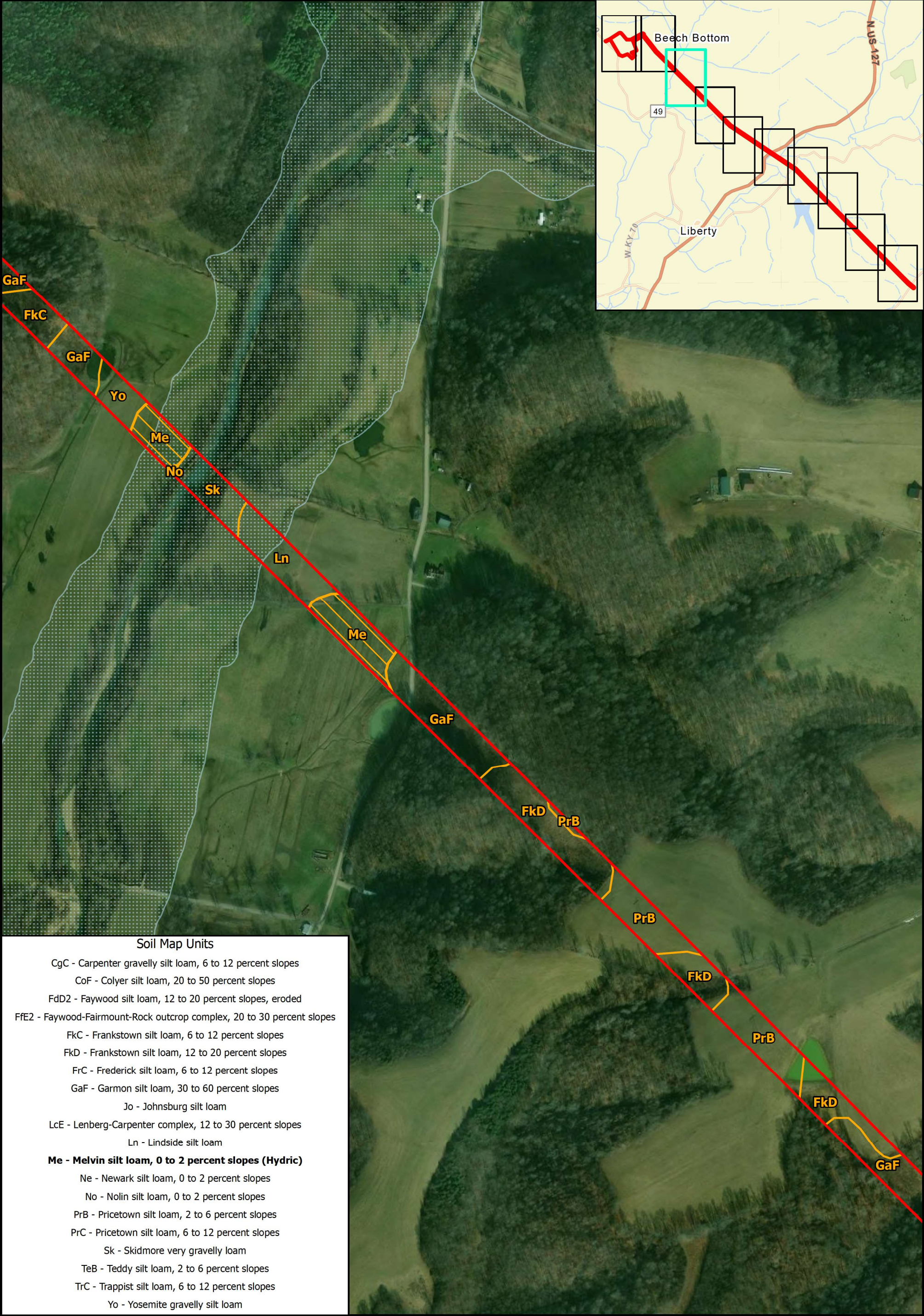


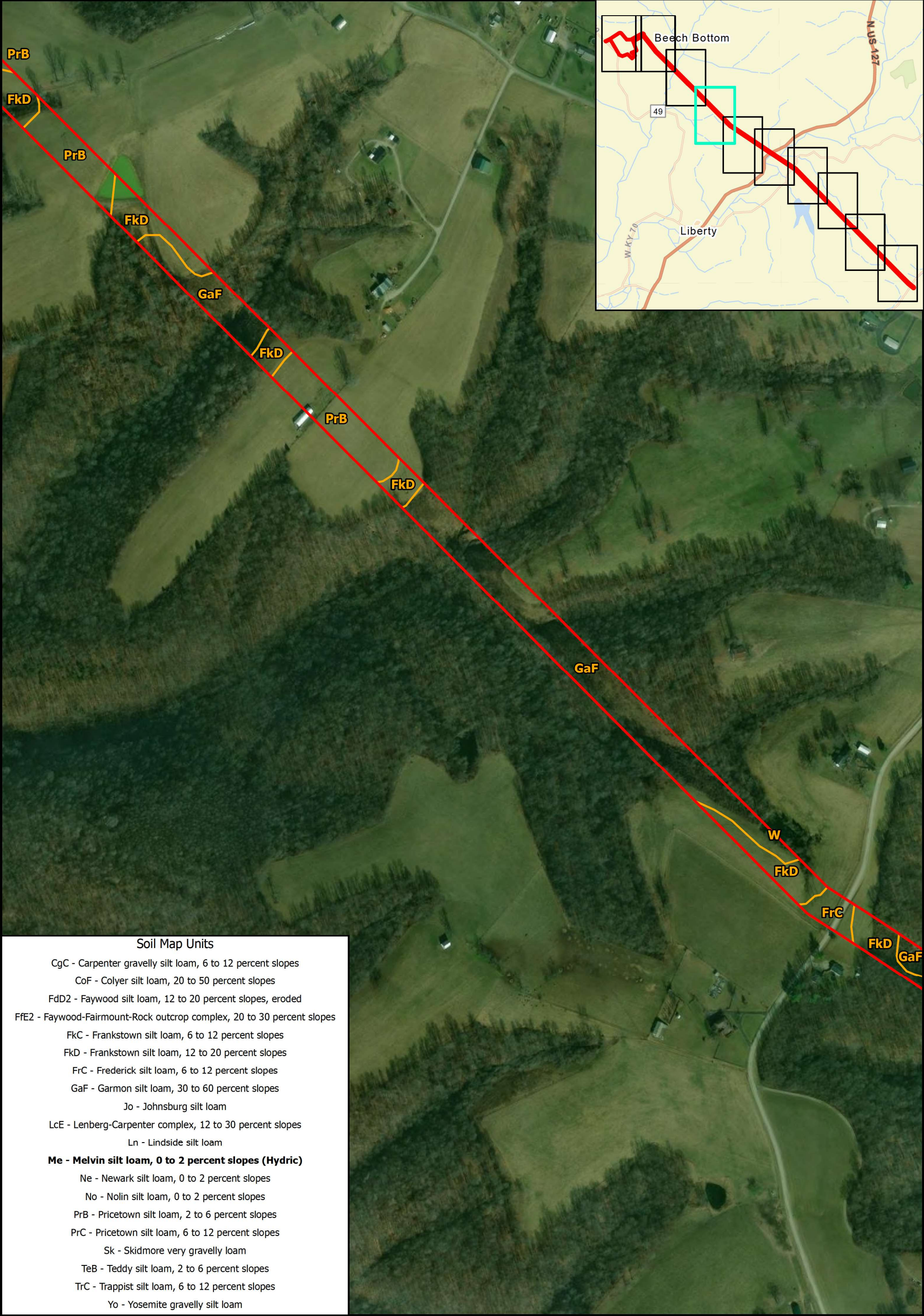


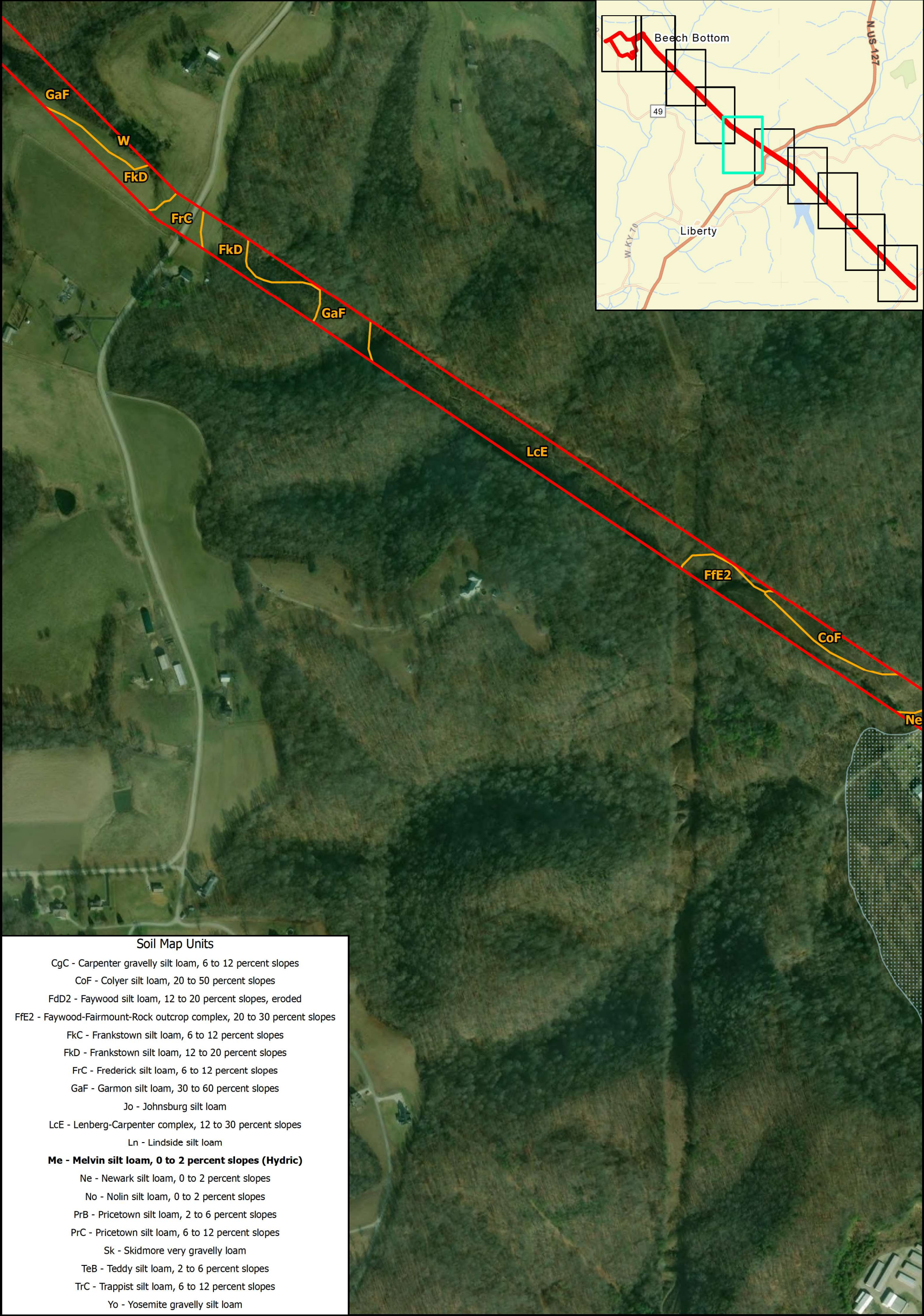
<p> Survey Area</p> <p> NHD Streams</p>	<p>NWI Wetlands</p> <p> Palustrine</p> <p> Riverine</p> <div data-bbox="842 2834 1237 3052"> <p>400 200 0 400</p> <p>Scale in Feet</p> </div> <div data-bbox="1270 2834 1501 3052"> </div>	<p>Figure 2 NWI, NHD, and USGS Topographic Map Liberty RICE Plant Project EKPC Casey County, KY</p>
---	---	---

