ENCLOSURE A

AIRPORT HAZARDS

Airport Hazards (CEST and EA)

General policy	Legislation	Regulation
It is HUD's policy to apply standards to prevent incompatible development around civil airports and military airfields.		24 CFR Part 51 Subpart D
References		
https://www.hudexchange.info/environmental-review/airport-hazards		

1. **To ensure compatible land use development, you must determine your site's proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?**

   ☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within the applicable distances to a military or civilian airport.*

   ☐Yes → *Continue to Question 2.*

2. **Is your project located within a Runway Potential Zone/Clear Zone (RPZ/CZ) or Accident Potential Zone (APZ)?**

   ☐Yes, project is in an APZ → *Continue to Question 3.*

   ☐Yes, project is an RPZ/CZ → *Project cannot proceed at this location.*

   ☐No, project is not within an APZ or RPZ/CZ

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within either zone.*

3. **Is the project in conformance with DOD guidelines for APZ?**

   ☐Yes, project is consistent with DOD guidelines without further action.

   Explain how you determined that the project is consistent:

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

☐No, the project cannot be brought into conformance with DOD guidelines and has not been approved. → *Project cannot proceed at this location.*

☐Project is not consistent with DOD guidelines, but it has been approved by Certifying Officer or HUD Approving Official.

Explain approval process:

If mitigation measures have been or will be taken, explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

<u>Worksheet Summary</u>

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport. The project is in compliance with Airport Hazards requirements. The nearest airport, the Bowling Green-Woodhurst civil airport is approximately 17,848 feet from the site, which is beyond the 2,500-foot threshold for civil airports. The military airports generally near Kentucky and Warren County include the Louisville International Airport (over 80 miles away), Fort Knox (over 60 miles away) and Fort Campbell (over 60 miles away).

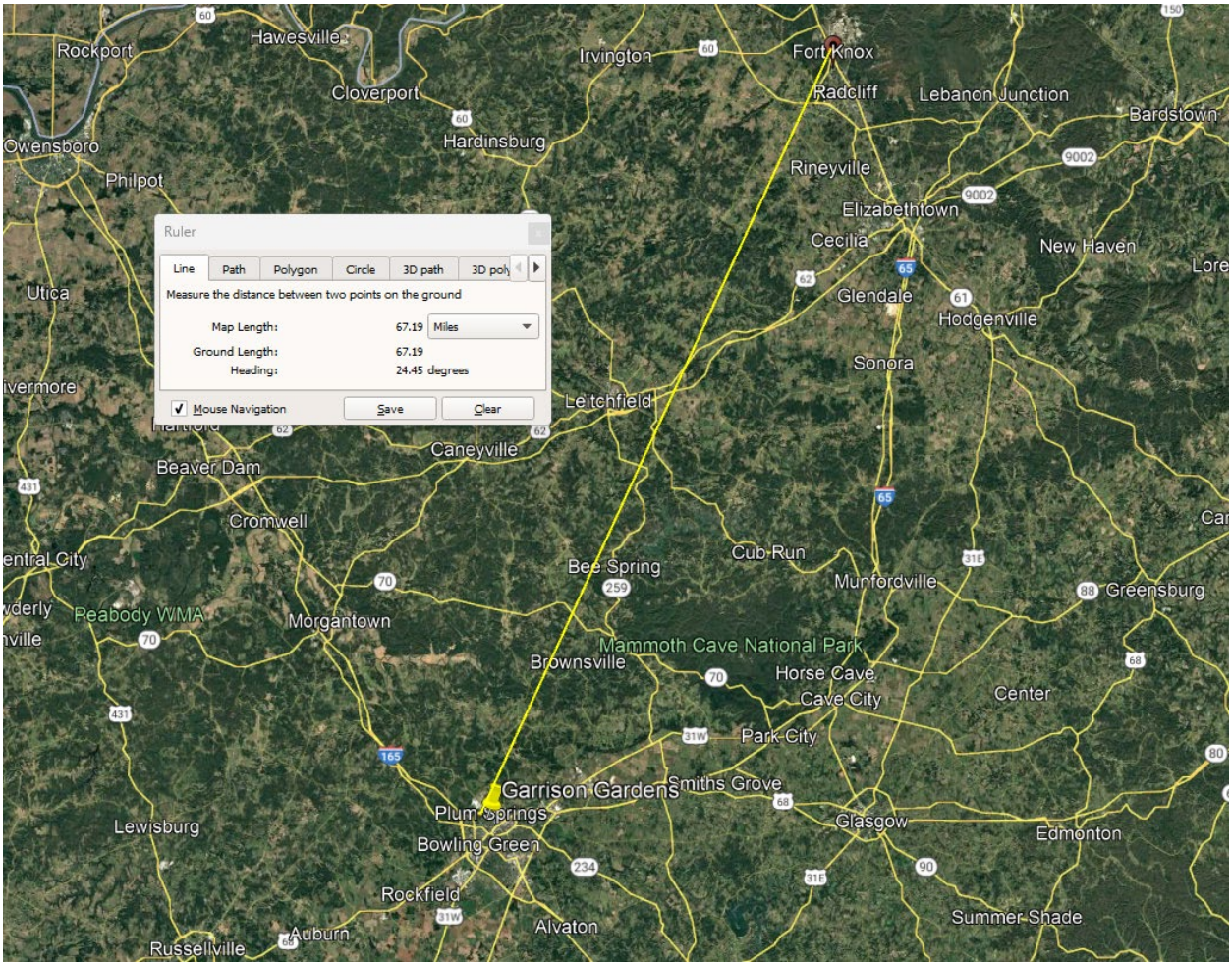
Are formal compliance steps or mitigation required?

