

Draft
Environmental Assessment

PERRY COUNTY/HWY 80 COLLECTION PROJECT PHASE
III, KNOTT AND PERRY COUNTIES, KENTUCKY

Section 531 Southern and Eastern Kentucky Program
Environmental Infrastructure Program

Project ID# EAXX20200H5P1730967741

December 2024



United States Army Corps of Engineers
Louisville District



DRAFT FINDING OF NO SIGNIFICANT IMPACT

Perry County/HWY 80 Collection Project Phase III

Project ID# EAXX20200H5P1730967741

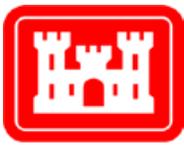
The U.S. Army Corps of Engineers, Louisville District (USACE) has conducted an Environmental Assessment (EA) in accordance with the National Environmental Policy Act of 1969 (42 U.S.C. § 4321 et seq.), as amended, for the Perry County/HWY 80 Collection Project Phase III (Project) located in Knott and Perry counties, Kentucky. The Draft EA, dated November 2024, describes the environmental effects of the Project as well as the other alternatives considered.

The Draft EA, incorporated herein by reference, evaluates alternatives that would deliver cost-effective, environmentally sound sanitary sewer services to residents within the Perry County/HWY 80 Collection Project Phase III service area. The recommended plan, includes:

- Expansion and connection of the existing sewage collection infrastructure in the project area via the extension of the current collection system at the existing Jamestown Pump Station to additional customers in the Phoenix Place subdivision and will install new infrastructure west along the KY HWY 80 right-of-way that will expand the existing collection system to include new service to Memory Mountain, Pine Point, Pine Valley, and Elk Run subdivisions in Perry County and the Bakers Point residential area in Knott County. If completed, the proposed project has the potential to provide service to 152 residences.
- The Perry County/HWY 80 Collection Project Phase III will consist of approximately 6,000 linear feet (LF) of 6-inch FM, 3,800 LF of 4-inch FM, 8,400 LF of 3-inch FM, 10,900 LF of 2.5-inch FM and approximately 11,000 LF of 1.25-inch service lines.

In addition to the recommended plan, a no action alternative was evaluated. The no action alternative would forego upgrades and modifications to existing wastewater infrastructure of the area that would provide for the increased capacity required to accept and treat wastewater from underserved communities of the Project area. The action alternative would entail the continued use of failing and inadequate septic and straight pipe systems that negatively impact local and regional water quality and public health.

This proposed Project is authorized by Section 531 of the Water Resources Development Act (WRDA) of 1996, Public Law 104-303, as amended, (Southern and Eastern Kentucky Environmental Infrastructure Program). The Southern and Eastern Kentucky Environmental Improvement Program, provides a program of Federal assistance through USACE for design and construction of water-related environmental infrastructure and resource protection and development projects, including projects for wastewater treatment and related facilities. This program covers 29 counties within Southern and Eastern

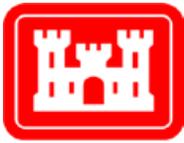


Kentucky. The scope of the proposed project will be determined jointly with the non-Federal Sponsor (the Troublesome Creek Environmental Authority), and limited to providing design assistance to a water-related environmental infrastructure project. The proposed expansion and connection project would address both the design and operational deficiencies of the existing system and also provide the surrounding communities with adequate wastewater treatment and associated public health benefits.

For the recommended plan and the no action alternative, the potential effects were evaluated, as appropriate. A summary assessment of the potential effects of the recommended plan are listed in Table 1:

Table 1: Summary of Potential Effects of the Recommended Plan.

	Insignificant effects	Insignificant effects as a result of mitigation	Resource unaffected by action
Land Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climate and Climate Resiliency	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Terrestrial Habitats	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invasive Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aquatic Habitat & Water Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floodplain	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Soils and Prime and Unique Farmlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wetlands	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hazardous, Toxic & Radioactive Waste	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cultural Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Threatened and Endangered Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Air Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Socioeconomic Conditions and Environmental Justice	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aesthetics	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transportation and Traffic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health and Safety	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



All practicable and appropriate means to avoid or minimize adverse environmental effects were analyzed and incorporated into the recommended plan. Best management practices (BMPs), as detailed in the draft EA (e.g., mulching, seeding, silt fences) will be integrated into the project plans and specifications and implemented during construction to minimize impacts. These actions are described in greater detail in Section 3.0 of the draft EA.

No compensatory mitigation is required as part of the recommended plan.

Public review of the draft EA and FONSI was initiated on [PENDING]. A 30-day state and agency review of the draft EA was initiated on [PENDING]. All comments submitted during the public comment period will be responded to in the Final EA and FONSI. Pursuant to Section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 470 et seq.), as amended, USACE determined that the recommended plan will have no effect on federally listed species or their designated critical habitat.

Pursuant to Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. § 470 et seq.), as amended, the USACE determined that the recommended plan has no potential to effect historic properties.

Pursuant to the Clean Water Act of 1972, as amended, the discharge of dredged or fill material associated with the recommended plan has been found to be compliant with section 404(b)(1) Guidelines (40 CFR 230). The Clean Water Act Section 404(b)(1) Guidelines and section 401 evaluation(s) is found in Section 3.4 of this document.

All applicable laws, executive orders, regulations, and local government plans were considered in evaluation of alternatives. Based on this EA, the reviews by other Federal, State and local agencies, Tribes, input of the public, and the review by my staff, it is my determination that the recommended plan would not cause significant adverse effects on the quality of the human environment; therefore, preparation of an Environmental Impact Statement is not required.

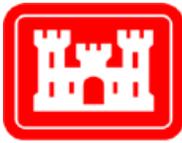
Date

L. Reyn Mann
Colonel, U.S. Army
District Commander



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Appendix A -- Supporting Environmental Documentation



List of Acronyms

AOI – Area of Impact

ARRA – American Recovery and Reinvestment Act

BMP – Best Management Practice

CAA – Clean Air Act

CDBG – Community Development Block Grant

CEJST – Climate and Economic Justice Screening Tool

CEQ – Council on Environmental Quality

CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act

CHR – County Health Rankings

CWA – Clean Water Act

dba – Decibel

DNL – Day Night Noise Levels

EA – Environmental Assessment

EIS – Environmental Impact Statement

EJSCREEN – Environmental Justice Screening Tool

FC – fecal coliform

FEMA – Federal Emergency Management Agency

FONSI – Finding of No Significant Impact

FM – Force Main

GHG – Greenhouse Gas

GPM – Gallons per minute

HTRW – Hazardous, Toxic, and Radioactive Waste

HDD – Horizontal Directional Drilling

HDPE – High Density Polyethylene

HUC – Hydrologic Unit Code

HTRW – Hazardous Toxic Radioactive Waste



KCWSD – Knott County Water Sewer District
KDOT – Kentucky Department of Transportation
KDOW – Kentucky Division of Water
KEPPC – Kentucky Exotic Plant Pest Council
KIA – Kentucky Infrastructure Authority
LF – Linear Feet
LMOP – Land Methane Outreach Program
NEPA – National Environmental Policy Act
NPDES – National Pollutant Discharge Elimination System
NPS – National Park Service
NRCS – National Resources Conservation Service
NWI – National Wetland Inventory
NAA – No Action Alternative
O&M – Operations and Maintenance
ORB – Ohio River Basin
OSHA – Occupational Safety and Health Administration
PPA – Project Partnership Agreement
SBR – Sequential Batch Reactor
RCRA – Resource Conservation and Recovery Act
ROD – Record of Decision
ROW – Right-of-Way
SBR – Sequential Batch Reactor
STEP – Septic Treatment Effluent Pump
TEA – Troublesome Creek Environmental Authority
TMDL – Total Maximum Daily Load
USACE – United States Army Corps of Engineers
USDA – United States Department of Agriculture
USEPA – United States Environmental Protection Agency



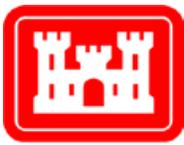
USGS – United States Geological Survey

USFWS – United States Fish and Wildlife Service

WQS – Water Quality Standard

WRDA – Water Resources Development Act

WWTP – Wastewater Treatment Plant



1.0 PROJECT DESCRIPTION

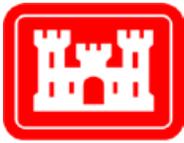
1.1 Project Background and Authorization

In August of 2006, the Troublesome Creek Environmental Authority (TEA) was formed as a nonprofit entity through inter-local agreements executed by the County Judge Executives of Knott, Perry, and Breathitt counties in Kentucky. The TEA's primary goal is to improve the environment in and around Troublesome Creek, a shared resource among the founding counties. From 2006 through 2009, TEA worked to secure funds for their pilot project, known as the Ball Creek Wastewater Treatment Plant (WWTP) and Sewer Collection Project, located at the headwaters of Ball Creek in Knott County. TEA secured approximately \$6.0M in funding from several sources including the United States Army Corps of Engineers (USACE), the Kentucky Infrastructure Authority (KIA) by means of the American Recovery and Reinvestment Act of 2009 (ARRA), the Knott County Fiscal Court, and multi-county coal severance funds approved by Knott, Breathitt, and Perry counties. In February of 2010, construction began to complete the project which included a new 0.10 million gallons per day (MGD) sequential batch reactor (SBR) WWTP, a 200 gallons per minute (GPM) lift station, 5.5 miles of 6" force main (FM), and 1.0 mile of 12" gravity sewer. The project was completed in March of 2012.

In 2018, a second phase of the project was completed along HWY 80 in Knott County to the Perry County line. This phase included approximately 13 miles of 6" high density polyethelent (HDPE) FM, which provides service to the Jamestown Village mobile home park and the Phoenix Place single family subdivision. This second phase of the project utilized community development block grant (CDBG) and through the USACE Southern and Eastern Kentucky Environmental Improvement Program authorized by Section 531 of WRDA 1996, Public Law 104-303. Total funds for the second phase was \$2.6M and included approximately 13 miles of of added HDPE FM infrastructure.

This Environmental Assessment focuses on a third proposed phase of the project expanding the service area. The proposed Perry County/HWY 80 Collection Project Phase III (Project) extends the TEA and Knott County Water Sewer District (KCWSD) service collection area from the Knott/Perry County line at the existing Jamestown Pump Station to the existing Ball Creek WWTP. The service area extension will provide service to additional Phoenix Place customers, located above and south across the ridge from the pump station, resulting in potentially 50 new customers. The Project will extend to the west, continuing along the HWY 80 ROW to include the existing subdivisions of Memory Mountain, Pine Point, Pine Valley, and Elk Run in Perry County. Bakers Fork is a residential hollow in Knott County, with eight additional customers, that is also included in this Project. If fully implemented, a total of 152 residences would benefit from the proposed Project.

The Project will be carried out through a public partnership agreement (PPA), which was executed on 18 December 2023 between the the non-Federal Sponsor (Sponsor) for the Troublesome Creek Sewer Collection Project, TEA, and USACE Louisville District. The Project is authorized by Section 531 of the Water Resources Development Act (WRDA) of 1996, Public Law 104-303, as amended (Section531).



Section 531 authorizes federal design and construction assistance to non-federal interests for publicly owned, non-Federal water-related environmental infrastructure and resource protection and development projects in a 29-county area of southern and eastern Kentucky, including projects for wastewater treatment and related facilities, water supply and related facilities, surface water resource protection and development, local storm water drainage, and related problems. This 29 county area includes Knott and Perry counties. The program is also known as the "Southern and Eastern Kentucky Environmental Improvement Program."

To accomplish this project, the USACE, Louisville District intends to enter into a Design PPA with the Sponsor. In this agreement, USACE will contribute 75%, and the Sponsor will contribute 25% of the funds to cover total project costs. The total project cost includes design and administration (USACE and Sponsor) costs. The non-Federal sponsor will be responsible for all necessary construction and environmental permits.

The purpose of the Environmental Assessment (EA) is to analyze potential environmental impacts that would result from the recommended plan and reasonable alternatives for the proposed Project in Knott and Perry counties, Kentucky, and to determine whether the preparation of an Environmental Impact Statement (EIS) is required.

This EA was prepared pursuant to the National Environmental Policy Act of 1969 (42 U.S.C. § 4321 et seq.) as amended (NEPA), Council on Environmental Quality (CEQ) regulations (40 C.F.R. Parts 1500-1508), and USACE Engineer Regulation (ER) 200-2-2, *Procedures for Implementing NEPA* (33 C.F.R. Part 230). This EA was prepared to describe the existing conditions in the vicinity of the project area (see Figure 1) and evaluate the potential impacts associated with the recommended plan and reasonable alternatives.

1.2 Location

The proposed project footprint occurs from the Knott/Perry County line at the existing Jamestown pump station to Phoenix Place subdivision located above and south across the ridge from the pump station. The project extends west continuing along HWY 80 ROW and picks up the Memory Mountain, Pine Point, Pine Valley, and Elk Run subdivisions in Perry County and the Bakers Fork residential area in Knott County. This project site is 8 miles north-northeast of the city of Hazard, Kentucky and 18 miles east of Buckhorn Lake.

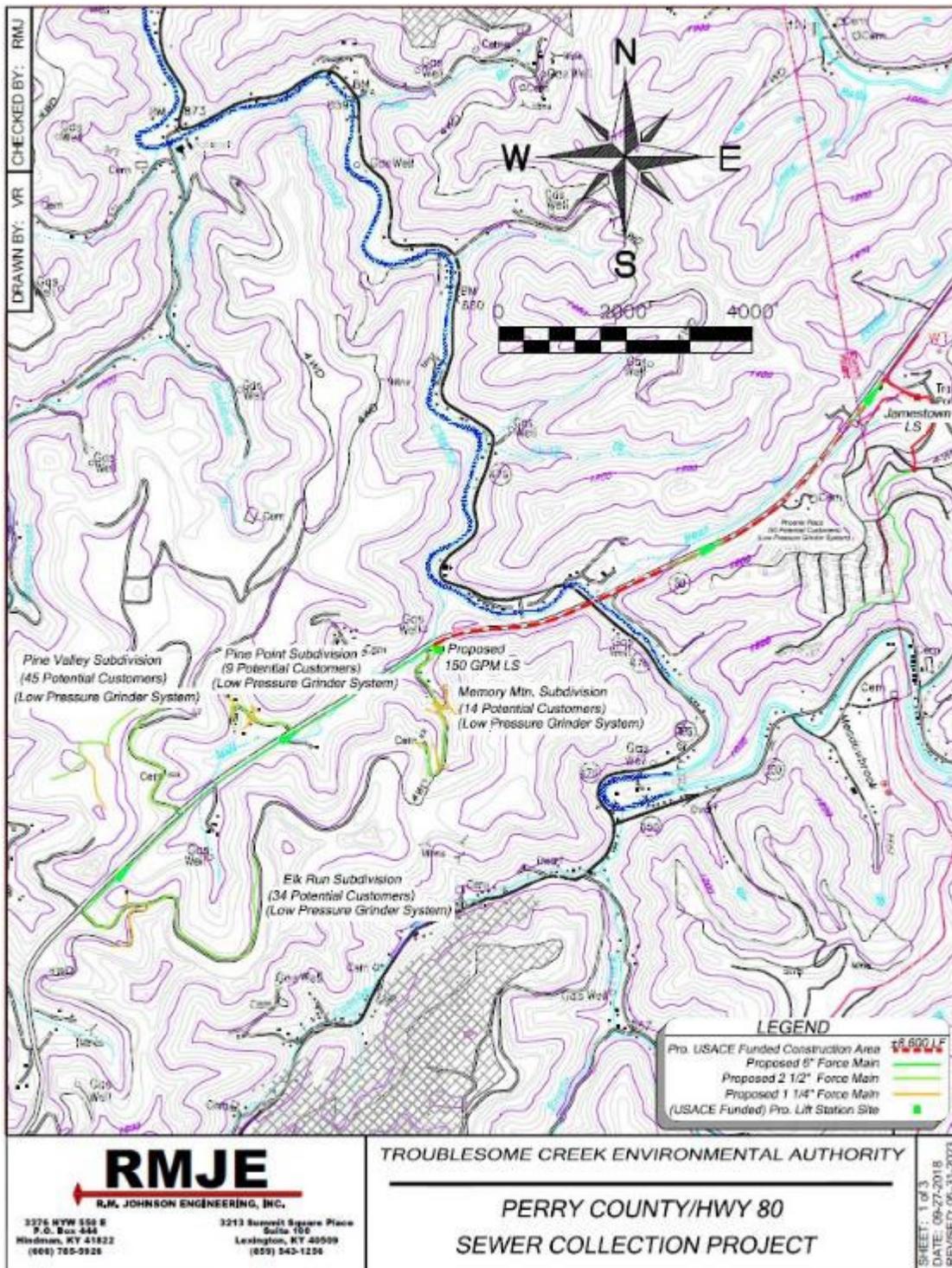


Figure 1. USACE funding design and construction area of the proposed Perry County/HWY 80 Collection Project Phase III, Knott and Perry counties, Kentucky (Source: RMJE 2022).

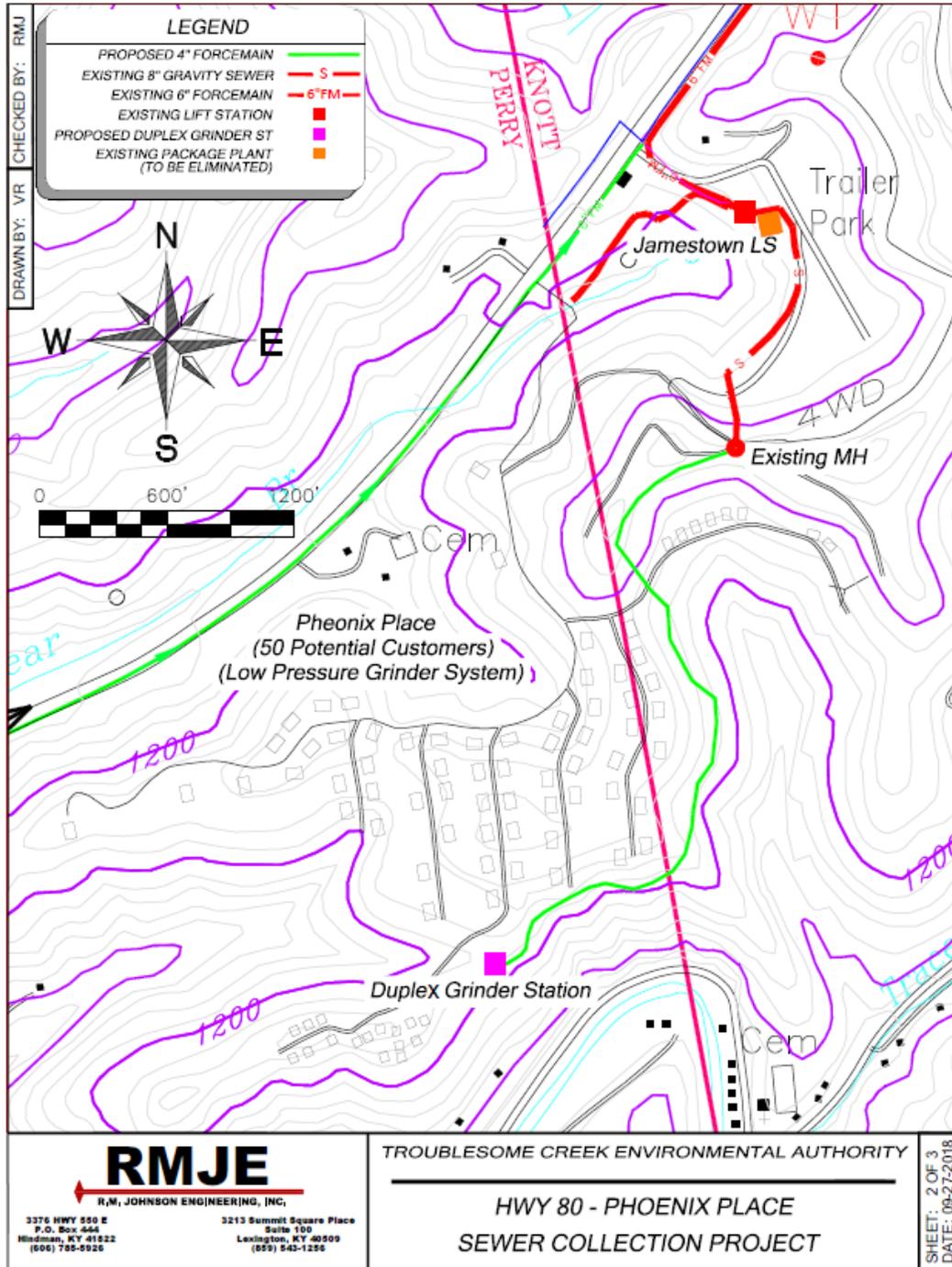


Figure 2. USACE funding design and construction area of the proposed Perry County/HWY 80 Collection Project Phase III, , Knott and Perry counties, Kentucky (Source: RMJE 2022).

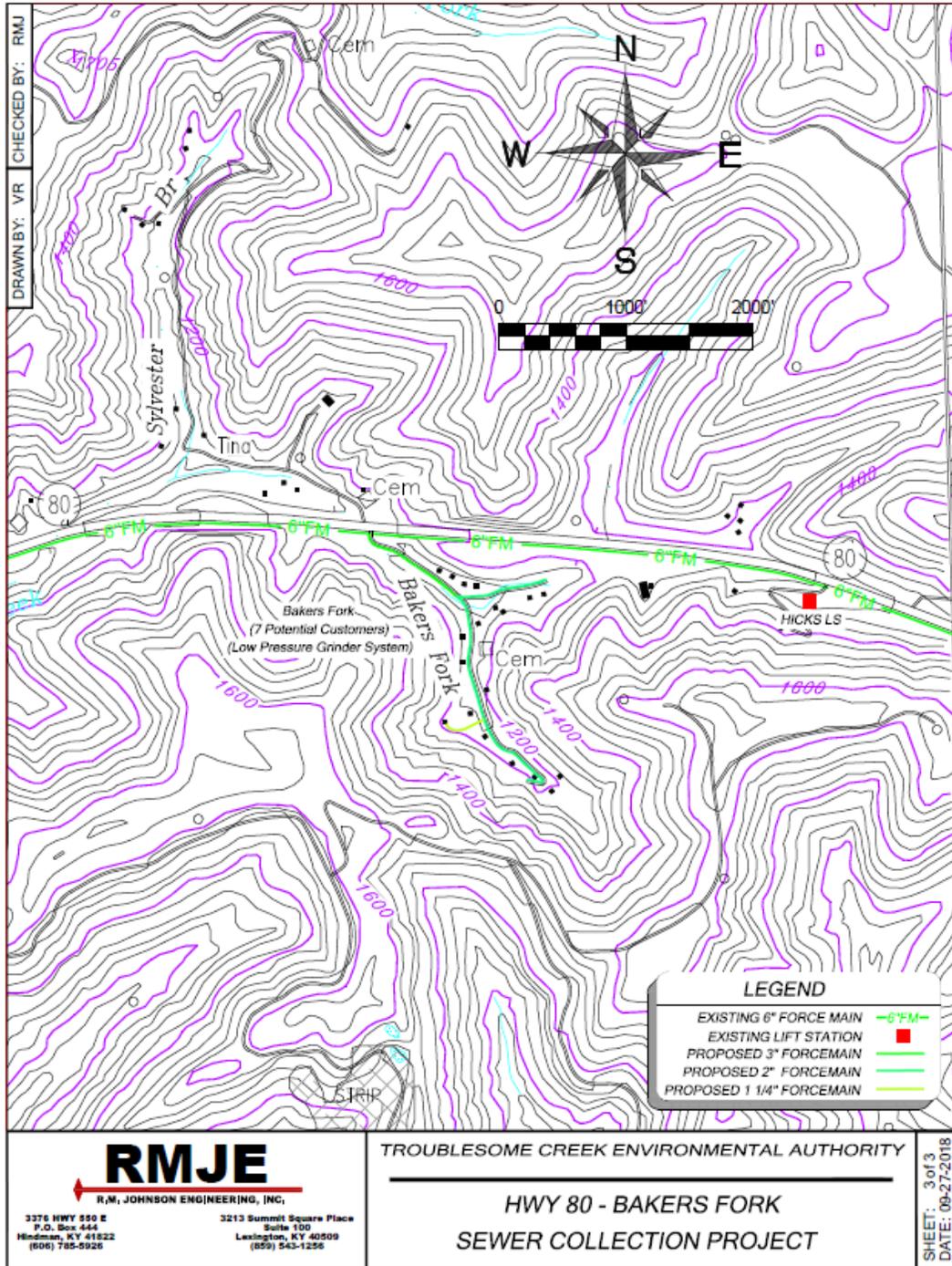
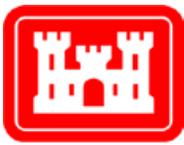
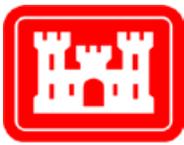


Figure 3. USACE funding design and construction area of the proposed Perry County/HWY 80 Collection Project Phase III, Knott and Perry counties, Kentucky (Source: RMJE 2022).



1.3 Purpose and Need

The region encompassing the proposed Project has suffered from persistent problems associated with wastewater treatment and negative impacts to local and regional water quality. The region is greatly populated with on-site septic tank systems and many of these systems are failing due to inadequate percolation properties of the soil. Since most homes in the service area are located within the floodplain or directly adjacent to tributary streams, septic tank failures and related sewage leaks are being deposited directly into the streams. Water quality monitoring programs conducted by the United States Environmental Protection Agency (USEPA), the Kentucky Division of Water (KDOW), and local municipalities have identified ongoing water quality issues within the surrounding watershed associated with sedimentation and fecal coliform contamination. These water quality issues have resulted in local streams such as Troublesome Creek to be placed on the USEPA's 303(d) list of impaired streams.

Overcoming straight pipe sanitary discharge in East Kentucky has been a priority for the state regulators, local officials, residents, and business owners for decades. Not having adequate sanitary infrastructure has been a challenge for development of the region and is more apparent now than any time in the past with the contraction of the energy industry and the loss of jobs from the coal mining and natural gas sectors over the past decade. Base infrastructure is essential to attract economic development from the commercial and manufacturing sectors. It is also essential for residential waste to be disposed of in an environmentally sustainable way for quality-of-life benefits to attract a qualified, skilled workforce. The proposed Project will provide sanitary sewer service for residential sections of Knott and Perry Counties.

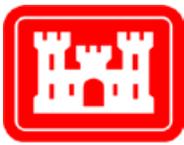
The purpose of the Project is to deliver a cost-effective, environmentally-sound approach to meet both the existing and future sanitary sewer collection needs for residents within underserved areas of the TEA and KCWSD service area.

The proposed Project, as designed, involves the improvement of current facilities to meet the needs of Phoenix Place, Memory Mountain, Pine Point, Pine Valley, and Elk Run subdivisions and Bakers Fork residential area and the expansion of operational capacity that will address the ongoing public health issues associated with human-caused water pollution in the project area.

2.0 ALTERNATIVES CONSIDERED

2.1 No Action Alternative

NEPA requires that a no action alternative (NAA) be considered as a baseline alternative to any proposed plan. Consideration of a no action alternative allows a comparison between the site with project conditions and the site without project conditions. Adoption of this alternative would constitute acceptance of the existing situation. The no action alternative would forego upgrades and modifications that provide for the increased capacity required to accept and treat wastewater from underserved communities between the Jamestown Pump Station and the Ball Creek WWTP. Therefore, water quality and public health in this watershed will continued to be negatively impacted. Residents of Memory Mountain, Pine Point, Pine Valley, and Elk Run subdivisions will continue to rely on failing or unsuitable septic systems or straight pipes. Therefore, the NAA will not address these ongoing issues and will lead to continued water quality and public health impacts over both the short- and long-term. Based on evaluations that



have been conducted in support of the Project, the no action alternative is not the most cost-effective (Johnson Engineering 2022). As a result, the NAA would not meet the purpose and need for the proposed project, to deliver a cost effective, environmentally-sound approach to meet both the existing and future sanitary sewer collection needs for residents within underserved areas of the TEA and KCWSD service area. However, it is still included in the effects analysis to serve as a baseline to evaluate the effects of the action alternatives.

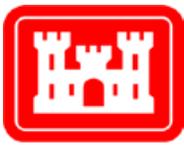
Although the NAA would not meet the purpose and need of the Project, CEQ regulations require analysis of the NAA to serve as a baseline against which to measure the environmental impacts of other alternatives and to evaluate the adequacy of the recommended plan in meeting the purpose and need of the action.

2.2 Wastewater Treatment Action Alternative Considered

2.2.1 Alternative 2: Recommended Plan

The proposed Troublesome Creek/HWY 80 Sewer Collection Project will extend the TEA and KCWSD service area from the Knott/Perry County line at the existing Jamestown Pump Station to the existing Ball Creek WWTP. The service area extension will provide service to additional Phoenix Place customers, resulting in potentially 50 new customers in this area. The project will extend to the west, continuing along the HWY 80 ROW to include the existing subdivisions of Memory Mountain, Pine Point, Pine Valley, and Elk Run, in Perry County and the Bakers Fork residential area in Knott County. The proposed Project has the potential to make the updated sewage treatment infrastructure available to 152 residences. There are also additional undeveloped lots in these subdivisions, and developers have requested sanitary service for multiple years. Sanitary service for these lots will encourage future development and construction of homes.

There are two types of collection systems, FM and traditional urban gravity. The Ball Creek WWTP collection system is mostly a FM system due to the topography and the number of rural customers located in sparsely populated areas. The only gravity section in the system is at the Knott County Sportsplex Facility, which was developed for a cluster of potential commercial customers. FM systems consist of individual residential grinder pump stations with a grinding or chopping mechanism in the pump that grinds domestic waste materials and reduces the effluent size for efficient low-pressure pumping. The pumps can work in series and move multiple residential customers to a mainline pump station, which pumps the waste over longer distances and at greater hydraulic head (USACE 2022). Some subdivisions sections can be operated with a series of low-pressure grinders without a main pump station if the terrain is suitable. FM pipe manholes are installed every 400 feet maximum or each time the sewer line changes directions off tangent. The depth of FM lines are usually 36 to 42 inches maximum, which eliminate the need to excavate to solid rock. Gravity systems are usually at depths of 4 to 6 feet, which is generally dictated by minimum slopes required for gravity flow. The proposed project will include FM grinder systems generally similar to those described above, and potentially gravity flow systems if supported by field conditions and the budget.



The Perry County/HWY 80 Collection Project will consist of approximately 6,000 linear feet (LF) of 6-inch FM, 3,800 LF of 4-inch FM, 8,400 LF of 3-inch FM, 10,900 LF of 2.5-inch FM and approximately 11,000 LF of 1.25-inch service lines. Work will occur to connect Perry County subdivisions along HWY 80 including Elk Run and Mountain Memory on the South side of HWY 80 and Pine Valley along the North side of HWY 80. Additional service will be picked up at Phoenix Place on the West side of Knott County. Access to the Bakers Fork residential area will occur along the existing single lane road with installation requiring the use of the Horizontal Directional Drilling (HDD) methods to avoid impacts to Troublesome Creek. The project will also include the installation of residential grinder stations, valves and all other appurtenances required to complete the project.

As the Recommended Plan, Alternative 2 will not only benefit the residents in the Elk Run, Memory Mountain, Phoenix Place, Pine Point, Pine Valley, and Bakers Point residential areas but can also provide needed infrastructure for future development that may occur in the service area. The proposed Project will also reduce the reliance on septic systems (that are unsuitable for use in the project area), prevent environmental violations, and ensure appropriate wastewater treatment for the entire service area.

3.0 AFFECTED ENVIRONMENT (40 CFR 1502.15) AND ENVIRONMENTAL CONSEQUENCES (40 CFR 1502.16)

NEPA and the CEQ's NEPA implementing regulations require an EA to identify the likely environmental effects of a proposed project and the agency to determine whether those impacts might be significant. Impacts (or effects) are changes to the human environment from a proposed action or alternatives that are reasonably foreseeable (40 C.F.R. § 1508.1(i)). Impacts can be beneficial or adverse, directly related to the action or indirectly caused by the action, and cumulative. Direct effects are caused by the action and occur at the same time and place (40 C.F.R. § 1508.1(i)(1)). Indirect effects are caused by the action and are later in time or further removed in distance but are still reasonably foreseeable (40 C.F.R. § 1508.1(i)(2)). Cumulative effects are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes the other actions (40 C.F.R. § 1508.1(i)(3)). Effects include ecological, aesthetic, historic, cultural, economic, social, health, climate change-related, or those affecting Tribal resources. 40 C.F.R. § 1508.1(i)(4).

The determination of whether an adverse impact of the proposed action is significant must examine the context of the action and the intensity of the impact, considering the duration of the impact (40 C.F.R. § 1501.3(d)). The term "context" refers to the affected environment in which the proposed action would take place and is based on the specific location of the proposed action, taking into account the entire affected region, the affected interests, and the locality. The term intensity refers to the magnitude of change that would result if the proposed action were implemented.

Starting with subsection 3.1, this section describes the existing environmental conditions in the project area (affected environment) providing a baseline for measuring expected changes that would result from implementation of the considered alternatives.



All potentially relevant resource areas were initially considered for analysis in this EA. Some resource topics are not discussed, or the discussion is limited in scope, due to the lack of anticipated effect from the Proposed action on the resource or because that resource is not located within the Project area.

This section presents the adverse and beneficial environmental effects (direct and indirect) of the NAA and the preferred alternative (Recommended Plan). While an effort was made to provide discrete effects analysis within this document that distinguishes between sections of the proposed action that are funded by the Federal sponsor, the distinctions between the two are often difficult to partition due to the small footprint and linear and connected nature of the project. The section is organized by resource, with the effects of alternatives discussed under each resource. Impacts are quantified whenever possible. Qualitative descriptions of impacts are explained by accompanying text where used.

Qualitative definitions/descriptions of impacts as used in this section of the EA include:

Degree:

- No Effect, or Negligible – a resource would not be affected, or the effects would be at or below the level of detection, and changes would not be of any measurable or perceptible consequence.
- Minor – effects on a resource would be detectable, although the effects would be localized, small, and of little consequence to the sustainability of the resource. Mitigation measures, if needed to offset adverse effects, would be simple and achievable.
- Moderate – effects on a resource would be readily detectable, localized, and measurable. Mitigation measures, if needed to offset adverse effects, would be extensive and likely achievable.
- Significant – effects on a resource would be obvious and would have substantial consequences. The resource would be severely impaired so that it is no longer functional in the project area. Mitigation measures to offset the adverse effects would be extensive, and success of the mitigation measures would not be guaranteed.

Duration:

- Short term – temporary effects caused by the construction and/or implementation of a selected alternative.
- Long term – caused by an alternative and remains after the action has been completed and/or after it is in full and complete operation.

3.1 Land Use

3.1.1 Existing Condition

The proposed project area is located within the Central Appalachians and Dissected Appalachian Plateau ecoregions of Kentucky (Wiken 1986, Omernik 1987). The Central Appalachians is a region of the Appalachians extending roughly northeast-southwest, from central Pennsylvania into Tennessee, eastern Kentucky, and southern West Virginia. This region is higher-altitude and has steeper inclines than regions both to the northwest and southeast, and it contains some of the



highest elevations in the northern end of the Appalachians, although farther south the Blue Ridge reaches much higher. The terrain can be characterized as rugged, consisting of a dissected plateau with numerous long ridges running through it. The ridges are narrow and steep, and the rest of the region is covered by low mountains and high hills, and narrow, curvy valleys. Overall, this region is sparsely populated, with some small cities and large towns (Wiken 1986, Omernik 1987).

Land use for the area is of mixed residential, commercial, and forested areas. Large sections of the landscape surrounding the project area consists of abandoned and/or reclaimed lands associated with past resource extraction activities. Some of the larger subdivisions in the area have been constructed on reclaimed lands. Single residential areas are generally situated in the valleys and bottomlands found along watercourses of the area. Much of the project area is forested, especially steeper hillsides at higher altitudes. The construction footprint of the proposed project is generally limited to existing ROWs and previously disturbed ground.

3.1.2 Environmental Consequences

3.1.2.1 No Action

The NAA would have no effect on land use. Land use in the project area would be expected to remain similar to the existing condition and follow current short-term and long-term trends for the reasonably foreseeable future with the implementation of the NAA.

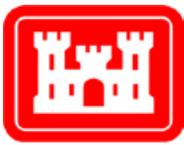
3.1.2.2 Recommended Plan

The proposed expansion, improvement, and construction of new infrastructure being implemented under the recommended plan would have a negligible effect on land use. The expansion and connection of existing infrastructure, laying of new supply lines, and construction of pump/lift stations would be conducted in previously disturbed areas. Areas of broken pavement will be repaired, and any areas of lawn that are disturbed will be seeded. Thus, impacts would be short-term and any adverse impacts on land use would be negligible. Implementation of the recommended plan would allow for environmentally sustainable growth of the community by facilitating the ability to meet wastewater treatment requirements. Because most of the area immediately surrounding the construction footprint is residential, commercial, or otherwise governed by zoning regulations, the growth that could be facilitated by the proposed Project is not anticipated to have a significant effect on current land use practices.

3.2 Climate & Climate Resiliency

3.2.1 Existing Condition

The climate in this area of Kentucky is continental in character, and temperature and precipitation levels fluctuate widely. The prevailing winds are westerly; therefore, most of the storms cross the state in a west to east pattern. Low pressure storms that originate in the Gulf of Mexico and move in a northeasterly direction across Kentucky contribute the greater proportion of precipitation received by the state. Warm, moist, tropical air masses from the Gulf of Mexico predominate during the summer months when humidity levels are high. As storms move through the state, occasional hot and cold periods of short duration may be experienced. During the spring and fall, storm systems tend to be less severe and have a smaller frequency, thus resulting in less radical extremes in temperature and rainfall (Runkle et al. 2022).



Climate data was gathered from the nearest National Oceanic and Atmospheric Administration weather station in Hazard, Kentucky, approximately 8 miles southwest of the project site (U.S. Climate Data 2024). Historical weather data was obtained from 1981 through 2024. The climate of the area is generally temperate with cold winters and warm summers. The average annual high temperature is 68°F and the average annual low temperature is 43°F. The warmest month is July with a mean daily high of 87°F. The coldest average month is January, with the mean daily low being 23°F. The average yearly amount of precipitation and snowfall is 44.1 and 13 inches, respectively (U.S. Climate Data 2024). The month with highest average precipitation is June (4.7 inches), and the lowest average precipitation month is October (2.7 inches).

Climate Change

As a requirement of NEPA, USACE proponents must consider climate change as part of the environmental baseline for NEPA analyses prepared in accordance with 32 CFR 651, Environmental Analysis of Army Actions. Army NEPA proponents will assess greenhouse gas (GHG) emissions and climate change effects resulting from proposed Army actions, including assessment of the social costs of carbon dioxide, nitrous oxide, and methane, in EAs and Findings of No Significant Impacts (FONSI), and Environmental Impact Statement (EIS) Records of Decision (ROD).

The USACE has developed numerous policies that require civil works projects to consider climate change during the planning and selection of projects. This includes the 2024-2027 Climate Adaptation Plan (USACE 2024a) as well as a Climate Preparedness and Resilience Policy Statement (USACE 2024b). These policies represent the USACE's commitment to increase the nation's resilience to climate change related effects as well as reduce GHG emissions, where possible, in supply chains, workforce operations, and construction projects.

The CEQ's NEPA Implementing Regulations require analysis of, where applicable, climate change-related effects, including, where feasible, quantification of GHG emissions, from the proposed action and alternatives, and the effects of climate change on the proposed action and alternatives (40 C.F.R. § 1502.16(a)6).

In 2017, the USACE Huntington District in collaboration with the Ohio River Basin Alliance, the USACE Institute for Water Resources, the USACE Great Lakes and Ohio River Division, and numerous other Federal agencies, non-government organizations, and research and academic institutions completed the Ohio River Basin Climate Change Pilot Report. This pilot study investigated potential climate change impacts to Ohio River Basin (ORB) infrastructure, including Federal facilities operated for reduction of flood damages, navigation, local protection, water supply, and hydroelectric power production, as well as the potential impacts on terrestrial and aquatic ecosystems that are influenced by operation of these infrastructure components (Drum et al. 2017). The primary purpose of the study was to identify those components of the ORB (including the TEA project area) infrastructure and ecosystem resources that may be at risk from future changes in precipitation and temperature, and to formulate mitigation and adaptation strategies that may be implemented to reduce those effects.

The primary concern to water management agencies is the threat of extreme weather episodes becoming more prevalent, longer, and more potent. The potential for climate and weather elements including temperature, precipitation, winds, humidity, evaporation to become less



predictable and more susceptible to extreme changes suggests a need for review studies of the existing operating schemes for water management and whether the current infrastructure design can accommodate potential future operational changes.

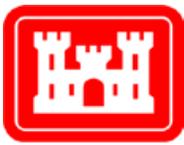
In general, the modeling data suggest that the more rapid changes in temperature, precipitation, and stream flows resulting from changes in regional climate may not begin within the ORB until 2040. However, modeling results also suggest a gradual increase in annual mean temperatures between 2011 and 2040 amounting to one-half degree per decade, with greater increases between 2041 and 2099 of one full degree per decade. The results of the pilot study further suggests that the region encompassing Troublesome Creek is not expected to experience marked hydrologic regime changes that may negatively affect the operation of the Project until 2071 (Drum et al. 2017).

According to climate change models performed in the Ohio River Basin- Climate Change Pilot Study Report, a mean temperature increase of a half-degree per decade is expected for 2011-2040. That number increases to one whole degree Fahrenheit per decade for 2041-2099 (Drum et al. 2017). This represents a 15.8% increase in temperature over this period in the basin. The potential impacts to infrastructure, energy production, and both aquatic and terrestrial ecosystems over the three 30-year time periods range from minimal in some HUC-4 sub-basins to dramatic and potentially devastating in others.

Based on the Ohio River Basin Climate Change Pilot Study Report, most of the watersheds within the ORB, which includes the project area, will experience some level of sensitive fish and mussel and human impacts based on projections. A subset of watersheds are likely at greatest risk due to the (1) severity of changes projected, (2) breadth and severity of the impacts of these changes to both human communities and sensitive aquatic organisms, and (3) current or anticipated watershed land use and functioning that would prevent or limit the ability of these areas to accommodate changes. Based on these criteria, the Allegheny, Kanawha, Kentucky-Licking, Middle Ohio, and Wabash watersheds appear to be at greatest risk. These watersheds contain significant distributions of sensitive aquatic organisms (Ohio River Basin Climate Change Pilot Study Report 2017).

The Kentucky-Licking HUC is projected to experience moderate flow increases overall (15–25%) and in spring maximum flows (5–15%). Conversely, the late summer-fall low-flow period will become drier (mean -5 to -15%, lows -15 to -50%), particularly toward the end of the century. The most likely impacts of these changes could be manifest in a variety of ways, including increased stream habitat scouring and flood damage to human communities during the spring, and lowered fish and mussel carrying capacity.

There are an indeterminate number of municipal, public service, county, corporate, and community-level wastewater collection and treatment facilities across the basin. Other than those residences and businesses using septic or aerator systems, all other habitable structures and commercial enterprises are on a sewerage collection system (at least that would be the preferable situation). Following prescribed levels of sewage treatment at a central or package plant, the resulting effluent is discharged into streams or rivers under strict Clean Water Act (CWA) permit requirements. Generally, the state-issued permits for effluent discharge are based in part on the



anticipated volume of flow in the receiving stream during any season of the year. Under severe drought conditions, the normal dilution capabilities of the receiving stream or river are reduced, resulting in higher concentrations of pollutants and decreased water quality. The overall trend of decreased flows in late summer-fall and rising temperature could also trigger user conflicts from increased consumptive uses such as irrigation and wastewater dilution/permits.

Climate-affected Hydrology and Greenhouse Gas Emissions

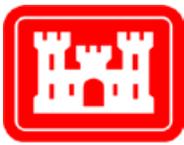
The CEQ's NEPA Implementing Regulations require analysis of, where applicable, climate change-related effects, including, where feasible, quantification of GHG emissions, from the proposed action and alternatives, and the effects of climate change on the proposed action and alternatives (40 C.F.R. § 1502.16(a)6).

Climate change is inherently a cumulative global issue. This means that one molecule of a GHG released anywhere on Earth has been assumed to have the same impact on climate regardless of its location. Consequently, the geographic scope for analyzing the effects of GHG emissions is vast, and it is best to evaluate these effects in relation to state and Federal GHG emission goals and standards. The state of Kentucky currently has no GHG emission goals or standards. Executive Order (EO) 14057: Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability, sets specific Federal goals for GHG emissions including:

- 100% carbon pollution-free electricity on a net annual basis by 2030, including 50% 24/7 carbon pollution-free electricity.
- 100% zero-emission vehicle acquisitions by 2035, including 100% zero-emission light-duty vehicle acquisitions by 2027.
- A net-zero emissions building portfolio by 2045, including a 50% emissions reduction by 2032.
- A 65% reduction in scope 1 and 2 greenhouse gas emissions, as defined by the Federal Greenhouse Gas Accounting and Reporting Guidance, from Federal operations by 2030 from 2008 levels.
- Net-zero emissions from Federal procurement, including a Buy Clean policy to promote use of construction materials with lower embodied emissions.
- Climate resilient infrastructure and operations
- A climate- and sustainability-focused Federal workforce.

USACE estimated total fuel usages for gasoline and diesel from projected necessary equipment anticipated hours of use. The list of equipment and use estimates was provided by the project contractor and these totals were then converted to tons/grams of CO₂, CH₄, and N₂O.

Analysis of the predicted emissions generated as a result of Recommended Plan was separated into two parts including construction emissions and impacts associated with climate-affected hydrology. To estimate emissions, total mileages or total hours for each component were calculated and multiplied by an average gallons per hour/mile for a given vehicle category. This produced the total gallons of diesel and gasoline needed for the construction effort. These numbers were then converted to tons/grams of CO₂, CH₄, and N₂O.



3.2.2 Environmental Consequences

3.2.2.1 No Action

Under the NAA, current land use practices, local traffic patterns, and resource use would remain unchanged from existing levels. As such, there would be no effect to local, regional, or global climate as a result of the NAA.

Implementation of the NAA is anticipated to result in negligible effects to climate-affected hydrology over both the short- and long-term. Climate modeling and research suggests that increases in precipitation and flood events in the region are expected to occur with greater intensity and frequency in the future. The effect of the implementing the NAA on local hydrology will be dependent on the rate, degree, frequency and intensity of local weather events.

3.2.2.2 Recommended Plan

The recommended plan would not involve activities of sufficient scope to significantly affect the local or regional climate. The results of the GHG analysis determined that construction activities associated with the completion of the Recommended Plan would produce an estimated 45 metric tons of CO₂, 1,640 grams of CH₄, and 348 grams of N₂O. The recommended plan would create an estimated \$5,797 of social costs to the community surrounding the proposed project.

Collectively, the impacts incurred as a result of GHG emissions generated during implementation of the proposed project reflect a minor adverse impact to the the local, regional, and global climate and to the residents living nearby. While small amounts of operations and maintenance (O&M) would be needed to maintain the condition of the ROW over the 50-year study period, the total emissions generated as a result of this activity is likely too low to be calculable and are not covered in this GHG analysis.

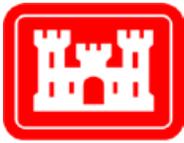
Implementation of the Recommended Plan is anticipated to result in negligible effects to climate-affected hydrology over both the short- and long-term. The expansion and connection of existing infrastructure, laying of new supply lines, and construction of pump/lift stations would be conducted in previously disturbed areas. As such, impacts would be temporary and any adverse impacts on land use would be negligible. Because the sewer infrastructure will be placed within the existing ROW, impacts to the surrounding watershed as a result of construction of the project will be minimal, and the Recommended Plan will not negatively impact the function of watershed.

3.3 Terrestrial Habitat

3.3.1 Existing Condition

The terrestrial habitats located in the vicinity of and within the project area consist of a mosaic of narrow bands of residential and commercial development primarily situated along watercourses and on reclaimed minelands. Areas of mowed grass, small, forested fencerows, property lines, and larger blocks of deciduous forest exist on mountainous terrain whose slopes generally preclude development.

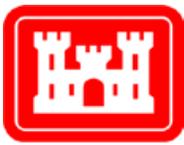
Breathitt, Knott, and Perry counties are situated in the Eastern Kentucky Coal Field physiographic region. The area is dissected maturely and consists of winding, narrow crest ridges



and narrow valleys. The terrain is rugged and exhibits great local relief. Geologically, the area is underlain by interbedded sandstone, siltstone, shale, and limestone of the Pennsylvanian and Mississippian Systems. The level-bedded sedimentary rocks of the Breathitt Formation comprise the most extensive outcrops in the region. A major rock stratum consists of sandstone, siltstone, and coal interspersed with narrow beds of calcareous shale or limestone. Ridges and valleys occupy about equal portions of the landscape. Few large streams are present and there is a general absence of flat land, except for narrow strips in the valley bottoms. Most of these bottoms are located within the floodplain and are usually the areas where existing homes are found. Upland elevations exceed 1,400 feet (Johnson Engineering 2022).

The proposed project is located within the Central Appalachians and Dissected Appalachian Plateau ecoregions of Kentucky (Wiken 1986; Omernik 1987). The Central Appalachians region is covered in highly diverse mixed mesophytic forest, with American chestnut (*Castanea dentata*) historically as the dominant tree, but numerous other species are also common. Now, dominant trees include chestnut oak (*Quercus montana*), red maple (*Acer rubrum*), white oak (*Quercus alba*), black oak (*Quercus velutina*), American beech (*Fagus grandifolia*), tuliptree (*Liriodendron tulipifera*), sugar maple (*Acer saccharum*), various ash species, American basswood (*Tilia americana*), buckeye (*Aesculus glabra*), and eastern hemlock (*Tsuga canadensis*). This area is much less utilized by humans than the surrounding, flatter, lower-elevation areas. Most of the area is still forested, with only small amounts of pasture and dairy farming. Additionally, coal mining is common in the region, with mines operating within the watershed.

This Dissected Appalachian Plateau region was originally covered mostly in diverse and variable mixed mesophytic forest. American chestnut (*Castanea dentata*) was dominant on dry sites. Middle and lower north- and east-facing slopes featured American beech (*Fagus grandifolia*), tuliptree (*Liriodendron tulipifera*), and sugar maple (*Acer saccharum*) as dominants, and co-dominants including white oak (*Quercus alba*), ash, American basswood (*Tilia americana*), buckeye (*Aesculus glabra*), eastern hemlock (*Tsuga canadensis*), and magnolia, along with diverse understories of small trees, shrubs, and herbs. Upper slopes featured mixed oak forests with chestnut oak (*Quercus montana*), red maple (*Acer rubrum*), white oak, and black oak (*Quercus velutina*). Warmer, middle and lower south- and west-facing slopes featured mixed oak forests dominated mainly by white oak, with understory of mountain laurel (*Kalmia latifolia*), along with black oak, scarlet oak (*Quercus coccinea*), post oak (*Quercus stellata*), mockernut hickory (*Carya tomentosa*), pignut hickory (*Carya glabra*), tupelo (*Nyssa sylvatica*), and sourwood (*Oxydendrum arboreum*). Mesic coves and bottomlands were co-dominated by hemlock and magnolia with an understory of rhododendron (Braun 1950). This area has been extensively logged, but it has mostly reverted back to woodland and about 90% of the region is presently forested or in the process of forest regeneration. A large portion of the forest, however, is managed as commercial woodlands. The remaining land is mostly used for coal mining, which has caused significant stream degradation. Mining techniques here include mountaintop removal, contour mining (a form of strip mining), and deep mining. There are some scattered small towns and some agriculture in the wider valleys. Agriculture here produces livestock, hay, tobacco, and



corn. Reclaimed mining land supports many planted species including the introduced/invasive tall fescue (*Festuca arundinacea*), black locust (*Robinia pseudoacacia*), and many introduced shrubs. Some former mining sites are still barren (Jones 2005).

3.3.2 Environmental Consequences

3.3.2.1 No Action

Because existing land use trends would be expected to continue in the absence of the proposed Perry County/HWY 80 Collection Project, the NAA would be expected to have no effect on terrestrial habitat.