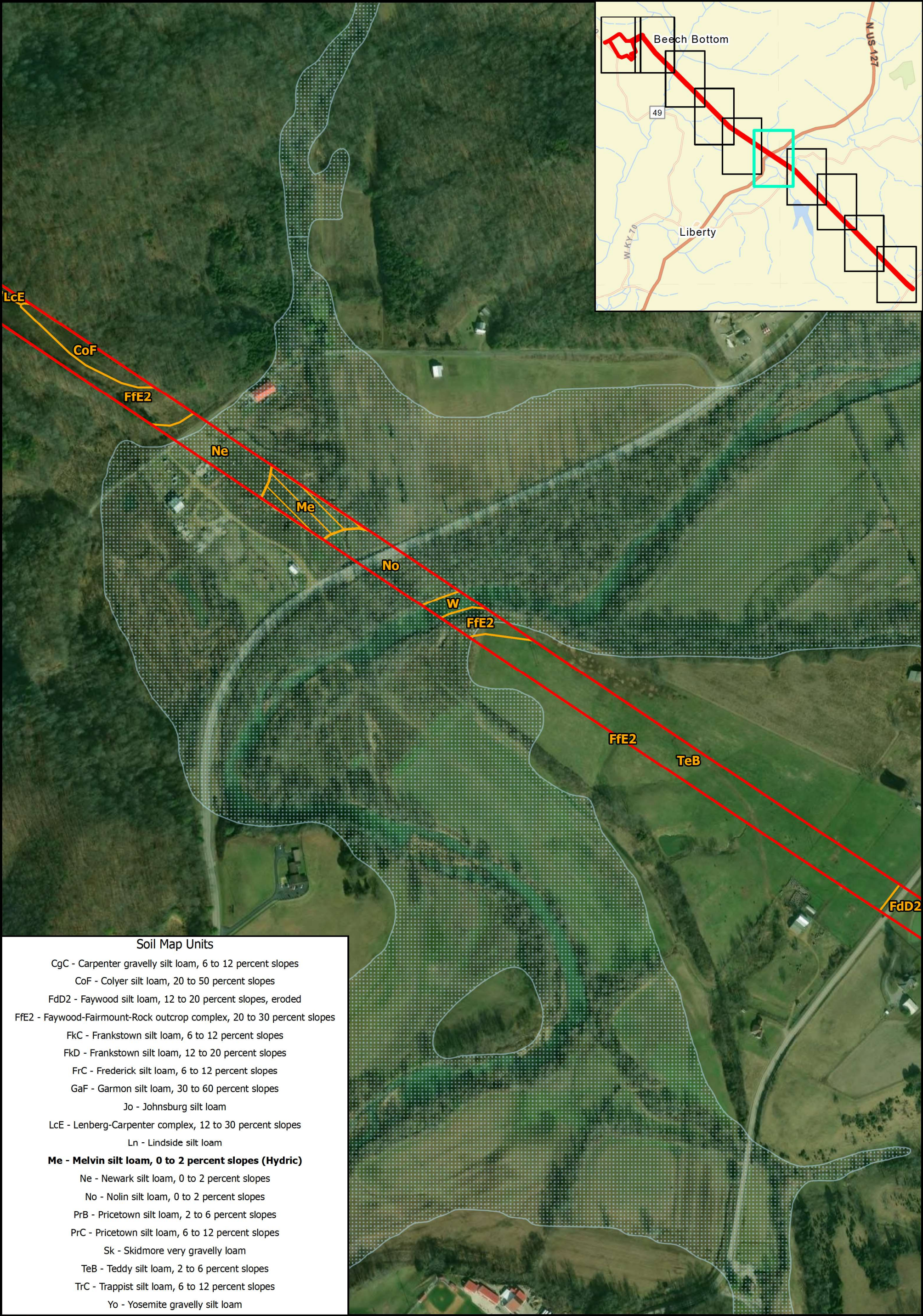


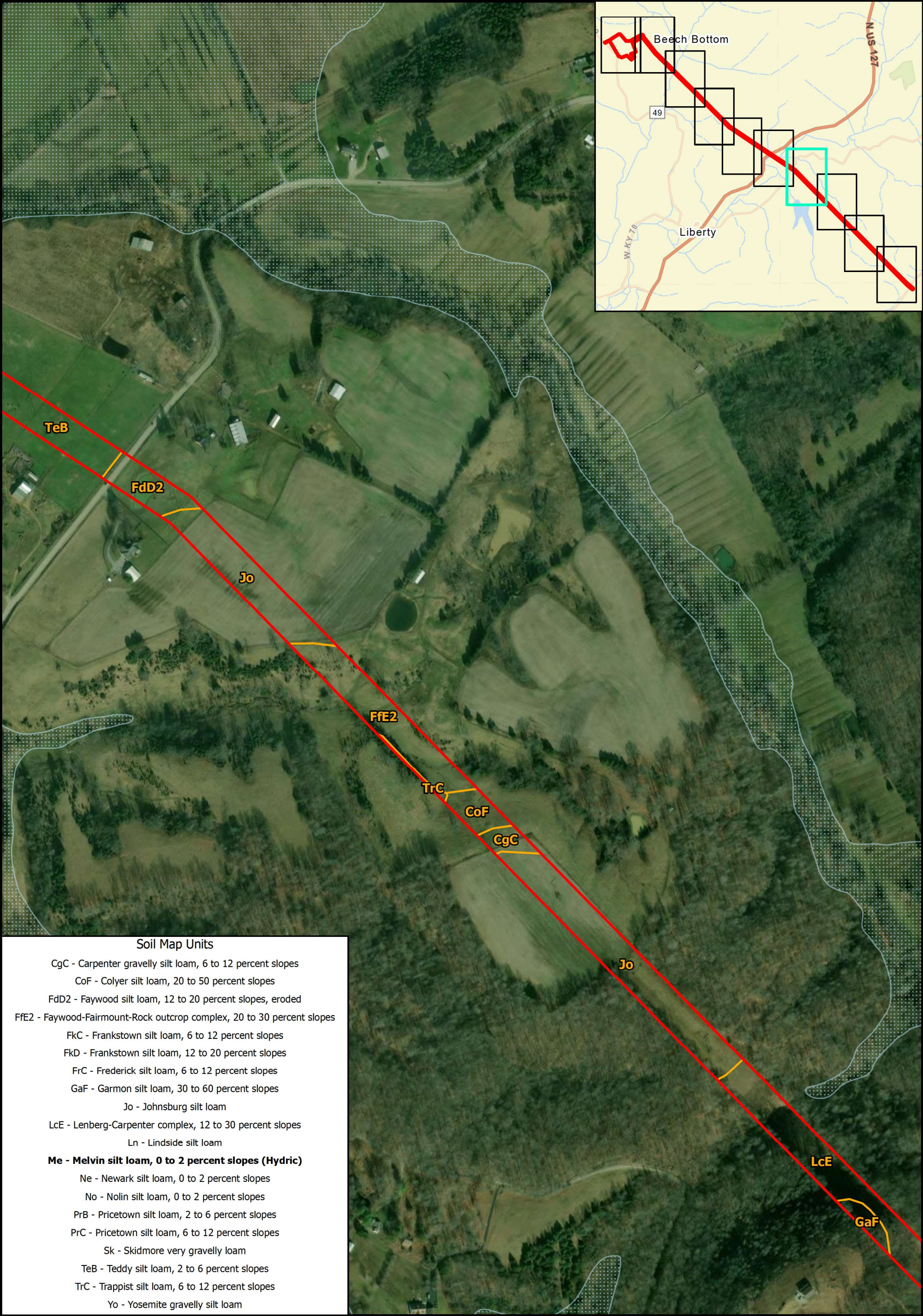


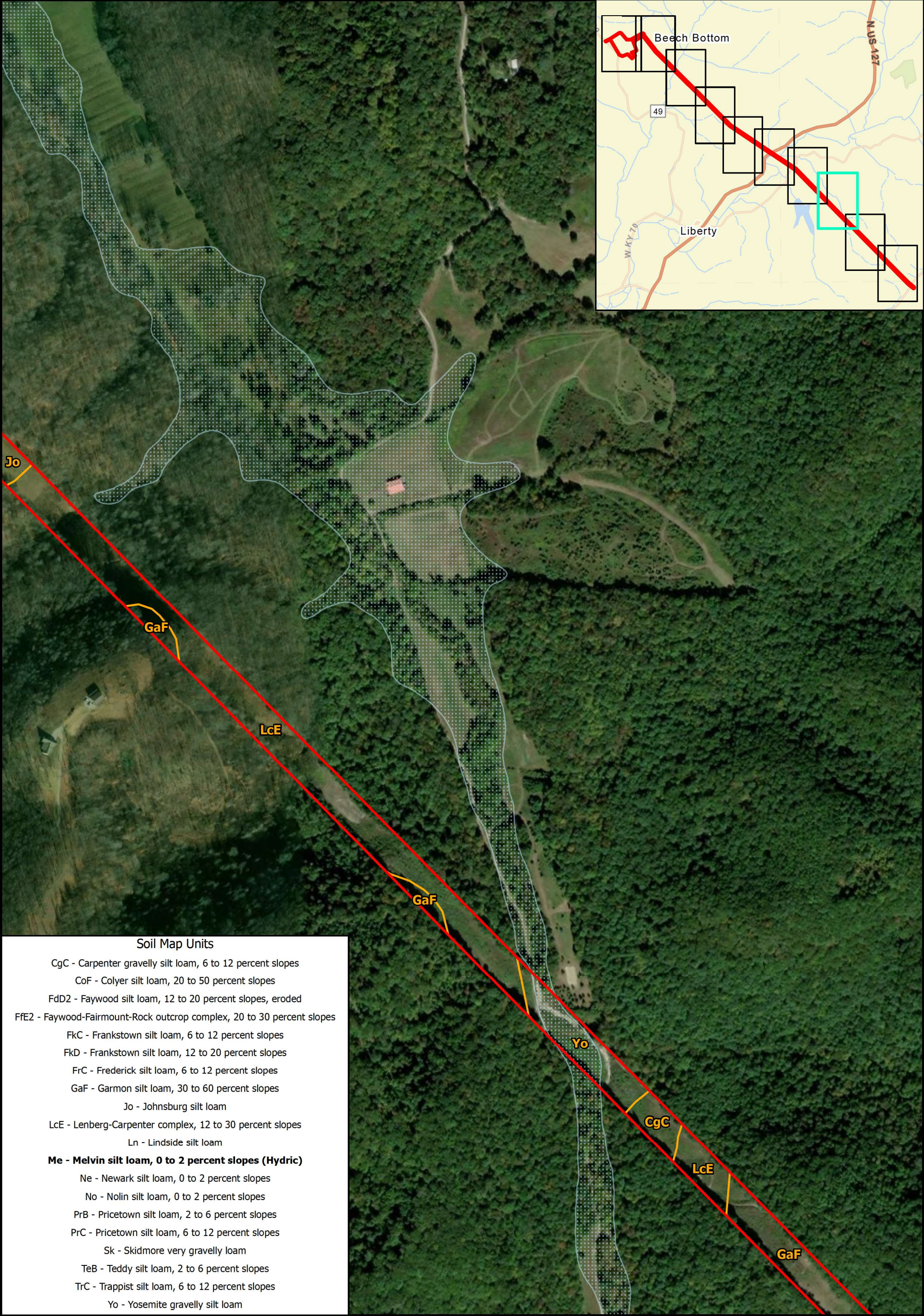


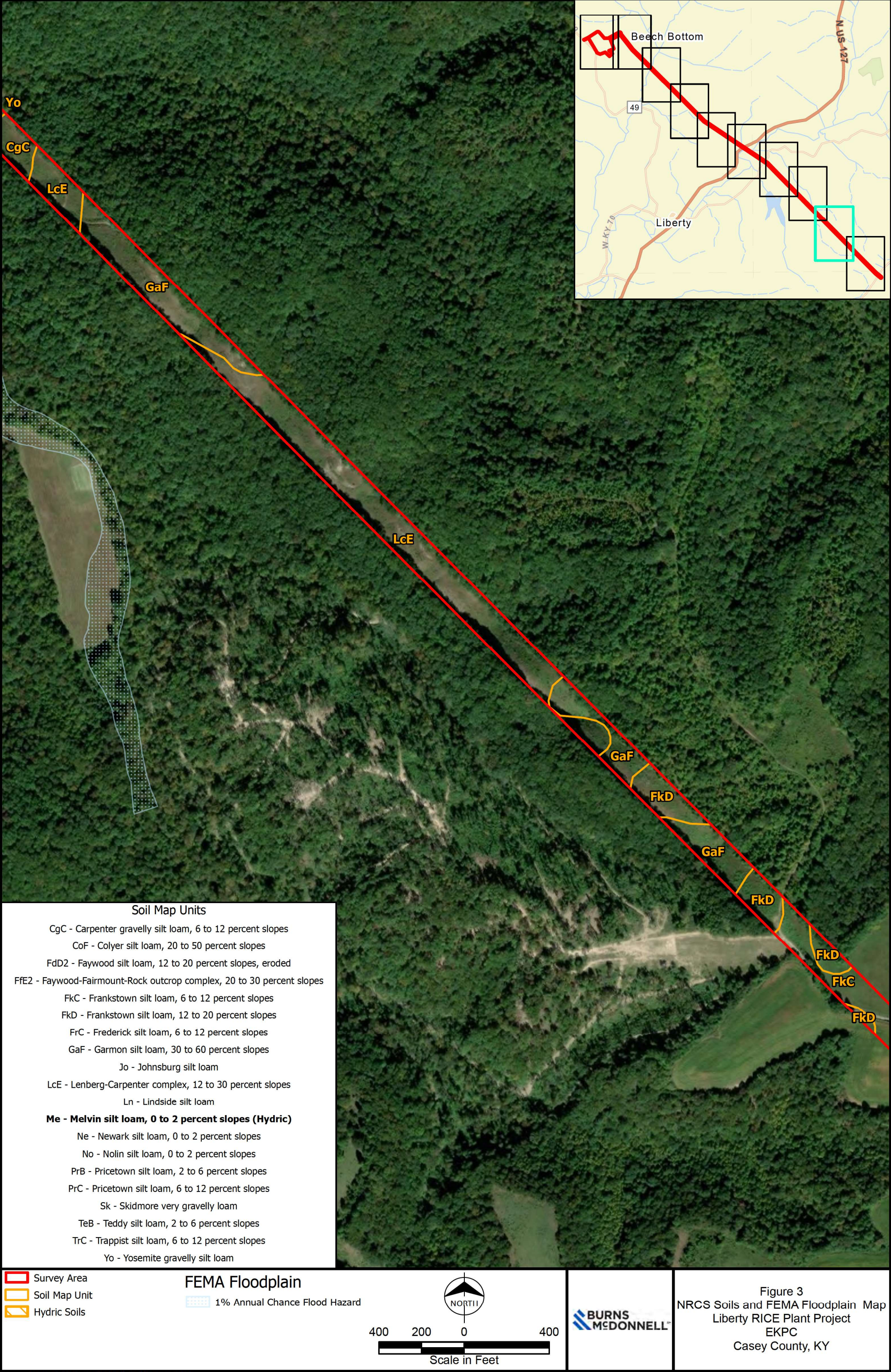


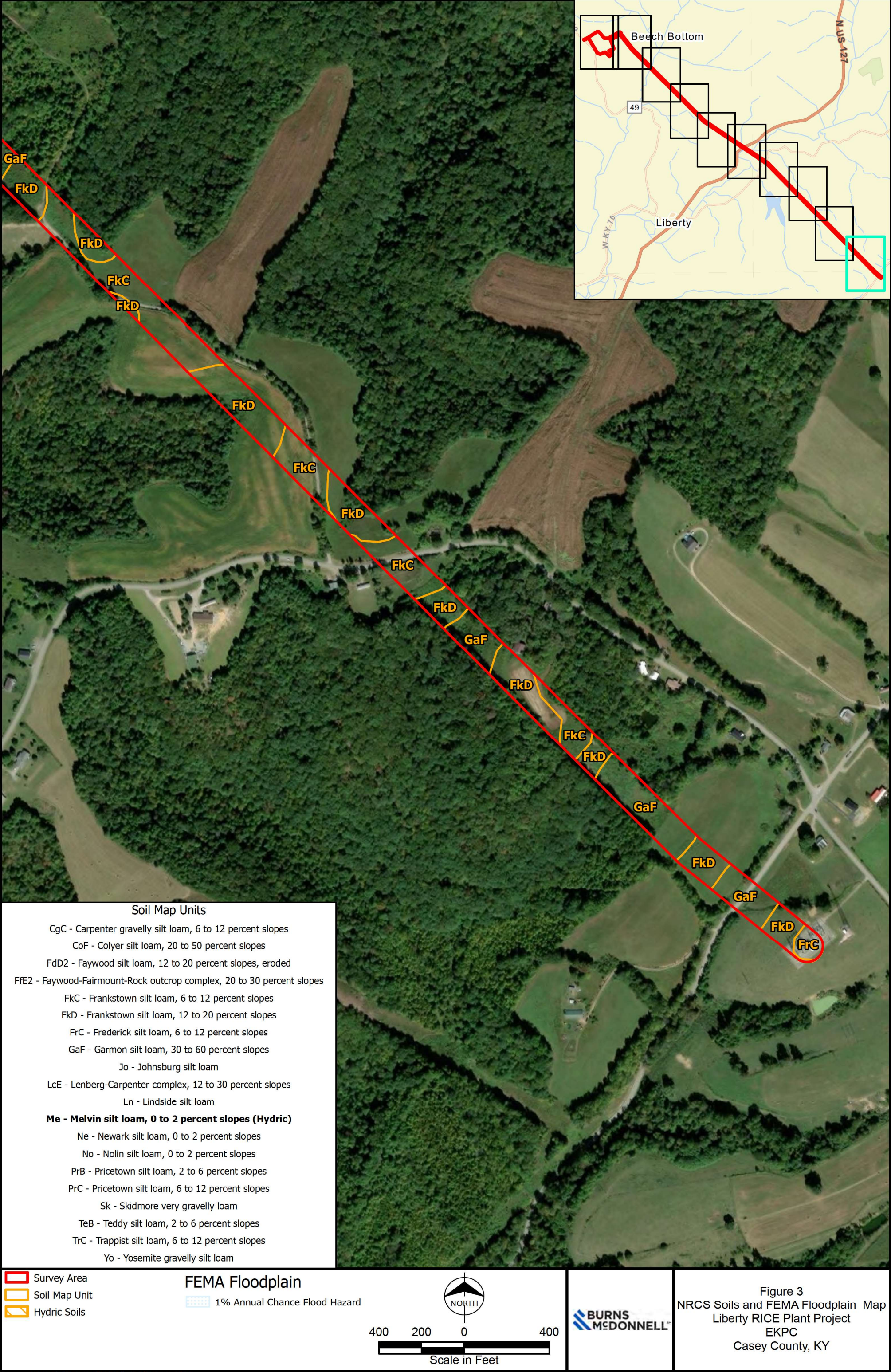


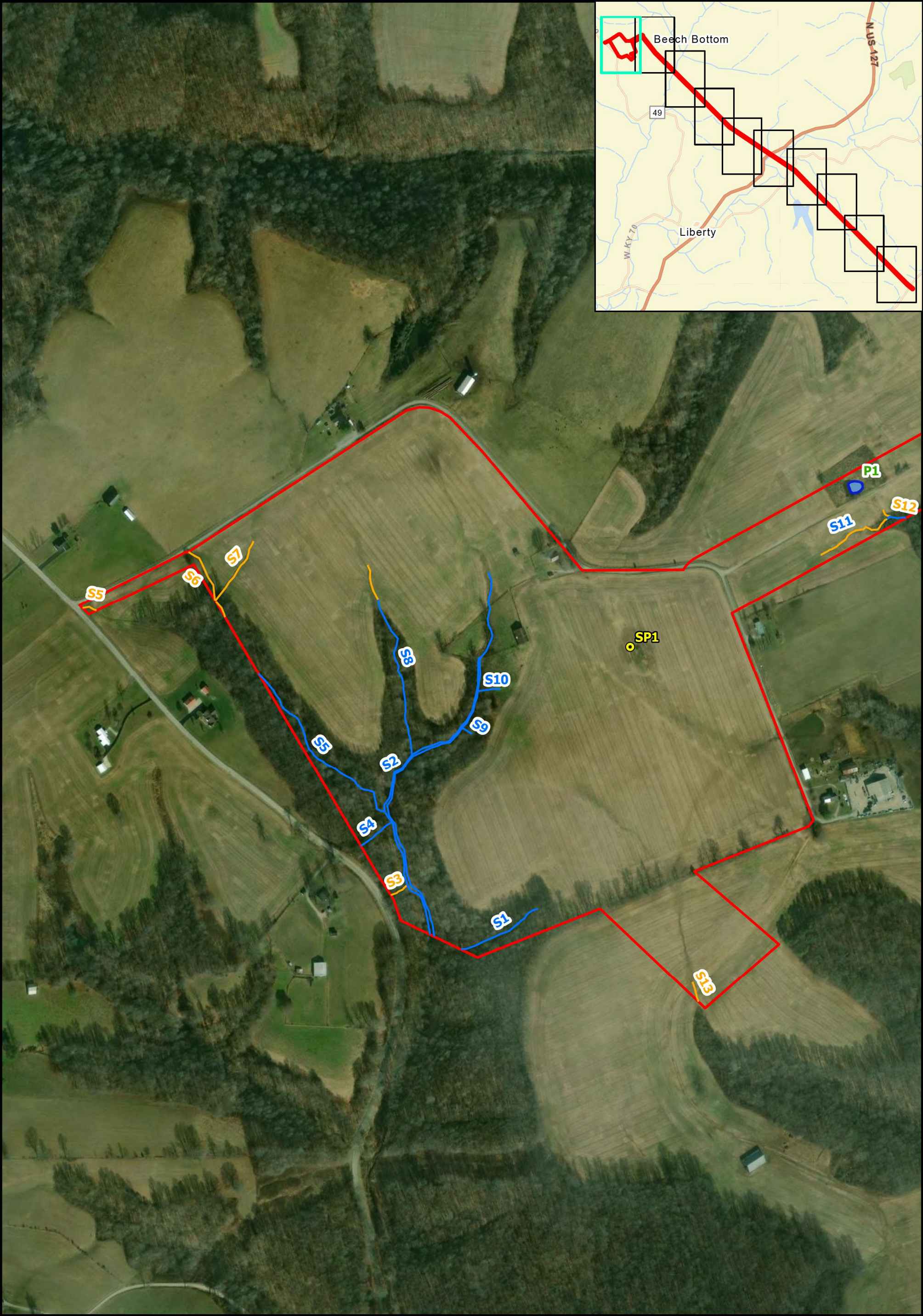












Survey Area

Sample Plot (SP)

Wetland Type (W)

Emergent

Scrub-Shrub

Pond (P)

Stream Type (S)

Proposed Non-Jurisdictional

Proposed Jurisdictional

Drainage Feature (D)