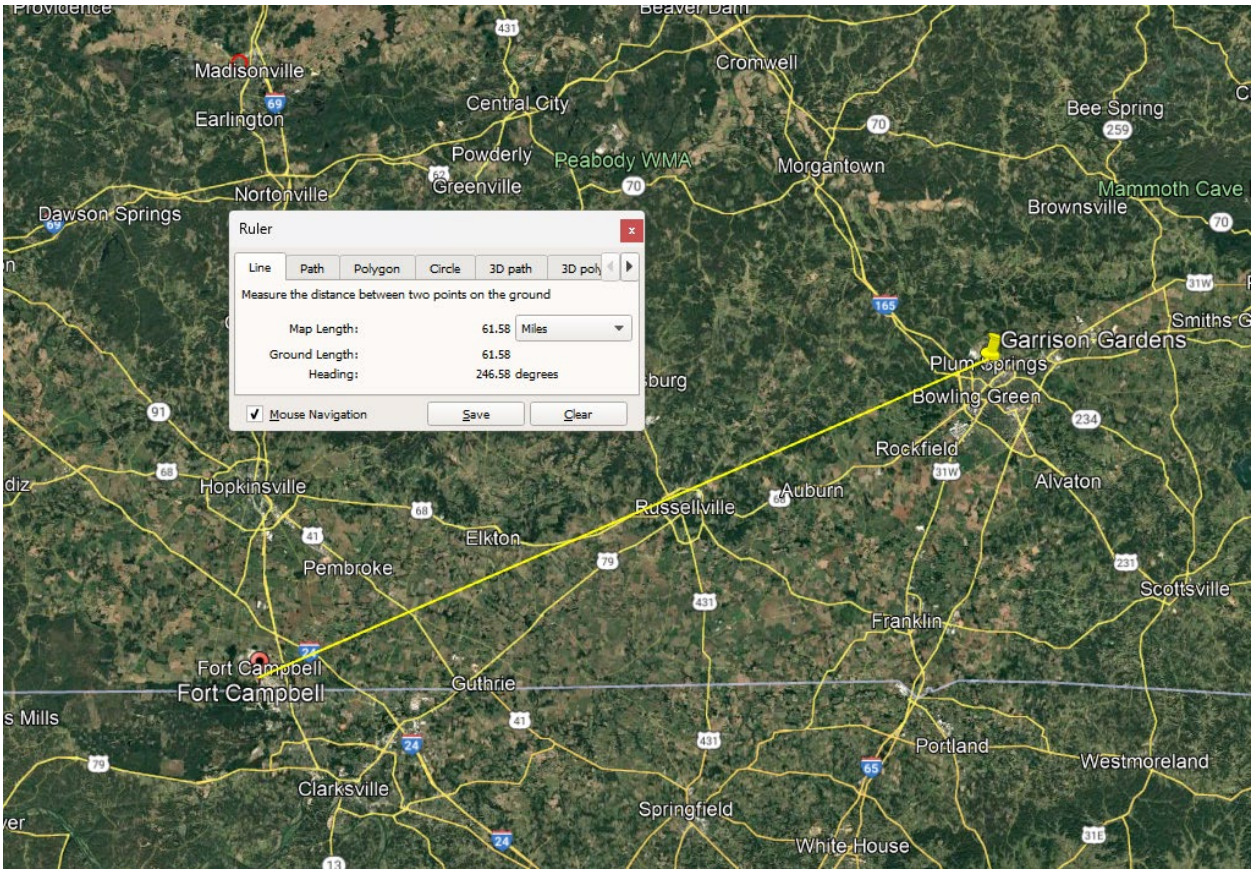
☐ Yes

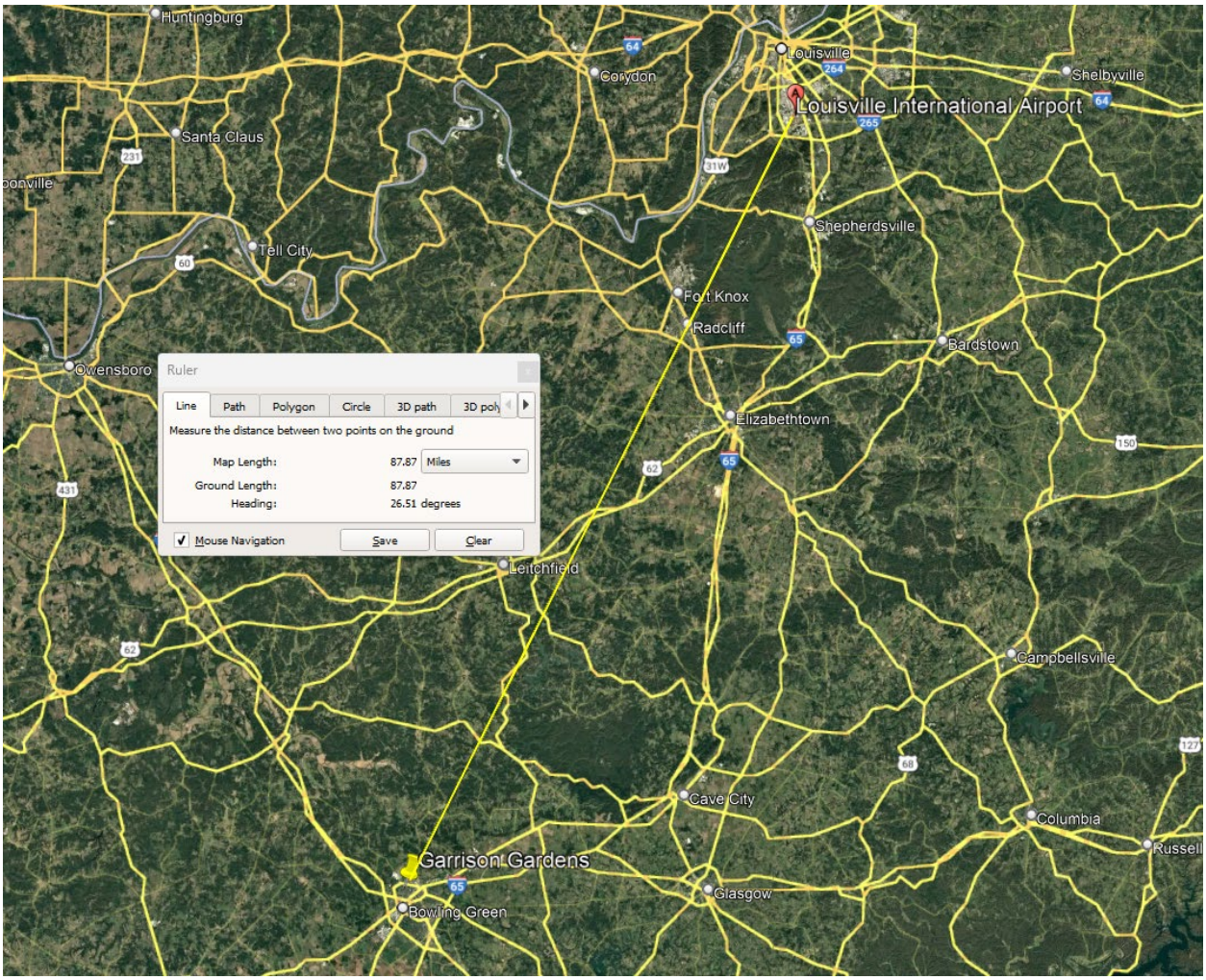
☒ No

Supporting Documentation

Garrison Gardens to Military Airports.pdf
Garrison Gardens - Airport.pdf


Ruler
Line
Path
Polygon
Circle
3D path
Measure the distance between two points on the ground
Map Length:
67.19
Miles
Ground Length:
67.19
Heading:
24.45 degrees
Mouse Navigation
Save
Clear
Rockport
Hawesville
Cloverport
Irvington
Fort Knox
Radcliff
Lebanon Junction
Bardstown
Owensboro
Philpot
Hardinsburg
Rineyville
Elizabethtown
Cecilia
New Haven
Utica
Glendale
Hodgenville
Sonora
Leitchfield
Caneyville
Beaver Dam
Cromwell
Cub Run
Bee Spring
Munfordville
Greensburg
Peabody WMA
Morgantown
Mammoth Cave National Park
Brownsville
Horse Cave
Cave City
Center
Park City
Smiths Grove
Garrison Gardens
Plum Springs
Glasgow
Edmonton
Lewisburg
Bowling Green
Rockfield
Alvaton
Summer Shade
Auburn
Russellville


Ruler
Line
Path
Polygon
Circle
3D path
Measure the distance between two points on the ground
Map Length: 61.58 Miles
Ground Length: 61.58
Heading: 246.58 degrees
Mouse Navigation
Save
Clear
Madisonville
Earlington
Central City
Cromwell
Bee Spring
Powderly
Peabody WMA
Morgantown
Greenville
Nortonville
Dawson Springs
Mammoth Cave
Brownsville
Garrison Gardens
Bowling Green
Rockfield
Alvaton
Hopkinsville
Auburn
Russellville
Elkton
Pembroke
Scottsville
Franklin
Fort Campbell
Guthrie
Portland
Westmoreland
Clarksville
Springfield
White House


Huntingburg
Corydon
Louisville
Shelbyville
Louisville International Airport
Santa Claus
Tell City
Shepherdsville
Fort Knox
Radcliff
Bardstown
Owensboro
Ruler
Line
Path
Polygon
Circle
3D path
Measure the distance between two points on the ground
Map Length:
87.87
Miles
Ground Length:
87.87
Heading:
26.51 degrees
Mouse Navigation
Save
Clear
Elizabethtown
Leitchfield