3.3.2.2 Recommended Plan

The recommended plan would have a negligible effect on terrestrial habitats. The construction related to the expansion of the existing facilities will be conducted within previously disturbed areas. No prime farmland will be impacted, and it is USACE's understanding that no trees would be removed during implementation of the recommended plan. All trenching required for the repair or replacement of FM will occur in previously disturbed areas. All areas of disturbance will be mulched, seeded, and fertilized after construction and best management practices (BMPs) will be employed to limit erosion. Examples of BMPs that are currently included in the project work plans include drift fencing, seeding, mulching, and fertilizing.

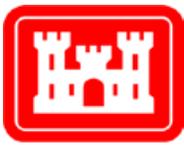
3.4 Invasive Species

3.4.1 Existing Condition

Exotic plant species possess characteristics of invasive species and spread easily into native plant communities and displace native vegetation (KEPPC 2013). Table 1 outlines the exotic plant species that pose a severe threat as determined by the Kentucky Exotic Pest Plant Council (KEPCC). The KEPCC also provides a watch list of exotic plants species that pose significant and moderate threats. The proposed project site does not have an existing inventory of invasive species and the presence is not well known. No specific data and information for the proposed project area was identified.

Table 1. Invasive species listed as *Severe Threat* for the state of Kentucky (KEPPC 2013).

Scientific Name:	Common Name:
<i>Achyranthes japonica</i>	Japanese chaff flower
<i>Ailanthus altissima</i>	Tree-of-heaven
<i>Alliaria petiolata</i>	Garlic mustard
<i>Ampelopsis brevipedunculata</i>	Porcelain berry
<i>Arthraxon hispidus</i>	Hairy jointgrass
<i>Carduus nutans</i>	Musk thistle
<i>Celastrus orbiculatus</i>	Oriental bittersweet
<i>Cirsium arvense</i>	Canada thistle
<i>Clematis terniflora</i>	Leatherleaf clematis
<i>Conium maculatum</i>	Poison hemlock
<i>Securigera varia</i>	Crown vetch
<i>Dioscorea polystachya</i>	Chinese yam



Scientific Name:	Common Name:
<i>Elaeagnus umbellata</i>	Autumn olive
<i>Euonymus alatus</i>	Burning bush
<i>Euonymus fortunei</i>	Wintercreeper
<i>Festuca arundinacea</i>	Kentucky 31 fescue
<i>Glechoma hederacea</i>	Ground ivy
<i>Lespedeza cuneata</i>	Sericea lespedeza
<i>Kummerowia stipulacea</i>	Korean lespedeza
<i>Ligustrum sinense, L. vulgare</i>	Privet
<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Lonicera maackii, L. fragrantissima, L. standishii</i>	Bush honeysuckles
<i>Lysimachia nummularia</i>	Moneywort
<i>Lythrum salicaria</i>	Purple loosestrife
<i>Melilotus alba</i>	White sweet clover
<i>Melilotus officinalis</i>	Yellow sweet clover
<i>Microstegium vimineum</i>	Japanese stiltgrass
<i>Miscanthus sinensis</i>	Chinese silver grass
<i>Paulownia tomentosa</i>	Princess tree
<i>Phragmites australis</i>	Common reed
<i>Polygonum cuspidatum</i>	Japanese knotweed
<i>Pyrus calleryana</i>	Callery pear
<i>Pueraria lobata</i>	Kudzu
<i>Ranunculus ficaria</i>	Lesser celandine
<i>Rhamnus cathartica</i>	European buckthorn
<i>Rosa multiflora</i>	Multiflora rose
<i>Sorghum halepense</i>	Johnson grass
<i>Stellaria media</i>	Chickweed

3.4.2 Environmental Consequences

3.4.2.1 No Action

The NAA would have no effect on invasive species.

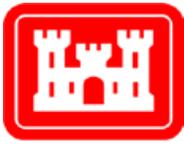
3.4.2.2 Recommended Plan

The Recommended Plan is not anticipated to have adverse effects on invasive species. All revegetation efforts on disturbed ground would be done with native species seed mixes.

3.4 Aquatic Habitat/Water Quality

3.4.1 Existing Conditions

The entire Troublesome Creek watershed is approximately 246 square miles, or 158,000 acres, and covers the central portion of Knott County, the northeastern portion of Perry County, and the southeastern portion of Breathitt County. Troublesome Creek discharges directly into the North Fork of the Kentucky River at Haddix in Breathitt County, KY. The major tributaries that discharge into Troublesome Creek are Lost Creek, Buckhorn Creek, and Balls Fork (otherwise known as Ball Creek).



As the largest stream in the project footprint, Troublesome Creek (river mile 0.0 – 45.25) is classified as non-supporting for recreation (i.e., contact in the form of swimming) and warm water habitat (KDOW 2024, USEPA 2024) and is currently listed as a 303(d) stream. The most recent assessment listed the watershed as impaired for aquatic life (warmwater habitat), and recreation (primary contact) caused by the presence of *Escherichia coli* (E. coli). The primary causes of these impairments to aquatic life are listed as salt contamination and sedimentation, sedimentation/siltation from channelization and erosion (USEPA 2024).

The KDOW uses fecal coliform (FC) data collected at ambient monitoring stations throughout Kentucky to assess water quality for recreational uses. The presence of E. coli in water samples is a strong indicator of sewage or animal waste contamination. Sewage and animal waste can contain many types of disease causing organisms which may result in severe illness if consumed. Children under five years of age, those with compromised immune systems, and the elderly are particularly susceptible.

Section 303(d) of the CWA requires States, Territories, and authorized Tribes to list and prioritize waters for which technology-based limits alone do not ensure attainment of water quality standards. The CWA and the USEPA regulations require that Total Maximum Daily Loads (TMDLs) be developed for all waters on the section 303(d) lists. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation or attribution of that amount to the pollutant's sources. Lists of 303(d) waters are made available to the public and submitted to the USEPA and KDOW. The process of formulating TMDLs for specific pollutants is a method by which impaired water body segments are identified and restoration solutions are developed. Ultimately, the goal of TMDL process is full attainment of biological and chemical Water Quality Standards (WQS) and, subsequently, removal of water bodies from the 303(d) list.

3.4.2 Environmental consequences

3.4.2.1 No Action

Under the NAA, current water quality trends would continue with releases of untreated sewage onto the surrounding landscape and eventually into the surrounding streams. These moderate long-term adverse impacts will continue to contribute poor water quality issues in the greater Troublesome Creek watershed.

3.4.2.2 Recommended Plan

The recommended plan would benefit the surrounding watershed by reducing the introduction of organic material to the watershed by providing an important component of a local wastewater collection and treatment system. This would ultimately result in long-term beneficial impact of the water quality of the Troublesome Creek watershed. HDD techniques will be employed during construction of the Project to avoid direct adverse impacts to waterbodies and BMP's such as silt fencing, mulching, seeding, and fertilizing disturbed ground will be utilized during construction to prevent stormwater runoff.



3.5 Floodplains

3.5.1 Existing Condition

Executive Order 11988 requires Federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. Analysis of the USEPA NEPAAssist website and Federal Emergency Management Agency (FEMA) floodplain maps indicate that a very small amount of the project area are located in the 100-year, or 1% annual chance flood hazard zone (USEPA 2024b; Figure 2). These areas are limited to riparian areas adjacent to Troublesome Creek and other watercourses.

3.5.2 Environmental Consequences

3.5.2.1 No Action

The NAA would have no effect on floodplains. Existing land use and development patterns will continue in the project area.

3.5.2.2 Recommended Plan

Because Project construction will follow existing road ROWs, the implementation of the recommended plan would not alter elevation or otherwise impact function of the floodplain. HDD will be implemented when construction crosses watercourses, including Troublesome Creek. Permitting and regulation by the Project proponent, KDOW, USACE, and others, as necessary, would ensure that there are no adverse effects to the floodplain from implementation of the recommended plan.

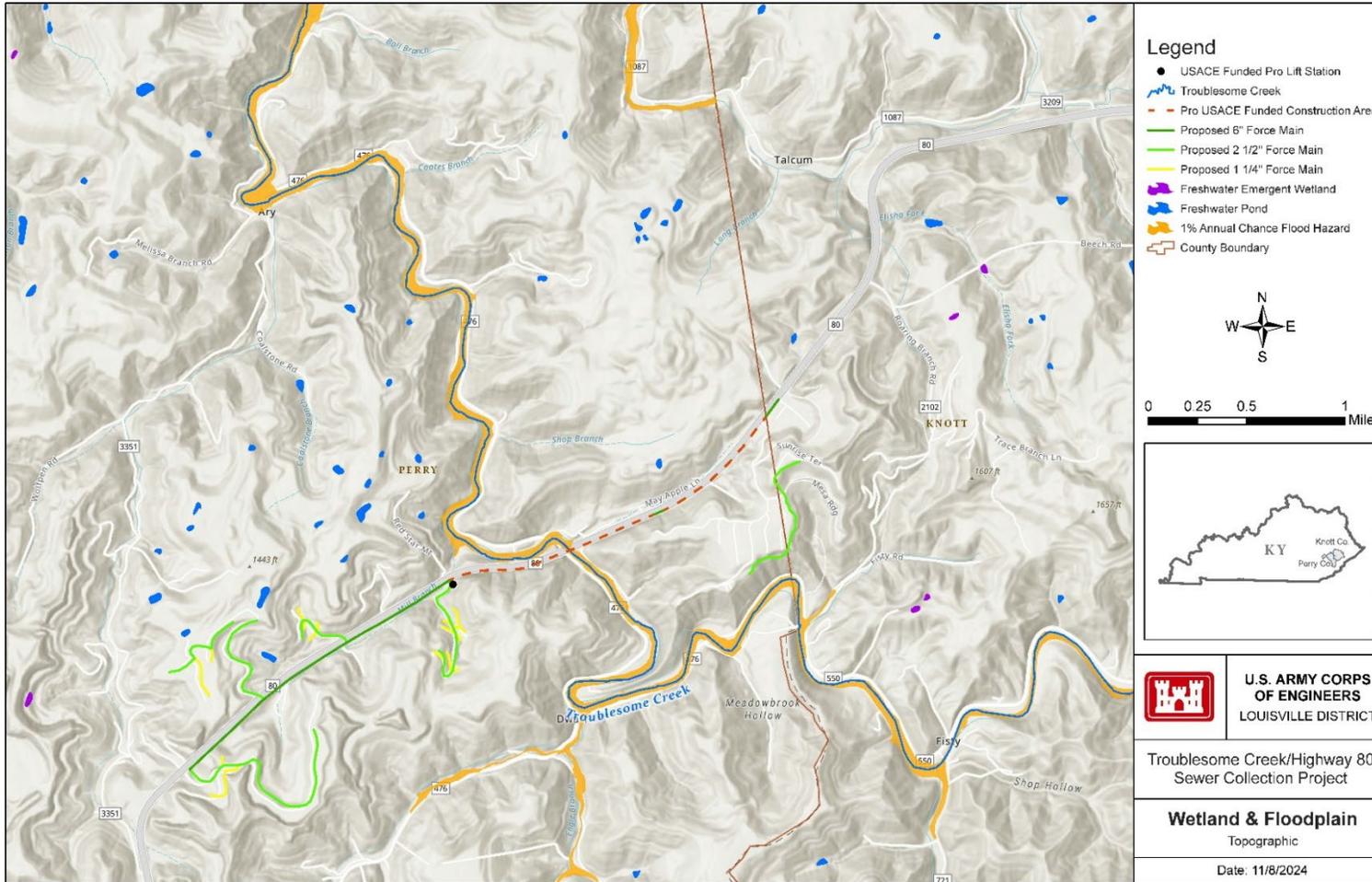


Figure 4. 100-year floodplain within the proposed Perry County/HWY 80 Collection Project Phase III, Perry County, Kentucky.



3.6 Soils and Prime and Unique Farmland

3.6.1 Existing Condition

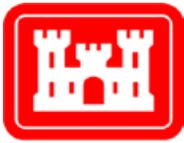
Review of National Resource Conservation Service (NRCS) soil maps revealed there are 16 soil types present in the project area. Many of these soils are found in the outlying areas of the project footprint so will be minimally impacted by the project. Udorthent soils of the Udorthents-Urban land-Rock outcrop complex, 0 to 35 percent slopes complex predominate in the existing ROW areas where main lines will be laid, i.e., along KY/Hwy 80 and, in general, Udorthents in this area represent soils that have been previously disturbed. Four additional general soil associations have been mapped in the project footprint, including the Shelocta-Highspint-Cloverlick-Kimper, the Handshoe-Cloverlick-Feds creek, Matewan-Marrowbone-Latham, and the Shelocta-Cloverlick-Feds creek-Kimper associations (RMJE 2022, USDA 2024). Variations in the soils within and between associations generally reflect variations of topography and other patterns. The Shelocta-Highsplint-Cloverlick-Kimper association contains very deep, well-drained, steep soils and have a loamy subsoil. Soils in the association are generally found on hillsides throughout the service area region. Individual soils mapped within the project area consist of Grigsby which are sandy loam and occasionally flooded; Feds creek soils which are stoney, well-drained, moderately permeable soils that drain rapidly associations (RMJE 2022, USDA 2024). These soils are found on hill slopes, mountainsides, benches, footslopes, and in drainage ways. Soils of the Handshoe-Feds creek-Marrowbone are formed in loamy colluvium weathered from sandstone, siltstone, and shale. Grigsby soils are well drained, moderately to moderately rapidly permeable soils on floodplains. These soils form in mixed alluvium. Handshoe soils are well drained, moderately rapidly permeable soils on sideslopes and footslopes on hills and mountains. These soils formed in colluvium weathered from acid brown or gray sandstone. Marrowbone soils are well-drained, moderately to moderately rapidly permeable soils on hill slopes, mountainsides, nose slopes and ridgetop crests. These soils formed in loamy residuum or colluvium weathered from interbedded sandstone and siltstone associations (RMJE 2022).

No soil types identified in the project footprint are classified as prime farmland. A detailed report and map of the soils found in the project area can be found in Appendix A.

Table 2. Predominant soil types within the Perry County/HWY 80 Collection Project Area of Impact (AOI), Perry and Knott counties, Kentucky.

Soil Name	Percent of AOI (%)	Prime Farmland (Yes/No)
Shilocta-Highsplint-Gilpin	25.1	No
Udorthents-Urban, 0-30 percent slopes	23.9	No
Fairpoint and Bethesda, 2-70 percent slopes	23.2	No
Cloverlick-Kimper-Highsplint, 30-65 percent slopes	5.7	No

Source: USDA 2024



3.6.2 Environmental Consequences

3.6.2.1 *No Action*

The NAA would have no effect on soils or prime and unique farmland because the work for the proposed Project would not occur. Current trends in land use, and their concomitant effect on soils, would be expected to continue.

3.6.2.2 *Recommended Plan*

The recommended plan would have a negligible effect on soils within the Project footprint. All construction would occur within existing ROWs or previously disturbed areas with impacted soils. No soils classified as prime or unique farmlands are found within the project footprint. Impacts to soils from the movement of heavy equipment to and from the staging areas during construction will be limited to a minor, short-term disturbance of the topsoil. The use of BMPs including mulching, seeding, and fertilizing would minimize any potential erosion of soils or long-term adverse effects of these activities.

3.7 Wetlands

3.7.1 Existing Condition

Desktop analysis via U.S. Fish and Wildlife (USFWS), National Wetlands Inventory (NWI) was conducted in an effort to locate potential wetland habitats within the construction footprint (USFWS 2024b). While several ponds and other wetland habitat types were identified adjacent to the construction zone(s) via the NWI mapping tool, no wetlands were located within the construction footprint. The location of identified wetlands near the project area can be found in Figure 3.

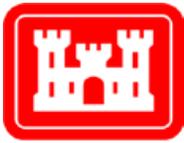
3.7.2 Environmental Consequences

3.7.2.1 *No Action*

Bioassessments conducted within the Troublesome Creek Watershed have found that the streams within the surrounding basin are polluted with sediment and fecal coliform, which has resulted in the major streams such as Troublesome Creek to be placed on the EPA's impaired streams list. The NAA may have a long term, minor impact on wetlands due to inadequate or nonexisting water treatment infrastructure. Under the NAA, inadequate or nonexisting water treatment infrastructure will continue to generate water pollution and impact water quality. Reduced water quality may have a long-term, minor impact on wetlands.

3.7.2.2 *Recommended Plan*

The recommended plan would have no effect on wetlands, as all the designated construction activities will avoid areas designated as wetlands (Figure 2). While a small amount of wetland habitat may exist in sections of the project footprint, this habitat is limited to the riparian and near shore areas immediately surrounding Troublesome Creek. Because direct impacts to this area will be avoided via HDD techniques, and/or land disturbance associated with the proposed Project will occur in previously disturbed areas associated with the current project footprint, implementing the proposed project will have no direct impact on wetlands. Water quality in the project area is expected to benefit from the implementation of the project and there may be a concomitant long-term beneficial impact to wetland habitats in the project watershed. Because the



proposed construction activities associated with the proposed project will involve no in-stream disturbance and no fill or impacts to wetland habitats will occur, no in-stream adverse effects are anticipated. Construction best management practices (BMPs) should be implemented to prevent potential direct and/or indirect stormwater pollution impacts.

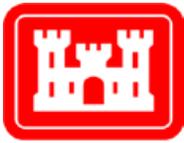
3.9 Hazardous, Toxic, and Radioactive Waste (HTRW)

3.9.1 Existing Condition

A Limited Phase I Hazardous, Toxic, and Radioactive Waste (HTRW) Environmental Site Assessment was conducted to identify environmental conditions and to identify the potential presence of HTRW contamination located in the Project's designated construction and lay down areas (PE/RMJE 2024; Appendix A). Phase I HTRW activities are performed to determine if there is a potential for any environmental concerns that may exist within the project area due to present and past property usage. Because the USACE has recognized that the majority of water and sewer projects are constructed in road ROWs, HTRW investigations of limited scope have been adopted for these types of projects. The purpose of the limited HTRW investigation is to identify site(s) that warrant further assessment due to the potential of having HTRW concerns. This investigation included a Federal and state environmental database search, site reconnaissance, review of historical aerial and topographic mapping, water well maps, United States Environmental Protection Agency (USEPA) and Kentucky Department of Environmental Protection (KDEP) database searches and file reviews, and a search of city directories and interviews with city personnel. This investigation was conducted in accordance with the most current American Society of Testing Materials (ASTM) E 1527 and E 1528 standards.

The USEPA Envirofacts Facility Database was queried regarding the potential location of any Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or Resource Conservation and Recovery Act (RCRA) sites in the vicinity of the proposed Project footprint. There are a total of 28 facilities listed and or reporting to the state or Federal databases (USEPA 2024b), the majority (n = 24 or 86%) are listed as current or past generators of water pollution regulated via the CWA and National Pollution Discharge Elimination System (NPDES) permits. Four CERCLA or RCRA facilities occur within two miles of the project area (USEPA 2024b). None of these facilities are located on the project construction footprint. A dataset provided by Kentucky Department of Environmental Protection's (KDEPs) Solid Waste Branch (SWB) was reviewed to investigate the proximity of permitted solid and special waste sites near the project area. There are no known landfills located within 10 miles of the Project footprint (USEPA 2024b).

Based on these results, further assessment is not required for any sites along or near the project area. The complete Phase 1 HTRW investigation report (PE/RMJE 2024) is included in Appendix A.



3.9.2 Environmental Consequences

3.9.2.1 No Action

The NAA would have no effect on existing HTRW resources and, in the absence of the Action, would not result in new HTRWs associated with the proposed Project. However, the NAA would result in the continued release of untreated sewage into the surrounding watershed that could pose a potential threat to human health and the environment.

3.9.2.2 Recommended Plan

The recommended plan would have no effect on HTRW resources. With no HTRW sites in or near the project footprint, the recommended plan would not impact existing HTRWs. Additionally, the recommended plan is not expected to produce HTRWs as a result of implementing the proposed project.

3.10 Cultural Resources

3.10.1 Existing Conditions

All work will be located within the previously disturbed areas associated with construction of the subdivisions and roadways. The installation of the proposed sewer lines will utilize existing utility corridors within the existing ROWs. Moreover, all subdivisions and roadways are less than 50 years old and not historic within the Commonwealth of Kentucky.

All work will be located within the previously disturbed areas associated with construction of the subdivisions and roadways. The installation of the proposed sewer lines will utilize existing utility corridors within the existing ROWs. Moreover, all subdivisions and roadways are less than 50 years old and not historic within the Commonwealth of Kentucky.

3.10.2 Environmental Consequences

3.10.2.1 No Action

The NAA would result in no effects to historic properties. Under the NAA, no environmental alterations or effects would occur through construction or demolition activities, and therefore, would result with no effects to historic properties whether present or not.

3.10.2.2 Recommended Plan

The recommended plan has no potential to effect historic properties because all ground disturbing activity is located within previously disturbed areas associated with construction of the highway, subdivisions, and existing utilities. Furthermore, the disturbed areas are associated with infrastructure less than 50 years old and are not historic within the Commonwealth of Kentucky.



3.11 Threatened and Endangered Species

3.11.1 Existing Condition

The Endangered Species Act of 1973 requires Federal agencies to consider the effects of actions on Federally listed endangered, threatened, and/or candidate species. A total of six listed species have ranges that overlap with the project area including the gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), and Kentucky arrow darter (*Etheostoma sagitta*). The tricolored bat (*Perimyotis subflavus*) is proposed for listing and the monarch butterfly (*Danaus plexippus*) is a candidate for listing. There is no critical habitat within or adjacent to the project area (USFWS 2024a). An official threatened and endangered species list from the USFWS for the project area can be found in Appendix A.

The Indiana bat has a range that intersects with the project area. In the spring, bats emerge from hibernation and migrate to summer roost sites. During the summer months, female Indiana bats establish maternity colonies of up to 100 bats under the loose bark of trees and in tree cavities. Loss and fragmentation of forest habitat are among the major threats to Indiana bat populations. Other threats include white-nose syndrome, winter disturbance, and environmental contaminants (USFWS 2006).

The northern long-eared bat has a range that intersects with the project area. The species was listed as threatened in 2015 due to declines mostly associated with white-nose syndrome. Northern long-eared bats spend winter hibernating in caves and mines. During the summer the bats roost singly or in colonies underneath bark or in cavities of both snags and live trees (USFWS 2015).

The tricolored bat is a small insectivorous bat that is distinguished by its unique tricolored fur and often appears yellowish to nearly orange. The species has a very large range and can be found across most of the eastern and central United States and portions of southern Canada, Mexico and Central America. Tricolored bats overwinter in caves and abandoned mines and have been found roosting in road-associated culverts in the southern parts of its range (USFWS 2024c). During the spring, summer, and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves of live or recently dead deciduous hardwood trees and occasionally utilize human structures as roosts. Tricolored bats face extinction due primarily to the rangewide impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. White-nose syndrome has caused estimated declines of more than 90 percent in affected tricolored bat colonies across the majority of the species range (USFWS 2024c).

The gray bat (*Myotis grisescens*) was listed as Federally endangered in 1976. Gray bats are distinguished from their congeners by the bat's wing membrane which connects to its ankle instead of the toe and the presence of notched claws. Gray bats weigh 7-16 grams. The bats eat a variety of flying aquatic and terrestrial insects present along rivers or lakes. Gray bats live in caves year-round. During the winter gray bats hibernate in deep, vertical caves. In the summer, they roost in caves which are scattered along rivers.



While the gray bat occupies a large geographic range which includes much of the southeastern United States, the species is restricted to caves in limestone karst areas that meet their narrow habitat requirements. They are mainly found in Alabama, northern Arkansas, Kentucky, Missouri, and Tennessee. Florida, Georgia, Kansas, Indiana, Illinois, Oklahoma, Mississippi, Virginia, and North Carolina are considered the edge of their range (USFWS 2019b). The gray bat range includes the project area and the species is considered potentially present in areas in which they have not been previously documented. However, there are no known hibernaculum maternity caves used by gray bats occurring on or near the project footprint (USFWS 2024d).

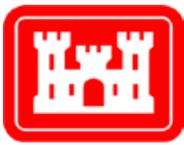
The Kentucky arrow darter is a small benthic fish that typically occupies rocky pools in headwater streams of the upper Kentucky River drainage in eastern Kentucky. The species once occurred in small streams throughout the drainage, but it has now been eliminated from large portions of its historical range, including 35 of 74 historical streams (HUC14 watersheds). The Kentucky arrow darter currently occupies 52 small stream systems across 10 Kentucky counties. However, most remaining populations are isolated and restricted to short stream reaches and, of the species' 52 extant streams, USFWS considers 27 of these populations to be "vulnerable" to extirpation. The species faces ongoing threats from poor water quality, and altered habitats caused by coal mining, oil and gas exploration, logging, agriculture, poor land use practices, and development (USFWS 2022). The species' fragmented distribution, lack of gene flow, and low genetic diversity increases its vulnerability to extirpation from chemical spills, habitat disturbance, and catastrophic weather events (e.g., drought, floods). Recent catastrophic flooding (summer 2022) across the upper Kentucky River drainage caused a great deal of damage to many streams occupied by the arrow darter but the effect on the species is currently unknown. The closest known record of the arrow darter to the project area, is 12 miles away in Hell for Certain Creek in Leslie County.

The monarch butterfly was determined to be a candidate species in December of 2020 (USFWS 2024e). Monarch butterflies are a species with an annual, multigenerational, migratory life cycle and a cross-continental migratory range covering portions of Canada, the US and Mexico. To complete their life cycle, monarch caterpillars must feed on milkweed (*Asclepias* spp.) plants while adults feed on nectar from a variety of blooming plants. Primary threats to this species include habitat loss, climate change, pesticide applications, natural enemies, and other abiotic and biotic stressors (USFWS 2024e, Monarch Joint Venture 2024). Habitat for this species would primarily be found in clearings and in areas where canopy cover doesn't prohibit herbaceous wildflower species from growing.

There are no Federally designated critical habitats found within the project area.

Other listed species

In addition to responsibilities to protect threatened and endangered species under the 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)). The MBTA of 1918 (16 United States Code [U.S.C.] 703-712) implements the 1916



Convention between the United States (U.S.) and Great Britain (for Canada) for the protection of migratory birds. Later amendments implemented additional treaties between the U.S. and Mexico (1936), the U.S. and Japan (1972), and the U.S. and the former Union of Soviet Socialist Republic (1976). These four treaties and their enabling legislation established federal responsibilities for the protection of nearly all species of migratory birds, their parts, eggs, and nests.

Under the provisions of the MBTA, it is unlawful to "...pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird or any part, nest, or egg of any such bird..."(16U.S.C. 703).

The term "take" means "...to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect..." (50 Code of Federal Regulation [CFR] 10.12). Intentional take is a take that is the purpose of the action. Unintentional take (incidental take) is a take that is not the purpose of the action but occurs as a result of an otherwise legal action. The MBTA makes no mention of habitat modification or destruction, unlike the ESA that identifies habitat modification or destruction as "harm" under the definition of "take."

Under the provisions of the MBTA, the unauthorized take of migratory birds is a strict liability criminal offense that does not require knowledge or specific intent on the part of the offender. As such, even when engaged in an otherwise legal activity where the intent is not to kill or injure migratory birds, violations can occur if a bird death or injury results. Even though the MBTA itself is enforceable only by the federal government, federal agencies may incur civil liability if their on-going or new actions take birds in violation of the MBTA. This is because the Administrative Procedure Act allows a private party to request that a court enjoin an agency action that does not comply with the MBTA (injunctions usually last until the action is brought into compliance or dropped). USFWS Office of Law Enforcement can use enforcement discretion, especially when organizations are willing to work with the USFWS to avoid or minimize impacts to migratory birds.

The IPaC report identified the following species protected under the MBTA that could be present within the Project area; chimney swift (*Chaetura pelagica*), lesser yellowlegs (*Tringa flavipes*), henslow sparrow (*Centronyx henslowii*), prairie warbler (*Setophaga discolor*), and wood thrush (*Hylocichla mustelina*).

3.11.2 Environmental Consequences

3.11.2.1 No Action

The NAA would result in no impacts to threatened and endangered species, including listed bat species. While a total of six federally listed species have ranges that overlap the project area, there are no known records of these species occurring in the project footprint. Development in the project area is limited by economic challenges and population densities. Based on the history of the site, changes in future land practices should follow recent patterns suggesting that impacts to listed species should be negligible. Absent the proposed project, continued perturbations to the local watershed would be expected to continue. Because the closest known population of the



federally listed arrow darter are approximately 12 miles away and not directly linked to Troublesome Creek watershed, impacts to this species are not expected as a result of implementing the NAA.

In addition, failure to implement the proposed project will not directly impact the chimney swift, henslow sparrow, prairie warbler, wood thrush, or their habitats. The lesser yellowlegs and bald eagle are an uncommon nonresident species that may use aquatic resources of the area when present. Failure to implement the proposed project would result in continued degradation of water quality and may have a negligible adverse impact on these species.

3.11.2.2 Recommended Plan

The recommended plan would have a no effect on threatened or endangered species, including listed bat species. All of the designated construction and lay down areas for the Project will occur in existing ROWs with previous disturbance, which are void of suitable habitat for any threatened or endangered species. Because no trees will be removed during project construction, the Action will have no effect on the gray bat, Indiana bat, northern long-eared bat, and tricolored bat. While there may be a long-term beneficial effect on water quality of the surrounding watershed, the distances to known populations of the arrow darter are too great and there will be no effect to the species as a result of implementing the proposed project. The proposed project may have a negligible effect on the monarch butterfly or its habitat.

Due to the location, scope, and design of the the proposed Project, the proposed Project would have no effect on bald eagles and other migratory birds, including the chimney swift, henslow sparrow, lesser yellowlegs, prairie warbler, and wood thrush.

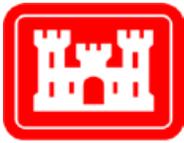
3.12 Air Quality

3.12.1 Existing Condition

The Clean Air Act (CAA) allows the USEPA to set air quality standards for pollutants considered harmful to public health and welfare. The National Ambient Air Quality Standards (NAAQS) set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. These standards have been established for six criteria pollutants including carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM₁₀ and PM_{2.5}), and sulfur dioxide (SO₂), and each state is required to develop implementation plans for each pollutant. Areas are generally designated as being either in “attainment” of the standards for the pollutants listed above or in “nonattainment”.

Nonattainment areas are required by the CAA to comply with the NAAQS standards through the evaluation and development of a maintenance plan. The USEPA makes a conformity determination to assure that the actions within the maintenance plan conform to the respective state’s implementation plan for each nonattainment pollutant.

According to the USEPA Green Book, Nonattainment/Maintenance Area Status for Each County by Year for All Criteria Pollutants, Perry County is classified as in full “attainment” for all criteria pollutants as of 10 September 2024 (USEPA 2024c).



3.12.2 Environmental Consequences

3.12.2.1 *No Action*

In the absence of the proposed Project, current air quality trends would be expected to continue. As such, the NAA would have no effect on air quality.

3.12.2.2 *Recommended Plan*

Implementation of the recommended plan would have the potential to cause minor, localized, and short-term air quality adverse impacts. Potential sources of these impacts include emissions from construction and associated heavy equipment operation which include diesel fuel fumes and exhaust. Because the recommended plan would not require around the clock construction, equipment downtime would allow for dispersion of any fumes generated during construction. The recommended plan is therefore exempt from the requirement to make a conformity determination mandated by the General Conformity Rule 40 C.F.R. § 93 of the Clean Air Act, since estimated emissions from construction equipment would be far below minimum standards of 100 tons/year, which is the minimum threshold for which a conformity determination must be performed.

3.13 Noise

3.13.1 Existing Condition

Noise in the vicinity of the project area is characterized by light traffic along KY80, and from farm and lawn care equipment.

Noise is measured as Day Night average noise levels (DNL) in “A-weighted” decibels (dBA) that the human ear is most sensitive to. There are no Federal standards for allowable noise levels. The Corps Safety and Health Requirements Manual provides criteria for short-term permissible noise exposure levels for consideration of hearing protection or the need to administer sound reduction controls, which is concurrent with Occupational Safety and Health Administration (OSHA) standards (Table 3; USACE 2014).

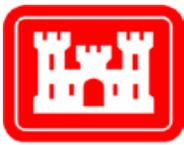


Table 3. Non-Department of Defense Continuous Noise Exposures (OSHA Standard).

Duration/day (hours)	Noise level (dBA)
8	85
4	88
2	91
1	94
0.5	97
0.25	100

3.13.2 Environmental Consequences

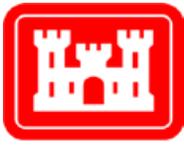
3.13.2.1 No Action

In the absence of the proposed Project, noise levels would be expected to be maintained at current levels. As such, there would be no effect on noise associated with the NAA.

3.13.2.2 Recommended Plan

Noise associated with the recommended plan would be limited to that generated during construction. The noise associated with construction would be short-term and would only occur during daylight hours over the estimated 1-year construction period. Construction noise would be similar to that of vehicular traffic, farm equipment, and other small machinery used in the local area. A backhoe and a front-end loader are examples of equipment that is likely to be used during construction. Each emits noise levels around 85 dBA at 45 feet. Construction equipment would be operated during daylight hours; therefore, a reasonable exposure time of two hours would be expected during the time residents may be home during the day. Peak outdoor noise levels ranging from 78-90 dBA would occur during the time in which equipment is directly in front of or in proximity to homes and businesses (within 25-100 feet). A maximum noise exposure of approximately 94 dBA, for one hour could occur if equipment were within 10 feet of homes and business. The noise projections do not account for screening objects, such as trees, outbuildings, or other objects that muffle and reduce the noise being emitted. The outdoor construction noise would be further muffled while residents are inside their homes. These limited exposures and time intervals are within allowable USACE safety levels. Further, they are similar to typical neighborhood noise generated by gas powered lawnmowers in the local area, which could range from 90-95 dBA at three feet and 70-75 dBA at 100 feet. Resident exposure to these noise levels would occur if and/or when residents are home and outdoors.

Due to daytime construction and the short and limited duration of elevated noise levels associated with the recommended plan, impacts from the noise to local residents would be negligible.



3.14 Socioeconomic Conditions and Environmental Justice

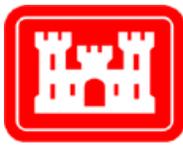
3.14.1 Existing Conditions

Under Executive Order 12898 “Federal Action to Address Environmental Justice in Minority Populations and Low-income Populations”, Federal agencies are directed to identify, address, and avoid disproportionately high and adverse human health or environmental effects on minority and low-income populations.

In addition, Executive Order 14008 Tackling the Climate Crisis at Home and Abroad (Exec. Order No. 14008, 2021) established the Justice40 Initiative with the goal that 40 percent of the overall benefits of certain investments, including climate change and clean water infrastructure flow to disadvantaged communities. Executive Order 14096 expands upon order 12898 by broadening the analysis to include a provision of equitable access to a healthy, sustainable, and resilient environment. The order aims to ensure that all communities, especially underserved and marginalized ones, have access to clean air, water, and land. The order also enhances data collection and public transparency, empowering communities to hold the government accountable for addressing environmental and health disparities.

Executive Order 13045 “Protection of Children from Environmental Health Risks and Safety Risks” was issued in 1997. This order applies to economically significant rules under Executive Order 12866 “Regulatory Planning and Review” that concerns an environmental health or safety risk that the USEPA has reason to believe may disproportionately affect children. Environmental health risks or safety risks refer to risks to health or to safety that are attributable to products or substances that children are likely to come in contact with or ingest (such as the air we breathe, the food we eat, the water we drink or use for recreation, the soil we live on, and the products we use or are exposed to).

The CEQ created the Climate and Economic Justice Screening Tool (CEJST) to help Federal agencies identify disadvantaged communities that have been historically marginalized, underserved, and/or overburdened by pollution. The tool identifies these communities through publicly available nationally consistent datasets. Under the current formula, a census tract is identified as “disadvantaged” in one or more categories of criteria if the census tract is above the threshold for one or more environmental or climate indicators and the census tract is above the threshold for the socioeconomic indicators. A search of the Climate and Economic Justice Screening Tool for an area encompassing the project area (Census Tracts #21193970400, 211119960200, and 21193970300) indicates that this area is identified as a “disadvantaged” community because it meets more than one burden threshold and the associated socioeconomic threshold (CEJST 2024). Identified factors that indicate this community is disadvantaged include a susceptibility to impacts related to climate change, i.e., high risk to life and property from increased flood events in the region; a relatively high proportion of households living in poverty; low life expectancy and high rates of heart disease, diabetes, and asthma, lack of indoor plumbing; and environmental and health impacts of legacy pollution related to surrounding abandoned mine lands (CEJST 2024).

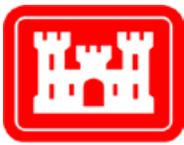


The USEPA environmental justice screening tool (EJSCREEN) was also used to analyze demographics for the project area (with a 3-mile buffer area encompassing 76.1 square miles), and a detailed demographic report can be found in Appendix A. According to EJSCREEN the 2018 population estimate for the project area was 5,316. The area is 98% Caucasian and 79% of residents are age 18 and above, and 23% are age 62 and over (USEPA 2024d). By comparison, the mean proportion of minorities in the state of Kentucky and the U.S. population is 16% and 39%, respectively. The estimated median household income base for the project area in 2018 was \$21,058. The estimated low-income population (n = 49%) is approximately the same as that of the state (n = 37%) and the national average (n = 31%).

A comparison of important mean environmental variables between the project area, the region, and nation is provided in Table 4. In general, values for pollution variables for the project area are similar to or below regional and national averages.

Table 4. Comparison of Selected Environmental Justice Variables for the Perry County/HWY 80 Collection Project project area (USEPA 2024d).

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter ($\mu\text{g}/\text{m}^3$)	7.45	8.54	8	8.08	30
Ozone (ppb)	58.2	59.3	46	61.6	25
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.0863	0.203	9	0.261	12
Air Toxics Cancer Risk* (lifetime risk per million)	24	26	0	25	5
Air Toxics Respiratory HI*	0.3	0.32	2	0.31	31
Toxic Releases to Air	0	7,500	0	4,600	0
Traffic Proximity (daily traffic count/distance to road)	8.7	78	32	210	15
Lead Paint (% Pre-1960 Housing)	0.21	0.24	57	0.3	49
Superfund Proximity (site count/km distance)	0.017	0.039	37	0.13	13
RMP Facility Proximity (facility count/km distance)	0.028	0.33	5	0.43	3
Hazardous Waste Proximity (facility count/km distance)	0.011	0.78	0	1.9	0
Underground Storage Tanks (count/km ²)	0.14	1.1	38	3.9	29
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0018	0.48	60	22	53
SOCIOECONOMIC INDICATORS					
Demographic Index	26%	26%	55	35%	43
Supplemental Demographic Index	22%	16%	81	14%	83
People of Color	2%	16%	18	39%	5
Low Income	49%	37%	71	31%	80
Unemployment Rate	10%	6%	79	6%	80
Limited English Speaking Households	0%	1%	0	5%	0
Less Than High School Education	25%	13%	86	12%	87
Under Age 5	5%	6%	50	6%	52
Over Age 64	17%	17%	53	17%	56
Low Life Expectancy	25%	22%	78	20%	90



3.14.2 Environmental Consequences

3.14.2.1 No Action

Under the NAA, untreated sewage would continue to be released into the environment from malfunctioning septic and straight pipe systems. Failure to alleviate the ongoing impacts to water quality could have potential minor or moderate adverse impacts to human health and, based on the relative high proportion of low-income populations in the project footprint, the NAA would be expected to have a disproportionate effect on minorities living in the project area.

3.14.2.2 Recommended Plan

The recommended plan would improve wastewater treatment for all residents in the project area, which would have a beneficial effects on low-income and minority populations in the project area. Due to the scope and design of the proposed project, the recommended plan would not be expected to generate quantities of greenhouse gases that would negatively impact the surrounding environment nor would it have a disproportionate effect on minority, disadvantaged populations, or children living in the project area.

3.15 Aesthetics

3.15.1 Existing Conditions

The project area landscape is a mix of forested habitat, residential, commercial, and abandoned mine lands. In general, developed areas are situated along bottomlands surrounding watercourses of the area or on reclaimed mine lands. Forested habitats that dominate the steeper hillsides are scenic and may offer large amounts of greenspace and limited opportunities to view wildlife.

3.15.2 Environmental Consequences

3.15.2.1 No Action

There would be no impacts in aesthetics with the NAA. Aesthetic values within the existing project area would remain the same.

3.15.2.2 Recommended Plan

The recommended plan would have negligible, long term effects to aesthetics of the project area. The recommended plan will have short term, negligible impacts on previously disturbed habitats of the project area which would return to preexisting conditions shortly after construction. The existing wastewater treatment infrastructure would be expanded and connected, so the project footprint will be larger on the landscape level. However, this type of construction will not conflict with the current land use and would quickly assimilate with existing aesthetics.

3.16 Transportation and Traffic

3.16.1 Existing Condition

Because the the proposed Project is located along an existing road ROW, the vast majority of the construction footprint will occur along existing public transportation or traffic routes. Due to this, the potential exists for traffic to be impacted by construction of the project. The connecting infrastructure will be placed adjacent to roadways. The immediate area around the project is dominated by a mosaic of forested habitats and abandoned minelands which are interspersed



with a limited number of commercial and residential areas with low population densities and relatively few roads. As such, traffic would be expected to be light even during peak hours.

3.16.2 Environmental Consequences

3.16.2.1 *No Action*

The NAA would have no effect on traffic. Current traffic patterns and trends would be expected to continue in the absence of the proposed Project.

3.16.2.2 *Recommended Plan*

The recommended plan would have short-term, minor adverse effects to traffic. Construction could involve some minor, short-term delays and potential detours in normal traffic patterns. Construction would follow Kentucky Department of Transportation (KDOT) guidelines. All appropriate KDOT guidelines for traffic control would be implemented and emergency access would be maintained. There would be no new permanent traffic diversions as a result of the recommended plan and as such, no long-term impact would occur.

3.17 Health and Safety

3.17.1 Existing Condition

With a ranking of 117 and 119 (out of 121 ranked counties) respectively, data shows that Knott and Perry counties are among the most unhealthy counties in the state of Kentucky. The counties compares unfavorably to state and the U.S. populations in several health-related factors that are indicative of a poorer quality of life and health outcomes. For example, both counties have higher documented rates of premature death, obesity, smoking, teen births, and physical inactivity (CHR 2024).

3.17.2 Environmental Consequences

3.17.2.1 *No Action*

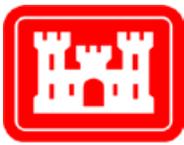
Under the NAA, untreated sewage would continue to be released into the environment unabated, which could have the potential to cause minor or moderate adverse health and safety impacts to the surrounding population.

3.17.2.2 *Recommended Plan*

The recommended plan would improve wastewater treatment for the local population, which would reduce or eliminate any possible negative health effects caused by discharge of untreated sewage into the surrounding environment. Therefore, the recommended plan would be anticipated to have a long-term beneficial impact on health and safety.

4.0 CUMULATIVE EFFECTS

NEPA requires a Federal agency to consider not only the direct and indirect impacts of a proposed action, but also the cumulative impact of the action. A cumulative impact is defined as “effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor, but collectively significant effects taking place over a period of time” (40 C.F.R. § 1508.1(i)(3)). These actions include on- or off-site projects conducted by



government agencies, businesses, or individuals that are within the spatial and temporal boundaries of the actions considered.

As previously discussed herein, it is anticipated that the proposed Perry County/HWY 80 Collection Project will have no effect or negligible effects on the following resource types: reservoir operation, air quality, topography, geology, soils, surface water hydrology, groundwater, listed species, demographics and environmental justice, recreation and visitation, cultural resources, HTRW materials, aesthetics and visual resources, and noise. The proposed project is expected to have beneficial effects on health and safety of the local population and the water quality of the surrounding watershed.

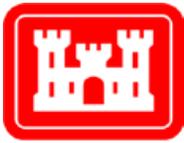
There is the potential for cumulative effects of the proposed action on project resources when added to the impacts of other past, present, and reasonably foreseeable future actions in the region. Any future development by USACE on Project resources has the potential to produce some temporary and minor construction-related adverse effects (e.g., noise, fugitive dust, vehicle emissions, etc.).

The cumulative effects analysis is based on the potential effects of the proposed project when added to similar impacts from other projects in the region. An inherent part of the cumulative effects analysis is the uncertainty surrounding actions that have not yet been fully developed. The CEQ regulations provide for the inclusion of uncertainties in the analysis and states that "when an agency is evaluating reasonably foreseeable significant adverse effects on the human environment...and there is incomplete or unavailable information, the agency shall make clear that such information is lacking" (40 CFR § 1502.21(1)).

Temporal and geographical limits for this project must be established in order to frame the analysis. These limits can vary by the resources that are affected. The installation of wastewater infrastructure of the type involved in the Perry County/HWY 80 Collection Project would have minimal and insignificant adverse effects on the environment. Long-term, beneficial effects would result from the project and would include improved health and safety, improved living conditions, and improved operations of the collection system. The temporal limits for assessment of this impact would initiate in 1972 with the passage of the Clean Water Act and end 50 years after completion of this project. The geographical extent can be broadened to consider effects beyond the recommended plan in certain circumstances. However, the geographical extent considered is the Troublesome Creek watershed as the adverse effects of point- and non-point impacts become increasingly difficult to assess and attribute to a particular source as they accumulate and/or are diluted in larger order streams.

Several streams making up the Troublesome Creek watershed are listed as impaired for various sources throughout. In the past, several of the communities within the watershed have performed upgrades to existing wastewater collection systems. These past actions had similar temporary impacts but no significant cumulative impact. Impairment of the watershed is expected to continue, but as communities continue to improve existing public water distribution systems, a cleaner, healthier watershed would be possible. Water quality standards and regulations are expected to remain as stringent in the future as today.

Section 3.0 documents the existing environment and potential environmental effects of the recommended plan and NAA with respect to existing conditions. The effects of the recommended plan, as discussed herein, are localized and minor. Past actions that may have



resulted in similar effects may include wastewater or water infrastructure improvement actions. No reasonably foreseeable future actions that would have similar impacts as the proposed action were identified. In scoping cumulative effects issues, no resources were identified as having a potential to be significantly affected. Only minor and temporary adverse impacts to ecological resources would be sustained with the implementation of the recommended plan. These resources would be reestablished upon completion of construction.

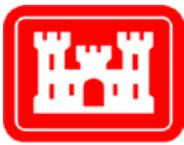
The availability of Federal funds through programs, such as the 531 Program, to assist communities with installation and construction of water-related environmental infrastructure and resource protection and development projects in Kentucky is an additional benefit to the area. The significance of this action on health, safety, and water quality would be positive. Given that the current program remains in place for the foreseeable future and the overall beneficial effect from implementation of the PPA, there is expected to be a positive, though small, cumulative effect on health and safety based on past, present, and reasonably foreseeable actions.

5.0 STATUS OF ENVIRONMENTAL COMPLIANCE

The recommended plan is in full compliance or in the process of attaining compliance with all applicable local, State, and Federal statutes as well as Executive Orders. Compliance status is documented below in Table 5.

Table 5. Status of Environmental Compliance with the proposed Perry County/HWY 80 Collection Project, Knott and Perry counties, Kentucky.

Statute/Executive Order	Full	In Progress
National Environmental Policy Act		X
Endangered Species Act	X	
Clean Water Act	X	
Wild and Scenic Rivers Act	X	
Clean Air Act	X	
National Historic Preservation Act	X	
Archeological Resources Protection Act	X	
Comprehensive, Environmental Response, Compensation and Liability Act	X	
Resource Conservation and Recovery Act	X	
Toxic Substances Control Act	X	
Quiet Communities Act	X	
Farmland Protection Act	X	
Executive Order 11988 Floodplain Management	X	
Executive Order 11990 Protection of Wetlands	X	
Executive Order 12898 Environmental Justice in Minority Populations and Low-Income Populations	X	



6.0 PUBLIC REVIEW AND COMMENTS

This draft EA and unsigned FONSI will be made available for public review for a period of 30 days [pending]. Table 6 lists the persons, agencies, Tribes, and organizations that will be notified for the public review. Any comments received will be considered by USACE before finalizing the EA and executing the FONSI. All agency and Tribal correspondence will be included in Appendix A.

Table 6. Agencies, Organizations, Persons, and Tribes contacted for public review of the proposed Perry County/HWY 80 Collection Project, Knott and Perry counties, Kentucky.

Stakeholder Type	Agency/Organization/Person/Tribe
State Agencies	Kentucky Department of Fish and Wildlife Resources
	Office of Kentucky Nature Preserves
	Kentucky Heritage Council
	Kentucky Division of Water
	Kentucky Department for Natural Resources
	Kentucky Division for Air Quality
	Kentucky Division of Waste Management
	Kentucky Transportation Cabinet
Federal Agencies	U.S. Fish and Wildlife Service, Kentucky Field Office
	Environmental Protection Agency, Region 4 Office
	U.S. Geological Survey Ohio-Kentucky-Indiana Water Science Center
	National Resource Conservation Service, Kentucky Office
Local Agencies	County Judge Executive
	County Engineer Office
	Planning and Zoning Office
	Roads Department
Elected Officials	United States Congressman - Hal Rogers
	United States Senator – Mitch McConnell
	United States Senator – Rand Paul
	Kentucky State Representative – Chris Fugate
	Kentucky State Representative – Brandon Smith
Non-governmental Organizations	The Nature Conservancy, Kentucky Chapter
	Sierra Club, Kentucky Chapter
	Kentucky Environmental Foundation
	Kentucky Heartwood
	Kentucky Waterways Alliance
	Kentucky Resources Council
	River Fields
	Kentuckians For The Commonwealth



6.0 CONCLUSION

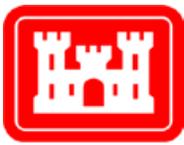
Because the Troublesome Creek WWTP was originally constructed in 2002/2003, the majority of plant components are original and are therefore nearing the end of their service lives. The proposed expansion of the TEA wastewater treatment system would address both the design and operational deficiencies of the existing system and also help the surrounding communities address their waste removal and public health issues.

The completion of the proposed Perry County/HWY 80 Collection Project will allow for controlled and quality growth of residential and non-residential entities within the focal sanitary service area and bring the area into compliance with Federal and state water quality requirements. For the proposed project, construction would take place on previously disturbed land on the boundaries of the existing road ROWs. Adverse effects associated with construction would be minor and short-term, and construction BMPs would be implemented to minimize impacts to residents and the environment. No significant adverse impacts have been identified as a result of implementation of the recommended plan.

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA); the Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 C.F.R. Parts 1500-1508); and the Corps of Engineers, Policy and Procedure for Implementing NEPA (33 C.F.R. Part 230).

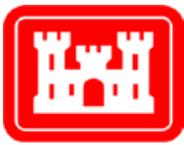
This EA concludes that environmental impacts of the proposed expansion of the existing wastewater treatment plant for the population living in and around the proposed project are minor and local in scope; the benefits of the recommended plan outweigh the minor adverse impacts that would result from its implementation; and the recommended plan does not constitute a major Federal action significantly affecting the quality of the human environment.

Based on the conclusions of this Draft EA, preparation of an EIS is not required. As such, a draft FONSI is presented at the beginning of this document and the recommended plan, as described herein, is expected to be implemented.