400

200

0

400

Scale in Feet

NORTH

BURNS
MCDONNELL

Figure 4

Wetland Delineation Map

Liberty RICE Plant Project

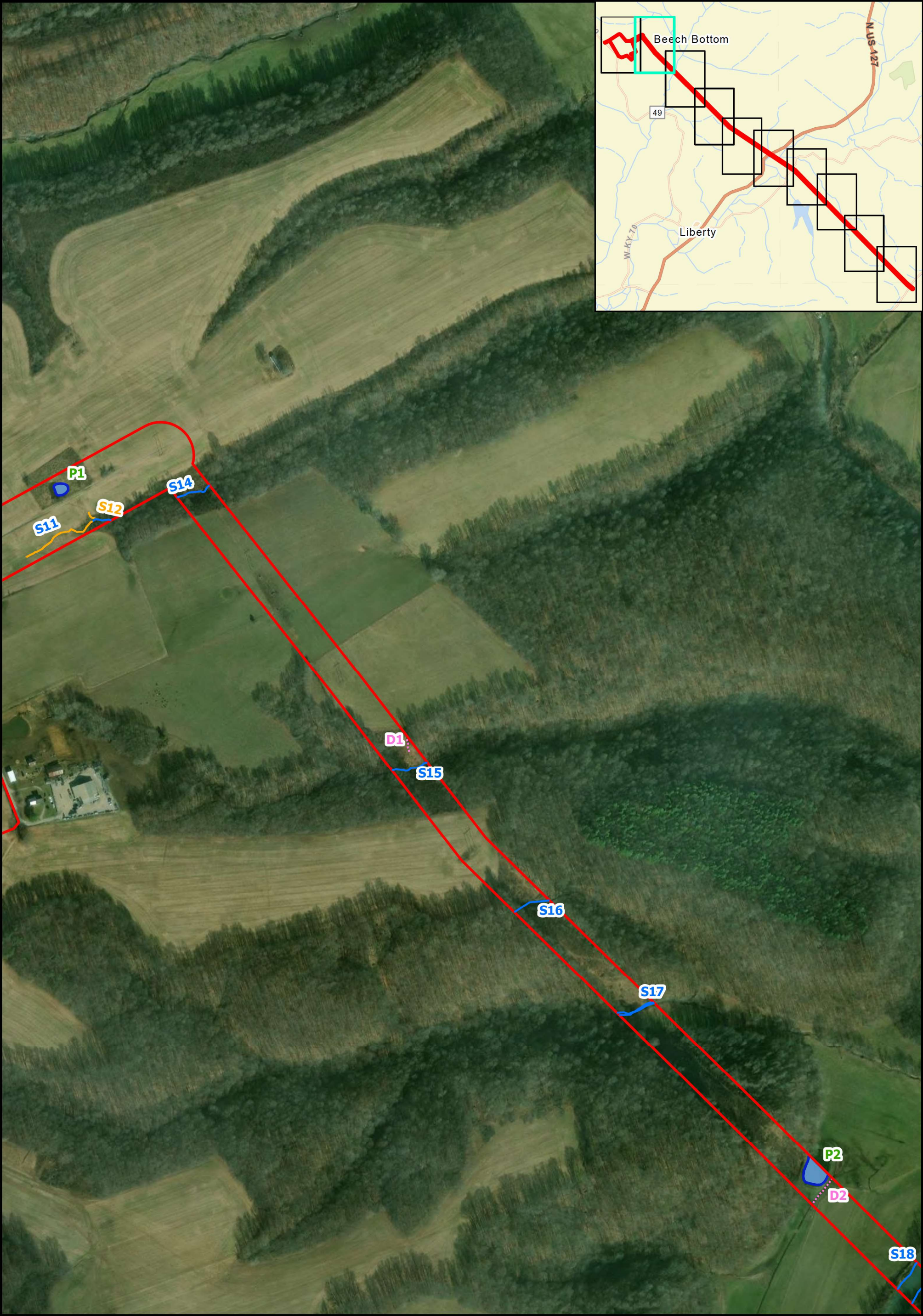
EKPC

Casey County, KY

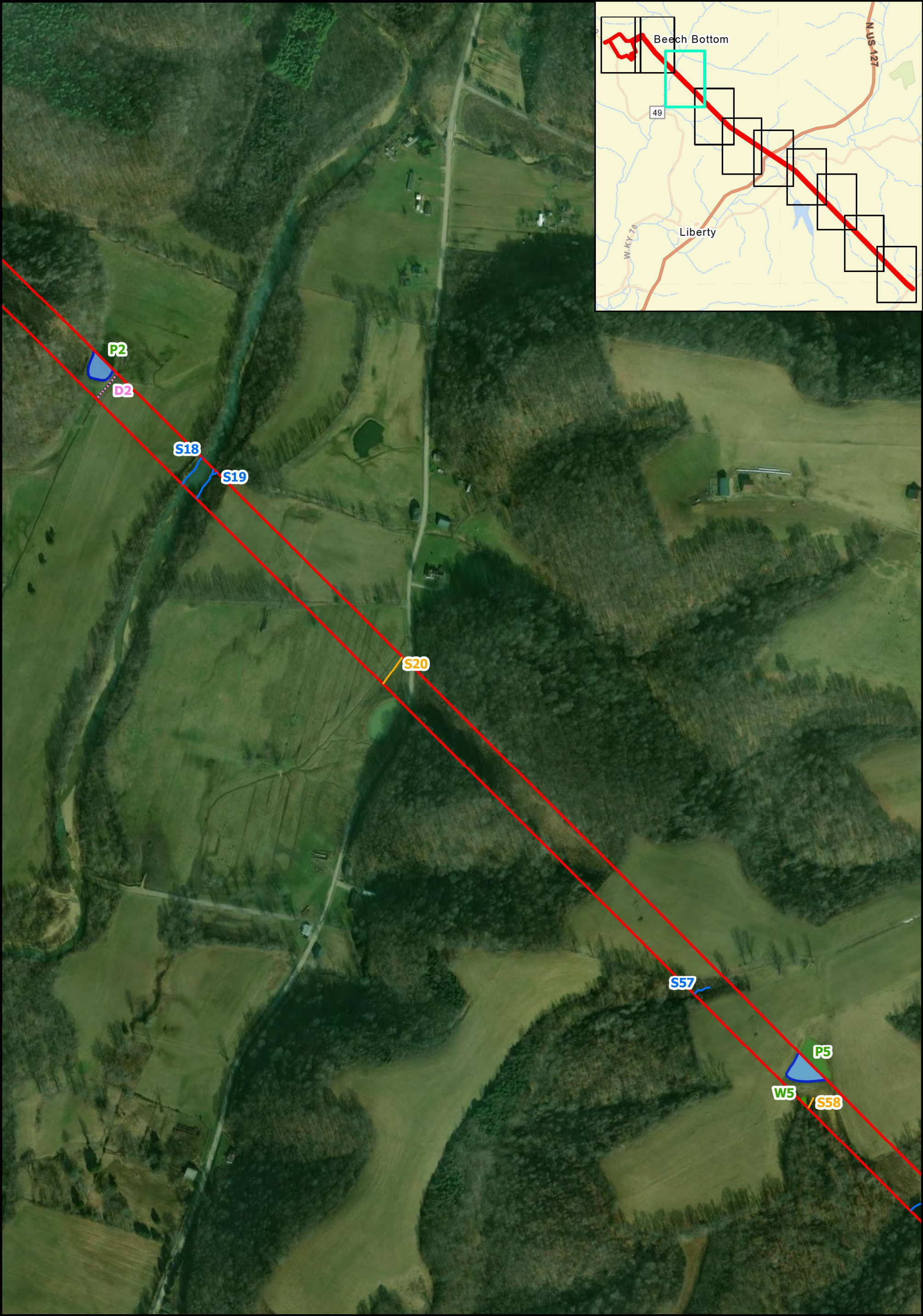
Page 1 of 10

Source: Burns & McDonnell, ESRI

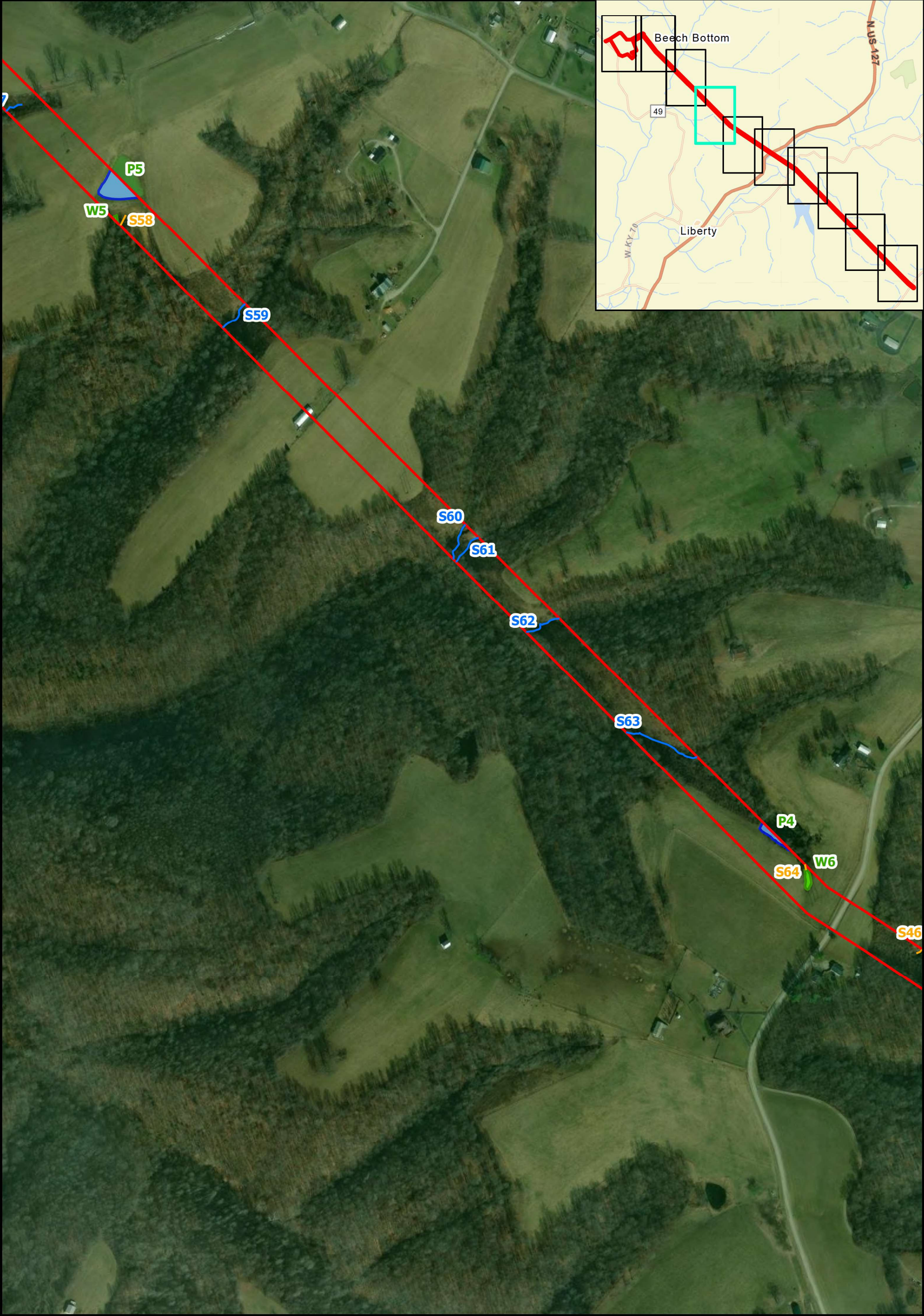
Issued: 10/16/2024



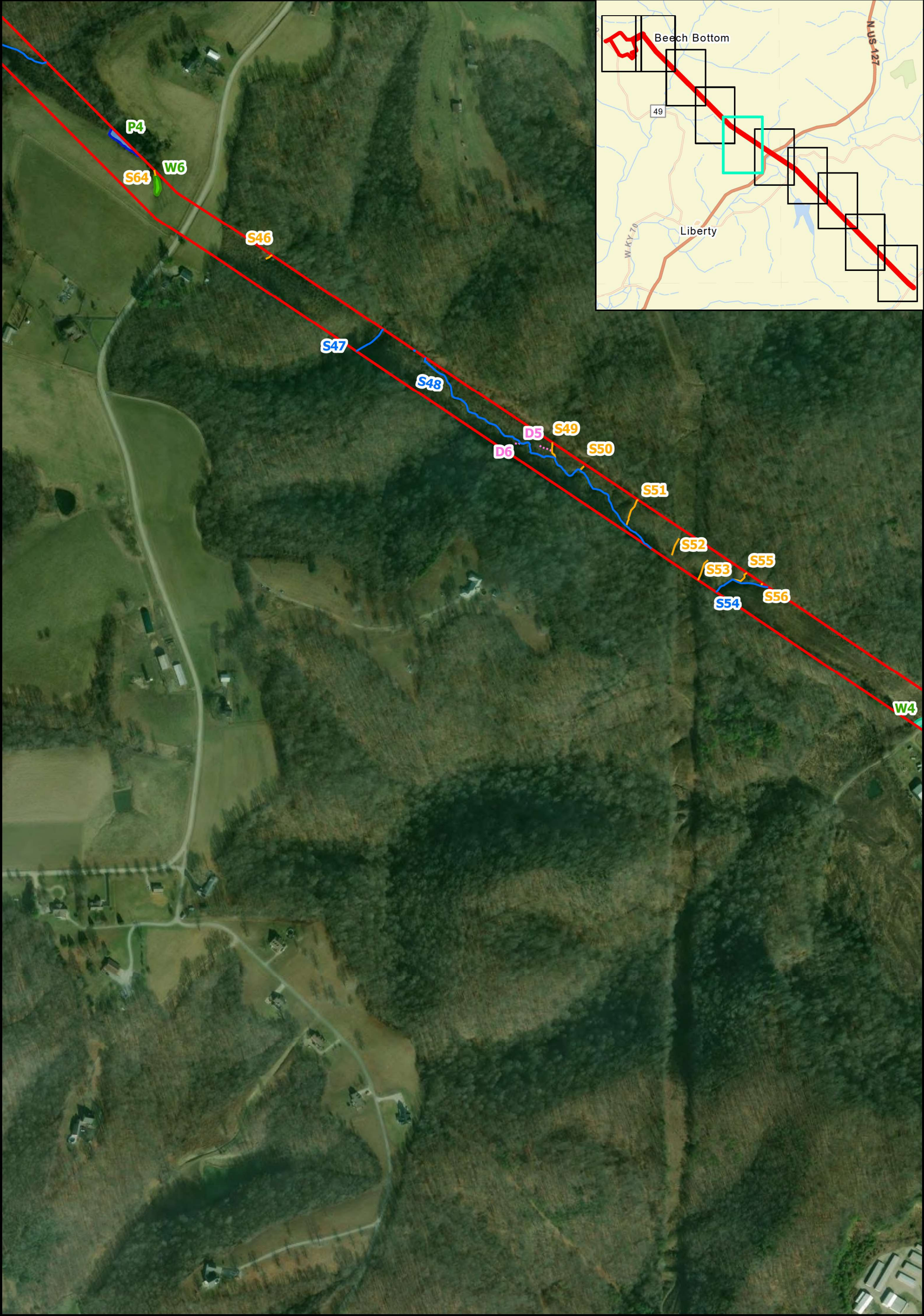
<div><div></div> Survey Area</div> <div><div></div> Sample Plot (SP)</div>	<div>Wetland Type (W)</div> <div><div></div> Emergent</div> <div><div></div> Scrub-Shrub</div> <div><div></div> Pond (P)</div>	<div>Stream Type (S)</div> <div><div></div> Proposed Non-Jurisdictional</div> <div><div></div> Proposed Jurisdictional</div> <div><div></div> Drainage Feature (D)</div>	<div><div></div> NORTH</div> <div>400 200 0 400</div> <div>Scale in Feet</div>	<div><div></div> BURNS MCDONNELL</div>	<div>Figure 4</div> <div>Wetland Delineation Map</div> <div>Liberty RICE Plant Project</div> <div>EKPC</div> <div>Casey County, KY</div> <div>Page 2 of 10</div>
--	--	--	--	--	--



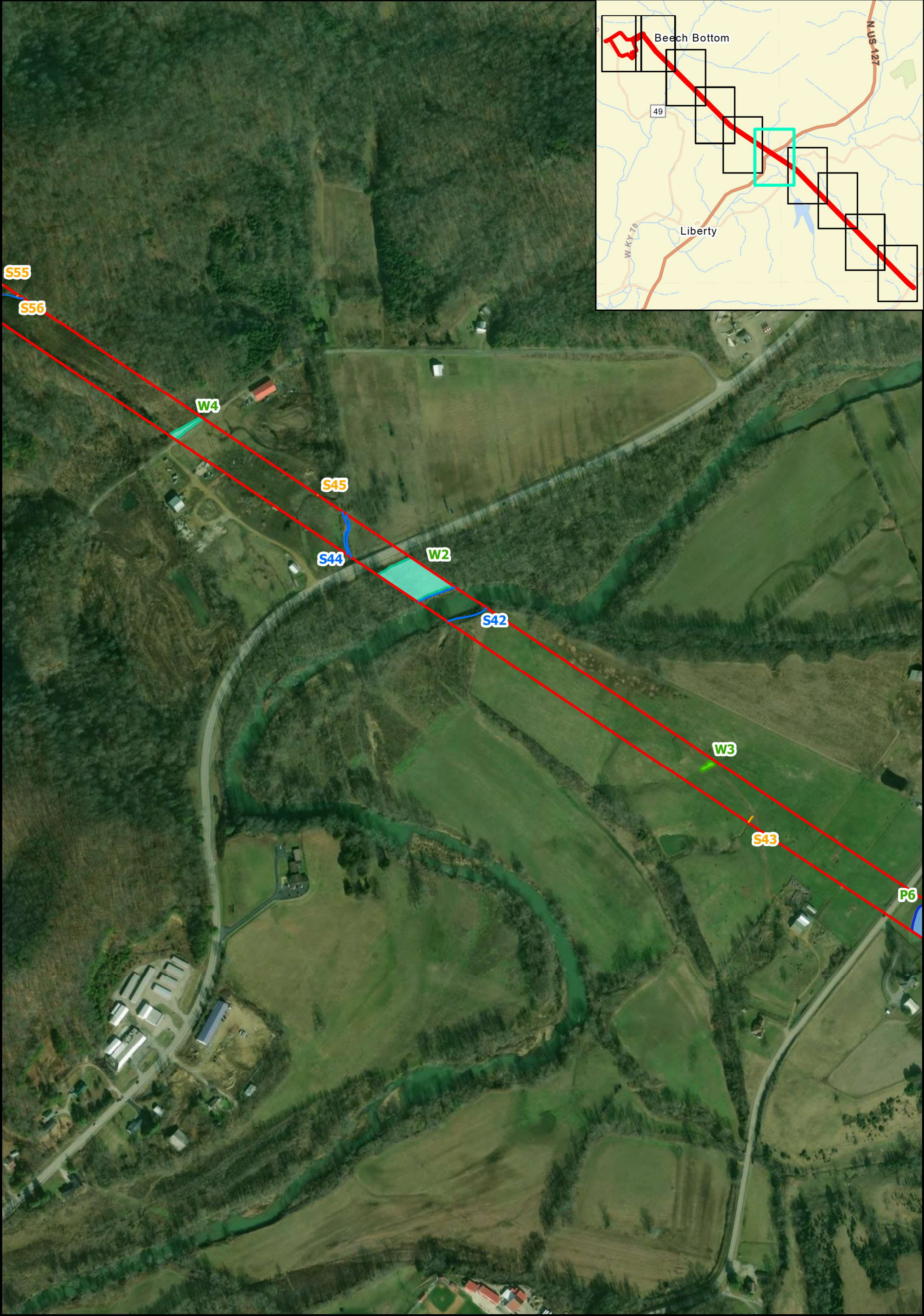
<div><div></div> Survey Area</div> <div><div></div> Sample Plot (SP)</div>	<div>Wetland Type (W)</div> <div><div></div> Emergent</div> <div><div></div> Scrub-Shrub</div> <div><div></div> Pond (P)</div>	<div>Stream Type (S)</div> <div><div></div> Proposed Non-Jurisdictional</div> <div><div></div> Proposed Jurisdictional</div> <div><div></div> Drainage Feature (D)</div>	<div><div></div> NORTH</div> <div>400 200 0 400</div> <div>Scale in Feet</div>	<div></div>	<div>Figure 4</div> <div>Wetland Delineation Map</div> <div>Liberty RICE Plant Project</div> <div>EKPC</div> <div>Casey County, KY</div> <div>Page 3 of 10</div>
--	--	--	--	-------------	--



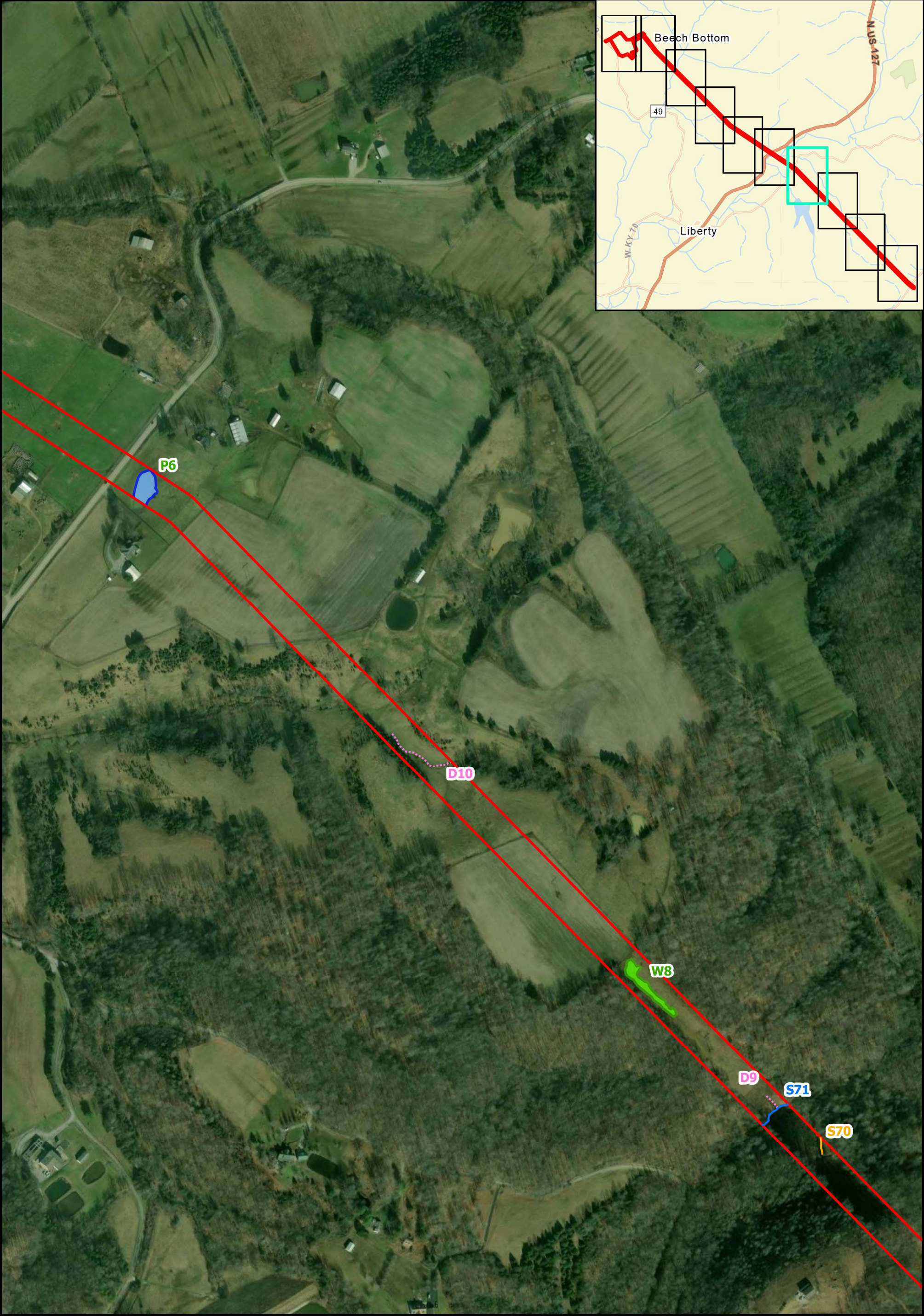
<ul style="list-style-type: none">— Survey Area● Sample Plot (SP)	Wetland Type (W) <ul style="list-style-type: none">— Emergent— Scrub-Shrub— Pond (P)	Stream Type (S) <ul style="list-style-type: none">— Proposed Non-Jurisdictional— Proposed Jurisdictional---- Drainage Feature (D)	<div style="text-align: center;"> NORTH</div> <div style="text-align: center;">400 200 0 400 Scale in Feet</div>		<div><p>Figure 4</p><p>Wetland Delineation Map</p><p>Liberty RICE Plant Project</p><p>EKPC</p><p>Casey County, KY</p><p>Page 4 of 10</p></div>
---	--	---	---	--	--