Campbellsville
Cave City
Columbia
Garrison Gardens
Glasgow
Bowling Green

AIRPORT HAZARDS

1221 Crewdson Drive Bowling Green, Kentucky

ENCLOSURE B

COASTAL BARRIER RESOURCES

Coastal Barrier Resources (CEST and EA)

General requirements	Legislation	Regulation
HUD financial assistance may not be used for most activities in units of the Coastal Barrier Resources System (CBRS). See 16 USC 3504 for limitations on federal expenditures affecting the CBRS.	Coastal Barrier Resources Act (CBRA) of 1982, as amended by the Coastal Barrier Improvement Act of 1990 (16 USC 3501)	
References		
https://www.hudexchange.info/environmental-review/coastal-barrier-resources		

Projects located in the following states must complete this form.

Alabama	Georgia	Massachusetts	New Jersey	Puerto Rico	Virgin Islands
Connecticut	Louisiana	Michigan	New York	Rhode Island	Virginia
Delaware	Maine	Minnesota	North Carolina	South Carolina	Wisconsin
Florida	Maryland	Mississippi	Ohio	Texas	

1. **Is the project located in a CBRS Unit?**

☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a CBRS Unit.*

☐Yes → *Continue to Question 2.*

> Federal assistance for most activities may not be used at this location. You must either choose an alternate site or cancel the project. In very rare cases, federal monies can be spent within CBRS units for certain exempted activities (e.g., a nature trail), after consultation with the Fish and Wildlife Service (FWS) (see 16 USC 3505 for exceptions to limitations on expenditures).

2. **Indicate your selected course of action.**

☐ After consultation with the FWS the project was given approval to continue

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map and documentation of a FWS approval.*

☐ Project was not given approval

Project cannot proceed at this location.