7.0 REFERENCES

- Braun, M.L. 1950. Deciduous Forests of Eastern North America. The Blackburn Press. Pp.596.
- Climate and Economic Justice Screening Tool (CEJST). 2024. Explore the Map. Available online: <https://screeningtool.geoplatform.gov/en/#11.07/37.3059/-83.1793>. Accessed 11 August 2024.
- County Health Rankings (CHR). 2024. 2024 County Health Rankings and Roadmaps. Accessed 2 September 2024.
- Drum, R. G., J. Noel, J. Kovatch, L. Yeghiazarian, H. Stone, J. Stark, P. Kirshen, E. Best, E. Emery, J. Trimboli, J. Arnold, and D. Raff (2017), Ohio River Basin–Formulating Climate Change Mitigation/Adaptation Strategies Through Regional Collaboration with the ORB Alliance, May 2017. Civil Works Technical Report, CWTS 2017-01, U.S. Army Corps of Engineers, Institute for Water Resources: Alexandria, VA.
- Jones, R.L. 2005. Plant Life of Kentucky: An Illustrated Guide to the Vascular Flora. University Press of Kentucky. Pp.856.
- Johnson Engineering. 2022. Perry County HWY80 Collection Project, Phase III. Preliminary Engineering Report. 16pp.
- Kentucky Exotic Pest Plant Council (KEPPC). 2013. Exotic Invasive Plants of Kentucky. Available at: <https://www.se-eppc.org/ky/list.htm>.
- Monarch Joint Venture. 2024. Migration. Available online: <https://monarchjointventure.org/monarch-biology/monarch-migration>. Accessed September 2024.
- National Park Service (NPS). 2024. Wild and Scenic River Mapper. Available online via: <https://www.nps.gov/orgs/1912/plan-your-visit.htm>.
- Omerik, J.M.. 1987. Ecoregions of the conterminous United States (map supplement): Annals of the Association of American Geographers, v. 77, no. 1, p. 118-125.
- Runkle, J., K.E. Kunkel, S.M. Champion, R. Frankson, and B.C. Stewart. 2022. Kentucky State Climate Summary 2022. NOAA Technical Report NESDIS 150-KY. NOAA/NESDIS, Silver Spring, MD, 4 pp.
- United States Department of Agriculture (USDA). 2024. Custom Soil Resource Report for Knott and Letcher Counties, Kentucky, and Leslie and Perry Counties, Kentucky. Perry County/HWY 80 Collection Project.
- U.S. Army Corps of Engineers (USACE). 2014. Engineering Manual 385-1-1. “Safety and Health Requirements.” Available at: <https://www.usace.army.mil/Missions/Safety-and-Occupational-Health/Safety-and-Health-Requirements-Manual/>.
- USACE. 2022. Section 531 Southern and Eastern Kentucky Environmental Infrastructure Program. Decision Document: Perry County/Hwy 80 Collection Project Phase III. Unpublished document.



- USACE. 2024a. U.S. Army Corps of Engineers, 2024 – 2027 Climate Adaptation Plan. 111pp. Available online via: <https://safe.menlosecurity.com/doc/docview/viewer/docNAF4835613A146d84a628af5ef0039fde142521d1ae44fea4c5f443634ed8f5416e358dff888c>
- USACE. 2024b. Climate and Resiliency Policy Statement. Available online via: <https://safe.menlosecurity.com/doc/docview/viewer/docNAF4835613A146d84a628af5ef0039fde142521d1ae44fea4c5f443634ed8f5416e358dff888c>
- United States Climate Data. 2024. Available online: Accessed 30 August 2024. Available online via: <https://www.usclimatedata.com/>.
- United States Environmental Protection Agency (USEPA). 2024. How's My Waterway. Available online: <https://mywaterway.epa.gov/community/051002010503/overview>. Accessed 30 August 2024.
- USEPA. 2024b. NEPAassist. Available online: <https://nepassistool.epa.gov/nepassist/nepamap.aspx?wherestr=mount+vernon%2+ky>. Accessed 1 August 2024.
- USEPA. 2024c. Current Nonattainment Counties for All Criteria Pollutants. Available online: https://www3.epa.gov/airquality/greenbook/anayo_ky.html. Accessed 7 September 2024.
- USEPA. 2024d. EJScreen: Environmental Justice Screening and Mapping Tool. Available online: <https://www.epa.gov/ejscreen>.
- United States Fish and Wildlife Service (USFWS). 2006. Fact Sheet Indiana Bat (*Myotis sodalis*). Available online: <https://www.fws.gov/midwest/endangered/mammals/inba/inbafactsht.html>. Accessed 20 August 2024.
- USFWS. 2015. Fact Sheet Northern Long-Eared Bat (*Myotis septentrionalis*). Available online: <https://www.fws.gov/Midwest/endangered/mammals/nleb/nlebFactSheet.html>. Accessed 20 August 2024.
- USFWS. 2022. Kentucky Arrow Darter (*Etheostoma spilotum*). Status Review: Summary and Evaluation, September 2022. 19pp.
- USFWS. 2024a. Information for Planning and Consulting (IPaC). <https://ecos.fws.gov/ipac/>. Accessed 2 September 2024.
- USFWS. 2024b. National Wetland Mapping Tool. Available online: <https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>. Accessed 12 September 2024.
- USFWS. 2024c. The Tricolored Bat (*Perimyotis subflavus*). Species Fact Sheet. Available online via <https://ecos.fws.gov/ecp/species/10515>. Accessed 9 September 2024.
- USFWS. 2024d. The Gray Bat (*Myotis grisescens*). Species Fact Sheet. Available online via: <https://www.fws.gov/species/gray-bat-myotis-grisescens>.
- USFWS 2024e. Monarch Butterfly. Available online: <https://www.fws.gov/species/monarch-butterfly-danaus-plexippus>. Accessed September 2024.



Wiken, E.B., 1986. Terrestrial ecozones of Canada: Ottawa, Ontario, Environment Canada, Ecological Land Classification Series no. 19, 26 p.



Appendix A

Supporting Environmental Materials



ANDY BESHEAR
GOVERNOR

TOURISM, ARTS AND HERITAGE CABINET
KENTUCKY HERITAGE COUNCIL
THE STATE HISTORIC PRESERVATION OFFICE

LINDY CASEBIER
SECRETARY

JACQUELINE COLEMAN
LT. GOVERNOR

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CRAIG A. POTTS
EXECUTIVE DIRECTOR &
STATE HISTORIC PRESERVATION OFFICER

December 18, 2024

Christopher D. Wernick
USACE-Louisville
600 Dr. Martin Luther King, Jr. Place
Louisville, KY 40201
Via email: christopher.d.wernick@usace.army.mil

RE: USACE-L; Covington Levee Repair Project; Kenton County, Kentucky

Dear Mr. Wernick,

Thank you for your submittal of maps and project specifics for the above-referenced undertaking. We understand the U.S. Army Corps of Engineers, Louisville District (USACE-L) proposes repair and rehabilitation of Section C the Covington Levee Flood Project. Proposed project activities include the stabilizing the river-side levee slope by installing a sheet piling wall; replacing the outlet pipe; installing a new headwall and flapgate structure; and either utilizing deep soil mixing or extending the sheet piling wall.

No previously recorded archaeological sites eligible for the National Register of Historic Places (NRHP) are within the proposed project area. Available information indicates the proposed project area has been disturbed by activities unrelated to this undertaking. We have no concerns regarding archaeological resources.

Two districts (Wallace Wood Area Residential Historic District [83002807] and the Austinburg Historic District [86003483]) are listed on the NRHP. Both are outside any visual line of site and will not be affected by the proposed project. Although the Covington Levee Flood Project is potentially eligible for the NRHP, we concur that the proposed actions will not cause an adverse effect due to an existing lack of integrity within Section C.

Our office concurs with your determination of **No Adverse Effect** to Historic Properties for this undertaking.



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In the unlikely event that human remains are found during construction for this project, work should cease immediately, and the county coroner and the Kentucky Heritage Council should be contacted. Should project plans change or should there be any future concerns or questions regarding cultural resources in the vicinity of this project area, please contact Patti Hutchins of my staff at Patricia.Hutchins@ky.gov.

Sincerely,



Craig Potts
Executive Director and
State Historic Preservation Officer

KHC# 242673

CP: peh, mr



An Equal Opportunity Employer M/F/D

Appendix

Supporting Materials

PERRY COUNTY / HIGHWAY 80 SANITARY SEWER COLLECTION LINE

Hazardous, Toxic, and Radioactive Waste (HTRW) Survey Report



TroublesomeCreek
ENVIRONMENTAL AUTHORITY

Prepared By:

PE / RMJE

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July 2024

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EXECUTIVE SUMMARY

PE / RMJE conducted a site investigation and a survey of government documents to discover any known environmental problems relative to the proposed Perry County / Highway 80 Sanitary Sewer Collection Line Project as per the standards of ASTM E1527-13. This project proposes a planned collection of sanitary sewer force mains to serve Perry County and the surrounding counties. This development will include the construction of utilities, and structures needed to facilitate the construction of said sanitary sewer force main lines. The intent of this survey is to discover any existing environmental concerns or conditions that would be an impediment to the project development.

Investigative measures included an open records request for information and search through the obtained records (both internet and file) of:

- The Kentucky Department of Environmental Protection
- The Kentucky Division of Mine Safety
- The Kentucky Division of Mine Permits
- The Kentucky Department of Fish and Wildlife Resources
- The Kentucky Heritage Council
- The U.S. Fish and Wildlife Services
- The U.S. Army Corp of Engineers
- The U.S. Natural Resources Conservation Service
- The Kentucky Division of Water
- The Kentucky Division of Oil and Gas
- The Troublesome Creek Environmental Authority

Interviews With:

- The Perry County Representatives, Perry County EMS Director Jerry Stacey
- Site Investigation by Steve Harris, PE, Ron Johnson, PE, and Bill Campbell, PLS.

Also, included the acquisition of historical mapping, use, and insurance documents from Environmental Data Resources:

Environmental Data Resources, Inc. (EDR), an independent environmental data research company, provided historical records on the subject properties by searching the radius of a point picked near the center of the proposed project area. Information regarding surrounding area properties was requested for the specified minimum search distances and was assumed to be correct and complete unless obviously contradicted by PE / RMJE's observations or other credible referenced sources reviewed during the Environmental Site Assessment. PE / RMJE is not a professional title insurance firm and makes no guarantee, explicit or implied, that any land title records acquired or reviewed, or any physical descriptions or depictions of the site in this report, represent a comprehensive definition or precise delineation of property ownership or boundaries.

Land use within the project area is a mixture of typical rural development infrastructure, housing, and forestland.

Investigation of the state mining database revealed no surface or underground mining activities in the general vicinity of the proposed project site.

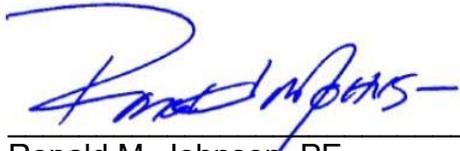
Endangered Species habitats exist in Perry County and the contractor should take preventative measures to ensure against an incidental taking or destruction of habitats. The organisms of primary concern are 3 species of bats. Recommended measures are described in detail in the section on Endangered Species.

Almost any project will require needed permits and authorizations from various government agencies. This project will require at a minimum the following permits from government agencies:

- Kentucky Division of Water (KY DOW) Floodplain Permit
- Kentucky Division of Water (KY DOW) For Sanitary Sewer Expansion and Service
- Kentucky Department of Transportation Cabinet (KYTC) Encroachment Permit for Access from Kentucky State Highway 80

Statement of Environmental Professional

I and employees under my supervision conducted an environmental survey of the proposed Perry County / Highway 80 Sanitary Sewer Collection Line Project. This survey included site inspection, interviews of locals, and a careful search of state government enforcement documents and EDR property and mapping documents. The survey did not discover any elements of the project that would require advanced planning; however, responses from some government agencies are still pending at this time. This report will be amended if agency responses require any advance permitting or planning.



Ronald M. Johnson, PE
PE / RMJE



1.0

INTRODUCTION

1.1 Purpose

1.2 Scope of Work

1.3 Terms and Conditions

1.4 Assumptions Limitations and Exceptions

1.5 Methodology and Means

INTRODUCTION

PE / RMJE was retained to conduct a Hazardous, Toxic, and Radioactive Waste Survey Report for a new collection of sanitary sewer force main lines, and associated structures in Perry County, Kentucky.

Troublesome Creek Environmental Authority

Knowing the importance and positive impacts that this project will provide to this region, this project includes the committed participation by Perry County, and Troublesome Creek Environmental Authority. Perry County will own and maintain the new collection of sanitary sewer force main lines, and their associated structures.

1.1 Purpose

The purpose of this HTRW was to document current and historical information on the subject property and surrounding areas in order to identify recognized environmental conditions (REC's), defined in ASTM E1527-13 as the presence or likely presence of any hazardous substances or petroleum products in, on, or at the property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

The term is not intended to include de *minimis* conditions, defined in ASTM E1527-13 as a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de *minimis* neither are recognized environmental conditions nor controlled recognized environmental conditions.

The term historical recognized environmental conditions (HERC), is defined by ASTM E1527-13 as a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority (as evidenced by the issuance of a no further action letter or other equivalent closure documentation) or meeting unrestricted use criteria established by a regulatory authority, without

subjecting the property to any required controls (e.g., property use restriction, activity and use limitations, institutional controls, or engineering controls).

The term controlled recognized environmental condition (CERC), is defined by ASTM E1527-13 as an REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to implementation of required controls (e.g., property use restrictions, activity and use limitations, institutional controls, or engineering controls).

1.2 Scope of Work

This HTRW was conducted utilizing standard practices consistent with ASTM E1527-13. Any significant scope-of-work additions, deletions or derivations of ASTM E1527-13 are noted below or in the corresponding sections of the report. The scope of work for this ESA included an evaluation of the following.

- General Physical Setting Characteristics of the subject property and immediate vicinity through a review of one or more referenced sources, including topographic and geological maps, soils, and hydrologic reports.
- Historical usage of the subject property, adjoining properties, and surrounding area through a review of reasonably ascertainable sources such as land title records, fire insurance maps, city directories, aerial photographs, property tax files, prior environmental assessment reports, and interviews.
- Current land use and existing conditions of the subject property including observations and interviews regarding the use, treatment storage, disposal or generation of hazardous substances, petroleum products and hazardous, regulated, or medical wastes; equipment that is known or likely to contain PCBs; storage tanks and drums; wells, drains and sumps; and pits, ponds, or lagoons.
- Current land use of adjoining and surrounding area properties and the likelihood of known or suspected releases of hazardous substances or petroleum products to impact the subject property.
- Environmental regulatory database information and local environmental records within specified minimum search distances

Unless otherwise identified in the report, the scope of work for this HTRW did not include a consideration of the following potential environmental conditions that are outside the scope of ASTM Practice E1527-13 standards, including but not limited

to: asbestos-containing building materials, biological agents, cultural and historic resources, ecological resources, health and safety, indoor air quality (unrelated to releases of hazardous substances or petroleum products into the environment), industrial hygiene, lead-based paint, lead in drinking water, mold, radon, regulatory compliance, and wetlands.

1.3 Terms and Conditions

This HTRW was performed on behalf of, and solely for the exclusive use of, the Client. No other company, entity, or person shall have any rights with regards to PE / RMJE's contact with Client including but not limited to indemnification by PE / RMJE, or any rights of reliance on the findings, conclusions, and recommendations of this or any subsequent reports regarding the subject property.

In accordance with ASTM E1527-13 provisions, this report is presumed to be valid for up to one year prior to the date of acquisition or transaction of the property. This presumption assumes that the following components of the report are updated within 180 days prior to the intended date of acquisition or transaction of the property: interviews, environmental lien search, government records reviews, visual inspection of the property and surrounding properties, and declaration by the environmental professional.

1.4 Assumptions, Limitations and Exceptions

This HTRW was prepared in accordance with the scope and limitations of ASTM's *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E1527-13), recognized by the U.S. Environmental Protection Agency (USEPA) as compliant with *Standards and Practices for All Appropriate Inquiries* (AAI) promulgated at 40 CFR Part 312.

This HTRW survey has been prepared to assess the property with respect to hazardous substances defined in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601), and petroleum products. As such, this assessment is intended to permit the Client to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability: that is, the practices that constitute "all appropriate inquiry into the previous ownership and uses of the subject property consistent with good commercial practice" as defined in 42 USC §9601 (35)(B).

PE / RMJE conducted this HTRW using reasonable efforts to identify recognized environmental conditions on the subject property. Findings within this report are based on the information obtained during the site reconnaissance, the electric regulatory file review, a review of historical records, interviews, and from reasonably ascertainable and publicly available information obtained from public agencies and other referenced sources. The presence of recognized environmental conditions on a site may not always be apparent, and therefore, PE / RMJE cannot provide a guarantee that recognized environmental conditions do not exist in connection with a site.

This report is not definitive and should not be assumed to be a complete or specific determination of all conditions above or below grade. Current subsurface conditions may differ from the conditions indicated by surface observations or historical sources and can be most reliably evaluated through intrusive techniques that were beyond the scope of this HTRW. Information in this report is not intended for use as a construction document and should not be used for demolition, renovation, or other construction purposes. PE / RMJE makes no representation or warranty that the past or current operations at the site are, or have been, in compliance with applicable federal, state, and local laws, regulations and codes.

1.5 Methodology and Means

Information for this report was gathered through the following methods:

1. An open records request for information and search through obtained records

(both internet and file) of:

- The Kentucky Department of Environmental protection
- The Kentucky Division of Mine Safety
- The Kentucky Division of Mine Permits
- The Kentucky Department of Fish and Wildlife Resources
- The Kentucky Heritage Council
- The US Fish and Wildlife Services
- The US Army Corp of Engineers
- The US National Resources Conservation Service
- The Kentucky Division of Water
- The Kentucky Division of Oil and Gas

2. Site investigation by PE / RMJE Principal Engineer Ron Johnson, PE.

3. Interviews with:

- Perry County Officials
- PE / RMJE Personnel

4. The acquisition of historical mapping, use, and insurance documents from Environmental Data Resources.

Environmental Data Resources, Inc. (EDR), an independent environmental data research company, provided historical records on the subject properties by searching the radius of two points picked (one northern and one southern) along the route of the proposed pipeline. The search radius of the two points encompassed the entire projected line of the route with some overlap in the center. Information regarding surrounding area properties was requested for the specified minimum search distances and was assumed to be correct and complete unless obviously contradicted by PE / RMJE's observations or other credible referenced sources reviewed during the HTRW. PE / RMJE is not a professional title insurance firm and makes no guarantee, explicit or implied, that any land title records acquired or reviewed, or any physical descriptions or depictions of the site in this report, represent a comprehensive definition or precise delineation of property ownership or boundaries.

2.0

LANDUSE AND TOPOGRAPHY

2.0 LAND USE

The Land use, both current and historic were investigated via a walk of the site as well as an investigation of EDR records. Land use of the site on and in the vicinity of the proposed sanitary sewer force main included: forest areas, residential, utilities (water line, gas line, and electrical transmission lines, and some commercial use (gas station, storage buildings, business, etc.). There was no evidence of underground storage tanks, or other existing structures that would cause difficulty with the installation of the proposed force main line.

Environmental Data Resources, Inc. (EDR), an independent environmental data research company, provided historical records on the subject properties by searching the radius of a point picked near the center of the project area. Information regarding surrounding area properties was requested for the specified minimum search distances and was assumed to be correct and complete unless obviously contradicted by PE / RMJE's observations or other credible referenced sources reviewed during the ESA. PE / RMJE is not a professional title insurance firm and makes no guarantee, explicit or implied, that any land title records acquired or reviewed, or any physical descriptions or depictions of the site in this report, represent a comprehensive definition or precise delineation of property ownership or boundaries.

Attached to the appendix of this document are the various EDR reports of the properties surrounding the proposed sanitary sewer force main location.

3.0
SOILS

3.0 SOILS

The US Natural Resources Conservation Service (NRCS) was contacted for advice concerning the disturbance of primer farmland and agricultural soils within the proposed project area. Attached is the generated soil report from the service.



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Knott and Letcher Counties, Kentucky, and Leslie and Perry Counties, Kentucky

23-01-073



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:27,500 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Knott and Letcher Counties, Kentucky
 Survey Area Data: Version 19, Sep 10, 2023

Soil Survey Area: Leslie and Perry Counties, Kentucky
 Survey Area Data: Version 20, Sep 10, 2023

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 9, 2016—Sep 15, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CkF	Cloverlick-Kimper-Highsplint complex, 30 to 65 percent slopes, very stony	14.0	1.7%
DrF	Dekalb-Gilpin-Rayne complex, 25 to 65 percent slopes, very rocky	3.5	0.4%
KfF	Kaymine, Fairpoint, and Fiveblock soils, benched, 2 to 70 percent slopes, very stony	27.8	3.4%
uShgF	Shelocta-Highsplint-Gilpin complex, 20 to 70 percent slopes, very stony	6.5	0.8%
uUdoC	Udorthents-Urban land complex, 0 to 15 percent slopes	27.6	3.3%
uUduE	Udorthents-Urban land-Rock outcrop complex, 0 to 35 percent slopes	10.3	1.3%
Subtotals for Soil Survey Area		89.8	10.9%
Totals for Area of Interest		825.2	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DLF	Matewan-Marrowbone-Latham complex, 20 to 80 percent slopes, very rocky	28.4	3.4%
FaB	Fairpoint soils, undulating	12.7	1.5%
FaF	Fairpoint and Bethesda soils, 2 to 70 percent slopes, benched, stony	114.6	13.9%
SCF	Shelocta-Cutshin-Gilpin complex, 20 to 75 percent slopes, very stony	112.8	13.7%
uShgF	Shelocta-Highsplint-Gilpin complex, 20 to 70 percent slopes, very stony	148.3	18.0%
uUdoC	Udorthents-Urban land complex, 0 to 15 percent slopes	93.1	11.3%
uUdoD	Udorthents-Urban land complex, 15 to 35 percent slopes	17.6	2.1%
uUdrB	Udorthents-Urban land-Grigsby complex, 0 to 6 percent slopes, occasionally flooded	1.4	0.2%

Custom Soil Resource Report

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
uUduE	Udorthents-Urban land-Rock outcrop complex, 0 to 35 percent slopes	202.1	24.5%
W	Water	4.3	0.5%
Subtotals for Soil Survey Area		735.4	89.1%
Totals for Area of Interest		825.2	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Knott and Letcher Counties, Kentucky

CkF—Cloverlick-Kimper-Highsplint complex, 30 to 65 percent slopes, very stony

Map Unit Setting

National map unit symbol: lh2b
Elevation: 800 to 1,800 feet
Mean annual precipitation: 28 to 47 inches
Mean annual air temperature: 42 to 67 degrees F
Frost-free period: 159 to 199 days
Farmland classification: Not prime farmland

Map Unit Composition

Cloverlick and similar soils: 31 percent
Kimper and similar soils: 29 percent
Highsplint and similar soils: 20 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cloverlick

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy skeletal colluvium derived from sandstone and shale

Typical profile

H1 - 0 to 9 inches: channery loam
H2 - 9 to 35 inches: very channery loam
H3 - 35 to 80 inches: very channery loam

Properties and qualities

Slope: 30 to 65 percent
Surface area covered with cobbles, stones or boulders: 2.8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Kimper

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Fine-loamy colluvium derived from sandstone and shale

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 62 inches: silt loam
H3 - 62 to 80 inches: very channery loam

Properties and qualities

Slope: 30 to 65 percent
Surface area covered with cobbles, stones or boulders: 2.8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Highsplint

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal colluvium derived from sandstone and shale

Typical profile

H1 - 0 to 9 inches: channery silt loam
H2 - 9 to 55 inches: very channery silt loam
H3 - 55 to 80 inches: very channery silt loam

Properties and qualities

Slope: 30 to 65 percent
Surface area covered with cobbles, stones or boulders: 2.8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium

Hydric soil rating: No

Minor Components

Shelocta

Percent of map unit: 7 percent

Hydric soil rating: No

Gilpin

Percent of map unit: 6 percent

Hydric soil rating: No

Feds creek

Percent of map unit: 3 percent

Hydric soil rating: No

Grigsby

Percent of map unit: 2 percent

Landform: Flood plains

Hydric soil rating: No

Summers

Percent of map unit: 2 percent

Hydric soil rating: No

DrF—DeKalb-Gilpin-Rayne complex, 25 to 65 percent slopes, very rocky

Map Unit Setting

National map unit symbol: lh2g

Elevation: 1,600 to 2,200 feet

Mean annual precipitation: 28 to 47 inches

Mean annual air temperature: 42 to 67 degrees F

Frost-free period: 159 to 199 days

Farmland classification: Not prime farmland

Map Unit Composition

DeKalb and similar soils: 40 percent

Custom Soil Resource Report

Rayne and similar soils: 20 percent

Gilpin and similar soils: 20 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dekalb

Setting

Landform: Ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy skeletal residuum weathered from sandstone

Typical profile

H1 - 0 to 2 inches: channery sandy loam

H2 - 2 to 25 inches: very channery sandy loam

R - 25 to 35 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 65 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: A

Ecological site: F125XY001WV - Sandstone Residuum

Hydric soil rating: No

Description of Rayne

Setting

Landform: Ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Fine-loamy residuum weathered from shale and siltstone

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 30 inches: silty clay loam

H3 - 30 to 40 inches: channery silty clay loam

Cr - 40 to 46 inches: weathered bedrock

R - 46 to 56 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 65 percent

Custom Soil Resource Report

Depth to restrictive feature: 40 to 60 inches to lithic bedrock; 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY003WV - Interbedded Sedimentary Uplands
Hydric soil rating: No

Description of Gilpin

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-loamy residuum weathered from sandstone and siltstone

Typical profile

H1 - 0 to 2 inches: loam
H2 - 2 to 28 inches: silty clay loam
H3 - 28 to 34 inches: very channery silt loam
R - 34 to 44 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 65 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F125XY003WV - Interbedded Sedimentary Uplands
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 5 percent

Custom Soil Resource Report

Hydric soil rating: No

Ramsey

Percent of map unit: 5 percent

Hydric soil rating: No

Summers

Percent of map unit: 4 percent

Hydric soil rating: No

Feds creek

Percent of map unit: 3 percent

Hydric soil rating: No

Jefferson

Percent of map unit: 3 percent

Hydric soil rating: No

KfF—Kaymine, Fairpoint, and Fiveblock soils, benched, 2 to 70 percent slopes, very stony

Map Unit Setting

National map unit symbol: lh2w

Elevation: 800 to 3,800 feet

Mean annual precipitation: 28 to 47 inches

Mean annual air temperature: 42 to 67 degrees F

Frost-free period: 159 to 199 days

Farmland classification: Not prime farmland

Map Unit Composition

Kaymine, unstable fill, and similar soils: 40 percent

Fairpoint, unstable fill, and similar soils: 20 percent

Fiveblock, unstable fill, and similar soils: 15 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kaymine, Unstable Fill

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy coal extraction mine spoil derived from interbedded sedimentary rock

Typical profile

H1 - 0 to 14 inches: channery silt loam

Custom Soil Resource Report

H2 - 14 to 80 inches: very channery silt loam

Properties and qualities

Slope: 2 to 70 percent

Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Hydric soil rating: No

Description of Fairpoint, Unstable Fill

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy coal extraction mine spoil derived from interbedded sedimentary rock

Typical profile

H1 - 0 to 4 inches: channery silty clay loam

H2 - 4 to 72 inches: very channery silty clay loam

Properties and qualities

Slope: 2 to 70 percent

Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Fiveblock, Unstable Fill

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy coal extraction mine spoil derived from interbedded sedimentary rock

Typical profile

H1 - 0 to 14 inches: channery sandy loam

H2 - 14 to 65 inches: very channery sandy loam

Properties and qualities

Slope: 2 to 70 percent

Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Cedarcreek, unstable fill

Percent of map unit: 8 percent

Hydric soil rating: No

Bethesda, unstable fill

Percent of map unit: 7 percent

Hydric soil rating: No

Shelocta

Percent of map unit: 3 percent

Hydric soil rating: No

Sewell, unstable fill

Percent of map unit: 3 percent

Hydric soil rating: No

Udorthents, unstable fill

Percent of map unit: 2 percent

Hydric soil rating: No

Itmann, unstable fill

Percent of map unit: 2 percent

Hydric soil rating: No

uShgF—Shelocta-Highsplint-Gilpin complex, 20 to 70 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2x5k0
Elevation: 680 to 2,680 feet
Mean annual precipitation: 28 to 58 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 147 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Shelocta, very stony, and similar soils: 50 percent
Highsplint, very stony, and similar soils: 20 percent
Gilpin, very stony, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shelocta, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Fine-loamy colluvium derived from sandstone and shale

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: silt loam
BA - 3 to 7 inches: loam
Bt1 - 7 to 23 inches: channery silt loam
2Bt2 - 23 to 34 inches: channery silt loam
2Bt3 - 34 to 45 inches: very channery silt loam
2C - 45 to 59 inches: very parachannery silt loam
2Cr - 59 to 69 inches: bedrock

Properties and qualities

Slope: 20 to 70 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 48 to 65 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Highsplint, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy-skeletal fine-loamy colluvium derived from sandstone and shale

Typical profile

Oi - 0 to 1 inches: very channery slightly decomposed plant material
A - 1 to 4 inches: very channery silt loam
BA - 4 to 11 inches: very channery silt loam
Bw1 - 11 to 28 inches: very channery clay loam
Bw2 - 28 to 48 inches: very channery loam
BC - 48 to 85 inches: very channery loam

Properties and qualities

Slope: 20 to 70 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Gilpin, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Head slope

Custom Soil Resource Report

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Fine-loamy residuum weathered from sandstone and shale

Typical profile

O_i - 0 to 1 inches: channery slightly decomposed plant material

A - 1 to 5 inches: channery silt loam

Bt₁ - 5 to 11 inches: channery silt loam

Bt₂ - 11 to 20 inches: channery silt loam

Bt₃ - 20 to 28 inches: channery loam

R - 28 to 38 inches: bedrock

Properties and qualities

Slope: 20 to 70 percent

Surface area covered with cobbles, stones or boulders: 1.0 percent

Depth to restrictive feature: 24 to 40 inches to lithic bedrock

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (K_{sat}): Very low to moderately low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: C

Ecological site: F125XY003WV - Interbedded Sedimentary Uplands

Hydric soil rating: No

Minor Components

Marrowbone, very stony

Percent of map unit: 6 percent

Landform: Hillslopes

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Nose slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Fedscreek, very stony

Percent of map unit: 4 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Ramsey, very stony

Percent of map unit: 3 percent

Landform: Hillslopes

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Nose slope

Custom Soil Resource Report

Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent

uUdoC—Udorthents-Urban land complex, 0 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2qdmg
Elevation: 700 to 2,100 feet
Mean annual precipitation: 28 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 156 to 222 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 55 percent
Urban land: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Mountainbase
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

A/Cp - 0 to 6 inches: very channery silt loam
C1 - 6 to 18 inches: very channery silt loam
C2 - 18 to 30 inches: very channery silt loam
C3 - 30 to 42 inches: very channery silt loam
2C4 - 42 to 80 inches: extremely channery silt loam

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Mountain slopes

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Gilpin

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Cutshin

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Convex
Hydric soil rating: No

Shelocta

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

uUduE—Udorthents-Urban land-Rock outcrop complex, 0 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2mff5
Elevation: 700 to 2,100 feet
Mean annual precipitation: 28 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 156 to 222 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 50 percent
Urban land: 25 percent
Rock outcrop: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

Ap - 0 to 5 inches: extremely parachannery silt loam
C1 - 5 to 30 inches: extremely parachannery silt loam
C2 - 30 to 60 inches: extremely parachannery silt loam
C3 - 60 to 79 inches: extremely parachannery silt loam

Properties and qualities

Slope: 0 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Mountain slopes

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Free face
Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Shelocta

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Cutshin

Percent of map unit: 3 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Gilpin

Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Custom Soil Resource Report

Leslie and Perry Counties, Kentucky

DLF—Matewan-Marrowbone-Latham complex, 20 to 80 percent slopes, very rocky

Map Unit Setting

National map unit symbol: 2tqh8
Elevation: 700 to 2,400 feet
Mean annual precipitation: 37 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 155 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Matewan, very stony, and similar soils: 30 percent
Marrowbone, very stony, and similar soils: 25 percent
Latham, very stony, and similar soils: 15 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Matewan, Very Stony

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy-skeletal residuum weathered from sandstone

Typical profile

O_i - 0 to 1 inches: channery slightly decomposed plant material
A - 1 to 3 inches: channery fine sandy loam
BA - 3 to 7 inches: channery fine sandy loam
Bw₁ - 7 to 21 inches: very channery fine sandy loam
Bw₂ - 21 to 28 inches: extremely channery fine sandy loam
R - 28 to 37 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 24 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (K_{sat}): Very low to moderately low (0.00 to 0.01 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e

Custom Soil Resource Report

Hydrologic Soil Group: A

Ecological site: F125XY003WV - Interbedded Sedimentary Uplands

Hydric soil rating: No

Description of Marrowbone, Very Stony

Setting

Landform: Ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Coarse-loamy residuum weathered from sandstone

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material

A - 1 to 5 inches: fine sandy loam

B_{w1} - 5 to 10 inches: loam

B_{w2} - 10 to 17 inches: fine sandy loam

B_{w3} - 17 to 23 inches: loam

BC - 23 to 28 inches: channery loam

R - 28 to 38 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent

Surface area covered with cobbles, stones or boulders: 1.0 percent

Depth to restrictive feature: 24 to 32 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (K_{sat}): Very low to moderately low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: F125XY003WV - Interbedded Sedimentary Uplands

Hydric soil rating: No

Description of Latham, Very Stony

Setting

Landform: Ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex

Across-slope shape: Concave

Parent material: Clayey residuum weathered from shale and siltstone

Typical profile

O_i - 0 to 1 inches: channery slightly decomposed plant material

A - 1 to 2 inches: silt loam

BA - 2 to 6 inches: silty clay loam

Bt - 6 to 20 inches: silty clay

Custom Soil Resource Report

BC - 20 to 25 inches: silty clay loam
Cr - 25 to 36 inches: bedrock
R - 36 to 46 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 24 to 34 inches to paralithic bedrock; 34 to 45 inches to lithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C/D
Ecological site: F125XY003WV - Interbedded Sedimentary Uplands
Hydric soil rating: No

Minor Components

Gilpin, very stony

Percent of map unit: 10 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Shelocta, very stony

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex, concave
Across-slope shape: Linear
Hydric soil rating: No

Fedscreek, very stony

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent

Ramsey, very stony

Percent of map unit: 3 percent

Custom Soil Resource Report

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

FaB—Fairpoint soils, undulating

Map Unit Setting

National map unit symbol: ljk2
Elevation: 820 to 2,460 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 42 to 67 degrees F
Frost-free period: 156 to 196 days
Farmland classification: Not prime farmland

Map Unit Composition

Fairpoint, unstable fill, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fairpoint, Unstable Fill

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal coal extraction mine spoil derived from interbedded sedimentary rock

Typical profile

H1 - 0 to 6 inches: very channery silt loam
H2 - 6 to 62 inches: very channery silt loam

Properties and qualities

Slope: 0 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Shelocta

Percent of map unit: 4 percent

Hydric soil rating: No

Cutshin

Percent of map unit: 4 percent

Hydric soil rating: No

Dekalb

Percent of map unit: 4 percent

Hydric soil rating: No

Gilpin

Percent of map unit: 3 percent

Hydric soil rating: No

FaF—Fairpoint and Bethesda soils, 2 to 70 percent slopes, benched, stony

Map Unit Setting

National map unit symbol: 2tqhd

Elevation: 720 to 1,510 feet

Mean annual precipitation: 45 to 57 inches

Mean annual air temperature: 43 to 68 degrees F

Frost-free period: 169 to 203 days

Farmland classification: Not prime farmland

Map Unit Composition

Fairpoint, unstable fill, and similar soils: 55 percent

Bethesda, unstable fill, and similar soils: 30 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fairpoint, Unstable Fill

Setting

Landform: Mountain slopes

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy-skeletal coal extraction mine spoil derived from sandstone and shale

Custom Soil Resource Report

Typical profile

Ap - 0 to 11 inches: channery loam
C1 - 11 to 32 inches: very channery loam
C2 - 32 to 41 inches: extremely channery loam
C3 - 41 to 51 inches: extremely flaggy loam
C4 - 51 to 58 inches: extremely flaggy silt loam
C5 - 58 to 72 inches: extremely flaggy loam

Properties and qualities

Slope: 2 to 70 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Bethesda, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy-skeletal coal extraction mine spoil derived from sandstone and shale

Typical profile

Ap - 0 to 12 inches: channery silt loam
C1 - 12 to 36 inches: very channery loam
C2 - 36 to 58 inches: very channery loam
C3 - 58 to 72 inches: very channery loam

Properties and qualities

Slope: 2 to 70 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s

Custom Soil Resource Report

Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Udorthents, unstable fill

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Shelocta, very stony

Percent of map unit: 3 percent
Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Matewan, very stony

Percent of map unit: 3 percent
Landform: Ridges
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Urban land

Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Dumps, mine (tailings & tipples)

Percent of map unit: 2 percent
Landform: Ridges
Landform position (three-dimensional): Mountaintop
Down-slope shape: Linear
Across-slope shape: Convex, linear
Hydric soil rating: No

SCF—Shelocta-Cutshin-Gilpin complex, 20 to 75 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2tqhb

Custom Soil Resource Report

Elevation: 680 to 2,400 feet
Mean annual precipitation: 40 to 54 inches
Mean annual air temperature: 42 to 69 degrees F
Frost-free period: 147 to 196 days
Farmland classification: Not prime farmland

Map Unit Composition

Shelocta, very stony, and similar soils: 35 percent
Cutshin, very stony, and similar soils: 25 percent
Gilpin, very stony, and similar soils: 15 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shelocta, Very Stony

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Fine-loamy colluvium derived from sandstone and shale over clayey residuum weathered from shale and siltstone

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: silt loam
BA - 3 to 7 inches: loam
Bt₁ - 7 to 23 inches: channery silt loam
2Bt₂ - 23 to 34 inches: channery silt loam
2Bt₃ - 34 to 45 inches: very channery silt loam
2C - 45 to 59 inches: very parachannery silt loam
2Cr - 59 to 69 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 48 to 65 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (K_{sat}): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY001WV - Sandstone Residuum
Hydric soil rating: No

Description of Cutshin, Very Stony

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope

Custom Soil Resource Report

Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Fine-loamy colluvium derived from sandstone and shale

Typical profile

Oi - 0 to 2 inches: very channery slightly decomposed plant material
A - 2 to 10 inches: very channery loam
AB - 10 to 19 inches: channery loam
Bw1 - 19 to 30 inches: channery loam
Bw2 - 30 to 50 inches: channery loam
Cr - 50 to 60 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: F125XY001WV - Sandstone Residuum
Hydric soil rating: No

Description of Gilpin, Very Stony

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-loamy residuum weathered from sandstone and shale

Typical profile

Oi - 0 to 1 inches: channery slightly decomposed plant material
A - 1 to 5 inches: channery silt loam
Bt1 - 5 to 11 inches: channery silt loam
Bt2 - 11 to 20 inches: channery silt loam
Bt3 - 20 to 28 inches: channery loam
R - 28 to 38 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 24 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F125XY001WV - Sandstone Residuum
Hydric soil rating: No

Minor Components

Cloverlick, very stony

Percent of map unit: 8 percent
Landform: Mountain slopes
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Marrowbone, very stony

Percent of map unit: 7 percent
Landform: Mountain slopes
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Highsplint, very stony

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Sequoia, very stony

Percent of map unit: 3 percent
Landform: Mountain slopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent

uShgF—Shelocta-Highsplint-Gilpin complex, 20 to 70 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2x5k0
Elevation: 680 to 2,680 feet
Mean annual precipitation: 28 to 58 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 147 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Shelocta, very stony, and similar soils: 50 percent
Highsplint, very stony, and similar soils: 20 percent
Gilpin, very stony, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shelocta, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Fine-loamy colluvium derived from sandstone and shale

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: silt loam
BA - 3 to 7 inches: loam
Bt₁ - 7 to 23 inches: channery silt loam
2Bt₂ - 23 to 34 inches: channery silt loam
2Bt₃ - 34 to 45 inches: very channery silt loam
2C - 45 to 59 inches: very parachannery silt loam
2Cr - 59 to 69 inches: bedrock

Properties and qualities

Slope: 20 to 70 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 48 to 65 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (K_{sat}): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Highsplint, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy-skeletal fine-loamy colluvium derived from sandstone and shale

Typical profile

Oi - 0 to 1 inches: very channery slightly decomposed plant material
A - 1 to 4 inches: very channery silt loam
BA - 4 to 11 inches: very channery silt loam
Bw1 - 11 to 28 inches: very channery clay loam
Bw2 - 28 to 48 inches: very channery loam
BC - 48 to 85 inches: very channery loam

Properties and qualities

Slope: 20 to 70 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Gilpin, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Head slope
Down-slope shape: Convex

Custom Soil Resource Report

Across-slope shape: Linear

Parent material: Fine-loamy residuum weathered from sandstone and shale

Typical profile

Oi - 0 to 1 inches: channery slightly decomposed plant material

A - 1 to 5 inches: channery silt loam

Bt1 - 5 to 11 inches: channery silt loam

Bt2 - 11 to 20 inches: channery silt loam

Bt3 - 20 to 28 inches: channery loam

R - 28 to 38 inches: bedrock

Properties and qualities

Slope: 20 to 70 percent

Surface area covered with cobbles, stones or boulders: 1.0 percent

Depth to restrictive feature: 24 to 40 inches to lithic bedrock

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: C

Ecological site: F125XY003WV - Interbedded Sedimentary Uplands

Hydric soil rating: No

Minor Components

Marrowbone, very stony

Percent of map unit: 6 percent

Landform: Hillslopes

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Nose slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Fedscreek, very stony

Percent of map unit: 4 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Ramsey, very stony

Percent of map unit: 3 percent

Landform: Hillslopes

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Nose slope

Down-slope shape: Convex

Custom Soil Resource Report

Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent

uUdoC—Udorthents-Urban land complex, 0 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2qdmg
Elevation: 700 to 2,100 feet
Mean annual precipitation: 28 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 156 to 222 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 55 percent
Urban land: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Mountainbase
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

A/Cp - 0 to 6 inches: very channery silt loam
C1 - 6 to 18 inches: very channery silt loam
C2 - 18 to 30 inches: very channery silt loam
C3 - 30 to 42 inches: very channery silt loam
2C4 - 42 to 80 inches: extremely channery silt loam

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Custom Soil Resource Report

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Urban Land

Setting

Landform: Mountain slopes

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Gilpin

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Cutshin

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Convex

Hydric soil rating: No

Shelocta

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

uUdoD—Udorthents-Urban land complex, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2mff6
Elevation: 700 to 2,100 feet
Mean annual precipitation: 28 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 143 to 222 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 55 percent
Urban land: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

A/Cp - 0 to 6 inches: very channery silt loam
C1 - 6 to 18 inches: very channery silt loam
C2 - 18 to 30 inches: very channery silt loam
C3 - 30 to 42 inches: very channery silt loam
2C4 - 42 to 80 inches: extremely channery silt loam

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C

Custom Soil Resource Report

Hydric soil rating: No

Description of Urban Land

Setting

Landform: Mountain slopes

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Shelocta

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Gilpin

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Cutshin

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: No

uUdrB—Udorthents-Urban land-Grigsby complex, 0 to 6 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 2mff7

Elevation: 700 to 1,400 feet

Mean annual precipitation: 28 to 54 inches

Mean annual air temperature: 42 to 68 degrees F

Frost-free period: 156 to 222 days

Custom Soil Resource Report

Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 40 percent

Urban land, occasionally flooded: 35 percent

Grigsby, occasionally flooded, and similar soils: 15 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

Ap - 0 to 5 inches: very channery silt loam

C1 - 5 to 22 inches: very channery silt loam

C2 - 22 to 35 inches: very channery silt loam

C3 - 35 to 52 inches: channery loam

C4 - 52 to 64 inches: channery loam

2C5 - 64 to 80 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 0 to 6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: Occasional

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Urban Land, Occasionally Flooded

Setting

Landform: Flood plains

Properties and qualities

Slope: 0 to 6 percent

Frequency of flooding: Occasional

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Description of Grigsby, Occasionally Flooded

Setting

Landform: Flood plains
Landform position (two-dimensional): Toeslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy alluvium derived from sedimentary rock

Typical profile

Ap - 0 to 6 inches: loam
Bw1 - 6 to 14 inches: loam
Bw2 - 14 to 30 inches: sandy loam
C1 - 30 to 45 inches: stratified loam to sand
C2 - 45 to 62 inches: stratified sand to loam
C3 - 62 to 80 inches: stratified gravelly sand to loamy sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: About 42 to 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F125XY004WV - Floodplain Alluvium
Hydric soil rating: No

Minor Components

Rowdy, occasionally flooded

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Yeager, frequently flooded

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

uUduE—Udorthents-Urban land-Rock outcrop complex, 0 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2mff5
Elevation: 700 to 2,100 feet
Mean annual precipitation: 28 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 156 to 222 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 50 percent
Urban land: 25 percent
Rock outcrop: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

Ap - 0 to 5 inches: extremely parachannery silt loam
C1 - 5 to 30 inches: extremely parachannery silt loam
C2 - 30 to 60 inches: extremely parachannery silt loam
C3 - 60 to 79 inches: extremely parachannery silt loam

Properties and qualities

Slope: 0 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Mountain slopes

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Free face
Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Shelocta

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Cutshin

Percent of map unit: 3 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Gilpin

Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

W—Water

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

4.0
MINING

4.0 MINING

Investigation of the state mining database did not reveal mining activities in the general vicinity of the proposed site.

No underground mine areas underlying the proposed site were discovered during our investigation.

5.0

HISTORICAL AND ARCHAEOLOGICAL CONCERNS

5.0 HISTORICAL AND ARCHAEOLOGICAL CONCERNS

Based on review of the EDR records and site investigation of the property there's no evidence of historic or cultural resources found on the subject property.

6.0

ENDANGERED AND PROTECTED SPECIES

6.0 ENDANGERED SPECIES

There are several laws that require protection of certain animal and plant species. These laws include: The Endangered Species Act (ESA), The Migratory Bird Treaty Act (MBTA), and The Bald and Golden Eagle Protection Act (BGEPA). These laws require protection of designated species from both actual and incidental takings including destruction of habitat. The primary agency that regulates these laws is the US Fish and Wildlife Service.

The US Fish and Wildlife Service (USFWS) maintains the IPAC website which provides a list of all threatened species and endangered species in a described project area. Use of this website produces a list of species that require protection. What follows is a discussion of all species requiring protection and a discussion of means of accomplishing required best management practices to protect them. The report generated by the website is included in Appendix 10.7.

Bats

The project area is in potential habitat area for 3 species of endangered bats: the Gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), and the Northern Long-Eared Bat (*Myotis septentrionalis*). While there are no identified roosts of any bats in the project, the project does lie in a known Summer 1 Habitat for the Northern Long Eared Bat.

A developer can protect themselves from incidental takings through application of the final 4(d) rule and compensatory mitigation measures. Mitigation includes payments based on tree canopy to the Kentucky Natural Land Trust through a USFWS reviewed application process.

Fishes

The project area is in a potential habit area for the Kentucky Arrow Darter (*Etheostoma spilotum*). General guidelines for this species are included in Appendix 10.7

Insects

The project area is in a potential habitat area for the Monarch Butterfly (*Danaus plexippus*), however no critical habitat has been designated for this species.

General Project Design Guidelines (4 Species)

Generated January 29, 2024 08:24 PM UTC, IPaC v6.103.0-rc1

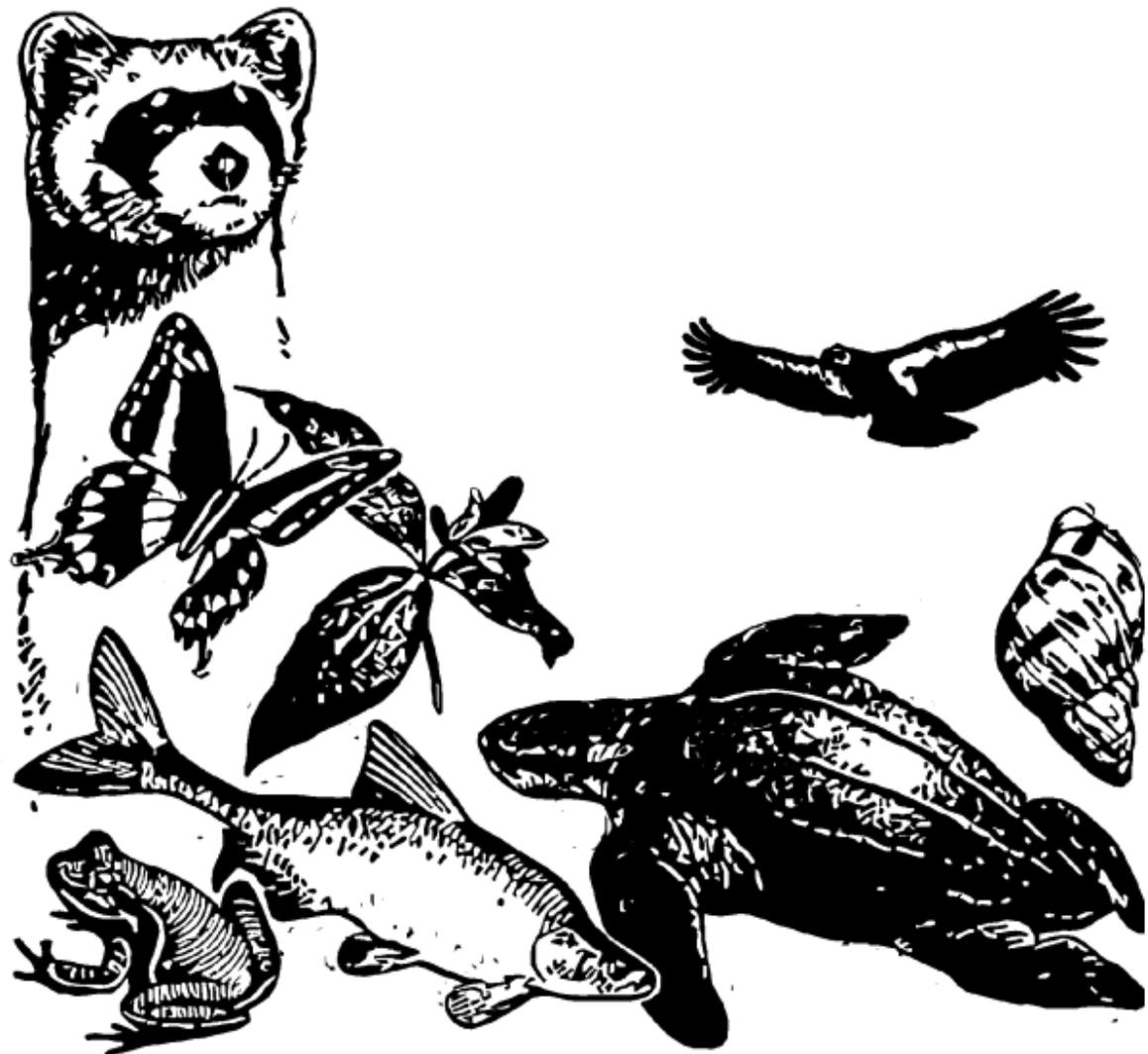


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Species Document Availability

Species with general design guidelines

Gray Bat *Myotis grisescens*

Indiana Bat *Myotis sodalis*

Kentucky Arrow Darter *Etheostoma spilotum*

Northern Long-eared Bat *Myotis septentrionalis*

Species without general design guidelines available

Monarch Butterfly *Danaus plexippus*

General Project Design Guidelines - Indiana Bat and 4 more species

Published by Kentucky Ecological Services Field Office for the following species included in your project

Indiana Bat *Myotis sodalis*

Kentucky Arrow Darter *Etheostoma spilotum*

Gray Bat *Myotis grisescens*

Monarch Butterfly *Danaus plexippus*

Northern Long-eared Bat *Myotis septentrionalis*

Four of the bat species found in Kentucky are listed under the Endangered Species Act: the Indiana bat (*Myotis sodalis*), the northern long-eared bat (*Myotis septentrionalis*), the gray bat (*Myotis grisescens*), and the Virginia big-eared bat (*Corynorhinus townsendii virginianus*). Records for Indiana bats, northern long-eared bats, and gray bats occur in all areas of the state, and these species are considered potentially present in areas in which they have not been previously documented. Virginia big-eared bat are found in a specific region of eastern Kentucky.