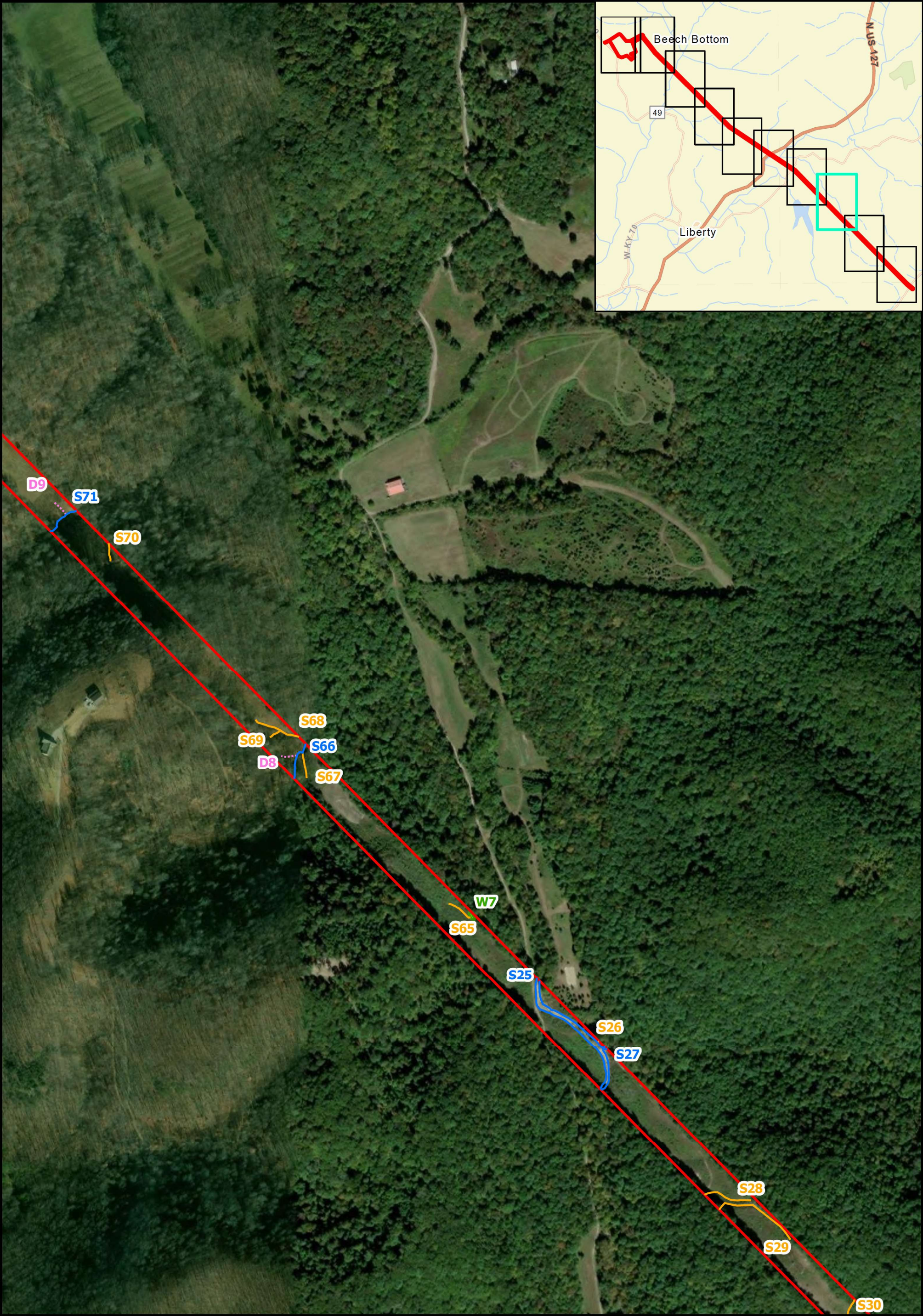
<p>Survey Area</p> <p>Sample Plot (SP)</p>	<p>Wetland Type (W)</p> <p>Emergent</p> <p>Scrub-Shrub</p> <p>Pond (P)</p>	<p>Stream Type (S)</p> <p>Proposed Non-Jurisdictional</p> <p>Proposed Jurisdictional</p> <p>Drainage Feature (D)</p>	<p>Scale in Feet</p> <p>400 200 0 400</p> <p>Scale in Feet</p>	<p>BURNS MCDONNELL</p>	<p>Figure 4</p> <p>Wetland Delineation Map</p> <p>Liberty RICE Plant Project</p> <p>EKPC</p> <p>Casey County, KY</p> <p>Page 5 of 10</p>
---	---	---	--	-------------------------------	--



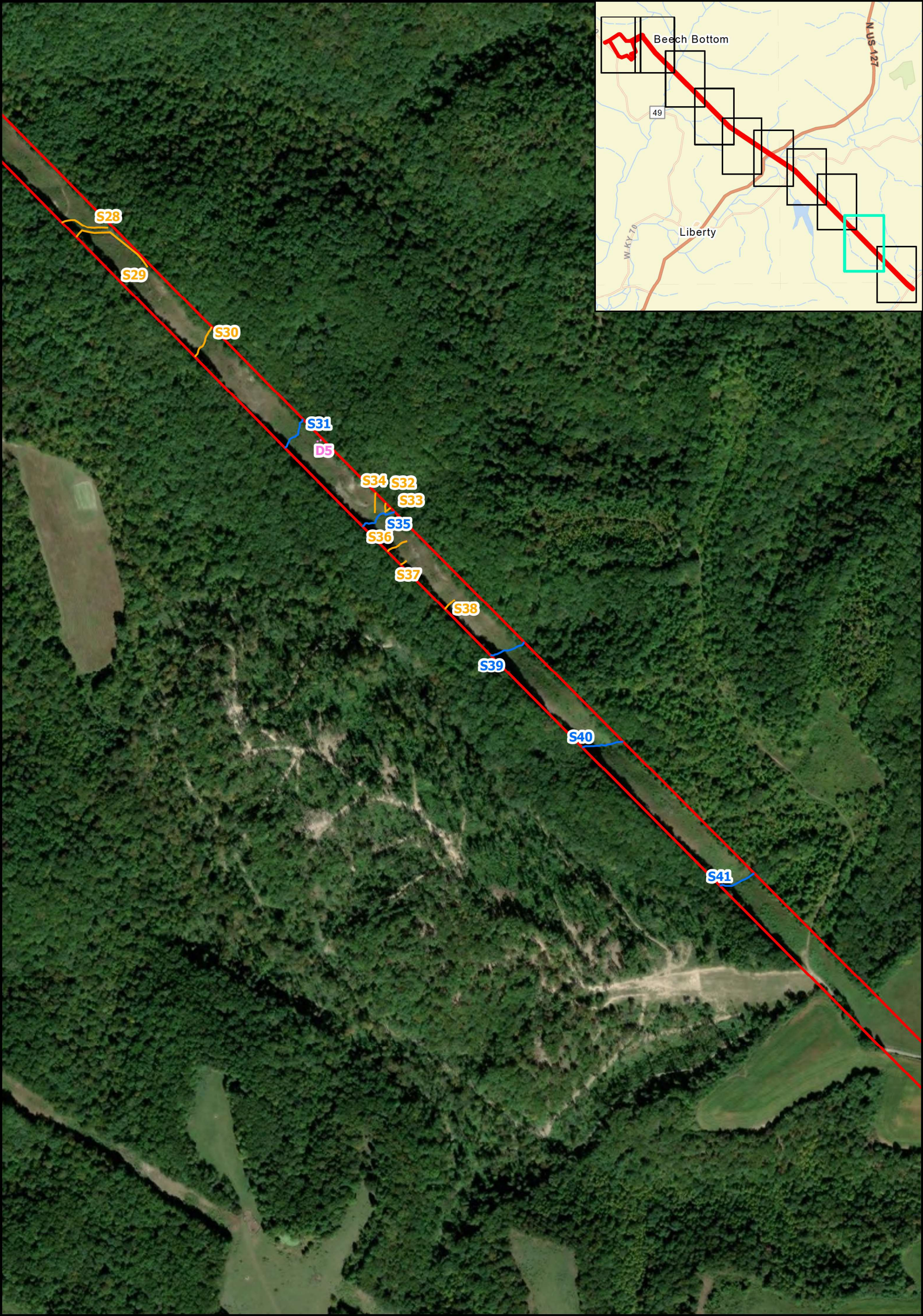
<p>Survey Area</p> <p>Sample Plot (SP)</p>	<p>Wetland Type (W)</p> <p>Emergent</p> <p>Scrub-Shrub</p> <p>Pond (P)</p>	<p>Stream Type (S)</p> <p>Proposed Non-Jurisdictional</p> <p>Proposed Jurisdictional</p> <p>Drainage Feature (D)</p>	<p>Scale in Feet</p> <p>400 200 0 400</p> <p>Scale in Feet</p>	<p>BURNS MCDONNELL</p>	<p>Figure 4</p> <p>Wetland Delineation Map</p> <p>Liberty RICE Plant Project</p> <p>EKPC</p> <p>Casey County, KY</p> <p>Page 6 of 10</p>
--	---	---	--	-------------------------------	--



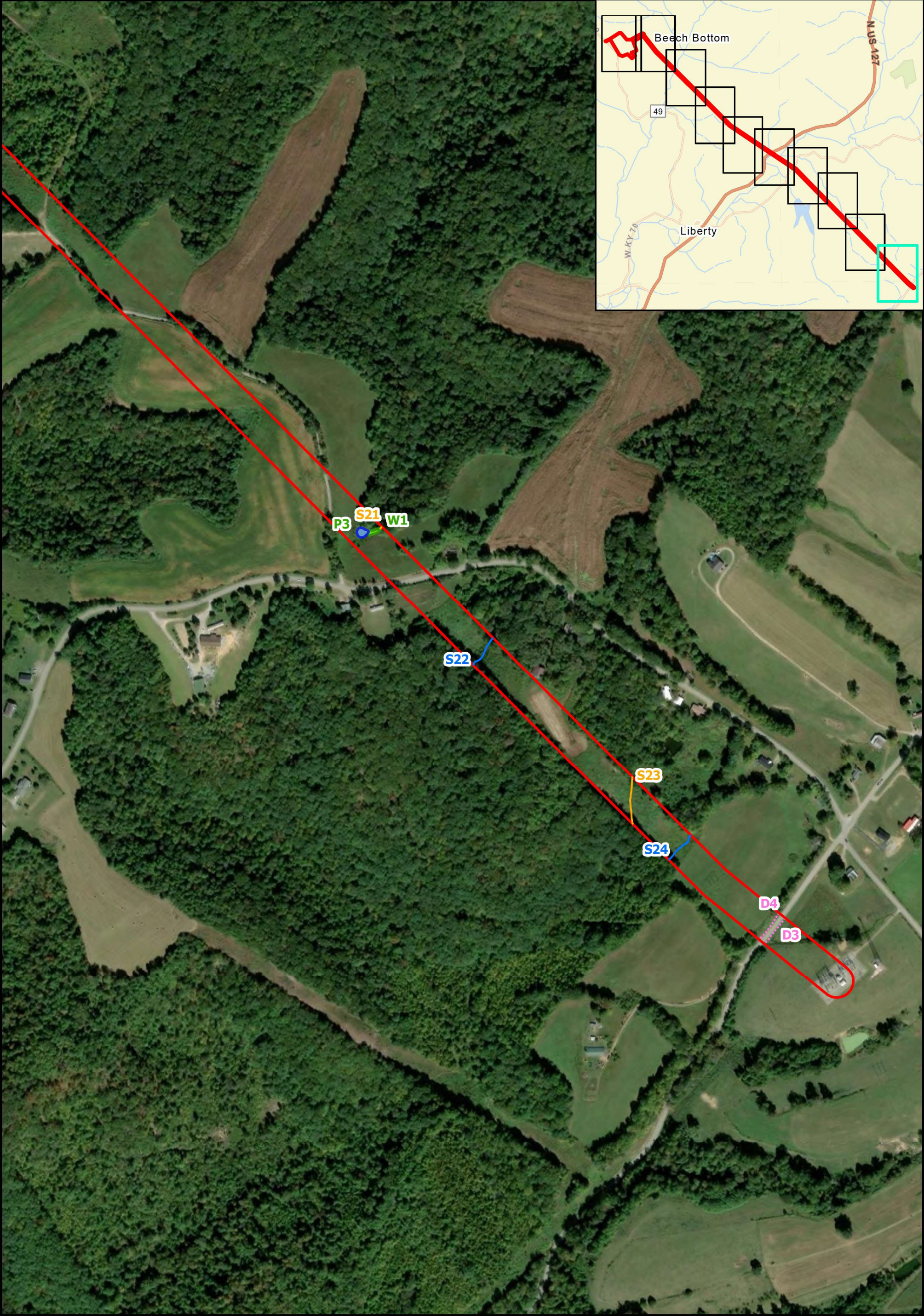
<div><div></div> Survey Area</div> <div><div></div> Sample Plot (SP)</div>	<div>Wetland Type (W)</div> <div><div></div> Emergent</div> <div><div></div> Scrub-Shrub</div> <div><div></div> Pond (P)</div>	<div>Stream Type (S)</div> <div><div></div> Proposed Non-Jurisdictional</div> <div><div></div> Proposed Jurisdictional</div> <div><div></div> Drainage Feature (D)</div>	<div><div></div> NORTH</div> <div>400 200 0 400</div> <div>Scale in Feet</div>	<div><div></div> BURNS MCDONNELL</div>	<div>Figure 4</div> <div>Wetland Delineation Map</div> <div>Liberty RICE Plant Project</div> <div>EKPC</div> <div>Casey County, KY</div> <div>Page 7 of 10</div>
--	--	--	--	--	--



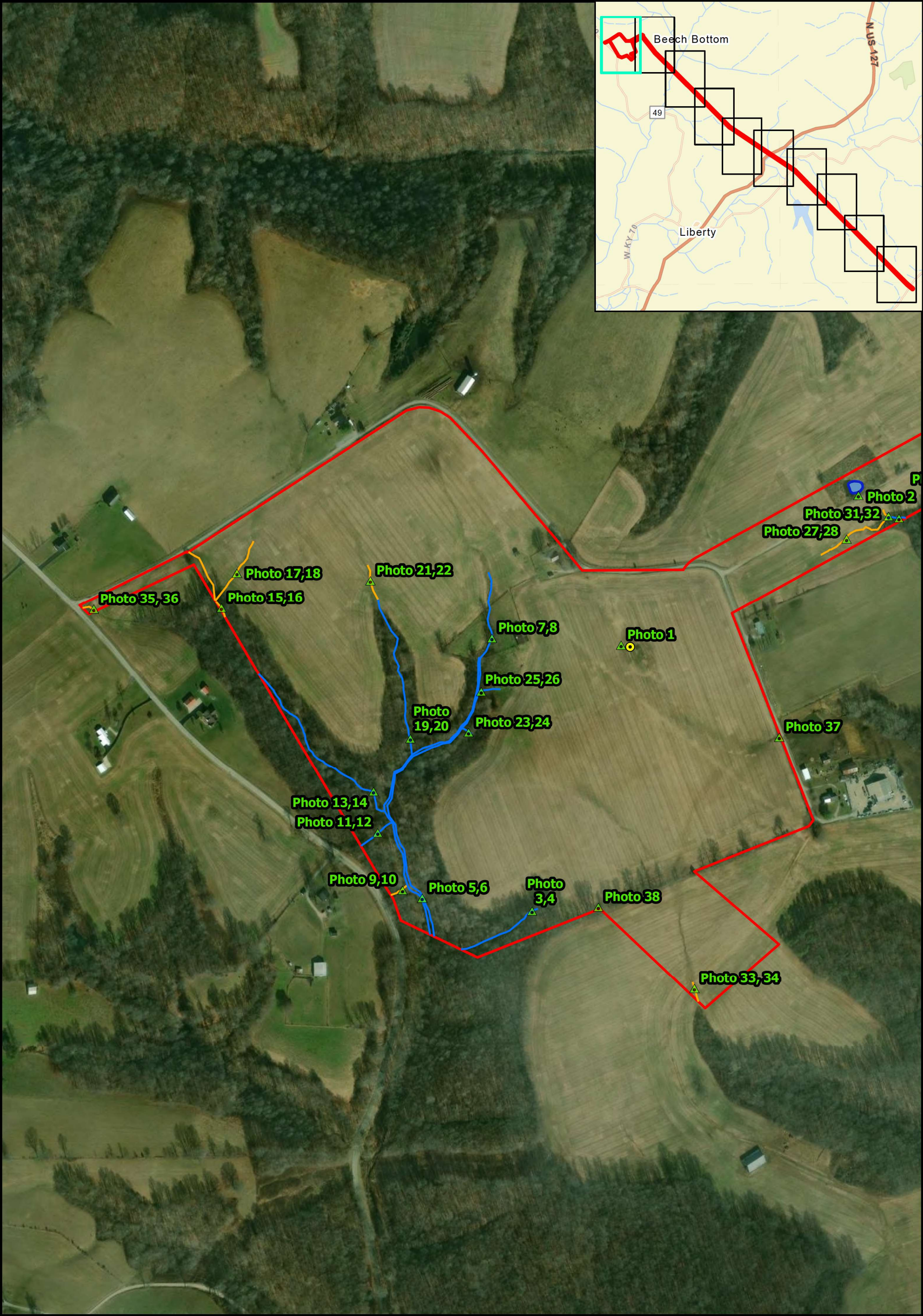
<div><div></div> Survey Area</div> <div><div></div> Sample Plot (SP)</div>	<div>Wetland Type (W)</div> <div><div></div> Emergent</div> <div><div></div> Scrub-Shrub</div> <div><div></div> Pond (P)</div>	<div>Stream Type (S)</div> <div><div></div> Proposed Non-Jurisdictional</div> <div><div></div> Proposed Jurisdictional</div> <div><div></div> Drainage Feature (D)</div>	<div><div></div> NORTH</div> <div>400 200 0 400</div> <div>Scale in Feet</div>	<div><div></div> BURNS MCDONNELL</div>	<div>Figure 4</div> <div>Wetland Delineation Map</div> <div>Liberty RICE Plant Project</div> <div>EKPC</div> <div>Casey County, KY</div> <div>Page 8 of 10</div>
--	--	--	--	--	--



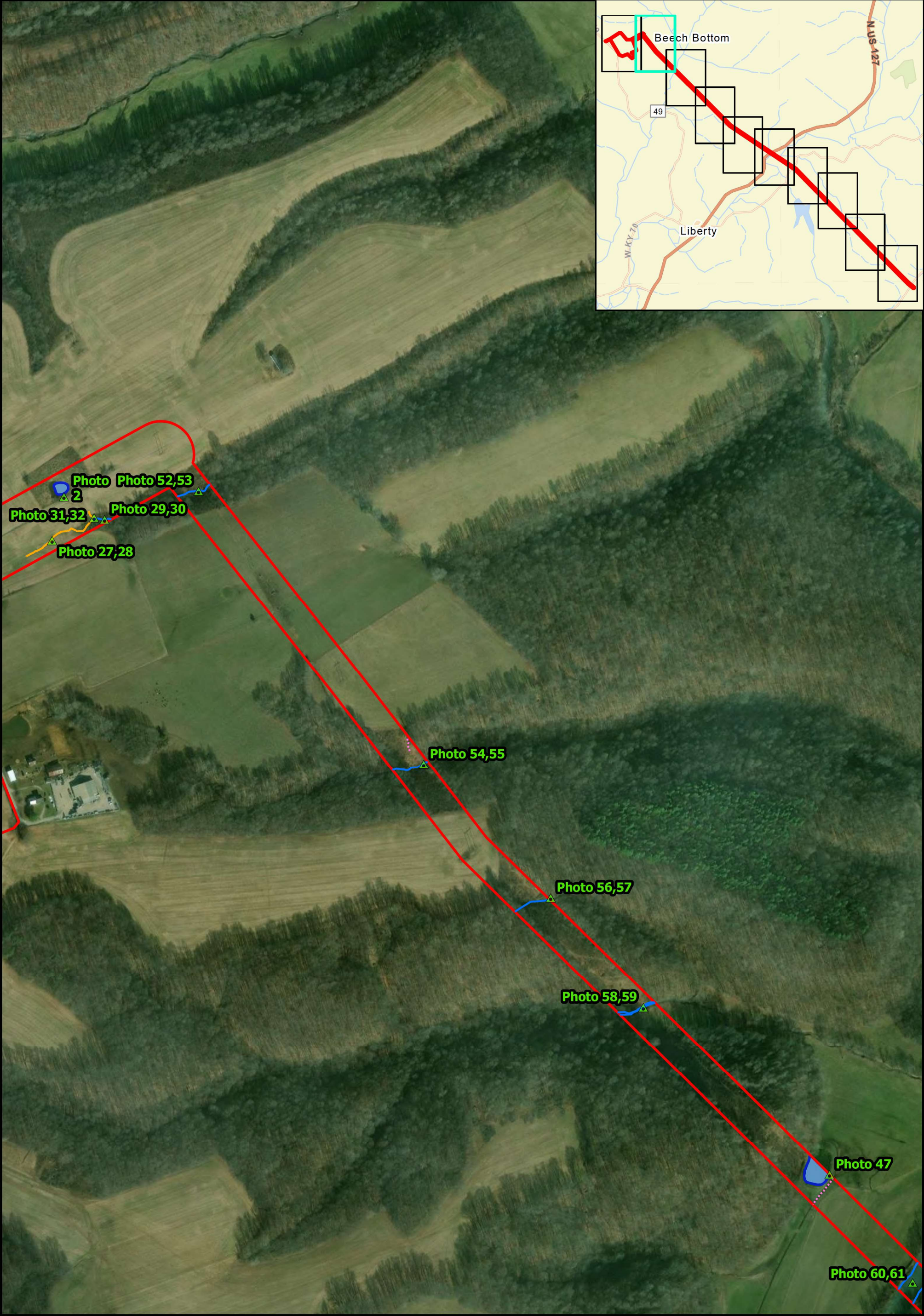
<div><div></div> Survey Area</div> <div><div></div> Sample Plot (SP)</div>	<div>Wetland Type (W)</div> <div><div></div> Emergent</div> <div><div></div> Scrub-Shrub</div> <div><div></div> Pond (P)</div>	<div>Stream Type (S)</div> <div><div></div> Proposed Non-Jurisdictional</div> <div><div></div> Proposed Jurisdictional</div> <div><div></div> Drainage Feature (D)</div>	<div><div></div> NORTH</div> <div>400 200 0 400</div> <div>Scale in Feet</div>	<div><div></div> BURNS MCDONNELL</div>	<div>Figure 4</div> <div>Wetland Delineation Map</div> <div>Liberty RICE Plant Project</div> <div>EKPC</div> <div>Casey County, KY</div> <div>Page 9 of 10</div>
--	--	--	--	--	--