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

Form is not required – Kentucky is not listed as a state that must complete this form.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

ENCLOSURE C

FLOOD INSURANCE

Flood Insurance (CEST and EA)

General requirements	Legislation	Regulation	Reference
Certain types of federal financial assistance may not be used in floodplains unless the community participates in National Flood Insurance Program and flood insurance is both obtained and maintained.	Flood Disaster Protection Act of 1973 as amended (42 USC 4001-4128)	24 CFR 50.4(b)(1) and 24 CFR 58.6(a) and (b); 24 CFR 55.5.	Flood Insurance - HUD Exchange

1. **Does this project involve mortgage insurance, refinance, acquisition, repairs, construction, or rehabilitation of a structure, mobile home, or insurable personal property?**

   ☐No. This project does not require flood insurance or is excepted from flood insurance. *Continue to the Worksheet Summary.*

   ☒Yes *Continue to Question 2.*

2. **Provide a FEMA/FIRM map showing the site.**

   The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs). For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site. Provide FEMA/FIRM floodplain zone designation, panel number, and date within your documentation.

   Is the structure, part of the structure, or insurable property located in a FEMA-designated Special Flood Hazard Area?

   ☒No *Continue to the Worksheet Summary.*

   ☐Yes *Continue to Question 3.*

3. **Is the community participating in the National Flood Insurance Program *or* has less than one year passed since FEMA notification of Special Flood Hazards?**

   ☐Yes, the community is participating in the National Flood Insurance Program.

   For loans, loan insurance or loan guarantees, flood insurance coverage must be continued for the term of the loan. For grants and other non-loan forms of financial assistance, flood insurance coverage must be continued for the life of the building irrespective of the transfer of ownership. The amount of coverage must equal the total project cost or the maximum coverage limit of the National Flood Insurance Program, whichever is less

   Provide a copy of the flood insurance policy declaration or a paid receipt for the current annual flood insurance premium and a copy of the application for flood insurance.

   Continue to the Worksheet Summary.

☐Yes, less than one year has passed since FEMA notification of Special Flood Hazards.
If less than one year has passed since notification of Special Flood Hazards, no flood Insurance is required.

Continue to the Worksheet Summary.

☐No. The community is not participating, or its participation has been suspended.

Federal assistance may not be used at this location. Cancel the project at this location.

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

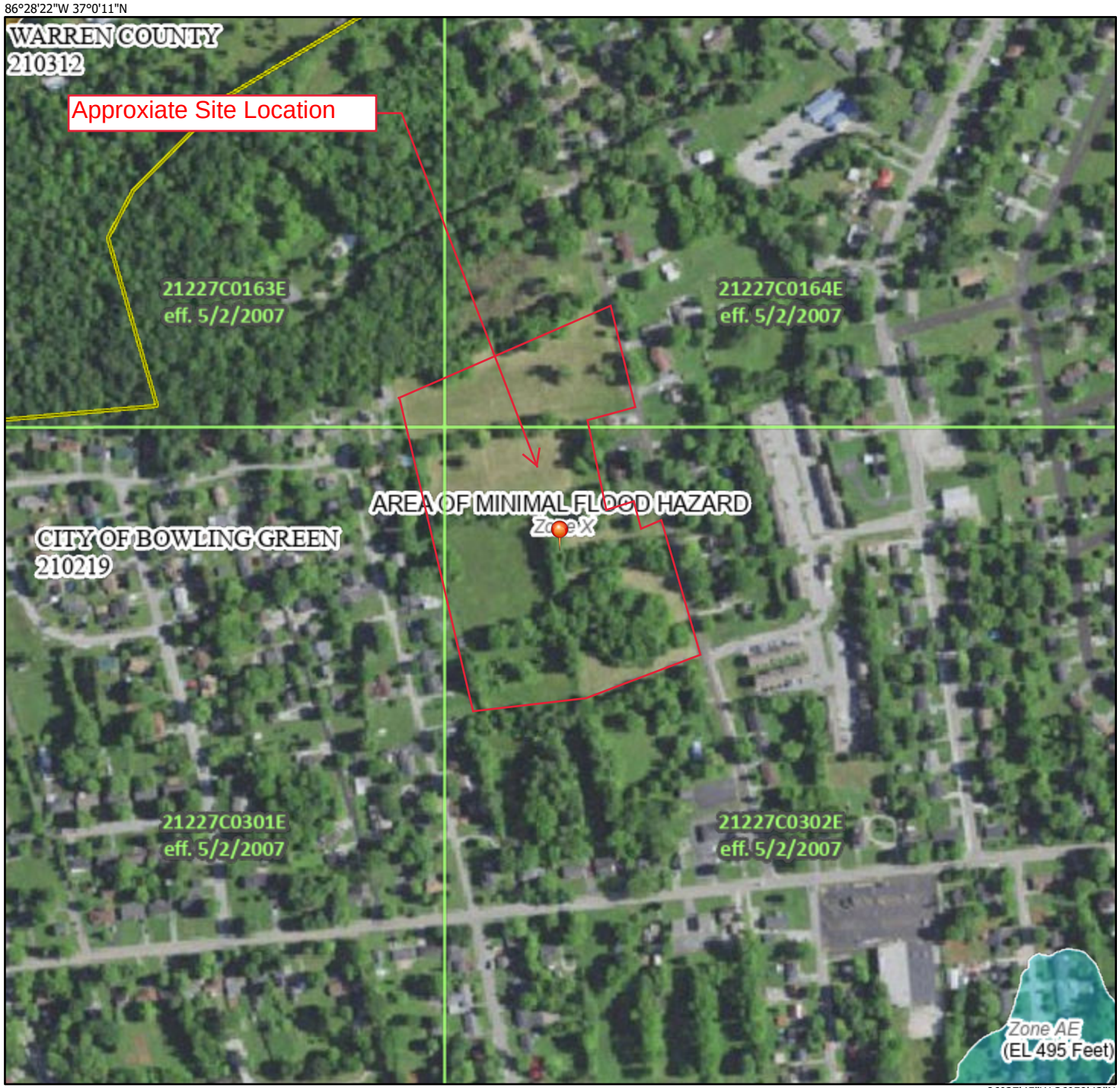
The structure or insurable property is not located in a FEMA-designated Special Flood Hazard Area. The entirety of the property is located within "Zone X" Area of minimal flood hazard. See attached FIRMette. While flood insurance may not be mandatory in this instance, HUD recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). The project is in compliance with flood insurance requirements.