All four species winter in caves, underground mines, or other similar structures. Gray bats and Virginia big-eared bats also use these structures and other structures, such as rockshelters and other karst features, during the summer for roosting and forming maternity colonies. To address the potential for impacts to winter habitat for these four bat species and summer habitat for the gray bat and the Virginia big-eared bat, we recommend conducting habitat assessments to identify any suitable habitat features in the action area of the proposed project. This action area typically includes a buffer around the footprint of the project. This buffer can vary in size depending on the actions associated with the proposed project. Any features identified should be assessed following the process described in the most current survey guidelines for the species at: <https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html>. Because these species may also occasionally roost in buildings, bridges, culverts, and other human-made structures, we recommend inspecting these structures for the presence of bats or signs of bat use prior to demolition. If bats are found or suspected to be using a structure, further coordination with the Service may be necessary.

In the summer, Indiana bats and northern long-eared bats utilize a variety of forested habitats, including riparian forests, bottomlands, and uplands, for both summer foraging and roosting. Females give birth and raise their young in trees occupied by maternity colonies. During the fall "swarming" period, these species occupy the forested habitat around the hibernacula where they mate and acquire additional fat reserves prior to hibernation. They also utilize this habitat during spring emergence before migrating to their summering areas. Suitable roost trees for Indiana bats are greater than 5 inches diameter at breast height (DBH), can be living or dead, and exhibit any of the following characteristics: exfoliating bark, broken limbs, broken tops, cracks, and crevices. Suitable habitat for northern long-eared bats include habitat suitable for Indiana bats as well as trees as small as 3 inches DBH and cavities in trees. We recommend the following options to address potential effects to the Indiana bat and northern long-eared bat as a result of impacts to roosting habitat:

- The project proponent can modify the proposed project to avoid impacts to suitable roosting and foraging habitat. A habitat assessment may be useful in determining if suitable summer roosting or foraging habitat is present in the action area of the proposed project.
- The project proponent can conduct a survey (acoustical or mist-net) to determine the presence or likely absence of the species in the project area. These presence/absence surveys must be conducted by a qualified biologist with the appropriate collection permits and in accordance with our most current survey guidance. If any federally-listed bats are captured, we request written notification of such occurrence(s) and further

coordination and consultation. Surveys must be conducted during late spring to early summer between the dates specified in the survey guidance. Results from surveys are valid during the survey season in which they are collected, through the survey season the following year, until the beginning of the survey season of the next following year. Survey results are not recommended to support probable absence of a bat species in an area and during a timeframe in which presence of the species has already been documented (“known” habitat), unless it is “outer-tier maternity” habitat. Survey guidance and distribution of known records can be found at:
<https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html>.

- The project proponent may provide the Service with additional information through the informal consultation process, prepared by a qualified biologist, that includes site-specific habitat information and a thorough effects analysis (direct, indirect, and cumulative) to support a “not likely to adversely affect” determination. The Service will review this and decide if there is enough supporting information to concur with the determination.
- For federal projects, the federal action agency can request formal section 7 consultation with the submission of a Biological Assessment describing the action and evaluating the effects of the action on the listed species in the project area. After formal consultation is initiated, the Service has 135 days to prepare a Biological Opinion that analyzes the effects of the action on the listed species and identifies actions to minimize those effects.
- For non-federal projects, section 10(a)(1)(B) of the ESA establishes a process for permitting the taking of listed species that is incidental to otherwise lawful non-Federal activities (i.e., an incidental take permit or ITP). Habitat Conservation Plans (HCPs) are planning documents required as part of an application for an incidental take permit. They describe the anticipated effects of the proposed taking, how those impacts will be minimized or mitigated, and how the HCP is to be funded. HCPs can apply to both listed and non-listed species, including those that are candidates or have been proposed for listing. However, the incidental take permit will only cover species listed as endangered or threatened under the ESA. Additional information about HCPs can be found on the Service’s website at: <http://www.fws.gov/endangered/what-we-do/hcp-overview.html>
- In certain areas, potential effects to the northern long-eared bat may be excepted under the Final 4(d) Rule that the Service published for the species on January 14, 2016. This 4(d) Rule identifies certain types of take that is prohibited and establishes specific conservation measures for tree removal activities that, if adhered to, would not result in prohibited incidental take. If the proposed project is in a location where incidental take would not be prohibited, the “official species list” attached to the IPaC-generated letter will include a condition for northern long-eared bat that reads: “The specified area includes areas in which incidental take would not be prohibited under the 4(d) rule.” Incidental take in these locations would be covered under the Service’s January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule. To use the programmatic BO to address effects to the northern long-eared bat, project proponents should use the “Northern Long-Eared Bat (NLEB) Consultation and 4(d) Rule Consistency” Determination Key in IPaC. This key is accessed by clicking on “Start

Review” under the “What’s Next” heading on the right side of the screen on the IPaC “Project Home” page. If there is no condition present for northern long-eared bat in the “official species list,” the key cannot be completed. Please contact the Kentucky Field Office for further coordination.

- The project proponent may choose to offset impacts resulting from the removal of Indiana bat and/or northern long-eared bat forested habitat by providing a contribution to the Imperiled Bat Conservation Fund (IBCF). By choosing this option, cooperators gain flexibility with regard to the removal of the habitat. In exchange for this flexibility, the cooperator provides recovery-focused conservation benefits to the species through the implementation of conservation measures that are described in the Conservation Strategy for Forest-Dwelling Bats in the Commonwealth of Kentucky found at: http://www.fws.gov/frankfort/indiana_bat_procedures.html. More information about the conservation benefits provided by the IBCF can be found at: <http://knlt.org/ibcf/>.

Though only Indiana bats and northern long-eared bats roost in trees, forested habitat is important to all four species for foraging and commuting purposes. Indiana bats and gray bats commonly utilize forested corridors along streams, while northern long-eared bats tend to forage more in the interior of forests, and Virginia big-eared bats along forested edges. Forest removal associated with projects can impact bat behavior by eliminating foraging areas and by rendering foraging areas unusable by severing connections between habitat. Modifying or degrading habitat to an extent that results in significant impairment of behavioral patterns could qualify as “take” under the ESA. The effects of forest habitat removal on the landscape should be evaluated for potential impacts to bat foraging and commuting behavior.

All four species of bats forage on insects. Gray bats and Indiana bats, in particular, often forage over strongly intermittent to larger streams, rivers, lakes, and ponds, consuming insects that spend the larval phase of the life cycle in water. These insects can be negatively affected by excessive sediment and contaminants in the water. We recommend using appropriate Best Management Practices (BMPs) to minimize impacts to the water quality within and downstream of the project area to protect these important foraging resources.

In summary, to address potential effects to federally-listed bats in Kentucky, please provide the Service with information about the following potential habitat features in the action area of the proposed project:

- caves, rockshelters, abandoned mine portals, or similar features;
- buildings, bridges, or culverts;
- forested habitat; and
- streams, rivers, lakes, ponds, or wetlands.

Please describe how the proposed project may impact these features and any measures proposed to reduce impacts.

General Project Design Guidelines - Indiana Bat and 4 more species

Published by Kentucky Ecological Services Field Office for the following species included in your project

Indiana Bat *Myotis sodalis*

Kentucky Arrow Darter *Etheostoma spilotum*

Gray Bat *Myotis grisescens*

Monarch Butterfly *Danaus plexippus*

Northern Long-eared Bat *Myotis septentrionalis*

Currently, there are eight federally-listed fish species that may occur in Kentucky and should be considered when evaluating project impacts. The table below lists the general Kentucky distribution of these species and describes typical habitat conditions in which they are found. Species occurrence is not limited to areas that contain typical habitat characteristics. The species can potentially be found in any stream of suitable size within its known range.

	Distribution in Kentucky	Typical Habitat
Blackside dace	Upper Cumberland River basin (portions of Bell, Harlan, Knox, Laurel, Letcher, McCreary, Pulaski, and Whitley counties). ¹	Headwater streams (generally 1 st – 2 nd order) with intact riparian zones and stable substrates; generally found near undercut stream banks, woody debris piles, and large rocks; more likely present when stream conductivity levels $\leq 240 \mu\text{S/cm}$.
Cumberland darter	Upper Cumberland River basin (McCreary and Whitley counties)	Small to medium-sized streams (2 nd – 4 th order) with pools or shallow runs containing sand, silt, or sand-covered bedrock substrates.
Diamond darter	Considered extirpated from Kentucky, but unoccupied critical habitat has been designated in the Green River	Moderate current and clean sand and gravel substrates.
Duskytail darter ²	Big South Fork Cumberland River	Rocky areas in gently flowing shallow pools and runs.
Kentucky arrow darter ³	Upper Kentucky River basin (portions of Breathitt, Clay, Harlan, Jackson, Knott, Lee, Leslie, Owsley, Perry, and Wolfe counties)	Headwater streams (generally 1 st – 2 nd order) with moderate- to high-gradients and rocky substrates; most often observed near some type of cover—boulders, rock ledges, large cobble, or woody debris piles; more likely present when stream conductivity levels $\leq 250 \mu\text{S/cm}$.
Palezone shiner	Little South Fork Cumberland River	Flowing pools and runs with clear water and substrates composed of bedrock, cobble, pebble, and gravel mixed with clean sand.

1 The blackside dace is also known to occur in one drainage in the Kentucky River basin (Perry County).

2 Recent taxonomic research has split this species into four distinct species. The Tuxedo darter (*Etheostoma lemniscatum*) is the species that exists in Kentucky. The Service has not formally recognized these nomenclatural changes; therefore, the duskytail darter is the current taxon recognized under the ESA.

3 The Kentucky arrow darter was listed as threatened under the ESA with a 4(d) rule. The 4(d) rule excepts take of the species resulting from certain categories of activities: channel reconfiguration or restoration, bank stabilization, bridge and culvert removal or replacement, and repair and maintenance of USFS concrete plank stream crossings. Additional criteria for qualifying activities are found at 81 FR 68963.

	Distribution in Kentucky	Typical Habitat
Pallid sturgeon	Mississippi River, its oxbows, and embayed portions of major tributaries.	
Relict darter	Bayou du Chien drainage, including portions of the mainstem, South Fork Bayou du Chien, Jackson Creek, Cane Creek, and Sand Creek.	Quiet to gently flowing pools, runs, and glides, usually over gravel mixed with sand; species often associated with undercut banks and other cover (woody debris, tree roots).

A fish species appears on the IPaC-generated species list if the project area input for the proposed project is located in a watershed where federally-listed fish species occur or may potentially occur. The Kentucky Field Office (KFO) can further assist in determining if a listed fish species is known to occur in a specific project area or if a habitat assessment or species survey is necessary to provide more information about the species' potential occurrence.

When practicable, we recommend siting projects to avoid impacting streams and rivers that contain listed fish species and utilizing methods, such as horizontal directional drilling and clear span bridges, to avoid direct impacts to listed fish species and their habitats. In-channel activities may affect federally-listed fish species if they are present in the action area of the proposed project. When in-channel activities cannot be avoided, the KFO can provide further assistance when evaluating the effects of these activities and determining the likelihood that adverse effects and/or take of a federally-listed fish species may occur.

Projects that do not involve in-channel activities may still have the potential to indirectly affect listed fish species and their habitats. Stream degradation is the primary threat to most federally-listed fish species in Kentucky. Development activities that disturb areas in watersheds containing listed fish species can degrade the stream by increased siltation/sedimentation, introduction of pollutants, and/or alteration of riparian areas. The following are some general recommendations to minimize indirect impacts to streams and rivers and reduce effects to federally-listed fishes:

- Utilize Best Management Practices to minimize erosion from work areas;
- Limit vegetation removal to minimize impacts to riparian areas;
- Revegetate disturbed areas with native vegetation;
- Use bioengineering techniques to restore disturbance to stream banks;
- Install upland sediment basins, where appropriate, to minimize sediment input into streams and rivers;
- Install detention structures to manage stormwater runoff into streams and river; and
- Minimize the addition of impervious surfaces in the watershed.

When submitting project information to the KFO for review, please include information about streams and rivers in the action area of the proposed project. Describe any proposed activities that would occur in the channel or on the banks and include descriptions of measures proposed to reduce impacts to stream and river habitat.

7.0

INTERVIEWS

- 7.1 PE / RMJE Personnel
- 7.2 Buckhorn/Hazard Officials

7.1 INTERVIEW OF PE / RMJE PERSONNEL

Ronald M. Johnson, PE

Conducted April 18, 2024

After a site visit of the proposed project location, PE / RMJE personnel made the following observations:

7.1 INTERVIEW OF CITY OF HAZARD OFFICIALS

WHOEVER IS INTERVIEWED

Conducted July 17, 2024

Jerry Stacey, Perry County EMS Director, indicated there have been no toxic or hazardous spills on or near the property and knows of no other documented or undocumented environmental impacts on the property.

8.0

STATE OPEN RECORDS

8.0 KENTUCKY STATE GOVERNMENT RECORDS

Department of Environmental Protection

An investigation of all records from the Department of Environmental Protection discovered the following circumstances near the project area. None of these produce a reasonable concern:

- No underground storage tanks (UST's) are known to exist as per KY DEP records search within the project area – see Appendix for agency response.

Other Records

Other records were obtained from various government agencies:

- The Kentucky Division of Mine Safety
- The Kentucky Division of Mine Permits
- The Kentucky Department of Fish and Wildlife Resources
- The Kentucky Heritage Council
- The US Fish and Wildlife Services
- The US Army Corp of Engineers
- The US National Resources Conservation Service
- The Kentucky Division of Water
- The Kentucky Division of Oil and Gas

These records are contained throughout the report as they relate to the various categories within the report (Endangered Species, Mining, Permit requirements, etc.) In the appendix, contact letters and responses with direct questioning about the project are provided.

9.0

**PERMITS AND
AUTHORIZATIONS**

9.0 NEEDED PERMITS AND AUTHORIZATIONS

Almost any project will require needed permits and authorizations from various government agencies. This project will require at minimum the following permits from these government agencies:

- Ky Division of Water Sanitary Sewer Construction Permit
- Ky Transportation Cabinet (KYTC) Encroachment Permit

10.0

APPENDIX

- 10.1 Maps (Included with Government Agency Contact Letters)
- 10.2 Historical Land use and Topography
- 10.3 EDR Aerial Photo Decade Package
- 10.4 City Directory Image Report
- 10.5 Sanborn Map
- 10.6 EDR Summary Report
 - 10.6.1 Gas and Oil Wells
 - 10.6.2 Underground Storage Tank
 - 10.6.3 KY Wells
- 10.7 Endangered Species Reports
- 10.8 Government Agency Letters

TEA Perry County/Hwy 80 Collection Project Ph III

5000 KY-80

Bulan, KY 41722

Inquiry Number: 7547673.4

January 23, 2024

EDR Historical Topo Map Report

with QuadMatch™



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

EDR Historical Topo Map Report

01/23/24

Site Name:

TEA Perry County/Hwy 80 Coll
5000 KY-80
Bulan, KY 41722
EDR Inquiry # 7547673.4

Client Name:

R.M. Johnson Engineering, Inc.
P.O. Box 444
Hindman, KY 41822
Contact: Fred Pennington



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by R.M. Johnson Engineering, Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:**Coordinates:**

P.O.#	NA	Latitude:	37.332256 37° 19' 56" North
Project:	TEA Perry County/Hwy 80 Ph I	Longitude:	-83.160064 -83° 9' 36" West
		UTM Zone:	Zone 17 North
		UTM X Meters:	308633.39
		UTM Y Meters:	4133919.82
		Elevation:	1285.51' above sea level

Maps Provided:

2022	1914
2019	1891
2016	
2013	
1992	
1976	
1972	
1954	

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2022 Source Sheets



Hazard North
2022
7.5-minute, 24000

2019 Source Sheets



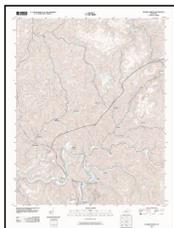
Hazard North
2019
7.5-minute, 24000

2016 Source Sheets



Hazard North
2016
7.5-minute, 24000

2013 Source Sheets



Hazard North
2013
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1992 Source Sheets



Hazard North
1992
7.5-minute, 24000
Aerial Photo Revised 1988

1976 Source Sheets



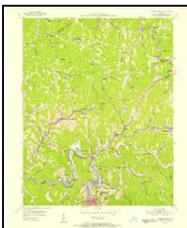
Hazard North
1976
7.5-minute, 24000
Aerial Photo Revised 1971

1972 Source Sheets



Hazard North
1972
7.5-minute, 24000
Aerial Photo Revised 1971

1954 Source Sheets



Hazard North
1954
7.5-minute, 24000
Aerial Photo Revised 1953

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1914 Source Sheets

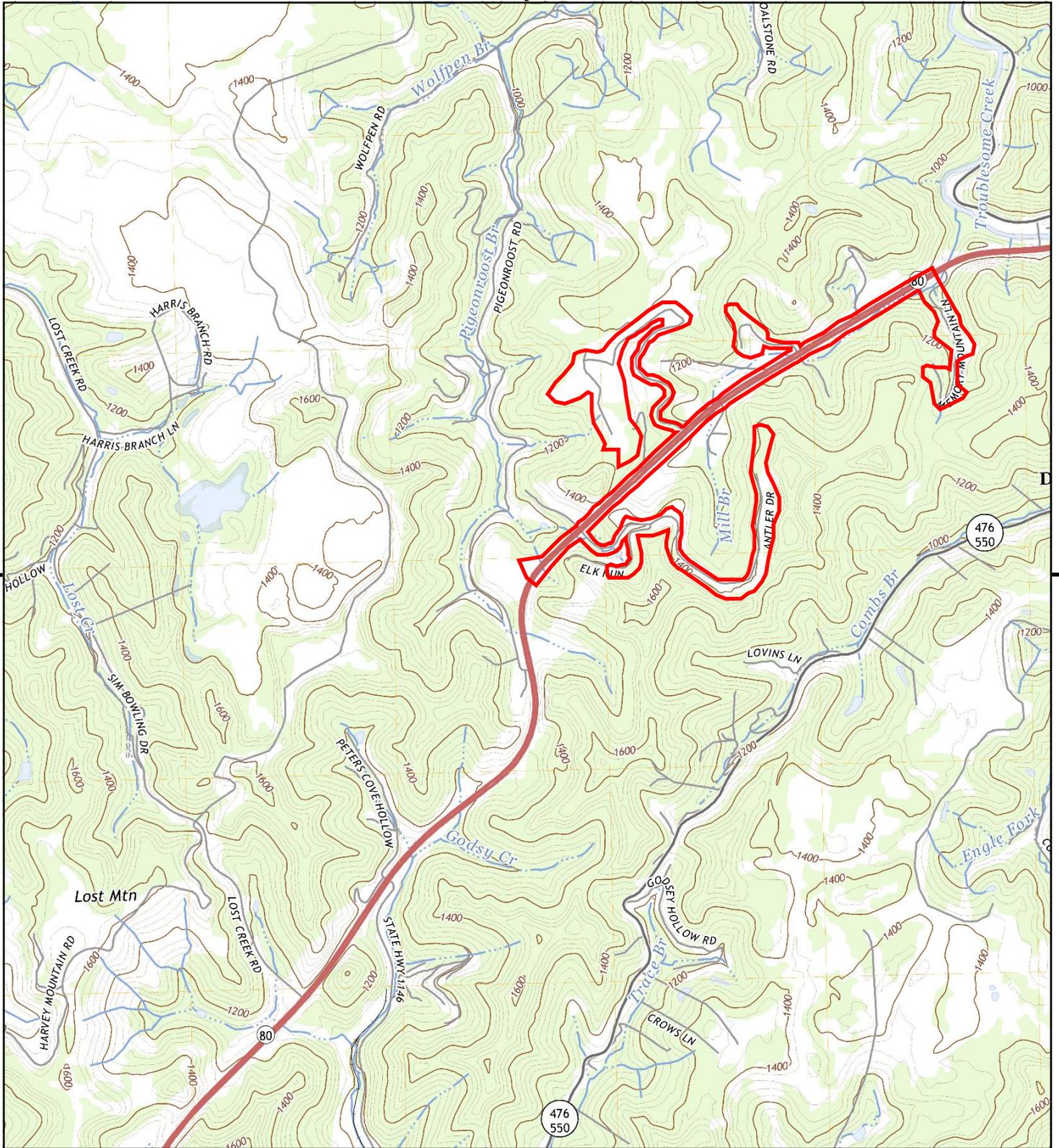


Troublesome
1914
15-minute, 62500

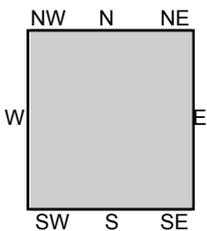
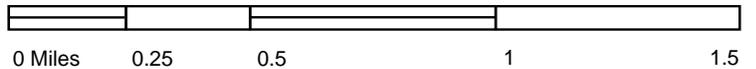
1891 Source Sheets



Hazard
1891
30-minute, 125000



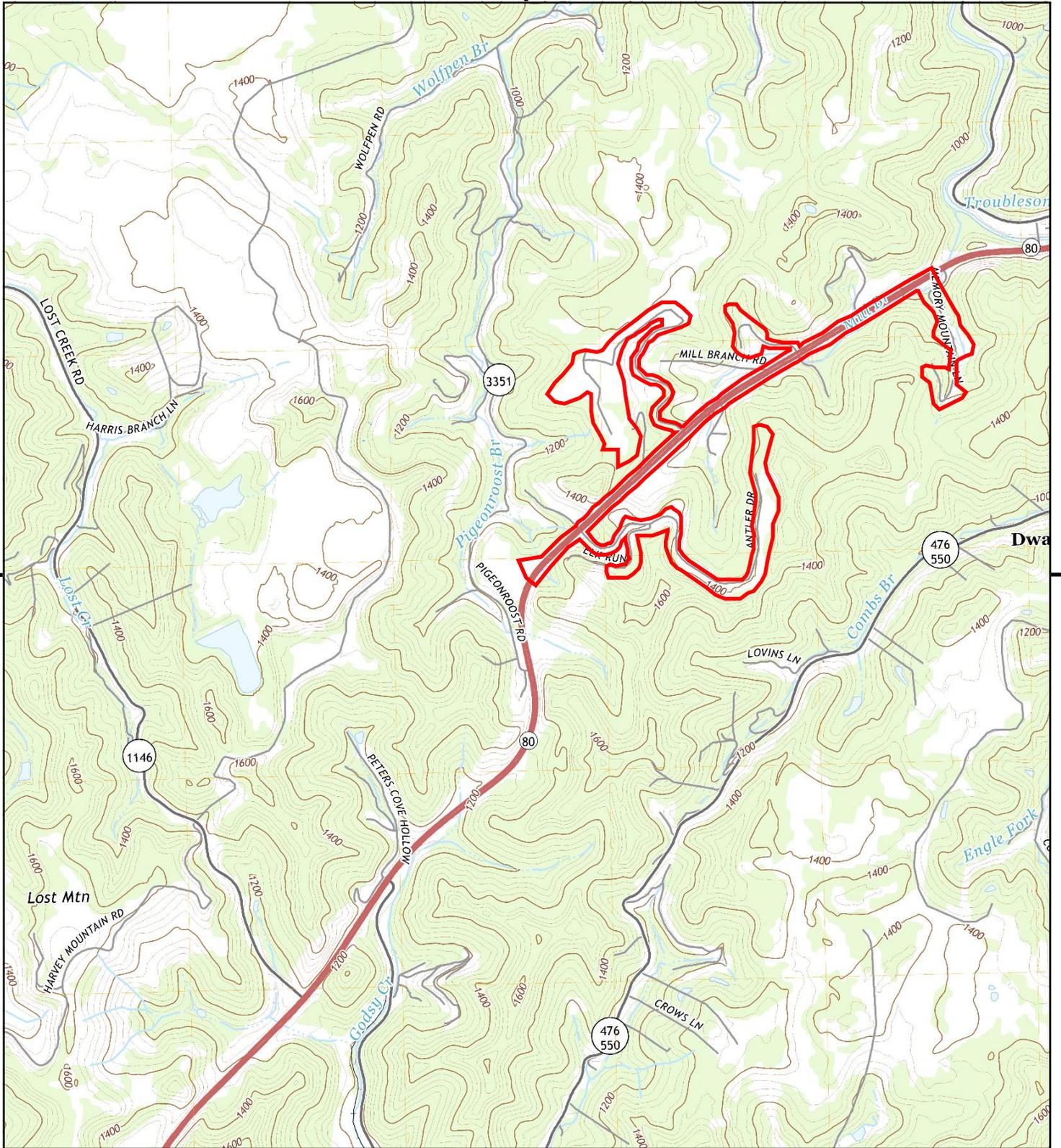
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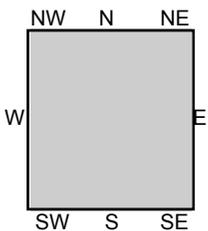
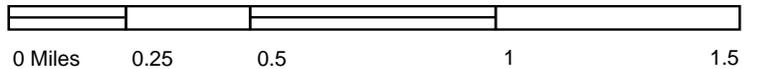
TP, Hazard North, 2022, 7.5-minute

SITE NAME: TEA Perry County/Hwy 80 Collection Proj
ADDRESS: 5000 KY-80
 Bulan, KY 41722
CLIENT: R.M. Johnson Engineering, Inc.





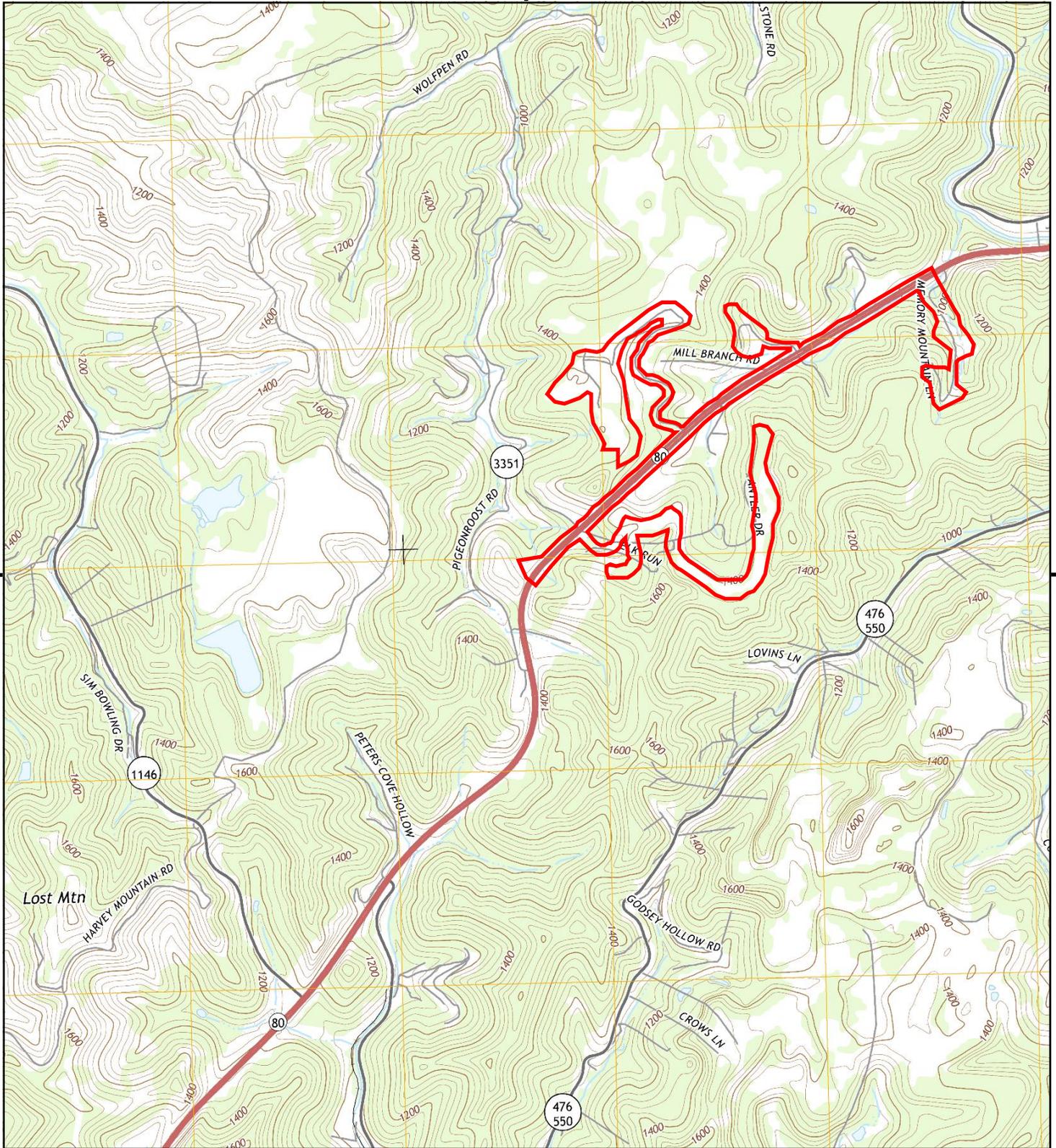
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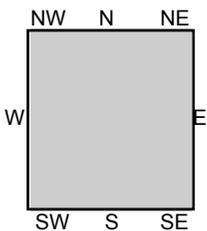
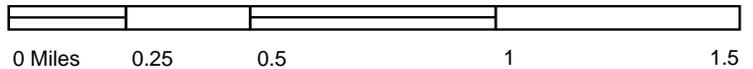
TP, Hazard North, 2019, 7.5-minute

SITE NAME: TEA Perry County/Hwy 80 Collection Proj
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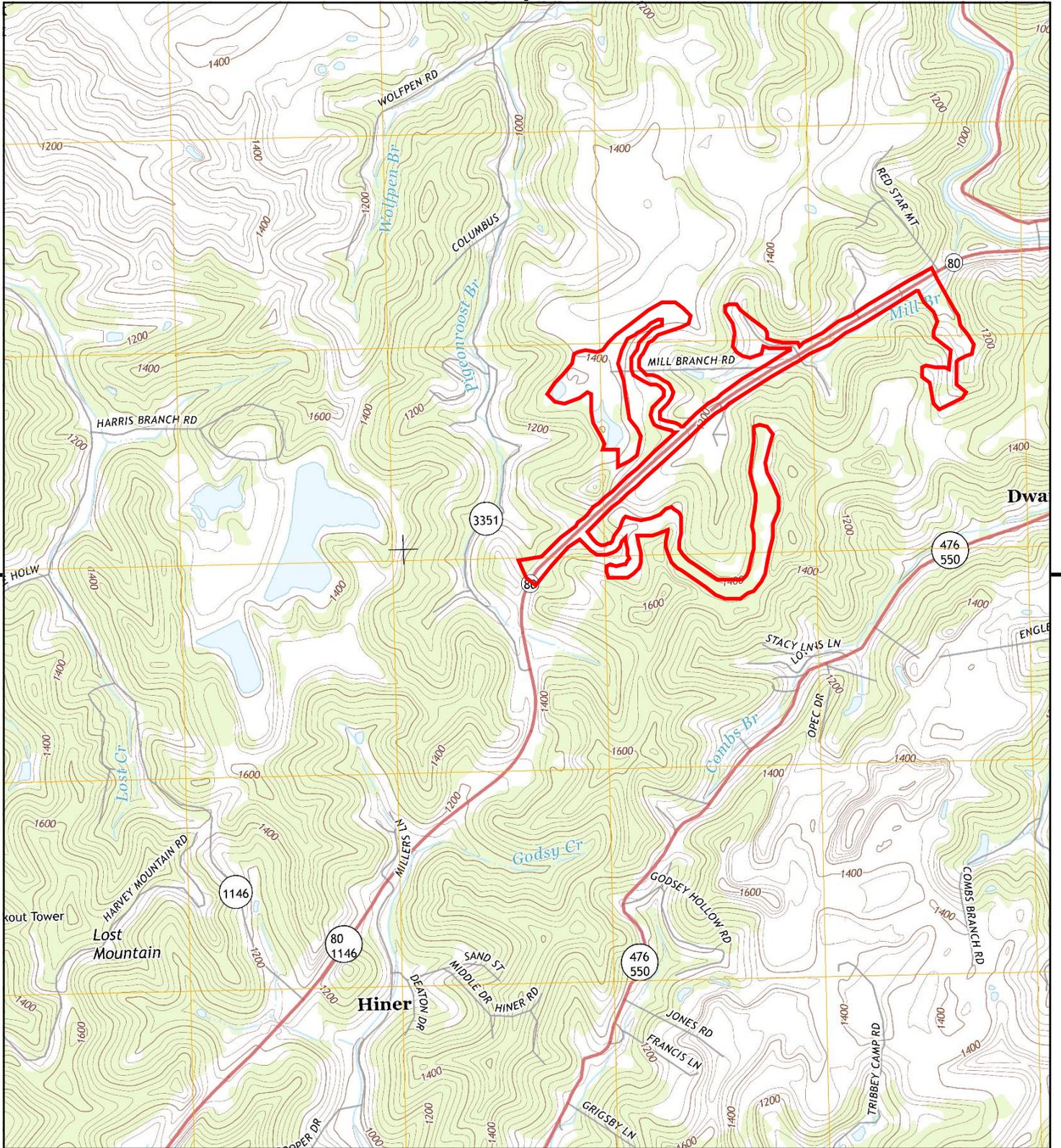
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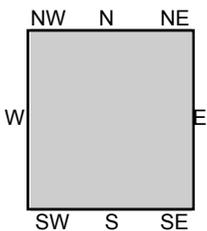
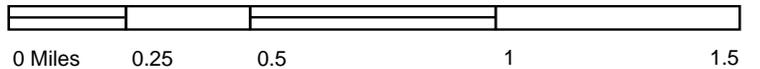
TP, Hazard North, 2016, 7.5-minute

SITE NAME: TEA Perry County/Hwy 80 Collection Proj
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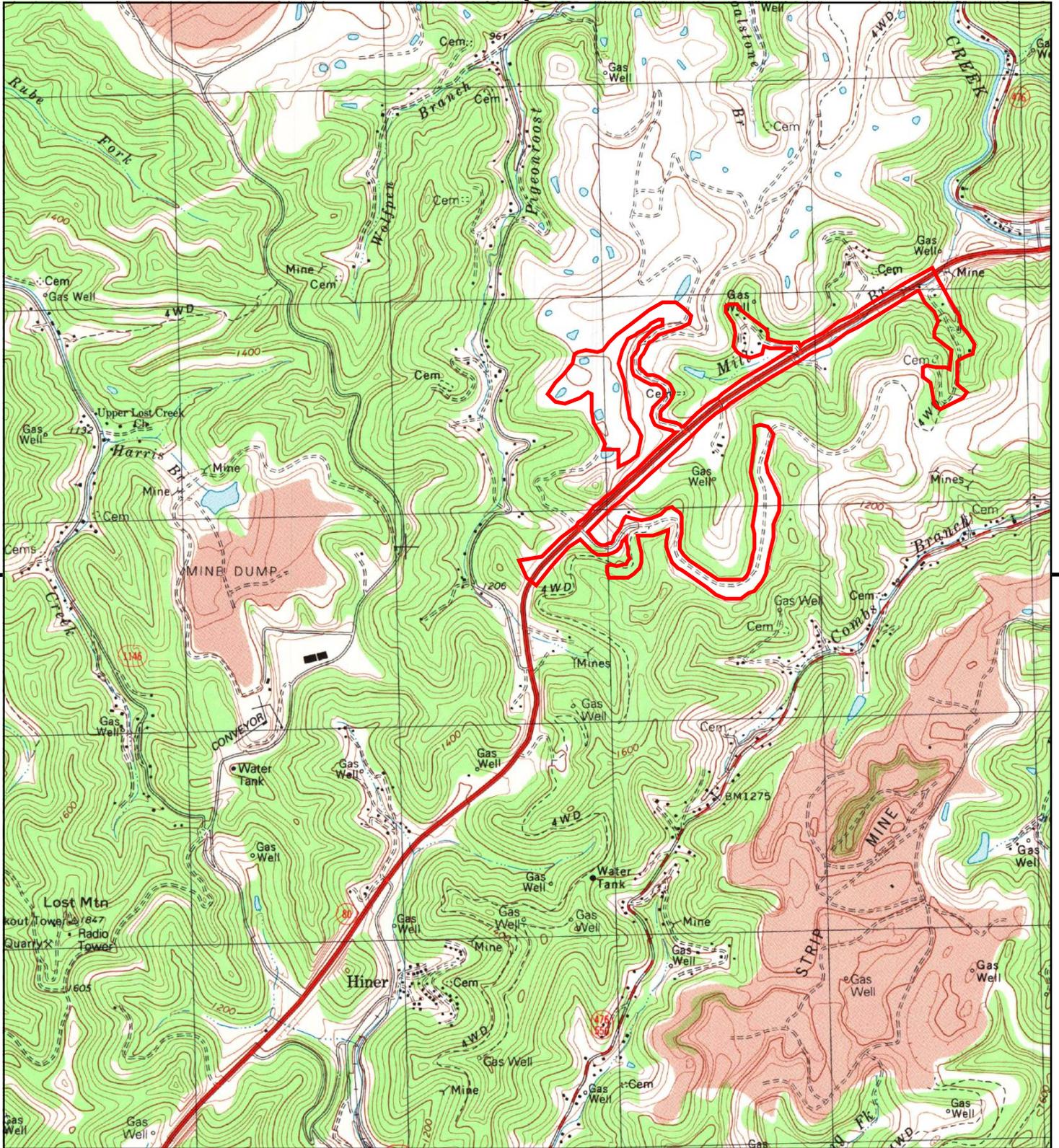
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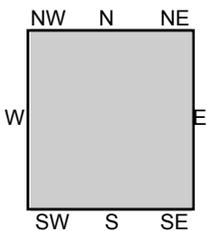
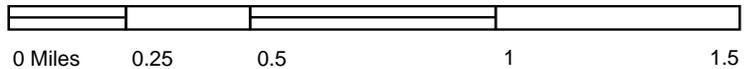
TP, Hazard North, 2013, 7.5-minute

SITE NAME: TEA Perry County/Hwy 80 Collection Proj
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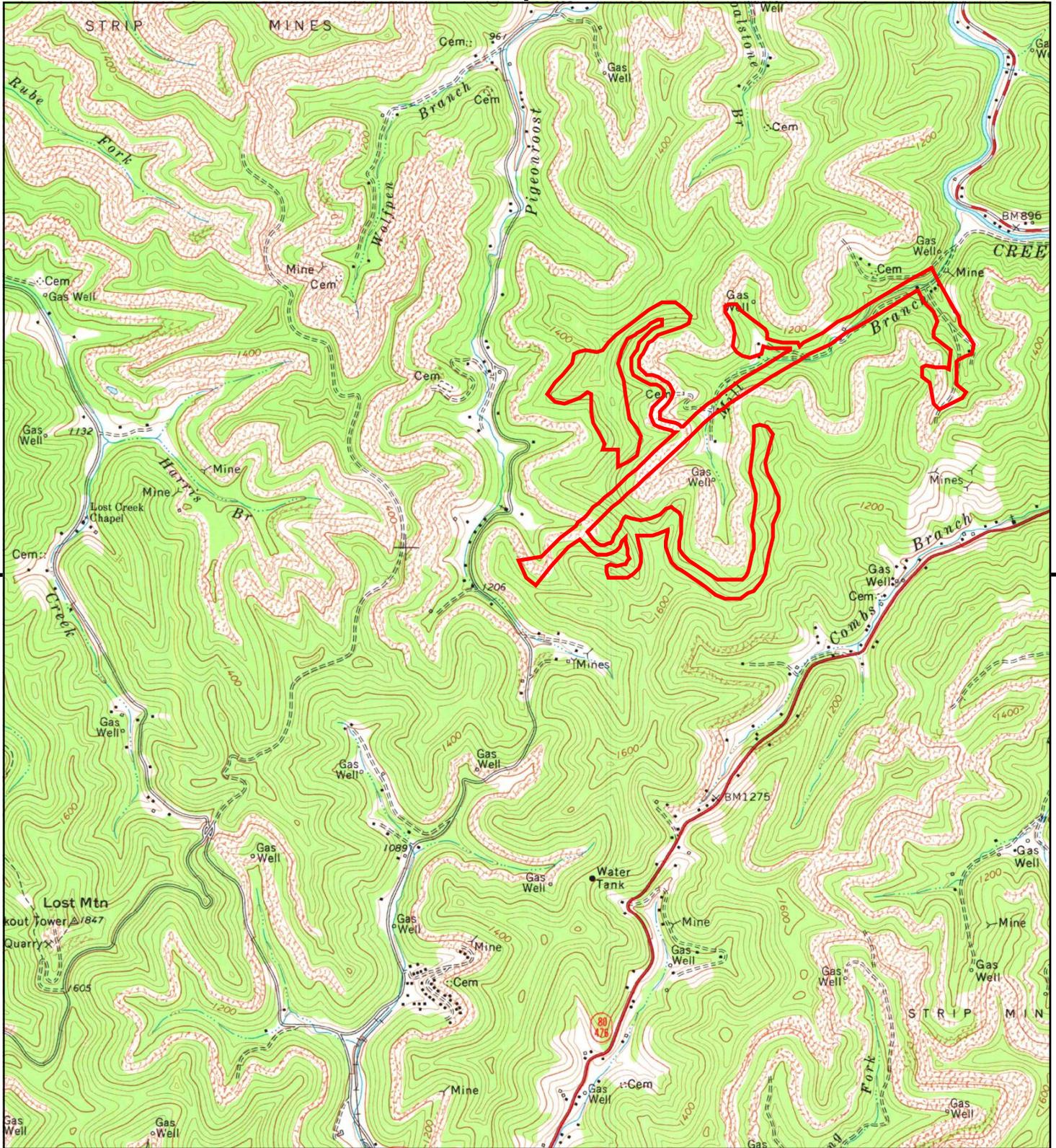
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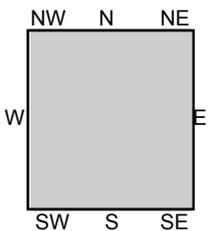
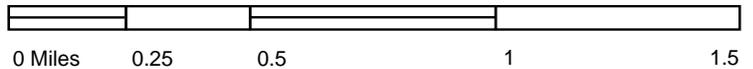
TP, Hazard North, 1992, 7.5-minute

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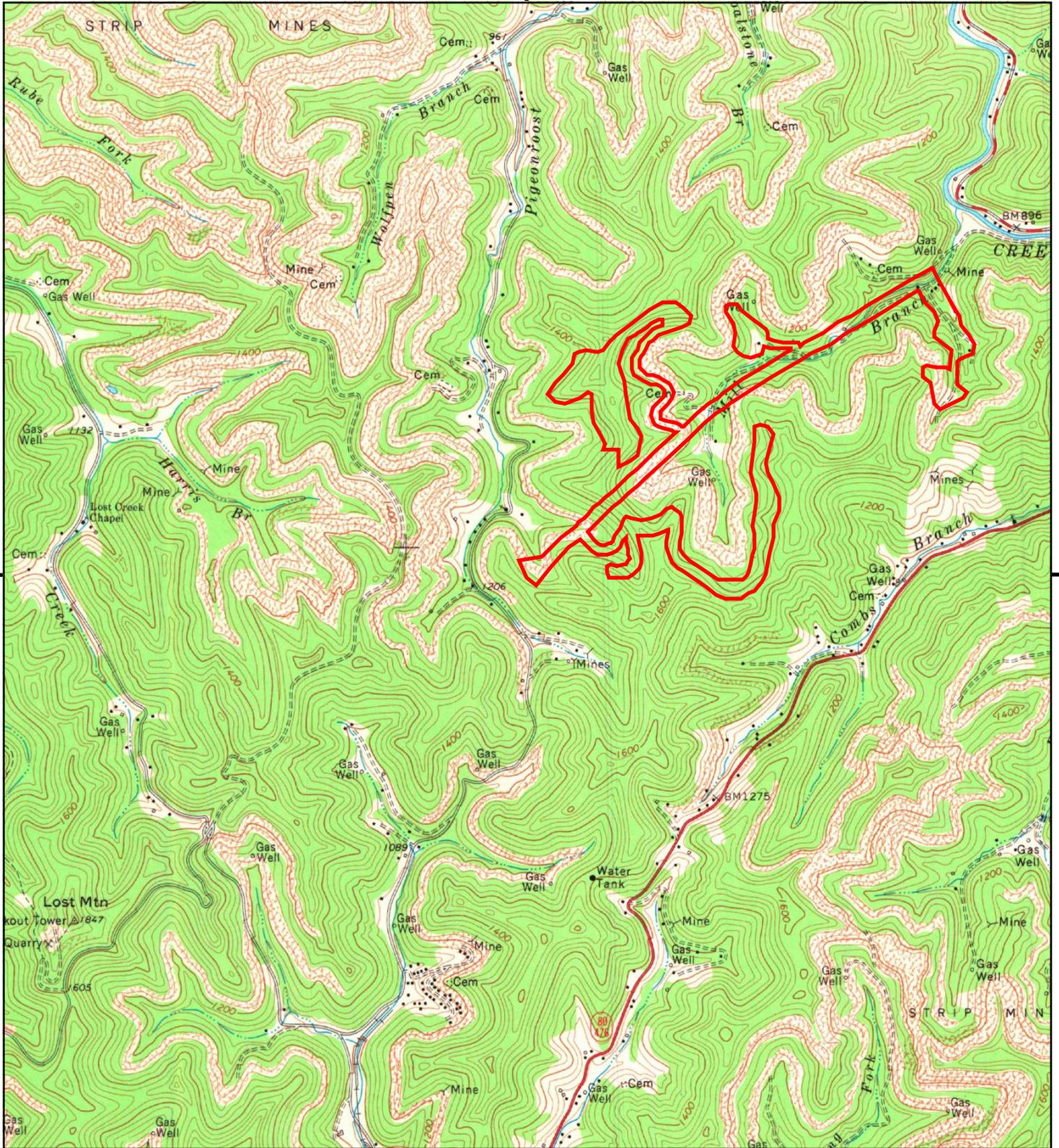
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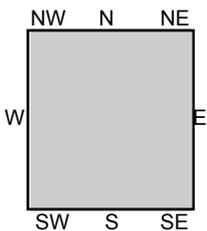
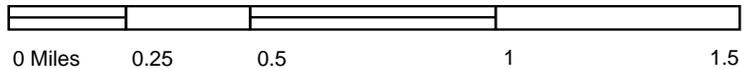
TP, Hazard North, 1976, 7.5-minute

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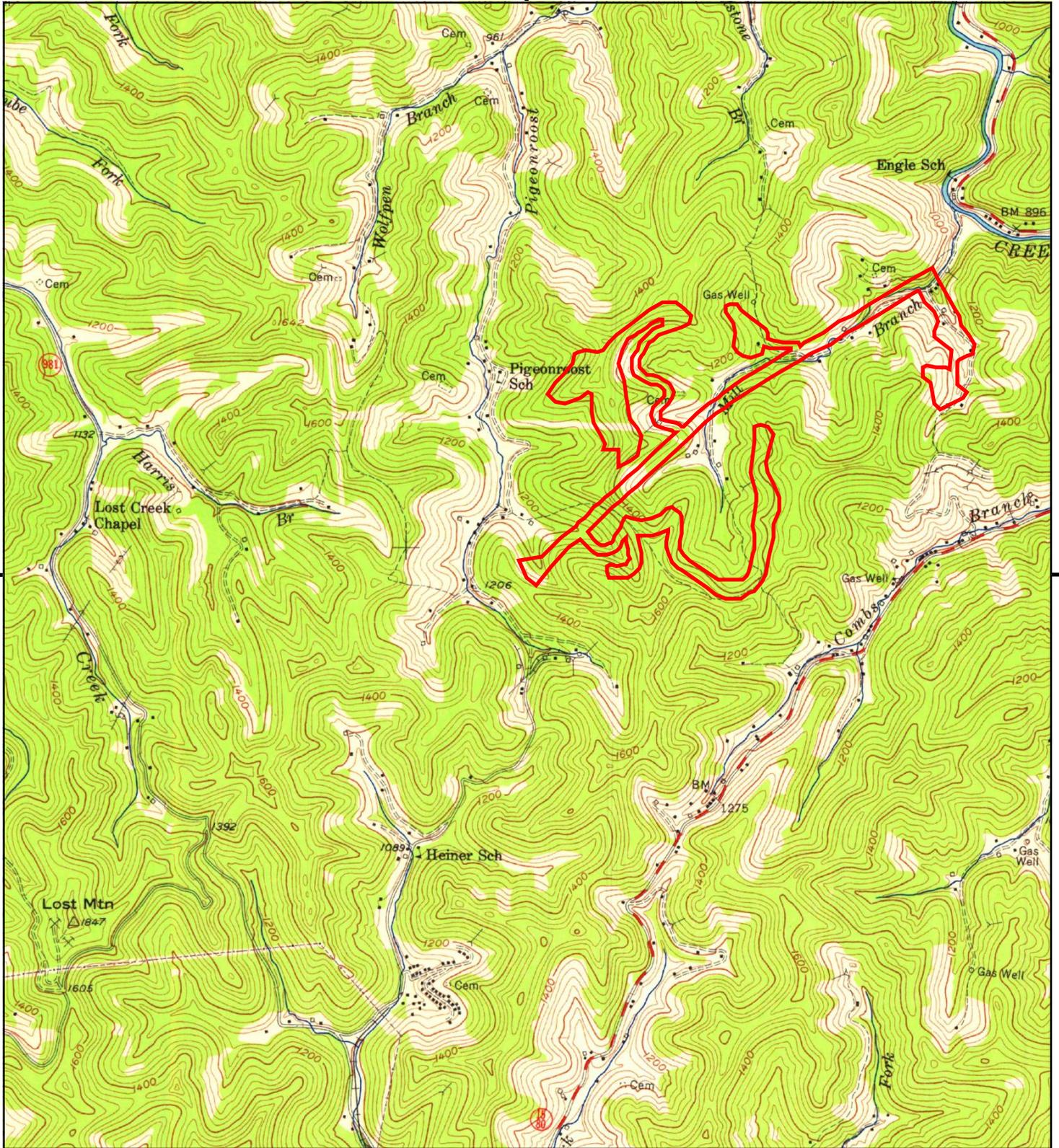
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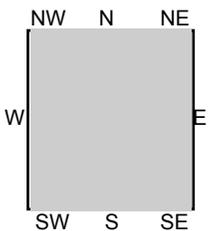
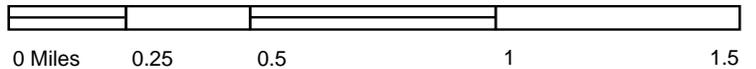
TP, Hazard North, 1972, 7.5-minute

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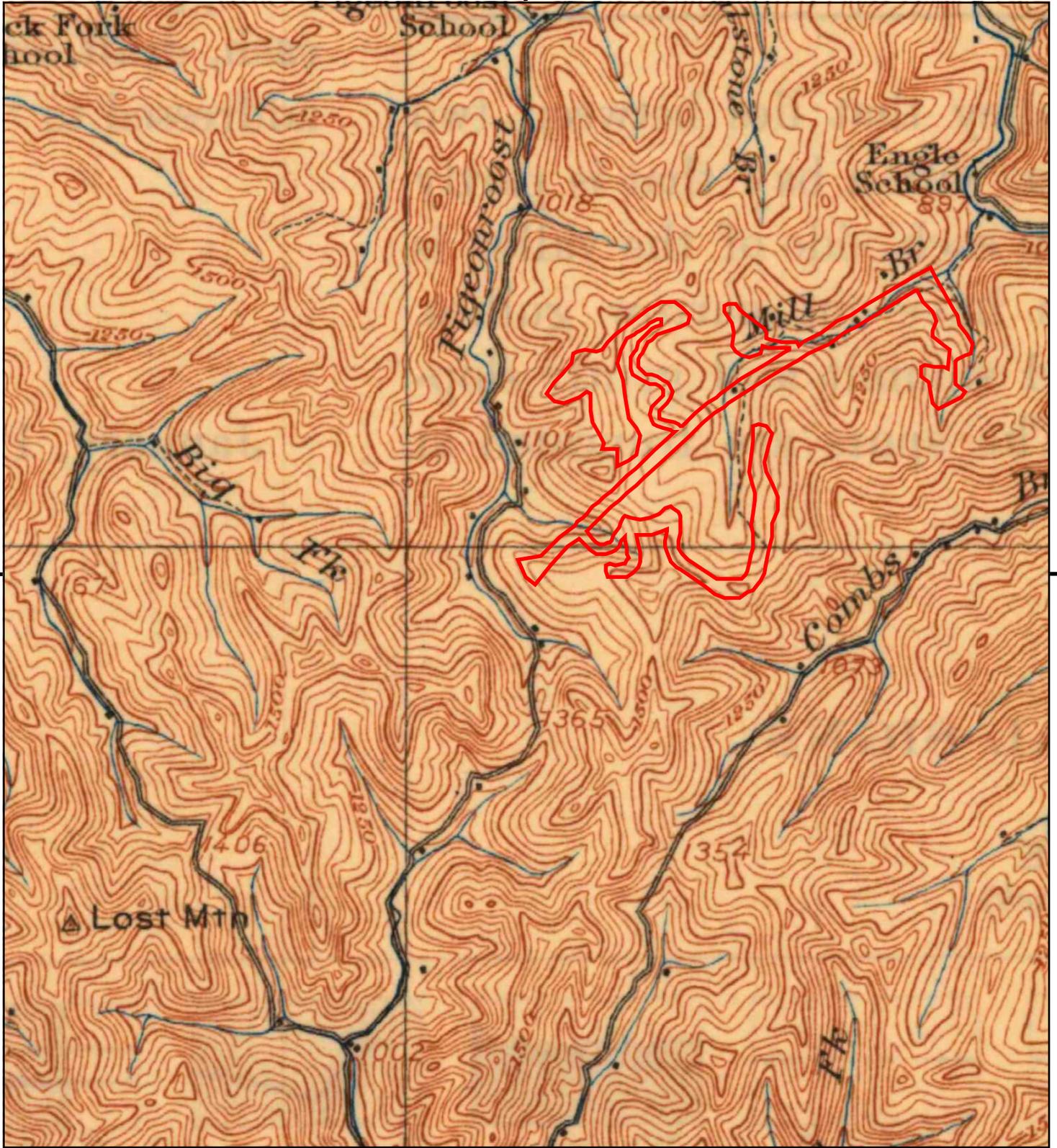
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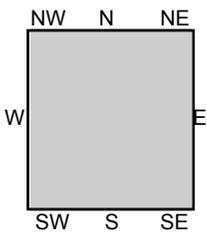
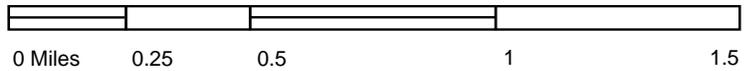
TP, Hazard North, 1954, 7.5-minute

SITE NAME: TEA Perry County/Hwy 80 Collection Proj
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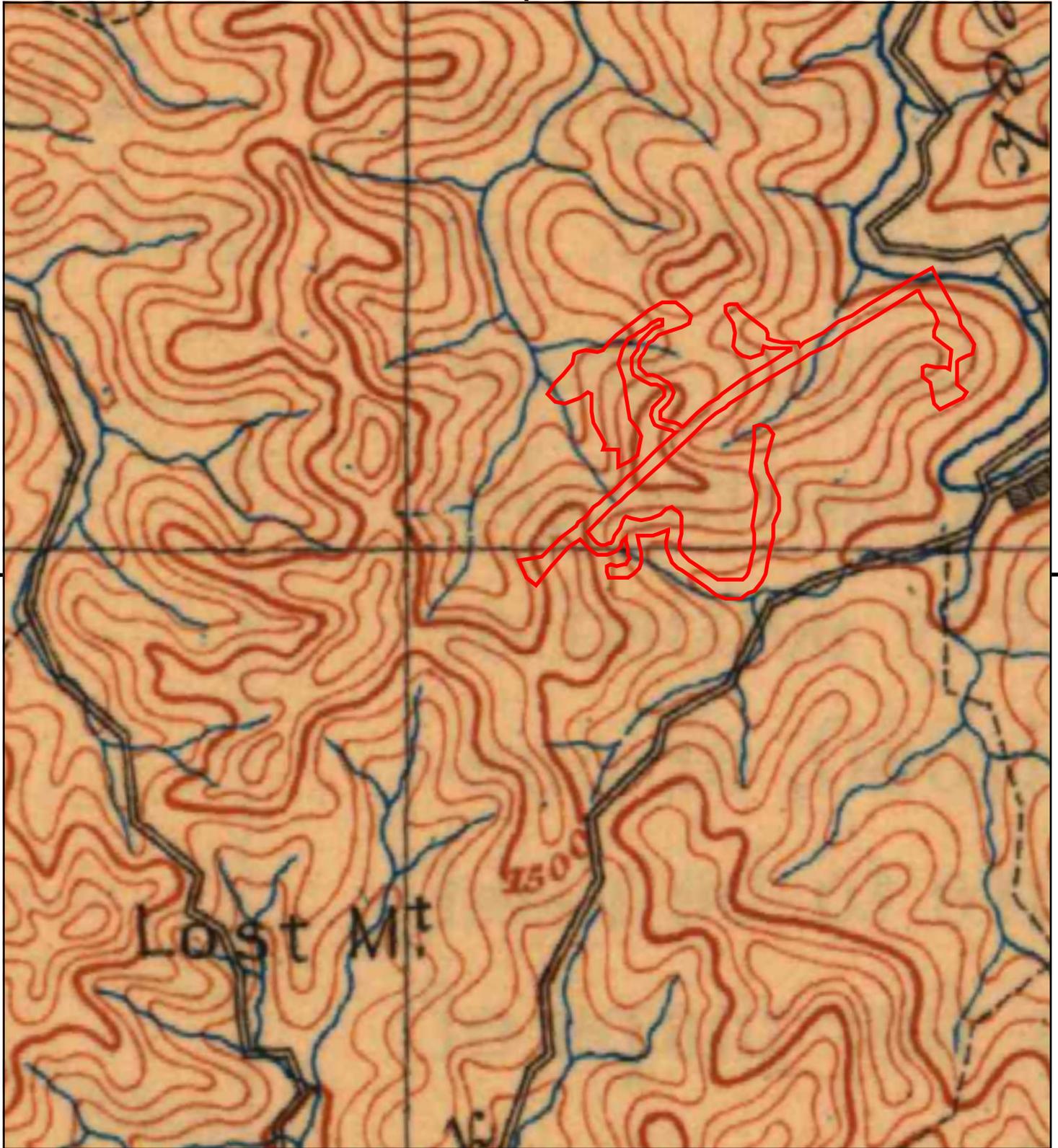
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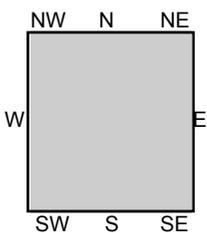
TP, Troublesome, 1914, 15-minute

SITE NAME: TEA Perry County/Hwy 80 Collection Proj
 ADDRESS: 5000 KY-80
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This report includes information from the following map sheet(s).