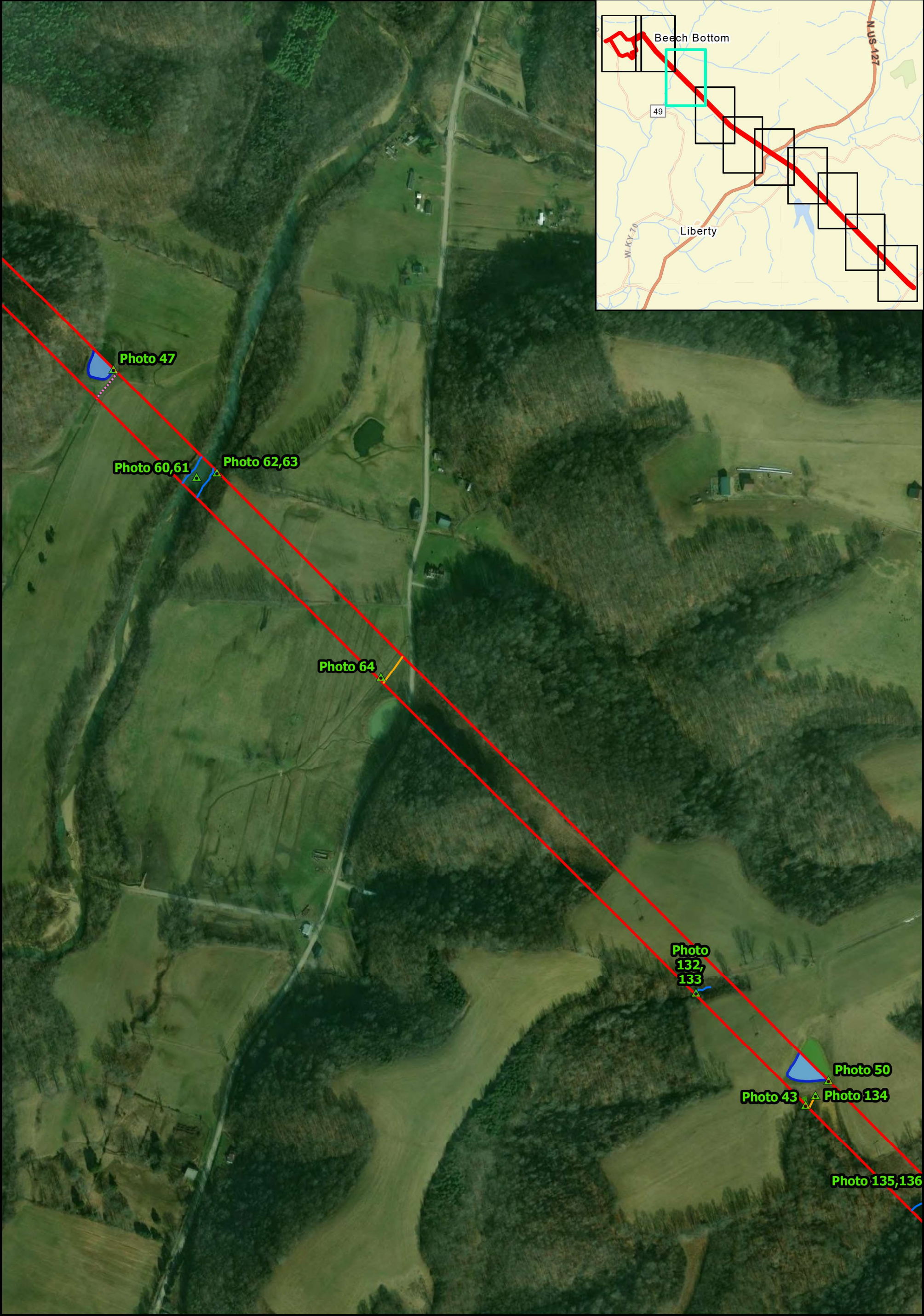
<div><div></div> Survey Area</div> <div><div></div> Sample Plot (SP)</div>	<div>Wetland Type (W)</div> <div><div></div> Emergent</div> <div><div></div> Scrub-Shrub</div> <div><div></div> Pond (P)</div>	<div>Stream Type (S)</div> <div><div></div> Proposed Non-Jurisdictional</div> <div><div></div> Proposed Jurisdictional</div> <div><div></div> Drainage Feature (D)</div>	<div><div></div> NORTH</div> <div>400 200 0 400</div> <div>Scale in Feet</div>	<div></div>	<div>Figure 4</div> <div>Wetland Delineation Map</div> <div>Liberty RICE Plant Project</div> <div>EKPC</div> <div>Casey County, KY</div> <div>Page 10 of 10</div>
--	--	--	--	-------------	---



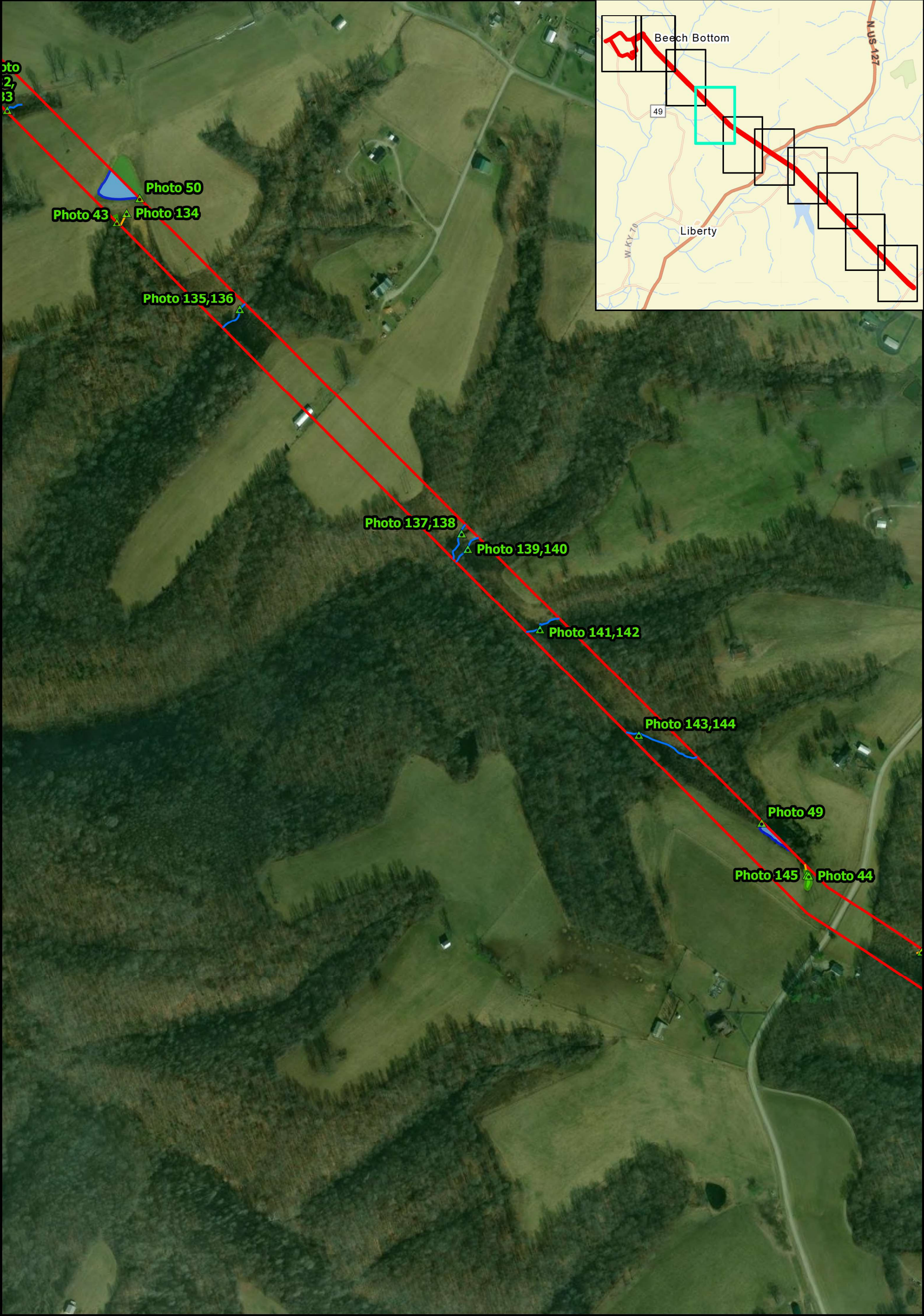
Survey Area ● Sample Plot (SP) ▲ Photo Point	Wetland Type (W) Emergent Scrub-Shrub Pond (P)	Stream Type (S) Proposed Non-Jurisdictional Proposed Jurisdictional Drainage Feature (D)	 Scale in Feet 400 200 0 400		Figure 5 Photo Map Liberty RICE Plant Project EKPC Casey County, KY Page 1 of 10
---	--	--	------------------------------------	--	---



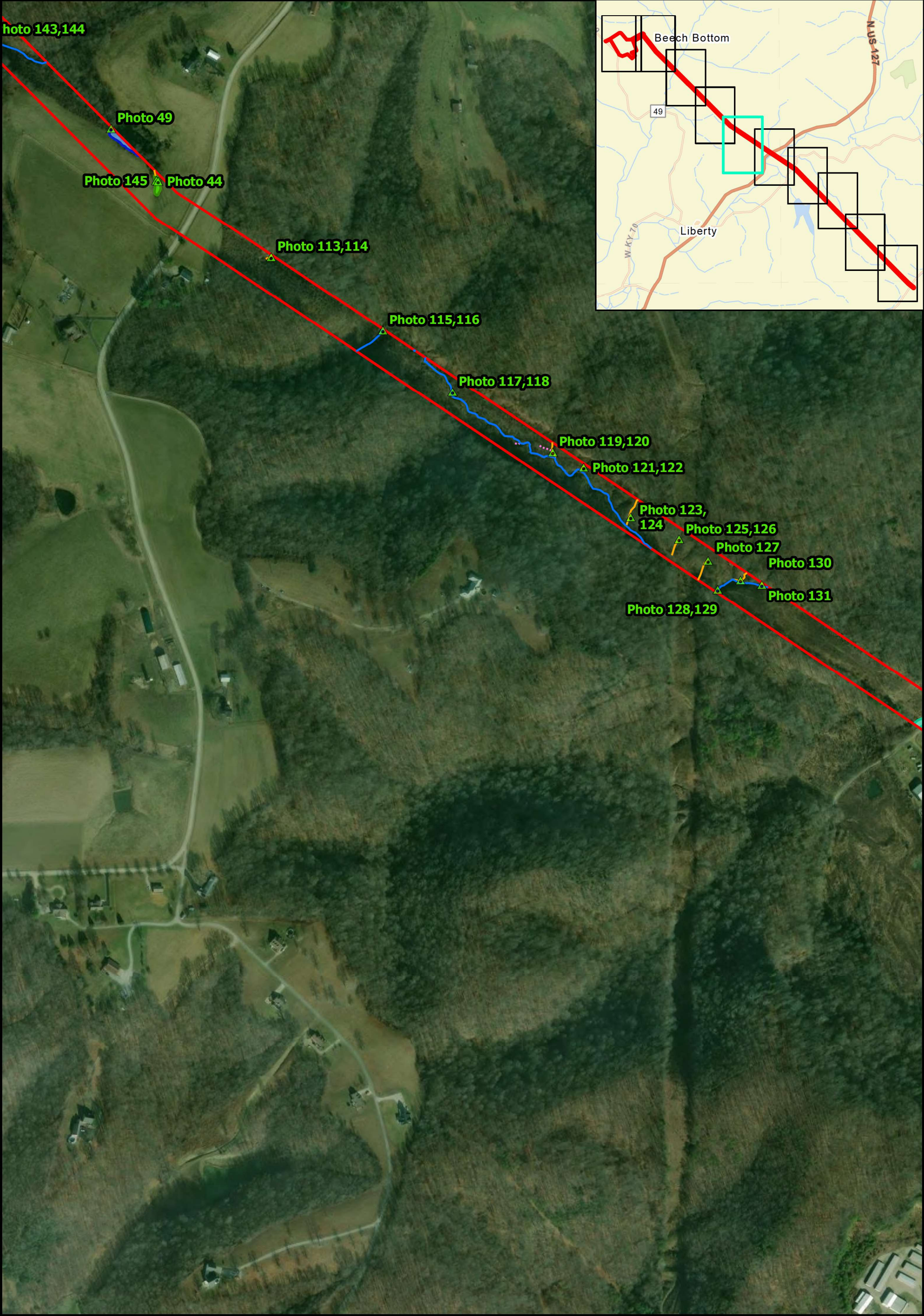
<div><div></div> Survey Area</div> <div><div></div> Sample Plot (SP)</div> <div><div></div> Photo Point</div>	<div>Wetland Type (W)</div> <div><div></div> Emergent</div> <div><div></div> Scrub-Shrub</div> <div><div></div> Pond (P)</div>	<div>Stream Type (S)</div> <div><div></div> Proposed Non-Jurisdictional</div> <div><div></div> Proposed Jurisdictional</div> <div><div></div> Drainage Feature (D)</div>	<div><div></div> NORTH</div> <div>400 200 0 400</div> <div>Scale in Feet</div>	<div><div></div> BURNS MCDONNELL</div>	<div>Figure 5</div> <div>Photo Map</div> <div>Liberty RICE Plant Project</div> <div>EKPC</div> <div>Casey County, KY</div> <div>Page 2 of 10</div>
---	--	--	--	--	--



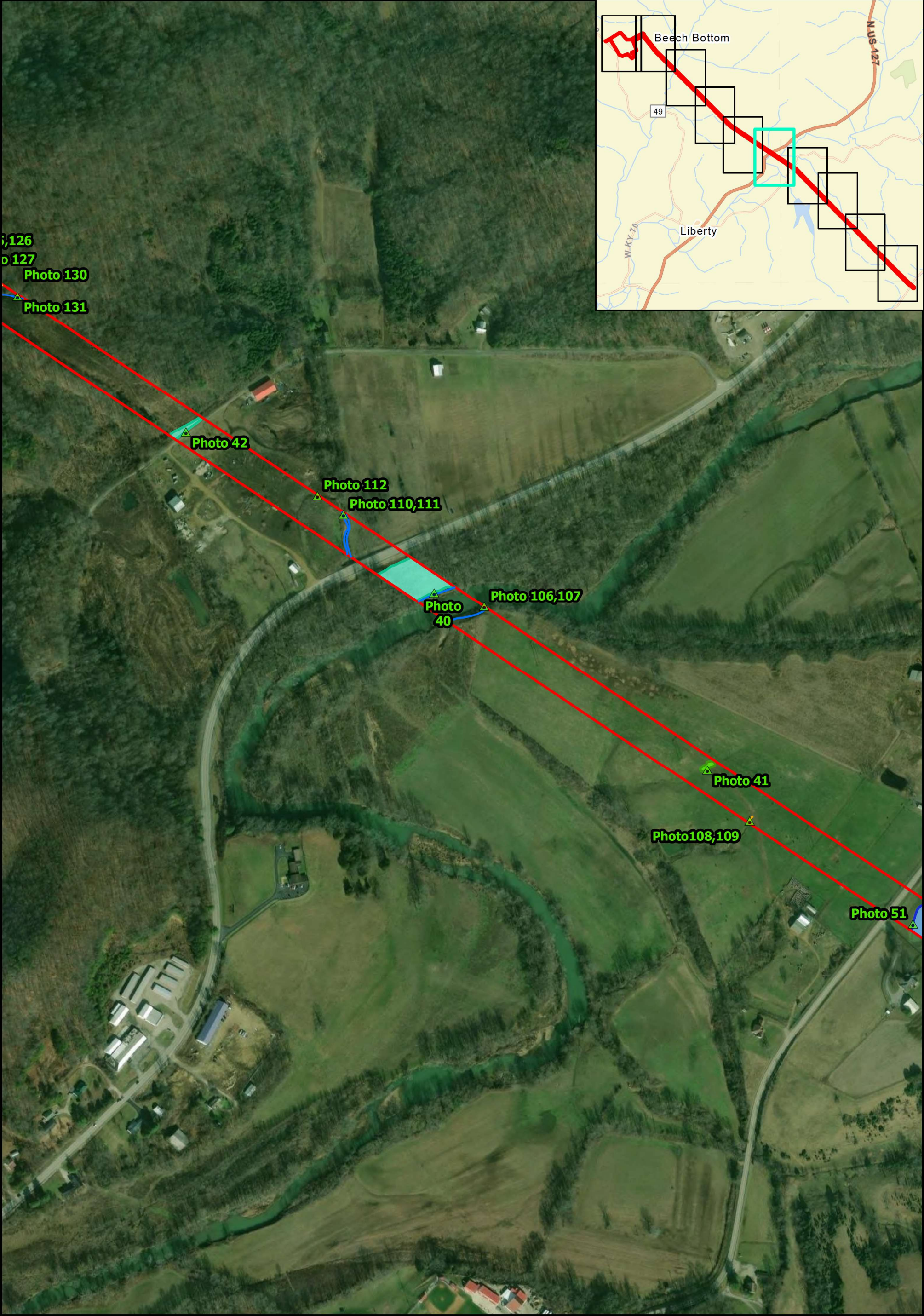
<div><div></div><div>Survey Area</div></div> <div><div></div><div>Sample Plot (SP)</div></div> <div><div></div><div>Photo Point</div></div>	<div><div>Wetland Type (W)</div><div><div></div><div>Emergent</div></div><div><div></div><div>Scrub-Shrub</div></div><div><div></div><div>Pond (P)</div></div></div>	<div><div>Stream Type (S)</div><div><div></div><div>Proposed Non-Jurisdictional</div></div><div><div></div><div>Proposed Jurisdictional</div></div><div><div></div><div>Drainage Feature (D)</div></div></div>	<div><div></div><div>NORTH</div></div> <div><div>4002000400</div><div>Scale in Feet</div></div>	<div><div></div></div>	<div><div>Figure 5</div><div>Photo Map</div><div>Liberty RICE Plant Project</div><div>EKPC</div><div>Casey County, KY</div><div>Page 3 of 10</div></div>
---	--	--	---	------------------------	--