Supporting Documentation Attached:

FIRMETTE_3ac4e76c-5d6e-460d-99ff-e1def0446ace(1).pdf

National Flood Hazard Layer FIRMette

FEMA



0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/14/2024 at 12:22 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

ENCLOSURE D

CLEAN AIR

Air Quality (CEST and EA)

General Requirements	Legislation	Regulation
The Clean Air Act is administered by the U.S. Environmental Protection Agency (EPA), which sets national standards on ambient pollutants. In addition, the Clean Air Act is administered by States, which must develop State Implementation Plans (SIPs) to regulate their state air quality. Projects funded by HUD must demonstrate that they conform to the appropriate SIP.	Clean Air Act (42 USC 7401 et seq.) as amended particularly Section 176(c) and (d) (42 USC 7506(c) and (d))	40 CFR Parts 6, 51 and 93
Reference		
https://www.hudexchange.info/environmental-review/air-quality		

Scope of Work

1. **Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?**

   ☒ Yes

   → *Continue to Question 2.*

   ☐ No

   Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.

Air Quality Attainment Status of Project's County or Air Quality Management District

2. **Is your project's air quality management district or county in non-attainment or maintenance status for any criteria pollutants?**
   Follow the link below to determine compliance status of project county or air quality management district:
   http://www.epa.gov/oaqps001/greenbk/

   ☒ No, project's county or air quality management district is in attainment status for all criteria pollutants

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☐ Yes, project's management district or county is in non-attainment or maintenance status for one or more criteria pollutants.

Describe the findings:

→ *Continue to Question 3.*

3. **Determine the <u>estimated emissions levels of your project for each of those criteria pollutants</u> that are in non-attainment or maintenance status on your project area. Will your project exceed any of the *de minimis or threshold* emissions levels of non-attainment and maintenance level pollutants or exceed the screening levels established by the state or air quality management district?**

   ☐ No, the project will not exceed *de minimis* or threshold emissions levels or screening levels

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Explain how you determined that the project would not exceed de minimis or threshold emissions.*

   ☐ Yes, the project exceeds *de minimis* emissions levels or screening levels.

   → *Continue to Question 4. Explain how you determined that the project would not exceed de minimis or threshold emissions in the Worksheet Summary.*

4. **For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The project's county or air quality management district is in attainment status for all criteria pollutants. Warren County, Kentucky is not in maintenance or non-attainment for any criteria pollutants per the EPA Greenbook (see attached). The project is in compliance with the Clean Air Act.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Supporting Documentation

Current Nonattainment Counties for All Criteria Pollutants _ Green Book _ US EPA.pdf

Current Nonattainment Counties for All Criteria Pollutants

Data is current as of June 30, 2024

The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.
The asterisk (*) indicates only a portion of the county is included in the designated nonattainment area (NA).

Download National Dataset of all designated areas (currently nonattainment, maintenance, revoked):
dbf | xls | Data dictionary (PDF)

Listed by State, County, NAAQS * Part County NA NA Area Name (Classification, if applicable)

ALASKA
- Fairbanks North Star Borough
  - *PM-2.5 (2006)* *Fairbanks, AK - (Serious)

ARIZONA
- Cochise County
  - *PM-10 (1987)* *Cochise County; Paul Spur/Douglas planning area, AZ - (Moderate)
- Gila County
  - *Lead (2008)* *Hayden, AZ
  - *PM-10 (1987)* *Hayden, AZ - (Moderate)
  - *PM-10 (1987)* *Miami, AZ - (Moderate)
  - *Sulfur Dioxide (2010)* *Hayden, AZ
  - *Sulfur Dioxide (2010)* *Miami, AZ
  - *8-Hour Ozone (2015)* *Phoenix-Mesa, AZ - (Moderate)
- Maricopa County
  - *PM-10 (1987)* *Maricopa and Pinal Counties; Phoenix planning area, AZ - (Serious)
  - *8-Hour Ozone (2008)* *Phoenix-Mesa, AZ - (Moderate)
  - *8-Hour Ozone (2015)* *Phoenix-Mesa, AZ - (Moderate)
- Pima County
  - *PM-10 (1987)* *Pima County; Rillito planning area, AZ - (Moderate)
- Pinal County
  - *Lead (2008)* *Hayden, AZ
  - *PM-10 (1987)* *Hayden, AZ - (Moderate)
  - *PM-10 (1987)* *Maricopa and Pinal Counties; Phoenix planning area, AZ - (Serious)
  - *PM-10 (1987)* *Miami, AZ - (Moderate)
  - *PM-10 (1987)* *Pinal County (part); West Pinal, AZ - (Serious)
  - *PM-2.5 (2006)* *West Central Pinal, AZ - (Moderate)
  - *Sulfur Dioxide (1971)* *Hayden (Pinal County), AZ
  - *Sulfur Dioxide (2010)* *Hayden, AZ
  - *8-Hour Ozone (2008)* *Phoenix-Mesa, AZ - (Moderate)
  - *8-Hour Ozone (2015)* *Phoenix-Mesa, AZ - (Moderate)
- Santa Cruz County
  - *PM-10 (1987)* *Santa Cruz County; Nogales planning area, AZ - (Moderate)
- Yuma County
  - *PM-10 (1987)* *Yuma, AZ - (Moderate)
  - *8-Hour Ozone (2015)* *Yuma, AZ - (Marginal)

CALIFORNIA
- Alameda County
  - *PM-2.5 (2006)* San Francisco Bay Area, CA - (Moderate)

8-Hour Ozone (2008) San Francisco Bay Area, CA - (Marginal)
8-Hour Ozone (2015) San Francisco Bay Area, CA - (Marginal)

Amador County
8-Hour Ozone (2015) Amador County, CA - (Marginal)

Butte County
8-Hour Ozone (2008) Chico (Butte County), CA - (Marginal)
8-Hour Ozone (2015) Butte County, CA - (Marginal)