TP, Hazard, 1891, 30-minute

SITE NAME: TEA Perry County/Hwy 80 Collection Proj
ADDRESS: 5000 KY-80
Bulan, KY 41722
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TEA Perry County/Hwy 80 Collection Project Ph III

5000 KY-80

Bulan, KY 41722

Inquiry Number: 7547673.8

January 24, 2024

The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th floor
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Toll Free: 800.352.0050
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EDR Aerial Photo Decade Package

01/24/24

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Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
2020	1"=1000'	Flight Year: 2020	USDA/NAIP
2016	1"=1000'	Flight Year: 2016	USDA/NAIP
2012	1"=1000'	Flight Year: 2012	USDA/NAIP
2008	1"=1000'	Flight Year: 2008	USDA/NAIP
1995	1"=1000'	Acquisition Date: March 14, 1995	USGS/DOQQ
1983	1"=1000'	Flight Date: April 26, 1983	USDA
1977	1"=1000'	Flight Date: March 08, 1977	USGS
1960	1"=1000'	Flight Date: October 12, 1960	USGS
1953	1"=1000'	Flight Date: March 16, 1953	USGS

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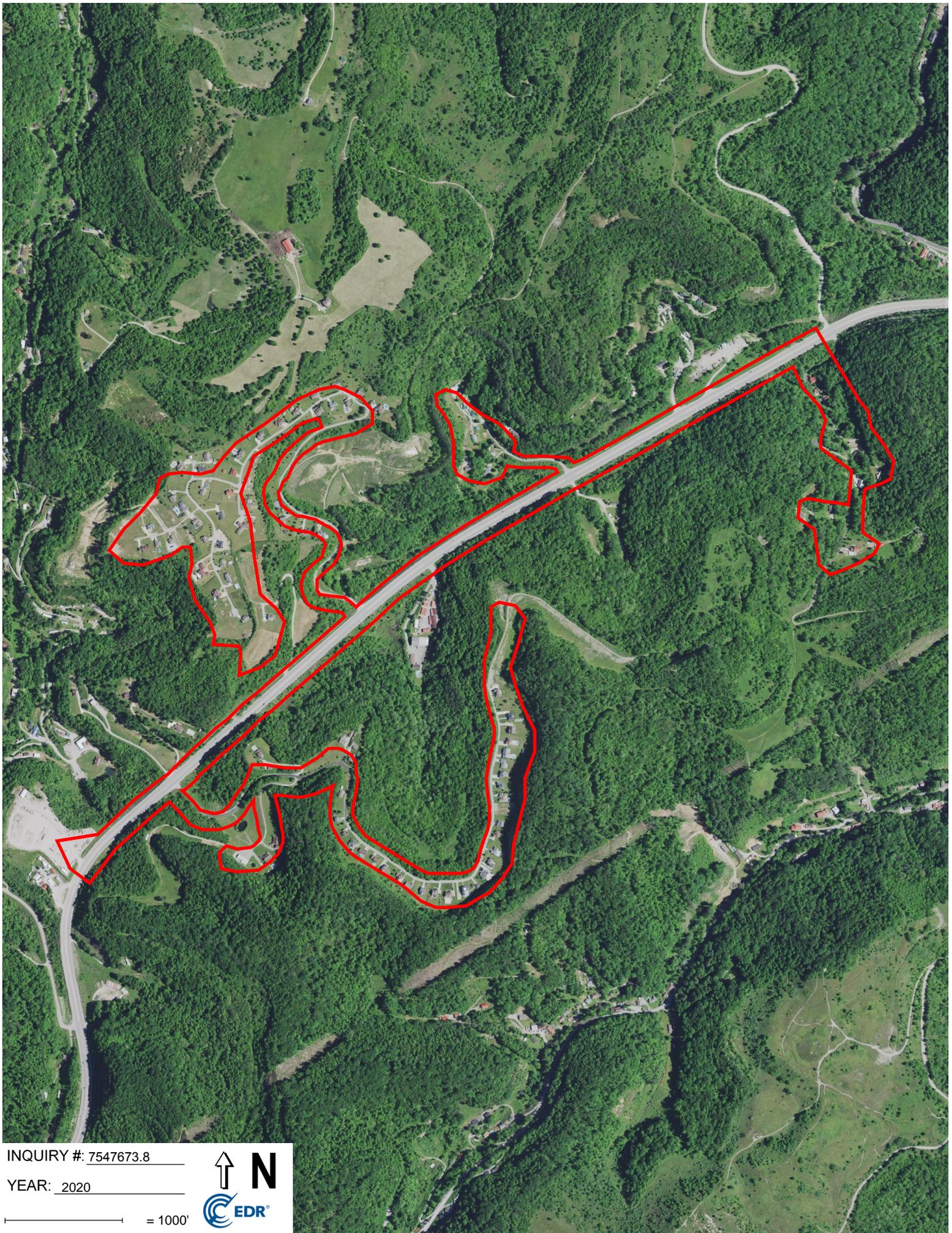
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INQUIRY #: 7547673.8

YEAR: 2020

— = 1000'





INQUIRY #: 7547673.8

YEAR: 2016

— = 1000'





INQUIRY #: 7547673.8

YEAR: 2012

— = 1000'



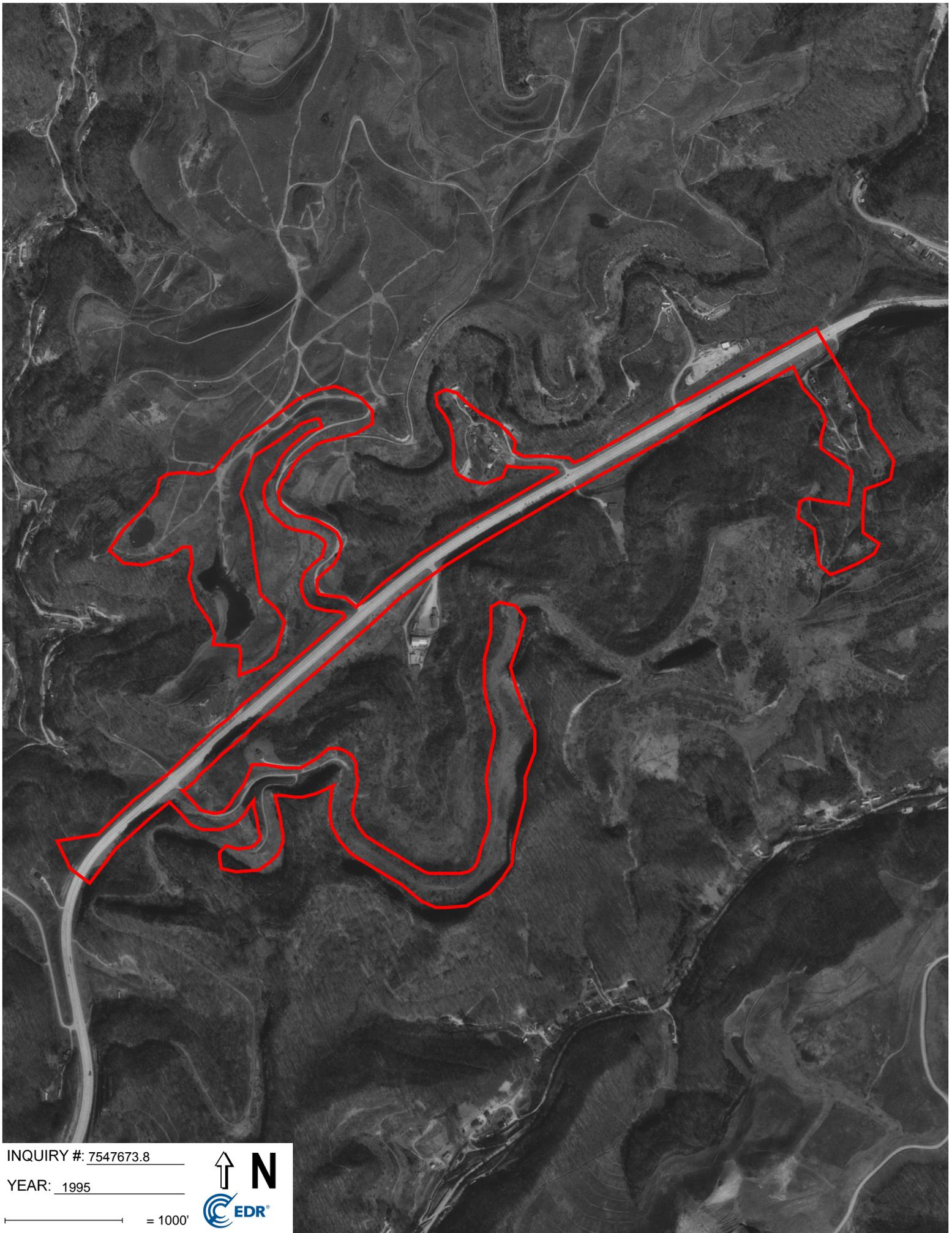


INQUIRY #: 7547673.8

YEAR: 2008

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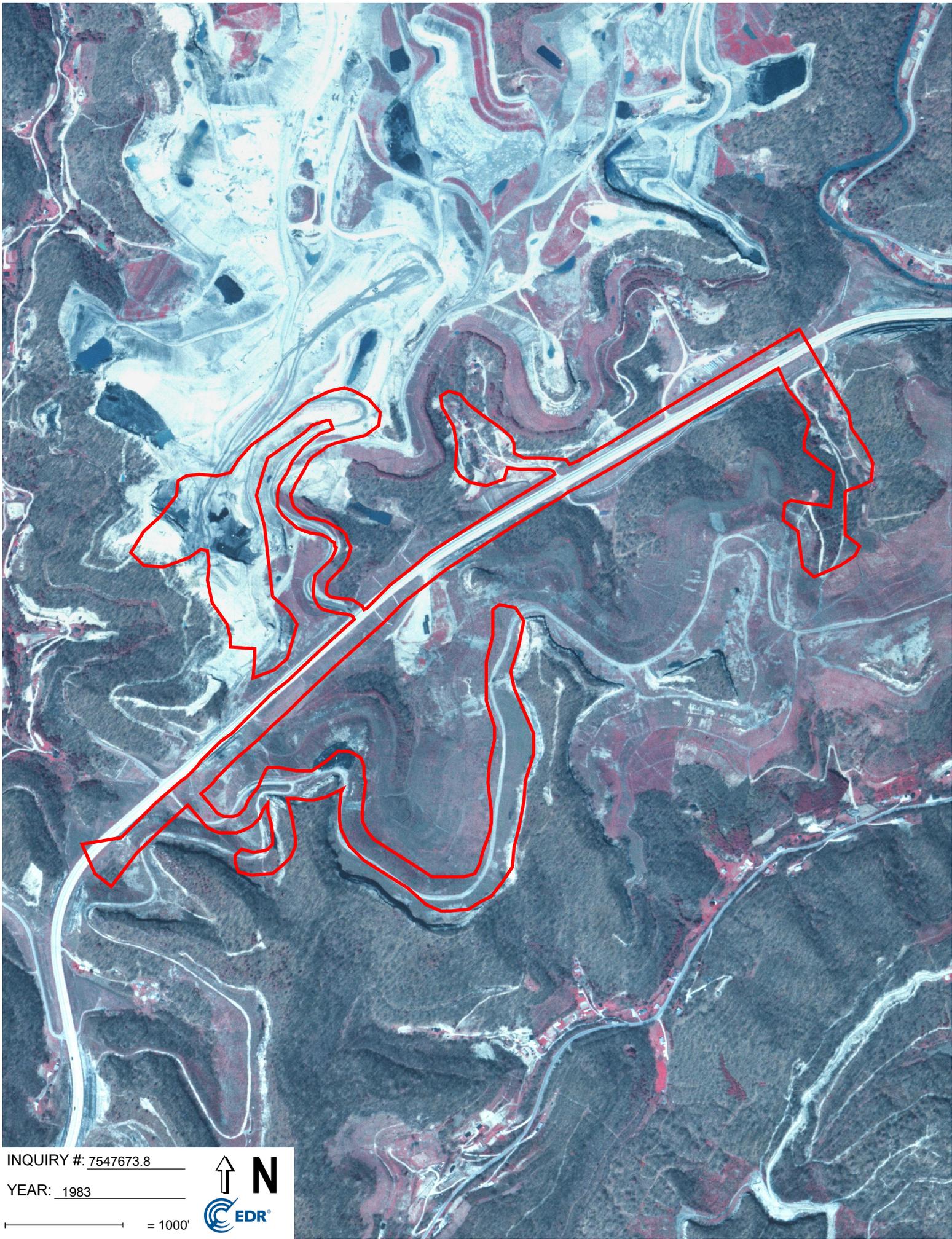


INQUIRY #: 7547673.8

YEAR: 1995

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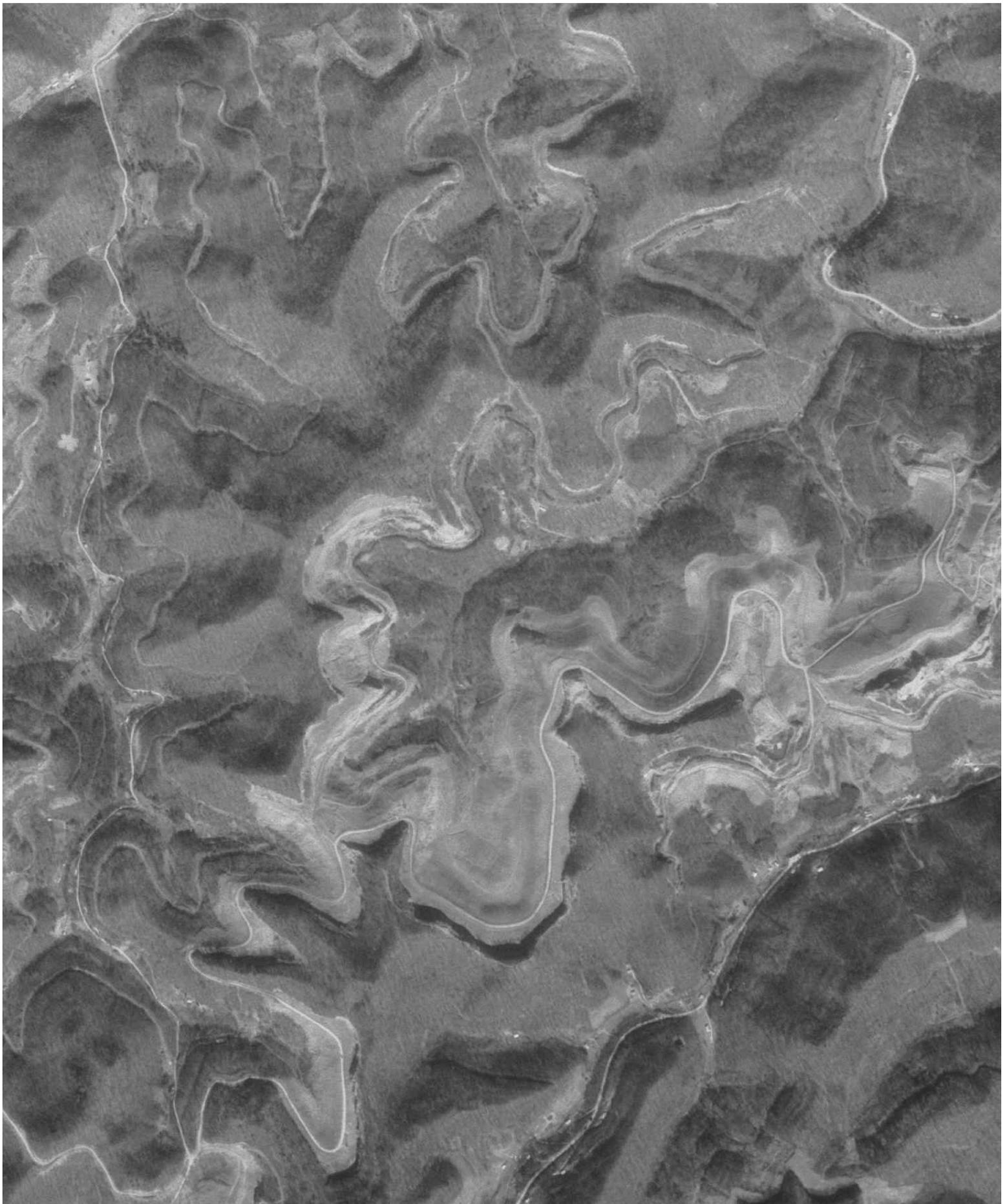


INQUIRY #: 7547673.8

YEAR: 1983

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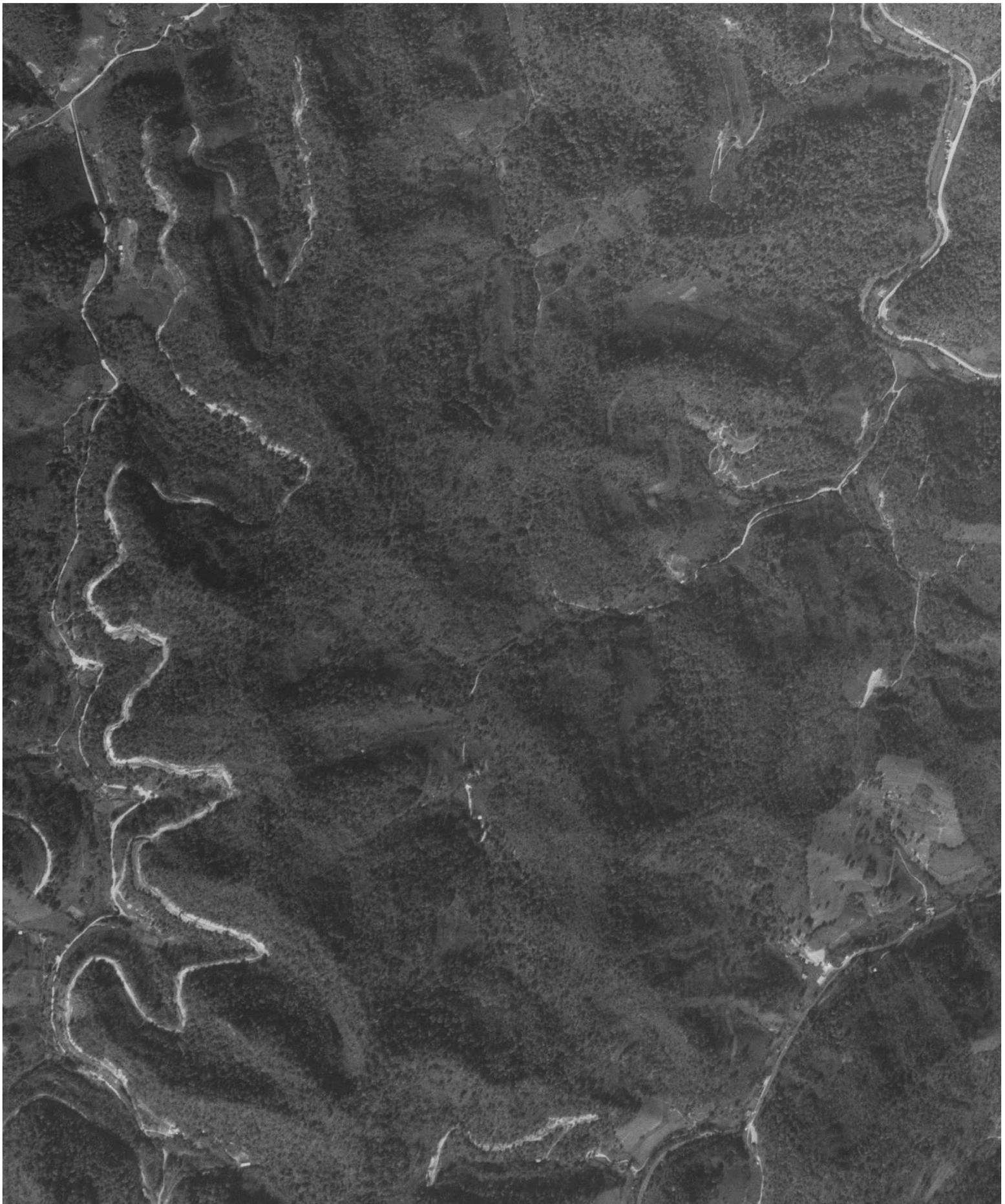
INQUIRY #: 7547673.8

YEAR: 1977

— = 1000'



Subject boundary not shown because it exceeds image extent or image is not georeferenced.



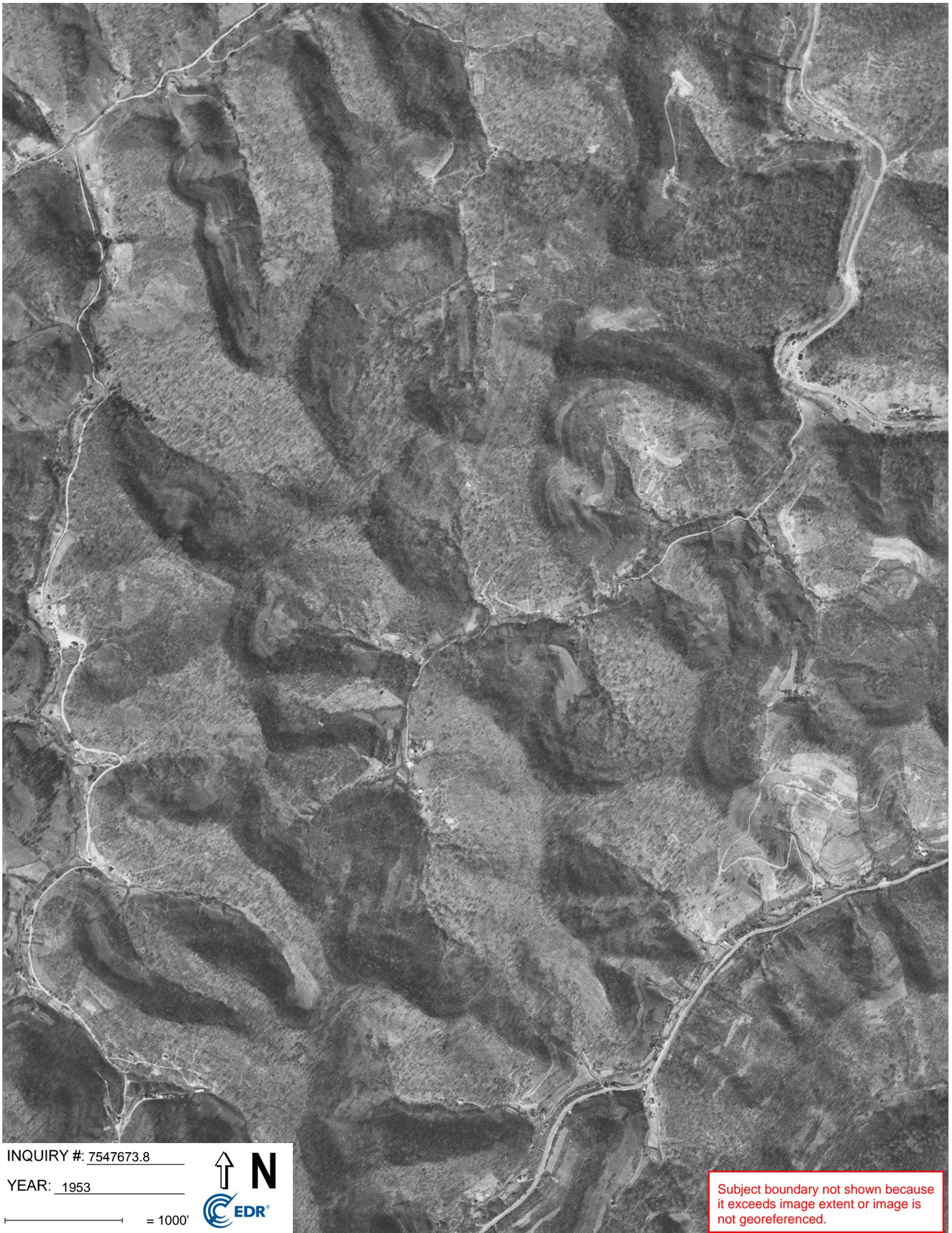
INQUIRY #: 7547673.8

YEAR: 1960

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Subject boundary not shown because it exceeds image extent or image is not georeferenced.



INQUIRY #: 7547673.8

YEAR: 1953

— = 1000'



Subject boundary not shown because it exceeds image extent or image is not georeferenced.

TEA Perry County/Hwy 80 Collection Project Ph III

5000 KY-80

Bulan, KY 41722

Inquiry Number: 7547673.5

January 24, 2024

The EDR-City Directory Image Report

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with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

<u>Year</u>	<u>Target Street</u>	<u>Cross Street</u>	<u>Source</u>
2020	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EDR Digital Archive
2017	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
2014	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
2010	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
2005	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
2000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Cole Information
1995	<input type="checkbox"/>	<input type="checkbox"/>	Cole Information
1992	<input type="checkbox"/>	<input type="checkbox"/>	Cole Information

FINDINGS

TARGET PROPERTY STREET

5000 KY-80
Bulan, KY 41722

Year CD Image Source

E KY HIGHWAY 80

2020	-	Cole Information	Target and Adjoining not listed in Source
2017	pg A2	Cole Information	
2014	pg A4	Cole Information	
2010	pg A6	Cole Information	
2005	pg A8	Cole Information	
2000	pg A10	Cole Information	
1995	-	Cole Information	Street not listed in Source
1992	-	Cole Information	Street not listed in Source

FINDINGS

CROSS STREETS

Year CD Image Source

PIGEONROOST RD

2020	pg. A1	EDR Digital Archive	
2017	pg. A3	Cole Information	
2014	pg. A5	Cole Information	
2010	pg. A7	Cole Information	
2005	pg. A9	Cole Information	
2000	pg. A11	Cole Information	
1995	-	Cole Information	Target and Adjoining not listed in Source
1992	-	Cole Information	Target and Adjoining not listed in Source

City Directory Images

PIGEONROOST RD 2020

339	ADAM BREWER EVA BREWER JENNIFER BREWER
647	REBECCA NOBLE SAMANTHA SLONE TAYLOR SMITH
775	JOSEPH GOODWIN VICKIE GOODWIN
812	CHRISTOPHER COMBS MARDELL COMBS
815	LOIS BOWLING
822	ALMA BURKHART
829	ALMA HOLAND TAYLOR JONES
835	TIMOTHY BUSH
865	MIKE BARTOE TERESA FORD
979	BRENDA WALKER
1078	BENNY SMITH
1192	JEANETTA RISNER JEFFREY COMBS LESLIE COMBS
1219	GLADYS CARTER
1391	ARTHUR STACY BOBBY STACY GARY STACY ROSE STACY
1460	BRANDON OSBORNE
1646	DORIS BREWER
1786	THELMA SMITH
1826	ALICE SMITH

Target Street

Cross Street

Source

✓

-

Cole Information

E KY HIGHWAY 80

2017

4505 HAZARD UTILITIES

PIGEONROOST RD 2017

339	BREWER, ADAM D
448	LOVINS, HERBERT
505	NOBLE, RICHARD E
583	NOBLE, ALBERT
605	WILLIAMS, SHERRY L
647	SMITH, TAYLOR
775	GOODWIN, JOSEPH E
812	SHEPHARD, HARRY
815	BOWLING, LOIS G
822	BURKHART, ALMA
829	HOLAND, ALMA
865	FORD, JAMES A
979	WALKER, BRENDA
1078	SMITH, NANCY
1192	COMBS, KEITH
1219	CARTER, JOE L
1227	ALLEN, OMER E
1425	CORNETT, OULTIE J
1460	STACY, GARY
1646	BREWER, EDDY
1786	SMITH, ESTILL
1826	SMITH, JUSTIN C

Target Street

Cross Street

Source

✓

-

Cole Information

E KY HIGHWAY 80

2014

4747 NAGGARD, SHELIA
4797 MELTON, LINDA
4852 MILLER, C
PIGEON ROOST TOBACCO

PIGEONROOST RD 2014

200	SMITH, BENNY
339	BREWER, ADAM D
448	LOVINS, RILEY
505	ADAMS, HAROLD
583	NOBLE, ALBERT
584	GOODWIN, BILLY
585	NOBLE, RICK
603	NOBLE, RICHARD E
605	WILLIAMS, SHERRY L
609	SHOUSE, GREG
619	WILLIAMS, RHONDA
647	NOBLE, RYAN
775	GOODWIN, JOSEPH E
812	SHEPHARD, HARRY
815	BOWLING, LOIS
822	HICKS, GAIL
829	HOLAND, ALMA
835	FORDS FAMILY TOWING & SERVICES OCCUPANT UNKNOWN,
865	FORD, JAMES A
979	COMMUNITY ALTERNATIVES WALKER, BRENDA
1037	OCCUPANT UNKNOWN,
1078	SMITH, NANCY
1192	COMBS, KEITH
1219	OCCUPANT UNKNOWN,
1227	ALLEN, OMER E
1391	STACEY, GARY
1425	CORNETT, OULTIE J
1450	BREWER, CALVIN
1646	OCCUPANT UNKNOWN,
1656	COMBS, LISA
1786	SMITH, ESTILL
1826	SMITH, ALVERY
1939	MCKINNEY, SAMANTHA
1961	BRADLEY, PATRICK

Target Street

Cross Street

Source

✓

-

Cole Information

E KY HIGHWAY 80

2010

4661 MINER TRUCKING
4747 NAGGARD, SHELIA
4797 MELTON, LINDA
4852 MILLER, BARBARA J
MILLER, CLAY A

PIGEONROOST RD 2010

200	SMITH, BENNY
339	BREWER, EVA
448	LOVINS, RILEY
490	BREWER, DAVID J
583	NOBLE, ALBERT
584	GOODWIN, BILLY
585	NOBLE, RICK
603	NOBLE, RICHARD E
605	WILLIAMS, KASANDRA
609	SHOUSE, GREG
647	COMBS, ESTILL
683	JONES, G
775	GOODWIN, VICKIE L
812	COMBS, KEVIN
815	BOWLING, LOIS
818	COMBS, MICHAEL
822	HICKS, GAIL
829	HOLAND, ALMA
979	BUSH, JUANETTA C
1078	MITCHELL, TINA
1192	COMBS, LESLIE
1219	ALLEN, HERMAN
1227	ALLEN, OMER E
1388	OSBORNE, CORNETT O
1391	STACEY, GARY
1425	FIELDS, BARBARA
1450	BREWER, CALVIN
1451	HANDSHOE, AMY
1593	BREWER, DEWEY
1646	BREWER, DORIS D
1656	COMBS, LISA
1786	SMITH, THELMA
1826	SMITH, ALVERY
1939	MCKINNEY, SAMANTHA
1961	BRADLEY, PATRICK

Target Street

Cross Street

Source

✓

-

Cole Information

E KY HIGHWAY 80

2005

4747 NOBLE, JOHNNY
4852 MILLER, BARBARA J

PIGEONROOST RD 2005

200	SMITH, BENNY
448	LOVINS, RILEY
490	BREWER, DAVID J
505	NOBLE, RICHARD E
583	DIXON, HELEN
591	NOBLE, RICK
683	JONES, G
775	GOODWIN, VICKIE L
812	COMBS, DONALD G
815	BOWLING, LOIS
865	FORD, JAMES
931	WILLIAMS, MIKE
1043	COMBS, ANNA L
1192	COMBS, JEFFREY
1219	ALLEN, HERMAN
1227	ALLEN, OMER E
1391	STACEY, GARY
1425	CORNETT, KATHY
1451	CORNETT, DANNY
1593	BREWER, DEWEY
1646	JOHNSON, NATHANIEL
1826	SMITH, ALVERY
1939	MCKINNEY, SAMANTHA
1961	BRADLEY, NAOMI

Target Street

Cross Street

Source

✓

-

Cole Information

E KY HIGHWAY 80

2000

5955 MILLER, VIRGIL

PIGEONROOST RD 2000

448	LOVINS, RILEY
490	BREWER, DAVID J
775	GOODWIN, VICKIE L
812	COMBS, DONALD G
815	BOWLING, LOIS
818	COMBS, K
835	WILLIAMS, K
888	NOBLE, SUE
1078	FUENTES, JEAN
1192	COMBS, LESLIE
1219	ALLEN, HERMAN
1227	ALLEN, OMER E
1391	STACY, RHONDA
1425	CORNETT, DANNY
1460	STACY, R
1593	BREWER, DEWEY
2150	GIBSON, JOHN P

TEA Perry County/Hwy 80 Collection Project Ph III

5000 KY-80

Bulan, KY 41722

Inquiry Number: 7547673.2s

January 23, 2024

The EDR Radius Map™ Report with GeoCheck®



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

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

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527 - 21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E2247 - 16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E1528 - 22) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

5000 KY-80
BULAN, KY 41722

COORDINATES

Latitude (North): 37.3322560 - 37° 19' 56.12"
Longitude (West): 83.1600640 - 83° 9' 36.23"
Universal Tranverse Mercator: Zone 17
UTM X (Meters): 308628.7
UTM Y (Meters): 4133715.8
Elevation: 1283 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 50024109 HAZARD NORTH, KY
Version Date: 2022

East Map: 50024074 CARRIE, KY
Version Date: 2022

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20200601
Source: USDA

MAPPED SITES SUMMARY

Target Property Address:
 5000 KY-80
 BULAN, KY 41712

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	KYTC PROJECT 224410	KY 80	NPDES	Lower	1 ft.
2			SPILLS	Higher	1 ft.
3			SPILLS	Higher	1 ft.
A4	CID 141040 - FD04 SP	KY 80	NPDES	Lower	1 ft.
5	NOBLE CONSTRUCTION		US MINES	Lower	125, 0.024, NE
B6	NOBLE MINE #1	PIGEON ROOST	US MINES, ABANDONED MINES	Higher	155, 0.029, SW
B7	NOBLE CONSTRUCTION		US MINES	Higher	178, 0.034, SSW
C8	HOP COAL INC		US MINES	Higher	396, 0.075, NNE
C9	HOP COAL INC		US MINES	Higher	396, 0.075, NNE
10	KEN MACK COALS INC		US MINES	Higher	1292, 0.245, ENE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL..... National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY..... Federal Facility Site Information listing
SEMS..... Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE..... Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS..... Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-SQG..... RCRA - Small Quantity Generators
RCRA-VSQG..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS..... Land Use Control Information System

EXECUTIVE SUMMARY

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROLS..... Institutional Controls Sites List

Federal ERNS list

ERNS..... Emergency Response Notification System

Lists of state- and tribal hazardous waste facilities

SHWS..... State Leads List

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF..... Solid Waste Facilities List

Lists of state and tribal leaking storage tanks

PSTEAF..... Facility Ranking List
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land
SB193..... SB193 Branch Site Inventory List

Lists of state and tribal registered storage tanks

FEMA UST..... Underground Storage Tank Listing
UST..... Underground Storage Tank Database
AST..... Above Ground Storage Tanks
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

ENG CONTROLS..... Engineering Controls Site Listing
INST CONTROL..... State Superfund Database

Lists of state and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing
VCP..... Voluntary Cleanup Program Sites

Lists of state and tribal brownfield sites

BROWNFIELDS..... Kentucky Brownfield Inventory

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

HIST LF..... Historical Landfills
SWRCY..... Recycling Facilities
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

EXECUTIVE SUMMARY

ODI..... Open Dump Inventory
IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register
CDL..... Clandestine Drug Lab Location Listing
US CDL..... National Clandestine Laboratory Register

Local Land Records

LIENS 2..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System

Other Ascertainable Records

RCRA NonGen / NLR..... RCRA - Non Generators / No Longer Regulated
FUDS..... Formerly Used Defense Sites
DOD..... Department of Defense Sites
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR..... Financial Assurance Information
EPA WATCH LIST..... EPA WATCH LIST
2020 COR ACTION..... 2020 Corrective Action Program List
TSCA..... Toxic Substances Control Act
TRIS..... Toxic Chemical Release Inventory System
SSTS..... Section 7 Tracking Systems
ROD..... Records Of Decision
RMP..... Risk Management Plans
RAATS..... RCRA Administrative Action Tracking System
PRP..... Potentially Responsible Parties
PADS..... PCB Activity Database System
ICIS..... Integrated Compliance Information System
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS..... Material Licensing Tracking System
COAL ASH DOE..... Steam-Electric Plant Operation Data
COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER..... PCB Transformer Registration Database
RADINFO..... Radiation Information Database
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS..... Incident and Accident Data
CONSENT..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV..... Indian Reservations
FUSRAP..... Formerly Utilized Sites Remedial Action Program
UMTRA..... Uranium Mill Tailings Sites
LEAD SMELTERS..... Lead Smelter Sites
US AIRS..... Aerometric Information Retrieval System Facility Subsystem
MINES MRDS..... Mineral Resources Data System
FINDS..... Facility Index System/Facility Registry System
UXO..... Unexploded Ordnance Sites
ECHO..... Enforcement & Compliance History Information
DOCKET HWC..... Hazardous Waste Compliance Docket Listing

EXECUTIVE SUMMARY

FUELS PROGRAM.....	EPA Fuels Program Registered Listing
PFAS NPL.....	Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES.....	Federal Sites PFAS Information
PFAS TRIS.....	List of PFAS Added to the TRI
PFAS TSCA.....	PFAS Manufacture and Imports Information
PFAS RCRA MANIFEST.....	PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR.....	PFAS Contamination Site Location Listing
PFAS WQP.....	Ambient Environmental Sampling for PFAS
PFAS NPDES.....	Clean Water Act Discharge Monitoring Information
PFAS ECHO.....	Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAINING.....	Facilities in Industries that May Be Handling PFAS Listing
PFAS PART 139 AIRPORT.....	All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC.....	Aqueous Foam Related Incidents Listing
BIOSOLIDS.....	ICIS-NPDES Biosolids Facility Data
PFAS.....	PFAS Detections Site Listing
AIRS.....	Permitted Airs Facility Listing
ASBESTOS.....	Asbestos Notification Listing
COAL ASH.....	Coal Ash Disposal Sites
DRYCLEANERS.....	Drycleaner Listing
Financial Assurance.....	Financial Assurance Information Listing
LEAD.....	Environmental Lead Program Report Tracking Database
UIC.....	UIC Information
UST FINDER.....	UST Finder Database
UST FINDER RELEASE.....	UST Finder Releases Database

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP.....	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto.....	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner.....	EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS.....	Recovered Government Archive State Hazardous Waste Facilities List
RGA LF.....	Recovered Government Archive Solid Waste Facilities List

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

ADDITIONAL ENVIRONMENTAL RECORDS

Records of Emergency Release Reports

SPILLS: A listing of spill and/or release related incidents.

A review of the SPILLS list, as provided by EDR, and dated 10/17/2023 has revealed that there are 2 SPILLS sites within approximately 0.001 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported Facility Status: Env. Closed Inc ID: 2299445		0 - 1/8 (0.000 mi.)	2	8
Not reported Facility Status: Env. Closed Inc ID: 2342672		0 - 1/8 (0.000 mi.)	3	9

Other Ascertainable Records

US MINES: Mines Master Index File. The source of this database is the Dept. of Labor, Mine Safety and Health Administration.

A review of the US MINES list, as provided by EDR, has revealed that there are 6 US MINES sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
NOBLE MINE #1 Database: MINES VIOLATIONS, Date of Government Version: 01/02/2024	PIGEON ROOST	SW 0 - 1/8 (0.029 mi.)	B6	11
NOBLE CONSTRUCTION Database: US MINES, Date of Government Version: 08/01/2023 Mine ID:: 1518399		SSW 0 - 1/8 (0.034 mi.)	B7	18
HOP COAL INC Database: US MINES, Date of Government Version: 08/01/2023 Mine ID:: 1503359		NNE 0 - 1/8 (0.075 mi.)	C8	19
HOP COAL INC Database: US MINES, Date of Government Version: 08/01/2023 Mine ID:: 1506756		NNE 0 - 1/8 (0.075 mi.)	C9	19
KEN MACK COALS INC Database: US MINES, Date of Government Version: 08/01/2023 Mine ID:: 1503607		ENE 1/8 - 1/4 (0.245 mi.)	10	20

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
NOBLE CONSTRUCTION Database: US MINES, Date of Government Version: 08/01/2023 Mine ID:: 1519419		NE 0 - 1/8 (0.024 mi.)	5	11

EXECUTIVE SUMMARY

ABANDONED MINES: An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

A review of the ABANDONED MINES list, as provided by EDR, and dated 11/28/2023 has revealed that there is 1 ABANDONED MINES site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>NOBLE MINE #1</i>	<i>PIGEON ROOST</i>	<i>SW 0 - 1/8 (0.029 mi.)</i>	<i>B6</i>	<i>11</i>

NPDES: A listing of permitted wastewater facilities.