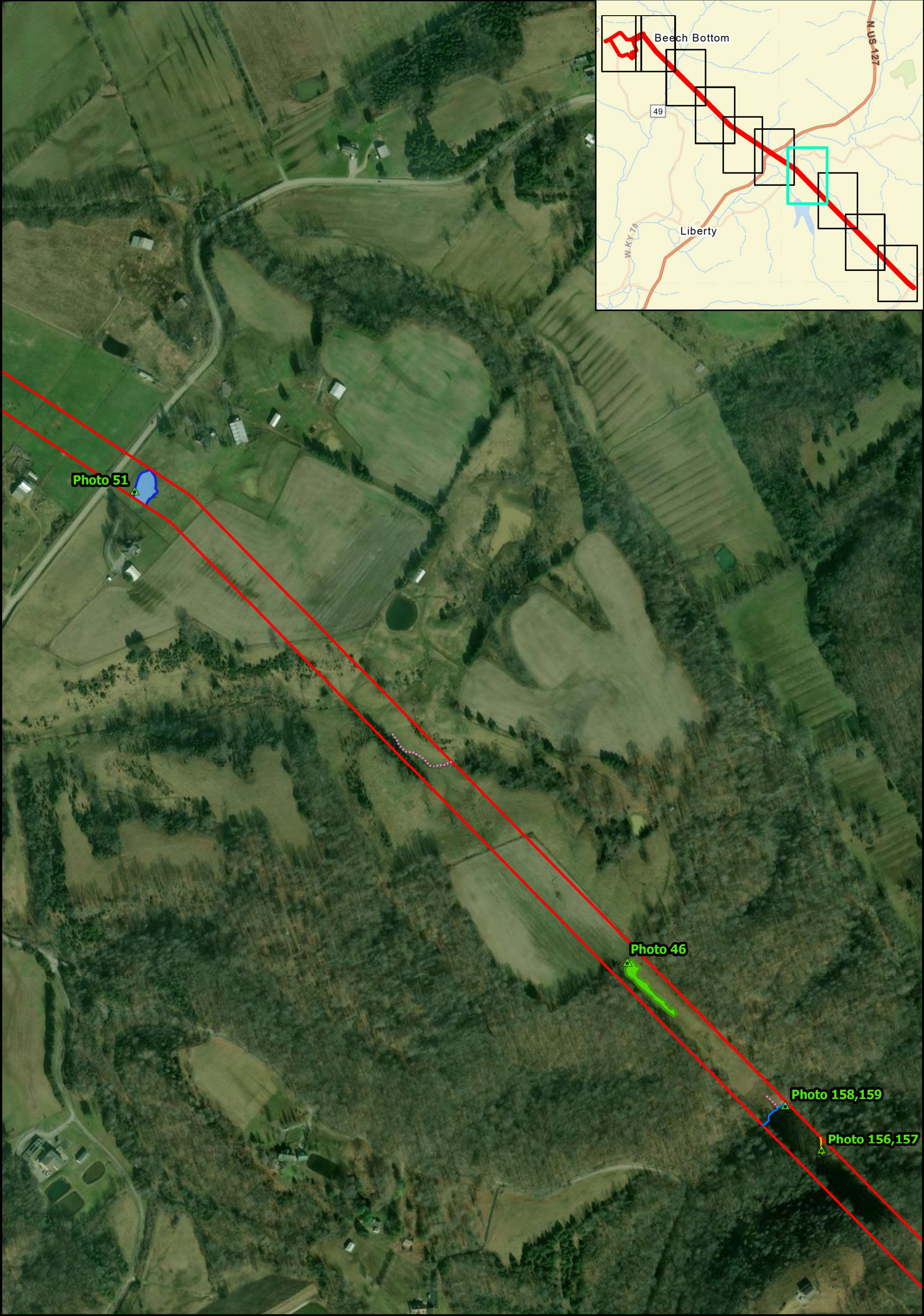
<div><div></div>Survey Area</div> <div><div></div>Sample Plot (SP)</div> <div><div></div>Photo Point</div>	<div>Wetland Type (W)</div> <div><div></div>Emergent</div> <div><div></div>Scrub-Shrub</div> <div><div></div>Pond (P)</div>	<div>Stream Type (S)</div> <div><div></div>Proposed Non-Jurisdictional</div> <div><div></div>Proposed Jurisdictional</div> <div><div></div>Drainage Feature (D)</div>	<div><div></div><div>NORTH</div></div> <div><div>4002000400</div><div>Scale in Feet</div></div>	<div><div><div></div><div>BURNS</div><div>MCDONNELL</div></div></div>	<div>Figure 5</div> <div>Photo Map</div> <div>Liberty RICE Plant Project</div> <div>EKPC</div> <div>Casey County, KY</div> <div>Page 4 of 10</div>
--	---	---	---	---	--



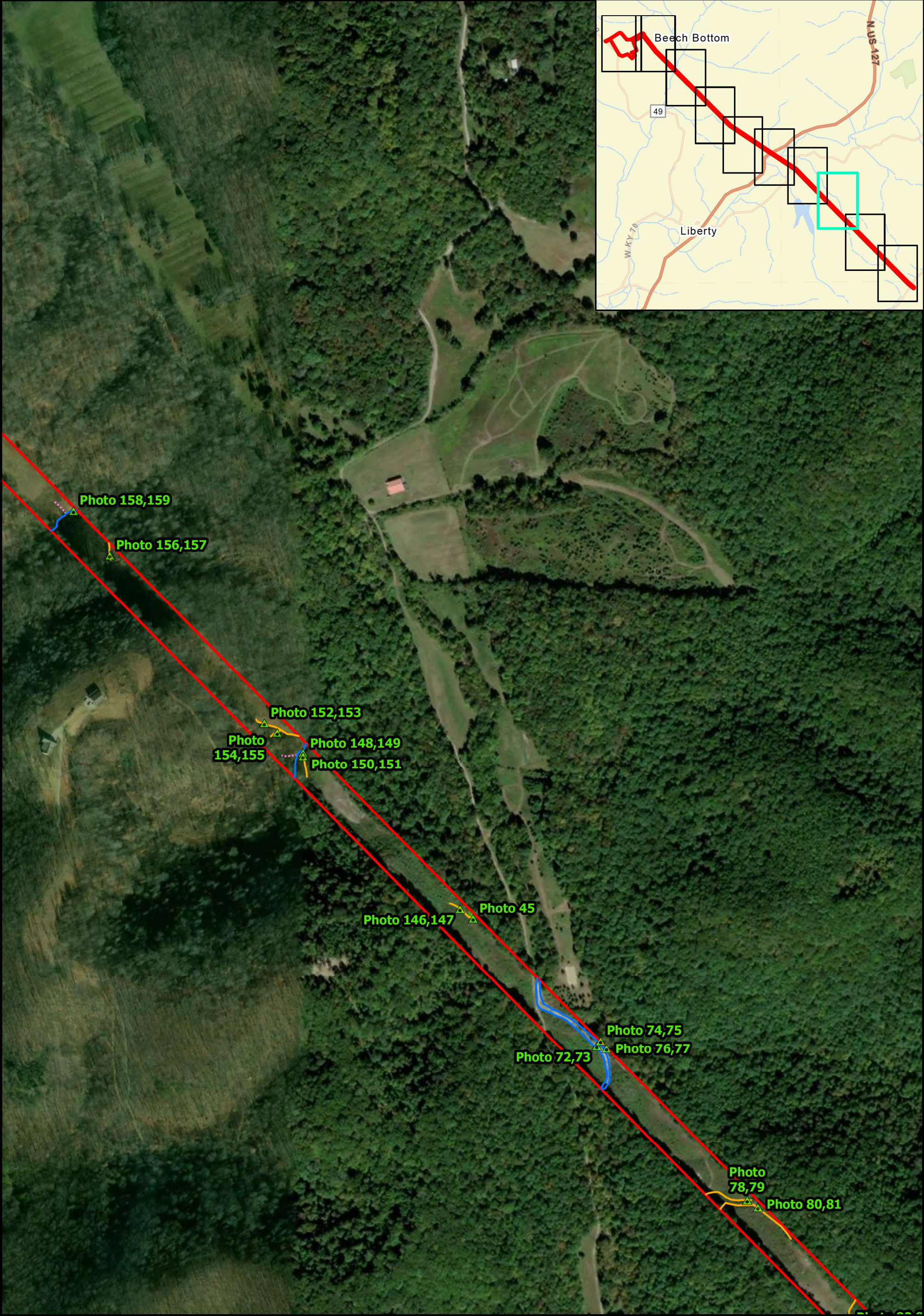
<p>Survey Area</p> <p>Sample Plot (SP)</p> <p>Photo Point</p>	<p>Wetland Type (W)</p> <p>Emergent</p> <p>Scrub-Shrub</p> <p>Pond (P)</p>	<p>Stream Type (S)</p> <p>Proposed Non-Jurisdictional</p> <p>Proposed Jurisdictional</p> <p>Drainage Feature (D)</p>	<p>400 200 0 400</p> <p>Scale in Feet</p>	<p>BURNS MCDONNELL</p>	<p>Figure 5</p> <p>Photo Map</p> <p>Liberty RICE Plant Project</p> <p>EKPC</p> <p>Casey County, KY</p> <p>Page 5 of 10</p>
--	---	---	---	-------------------------------	--



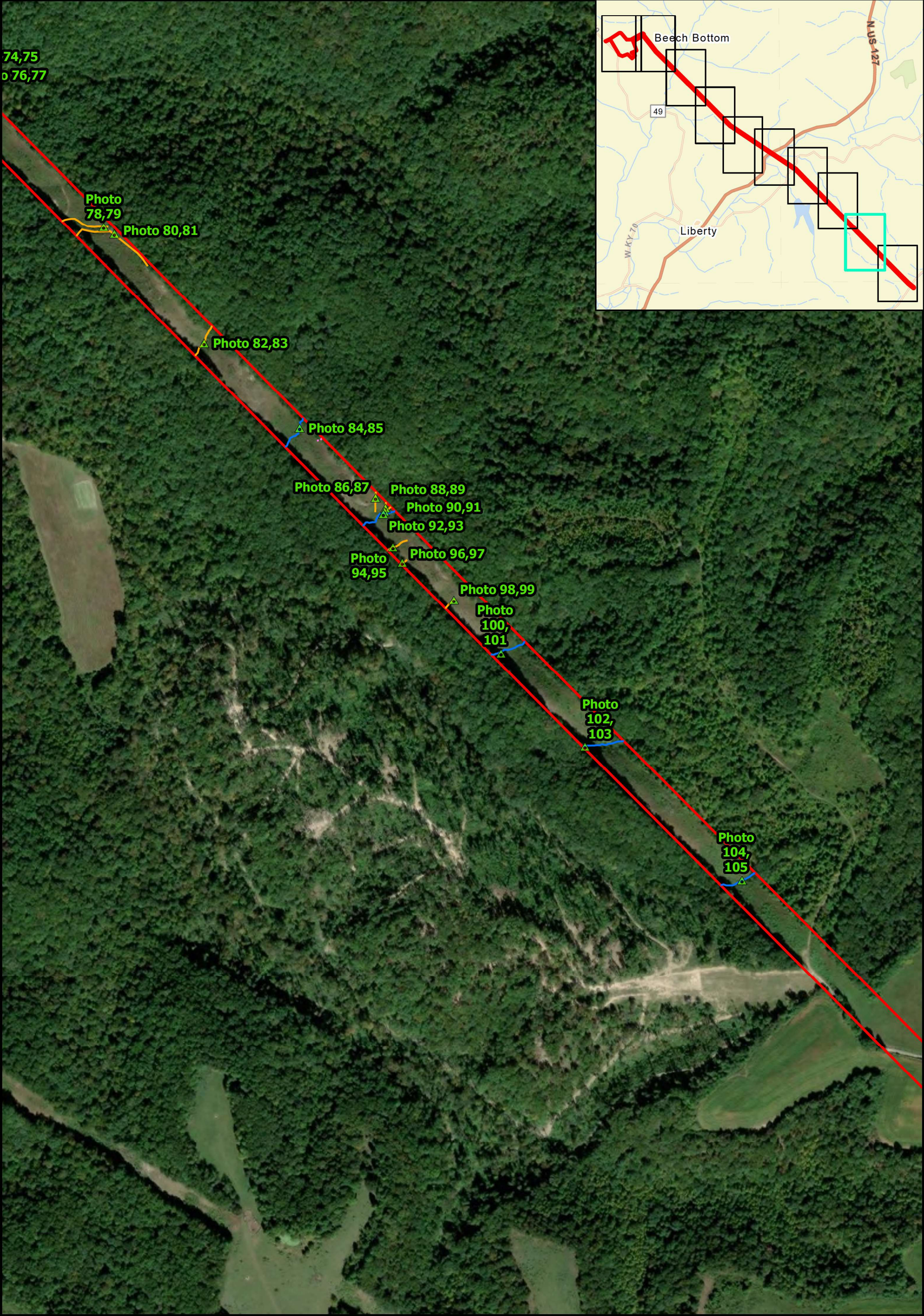
<div><div></div><div>Survey Area</div></div> <div><div></div><div>Sample Plot (SP)</div></div> <div><div></div><div>Photo Point</div></div>	<div><div>Wetland Type (W)</div><div><div></div><div>Emergent</div></div><div><div></div><div>Scrub-Shrub</div></div><div><div></div><div>Pond (P)</div></div></div>	<div><div>Stream Type (S)</div><div><div></div><div>Proposed Non-Jurisdictional</div></div><div><div></div><div>Proposed Jurisdictional</div></div><div><div></div><div>Drainage Feature (D)</div></div></div>	<div><div></div><div>NORTH</div></div> <div><div>400</div><div>200</div><div>0</div><div>400</div></div> <div><div></div><div>Scale in Feet</div></div>	<div><div></div></div>	<div><div>Figure 5</div><div>Photo Map</div><div>Liberty RICE Plant Project</div><div>EKPC</div><div>Casey County, KY</div><div>Page 6 of 10</div></div>
---	--	--	---	------------------------	--



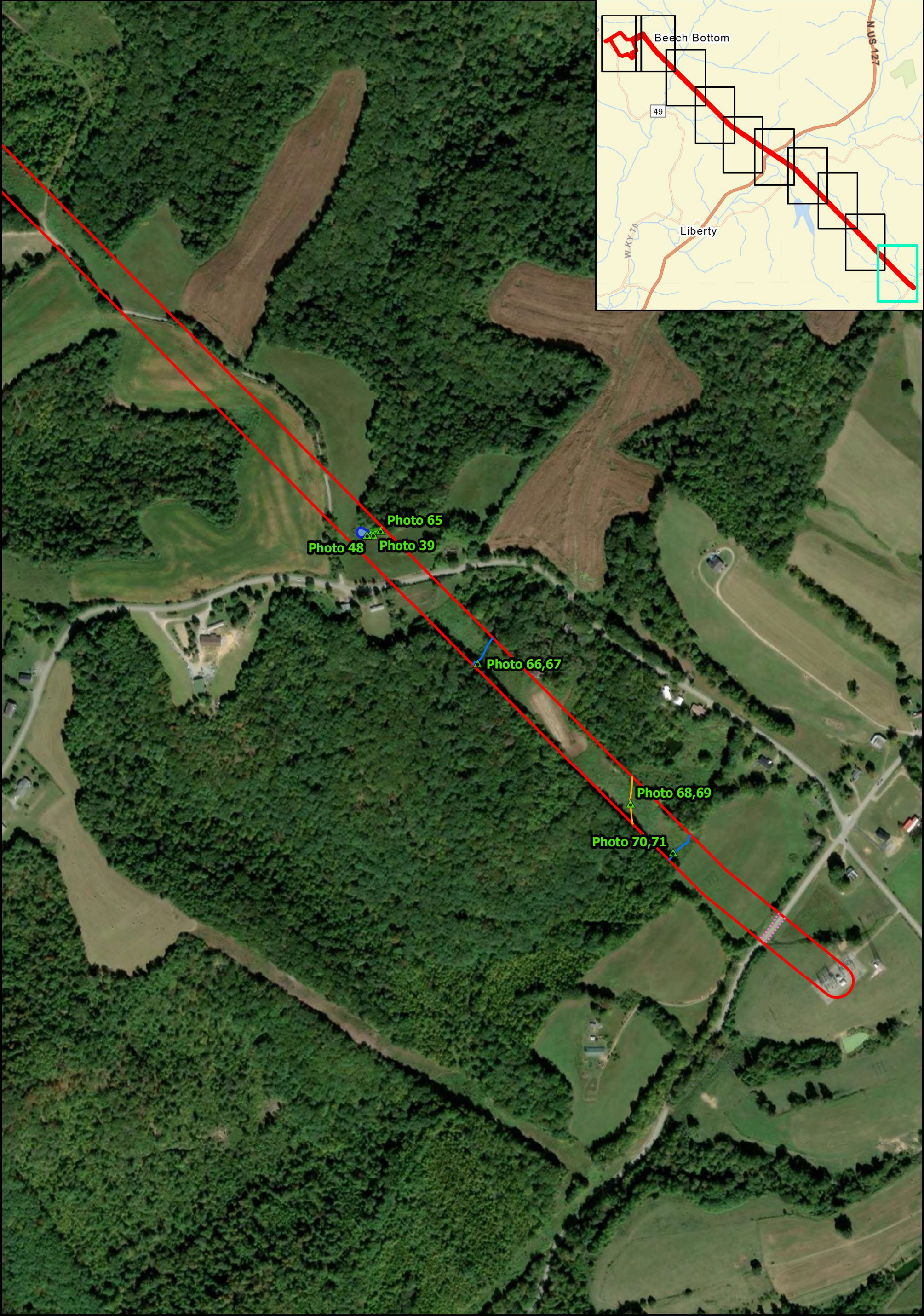
<div><div></div><div>Survey Area</div></div> <div><div></div><div>Sample Plot (SP)</div></div> <div><div></div><div>Photo Point</div></div>	<div><div>Wetland Type (W)</div><div><div></div><div>Emergent</div></div><div><div></div><div>Scrub-Shrub</div></div><div><div></div><div>Pond (P)</div></div></div>	<div><div>Stream Type (S)</div><div><div></div><div>Proposed Non-Jurisdictional</div></div><div><div></div><div>Proposed Jurisdictional</div></div><div><div></div><div>Drainage Feature (D)</div></div></div>	<div><div></div><div>NORTH</div></div> <div><div>4002000400</div><div>Scale in Feet</div></div>	<div><div></div></div>	<div><div>Figure 5</div><div>Photo Map</div><div>Liberty RICE Plant Project</div><div>EKPC</div><div>Casey County, KY</div><div>Page 7 of 10</div></div>
---	--	--	---	------------------------	--



<p>Survey Area</p> <p>Sample Plot (SP)</p> <p>Photo Point</p>	<p>Wetland Type (W)</p> <p>Emergent</p> <p>Scrub-Shrub</p> <p>Pond (P)</p>	<p>Stream Type (S)</p> <p>Proposed Non-Jurisdictional</p> <p>Proposed Jurisdictional</p> <p>Drainage Feature (D)</p>	<p>400 200 0 400</p> <p>Scale in Feet</p>	<p>BURNS MCDONNELL</p>	<p>Figure 5</p> <p>Photo Map</p> <p>Liberty RICE Plant Project</p> <p>EKPC</p> <p>Casey County, KY</p> <p>Page 8 of 10</p>
--	---	---	---	-------------------------------	--



<div><div></div> Survey Area</div> <div><div></div> Sample Plot (SP)</div> <div><div></div> Photo Point</div>	<div>Wetland Type (W)</div> <div><div></div> Emergent</div> <div><div></div> Scrub-Shrub</div> <div><div></div> Pond (P)</div>	<div>Stream Type (S)</div> <div><div></div> Proposed Non-Jurisdictional</div> <div><div></div> Proposed Jurisdictional</div> <div><div></div> Drainage Feature (D)</div>	<div><div></div> NORTH</div> <div>400 200 0 400</div> <div>Scale in Feet</div>	<div></div>	<div>Figure 5</div> <div>Photo Map</div> <div>Liberty RICE Plant Project</div> <div>EKPC</div> <div>Casey County, KY</div> <div>Page 9 of 10</div>
---	--	--	--	-------------	--



<div><div><div></div></div><div>Survey Area</div></div> <div><div><div></div></div><div>Sample Plot (SP)</div></div> <div><div><div></div></div><div>Photo Point</div></div>	<div><div><div></div></div><div>Wetland Type (W)</div></div> <div><div><div></div></div><div>Emergent</div></div> <div><div><div></div></div><div>Scrub-Shrub</div></div> <div><div><div></div></div><div>Pond (P)</div></div>	<div><div><div></div></div><div>Stream Type (S)</div></div> <div><div><div></div></div><div>Proposed Non-Jurisdictional</div></div> <div><div><div></div></div><div>Proposed Jurisdictional</div></div> <div><div><div></div></div><div>Drainage Feature (D)</div></div>	<div><div><div></div></div><div>NORTH</div></div> <div><div><div></div></div><div>4002000400</div></div> <div><div><div></div></div><div>Scale in Feet</div></div>	<div><div><div></div></div><div>BURNS MCDONNELL</div></div>	<div><div><div></div></div><div>Figure 5</div></div> <div><div><div></div></div><div>Photo Map</div></div> <div><div><div></div></div><div>Liberty RICE Plant Project</div></div> <div><div><div></div></div><div>EKPC</div></div> <div><div><div></div></div><div>Casey County, KY</div></div> <div><div><div></div></div><div>Page 10 of 10</div></div>
--	--	--	--	---	---

APPENDIX B – WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: EKPC Liberty City/County: Casey County Sampling Date: 2024-03-27
Applicant/Owner: EKPC State: Kentucky Sampling Point: SP1
Investigator(s): V Tremante, B Salupo Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Closed Depression Local relief (concave, convex, none): Concave Slope (%): 2
Subregion (LRR or MLRA): N 122 Lat: 37.37059463 Long: -84.9574603 Datum: NAD 83
Soil Map Unit Name: PrB - Pricetown silt loam, 2 to 6 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	

Remarks:

Active agricultural field. 6 inch corrugated plastic drain tile encountered while potholing.
Area was planted with soybeans last season based on residuals.