Calaveras County
8-Hour Ozone (2008) Calaveras County, CA - (Marginal)
8-Hour Ozone (2015) Calaveras County, CA - (Marginal)

Contra Costa County
PM-2.5 (2006) San Francisco Bay Area, CA - (Moderate)
8-Hour Ozone (2008) San Francisco Bay Area, CA - (Marginal)
8-Hour Ozone (2015) San Francisco Bay Area, CA - (Marginal)

El Dorado County
PM-2.5 (2006) *Sacramento, CA - (Moderate)
8-Hour Ozone (2008) *Sacramento Metro, CA - (Severe 15)
8-Hour Ozone (2015) *Sacramento Metro, CA - (Serious)

Fresno County
PM-2.5 (1997) San Joaquin Valley, CA - (Serious)
PM-2.5 (2006) San Joaquin Valley, CA - (Serious)
PM-2.5 (2012) San Joaquin Valley, CA - (Serious)
8-Hour Ozone (2008) San Joaquin Valley, CA - (Extreme)
8-Hour Ozone (2015) San Joaquin Valley, CA - (Extreme)

Imperial County
PM-2.5 (2006) *Imperial County, CA - (Moderate)
PM-2.5 (2012) *Imperial County, CA - (Moderate)
8-Hour Ozone (2008) Imperial County, CA - (Moderate)
8-Hour Ozone (2015) Imperial County, CA - (Marginal)

Inyo County
PM-10 (1987) *Inyo County; Owens Valley planning area, CA - (Serious)

Kern County
PM-10 (1987) *East Kern County, CA - (Serious)
PM-2.5 (1997) *San Joaquin Valley, CA - (Serious)
PM-2.5 (2006) *San Joaquin Valley, CA - (Serious)
PM-2.5 (2012) *San Joaquin Valley, CA - (Serious)
8-Hour Ozone (2008) *Kern County (Eastern Kern), CA - (Severe 15)
8-Hour Ozone (2008) *San Joaquin Valley, CA - (Extreme)
8-Hour Ozone (2015) *Kern County (Eastern Kern), CA - (Serious)
8-Hour Ozone (2015) *San Joaquin Valley, CA - (Extreme)

Kings County
PM-2.5 (1997) San Joaquin Valley, CA - (Serious)
PM-2.5 (2006) San Joaquin Valley, CA - (Serious)
PM-2.5 (2012) San Joaquin Valley, CA - (Serious)
8-Hour Ozone (2008) San Joaquin Valley, CA - (Extreme)
8-Hour Ozone (2015) San Joaquin Valley, CA - (Extreme)

Los Angeles County
Lead (2008) *Los Angeles County-South Coast Air Basin, CA
PM-2.5 (1997) *Los Angeles-South Coast Air Basin, CA - (Moderate)
PM-2.5 (2006) *Los Angeles-South Coast Air Basin, CA - (Serious)
PM-2.5 (2012) *Los Angeles-South Coast Air Basin, CA - (Serious)
8-Hour Ozone (2008) *Los Angeles-San Bernardino Counties (West Mojave Desert), CA - (Severe 15)
8-Hour Ozone (2008) *Los Angeles-South Coast Air Basin, CA - (Extreme)
8-Hour Ozone (2015) *Los Angeles-San Bernardino Counties (West Mojave Desert), CA - (Severe 15)
8-Hour Ozone (2015) *Los Angeles-South Coast Air Basin, CA - (Extreme)

Madera County
PM-2.5 (1997) San Joaquin Valley, CA - (Serious)
PM-2.5 (2006) San Joaquin Valley, CA - (Serious)
PM-2.5 (2012) San Joaquin Valley, CA - (Serious)

8-Hour Ozone (2008) San Joaquin Valley, CA - (Extreme)
8-Hour Ozone (2015) San Joaquin Valley, CA - (Extreme)

Marin County
PM-2.5 (2006) San Francisco Bay Area, CA - (Moderate)
8-Hour Ozone (2008) San Francisco Bay Area, CA - (Marginal)
8-Hour Ozone (2015) San Francisco Bay Area, CA - (Marginal)

Mariposa County
8-Hour Ozone (2008) Mariposa County, CA - (Moderate)
8-Hour Ozone (2015) Mariposa County, CA - (Moderate)

Merced County
PM-2.5 (1997) San Joaquin Valley, CA - (Serious)
PM-2.5 (2006) San Joaquin Valley, CA - (Serious)
PM-2.5 (2012) San Joaquin Valley, CA - (Serious)
8-Hour Ozone (2008) San Joaquin Valley, CA - (Extreme)
8-Hour Ozone (2015) San Joaquin Valley, CA - (Extreme)

Mono County
PM-10 (1987) *Mono Basin, CA - (Moderate)

Napa County
PM-2.5 (2006) San Francisco Bay Area, CA - (Moderate)
8-Hour Ozone (2008) San Francisco Bay Area, CA - (Marginal)
8-Hour Ozone (2015) San Francisco Bay Area, CA - (Marginal)

Nevada County
8-Hour Ozone (2008) *Nevada County (Western part), CA - (Serious)
8-Hour Ozone (2015) *Nevada County (Western part), CA - (Serious)

Orange County
PM-2.5 (1997) Los Angeles-South Coast Air Basin, CA - (Moderate)
PM-2.5 (2006) Los Angeles-South Coast Air Basin, CA - (Serious)
PM-2.5 (2012) Los Angeles-South Coast Air Basin, CA - (Serious)
8-Hour Ozone (2008) Los Angeles-South Coast Air Basin, CA - (Extreme)
8-Hour Ozone (2015) Los Angeles-South Coast Air Basin, CA - (Extreme)

Placer County
PM-2.5 (2006) *Sacramento, CA - (Moderate)
8-Hour Ozone (2008) *Sacramento Metro, CA - (Severe 15)
8-Hour Ozone (2015) *Sacramento Metro, CA - (Serious)