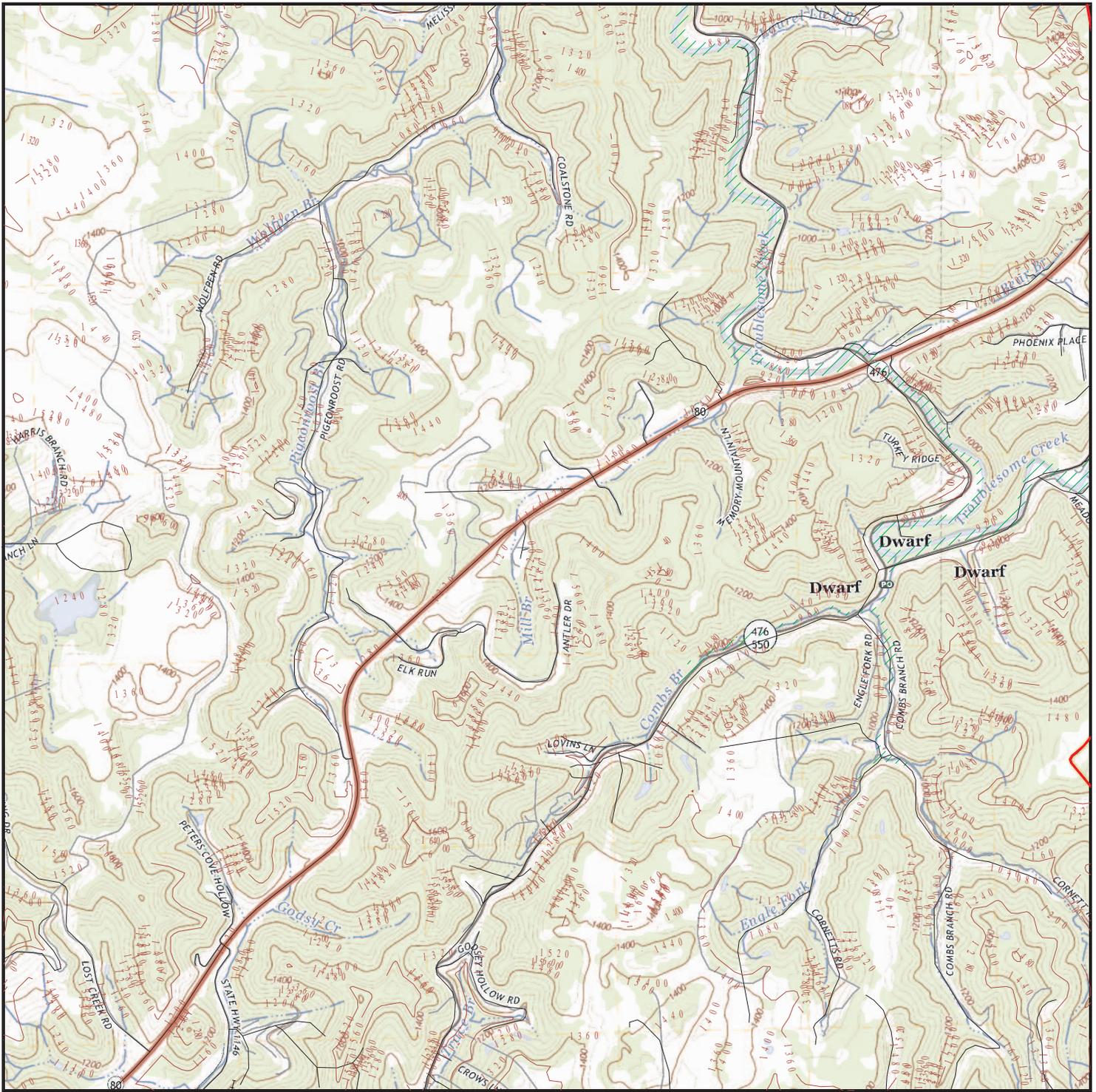
A review of the NPDES list, as provided by EDR, and dated 08/14/2023 has revealed that there are 2 NPDES sites within approximately 0.001 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
KYTC PROJECT 224410 Facility Status: Effective KY DES #: KYR10R185	KY 80	0 - 1/8 (0.000 mi.)	A1	8
CID 141040 - FD04 SP Facility Status: Terminated KY DES #: KYR10I674	KY 80	0 - 1/8 (0.000 mi.)	A4	10

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 7547673.2S



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  National Priority List Sites
-  Dept. Defense Sites

-  Indian Reservations BIA
-  County Boundary
-  Special Flood Hazard Area (1%)
-  0.2% Annual Chance Flood Hazard
-  National Wetland Inventory
-  State Wetlands

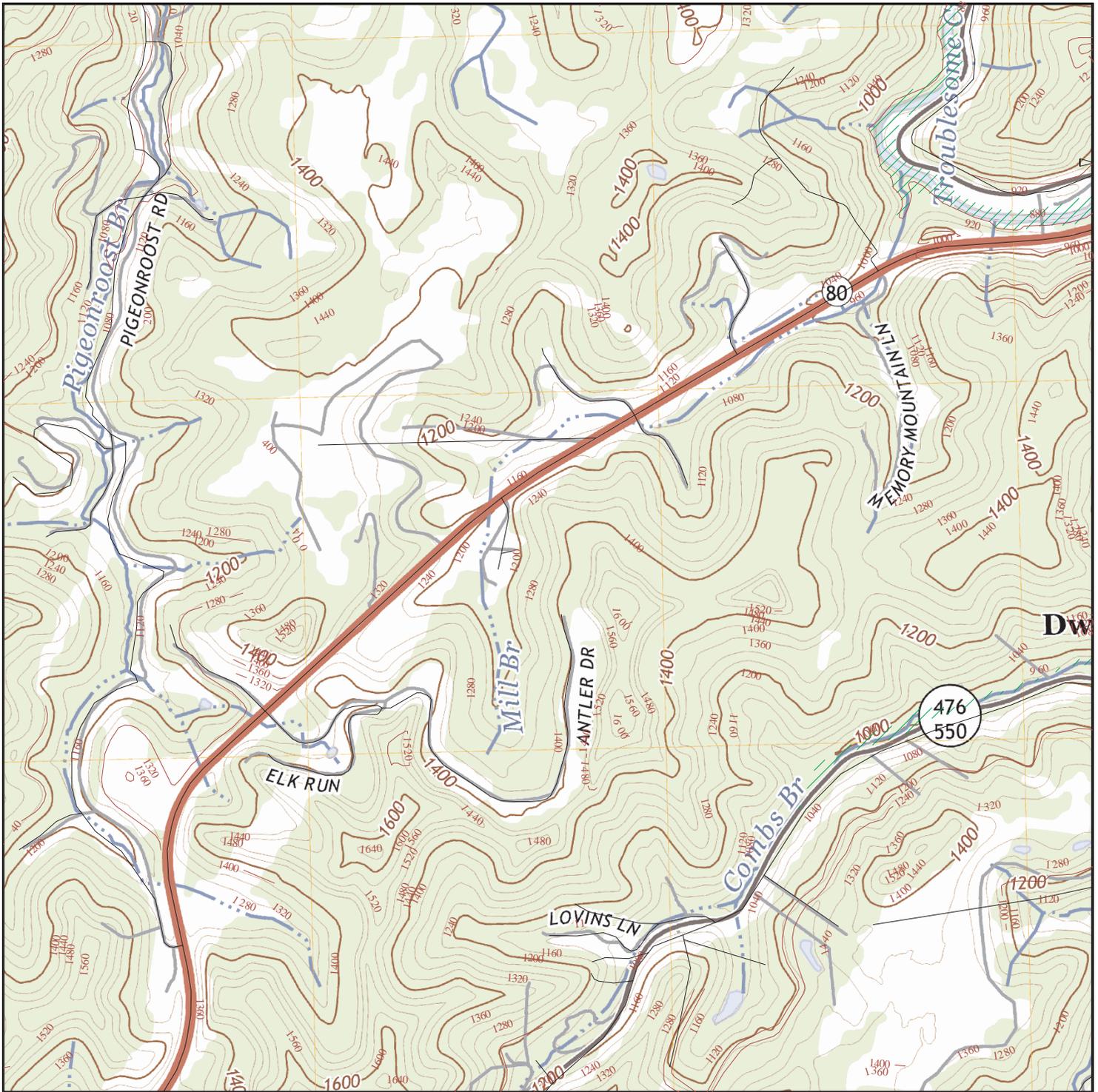


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: TEA Perry County/Hwy 80 Collection Project Ph III
 ADDRESS: 5000 KY-80
 Bulan KY 41722
 LAT/LONG: 37.332256 / 83.160064

CLIENT: R.M. Johnson Engineering, Inc.
 CONTACT: Fred Pennington
 INQUIRY #: 7547673.2s
 DATE: January 23, 2024 12:30 pm

DETAIL MAP - 7547673.2S



- N Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites



- Indian Reservations BIA
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: TEA Perry County/Hwy 80 Collection Project Ph III
 ADDRESS: 5000 KY-80
 Bulan KY 41722
 LAT/LONG: 37.332256 / 83.160064

CLIENT: R.M. Johnson Engineering, Inc.
 CONTACT: Fred Pennington
 INQUIRY #: 7547673.2s
 DATE: January 23, 2024 12:32 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Lists of Federal NPL (Superfund) sites</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
<i>Lists of Federal Delisted NPL sites</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Lists of Federal sites subject to CERCLA removals and CERCLA orders</i>								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
<i>Lists of Federal CERCLA sites with NFRAP</i>								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
<i>Lists of Federal RCRA facilities undergoing Corrective Action</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Lists of Federal RCRA TSD facilities</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Lists of Federal RCRA generators</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	0.001		0	NR	NR	NR	NR	0
<i>Lists of state- and tribal hazardous waste facilities</i>								
SHWS	1.000		0	0	0	0	NR	0
<i>Lists of state and tribal landfills and solid waste disposal facilities</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal leaking storage tanks</i>								
PSTEAF	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
SB193	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal registered storage tanks</i>								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
<i>State and tribal institutional control / engineering control registries</i>								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal voluntary cleanup sites</i>								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
<i>Lists of state and tribal brownfield sites</i>								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
<u>ADDITIONAL ENVIRONMENTAL RECORDS</u>								
<i>Local Brownfield lists</i>								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Landfill / Solid Waste Disposal Sites</i>								
HIST LF	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
<i>Local Lists of Hazardous waste / Contaminated Sites</i>								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
<i>Local Land Records</i>								
LIENS 2	0.001		0	NR	NR	NR	NR	0
<i>Records of Emergency Release Reports</i>								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001		2	NR	NR	NR	NR	2
<i>Other Ascertainable Records</i>								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		5	1	NR	NR	NR	6
MINES MRDS	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		1	0	NR	NR	NR	1
FINDS	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TRIS	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
BIOSOLIDS	0.001		0	NR	NR	NR	NR	0
PFAS	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
AIRS	0.001		0	NR	NR	NR	NR	0
ASBESTOS	0.001		0	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
LEAD	0.001		0	NR	NR	NR	NR	0
NPDES	0.001		2	NR	NR	NR	NR	2
UIC	0.001		0	NR	NR	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0
UST FINDER RELEASE	0.500		0	0	0	NR	NR	0
<u>EDR HIGH RISK HISTORICAL RECORDS</u>								
<i>EDR Exclusive Records</i>								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
<u>EDR RECOVERED GOVERNMENT ARCHIVES</u>								
<i>Exclusive Recovered Govt. Archives</i>								
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0
- Totals --		0	10	1	0	0	0	11

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

A1 **KYTC PROJECT 224410**
KY 80
< 1/8 **COMBS, KY 41729**
1 ft.

NPDES **S130497491**
N/A

Site 1 of 2 in cluster A

Relative:
Lower

Actual:
1202 ft.

NPDES:
 Name: KYTC PROJECT 224410
 Address: KY 80
 City,State,Zip: COMBS, KY 41729
 Federal Facility ID: Not reported
 Facility Status: Effective
 KY DES #: KYR10R185
 Total App# Design Flow (MGD): Not reported
 Horizontal Collect Method Desc: Not reported
 Facility Addr 2: Not reported
 Inactive Date: Not reported
 Design Capacity: Not reported
 Fee Category: Not reported
 SIC Code: 1611
 Lat/Long: 37.33889 / -83.15045
 Lat/Long Method: Not reported
 USGS Hydrologic Basin Code: 027
 Facility Stream Segment: Not reported
 Facility Mileage Indicator: Not reported
 Basin Code: Not reported
 Basin Code Description: Not reported
 DMR Contact: Not reported
 Contact Telephone: Not reported
 Mailing Address: KY 80
 Mailing Address 2: Not reported
 Mailing City,St,Zip: Combs, KY 41729
 Permit Issued: 02/24/2023
 Permit Expires: 11/30/2024
 SIC Code Description: Highway And Street Construction
 Reveiving Waters: Big Creek
 Major/Minor: Minor
 Effective Date: 02/24/2023
 Affiliation Type Desc: Permittee Mailing Address
 Organization Formal Name: KYTC Project 224410
 Facility Type Desc: Not reported
 State Facility ID: 51351
 Original Issue Date: 02/24/2023
 Approved For Electronic DMR Submission: No

2

SPILLS **S117151226**
N/A

< 1/8 **BULAN, KY**
1 ft.

Relative:
Higher

Actual:
1400 ft.

SPILLS:
 Name: Not reported
 Address: Not reported
 City,State,Zip: BULAN, KY
 Facility Status: Env. Closed
 Incident Type: OPEN BURNING
 Program Code: 01
 Received By Staff: Hall, Corey
 Received Date: 08/04/2009
 Report Date: 2009-08-04 15:13:24

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

(Continued)

S117151226

Dispatch Description: Open Burning of Construction Debris
Source Name: Morgan & Son Construction
Source Address: Route 80 turn Left coming from Hazard to Pine Valley Drive. Almost to the very end of road is where the burning is.
Substances: Not reported
Other Substances Desc: Not reported
Media Impacted: Air
Inc ID: 2299445
Lead Invest Person ID: 41054
Compliance: Yes
Notification: No
Priority: Routine
Incident End Date: Not reported
Follow Up Priority Desc: Not reported
Most Recent Comp Eval Activity: Not reported
Most Recent ENF Activity: Not reported
Begin Emergency Date: Not reported
End Emergency Date: Not reported
MARS Function Code: Not reported
Locked: Yes
Closure Type Desc: Env. Closed-No Action Necessary
Waterbody: Not reported
Latitude: 37.34052
Longitude: -83.15533

3

SPILLS S117189930
N/A

< 1/8
1 ft. ARY, KY

Relative:
Higher
Actual:
1322 ft.

SPILLS:

Name: Not reported
Address: Not reported
City,State,Zip: ARY, KY
Facility Status: Env. Closed
Incident Type: WELL-PRIVATE
Program Code: 06
Received By Staff: White, Damon
Received Date: Not reported
Report Date: 2012-01-30 08:22:33
Dispatch Description: Oil/Gas drilling above residence served by groundwater well. Complainant says well water has "changed" since the drilling. Complainant reportedly had well sampled previously and unrelated to the oil/gas drilling to use for comparison.
Source Name: Unknown at this time
Source Address: 558 Memory Mountain Ln, Hazard, KY 41701
Substances: Not reported
Other Substances Desc: Not reported
Media Impacted: Groundwater
Inc ID: 2342672
Lead Invest Person ID: 7115
Compliance: Yes
Notification: No
Priority: Routine
Incident End Date: 2012-03-26 00:00:00
Follow Up Priority Desc: Routine
Most Recent Comp Eval Activity: Not reported
Most Recent ENF Activity: Not reported

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

(Continued)

S117189930

Begin Emergency Date: Not reported
 End Emergency Date: Not reported
 MARS Function Code: Not reported
 Locked: Yes
 Closure Type Desc: Env. Closed-No Action Necessary
 Waterbody: Not reported
 Latitude: 37.34093
 Longitude: 83.138729

A4

**CID 141040 - FD04 SPP 097 0080 011-016 KY 80
 KY 80**

**NPDES S117571719
 N/A**

**< 1/8
 1 ft.**

COMBS, KY 41729

Site 2 of 2 in cluster A

**Relative:
 Lower**

NPDES:

**Actual:
 1200 ft.**

Name: CID 141040 - FD04 SPP 097 0080 011-016 KY 80
 Address: KY 80
 City,State,Zip: COMBS, KY 41729
 Federal Facility ID: Not reported
 Facility Status: Terminated
 KY DES #: KYR10I674
 Total App# Design Flow (MGD): Not reported
 Horizontal Collect Method Desc: Not reported
 Facility Addr 2: Not reported
 Inactive Date: 08/11/2015
 Design Capacity: Not reported
 Fee Category: Not reported
 SIC Code: 1611
 Lat/Long: 37.33889 / -83.15045
 Lat/Long Method: Not reported
 USGS Hydrologic Basin Code: 027
 Facility Stream Segment: Not reported
 Facility Mileage Indicator: Not reported
 Basin Code: Not reported
 Basin Code Description: Not reported
 DMR Contact: Not reported
 Contact Telephone: Not reported
 Mailing Address: KY 80
 Mailing Address 2: Not reported
 Mailing City,St,Zip: Combs, KY 41729
 Permit Issued: 07/31/2014
 Permit Expires: 07/31/2014
 SIC Code Description: Highway And Street Construction
 Reveiving Waters: Mill Branch
 Major/Minor: Minor
 Effective Date: 07/31/2014
 Affiliation Type Desc: Permittee Mailing Address
 Organization Formal Name: CID 141040 - FD04 SPP 097 0080 011-016 KY 80
 Facility Type Desc: Not reported
 State Facility ID: 51351
 Original Issue Date: 07/31/2014
 Approved For Electronic DMR Submission: No

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

5
NE
< 1/8
0.024 mi.
125 ft.

NOBLE CONSTRUCTION
PERRY (County), KY

US MINES **1016484770**
N/A

Relative:
Lower
Actual:
958 ft.

US MINES:
Sic Code(s): 122200
Sic Code(s): 000000
Mine ID: 1519419
Entity Name: NOBLE MINE #2
Company: NOBLE CONSTRUCTION
Status: Active
Status Date: 20161110
Operation Class: 1
Number of Shops: 0
Number of Plants: 0
Latitude Degree: 37
Longitude Degree: 083
Latitude Minute: 20
Latitude Seconds: 42
Longitude Minutes: 08
Longitude Seconds: 16
Number of Pits: 001

B6
SW
< 1/8
0.029 mi.
155 ft.

NOBLE MINE #1
PIGEON ROOST
PIGEON ROOST, KY 41722
Site 1 of 2 in cluster B

US MINES **1024911150**
ABANDONED MINES **N/A**

Relative:
Higher
Actual:
1360 ft.

MINES VIOLATIONS:
Name: NOBLE MINE #1
Address: PIGEON ROOST
City,State,Zip: PIGEON ROOST, KY 41722
Facility ID: Not reported

MINES VIOLATIONS:
Violation Number: 7500369
Mine ID: 1518399
Contractor ID: Not reported
Date Issued: 01/21/2003
Action Type: 104(a)
Type of Issue: Citation
S and S: N
Term Date: 01/21/2003
Title 30 Code of Federal Regulations: 77.404(a)
Proposed Penalty: 55
Assessment Amount: 55
Paid Penalty Amount: 55
Assessment Case Status: Proposed
Assessment Status: Closed
Year: 2003
Address Type: MineLocation
PO Box: Not reported
Address: PIGEON ROOST

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

NOBLE MINE #1 (Continued)

1024911150

City: PIGEON ROOST
State: KY
Operator: Noble Construction
Zip: 41722
Mine Controller Name: Richard E Noble
Name: NOBLE MINE #1
Ownership Date: 06/01/2001
Mine Status: Abandoned
Status Date: 10/25/2006
Primary Site Description: Coal (Bituminous)
Mine Type: Surface
State 2: KY
County: PERRY

Violation Number: 7472819
Mine ID: 1518399
Contractor ID: Not reported
Date Issued: 09/19/2003
Action Type: 104(a)
Type of Issue: Citation
S and S: Y
Term Date: 09/23/2003
Title 30 Code of Federal Regulations: 77.404(a)
Proposed Penalty: 83
Assessment Amount: 83
Paid Penalty Amount: 83
Assessment Case Status: Proposed
Assessment Status: Closed
Year: 2003
Address Type: MineLocation
PO Box: Not reported
Address: PIGEON ROOST
City: PIGEON ROOST
State: KY
Operator: Noble Construction
Zip: 41722
Mine Controller Name: Richard E Noble
Name: NOBLE MINE #1
Ownership Date: 06/01/2001
Mine Status: Abandoned
Status Date: 10/25/2006
Primary Site Description: Coal (Bituminous)
Mine Type: Surface
State 2: KY
County: PERRY

Violation Number: 7472820
Mine ID: 1518399
Contractor ID: Not reported
Date Issued: 09/19/2003
Action Type: 104(a)
Type of Issue: Citation
S and S: N
Term Date: 09/23/2003
Title 30 Code of Federal Regulations: 77.410(a)(1)
Proposed Penalty: 60
Assessment Amount: 60

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

NOBLE MINE #1 (Continued)

1024911150

Paid Penalty Amount: 60
Assessment Case Status: Proposed
Assessment Status: Closed
Year: 2003
Address Type: MineLocation
PO Box: Not reported
Address: PIGEON ROOST
City: PIGEON ROOST
State: KY
Operator: Noble Construction
Zip: 41722
Mine Controller Name: Richard E Noble
Name: NOBLE MINE #1
Ownership Date: 06/01/2001
Mine Status: Abandoned
Status Date: 10/25/2006
Primary Site Description: Coal (Bituminous)
Mine Type: Surface
State 2: KY
County: PERRY

Violation Number: 7473955
Mine ID: 1518399
Contractor ID: Not reported
Date Issued: 03/29/2005
Action Type: 104(a)
Type of Issue: Citation
S and S: N
Term Date: 04/11/2005
Title 30 Code of Federal Regulations: 71.403(a)
Proposed Penalty: 60.00
Assessment Amount: 60.00
Paid Penalty Amount: 60.00
Assessment Case Status: Proposed
Assessment Status: Closed
Year: 2005
Address Type: MineLocation
PO Box: Not reported
Address: PIGEON ROOST
City: PIGEON ROOST
State: KY
Operator: Noble Construction
Zip: 41722
Mine Controller Name: Richard E Noble
Name: NOBLE MINE #1
Ownership Date: 06/01/2001
Mine Status: Abandoned
Status Date: 10/25/2006
Primary Site Description: Coal (Bituminous)
Mine Type: Surface
State 2: KY
County: PERRY

Violation Number: 7473956
Mine ID: 1518399
Contractor ID: Not reported
Date Issued: 03/29/2005

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

NOBLE MINE #1 (Continued)

1024911150

Action Type: 104(a)
Type of Issue: Citation
S and S: Y
Term Date: 03/30/2005
Title 30 Code of Federal Regulations: 77.1605(k)
Proposed Penalty: 76.00
Assessment Amount: 76.00
Paid Penalty Amount: 76.00
Assessment Case Status: Proposed
Assessment Status: Closed
Year: 2005
Address Type: MineLocation
PO Box: Not reported
Address: PIGEON ROOST
City: PIGEON ROOST
State: KY
Operator: Noble Construction
Zip: 41722
Mine Controller Name: Richard E Noble
Name: NOBLE MINE #1
Ownership Date: 06/01/2001
Mine Status: Abandoned
Status Date: 10/25/2006
Primary Site Description: Coal (Bituminous)
Mine Type: Surface
State 2: KY
County: PERRY

Violation Number: 7473957
Mine ID: 1518399
Contractor ID: Not reported
Date Issued: 03/29/2005
Action Type: 104(a)
Type of Issue: Citation
S and S: N
Term Date: 03/29/2005
Title 30 Code of Federal Regulations: 77.1713(c)
Proposed Penalty: 60.00
Assessment Amount: 60.00
Paid Penalty Amount: 60.00
Assessment Case Status: Proposed
Assessment Status: Closed
Year: 2005
Address Type: MineLocation
PO Box: Not reported
Address: PIGEON ROOST
City: PIGEON ROOST
State: KY
Operator: Noble Construction
Zip: 41722
Mine Controller Name: Richard E Noble
Name: NOBLE MINE #1
Ownership Date: 06/01/2001
Mine Status: Abandoned
Status Date: 10/25/2006
Primary Site Description: Coal (Bituminous)
Mine Type: Surface

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

NOBLE MINE #1 (Continued)

1024911150

State 2: KY
County: PERRY

Violation Number: 7473958
Mine ID: 1518399
Contractor ID: Not reported
Date Issued: 03/29/2005
Action Type: 104(a)
Type of Issue: Citation
S and S: N
Term Date: 03/29/2005
Title 30 Code of Federal Regulations: 77.410(a)(1)
Proposed Penalty: 60.00
Assessment Amount: 60.00
Paid Penalty Amount: 60.00
Assessment Case Status: Proposed
Assessment Status: Closed
Year: 2005
Address Type: MineLocation
PO Box: Not reported
Address: PIGEON ROOST
City: PIGEON ROOST
State: KY
Operator: Noble Construction
Zip: 41722
Mine Controller Name: Richard E Noble
Name: NOBLE MINE #1
Ownership Date: 06/01/2001
Mine Status: Abandoned
Status Date: 10/25/2006
Primary Site Description: Coal (Bituminous)
Mine Type: Surface
State 2: KY
County: PERRY

Violation Number: 7473959
Mine ID: 1518399
Contractor ID: Not reported
Date Issued: 03/29/2005
Action Type: 104(a)
Type of Issue: Citation
S and S: N
Term Date: 03/29/2005
Title 30 Code of Federal Regulations: 77.410(a)(1)
Proposed Penalty: 60.00
Assessment Amount: 60.00
Paid Penalty Amount: 60.00
Assessment Case Status: Proposed
Assessment Status: Closed
Year: 2005
Address Type: MineLocation
PO Box: Not reported
Address: PIGEON ROOST
City: PIGEON ROOST
State: KY
Operator: Noble Construction
Zip: 41722

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

NOBLE MINE #1 (Continued)

1024911150

Mine Controller Name: Richard E Noble
Name: NOBLE MINE #1
Ownership Date: 06/01/2001
Mine Status: Abandoned
Status Date: 10/25/2006
Primary Site Description: Coal (Bituminous)
Mine Type: Surface
State 2: KY
County: PERRY

Violation Number: 7473960
Mine ID: 1518399
Contractor ID: Not reported
Date Issued: 03/29/2005
Action Type: 104(a)
Type of Issue: Citation
S and S: Y
Term Date: 04/11/2005
Title 30 Code of Federal Regulations: 77.404(a)
Proposed Penalty: 76.00
Assessment Amount: 76.00
Paid Penalty Amount: 76.00
Assessment Case Status: Proposed
Assessment Status: Closed
Year: 2005
Address Type: MineLocation
PO Box: Not reported
Address: PIGEON ROOST
City: PIGEON ROOST
State: KY
Operator: Noble Construction
Zip: 41722
Mine Controller Name: Richard E Noble
Name: NOBLE MINE #1
Ownership Date: 06/01/2001
Mine Status: Abandoned
Status Date: 10/25/2006
Primary Site Description: Coal (Bituminous)
Mine Type: Surface
State 2: KY
County: PERRY

Violation Number: 7473961
Mine ID: 1518399
Contractor ID: Not reported
Date Issued: 03/29/2005
Action Type: 104(a)
Type of Issue: Citation
S and S: Y
Term Date: 03/30/2005
Title 30 Code of Federal Regulations: 77.404(a)
Proposed Penalty: 76.00
Assessment Amount: 76.00
Paid Penalty Amount: 76.00
Assessment Case Status: Proposed
Assessment Status: Closed
Year: 2005

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

NOBLE MINE #1 (Continued)

1024911150

Address Type: MineLocation
PO Box: Not reported
Address: PIGEON ROOST
City: PIGEON ROOST
State: KY
Operator: Noble Construction
Zip: 41722
Mine Controller Name: Richard E Noble
Name: NOBLE MINE #1
Ownership Date: 06/01/2001
Mine Status: Abandoned
Status Date: 10/25/2006
Primary Site Description: Coal (Bituminous)
Mine Type: Surface
State 2: KY
County: PERRY

Violation Number: 7473962
Mine ID: 1518399
Contractor ID: Not reported
Date Issued: 03/29/2005
Action Type: 104(a)
Type of Issue: Citation
S and S: Y
Term Date: 04/11/2005
Title 30 Code of Federal Regulations: 77.404(a)
Proposed Penalty: 76.00
Assessment Amount: 76.00
Paid Penalty Amount: 76.00
Assessment Case Status: Proposed
Assessment Status: Closed
Year: 2005

Address Type: MineLocation
PO Box: Not reported
Address: PIGEON ROOST
City: PIGEON ROOST
State: KY
Operator: Noble Construction
Zip: 41722
Mine Controller Name: Richard E Noble
Name: NOBLE MINE #1
Ownership Date: 06/01/2001
Mine Status: Abandoned
Status Date: 10/25/2006
Primary Site Description: Coal (Bituminous)
Mine Type: Surface
State 2: KY
County: PERRY

[Click this hyperlink](#) while viewing on your computer to access
50 additional US_MINES_VIOLATIONS: record(s) in the EDR Site Report.

ABANDONED MINES:

Mine ID: 1518399
Mine Name: NOBLE MINE #1
Mine Address: PIGEON ROOST

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

NOBLE MINE #1 (Continued)

1024911150

City,State,Zip: PIGEON ROOST, KY 41722
 Primary SIC Code: Coal (Bituminous)
 Mine Type: Surface
 Mine Status Description: Abandoned
 Mine Status Date: 10/25/2006
 Coal (C) or Metal (M) Mine: C
 Controller ID: C16059
 Controller Name: Richard E Noble
 Operator ID: P24653
 Operator name: Noble Construction
 Address of Record Street: P. O. Box 83
 Address of Record PO Box: Not reported
 Address of Record City: Bulan
 Address of Record State: KY
 Address of Record Zip Code: 41722
 Assessment Address Street: P. O. Box 83
 Assessment Address PO Box: Not reported
 Assessment Address City: Bulan
 Assessment Address State: KY
 Assessment Address Zip Code: 41722
 Mine Health and Safety Address Street: Not reported
 Mine Health and Safety Address PO Box: 83
 Mine Health and Safety Address City: Bulan
 Mine Health and Safety Address State: KY
 Mine Health and Safety Address Zip Code: Not reported
 Latitude: 37.331944
 Longitude: -83.160555

B7
SSW
 < 1/8
 0.034 mi.
 178 ft.

NOBLE CONSTRUCTION
PERRY (County), KY
Site 2 of 2 in cluster B

US MINES 1016484283
N/A

Relative:
Higher
Actual:
1309 ft.

US MINES:
 Sic Code(s): 122200
 Sic Code(s): 000000
 Mine ID: 1518399
 Entity Name: NOBLE MINE #1
 Company: NOBLE CONSTRUCTION
 Status: Permanently Closed
 Status Date: 20061025
 Operation Class: 1
 Number of Shops: 0
 Number of Plants: 0
 Latitude Degree: 37
 Longitude Degree: 083
 Latitude Minute: 19
 Latitude Seconds: 54
 Longitude Minutes: 09
 Longitude Seconds: 37
 Number of Pits: 000

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

C8 **HOP COAL INC**
NNE
< 1/8 **HARLAN (County), KY**
0.075 mi.
396 ft. **Site 1 of 2 in cluster C**

US MINES **1011157446**
 N/A

Relative: **US MINES:**
Higher Sic Code(s): 122200
 Sic Code(s): 000000
Actual: Sic Code(s): 000000
1341 ft. Sic Code(s): 000000
 Sic Code(s): 000000
 Sic Code(s): 000000
 Mine ID: 1503359
 Entity Name: SURFACE MINE
 Company: HOP COAL INC
 Status: Permanently Closed
 Status Date: 19780227
 Operation Class: 1
 Number of Shops: 0
 Number of Plants: 0
 Latitude Degree: 00
 Longitude Degree: 000
 Latitude Minute: 00
 Latitude Seconds: 00
 Longitude Minutes: 00
 Longitude Seconds: 00
 Number of Pits: 000

C9 **HOP COAL INC**
NNE
< 1/8 **PERRY (County), KY**
0.075 mi.
396 ft. **Site 2 of 2 in cluster C**

US MINES **1016480192**
 N/A

Relative: **US MINES:**
Higher Sic Code(s): 122200
 Sic Code(s): 000000
Actual: Sic Code(s): 000000
1341 ft. Sic Code(s): 000000
 Sic Code(s): 000000
 Sic Code(s): 000000
 Mine ID: 1506756
 Entity Name: NO 1 SURFACE MINE
 Company: HOP COAL INC
 Status: Permanently Closed
 Status Date: 19800609
 Operation Class: 1
 Number of Shops: 0
 Number of Plants: 0
 Latitude Degree: 00
 Longitude Degree: 000
 Latitude Minute: 00
 Latitude Seconds: 00
 Longitude Minutes: 00
 Longitude Seconds: 00
 Number of Pits: 000

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

10
ENE
1/8-1/4
0.245 mi.
1292 ft.

KEN MACK COALS INC
PERRY (County), KY

US MINES **1016478316**
 N/A

Relative:
Higher
Actual:
1411 ft.

US MINES:
 Sic Code(s): 122200
 Sic Code(s): 000000
 Mine ID: 1503607
 Entity Name: NO 1 STRIP MINE
 Company: KEN MACK COALS INC
 Status: Permanently Closed
 Status Date: 19761102
 Operation Class: 1
 Number of Shops: 0
 Number of Plants: 0
 Latitude Degree: 00
 Longitude Degree: 000
 Latitude Minute: 00
 Latitude Seconds: 00
 Longitude Minutes: 00
 Longitude Seconds: 00
 Number of Pits: 000

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
NO SITES FOUND					

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/19/2023	Source: EPA
Date Data Arrived at EDR: 10/03/2023	Telephone: N/A
Date Made Active in Reports: 10/19/2023	Last EDR Contact: 01/02/2024
Number of Days to Update: 16	Next Scheduled EDR Contact: 04/08/2024
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 09/19/2023	Source: EPA
Date Data Arrived at EDR: 10/03/2023	Telephone: N/A
Date Made Active in Reports: 10/19/2023	Last EDR Contact: 01/02/2024
Number of Days to Update: 16	Next Scheduled EDR Contact: 04/08/2024
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: N/A
Last EDR Contact: 01/02/2024
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 09/25/2023
Date Data Arrived at EDR: 09/26/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 12/20/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly known as CERCLIS, renamed to SEMs by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 01/02/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 09/19/2023	Source: EPA
Date Data Arrived at EDR: 10/03/2023	Telephone: 800-424-9346
Date Made Active in Reports: 10/19/2023	Last EDR Contact: 01/02/2024
Number of Days to Update: 16	Next Scheduled EDR Contact: 04/22/2024
	Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/04/2023	Source: EPA
Date Data Arrived at EDR: 12/06/2023	Telephone: 800-424-9346
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/06/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (404) 562-8651
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/06/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (404) 562-8651
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/06/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (404) 562-8651
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/06/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/04/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/06/2023	Telephone: (404) 562-8651
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/06/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/03/2023	Source: Department of the Navy
Date Data Arrived at EDR: 08/07/2023	Telephone: 843-820-7326
Date Made Active in Reports: 10/10/2023	Last EDR Contact: 11/02/2023
Number of Days to Update: 64	Next Scheduled EDR Contact: 02/19/2024
	Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/21/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/21/2023	Telephone: 703-603-0695
Date Made Active in Reports: 11/07/2023	Last EDR Contact: 11/17/2023
Number of Days to Update: 78	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/21/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/21/2023	Telephone: 703-603-0695
Date Made Active in Reports: 11/07/2023	Last EDR Contact: 11/17/2023
Number of Days to Update: 78	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/18/2023

Date Data Arrived at EDR: 09/20/2023

Date Made Active in Reports: 12/11/2023

Number of Days to Update: 82

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180

Last EDR Contact: 12/13/2023

Next Scheduled EDR Contact: 04/01/2024

Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

SHWS: State Leads List

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 11/27/2023

Date Data Arrived at EDR: 11/29/2023

Date Made Active in Reports: 12/05/2023

Number of Days to Update: 6

Source: Department of Environmental Protection

Telephone: 502-564-6716

Last EDR Contact: 11/15/2023

Next Scheduled EDR Contact: 03/04/2024

Data Release Frequency: Quarterly

Lists of state and tribal landfills and solid waste disposal facilities

SWF/LF: Solid Waste Facilities List

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/22/2023

Date Data Arrived at EDR: 08/24/2023

Date Made Active in Reports: 11/03/2023

Number of Days to Update: 71

Source: Department of Environmental Protection

Telephone: 502-564-6716

Last EDR Contact: 10/28/2023

Next Scheduled EDR Contact: 02/05/2024

Data Release Frequency: Semi-Annually

Lists of state and tribal leaking storage tanks

PSTEAF: Facility Ranking List

The Underground Storage Tank Branch (USTB) has ranked all PSTEAF reimbursable facilities requiring corrective action, in accordance with 401 KAR 42:290. Directive letters will be issued on the basis of facility ranking and available PSTEAF funding in sequential order as ranked. For example, Rank 2 facilities will be issued directives before Rank 3 facilities.

Date of Government Version: 09/01/2023

Date Data Arrived at EDR: 10/04/2023

Date Made Active in Reports: 12/21/2023

Number of Days to Update: 78

Source: Department of Environmental Protection

Telephone: 502-564-5981

Last EDR Contact: 01/04/2024

Next Scheduled EDR Contact: 04/15/2024

Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/20/2023

Date Data Arrived at EDR: 05/09/2023

Date Made Active in Reports: 07/14/2023

Number of Days to Update: 66

Source: EPA Region 10

Telephone: 206-553-2857

Last EDR Contact: 01/17/2024

Next Scheduled EDR Contact: 04/29/2024

Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/20/2023	Source: EPA Region 1
Date Data Arrived at EDR: 05/09/2023	Telephone: 617-918-1313
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/14/2023	Source: EPA, Region 5
Date Data Arrived at EDR: 05/09/2023	Telephone: 312-886-7439
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/26/2023	Source: EPA Region 6
Date Data Arrived at EDR: 05/09/2023	Telephone: 214-665-6597
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 04/20/2023	Source: EPA Region 4
Date Data Arrived at EDR: 05/09/2023	Telephone: 404-562-8677
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/19/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/09/2023	Telephone: 415-972-3372
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/25/2023	Source: EPA Region 7
Date Data Arrived at EDR: 05/09/2023	Telephone: 913-551-7003
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/19/2023	Source: EPA Region 8
Date Data Arrived at EDR: 05/09/2023	Telephone: 303-312-6271
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SB193: SB193 Branch Site Inventory List

The inventory indicates facilities that have performed permanent closure activities at a regulated underground storage tank facility and have known soil and/or groundwater contamination.

Date of Government Version: 09/05/2006	Source: Department of Environmental Protection
Date Data Arrived at EDR: 09/13/2006	Telephone: 502-564-5981
Date Made Active in Reports: 10/18/2006	Last EDR Contact: 04/08/2016
Number of Days to Update: 35	Next Scheduled EDR Contact: 07/25/2016
	Data Release Frequency: No Update Planned

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 03/08/2023	Source: FEMA
Date Data Arrived at EDR: 03/09/2023	Telephone: 202-646-5797
Date Made Active in Reports: 05/30/2023	Last EDR Contact: 01/11/2024
Number of Days to Update: 82	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: Varies

UST: Underground Storage Tank Database

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/11/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 08/22/2023	Telephone: 502-564-5981
Date Made Active in Reports: 11/06/2023	Last EDR Contact: 11/17/2023
Number of Days to Update: 76	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Quarterly

AST: Above Ground Storage Tanks

A listing of aboveground storage tank site locations.

Date of Government Version: 11/06/2023	Source: Office of State Fire Marshal
Date Data Arrived at EDR: 11/09/2023	Telephone: 502-564-4010
Date Made Active in Reports: 11/20/2023	Last EDR Contact: 11/01/2023
Number of Days to Update: 11	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/19/2023	Source: EPA Region 9
Date Data Arrived at EDR: 05/09/2023	Telephone: 415-972-3368
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/20/2023	Source: EPA Region 8
Date Data Arrived at EDR: 05/09/2023	Telephone: 303-312-6137
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/25/2023	Source: EPA Region 7
Date Data Arrived at EDR: 05/09/2023	Telephone: 913-551-7003
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/20/2023	Source: EPA, Region 1
Date Data Arrived at EDR: 05/09/2023	Telephone: 617-918-1313
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/14/2023	Source: EPA Region 5
Date Data Arrived at EDR: 05/09/2023	Telephone: 312-886-6136
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/26/2023	Source: EPA Region 6
Date Data Arrived at EDR: 05/09/2023	Telephone: 214-665-7591
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/20/2023	Source: EPA Region 10
Date Data Arrived at EDR: 05/09/2023	Telephone: 206-553-2857
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 04/20/2023	Source: EPA Region 4
Date Data Arrived at EDR: 05/09/2023	Telephone: 404-562-9424
Date Made Active in Reports: 07/14/2023	Last EDR Contact: 01/17/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Controls Site Listing

A listing of sites that use engineering controls.

Date of Government Version: 11/28/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 11/29/2023	Telephone: 502-564-6716
Date Made Active in Reports: 12/05/2023	Last EDR Contact: 11/15/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Varies

INST CONTROL: State Superfund Database

A list of closed sites in the State Superfund Database. Institutional controls would be in place at any site that uses Contained or Managed as a Closure Option.

Date of Government Version: 11/28/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 11/29/2023	Telephone: 502-564-6716
Date Made Active in Reports: 12/05/2023	Last EDR Contact: 11/15/2023
Number of Days to Update: 6	Next Scheduled EDR Contact: 03/04/2024
	Data Release Frequency: Varies

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015	Source: EPA, Region 1
Date Data Arrived at EDR: 09/29/2015	Telephone: 617-918-1102
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 12/12/2023
Number of Days to Update: 142	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Sites

Sites that have been accepted into the Voluntary Cleanup Program or have submitted an application.

Date of Government Version: 01/09/2024	Source: Department of Environmental Protection
Date Data Arrived at EDR: 01/11/2024	Telephone: 502-564-6716
Date Made Active in Reports: 01/12/2024	Last EDR Contact: 12/19/2023
Number of Days to Update: 1	Next Scheduled EDR Contact: 04/08/2024
	Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: 913-551-7365
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 07/08/2021
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

Lists of state and tribal brownfield sites

BROWNFIELDS: Kentucky Brownfield Inventory

The Kentucky Brownfield Program has created an inventory of brownfield sites in order to market the properties to those interested in brownfield redevelopment. The Kentucky Brownfield Program is working to promote the redevelopment of these sites by helping to remove barriers that prevent reuse, providing useful information to communities, developers and the public and encouraging a climate that fosters redevelopment of contaminated sites.

Date of Government Version: 10/20/2023	Source: Division of Compliance Assistance
Date Data Arrived at EDR: 10/25/2023	Telephone: 502-564-0323
Date Made Active in Reports: 01/16/2024	Last EDR Contact: 01/09/2024
Number of Days to Update: 83	Next Scheduled EDR Contact: 04/22/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 08/15/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/30/2023	Telephone: 202-566-2777
Date Made Active in Reports: 12/01/2023	Last EDR Contact: 12/14/2023
Number of Days to Update: 93	Next Scheduled EDR Contact: 03/25/2024
	Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

HIST LF: Historical Landfills

This solid waste facility listing contains detail information that is not included in the landfill listing. A listing with detail information is no longer available by the Department of Environmental Protection.

Date of Government Version: 05/01/2003	Source: Department of Environmental Protection
Date Data Arrived at EDR: 03/30/2006	Telephone: 502-564-6716
Date Made Active in Reports: 05/01/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 32	Next Scheduled EDR Contact: 05/25/2009
	Data Release Frequency: No Update Planned

SWRCY: Recycling Facilities

A listing of recycling facilities located in the state of Kentucky.

Date of Government Version: 09/11/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 10/10/2023	Telephone: 502-564-6716
Date Made Active in Reports: 01/03/2024	Last EDR Contact: 01/11/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 04/22/2024
	Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/03/2007	Telephone: 703-308-8245
Date Made Active in Reports: 01/24/2008	Last EDR Contact: 10/23/2023
Number of Days to Update: 52	Next Scheduled EDR Contact: 02/05/2024
	Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 01/11/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Services, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 01/17/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Lab Location Listing

Clandestine drug lab site locations.

Date of Government Version: 11/21/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 12/05/2023
Number of Days to Update: 6

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 11/15/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 08/21/2023
Date Data Arrived at EDR: 08/21/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 78

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/19/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 12/04/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/18/2023
Date Data Arrived at EDR: 09/20/2023
Date Made Active in Reports: 11/14/2023
Number of Days to Update: 55

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/13/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

SPILLS: State spills

A listing of spill and/or release related incidents.

Date of Government Version: 10/17/2023
Date Data Arrived at EDR: 10/18/2023
Date Made Active in Reports: 01/12/2024
Number of Days to Update: 86

Source: DEP, Emergency Response
Telephone: 502-564-2380
Last EDR Contact: 01/09/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Varies

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/04/2023
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 08/07/2023
Date Data Arrived at EDR: 08/15/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 56

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 01/10/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018	Source: U.S. Geological Survey
Date Data Arrived at EDR: 04/11/2018	Telephone: 888-275-8747
Date Made Active in Reports: 11/06/2019	Last EDR Contact: 01/05/2024
Number of Days to Update: 574	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 07/30/2021	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/03/2023	Telephone: 615-532-8599
Date Made Active in Reports: 02/10/2023	Last EDR Contact: 11/08/2023
Number of Days to Update: 7	Next Scheduled EDR Contact: 02/19/2024
	Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/18/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/20/2023	Telephone: 202-566-1917
Date Made Active in Reports: 12/12/2023	Last EDR Contact: 12/13/2023
Number of Days to Update: 83	Next Scheduled EDR Contact: 04/01/2024
	Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014	Telephone: 617-520-3000
Date Made Active in Reports: 06/17/2014	Last EDR Contact: 10/31/2023
Number of Days to Update: 88	Next Scheduled EDR Contact: 02/12/2024
	Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/08/2018	Telephone: 703-308-4044
Date Made Active in Reports: 07/20/2018	Last EDR Contact: 11/03/2023
Number of Days to Update: 73	Next Scheduled EDR Contact: 02/12/2024
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2020	Source: EPA
Date Data Arrived at EDR: 06/14/2022	Telephone: 202-260-5521
Date Made Active in Reports: 03/24/2023	Last EDR Contact: 12/14/2023
Number of Days to Update: 283	Next Scheduled EDR Contact: 03/25/2024
	Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2021	Source: EPA
Date Data Arrived at EDR: 08/18/2023	Telephone: 202-566-0250
Date Made Active in Reports: 11/07/2023	Last EDR Contact: 11/13/2023
Number of Days to Update: 81	Next Scheduled EDR Contact: 02/26/2024
	Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 10/19/2023	Source: EPA
Date Data Arrived at EDR: 10/20/2023	Telephone: 202-564-4203
Date Made Active in Reports: 01/16/2024	Last EDR Contact: 01/17/2024
Number of Days to Update: 88	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/19/2023	Source: EPA
Date Data Arrived at EDR: 10/03/2023	Telephone: 703-416-0223
Date Made Active in Reports: 10/19/2023	Last EDR Contact: 01/02/2024
Number of Days to Update: 16	Next Scheduled EDR Contact: 03/11/2024
	Data Release Frequency: Annually

RMP: Risk Management Plans

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 09/01/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/27/2023	Telephone: 202-564-8600
Date Made Active in Reports: 12/21/2023	Last EDR Contact: 01/12/2024
Number of Days to Update: 85	Next Scheduled EDR Contact: 04/19/2024
	Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 09/19/2023	Source: EPA
Date Data Arrived at EDR: 10/03/2023	Telephone: 202-564-6023
Date Made Active in Reports: 10/19/2023	Last EDR Contact: 12/04/2023
Number of Days to Update: 16	Next Scheduled EDR Contact: 02/12/2024
	Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 03/20/2023	Source: EPA
Date Data Arrived at EDR: 04/04/2023	Telephone: 202-566-0500
Date Made Active in Reports: 06/09/2023	Last EDR Contact: 01/05/2024
Number of Days to Update: 66	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/23/2016	Telephone: 202-564-2501
Date Made Active in Reports: 02/10/2017	Last EDR Contact: 12/26/2023
Number of Days to Update: 79	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 08/18/2017
Number of Days to Update: 25	Next Scheduled EDR Contact: 12/04/2017
	Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/20/2023	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 09/01/2023	Telephone: 301-415-0717
Date Made Active in Reports: 09/20/2023	Last EDR Contact: 01/11/2024
Number of Days to Update: 19	Next Scheduled EDR Contact: 04/29/2024
	Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2021	Source: Department of Energy
Date Data Arrived at EDR: 04/14/2023	Telephone: 202-586-8719
Date Made Active in Reports: 07/10/2023	Last EDR Contact: 11/27/2023
Number of Days to Update: 87	Next Scheduled EDR Contact: 03/11/2024
	Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/05/2019	Telephone: N/A
Date Made Active in Reports: 11/11/2019	Last EDR Contact: 11/27/2023
Number of Days to Update: 251	Next Scheduled EDR Contact: 03/11/2024
	Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019	Source: Environmental Protection Agency
Date Data Arrived at EDR: 11/06/2019	Telephone: 202-566-0517
Date Made Active in Reports: 02/10/2020	Last EDR Contact: 11/03/2023
Number of Days to Update: 96	Next Scheduled EDR Contact: 02/12/2024
	Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 12/19/2023
Next Scheduled EDR Contact: 04/08/2024
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transportation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/05/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/11/2024
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 5

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2021
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 03/20/2023
Number of Days to Update: 11

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 12/06/2023
Next Scheduled EDR Contact: 04/01/2024
Data Release Frequency: Biennially

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014	Source: USGS
Date Data Arrived at EDR: 07/14/2015	Telephone: 202-208-3710
Date Made Active in Reports: 01/10/2017	Last EDR Contact: 01/02/2024
Number of Days to Update: 546	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/03/2023	Source: Department of Energy
Date Data Arrived at EDR: 03/03/2023	Telephone: 202-586-3559
Date Made Active in Reports: 06/09/2023	Last EDR Contact: 10/25/2023
Number of Days to Update: 98	Next Scheduled EDR Contact: 02/12/2024
	Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019	Source: Department of Energy
Date Data Arrived at EDR: 11/15/2019	Telephone: 505-845-0011
Date Made Active in Reports: 01/28/2020	Last EDR Contact: 11/09/2023
Number of Days to Update: 74	Next Scheduled EDR Contact: 02/26/2024
	Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 09/19/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/03/2023	Telephone: 703-603-8787
Date Made Active in Reports: 10/19/2023	Last EDR Contact: 01/02/2024
Number of Days to Update: 16	Next Scheduled EDR Contact: 04/08/2024
	Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001	Source: American Journal of Public Health
Date Data Arrived at EDR: 10/27/2010	Telephone: 703-305-6451
Date Made Active in Reports: 12/02/2010	Last EDR Contact: 12/02/2009
Number of Days to Update: 36	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2023
Date Data Arrived at EDR: 08/22/2023
Date Made Active in Reports: 11/07/2023
Number of Days to Update: 77

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/17/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 01/02/2024
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 1

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 02/19/2024
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/07/2022
Date Data Arrived at EDR: 02/24/2023
Date Made Active in Reports: 05/17/2023
Number of Days to Update: 82

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/28/2023
Date Data Arrived at EDR: 11/29/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 12

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 11/28/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Quarterly

MINES MRDS: Mineral Resources Data System Mineral Resources Data System

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 02/28/2023
Number of Days to Update: 98

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 11/20/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/03/2023
Date Data Arrived at EDR: 11/08/2023
Date Made Active in Reports: 11/20/2023
Number of Days to Update: 12

Source: EPA
Telephone: (404) 562-9900
Last EDR Contact: 11/08/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/15/2023
Next Scheduled EDR Contact: 03/04/2024
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/06/2023
Date Data Arrived at EDR: 09/13/2023
Date Made Active in Reports: 12/11/2023
Number of Days to Update: 89

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 01/05/2024
Next Scheduled EDR Contact: 04/22/2024
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/14/2023
Date Data Arrived at EDR: 08/15/2023
Date Made Active in Reports: 10/19/2023
Number of Days to Update: 65

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/10/2023
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS TRIS: List of PFAS Added to the TRI

Section 7321 of the National Defense Authorization Act for Fiscal Year 2020 (NDAA) immediately added certain per- and polyfluoroalkyl substances (PFAS) to the list of chemicals covered by the Toxics Release Inventory (TRI) under Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) and provided a framework for additional PFAS to be added to TRI on an annual basis.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-566-0250
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 10/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits. Caveats and Limitations: Less than half of states have required PFAS monitoring for at least one of their permittees and fewer states have established PFAS effluent limits for permittees. New rulemakings have been initiated that may increase the number of facilities monitoring for PFAS in the future.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 01/04/2024
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facility's name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration's document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 09/23/2023
Date Data Arrived at EDR: 10/03/2023
Date Made Active in Reports: 12/21/2023
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 12/28/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 12/27/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 12/27/2023
Next Scheduled EDR Contact: 04/15/2024
Data Release Frequency: No Update Planned

BIOSOLIDS: ICIS-NPDES Biosolids Facility Data

The data reflects compliance information about facilities in the biosolids program.

Date of Government Version: 12/31/2023
Date Data Arrived at EDR: 01/03/2024
Date Made Active in Reports: 01/16/2024
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-564-4700
Last EDR Contact: 01/03/2024
Next Scheduled EDR Contact: 04/29/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PFAS: PFAS Detections Site Listing

The presence of PFAS contamination at locations, including water treatment plants.

Date of Government Version: 03/06/2023
Date Data Arrived at EDR: 03/09/2023
Date Made Active in Reports: 05/26/2023
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 502-564-3410
Last EDR Contact: 11/28/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Varies

AIRS: Permitted Airs Facility Listing

A listing of permitted Airs facilities.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/20/2023
Date Made Active in Reports: 08/29/2023
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: 502-573-3382
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Semi-Annually

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 09/21/2023
Date Data Arrived at EDR: 09/22/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 502-782-6780
Last EDR Contact: 11/21/2023
Next Scheduled EDR Contact: 03/11/2024
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Sites

A listing of coal ash pond site locations.

Date of Government Version: 08/22/2023
Date Data Arrived at EDR: 10/27/2023
Date Made Active in Reports: 01/17/2024
Number of Days to Update: 82

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 10/27/2023
Next Scheduled EDR Contact: 02/05/2024
Data Release Frequency: No Update Planned

DRYCLEANERS: Drycleaner Listing

A listing of drycleaner facility locations.

Date of Government Version: 07/05/2023
Date Data Arrived at EDR: 07/20/2023
Date Made Active in Reports: 08/29/2023
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: 502-573-3382
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Semi-Annually

Financial Assurance 1: Financial Assurance Information Listing

A listing of financial assurance information.

Date of Government Version: 08/22/2023
Date Data Arrived at EDR: 08/24/2023
Date Made Active in Reports: 08/29/2023
Number of Days to Update: 5

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

Financial Assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/14/2014
Date Data Arrived at EDR: 06/06/2014
Date Made Active in Reports: 06/24/2014
Number of Days to Update: 18

Source: Department of Environmental Protection
Telephone: 502-564-5981
Last EDR Contact: 01/22/2024
Next Scheduled EDR Contact: 05/06/2024
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Financial Assurance 3: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 11/09/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 11/09/2023	Telephone: 502-564-6716
Date Made Active in Reports: 11/13/2023	Last EDR Contact: 01/22/2024
Number of Days to Update: 4	Next Scheduled EDR Contact: 05/06/2024
	Data Release Frequency: Varies

LEAD: Environmental Lead Program Report Tracking Database

Lead Report Tracking Database

Date of Government Version: 01/27/2017	Source: Department of Public Health
Date Data Arrived at EDR: 02/02/2017	Telephone: 502-564-4537
Date Made Active in Reports: 08/21/2017	Last EDR Contact: 10/26/2023
Number of Days to Update: 200	Next Scheduled EDR Contact: 02/12/2024
	Data Release Frequency: Varies

NPDES: Permitted Facility Listing

A listing of permitted wastewater facilities.

Date of Government Version: 08/14/2023	Source: Department of Environmental Protection
Date Data Arrived at EDR: 08/15/2023	Telephone: 502-564-3410
Date Made Active in Reports: 11/01/2023	Last EDR Contact: 10/26/2023
Number of Days to Update: 78	Next Scheduled EDR Contact: 02/12/2024
	Data Release Frequency: Semi-Annually

UIC: UIC Information

A listing of wells identified as underground injection wells, in the Kentucky Oil & Gas Wells data base.