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Iron Deposits (B5)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			
<input type="checkbox"/> Water-Stained Leaves (B9)			
<input type="checkbox"/> Aquatic Fauna (B13)			

Field Observations:	Wetland Hydrology Present? Yes <u>X</u> No _____
Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____	
Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

6 inch corrugated plastic drain tile was encountered during potholing.

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: SP1

Tree Stratum (Plot size: <u>30 ft r</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.00</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>75</u></td> <td>x 5 = <u>375</u></td> </tr> <tr> <td>Column Totals: <u>92</u> (A)</td> <td><u>398</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.32</u>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>75</u>	x 5 = <u>375</u>	Column Totals: <u>92</u> (A)	<u>398</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>15</u>	x 1 = <u>15</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>2</u>	x 4 = <u>8</u>																	
UPL species <u>75</u>	x 5 = <u>375</u>																	
Column Totals: <u>92</u> (A)	<u>398</u> (B)																	
50% of total cover: _____ 20% of total cover: _____																		
Sapling/Shrub Stratum (Plot size: <u>15 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
_____ = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)														
50% of total cover: _____ 20% of total cover: _____																		
Herb Stratum (Plot size: <u>5 ft r</u>)																		
1. <u>Glycine max</u>	<u>75</u>	<u>X</u>	<u>UPL</u>															
2. <u>Packera glabella</u>	<u>15</u>		<u>OBL</u>															
3. <u>Poa pratensis</u>	<u>2</u>		<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
<u>92</u> = Total Cover																		
50% of total cover: <u>46.00</u> 20% of total cover: <u>18.40</u>																		
Woody Vine Stratum (Plot size: <u>30 ft r</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover																		
50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.) <u>See photo 1. Observed soy plants were from the previous season.</u>				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														

SOIL

Sampling Point: SP1[illegible]

APPENDIX C - PHOTOGRAPH LOGS



Photo 1: View of Sample Plot (SP)1 in upland, facing south.



Photo 2: View of PUB open water Pond (P)1, facing north.



Photo 3: Upstream view of intermittent Stream (S)1, facing east.



Photo 4: Downstream view of intermittent S1, facing west.



Photo 5: Upstream view of perennial S2, facing south.



Photo 6: Downstream view of perennial S2, facing north.



Photo 7: Upstream view of intermittent S2, facing north.



Photo 8: Downstream view of intermittent S2, facing south.



Photo 9: Upstream view of ephemeral S3, facing west.



Photo 10: Downstream view of ephemeral S3 in the foreground, facing east as it drains into S2.



Photo 11: Upstream view of intermittent S4, facing southwest.



Photo 12: Downstream view of intermittent S4, facing northeast.



Photo 13: Upstream view of intermittent S5, facing north.



Photo 14: Downstream view of intermittent S5, facing south.



Photo 15: Upstream view of ephemeral S6, facing north.



Photo 16: Downstream view of ephemeral S6, facing south.



Photo 17: Downstream view of ephemeral S7, facing southwest.



Photo 18: Upstream view of ephemeral S7, facing northeast.



Photo 19: Upstream view of intermittent S8, facing north.



Photo 20: Downstream view of intermittent S8, facing south.



Photo 21: Upstream view of ephemeral S8, facing north.



Photo 22: Downstream view of ephemeral S8, facing south.



Photo 23: Upstream view of intermittent S9, facing southeast.



Photo 24: Downstream view of intermittent S9, facing northwest.



Photo 25: Upstream view of intermittent S10, facing east.



Photo 26: Downstream view of intermittent S10, facing west.



Photo 27: Upstream view of ephemeral S11, facing west.



Photo 28: Downstream view of ephemeral S11, facing east.



Photo 29: Downstream view of intermittent S11, facing east.



Photo 30: Upstream view of intermittent S11, facing west.



Photo 31: Upstream view of ephemeral S12, facing northwest.



Photo 32: Downstream view of ephemeral S12, facing southeast.



Photo 33: Upstream view of ephemeral S13, facing north.



Photo 34: Downstream view of ephemeral S13, facing south.



Photo 35: Upstream view of ephemeral S5, facing northwest.



Photo 36: Downstream view of ephemeral S5, facing southeast.



Photo 37: View of representative farm field, facing west.



Photo 38: View down edge of property and tree line, facing northeast.



Photo 39: View of Wetland (W)1, facing east.



Photo 40: View of W2, facing north.



Photo 41: View of W3, facing north.



Photo 42: View of W4, facing west.



Photo 43: View of W5, facing northeast.



Photo 44: View of W6, facing south.



Photo 45: View of W7, facing south.



Photo 46: View of W8, facing south.



Photo 47: View of Pond (P)2, facing north.



Photo 48: View of P3, facing north.



Photo 49: View of P4, facing north.



Photo 50: View of P5, facing south.



Photo 51: View of P6, facing west.



Photo 52: Upstream view of intermittent S14, facing west.



Photo 53: Downstream view of intermittent S14, facing east.



Photo 54: Upstream view of perennial S15, facing west.



Photo 55: Downstream view of perennial S15, facing east.



Photo 56: Upstream view of intermittent S16, facing west.



Photo 57: Downstream view of intermittent S16, facing west.



Photo 58: Upstream view of perennial S17, facing west.



Photo 59: Downstream view of perennial S17, facing east.



Photo 60: Upstream view of perennial S18, Brush Creek, facing west.



Photo 61: Downstream view of perennial S18, Brush Creek, facing east.



Photo 62: Upstream view of intermittent S19, facing northwest.



Photo 63: Downstream view of intermittent S19, facing southeast.



Photo 64: Upstream view of ephemeral S20, facing northeast.



Photo 65: Upstream view of ephemeral S21, facing west.



Photo 66: Upstream view of intermittent S22, facing east.



Photo 67: Downstream view of intermittent S22, facing west.



Photo 68: Upstream view of ephemeral S23, facing north.



Photo 69: Downstream view of ephemeral S23, facing south.



Photo 70: Upstream view of perennial S24, facing east.



Photo 71: Downstream view of perennial S24, facing west.



Photo 72: Upstream view of perennial S25, Moccasin Creek, facing north.



Photo 73: Downstream view of perennial S25, Moccasin Creek, facing south.



Photo 74: Upstream view of ephemeral S26, facing east.



Photo 75: Downstream view of ephemeral S26, facing west.



Photo 76: Upstream view of perennial S27, facing east.



Photo 77: Downstream view of perennial S27, facing west.



Photo 78: Upstream view of ephemeral S28, facing southeast.



Photo 79: Downstream view of ephemeral S28, facing northwest.



Photo 80: Upstream view of ephemeral S29, facing northeast.



Photo 81: Downstream view of ephemeral S29, facing southwest.



Photo 82: Upstream view of ephemeral S30, facing east.



Photo 83: Downstream view of ephemeral S30, facing west.



Photo 84: Photo of intermittent S31 was not available, however, it was characteristically similar to S22, with the upstream view shown here.



Photo 85: Photo of intermittent S31 was not available, however, it was characteristically similar to S22, with the downstream view shown here.



Photo 86: Photo of ephemeral S32 was not available, however, it was characteristically similar to S28, with the upstream view shown here.



Photo 87: Photo of ephemeral S32 was not available, however, it was characteristically similar to S28, with the downstream view shown here.



Photo 88: Upstream view of ephemeral S33, facing northeast.



Photo 89: Downstream view of ephemeral S33, facing southwest.



Photo 90: Upstream view of ephemeral S34, facing northeast.



Photo 91: Downstream view of ephemeral S34, facing southwest.



Photo 92: Upstream view of intermittent S35, facing east.



Photo 93: Downstream view of intermittent S35, facing west.



Photo 94: Upstream view of ephemeral S36, facing east.



Photo 95: Downstream view of ephemeral S36, facing west.



Photo 96: Upstream view of ephemeral S37, facing east.



Photo 97: Downstream view of ephemeral S37, facing west.



Photo 98: Upstream view of ephemeral S38, facing southeast.



Photo 99: Downstream view of ephemeral S38, facing west.



Photo 100: Upstream view of intermittent S39, facing east.



Photo 101: Downstream view of intermittent S39, facing west.



Photo 102: Upstream view of intermittent S40, facing east.



Photo 103: Downstream view of intermittent S40, facing west.



Photo 104: Upstream view of intermittent S41, facing east.



Photo 105: Downstream view of intermittent S41, facing west.



Photo 106: Upstream view of perennial S42, the Green River, facing east.



Photo 107: Downstream view of perennial S42, the Green River, facing west.



Photo 108: Upstream view of ephemeral S43, facing east.



Photo 109: Downstream view of ephemeral S43, facing west.



Photo 110: Upstream view of perennial S44, Barger Branch, facing northeast.



Photo 111: Downstream view of perennial S44, Barger Branch, facing southwest.



Photo 112: Upstream view of ephemeral S45, facing east.



Photo 113: Upstream view of ephemeral S46, facing west.



Photo 114: Downstream view of ephemeral S46, facing east.



Photo 115: Upstream view of intermittent S47, facing west.



Photo 116: Downstream view of intermittent S47, facing east.



Photo 117: Upstream view of perennial S48, facing north.



Photo 118: Downstream view of perennial S48, facing south.



Photo 119: Upstream view of ephemeral S49, facing east.



Photo 120: Downstream view of ephemeral S49, facing west.



Photo 121: Upstream view of ephemeral S50, facing west.



Photo 122: Downstream view of ephemeral S50, facing east.



Photo 123: Upstream view of ephemeral S51, facing east.



Photo 124: Downstream view of ephemeral S51, facing west.



Photo 125: Upstream view of ephemeral S52, facing northeast.



Photo 126: Downstream view of ephemeral S52, facing southwest.



Photo 127: Upstream view of ephemeral S53, facing west.



Photo 128: Upstream view of intermittent S54, facing east.



Photo 129: Downstream view of intermittent S54, facing west.



Photo 130: View of ephemeral S55, facing northeast.



Photo 131: Photo of ephemeral S56 was not available, however, it was characteristically similar to S43, shown here.



Photo 132: Upstream view of perennial S57, facing northwest.



Photo 133: Downstream view of perennial S57, facing southwest.



Photo 134: View of ephemeral S58, facing northwest.



Photo 135: Upstream view of perennial S59, facing east.



Photo 136: Downstream view of perennial S59, facing west.



Photo 137: Upstream view of perennial S60, facing west.



Photo 138: Downstream view of perennial S60, facing east.



Photo 139: Upstream view of intermittent S61, facing east.



Photo 140: Downstream view of intermittent S61, facing west.



Photo 141: Upstream view of perennial S62, facing north.



Photo 142: Downstream view of perennial S62, facing south.



Photo 143: Upstream view of perennial S63, facing west.



Photo 144: Downstream view of perennial S63, facing east.



Photo 145: View of ephemeral S64.



Photo 146: Upstream view of ephemeral S65, facing northeast.



Photo 147: Downstream view of ephemeral S65, facing southwest.



Photo 148: Upstream view of intermittent S66, facing east.



Photo 149: Downstream view of intermittent S66, facing west.



Photo 150: Upstream view of ephemeral S67, facing north.



Photo 151: Downstream view of ephemeral S67, facing south.



Photo 152: Upstream view of ephemeral S68, facing northwest.



Photo 153: Downstream view of ephemeral S68, facing southeast.



Photo 154: Upstream view of ephemeral S69, facing west.



Photo 155: Downstream view of ephemeral S69, facing east.



Photo 156: Upstream view of ephemeral S70, facing east.



Photo 157: Downstream view of ephemeral S70, facing west.



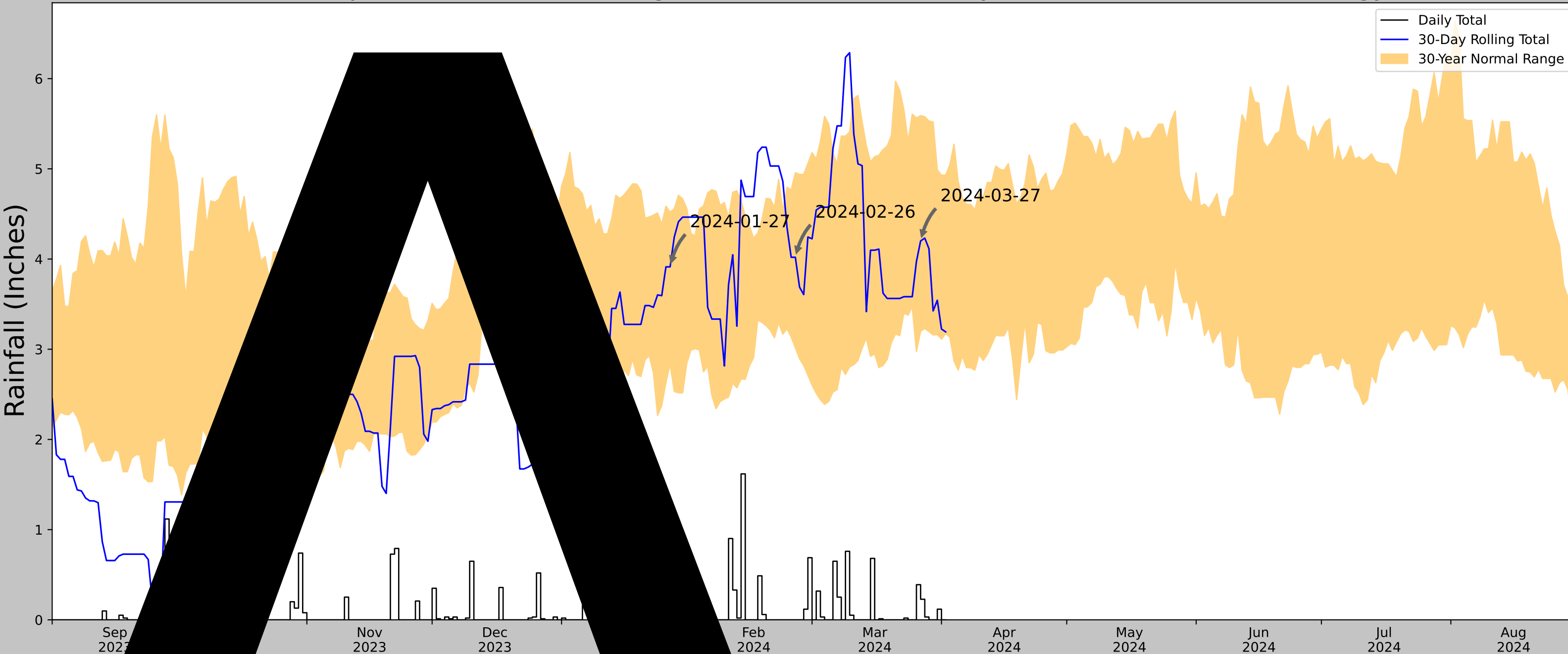
Photo 158: Downstream view of intermittent S71, facing northwest.



Photo 159: Downstream view of intermittent S71, facing southeast.

APPENDIX D - ANTECEDENT PRECIPITATION TOOL

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



	37.3699, -84.9595
	2024-03-27
	1068.021
(i)	Mild drought (2024-02)
Wet Season	Wet Season

30 Days Ending	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-03-27	5.590158	4.200788	Normal	2	3	6
2024-02-26	4.957087	4.019685	Normal	2	2	4
2024-01-27	4.520079	3.913386	Normal	2	1	2
Result						Normal Conditions - 12


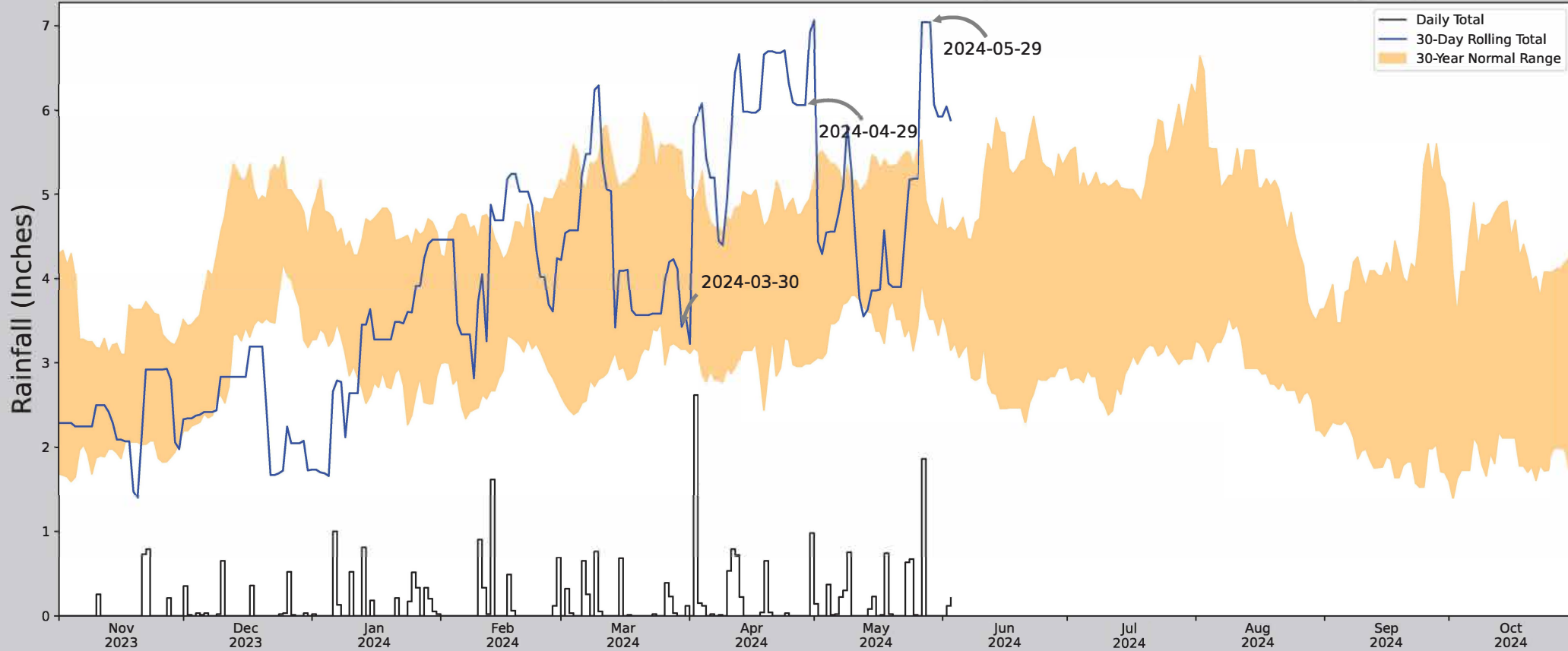


Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days Normal	Days Antecedent
	37.6514, -84.7628	975.066	22.238	92.955	12.074	10182	88
DANVILLE	37.6585, -84.7637	912.074	0.493	62.992	0.253	39	0
DANVILLE	37.6557, -84.7802	972.113	0.997	2.953	0.452	13	0
DANVILLE	37.586, -84.7791	1005.906	4.606	30.84	2.215	29	0
LANCASTER	37.5466, -84.6876	827.1	4.127	147.966	2.468	149	0
	37.5884, -84.6835	922.9	5.034	52.166	2.528	10	0
	37.574, -84.6711	904.856	6.778	70.21	3.526	1	0
	37.572, -84.5706	1020.013	10.779	44.947	5.335	5	0
	37.566, -84.646	1054.134	13.728	79.068	7.263	1	0
	37.548, -84.9965	941.929	15.511	33.137	7.494	786	2
	37.548, -84.4375	1024.934	21.006	49.868	10.5	137	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.366958, -84.956809
Observation Date	2024-05-29
Elevation (ft)	1078.986
Drought Index (PDSI)	Mild drought (2024-04)
WebWIMP H ₂ O Balance	Wet Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-05-29	3.518898	4.762992	7.043307	Wet	3	3	9
2024-04-29	2.992126	4.870473	6.059055	Wet	3	2	6
2024-03-30	3.157874	5.520473	3.425197	Normal	2	1	2
Result							Wetter than Normal - 17