Plumas County
PM-2.5 (2012) *Plumas County, CA - (Serious)

Riverside County
PM-10 (1987) *Riverside County; Coachella Valley planning area, CA - (Serious)
PM-2.5 (1997) *Los Angeles-South Coast Air Basin, CA - (Moderate)
PM-2.5 (2006) *Los Angeles-South Coast Air Basin, CA - (Serious)
PM-2.5 (2012) *Los Angeles-South Coast Air Basin, CA - (Serious)
8-Hour Ozone (2008) *Los Angeles-South Coast Air Basin, CA - (Extreme)
8-Hour Ozone (2008) *Morongo Band of Mission Indians, CA - (Severe 15)
8-Hour Ozone (2008) *Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation, CA - (Moderate)
8-Hour Ozone (2008) *Riverside County (Coachella Valley), CA - (Extreme)
8-Hour Ozone (2015) *Los Angeles-South Coast Air Basin, CA - (Extreme)
8-Hour Ozone (2015) *Morongo Band of Mission Indians, CA - (Serious)
8-Hour Ozone (2015) *Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation, CA - (Moderate)
8-Hour Ozone (2015) *Riverside County (Coachella Valley), CA - (Severe 15)

Sacramento County
PM-2.5 (2006) Sacramento, CA - (Moderate)
8-Hour Ozone (2008) Sacramento Metro, CA - (Severe 15)
8-Hour Ozone (2015) Sacramento Metro, CA - (Serious)

San Bernardino County
PM-10 (1987) *San Bernardino County, CA - (Moderate)
PM-10 (1987) *Trona, CA - (Moderate)
PM-2.5 (1997) *Los Angeles-South Coast Air Basin, CA - (Moderate)
PM-2.5 (2006) *Los Angeles-South Coast Air Basin, CA - (Serious)
PM-2.5 (2012) *Los Angeles-South Coast Air Basin, CA - (Serious)

8-Hour Ozone (2008) *Los Angeles-San Bernardino Counties (West Mojave Desert), CA - (Severe 15)
8-Hour Ozone (2008) *Los Angeles-South Coast Air Basin, CA - (Extreme)
8-Hour Ozone (2015) *Los Angeles-San Bernardino Counties (West Mojave Desert), CA - (Severe 15)
8-Hour Ozone (2015) *Los Angeles-South Coast Air Basin, CA - (Extreme)

San Diego County
8-Hour Ozone (2008) *Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation, CA - (Moderate)
8-Hour Ozone (2008) *San Diego County, CA - (Severe 15)
8-Hour Ozone (2015) *Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation, CA - (Moderate)
8-Hour Ozone (2015) *San Diego County, CA - (Severe 15)

San Francisco County
PM-2.5 (2006) San Francisco Bay Area, CA - (Moderate)
8-Hour Ozone (2008) San Francisco Bay Area, CA - (Marginal)
8-Hour Ozone (2015) San Francisco Bay Area, CA - (Marginal)

San Joaquin County
PM-2.5 (1997) San Joaquin Valley, CA - (Serious)
PM-2.5 (2006) San Joaquin Valley, CA - (Serious)
PM-2.5 (2012) San Joaquin Valley, CA - (Serious)
8-Hour Ozone (2008) San Joaquin Valley, CA - (Extreme)
8-Hour Ozone (2015) San Joaquin Valley, CA - (Extreme)

San Luis Obispo County
8-Hour Ozone (2008) *San Luis Obispo (Eastern San Luis Obispo), CA - (Marginal)
8-Hour Ozone (2015) *San Luis Obispo (Eastern part), CA - (Marginal)

San Mateo County
PM-2.5 (2006) San Francisco Bay Area, CA - (Moderate)
8-Hour Ozone (2008) San Francisco Bay Area, CA - (Marginal)
8-Hour Ozone (2015) San Francisco Bay Area, CA - (Marginal)

Santa Clara County
PM-2.5 (2006) San Francisco Bay Area, CA - (Moderate)
8-Hour Ozone (2008) San Francisco Bay Area, CA - (Marginal)
8-Hour Ozone (2015) San Francisco Bay Area, CA - (Marginal)

Solano County
PM-2.5 (2006) *Sacramento, CA - (Moderate)
PM-2.5 (2006) *San Francisco Bay Area, CA - (Moderate)
8-Hour Ozone (2008) *Sacramento Metro, CA - (Severe 15)
8-Hour Ozone (2008) *San Francisco Bay Area, CA - (Marginal)
8-Hour Ozone (2015) *Sacramento Metro, CA - (Serious)
8-Hour Ozone (2015) *San Francisco Bay Area, CA - (Marginal)

Sonoma County
PM-2.5 (2006) *San Francisco Bay Area, CA - (Moderate)
8-Hour Ozone (2008) *San Francisco Bay Area, CA - (Marginal)
8-Hour Ozone (2015) *San Francisco Bay Area, CA - (Marginal)

Stanislaus County
PM-2.5 (1997) San Joaquin Valley, CA - (Serious)
PM-2.5 (2006) San Joaquin Valley, CA - (Serious)
PM-2.5 (2012) San Joaquin Valley, CA - (Serious)
8-Hour Ozone (2008) San Joaquin Valley, CA - (Extreme)
8-Hour Ozone (2015) San Joaquin Valley, CA - (Extreme)

Sutter County
8-Hour Ozone (2008) *Sacramento Metro, CA - (Severe 15)
8-Hour Ozone (2015) *Sacramento Metro, CA - (Serious)
8-Hour Ozone (2015) *Sutter Buttes, CA - (Marginal)

Tehama County
8-Hour Ozone (2008) *Tuscan Buttes, CA - (Marginal)
8-Hour Ozone (2015) *Tuscan Buttes, CA - (Marginal (Rural Transport))