Date of Government Version: 09/28/2023	Source: Kentucky Geological Survey
Date Data Arrived at EDR: 10/10/2023	Telephone: 859-323-0544
Date Made Active in Reports: 01/02/2024	Last EDR Contact: 01/11/2024
Number of Days to Update: 84	Next Scheduled EDR Contact: 04/22/2024
	Data Release Frequency: Quarterly

UST FINDER: UST Finder Database

EPA developed UST Finder, a web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. It provides the attributes and locations of active and closed USTs, UST facilities, and LUST sites from states and from Tribal lands and US territories . UST Finder contains information about proximity of UST facilities and LUST sites to: surface and groundwater public drinking water protection areas; estimated number of private domestic wells and number of people living nearby; and flooding and wildfires.

Date of Government Version: 06/08/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/04/2023	Telephone: 202-564-0394
Date Made Active in Reports: 01/18/2024	Last EDR Contact: 11/09/2023
Number of Days to Update: 106	Next Scheduled EDR Contact: 02/19/2024
	Data Release Frequency: Varies

UST FINDER RELEASE: UST Finder Releases Database

US EPA's UST Finder data is a national composite of leaking underground storage tanks. This data contains information about, and locations of, leaking underground storage tanks. Data was collected from state sources and standardized into a national profile by EPA's Office of Underground Storage Tanks, Office of Research and Development, and the Association of State and Territorial Solid Waste Management Officials.

Date of Government Version: 06/08/2023	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/31/2023	Telephone: 202-564-0394
Date Made Active in Reports: 01/18/2024	Last EDR Contact: 10/31/2023
Number of Days to Update: 79	Next Scheduled EDR Contact: 02/19/2024
	Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists.

Date of Government Version: N/A	Source: Department of Environmental Protection
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/15/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 198	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/07/2023	Source: Department of Energy & Environmental Protection
Date Data Arrived at EDR: 08/08/2023	Telephone: 860-424-3375
Date Made Active in Reports: 10/24/2023	Last EDR Contact: 11/07/2023
Number of Days to Update: 77	Next Scheduled EDR Contact: 02/19/2024
	Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018	Source: Department of Environmental Protection
Date Data Arrived at EDR: 04/10/2019	Telephone: N/A
Date Made Active in Reports: 05/16/2019	Last EDR Contact: 12/27/2023
Number of Days to Update: 36	Next Scheduled EDR Contact: 04/15/2024
	Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 12/31/2019	Source: Department of Environmental Conservation
Date Data Arrived at EDR: 11/30/2023	Telephone: 518-402-8651
Date Made Active in Reports: 12/01/2023	Last EDR Contact: 11/30/2023
Number of Days to Update: 1	Next Scheduled EDR Contact: 02/05/2024
	Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018	Source: Department of Environmental Protection
Date Data Arrived at EDR: 07/19/2019	Telephone: 717-783-8990
Date Made Active in Reports: 09/10/2019	Last EDR Contact: 01/05/2024
Number of Days to Update: 53	Next Scheduled EDR Contact: 04/22/2024
	Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/09/2022
Next Scheduled EDR Contact: 02/26/2024
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 11/29/2023
Next Scheduled EDR Contact: 03/18/2024
Data Release Frequency: Annually

Oil/Gas Pipelines

Source: Endeavor Business Media

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data

Source: Endeavor Business Media

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health
Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics
Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Certified Child Care Homes

Source: Cabinet for Families & Children
Telephone: 502-564-7130

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Environmental & Public Protection Cabinet

Telephone: 502-564-6736

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

TEA PERRY COUNTY/HWY 80 COLLECTION PROJECT PH III
5000 KY-80
BULAN, KY 41722

TARGET PROPERTY COORDINATES

Latitude (North): 37.332256 - 37° 19' 56.12"
Longitude (West): 83.160064 - 83° 9' 36.23"
Universal Tranverse Mercator: Zone 17
UTM X (Meters): 308628.7
UTM Y (Meters): 4133715.8
Elevation: 1283 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map: 50024109 HAZARD NORTH, KY
Version Date: 2022

East Map: 50024074 CARRIE, KY
Version Date: 2022

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

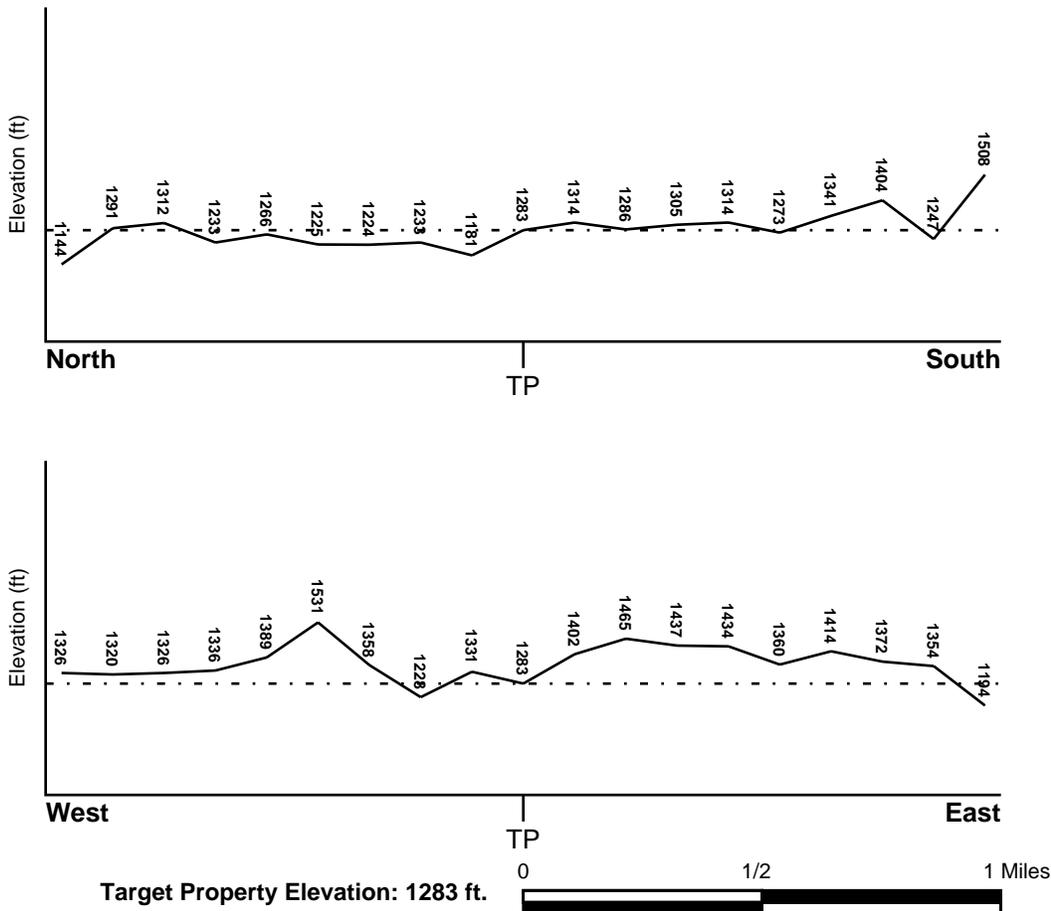
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General West

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
21193C0185D	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
Not Reported	

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
HAZARD NORTH	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

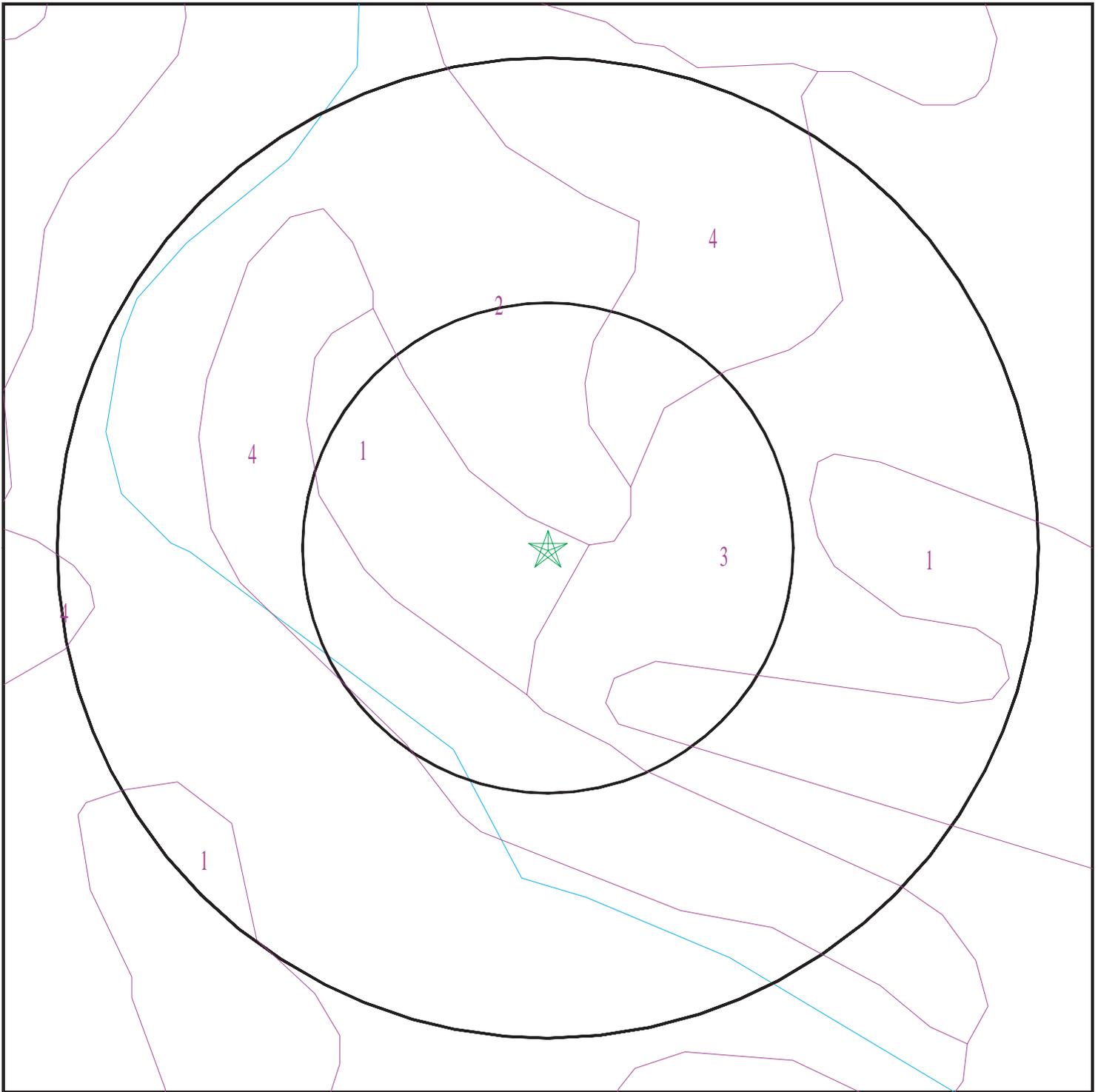
Era:	Paleozoic
System:	Pennsylvanian
Series:	Des Moinesian Series
Code:	PP2 (<i>decoded above as Era, System & Series</i>)

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7547673.2s



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: TEA Perry County/Hwy 80 Collection Project Ph III
ADDRESS: 5000 KY-80
Bulan KY 41722
LAT/LONG: 37.332256 / 83.160064

CLIENT: R.M. Johnson Engineering, Inc.
CONTACT: Fred Pennington
INQUIRY #: 7547673.2s
DATE: January 23, 2024 12:32 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Dekalb

Soil Surface Texture: channery loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 86 inches

Depth to Watertable Min: > 69 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	1 inches	channery loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:
2	1 inches	33 inches	very channery loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:
3	33 inches	38 inches	unweathered bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	Not reported	Max: Min:	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 2

Soil Component Name: Shelocta

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	5 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel	Max: 42 Min: 4	Max: 5.5 Min: 4.5
2	5 inches	59 inches	channery silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel	Max: 42 Min: 4	Max: 5.5 Min: 4.5
3	59 inches	72 inches	channery loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel	Max: 42 Min: 4	Max: 5.5 Min: 4.5

Soil Map ID: 3

Soil Component Name: Fairpoint

Soil Surface Texture: very channery silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	5 inches	very channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel	Max: 4.23 Min: 1.41	Max: 7.3 Min: 5.6
2	5 inches	61 inches	very channery silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel	Max: 4.23 Min: 1.41	Max: 7.3 Min: 5.6

Soil Map ID: 4

Soil Component Name: Shelocta

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	5 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel	Max: 42 Min: 4	Max: 5.5 Min: 4.5
2	5 inches	59 inches	channery silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel	Max: 42 Min: 4	Max: 5.5 Min: 4.5
3	59 inches	72 inches	very channery loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Gravels, Gravels with fines, Clayey Gravel	Max: 42 Min: 4	Max: 5.5 Min: 4.5

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	KY7000000035867	1/8 - 1/4 Mile NNW
2	KY7000000024409	1/8 - 1/4 Mile West
3	KY7000000033420	1/8 - 1/4 Mile NW
4	KY7000000034908	1/8 - 1/4 Mile NNE
5	KY7000000008112	1/8 - 1/4 Mile North
6	KY7000000008790	1/4 - 1/2 Mile SSW
A7	KY7000000013246	1/4 - 1/2 Mile ESE
A8	KY7000000001894	1/4 - 1/2 Mile ESE
9	KY7000000032393	1/2 - 1 Mile North
10	KY7000000017221	1/2 - 1 Mile North
11	KY7000000016846	1/2 - 1 Mile North
B12	KY7000000027054	1/2 - 1 Mile SSW
B13	KY7000000027055	1/2 - 1 Mile SSW
C14	KY7000000032096	1/2 - 1 Mile WNW
15	KY7000000024280	1/2 - 1 Mile SW
C16	KY7000000032075	1/2 - 1 Mile WNW
17	KY7000000024405	1/2 - 1 Mile ESE
18	KY7000000035656	1/2 - 1 Mile North
19	KY7000000058425	1/2 - 1 Mile South
20	KY7000000024857	1/2 - 1 Mile NE
21	KY7000000022344	1/2 - 1 Mile North

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

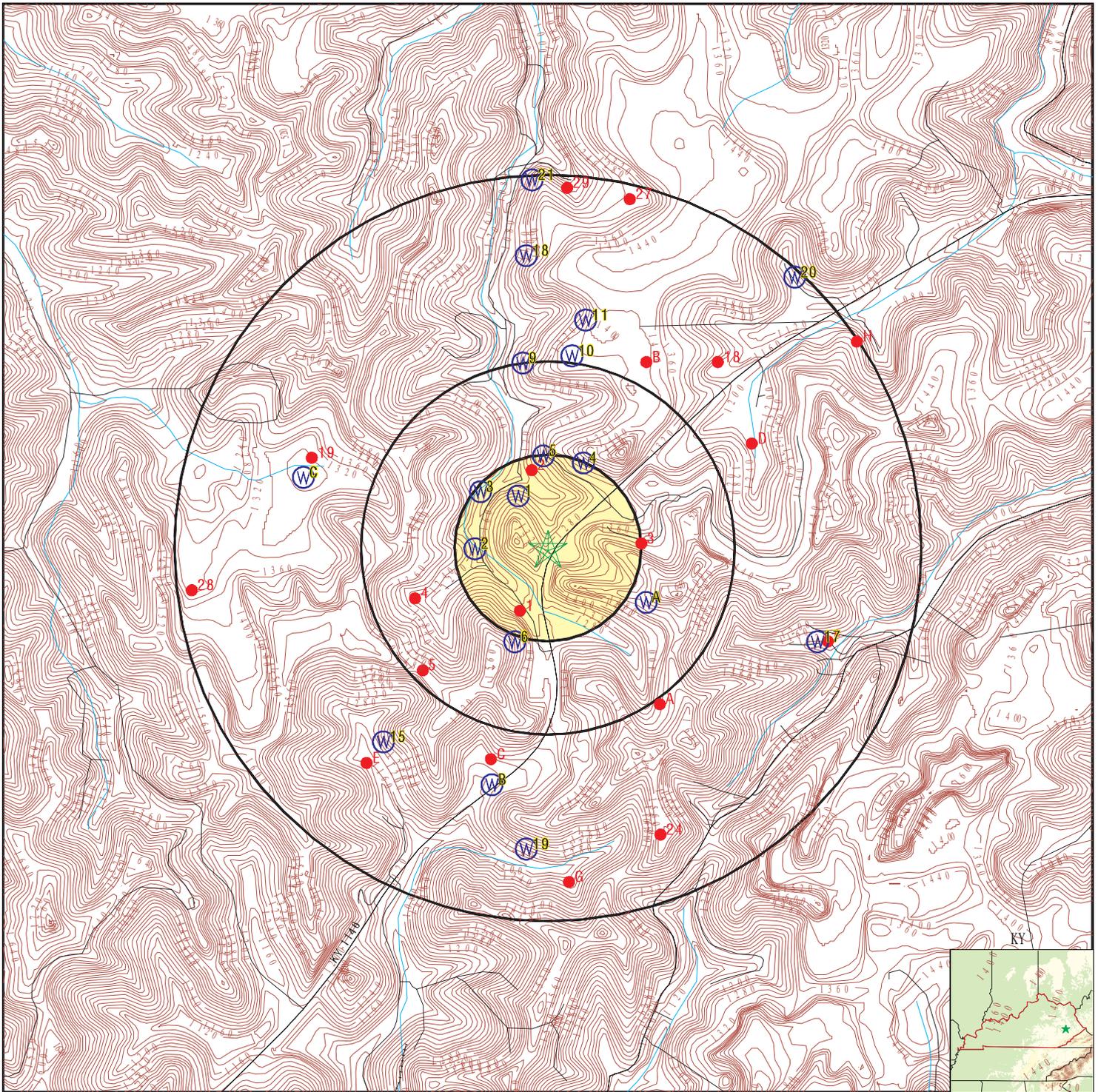
MAP ID	WELL ID	LOCATION FROM TP
1	KYOG14000106604	1/8 - 1/4 Mile SSW
2	KYOG14000108190	1/8 - 1/4 Mile NNW
3	KYOG14000107189	1/4 - 1/2 Mile East
4	KYOG14000075974	1/4 - 1/2 Mile WSW
5	KYOG14000108002	1/4 - 1/2 Mile SW
A6	KYOG14000015746	1/4 - 1/2 Mile SE
A7	KYOG14000075975	1/2 - 1 Mile SSE
B8	KYOG14000120540	1/2 - 1 Mile NNE
B9	KYOG14000110755	1/2 - 1 Mile NNE
B10	KYOG14000109813	1/2 - 1 Mile NNE
C11	KYOG14000122156	1/2 - 1 Mile SSW
C12	KYOG14000122155	1/2 - 1 Mile SSW
C13	KYOG14000075977	1/2 - 1 Mile SSW
C14	KYOG14000121857	1/2 - 1 Mile SSW
C15	KYOG14000121856	1/2 - 1 Mile SSW
D16	KYOG14000128421	1/2 - 1 Mile ENE
D17	KYOG14000080873	1/2 - 1 Mile ENE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE OIL/GAS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
18	KYOG14000121615	1/2 - 1 Mile NE
19	KYOG14000071265	1/2 - 1 Mile WNW
E20	KYOG14000075567	1/2 - 1 Mile SW
E21	KYOG14000083310	1/2 - 1 Mile SW
F22	KYOG14000128423	1/2 - 1 Mile ESE
F23	KYOG14000075973	1/2 - 1 Mile ESE
24	KYOG14000108411	1/2 - 1 Mile SSE
G25	KYOG14000119159	1/2 - 1 Mile South
G26	KYOG14000075976	1/2 - 1 Mile South
27	KYOG14000080872	1/2 - 1 Mile NNE
28	KYOG14000075566	1/2 - 1 Mile West
29	KYOG14000113510	1/2 - 1 Mile North
H30	KYOG14000112813	1/2 - 1 Mile NE
H31	KYOG14000117654	1/2 - 1 Mile NE

PHYSICAL SETTING SOURCE MAP - 7547673.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Oil, gas or related wells



SITE NAME: TEA Perry County/Hwy 80 Collection Project Ph III
 ADDRESS: 5000 KY-80
 Bulan KY 41722
 LAT/LONG: 37.332256 / 83.160064

CLIENT: R.M. Johnson Engineering, Inc.
 CONTACT: Fred Pennington
 INQUIRY #: 7547673.2s
 DATE: January 23, 2024 12:32 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

1
NNW
1/8 - 1/4 Mile
Lower

KY WELLS KY7000000035867

AKGWA ID:	00058838	Well Type:	Water Well
Well Status:	Active	Alt ID:	Not Reported
PWS ID:	Not Reported	Well Name:	Residence - Eugene Calewell
Surface Elevation:	1200	Usage:	Domestic - Single Household
Total Depth:	140	Depth to Bedrock:	7
End Date:	21-AUG-02		

2
West
1/8 - 1/4 Mile
Lower

KY WELLS KY7000000024409

AKGWA ID:	00043310	Well Type:	Water Well
Well Status:	Active	Alt ID:	Not Reported
PWS ID:	Not Reported	Well Name:	Residence - Dana Gayheart
Surface Elevation:	1160	Usage:	Domestic - Single Household
Total Depth:	123	Depth to Bedrock:	7
End Date:	13-SEP-95		

3
NW
1/8 - 1/4 Mile
Lower

KY WELLS KY7000000033420

AKGWA ID:	00055221	Well Type:	Water Well
Well Status:	Active	Alt ID:	Not Reported
PWS ID:	Not Reported	Well Name:	Residence - Becky Brewer
Surface Elevation:	1340	Usage:	Domestic - Single Household
Total Depth:	200	Depth to Bedrock:	6
End Date:	08-JUN-00		

4
NNE
1/8 - 1/4 Mile
Higher

KY WELLS KY7000000034908

AKGWA ID:	00057172	Well Type:	Water Well
Well Status:	Active	Alt ID:	Not Reported
PWS ID:	Not Reported	Well Name:	Residence - Eddie Campbell
Surface Elevation:	1320	Usage:	Domestic - Single Household
Total Depth:	285	Depth to Bedrock:	11
End Date:	17-AUG-01		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

5
North
1/8 - 1/4 Mile
Lower

KY WELLS KY700000008112

AKGWA ID: 00010729
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1200
Total Depth: 240
End Date: 23-MAR-88

Well Type: Water Well
Alt ID: Not Reported
Well Name: Residence - Clay Miller
Usage: Domestic - Single Household
Depth to Bedrock: 6

6
SSW
1/4 - 1/2 Mile
Higher

KY WELLS KY700000008790

AKGWA ID: 00011839
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1400
Total Depth: 123
End Date: 27-JUN-88

Well Type: Water Well
Alt ID: Not Reported
Well Name: Residence - Jessie Melton
Usage: Domestic - Single Household
Depth to Bedrock: 18

A7
ESE
1/4 - 1/2 Mile
Higher

KY WELLS KY7000000013246

AKGWA ID: 00018937
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1480
Total Depth: 143
End Date: 14-NOV-90

Well Type: Water Well
Alt ID: Not Reported
Well Name: Residence - Brenda Miller
Usage: Domestic - Single Household
Depth to Bedrock: 8

A8
ESE
1/4 - 1/2 Mile
Higher

KY WELLS KY7000000001894

AKGWA ID: 00001900
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1600
Total Depth: 245
End Date: 13-JUL-86

Well Type: Water Well
Alt ID: Not Reported
Well Name: Residence - Cathy Fugate
Usage: Domestic - Single Household
Depth to Bedrock: 9

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

9
North
1/2 - 1 Mile
Lower

KY WELLS KY7000000032393

AKGWA ID: 00053797
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1200
Total Depth: 285
End Date: 08-MAR-00

Well Type: Water Well
Alt ID: Not Reported
Well Name: Residence - Juanita Bush
Usage: Domestic - Single Household
Depth to Bedrock: 7

10
North
1/2 - 1 Mile
Higher

KY WELLS KY7000000017221

AKGWA ID: 00028001
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1400
Total Depth: 200
End Date: 19-NOV-91

Well Type: Water Well
Alt ID: Not Reported
Well Name: Residence - Joyce Campbell
Usage: Domestic - Single Household
Depth to Bedrock: 7

11
North
1/2 - 1 Mile
Higher

KY WELLS KY7000000016846

AKGWA ID: 00026590
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1340
Total Depth: 102
End Date: 12-SEP-91

Well Type: Water Well
Alt ID: Not Reported
Well Name: Residence - Robert Smith
Usage: Domestic - Single Household
Depth to Bedrock: 12

B12
SSW
1/2 - 1 Mile
Lower

KY WELLS KY7000000027054

AKGWA ID: 00046592
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1160
Total Depth: 285
End Date: 09-OCT-96

Well Type: Water Well
Alt ID: Not Reported
Well Name: Hazard Animal Shelter
Usage: Domestic - Single Household
Depth to Bedrock: 7

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

B13
SSW
1/2 - 1 Mile
Lower

KY WELLS KY7000000027055

AKGWA ID:	00046592	Well Type:	Water Well
Well Status:	Active	Alt ID:	Not Reported
PWS ID:	Not Reported	Well Name:	Hazard Animal Shelter
Surface Elevation:	1160	Usage:	Domestic - Single Household
Total Depth:	365	Depth to Bedrock:	0
End Date:	28-JUL-99		

C14
WNW
1/2 - 1 Mile
Higher

KY WELLS KY7000000032096

AKGWA ID:	00053351	Well Type:	Water Well
Well Status:	Active	Alt ID:	Not Reported
PWS ID:	Not Reported	Well Name:	Residence - Vonda Richardson
Surface Elevation:	1240	Usage:	Domestic - Single Household
Total Depth:	60	Depth to Bedrock:	11
End Date:	12-OCT-99		

15
SW
1/2 - 1 Mile
Lower

KY WELLS KY7000000024280

AKGWA ID:	00043079	Well Type:	Water Well
Well Status:	Active	Alt ID:	Not Reported
PWS ID:	Not Reported	Well Name:	Residence - Scott Stacey
Surface Elevation:	1250	Usage:	Domestic - Single Household
Total Depth:	225	Depth to Bedrock:	5
End Date:	08-AUG-95		

C16
WNW
1/2 - 1 Mile
Higher

KY WELLS KY7000000032075

AKGWA ID:	00053325	Well Type:	Water Well
Well Status:	Active	Alt ID:	Not Reported
PWS ID:	Not Reported	Well Name:	Residence - Vonda Richardson
Surface Elevation:	1240	Usage:	Domestic - Single Household
Total Depth:	90	Depth to Bedrock:	9
End Date:	14-SEP-99		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

17
ESE
1/2 - 1 Mile
Lower

KY WELLS KY7000000024405

AKGWA ID: 00043281
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1120
Total Depth: 225
End Date: 08-AUG-95

Well Type: Water Well
Alt ID: Not Reported
Well Name: Residence - Mitchell Walker
Usage: Domestic - Single Household
Depth to Bedrock: 12

18
North
1/2 - 1 Mile
Lower

KY WELLS KY7000000035656

AKGWA ID: 00058508
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1160
Total Depth: 184
End Date: 17-APR-02

Well Type: Water Well
Alt ID: Not Reported
Well Name: Residence - Goldie Stacy
Usage: Domestic - Single Household
Depth to Bedrock: 9

19
South
1/2 - 1 Mile
Lower

KY WELLS KY7000000058425

AKGWA ID: 80002804
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1200
Total Depth: 62
End Date: 12-MAR-93

Well Type: Monitoring Well
Alt ID: Not Reported
Well Name: Lost Mountain Coal Co
Usage: Mining
Depth to Bedrock: 29

20
NE
1/2 - 1 Mile
Lower

KY WELLS KY7000000024857

AKGWA ID: 00043967
Well Status: Active
PWS ID: Not Reported
Surface Elevation: 1120
Total Depth: 143
End Date: 01-FEB-96

Well Type: Water Well
Alt ID: Not Reported
Well Name: Residence - Linda Langdon
Usage: Domestic - Single Household
Depth to Bedrock: 14

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

21
North
1/2 - 1 Mile
Lower

KY WELLS KY7000000022344

AKGWA ID: 00037554
 Well Status: Active
 PWS ID: Not Reported
 Surface Elevation: 1120
 Total Depth: 143
 End Date: 02-NOV-94

Well Type: Water Well
 Alt ID: Not Reported
 Well Name: Residence - William Pace
 Usage: Domestic - Single Household
 Depth to Bedrock: 10

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
SSW
1/8 - 1/4 Mile

OIL_GAS KYOG14000106604

OIL_GAS:

API #:	16193009890000	KGS #:	124599
Well Elevation:	1248	Original Farm/Lease Name:	EQUITABLE PRODUCTION CO
Original Operator:	EQUITABLE PRODUCTION COMPANY		
Original Well #:	504983	Permit #:	93755
Formation:	341OLNG	Deepest Formation:	341OHIO
Init Open or Potential Flow:	Not Reported	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	05-JUL-02	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	1690	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=124599		

2
NNW
1/8 - 1/4 Mile

OIL_GAS KYOG14000108190

OIL_GAS:

API #:	16193012000000	KGS #:	126748
Well Elevation:	1178	Original Farm/Lease Name:	APPALACHIAN ENTERPRISES LLC ET A
Original Operator:	EQUITABLE PRODUCTION COMPANY		
Original Well #:	565512	Permit #:	95396
Formation:	341OLNG	Deepest Formation:	341OHIO
Init Open or Potential Flow:	Not Reported	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	08-DEC-03	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=126748		

3
East
1/4 - 1/2 Mile

OIL_GAS KYOG14000107189

OIL_GAS:

API #:	16193010200000	KGS #:	125590
Well Elevation:	1404	Original Farm/Lease Name:	EVERSOLE, MICHAEL & BRENDA
Original Operator:	EQUITABLE PRODUCTION COMPANY		
Original Well #:	565511	Permit #:	94451
Formation:	341OHIO	Deepest Formation:	341OHIO
Init Open or Potential Flow:	Not Reported	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Bore Type:	Conventional vertical well bore		
Completion Date:	31-MAR-03	Plug Date:	30-APR-21
Documentation on Plug:	PA	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=125590		

4

WSW
1/4 - 1/2 Mile

OIL_GAS **KYOG14000075974**

OIL_GAS:

API #:	16193010330000	KGS #:	80158
Well Elevation:	1232	Original Farm/Lease Name:	BREWER, BENJAMIN
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	6629	Permit #:	2358
Formation:	341OHIO	Deepest Formation:	000
Init Open or Potential Flow:	Not Reported	description in result_desc field:	D&A
Original API Classification:	Development Well		
How Completed:	Dry and abandoned		
Bore Type:	Conventional vertical well bore		
Completion Date:	06-JUL-61	Plug Date:	26-JUL-61
Documentation on Plug:	PA	Core Call #:	Not Reported
Cutting Call #:	6111	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=80158		

5

SW
1/4 - 1/2 Mile

OIL_GAS **KYOG14000108002**

OIL_GAS:

API #:	16193011860000	KGS #:	126560
Well Elevation:	1496	Original Farm/Lease Name:	EQUITABLE PRODUCTION CO
Original Operator:	EQUITABLE PRODUCTION COMPANY		
Original Well #:	563993	Permit #:	95215
Formation:	341OLNG	Deepest Formation:	341OHIO
Init Open or Potential Flow:	Not Reported	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	09-OCT-03	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=126560		

A6

SE
1/4 - 1/2 Mile

OIL_GAS **KYOG14000015746**

OIL_GAS:

API #:	16193010340000	KGS #:	16160
Well Elevation:	1416	Original Farm/Lease Name:	BREWER, WILLIAM
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	7227	Permit #:	27724

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Formation:	000	Deepest Formation:	000
Init Open or Potential Flow:	Not Reported	description in result_desc field:	TRM
Original API Classification:	Unclassified		
How Completed:	Terminated (permit expired or cancelled)		
Bore Type:	Conventional vertical well bore		
Completion Date:	Not Reported	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=16160		

A7
SSE
1/2 - 1 Mile

OIL_GAS KYOG14000075975

OIL_GAS:

API #:	16193006090000	KGS #:	80159
Well Elevation:	1422	Original Farm/Lease Name:	BREWER, WILLIAM
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	7265	Permit #:	32781
Formation:	341OHIO	Deepest Formation:	341OHIO
Init Open or Potential Flow:	146 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Extension (outpost) Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	30-MAY-78	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=80159		

B8
NNE
1/2 - 1 Mile

OIL_GAS KYOG14000120540

OIL_GAS:

API #:	16193016670000	KGS #:	139592
Well Elevation:	1378	Original Farm/Lease Name:	STACY, WILLIAM
Original Operator:	EQT PRODUCTION COMPANY		
Original Well #:	569462	Permit #:	107068
Formation:	341OHIO	Deepest Formation:	341HURNL
Init Open or Potential Flow:	1062 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Unclassified	How Completed:	Gas producer
Bore Type:	Horizontal, may include multiple laterals, pinnate deviations		
Completion Date:	25-AUG-10	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=139592		

B9
NNE
1/2 - 1 Mile

OIL_GAS KYOG14000110755

OIL_GAS:

API #:	16193012870000	KGS #:	129314
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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Well Elevation:	1376	Original Farm/Lease Name:	EQUITABLE PRODUCTION CO
Original Operator:	EQUITABLE PRODUCTION COMPANY		
Original Well #:	565992	Permit #:	97984
Formation:	341OLNG	Deepest Formation:	341OHIO
Init Open or Potential Flow:	Not Reported	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	27-MAY-05	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=129314		

**B10
NNE
1/2 - 1 Mile**

OIL_GAS KYOG14000109813

OIL_GAS:

API #:	16193012650000	KGS #:	128371
Well Elevation:	1383	Original Farm/Lease Name:	EQUITABLE PRODUCTION CO
Original Operator:	EQUITABLE PRODUCTION COMPANY		
Original Well #:	565992	Permit #:	97107
Formation:	000	Deepest Formation:	000
Init Open or Potential Flow:	Not Reported	description in result_desc field:	TRM
Original API Classification:	Unclassified		
How Completed:	Terminated (permit expired or cancelled)		
Bore Type:	Conventional vertical well bore		
Completion Date:	Not Reported	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	2335	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=128371		

**C11
SSW
1/2 - 1 Mile**

OIL_GAS KYOG14000122156

OIL_GAS:

API #:	16193016980000	KGS #:	141274
Well Elevation:	1247	Original Farm/Lease Name:	EQT PRODUCTION COMPANY
Original Operator:	EQT PRODUCTION COMPANY		
Original Well #:	570969	Permit #:	108067
Formation:	341OHIO	Deepest Formation:	341HURNL
Init Open or Potential Flow:	585 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Unclassified	How Completed:	Gas producer
Bore Type:	Horizontal, may include multiple laterals, pinnate deviations		
Completion Date:	24-JUN-11	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	16235	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=141274		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

C12
SSW
1/2 - 1 Mile

OIL_GAS **KYOG14000122155**

OIL_GAS:

API #:	16193016970000	KGS #:	141273
Well Elevation:	1245	Original Farm/Lease Name:	EQT PRODUCTION COMPANY
Original Operator:	EQT PRODUCTION COMPANY		
Original Well #:	570968	Permit #:	108066
Formation:	341OHIO	Deepest Formation:	341HURNL
Init Open or Potential Flow:	581 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Unclassified	How Completed:	Gas producer
Bore Type:	Horizontal, may include multiple		
Completion Date:	24-JUN-11	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	16240	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=141273		

C13
SSW
1/2 - 1 Mile

OIL_GAS **KYOG14000075977**

OIL_GAS:

API #:	16193005260000	KGS #:	80161
Well Elevation:	1258	Original Farm/Lease Name:	GAYHEART, ROBERT
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	6929	Permit #:	16115
Formation:	344CORN	Deepest Formation:	341OHIO
Init Open or Potential Flow:	169 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	18-MAY-66	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=80161		

C14
SSW
1/2 - 1 Mile

OIL_GAS **KYOG14000121857**

OIL_GAS:

API #:	16193016910000	KGS #:	140943
Well Elevation:	1251	Original Farm/Lease Name:	EQT PRODUCTION COMPANY
Original Operator:	EQT PRODUCTION COMPANY		
Original Well #:	570968	Permit #:	107822
Formation:	000	Deepest Formation:	000
Init Open or Potential Flow:	Not Reported	description in result_desc field:	TRM
Original API Classification:	Unclassified		
How Completed:	Terminated (permit expired or cancelled)		
Bore Type:	Horizontal, may include multiple laterals, pinnate deviations		
Completion Date:	Not Reported	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Cutting Call #: Not Reported Log on File: Not Reported
 URL: <https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=140943>

**C15
SSW
1/2 - 1 Mile**

OIL_GAS KYOG14000121856

OIL_GAS:

API #:	16193016900000	KGS #:	140942
Well Elevation:	1248	Original Farm/Lease Name:	EQT PRODUCTION COMPANY
Original Operator:	EQT PRODUCTION COMPANY		
Original Well #:	570969	Permit #:	107823
Formation:	000	Deepest Formation:	000
Init Open or Potential Flow:	Not Reported	description in result_desc field:	TRM
Original API Classification:	Unclassified		
How Completed:	Terminated (permit expired or cancelled)		
Bore Type:	Horizontal, may include multiple laterals, pinnate deviations		
Completion Date:	Not Reported	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=140942		

**D16
ENE
1/2 - 1 Mile**

OIL_GAS KYOG14000128421

OIL_GAS:

API #:	16193003830000	KGS #:	149080
Well Elevation:	0	Original Farm/Lease Name:	STACY, WM
Original Operator:	EQT PRODUCTION COMPANY		
Original Well #:	6565	Permit #:	41E0
Formation:	000	Deepest Formation:	000
Init Open or Potential Flow:	Not Reported	description in result_desc field:	LOC
Original API Classification:	Unclassified		
How Completed:	Locaton (new permit issued or insufficient data)		
Bore Type:	Conventional vertical well bore		
Completion Date:	Not Reported	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=149080		

**D17
ENE
1/2 - 1 Mile**

OIL_GAS KYOG14000080873

OIL_GAS:

API #:	16193003830000	KGS #:	86256
Well Elevation:	1159	Original Farm/Lease Name:	STACY, W M
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	6565	Permit #:	41E0
Formation:	341OHIO	Deepest Formation:	341OHIO
Init Open or Potential Flow:	65 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Development Well		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	13-MAY-60	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=86256		

**18
NE
1/2 - 1 Mile**

OIL_GAS KYOG14000121615

OIL_GAS:

API #:	16193016820000	KGS #:	140702
Well Elevation:	1197	Original Farm/Lease Name:	EQT PRODUCTION COMPANY
Original Operator:	EQT PRODUCTION COMPANY		
Original Well #:	571013	Permit #:	107623
Formation:	341OHIO	Deepest Formation:	341HURNL
Init Open or Potential Flow:	253 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Unclassified	How Completed:	Gas producer
Bore Type:	Horizontal, may include multiple laterals, pinnate deviations		
Completion Date:	20-MAY-11	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	16238	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=140702		

**19
WNW
1/2 - 1 Mile**

OIL_GAS KYOG14000071265

OIL_GAS:

API #:	16193010570000	KGS #:	75045
Well Elevation:	1258	Original Farm/Lease Name:	COMBS, HARRISON
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	7216	Permit #:	27256
Formation:	344CORN	Deepest Formation:	341OHIO
Init Open or Potential Flow:	60 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	28-FEB-74	Plug Date:	11-APR-86
Documentation on Plug:	PA	Core Call #:	Not Reported
Cutting Call #:	12807	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=75045		

**E20
SW
1/2 - 1 Mile**

OIL_GAS KYOG14000075567

OIL_GAS:

API #:	16193003980000	KGS #:	79723
Well Elevation:	1169	Original Farm/Lease Name:	COMBS, JOHN L
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	6632	Permit #:	2402

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Formation:	3371NJN	Deepest Formation:	332BIGL
Init Open or Potential Flow:	520 MCFGPD	description in result_desc field:	GAS
Original API Classification:	New Pool Wildcat		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	07-JUL-61	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	6091	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=79723		

**E21
SW
1/2 - 1 Mile**

OIL_GAS KYOG14000083310

OIL_GAS:

API #:	16193003340000	KGS #:	89061
Well Elevation:	1169	Original Farm/Lease Name:	COMBS, JOHN L
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	6632	Permit #:	26979
Formation:	341OHIO	Deepest Formation:	341OHIO
Init Open or Potential Flow:	103 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	03-AUG-73	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=89061		

**F22
ESE
1/2 - 1 Mile**

OIL_GAS KYOG14000128423

OIL_GAS:

API #:	16193003860000	KGS #:	149082
Well Elevation:	0	Original Farm/Lease Name:	STACY, WILLIAM
Original Operator:	EQT PRODUCTION COMPANY		
Original Well #:	6586	Permit #:	459E0
Formation:	000	Deepest Formation:	000
Init Open or Potential Flow:	Not Reported	description in result_desc field:	LOC
Original API Classification:	Unclassified		
How Completed:	Locaton (new permit issued or insufficient data)		
Bore Type:	Conventional vertical well bore		
Completion Date:	Not Reported	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=149082		

**F23
ESE
1/2 - 1 Mile**

OIL_GAS KYOG14000075973

OIL_GAS:

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

API #:	16193003860000	KGS #:	80157
Well Elevation:	1101	Original Farm/Lease Name:	STACY, WILLIAM
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	6586	Permit #:	459E0
Formation:	341OHIO	Deepest Formation:	341OHIO
Init Open or Potential Flow:	84 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Extension (outpost) Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	09-SEP-60	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=80157		

**24
SSE
1/2 - 1 Mile**

OIL_GAS KYOG14000108411

OIL_GAS:

API #:	16193012070000	KGS #:	126969
Well Elevation:	1577	Original Farm/Lease Name:	EQUITABLE PRODUCTION CO
Original Operator:	EQUITABLE PRODUCTION COMPANY		
Original Well #:	565991	Permit #:	95594
Formation:	341OHIO	Deepest Formation:	341OHIO
Init Open or Potential Flow:	Not Reported	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	12-MAR-04	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=126969		

**G25
South
1/2 - 1 Mile**

OIL_GAS KYOG14000119159

OIL_GAS:

API #:	16193016030000	KGS #:	138047
Well Elevation:	1252	Original Farm/Lease Name:	EQT PRODUCTION COMPANY
Original Operator:	EQT PRODUCTION COMPANY		
Original Well #:	569082	Permit #:	105704
Formation:	341OLNG	Deepest Formation:	341HURNL
Init Open or Potential Flow:	610 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Horizontal, may include multiple laterals, pinnate deviations		
Completion Date:	30-JUL-09	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	16086	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=138047		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

G26
South
1/2 - 1 Mile

OIL_GAS KYOG14000075976

OIL_GAS:

API #:	16193004010000	KGS #:	80160
Well Elevation:	1255	Original Farm/Lease Name:	COMBS, SHADE B
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	6639	Permit #:	3240
Formation:	341OHIO	Deepest Formation:	341BBSI
Init Open or Potential Flow:	60 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	09-OCT-61	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	7211	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=80160		

27
NNE
1/2 - 1 Mile

OIL_GAS KYOG14000080872

OIL_GAS:

API #:	16193011540000	KGS #:	86255
Well Elevation:	1131	Original Farm/Lease Name:	STACY, GEORGE
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	7145	Permit #:	25024
Formation:	357CLNT	Deepest Formation:	000
Init Open or Potential Flow:	Not Reported	description in result_desc field:	D&A
Original API Classification:	Development Well		
How Completed:	Dry and abandoned		
Bore Type:	Conventional vertical well bore		
Completion Date:	10-DEC-71	Plug Date:	23-DEC-71
Documentation on Plug:	PA	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=86255		

28
West
1/2 - 1 Mile

OIL_GAS KYOG14000075566

OIL_GAS:

API #:	16193005840000	KGS #:	79722
Well Elevation:	1237	Original Farm/Lease Name:	COMBS, HARRISON
Original Operator:	KENTUCKY WEST VIRGINIA GAS CO		
Original Well #:	7200	Permit #:	26771
Formation:	344CORN	Deepest Formation:	341OHIO
Init Open or Potential Flow:	60 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	31-AUG-73	Plug Date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=79722		

29
North
1/2 - 1 Mile

OIL_GAS KYOG14000113510

OIL_GAS:

API #:	16193014310000	KGS #:	132174
Well Elevation:	1120		
Original Farm/Lease Name:	EQUITABLE PRODUCTION COMPANY		
Original Operator:	EQUITABLE PRODUCTION COMPANY		
Original Well #:	566564	Permit #:	100637
Formation:	341OLNG	Deepest Formation:	341HURNL
Init Open or Potential Flow:	Not Reported	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	13-MAR-07	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=132174		

H30
NE
1/2 - 1 Mile

OIL_GAS KYOG14000112813

OIL_GAS:

API #:	16193013940000	KGS #:	131477
Well Elevation:	1200		
Original Farm/Lease Name:	EQUITABLE PRODUCTION COMPANY		
Original Operator:	EQUITABLE PRODUCTION COMPANY		
Original Well #:	566580	Permit #:	99945
Formation:	000	Deepest Formation:	000
Init Open or Potential Flow:	Not Reported	description in result_desc field:	TRM
Original API Classification:	Unclassified		
How Completed:	Terminated (permit expired or cancelled)		
Bore Type:	Conventional vertical well bore		
Completion Date:	Not Reported	Plug Date:	Not Reported
Documentation on Plug:	Not Reported	Core Call #:	Not Reported
Cutting Call #:	15872	Log on File:	Not Reported
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=131477		

H31
NE
1/2 - 1 Mile

OIL_GAS KYOG14000117654

OIL_GAS:

API #:	16193015470000	KGS #:	136449
Well Elevation:	1200		
Original Farm/Lease Name:	EQUITABLE PRODUCTION COMPANY		
Original Operator:	EQUITABLE PRODUCTION COMPANY		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Original Well #:	566580	Permit #:	104169
Formation:	341HURNL	Deepest Formation:	341HURNL
Init Open or Potential Flow:	1125 MCFGPD	description in result_desc field:	GAS
Original API Classification:	Development Well		
How Completed:	Gas producer		
Bore Type:	Horizontal, may include multiple laterals, pinnate deviations		
Completion Date:	17-JUL-08	Plug Date:	21-MAY-21
Documentation on Plug:	PA	Core Call #:	Not Reported
Cutting Call #:	Not Reported	Log on File:	ELOG
URL:	https://kgs.uky.edu/kygeode/services/oilgas/wellReport.asp?id=136449		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for PERRY County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.
- : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
- : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for PERRY COUNTY, KY

Number of sites tested: 3

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.900 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.600 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map

Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory

Source: Environmental & Public Protection Cabinet

Telephone: 502-564-6736

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Kentucky Water Well Records Database

Source: Kentucky Geological Survey

Telephone: 859-257-5500

Water Wells in Kentucky. Data from the Kentucky Ground Water Data Repository.

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Locations

Source: Kentucky Geological Survey

Telephone: 859-257-5500

Oil and gas well locations in the state of Kentucky

RADON

State Database: KY Radon

Source: Department of Public Health

Telephone: 502-564-4856

Radon Test Results

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

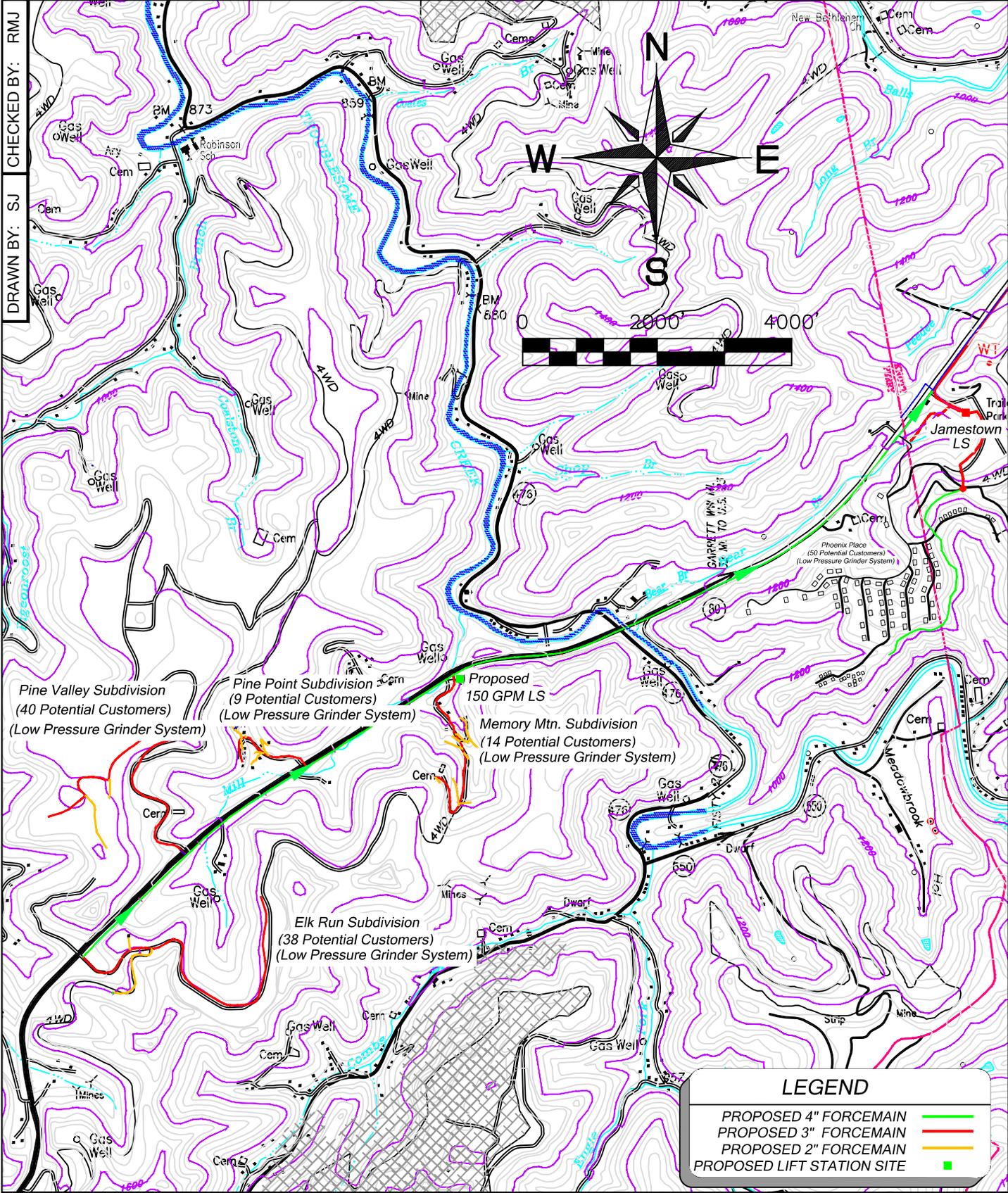
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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DRAWN BY: SJ
CHECKED BY: RMJ

Pine Valley Subdivision
(40 Potential Customers)
(Low Pressure Grinder System)

Pine Point Subdivision
(9 Potential Customers)
(Low Pressure Grinder System)

Proposed
150 GPM LS
Memory Mtn. Subdivision
(14 Potential Customers)
(Low Pressure Grinder System)

Elk Run Subdivision
(38 Potential Customers)
(Low Pressure Grinder System)

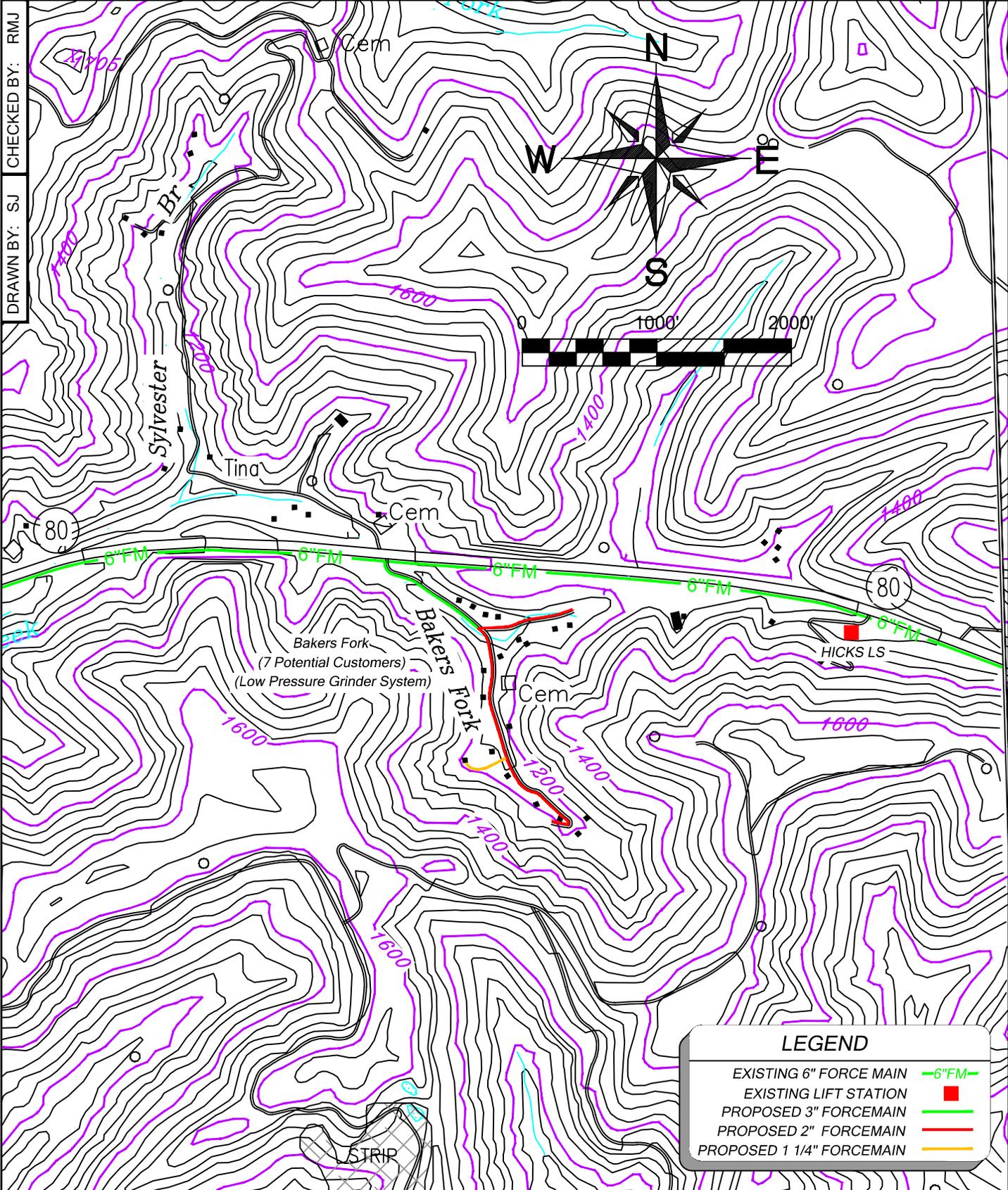


LEXINGTON | HINDMAN | TOMPKINSVILLE
KENTUCKY
CIVIL | GEOTECHNICAL | SURVEYING | MATERIAL TESTING

TROUBLESOME CREEK ENVIRONMENTAL AUTHORITY

PERRY COUNTY/HWY 80
PHASE III SEWER COLLECTION PROJECT

SHEET: 1 of 2
DATE: 07/01/2024



DRAWN BY: SJ CHECKED BY: RMJ



LEXINGTON | HINDMAN | TOMPKINSVILLE
 KENTUCKY
 CIVIL | GEOTECHNICAL | SURVEYING | MATERIAL TESTING

TROUBLESOME CREEK ENVIRONMENTAL AUTHORITY

HWY 80 - BAKERS FORK
 PHASE III SEWER COLLECTION PROJECT

SHEET: 2 of 2
 DATE: 07/01/2024



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Kentucky Ecological Services Field Office
J C Watts Federal Building, Room 265
330 West Broadway
Frankfort, KY 40601-8670
Phone: (502) 695-0467 Fax: (502) 695-1024
Email Address: kentuckyes@fws.gov

In Reply Refer To:

09/16/2024 02:50:10 UTC

Project Code: 2023-0102602

Project Name: Troublesome Creek/HWY 80 Sewage Collection Project -- Phase III

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 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 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:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.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 <https://www.fws.gov/program/migratory-bird-permit/what-we-do..>

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

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

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

this letter with any request for consultation or correspondence about your project that you submit to our office.