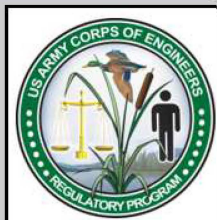
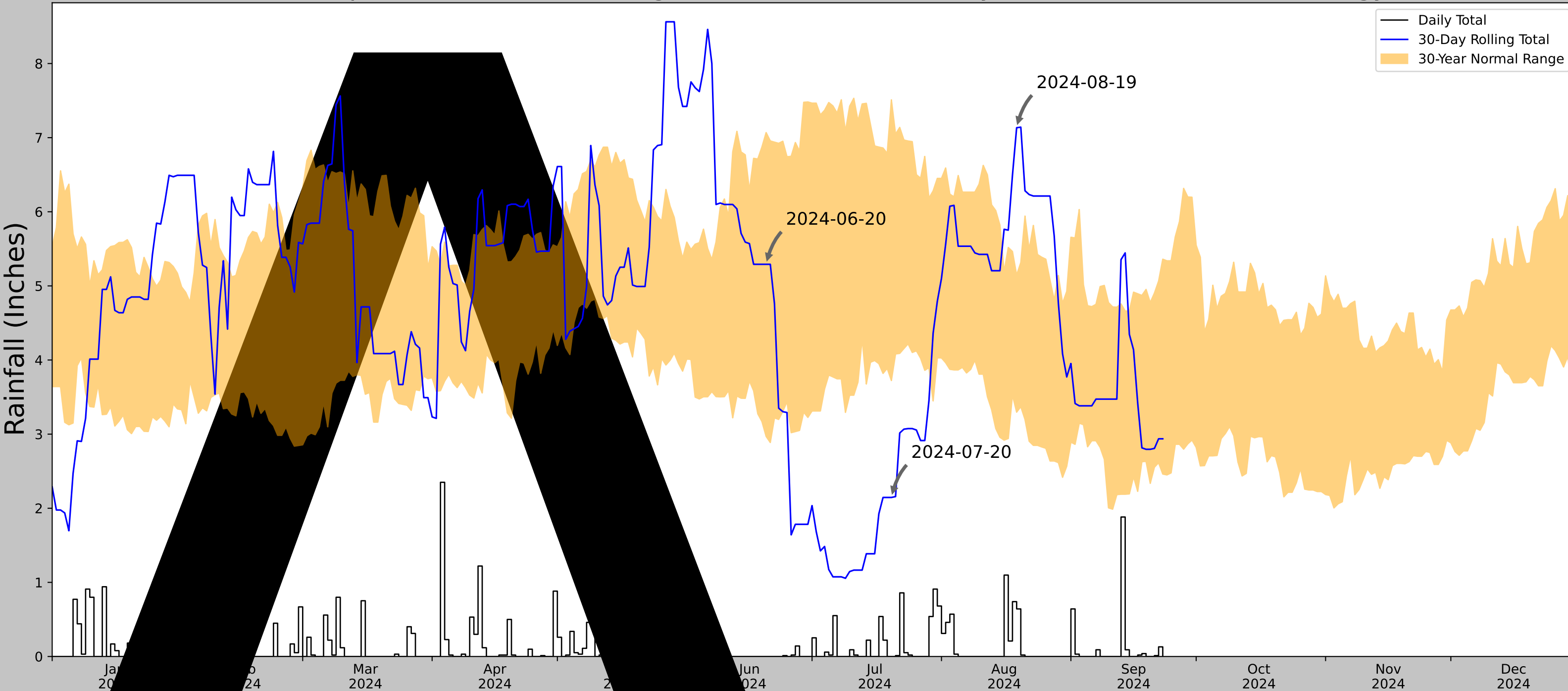


Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DANVILLE	37.6514, -84.7628	975.066	22.345	103.92	12.378	10182	89
DANVILLE 1.2 NNE	37.6585, -84.7637	912.074	0.493	62.992	0.253	39	0
DANVILLE 1.0 NNW	37.6557, -84.7802	972.113	0.997	2.953	0.452	13	0
DANVILLE 3.9 S	37.586, -84.7791	1005.906	4.606	30.84	2.215	29	0
LANCASTER 6.2 WNW	37.6466, -84.6876	827.1	4.127	147.966	2.468	149	1
LANCASTER 7.5 NW	37.6884, -84.6835	922.9	5.034	52.166	2.528	10	0
BRYANTSVILLE 1.2 W	37.7174, -84.6711	904.856	6.778	70.21	3.526	1	0
LANCASTER	37.6172, -84.5706	1020.013	10.779	44.947	5.335	5	0
STANFORD 4.0 SSE	37.4756, -84.646	1054.134	13.728	79.068	7.263	1	0
BRADFORDSVILLE 8.5 ENE	37.5245, -84.9965	941.929	15.511	33.137	7.494	786	0
CRAB ORCHARD 6 N	37.4903, -84.4375	1024.934	21.006	49.868	10.5	137	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



	37.3699, -84.9595
Location	2024-08-19
Station ID	1068.021
Condition	Incipient drought
Season	Dry Season

30 Days Ending	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-19	5.146457	7.133858	Wet	3	3	9
2024-07-20	7.51063	2.145669	Dry	1	2	2
2024-06-20	7.068898	5.291339	Normal	2	1	2
Result						Normal Conditions - 13


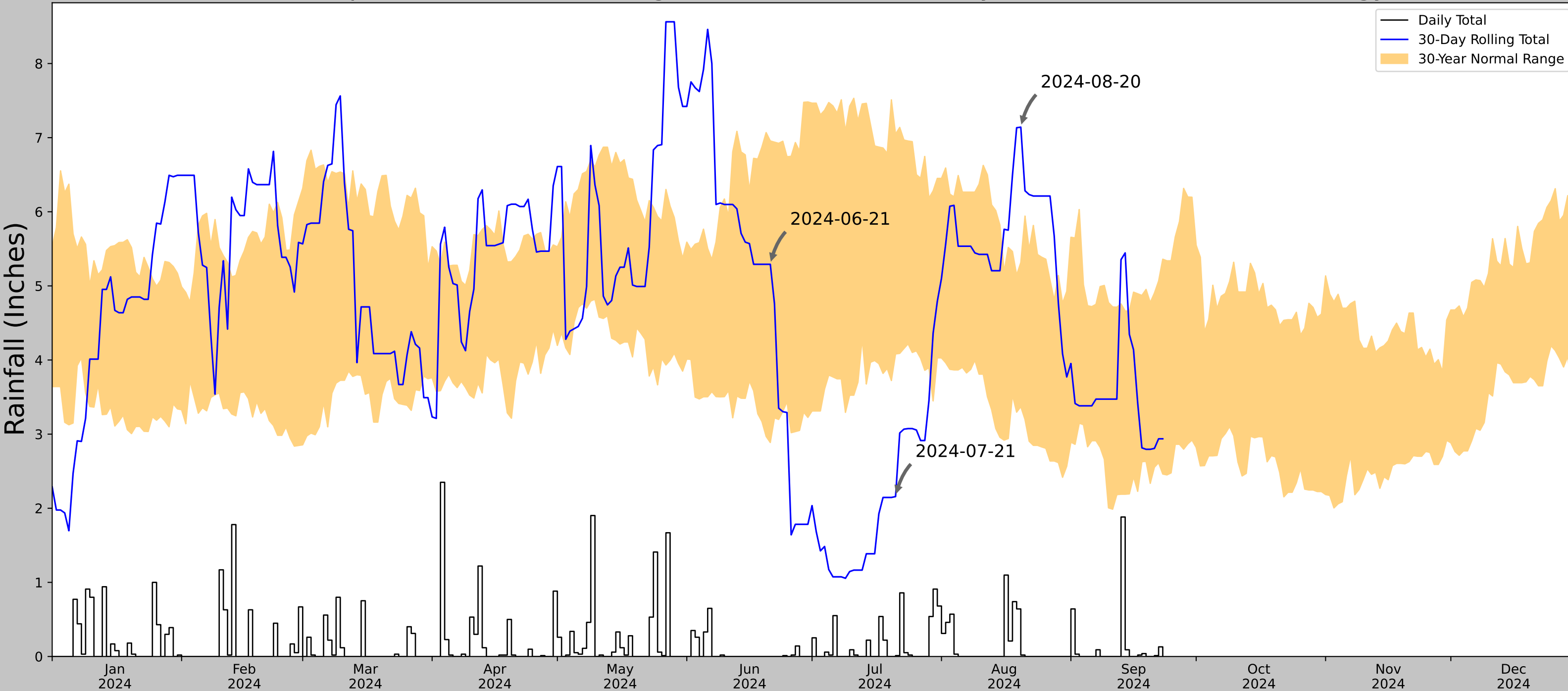


Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days Normal	
BRADFORDSVILLE 8.5 ENE	37.5245, -84.9965	941.929	10.873	126.092	6.264	5682	
BRADFORDSVILLE	37.495, -85.1517	660.105	8.747	281.824	6.401	5596	
DANVILLE	37.6514, -84.7628	975.066	15.511	33.137	7.494	64	
LIBERTY	37.2508, -84.9328	870.079	19.231	71.85	10.036	8	
SPRINGFIELD 2W	37.7053, -85.2639	740.158	19.242	201.771	12.541	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.3699, -84.9595
Observation Date	2024-08-20
Elevation (ft)	1068.021
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-20	3.370866	5.315355	7.141733	Wet	3	3	9
2024-07-21	4.081102	7.047638	2.15748	Dry	1	2	2
2024-06-21	2.886614	6.955906	5.291339	Normal	2	1	2
Result							Normal Conditions - 13


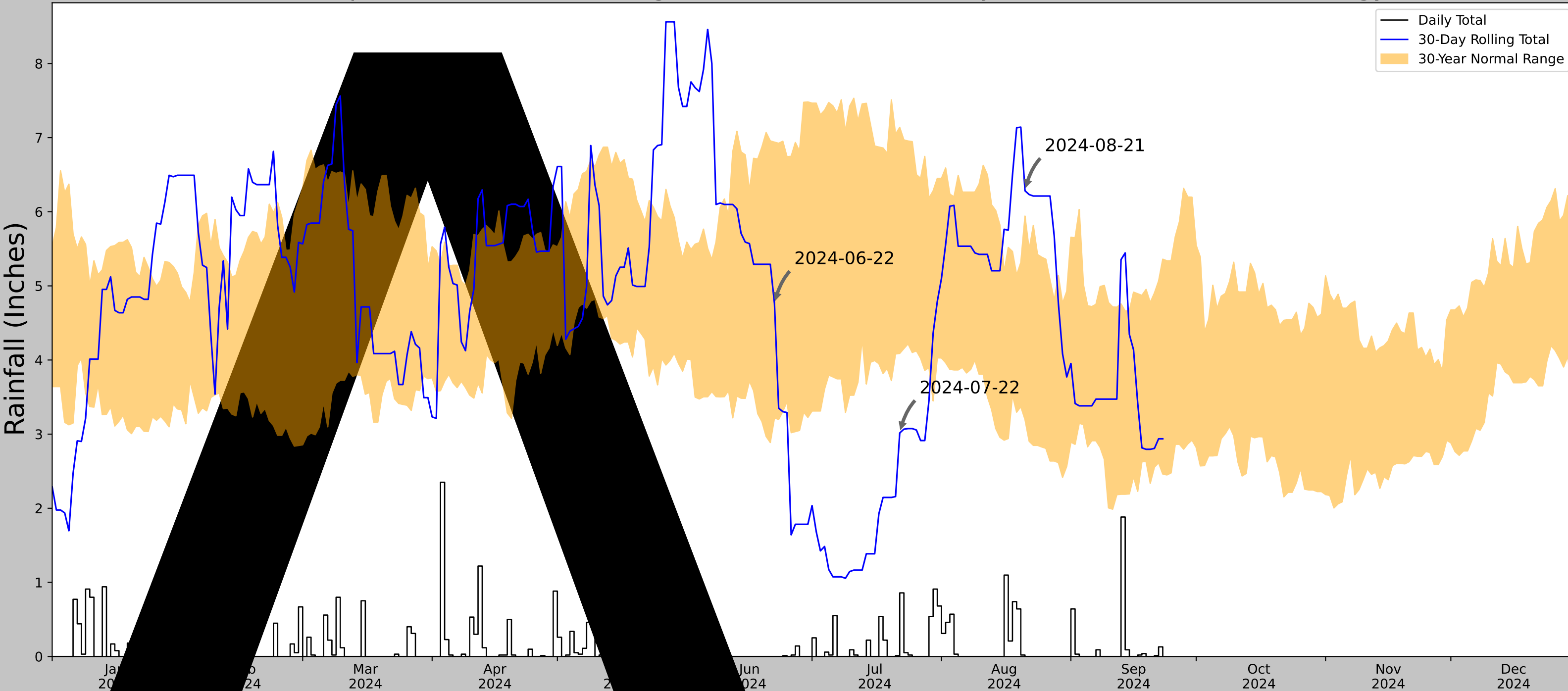


Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days Normal	Days Antecedent
BRADFORDSVILLE 8.5 ENE	37.5245, -84.9965	941.929	10.873	126.092	6.264	5682	90
BRADFORDSVILLE	37.495, -85.1517	660.105	8.747	281.824	6.401	5596	0
DANVILLE	37.6514, -84.7628	975.066	15.511	33.137	7.494	64	0
LIBERTY	37.2508, -84.9328	870.079	19.231	71.85	10.036	8	0
SPRINGFIELD 2W	37.7053, -85.2639	740.158	19.242	201.771	12.541	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



	37.3699, -84.9595
Latitude	2024-08-21
Longitude	1068.021
Wetness Index (SI)	Incipient drought
Wetness Index	Dry Season

30 Days Ending	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-21	5.942126	6.283465	Wet	3	3	9
2024-07-22	7.138583	3.015748	Dry	1	2	2
2024-06-22	6.93937	4.759843	Normal	2	1	2
Result						Normal Conditions - 13


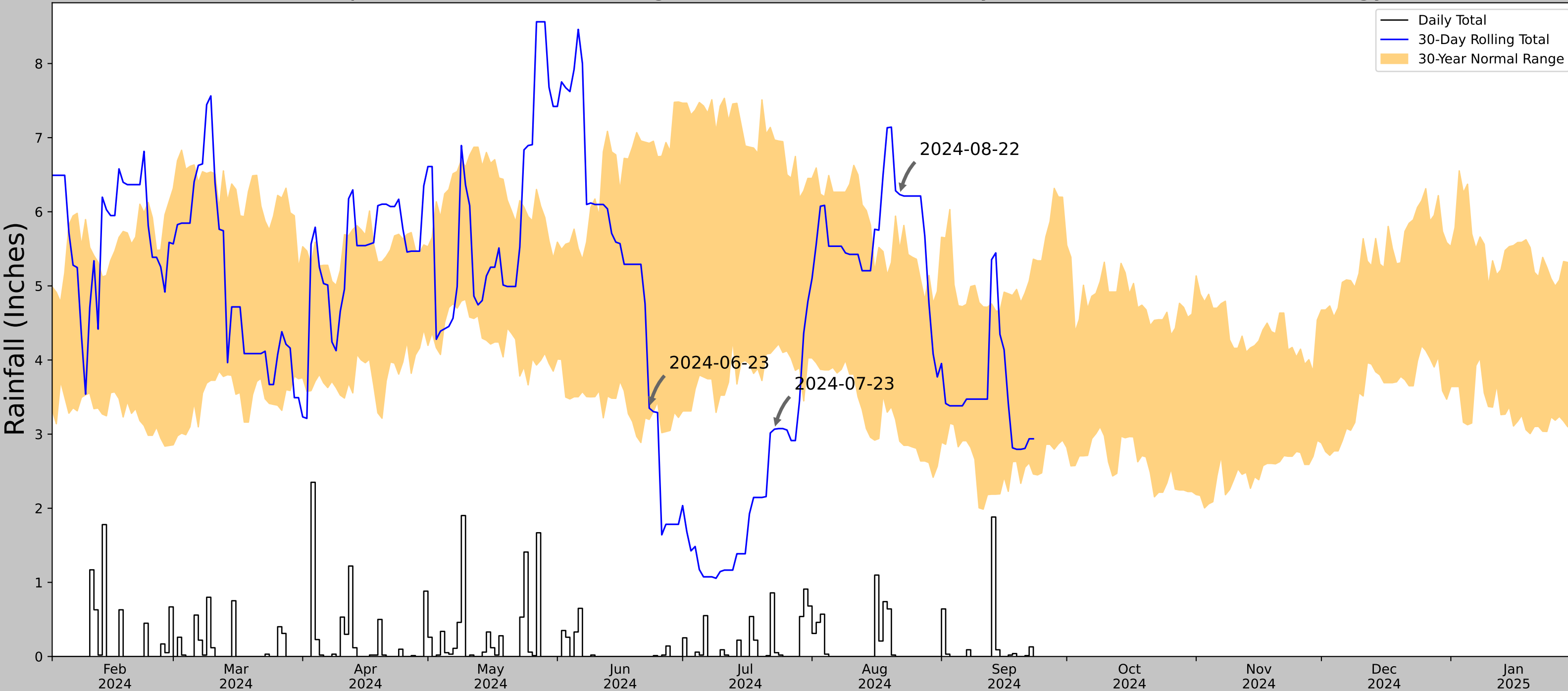


Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days Normal	Days Antecedent
BRADFORDSVILLE 8.5 ENE	37.5245, -84.9965	941.929	10.873	126.092	6.264	5682	90
BRADFORDSVILLE	37.495, -85.1517	660.105	8.747	281.824	6.401	5596	0
DANVILLE	37.6514, -84.7628	975.066	15.511	33.137	7.494	64	0
LIBERTY	37.2508, -84.9328	870.079	19.231	71.85	10.036	8	0
SPRINGFIELD 2W	37.7053, -85.2639	740.158	19.242	201.771	12.541	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.3699, -84.9595
Observation Date	2024-08-22
Elevation (ft)	1068.021
Drought Index (PDSI)	Incipient drought
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-08-22	2.903937	5.490945	6.232284	Wet	3	3	9
2024-07-23	4.154331	6.968504	3.066929	Dry	1	2	2
2024-06-23	3.198032	6.924016	3.350394	Normal	2	1	2
Result							Normal Conditions - 13




Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation	Weighted	Days Normal	Days Antecedent
BRADFORDSVILLE 8.5 ENE	37.5245, -84.9965	941.929	10.873	126.092	6.264	5682	90
BRADFORDSVILLE	37.495, -85.1517	660.105	8.747	281.824	6.401	5596	0
DANVILLE	37.6514, -84.7628	975.066	15.511	33.137	7.494	64	0
LIBERTY	37.2508, -84.9328	870.079	19.231	71.85	10.036	8	0
SPRINGFIELD 2W	37.7053, -85.2639	740.158	19.242	201.771	12.541	2	0