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:

Kentucky Ecological Services Field Office

J C Watts Federal Building, Room 265

330 West Broadway

Frankfort, KY 40601-8670

(502) 695-0467

PROJECT SUMMARY

Project Code: 2023-0102602

Project Name: Troublesome Creek/HWY 80 Sewage Collection Project -- Phase III

Project Type: Federal Grant / Loan Related

Project Description: The proposed Troublesome Creek/HWY 80 sewage collection project extends the TEA and Knott County Water and Sewer District (KCWSD) service collection area from the Knott/Perry County line at the existing Jamestown Pump Station to the existing Ball Creek Wastewater Treatment Plant (WWTP). The service area extension will provide service to additional Phoenix Place customers, located above and south across the ridge from the pump station, resulting in potentially 50 new customers. The project will extend to the west, continuing along KY 80 Right-of-Way (ROW), and pick up four (4) existing subdivisions – Memory Mountain, Pine Point, Pine Valley, and Elk Run Subdivisions in Perry County. The total potential customers include 152 residences. Developers have been requesting sanitary service for years. There are also additional undeveloped lots in these subdivisions. Sanitary service for these lots will encourage future development and construction of homes. Bakers Fork is a residential hollow in Knott County, with 8 additional customers, that is also included in this project. The region is greatly populated with on-site septic tank systems. The results of this type of treatment within the service area have proved to be problematic. Many systems are failing due to inadequate percolation properties of the soil.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@37.3443994,-83.12956426384747,14z>



Counties: Knott and Perry counties, Kentucky

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 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 2 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 Fisheries¹, 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
<p>Gray Bat <i>Myotis grisescens</i></p> <p>No critical habitat has been designated for this species. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> ▪ The project area includes potential gray bat habitat. <p>Species profile: https://ecos.fws.gov/ecp/species/6329 General project design guidelines: https://ipac.ecosphere.fws.gov/project/P64CHEBXBRA67HHHM2VYZOKYDE/documents/generated/6422.pdf</p>	Endangered
<p>Indiana Bat <i>Myotis sodalis</i></p> <p>There is final critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions:</p> <ul style="list-style-type: none"> ▪ The project area includes 'potential' habitat. All activities in this location should consider possible effects to this species. <p>Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/P64CHEBXBRA67HHHM2VYZOKYDE/documents/generated/6422.pdf</p>	Endangered
<p>Northern Long-eared Bat <i>Myotis septentrionalis</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 General project design guidelines: https://ipac.ecosphere.fws.gov/project/P64CHEBXBRA67HHHM2VYZOKYDE/documents/generated/6422.pdf</p>	Endangered
<p>Tricolored Bat <i>Perimyotis subflavus</i></p> <p>No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515</p>	Proposed Endangered

FISHES

NAME	STATUS
<p>Kentucky Arrow Darter <i>Etheostoma spilotum</i></p> <p>There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9063 General project design guidelines: https://ipac.ecosphere.fws.gov/project/P64CHEBXBRA67HHHM2VYZOKYDE/documents/generated/5224.pdf</p>	Threatened

INSECTS

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

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Army Corps of Engineers
Name: Jeffrey Hawkins
Address: 600 Dr. Martin Luther King Jr. Place
City: Louisville
State: KY
Zip: 40202
Email: jeffrey.a.hawkins@usace.army.mil
Phone: 8593399414



United States
Department of
Agriculture

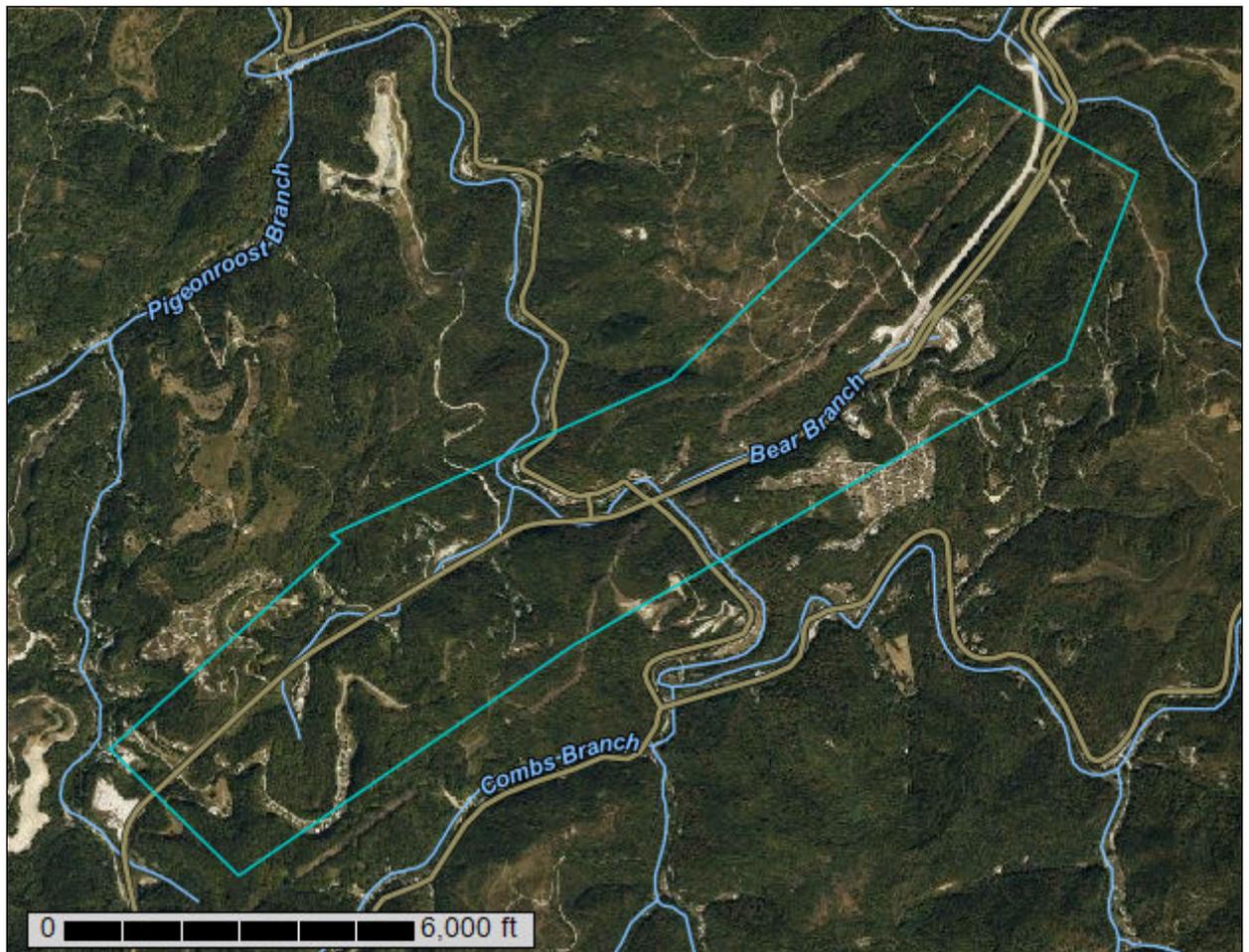
NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Knott and Letcher Counties, Kentucky, and Leslie and Perry Counties, Kentucky

Troublesome Creek Sewer Collection Project



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

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scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Knott and Letcher Counties, Kentucky
 Survey Area Data: Version 18, Sep 2, 2022

Soil Survey Area: Leslie and Perry Counties, Kentucky
 Survey Area Data: Version 19, Sep 2, 2022

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 9, 2016—Sep 15, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CkF	Cloverlick-Kimper-Highsplint complex, 30 to 65 percent slopes, very stony	126.9	8.0%
DrF	Dekalb-Gilpin-Rayne complex, 25 to 65 percent slopes, very rocky	29.5	1.9%
FkE	Fiveblock and Kaymine soils, 0 to 30 percent slopes, stony	9.8	0.6%
KfF	Kaymine, Fairpoint, and Fiveblock soils, benched, 2 to 70 percent slopes, very stony	92.7	5.8%
uShgF	Shelocta-Highsplint-Gilpin complex, 20 to 70 percent slopes, very stony	30.9	2.0%
uUdoC	Udorthents-Urban land complex, 0 to 15 percent slopes	26.9	1.7%
uUduE	Udorthents-Urban land-Rock outcrop complex, 0 to 35 percent slopes	68.3	4.3%
Subtotals for Soil Survey Area		384.9	24.3%
Totals for Area of Interest		1,585.1	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
DLF	Matewan-Marrowbone-Latham complex, 20 to 80 percent slopes, very rocky	101.7	6.4%
FaB	Fairpoint soils, undulating	76.1	4.8%
FaF	Fairpoint and Bethesda soils, 2 to 70 percent slopes, benched, stony	368.2	23.2%
SCF	Shelocta-Cutshin-Gilpin complex, 20 to 75 percent slopes, very stony	162.6	10.3%
uShgF	Shelocta-Highsplint-Gilpin complex, 20 to 70 percent slopes, very stony	202.2	12.8%
uUdoC	Udorthents-Urban land complex, 0 to 15 percent slopes	46.0	2.9%
uUdoD	Udorthents-Urban land complex, 15 to 35 percent slopes	32.9	2.1%
uUdrB	Udorthents-Urban land-Grigsby complex, 0 to 6 percent slopes, occasionally flooded	4.6	0.3%

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Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
uUduE	Udorthents-Urban land-Rock outcrop complex, 0 to 35 percent slopes	200.1	12.6%
W	Water	5.9	0.4%
Subtotals for Soil Survey Area		1,200.2	75.7%
Totals for Area of Interest		1,585.1	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Knott and Letcher Counties, Kentucky

CkF—Cloverlick-Kimper-Highsplint complex, 30 to 65 percent slopes, very stony

Map Unit Setting

National map unit symbol: lh2b
Elevation: 800 to 1,800 feet
Mean annual precipitation: 28 to 47 inches
Mean annual air temperature: 42 to 67 degrees F
Frost-free period: 159 to 199 days
Farmland classification: Not prime farmland

Map Unit Composition

Cloverlick and similar soils: 31 percent
Kimper and similar soils: 29 percent
Highsplint and similar soils: 20 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cloverlick

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy skeletal colluvium derived from sandstone and shale

Typical profile

H1 - 0 to 9 inches: channery loam
H2 - 9 to 35 inches: very channery loam
H3 - 35 to 80 inches: very channery loam

Properties and qualities

Slope: 30 to 65 percent
Surface area covered with cobbles, stones or boulders: 2.8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Kimper

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Fine-loamy colluvium derived from sandstone and shale

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 62 inches: silt loam
H3 - 62 to 80 inches: very channery loam

Properties and qualities

Slope: 30 to 65 percent
Surface area covered with cobbles, stones or boulders: 2.8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Highsplint

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal colluvium derived from sandstone and shale

Typical profile

H1 - 0 to 9 inches: channery silt loam
H2 - 9 to 55 inches: very channery silt loam
H3 - 55 to 80 inches: very channery silt loam

Properties and qualities

Slope: 30 to 65 percent
Surface area covered with cobbles, stones or boulders: 2.8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.20 to 1.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium

Hydric soil rating: No

Minor Components

Shelocta

Percent of map unit: 7 percent

Hydric soil rating: No

Gilpin

Percent of map unit: 6 percent

Hydric soil rating: No

Feds creek

Percent of map unit: 3 percent

Hydric soil rating: No

Grigsby

Percent of map unit: 2 percent

Landform: Flood plains

Hydric soil rating: No

Summers

Percent of map unit: 2 percent

Hydric soil rating: No

DrF—DeKalb-Gilpin-Rayne complex, 25 to 65 percent slopes, very rocky

Map Unit Setting

National map unit symbol: lh2g

Elevation: 1,600 to 2,200 feet

Mean annual precipitation: 28 to 47 inches

Mean annual air temperature: 42 to 67 degrees F

Frost-free period: 159 to 199 days

Farmland classification: Not prime farmland

Map Unit Composition

DeKalb and similar soils: 40 percent

Custom Soil Resource Report

Rayne and similar soils: 20 percent

Gilpin and similar soils: 20 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dekalb

Setting

Landform: Ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy skeletal residuum weathered from sandstone

Typical profile

H1 - 0 to 2 inches: channery sandy loam

H2 - 2 to 25 inches: very channery sandy loam

R - 25 to 35 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 65 percent

Depth to restrictive feature: 20 to 40 inches to lithic bedrock

Drainage class: Well drained

Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: A

Ecological site: F125XY001WV - Sandstone Residuum

Hydric soil rating: No

Description of Rayne

Setting

Landform: Ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Fine-loamy residuum weathered from shale and siltstone

Typical profile

H1 - 0 to 8 inches: silt loam

H2 - 8 to 30 inches: silty clay loam

H3 - 30 to 40 inches: channery silty clay loam

Cr - 40 to 46 inches: weathered bedrock

R - 46 to 56 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 65 percent

Custom Soil Resource Report

Depth to restrictive feature: 40 to 60 inches to lithic bedrock; 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY003WV - Interbedded Sedimentary Uplands
Hydric soil rating: No

Description of Gilpin

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-loamy residuum weathered from sandstone and siltstone

Typical profile

H1 - 0 to 2 inches: loam
H2 - 2 to 28 inches: silty clay loam
H3 - 28 to 34 inches: very channery silt loam
R - 34 to 44 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 65 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F125XY003WV - Interbedded Sedimentary Uplands
Hydric soil rating: No

Minor Components

Rock outcrop

Percent of map unit: 5 percent

Custom Soil Resource Report

Hydric soil rating: No

Ramsey

Percent of map unit: 5 percent

Hydric soil rating: No

Summers

Percent of map unit: 4 percent

Hydric soil rating: No

Feds creek

Percent of map unit: 3 percent

Hydric soil rating: No

Jefferson

Percent of map unit: 3 percent

Hydric soil rating: No

FkE—Fiveblock and Kaymine soils, 0 to 30 percent slopes, stony

Map Unit Setting

National map unit symbol: lh2j

Elevation: 800 to 3,000 feet

Mean annual precipitation: 28 to 47 inches

Mean annual air temperature: 42 to 67 degrees F

Frost-free period: 159 to 199 days

Farmland classification: Not prime farmland

Map Unit Composition

Fiveblock, unstable fill, and similar soils: 41 percent

Kaymine, unstable fill, and similar soils: 39 percent

Minor components: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fiveblock, Unstable Fill

Setting

Landform: Ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Loamy skeletal coal extraction mine spoil derived from interbedded sedimentary rock

Typical profile

H1 - 0 to 14 inches: channery sandy loam

H2 - 14 to 65 inches: very channery sandy loam

Custom Soil Resource Report

Properties and qualities

Slope: 0 to 30 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Kaymine, Unstable Fill

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy skeletal coal extraction mine spoil derived from interbedded sedimentary rock

Typical profile

H1 - 0 to 14 inches: channery silt loam
H2 - 14 to 80 inches: very channery silt loam

Properties and qualities

Slope: 0 to 30 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Fairpoint, unstable fill

Percent of map unit: 5 percent

Hydric soil rating: No

Cedarcreek, unstable fill

Percent of map unit: 5 percent

Hydric soil rating: No

Sewell, unstable fill

Percent of map unit: 5 percent

Hydric soil rating: No

Itmann, unstable fill

Percent of map unit: 3 percent

Hydric soil rating: No

Bethesda, unstable fill

Percent of map unit: 2 percent

Hydric soil rating: No

KfF—Kaymine, Fairpoint, and Fiveblock soils, benched, 2 to 70 percent slopes, very stony

Map Unit Setting

National map unit symbol: lh2w

Elevation: 800 to 3,800 feet

Mean annual precipitation: 28 to 47 inches

Mean annual air temperature: 42 to 67 degrees F

Frost-free period: 159 to 199 days

Farmland classification: Not prime farmland

Map Unit Composition

Kaymine, unstable fill, and similar soils: 40 percent

Fairpoint, unstable fill, and similar soils: 20 percent

Fiveblock, unstable fill, and similar soils: 15 percent

Minor components: 25 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kaymine, Unstable Fill

Setting

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy coal extraction mine spoil derived from interbedded sedimentary rock

Typical profile

H1 - 0 to 14 inches: channery silt loam

H2 - 14 to 80 inches: very channery silt loam

Custom Soil Resource Report

Properties and qualities

Slope: 2 to 70 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Description of Fairpoint, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy coal extraction mine spoil derived from interbedded sedimentary rock

Typical profile

H1 - 0 to 4 inches: channery silty clay loam
H2 - 4 to 72 inches: very channery silty clay loam

Properties and qualities

Slope: 2 to 70 percent
Surface area covered with cobbles, stones or boulders: 1.5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Fiveblock, Unstable Fill

Setting

Landform: Mountain slopes

Custom Soil Resource Report

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy coal extraction mine spoil derived from interbedded sedimentary rock

Typical profile

H1 - 0 to 14 inches: channery sandy loam

H2 - 14 to 65 inches: very channery sandy loam

Properties and qualities

Slope: 2 to 70 percent

Surface area covered with cobbles, stones or boulders: 1.5 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: A

Hydric soil rating: No

Minor Components

Cedarcreek, unstable fill

Percent of map unit: 8 percent

Hydric soil rating: No

Bethesda, unstable fill

Percent of map unit: 7 percent

Hydric soil rating: No

Sewell, unstable fill

Percent of map unit: 3 percent

Hydric soil rating: No

Shelocta

Percent of map unit: 3 percent

Hydric soil rating: No

Udorthents, unstable fill

Percent of map unit: 2 percent

Hydric soil rating: No

Itmann, unstable fill

Percent of map unit: 2 percent

Hydric soil rating: No

uShgF—Shelocta-Highsplint-Gilpin complex, 20 to 70 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2x5k0
Elevation: 680 to 2,680 feet
Mean annual precipitation: 28 to 58 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 147 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Shelocta, very stony, and similar soils: 50 percent
Highsplint, very stony, and similar soils: 20 percent
Gilpin, very stony, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shelocta, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Fine-loamy colluvium derived from sandstone and shale

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: silt loam
BA - 3 to 7 inches: loam
Bt₁ - 7 to 23 inches: channery silt loam
2Bt₂ - 23 to 34 inches: channery silt loam
2Bt₃ - 34 to 45 inches: very channery silt loam
2C - 45 to 59 inches: very parachannery silt loam
2Cr - 59 to 69 inches: bedrock

Properties and qualities

Slope: 20 to 70 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 48 to 65 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (K_{sat}): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Highsplint, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy-skeletal fine-loamy colluvium derived from sandstone and shale

Typical profile

Oi - 0 to 1 inches: very channery slightly decomposed plant material
A - 1 to 4 inches: very channery silt loam
BA - 4 to 11 inches: very channery silt loam
Bw1 - 11 to 28 inches: very channery clay loam
Bw2 - 28 to 48 inches: very channery loam
BC - 48 to 85 inches: very channery loam

Properties and qualities

Slope: 20 to 70 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Gilpin, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Head slope
Down-slope shape: Convex

Custom Soil Resource Report

Across-slope shape: Linear

Parent material: Fine-loamy residuum weathered from sandstone and shale

Typical profile

Oi - 0 to 1 inches: channery slightly decomposed plant material

A - 1 to 5 inches: channery silt loam

Bt1 - 5 to 11 inches: channery silt loam

Bt2 - 11 to 20 inches: channery silt loam

Bt3 - 20 to 28 inches: channery loam

R - 28 to 38 inches: bedrock

Properties and qualities

Slope: 20 to 70 percent

Surface area covered with cobbles, stones or boulders: 1.0 percent

Depth to restrictive feature: 24 to 40 inches to lithic bedrock

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: C

Ecological site: F125XY003WV - Interbedded Sedimentary Uplands

Hydric soil rating: No

Minor Components

Marrowbone, very stony

Percent of map unit: 6 percent

Landform: Hillslopes

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Nose slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Fedscreek, very stony

Percent of map unit: 4 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Ramsey, very stony

Percent of map unit: 3 percent

Landform: Hillslopes

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Nose slope

Down-slope shape: Convex

Custom Soil Resource Report

Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent

uUdoC—Udorthents-Urban land complex, 0 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2qdmg
Elevation: 700 to 2,100 feet
Mean annual precipitation: 28 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 156 to 222 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 55 percent
Urban land: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Mountainbase
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

A/Cp - 0 to 6 inches: very channery silt loam
C1 - 6 to 18 inches: very channery silt loam
C2 - 18 to 30 inches: very channery silt loam
C3 - 30 to 42 inches: very channery silt loam
2C4 - 42 to 80 inches: extremely channery silt loam

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Custom Soil Resource Report

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Urban Land

Setting

Landform: Mountain slopes

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Shelocta

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Gilpin

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Cutshin

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Convex

Hydric soil rating: No

uUduE—Udorthents-Urban land-Rock outcrop complex, 0 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2mff5
Elevation: 700 to 2,100 feet
Mean annual precipitation: 28 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 156 to 222 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 50 percent
Urban land: 25 percent
Rock outcrop: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

Ap - 0 to 5 inches: extremely parachannery silt loam
C1 - 5 to 30 inches: extremely parachannery silt loam
C2 - 30 to 60 inches: extremely parachannery silt loam
C3 - 60 to 79 inches: extremely parachannery silt loam

Properties and qualities

Slope: 0 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Custom Soil Resource Report

Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Mountain slopes

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Free face
Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Shelocta

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Cutshin

Percent of map unit: 3 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Gilpin

Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Custom Soil Resource Report

Leslie and Perry Counties, Kentucky

DLF—Matewan-Marrowbone-Latham complex, 20 to 80 percent slopes, very rocky

Map Unit Setting

National map unit symbol: 2tqh8
Elevation: 700 to 2,400 feet
Mean annual precipitation: 37 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 155 to 220 days
Farmland classification: Not prime farmland

Map Unit Composition

Matewan, very stony, and similar soils: 30 percent
Marrowbone, very stony, and similar soils: 25 percent
Latham, very stony, and similar soils: 15 percent
Minor components: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Matewan, Very Stony

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy-skeletal residuum weathered from sandstone

Typical profile

O_i - 0 to 1 inches: channery slightly decomposed plant material
A - 1 to 3 inches: channery fine sandy loam
BA - 3 to 7 inches: channery fine sandy loam
Bw₁ - 7 to 21 inches: very channery fine sandy loam
Bw₂ - 21 to 28 inches: extremely channery fine sandy loam
R - 28 to 37 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 24 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (K_{sat}): Very low to moderately low (0.00 to 0.01 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e

Custom Soil Resource Report

Hydrologic Soil Group: A

Ecological site: F125XY003WV - Interbedded Sedimentary Uplands

Hydric soil rating: No

Description of Marrowbone, Very Stony

Setting

Landform: Ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Coarse-loamy residuum weathered from sandstone

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material

A - 1 to 5 inches: fine sandy loam

B_{w1} - 5 to 10 inches: loam

B_{w2} - 10 to 17 inches: fine sandy loam

B_{w3} - 17 to 23 inches: loam

BC - 23 to 28 inches: channery loam

R - 28 to 38 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent

Surface area covered with cobbles, stones or boulders: 1.0 percent

Depth to restrictive feature: 24 to 32 inches to lithic bedrock

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (K_{sat}): Very low to moderately low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: B

Ecological site: F125XY003WV - Interbedded Sedimentary Uplands

Hydric soil rating: No

Description of Latham, Very Stony

Setting

Landform: Ridges

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Mountaintop

Down-slope shape: Convex

Across-slope shape: Concave

Parent material: Clayey residuum weathered from shale and siltstone

Typical profile

O_i - 0 to 1 inches: channery slightly decomposed plant material

A - 1 to 2 inches: silt loam

BA - 2 to 6 inches: silty clay loam

Bt - 6 to 20 inches: silty clay

Custom Soil Resource Report

BC - 20 to 25 inches: silty clay loam
Cr - 25 to 36 inches: bedrock
R - 36 to 46 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 24 to 34 inches to paralithic bedrock; 34 to 45 inches to lithic bedrock
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C/D
Ecological site: F125XY003WV - Interbedded Sedimentary Uplands
Hydric soil rating: No

Minor Components

Gilpin, very stony

Percent of map unit: 10 percent
Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Shelocta, very stony

Percent of map unit: 7 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Concave, convex
Across-slope shape: Linear
Hydric soil rating: No

Fedscreek, very stony

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent

Ramsey, very stony

Percent of map unit: 3 percent

Custom Soil Resource Report

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

FaB—Fairpoint soils, undulating

Map Unit Setting

National map unit symbol: ljk2
Elevation: 820 to 2,460 feet
Mean annual precipitation: 43 to 54 inches
Mean annual air temperature: 42 to 67 degrees F
Frost-free period: 156 to 196 days
Farmland classification: Not prime farmland

Map Unit Composition

Fairpoint, unstable fill, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fairpoint, Unstable Fill

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Mountaintop
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal coal extraction mine spoil derived from interbedded sedimentary rock

Typical profile

H1 - 0 to 6 inches: very channery silt loam
H2 - 6 to 62 inches: very channery silt loam

Properties and qualities

Slope: 0 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Custom Soil Resource Report

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Hydric soil rating: No

Minor Components

Shelocta

Percent of map unit: 4 percent

Hydric soil rating: No

Dekalb

Percent of map unit: 4 percent

Hydric soil rating: No

Cutshin

Percent of map unit: 4 percent

Hydric soil rating: No

Gilpin

Percent of map unit: 3 percent

Hydric soil rating: No

FaF—Fairpoint and Bethesda soils, 2 to 70 percent slopes, benched, stony

Map Unit Setting

National map unit symbol: 2tqhd

Elevation: 720 to 1,510 feet

Mean annual precipitation: 45 to 57 inches

Mean annual air temperature: 43 to 68 degrees F

Frost-free period: 169 to 203 days

Farmland classification: Not prime farmland

Map Unit Composition

Fairpoint, unstable fill, and similar soils: 55 percent

Bethesda, unstable fill, and similar soils: 30 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fairpoint, Unstable Fill

Setting

Landform: Mountain slopes

Landform position (three-dimensional): Mountainflank

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy-skeletal coal extraction mine spoil derived from sandstone and shale

Custom Soil Resource Report

Typical profile

Ap - 0 to 11 inches: channery loam
C1 - 11 to 32 inches: very channery loam
C2 - 32 to 41 inches: extremely channery loam
C3 - 41 to 51 inches: extremely flaggy loam
C4 - 51 to 58 inches: extremely flaggy silt loam
C5 - 58 to 72 inches: extremely flaggy loam

Properties and qualities

Slope: 2 to 70 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Bethesda, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy-skeletal coal extraction mine spoil derived from sandstone and shale

Typical profile

Ap - 0 to 12 inches: channery silt loam
C1 - 12 to 36 inches: very channery loam
C2 - 36 to 58 inches: very channery loam
C3 - 58 to 72 inches: very channery loam

Properties and qualities

Slope: 2 to 70 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s

Custom Soil Resource Report

Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Udorthents, unstable fill

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Matewan, very stony

Percent of map unit: 3 percent
Landform: Ridges
Landform position (three-dimensional): Mountaintop
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Shelocta, very stony

Percent of map unit: 3 percent
Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Dumps, mine (tailings & tipples)

Percent of map unit: 2 percent
Landform: Ridges
Landform position (three-dimensional): Mountaintop
Down-slope shape: Linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Urban land

Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

SCF—Shelocta-Cutshin-Gilpin complex, 20 to 75 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2tqhb

Custom Soil Resource Report

Elevation: 680 to 2,400 feet
Mean annual precipitation: 40 to 54 inches
Mean annual air temperature: 42 to 69 degrees F
Frost-free period: 147 to 196 days
Farmland classification: Not prime farmland

Map Unit Composition

Shelocta, very stony, and similar soils: 35 percent
Cutshin, very stony, and similar soils: 25 percent
Gilpin, very stony, and similar soils: 15 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shelocta, Very Stony

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Fine-loamy colluvium derived from sandstone and shale over clayey residuum weathered from shale and siltstone

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: silt loam
BA - 3 to 7 inches: loam
Bt₁ - 7 to 23 inches: channery silt loam
2Bt₂ - 23 to 34 inches: channery silt loam
2Bt₃ - 34 to 45 inches: very channery silt loam
2C - 45 to 59 inches: very parachannery silt loam
2Cr - 59 to 69 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 48 to 65 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (K_{sat}): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY001WV - Sandstone Residuum
Hydric soil rating: No

Description of Cutshin, Very Stony

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope

Custom Soil Resource Report

Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Fine-loamy colluvium derived from sandstone and shale

Typical profile

Oi - 0 to 2 inches: very channery slightly decomposed plant material
A - 2 to 10 inches: very channery loam
AB - 10 to 19 inches: channery loam
Bw1 - 19 to 30 inches: channery loam
Bw2 - 30 to 50 inches: channery loam
Cr - 50 to 60 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: F125XY001WV - Sandstone Residuum
Hydric soil rating: No

Description of Gilpin, Very Stony

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Fine-loamy residuum weathered from sandstone and shale

Typical profile

Oi - 0 to 1 inches: channery slightly decomposed plant material
A - 1 to 5 inches: channery silt loam
Bt1 - 5 to 11 inches: channery silt loam
Bt2 - 11 to 20 inches: channery silt loam
Bt3 - 20 to 28 inches: channery loam
R - 28 to 38 inches: bedrock

Properties and qualities

Slope: 20 to 80 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 24 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)

Custom Soil Resource Report

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F125XY001WV - Sandstone Residuum
Hydric soil rating: No

Minor Components

Cloverlick, very stony

Percent of map unit: 8 percent
Landform: Mountain slopes
Landform position (three-dimensional): Center third of mountainflank
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Marrowbone, very stony

Percent of map unit: 7 percent
Landform: Mountain slopes
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Highsplint, very stony

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Sequoia, very stony

Percent of map unit: 3 percent
Landform: Mountain slopes
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Upper third of mountainflank
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent

uShgF—Shelocta-Highsplint-Gilpin complex, 20 to 70 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2x5k0
Elevation: 680 to 2,680 feet
Mean annual precipitation: 28 to 58 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 147 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Shelocta, very stony, and similar soils: 50 percent
Highsplint, very stony, and similar soils: 20 percent
Gilpin, very stony, and similar soils: 15 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Shelocta, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Fine-loamy colluvium derived from sandstone and shale

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 3 inches: silt loam
BA - 3 to 7 inches: loam
Bt1 - 7 to 23 inches: channery silt loam
2Bt2 - 23 to 34 inches: channery silt loam
2Bt3 - 34 to 45 inches: very channery silt loam
2C - 45 to 59 inches: very parachannery silt loam
2Cr - 59 to 69 inches: bedrock

Properties and qualities

Slope: 20 to 70 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: 48 to 65 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches

Custom Soil Resource Report

Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Highsplint, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loamy-skeletal fine-loamy colluvium derived from sandstone and shale

Typical profile

Oi - 0 to 1 inches: very channery slightly decomposed plant material
A - 1 to 4 inches: very channery silt loam
BA - 4 to 11 inches: very channery silt loam
Bw1 - 11 to 28 inches: very channery clay loam
Bw2 - 28 to 48 inches: very channery loam
BC - 48 to 85 inches: very channery loam

Properties and qualities

Slope: 20 to 70 percent
Surface area covered with cobbles, stones or boulders: 1.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Ecological site: F125XY002WV - Interbedded Sedimentary Colluvium
Hydric soil rating: No

Description of Gilpin, Very Stony

Setting

Landform: Hillslopes
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Head slope
Down-slope shape: Convex

Custom Soil Resource Report

Across-slope shape: Linear

Parent material: Fine-loamy residuum weathered from sandstone and shale

Typical profile

Oi - 0 to 1 inches: channery slightly decomposed plant material

A - 1 to 5 inches: channery silt loam

Bt1 - 5 to 11 inches: channery silt loam

Bt2 - 11 to 20 inches: channery silt loam

Bt3 - 20 to 28 inches: channery loam

R - 28 to 38 inches: bedrock

Properties and qualities

Slope: 20 to 70 percent

Surface area covered with cobbles, stones or boulders: 1.0 percent

Depth to restrictive feature: 24 to 40 inches to lithic bedrock

Drainage class: Well drained

Runoff class: High

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.01 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7e

Hydrologic Soil Group: C

Ecological site: F125XY003WV - Interbedded Sedimentary Uplands

Hydric soil rating: No

Minor Components

Marrowbone, very stony

Percent of map unit: 6 percent

Landform: Hillslopes

Landform position (two-dimensional): Summit

Landform position (three-dimensional): Nose slope

Down-slope shape: Convex

Across-slope shape: Convex

Hydric soil rating: No

Fedscreek, very stony

Percent of map unit: 4 percent

Landform: Hillslopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Ramsey, very stony

Percent of map unit: 3 percent

Landform: Hillslopes

Landform position (two-dimensional): Shoulder

Landform position (three-dimensional): Nose slope

Down-slope shape: Convex

Custom Soil Resource Report

Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 2 percent

uUdoC—Udorthents-Urban land complex, 0 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2qdmg
Elevation: 700 to 2,100 feet
Mean annual precipitation: 28 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 156 to 222 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 55 percent
Urban land: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Mountainbase
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

A/Cp - 0 to 6 inches: very channery silt loam
C1 - 6 to 18 inches: very channery silt loam
C2 - 18 to 30 inches: very channery silt loam
C3 - 30 to 42 inches: very channery silt loam
2C4 - 42 to 80 inches: extremely channery silt loam

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Custom Soil Resource Report

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Urban Land

Setting

Landform: Mountain slopes

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Cutshin

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Convex

Hydric soil rating: No

Gilpin

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

Shelocta

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

uUdoD—Udorthents-Urban land complex, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2mff6
Elevation: 700 to 2,100 feet
Mean annual precipitation: 28 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 143 to 222 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 55 percent
Urban land: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

A/Cp - 0 to 6 inches: very channery silt loam
C1 - 6 to 18 inches: very channery silt loam
C2 - 18 to 30 inches: very channery silt loam
C3 - 30 to 42 inches: very channery silt loam
2C4 - 42 to 80 inches: extremely channery silt loam

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C

Custom Soil Resource Report

Hydric soil rating: No

Description of Urban Land

Setting

Landform: Mountain slopes

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Minor Components

Cutshin

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: No

Shelocta

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Gilpin

Percent of map unit: 5 percent

Landform: Mountain slopes

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Lower third of mountainflank

Down-slope shape: Convex

Across-slope shape: Linear

Hydric soil rating: No

uUdrB—Udorthents-Urban land-Grigsby complex, 0 to 6 percent slopes, occasionally flooded

Map Unit Setting

National map unit symbol: 2mff7

Elevation: 700 to 1,400 feet

Mean annual precipitation: 28 to 54 inches

Mean annual air temperature: 42 to 68 degrees F

Frost-free period: 156 to 222 days

Custom Soil Resource Report

Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 40 percent

Urban land, occasionally flooded: 35 percent

Grigsby, occasionally flooded, and similar soils: 15 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

Ap - 0 to 5 inches: very channery silt loam

C1 - 5 to 22 inches: very channery silt loam

C2 - 22 to 35 inches: very channery silt loam

C3 - 35 to 52 inches: channery loam

C4 - 52 to 64 inches: channery loam

2C5 - 64 to 80 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 0 to 6 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: NoneOccasional

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6s

Hydrologic Soil Group: C

Hydric soil rating: No

Description of Urban Land, Occasionally Flooded

Setting

Landform: Flood plains

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydric soil rating: No

Description of Grigsby, Occasionally Flooded

Setting

Landform: Flood plains

Custom Soil Resource Report

Landform position (two-dimensional): Toeslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy alluvium derived from sedimentary rock

Typical profile

Ap - 0 to 6 inches: loam
Bw1 - 6 to 14 inches: loam
Bw2 - 14 to 30 inches: sandy loam
C1 - 30 to 45 inches: stratified loam to sand
C2 - 45 to 62 inches: stratified sand to loam
C3 - 62 to 80 inches: stratified gravelly sand to loamy sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.57 to 5.95 in/hr)
Depth to water table: About 42 to 80 inches
Frequency of flooding: NoneOccasional
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F125XY004WV - Floodplain Alluvium
Hydric soil rating: No

Minor Components

Yeager, frequently flooded

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Rowdy, occasionally flooded

Percent of map unit: 5 percent
Landform: Stream terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

uUduE—Udorthents-Urban land-Rock outcrop complex, 0 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2mff5
Elevation: 700 to 2,100 feet
Mean annual precipitation: 28 to 54 inches
Mean annual air temperature: 42 to 68 degrees F
Frost-free period: 156 to 222 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, unstable fill, and similar soils: 50 percent
Urban land: 25 percent
Rock outcrop: 15 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Unstable Fill

Setting

Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Mountainflank
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy skeletal mine spoil or earthy fill derived from interbedded sedimentary rock

Typical profile

Ap - 0 to 5 inches: extremely parachannery silt loam
C1 - 5 to 30 inches: extremely parachannery silt loam
C2 - 30 to 60 inches: extremely parachannery silt loam
C3 - 60 to 79 inches: extremely parachannery silt loam

Properties and qualities

Slope: 0 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Mountain slopes

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Mountain slopes
Landform position (three-dimensional): Free face
Down-slope shape: Linear
Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Shelocta

Percent of map unit: 5 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Cutshin

Percent of map unit: 3 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: No

Gilpin

Percent of map unit: 2 percent
Landform: Mountain slopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Lower third of mountainflank
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

W—Water

Map Unit Composition

Water: 100 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

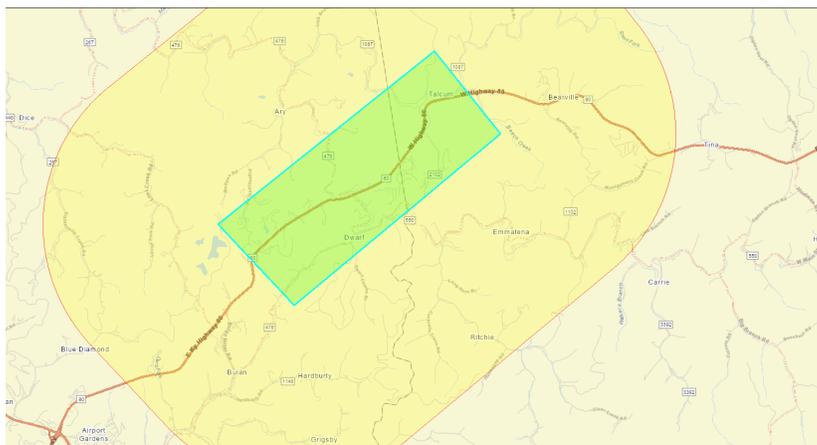


EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Perry County, KY

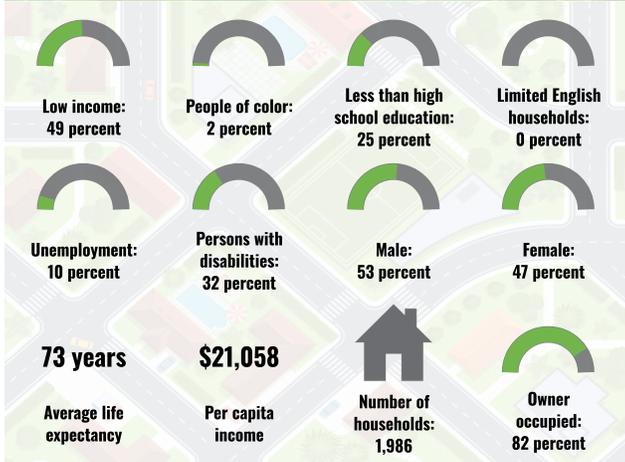
3 miles Ring around the Area
 Population: 5,316
 Area in square miles: 76.03



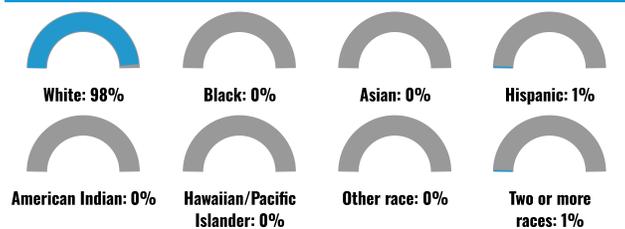
September 6, 2023
 Troublesome Creek Impact Area

1:72,224
 0 0.5 1 2 mi
 0 1 2 4 km
VGDL, Esri, HERE, Garmin, SwireCloud, GeoTechnologies, Inc, METI, NASA, USGS, EPA, NPS, USDA

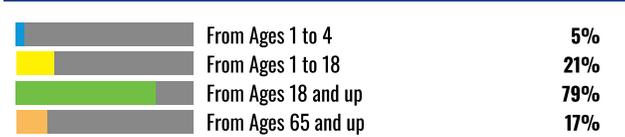
COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	100%

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

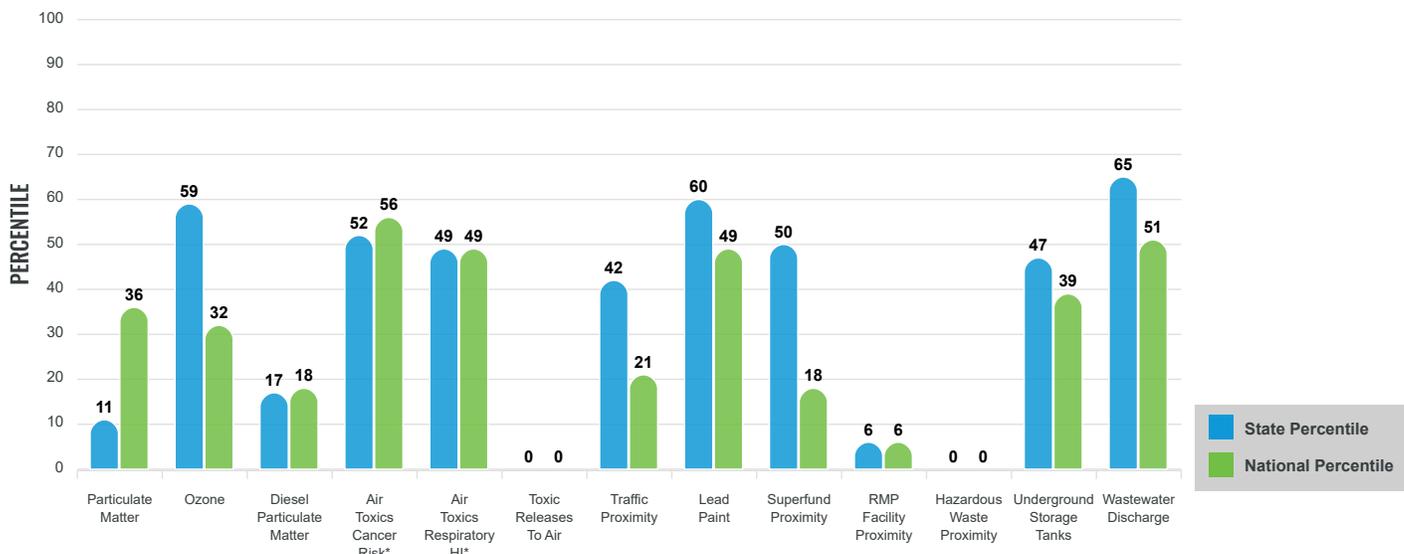
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

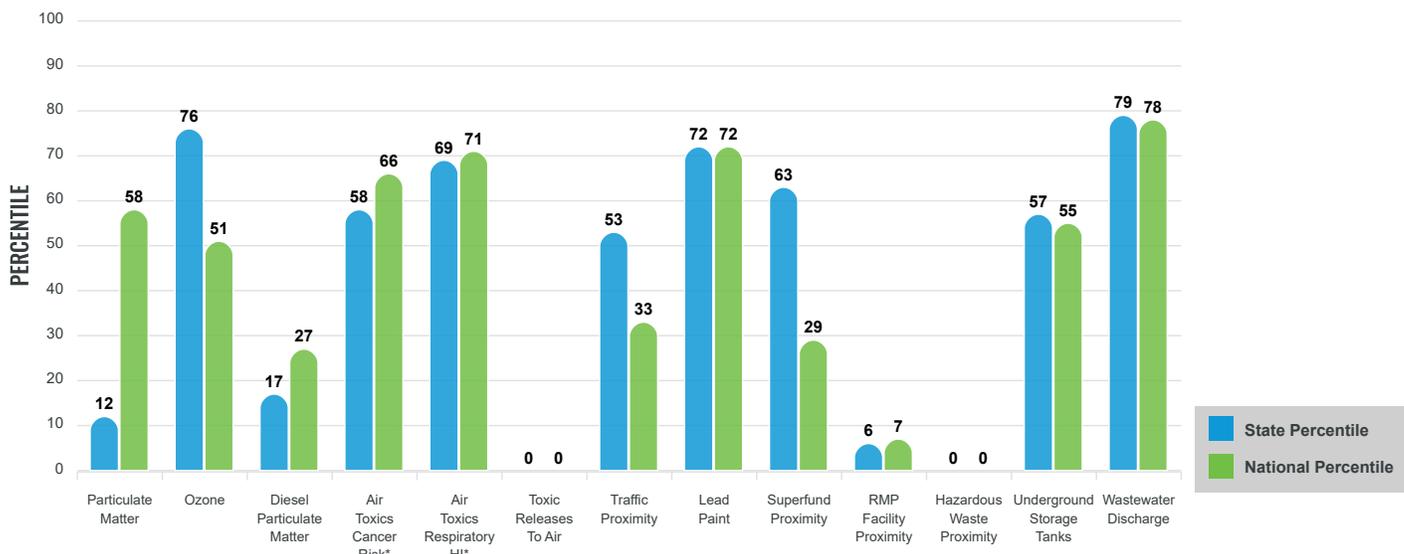
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for 3 miles Ring around the Area

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m ³)	7.45	8.54	8	8.08	30
Ozone (ppb)	58.2	59.3	46	61.6	25
Diesel Particulate Matter (µg/m ³)	0.0863	0.203	9	0.261	12
Air Toxics Cancer Risk* (lifetime risk per million)	24	26	0	25	5
Air Toxics Respiratory HI*	0.3	0.32	2	0.31	31
Toxic Releases to Air	0	7,500	0	4,600	0
Traffic Proximity (daily traffic count/distance to road)	8.7	78	32	210	15
Lead Paint (% Pre-1960 Housing)	0.21	0.24	57	0.3	49
Superfund Proximity (site count/km distance)	0.017	0.039	37	0.13	13
RMP Facility Proximity (facility count/km distance)	0.028	0.33	5	0.43	3
Hazardous Waste Proximity (facility count/km distance)	0.011	0.78	0	1.9	0
Underground Storage Tanks (count/km ²)	0.14	1.1	38	3.9	29
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0018	0.48	60	22	53
SOCIOECONOMIC INDICATORS					
Demographic Index	26%	26%	55	35%	43
Supplemental Demographic Index	22%	16%	81	14%	83
People of Color	2%	16%	18	39%	5
Low Income	49%	37%	71	31%	80
Unemployment Rate	10%	6%	79	6%	80
Limited English Speaking Households	0%	1%	0	5%	0
Less Than High School Education	25%	13%	86	12%	87
Under Age 5	5%	6%	50	6%	52
Over Age 64	17%	17%	53	17%	56
Low Life Expectancy	25%	22%	78	20%	90

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
Water Dischargers	88
Air Pollution	2
Brown fields	0
Toxic Release Inventory	0

Other community features within defined area:

Schools	2
Hospitals	0
Places of Worship	19

Other environmental data:

Air Non-attainment	No
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

Report for 3 miles Ring around the Area

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	25%	22%	77	20%	90
Heart Disease	9.2	7.4	83	6.1	94
Asthma	12.4	11.5	77	10	93
Cancer	6.9	6.5	60	6.1	64
Persons with Disabilities	31%	18.3%	93	13.4%	98

CLIMATE INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	35%	12%	91	12%	93
Wild re Risk	16%	3%	94	14%	82

CRITICAL SERVICE GAPS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	20%	17%	64	14%	75
Lack of Health Insurance	7%	6%	69	9%	50
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Footnotes

Report for 3 miles Ring around the Area