Tulare County
PM-2.5 (1997) San Joaquin Valley, CA - (Serious)
PM-2.5 (2006) San Joaquin Valley, CA - (Serious)

PM-2.5 (2012) San Joaquin Valley, CA - (Serious)
8-Hour Ozone (2008) San Joaquin Valley, CA - (Extreme)
8-Hour Ozone (2015) San Joaquin Valley, CA - (Extreme)

Tuolumne County
8-Hour Ozone (2015) Tuolumne County, CA - (Marginal)

Ventura County
8-Hour Ozone (2008) *Ventura County, CA - (Serious)
8-Hour Ozone (2015) *Ventura County, CA - (Serious)

Yolo County
PM-2.5 (2006) *Sacramento, CA - (Moderate)
8-Hour Ozone (2008) Sacramento Metro, CA - (Severe 15)
8-Hour Ozone (2015) Sacramento Metro, CA - (Serious)

COLORADO

Adams County
8-Hour Ozone (2008) Denver-Boulder-Greeley-Ft. Collins-Loveland, CO - (Severe 15)
8-Hour Ozone (2015) Denver Metro/North Front Range, CO - (Moderate)

Arapahoe County
8-Hour Ozone (2008) Denver-Boulder-Greeley-Ft. Collins-Loveland, CO - (Severe 15)
8-Hour Ozone (2015) Denver Metro/North Front Range, CO - (Moderate)

Boulder County
8-Hour Ozone (2008) Denver-Boulder-Greeley-Ft. Collins-Loveland, CO - (Severe 15)
8-Hour Ozone (2015) Denver Metro/North Front Range, CO - (Moderate)

Broomfield County
8-Hour Ozone (2008) Denver-Boulder-Greeley-Ft. Collins-Loveland, CO - (Severe 15)
8-Hour Ozone (2015) Denver Metro/North Front Range, CO - (Moderate)

Denver County
8-Hour Ozone (2008) Denver-Boulder-Greeley-Ft. Collins-Loveland, CO - (Severe 15)
8-Hour Ozone (2015) Denver Metro/North Front Range, CO - (Moderate)

Douglas County
8-Hour Ozone (2008) Denver-Boulder-Greeley-Ft. Collins-Loveland, CO - (Severe 15)
8-Hour Ozone (2015) Denver Metro/North Front Range, CO - (Moderate)

Jefferson County
8-Hour Ozone (2008) Denver-Boulder-Greeley-Ft. Collins-Loveland, CO - (Severe 15)
8-Hour Ozone (2015) Denver Metro/North Front Range, CO - (Moderate)

Larimer County
8-Hour Ozone (2008) *Denver-Boulder-Greeley-Ft. Collins-Loveland, CO - (Severe 15)
8-Hour Ozone (2015) *Denver Metro/North Front Range, CO - (Moderate)

Weld County
8-Hour Ozone (2008) *Denver-Boulder-Greeley-Ft. Collins-Loveland, CO - (Severe 15)
8-Hour Ozone (2015) Denver Metro/North Front Range, CO - (Moderate)

CONNECTICUT

Fairfield County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)

Hartford County
8-Hour Ozone (2008) Greater Connecticut, CT - (Serious)
8-Hour Ozone (2015) Greater Connecticut, CT - (Moderate)

Litchfield County
8-Hour Ozone (2008) Greater Connecticut, CT - (Serious)
8-Hour Ozone (2015) Greater Connecticut, CT - (Moderate)

Middlesex County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)

New Haven County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)

New London County
8-Hour Ozone (2008) Greater Connecticut, CT - (Serious)
8-Hour Ozone (2015) Greater Connecticut, CT - (Moderate)

Tolland County
8-Hour Ozone (2008) Greater Connecticut, CT - (Serious)

8-Hour Ozone (2015) Greater Connecticut, CT - (Moderate)
Windham County
8-Hour Ozone (2008) Greater Connecticut, CT - (Serious)
8-Hour Ozone (2015) Greater Connecticut, CT - (Moderate)

DELAWARE
New Castle County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Sussex County
8-Hour Ozone (2008) Seaford, DE - (Marginal)

DISTRICT OF COLUMBIA
District of Columbia
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)

GUAM
Guam
*Sulfur Dioxide (1971)**Piti, GU
*Sulfur Dioxide (1971)**Tanguisson, GU
*Sulfur Dioxide (2010)**Piti-Cabras, GU

IDAHO
Bannock County
PM-10 (1987) *Power-Bannock Counties; Fort Hall Indian Reservation, ID - (Moderate)
Power County
PM-10 (1987) *Power-Bannock Counties; Fort Hall Indian Reservation, ID - (Moderate)

ILLINOIS
Cook County
8-Hour Ozone (2015) Chicago, IL-IN-WI - (Moderate)
DuPage County
8-Hour Ozone (2015) Chicago, IL-IN-WI - (Moderate)
Grundy County
8-Hour Ozone (2015) *Chicago, IL-IN-WI - (Moderate)
Kane County
8-Hour Ozone (2015) Chicago, IL-IN-WI - (Moderate)
Kendall County
8-Hour Ozone (2015) *Chicago, IL-IN-WI - (Moderate)
Lake County
8-Hour Ozone (2015) Chicago, IL-IN-WI - (Moderate)
Madison County
*Sulfur Dioxide (2010)**Alton Township, IL
8-Hour Ozone (2015) St. Louis, MO-IL - (Moderate)
McHenry County
8-Hour Ozone (2015) Chicago, IL-IN-WI - (Moderate)
Monroe County
8-Hour Ozone (2015) St. Louis, MO-IL - (Moderate)
St. Clair County
8-Hour Ozone (2015) St. Louis, MO-IL - (Moderate)
Will County
8-Hour Ozone (2015) Chicago, IL-IN-WI - (Moderate)

INDIANA
Huntington County
*Sulfur Dioxide (2010)**Huntington, IN
Lake County
8-Hour Ozone (2015) *Chicago, IL-IN-WI - (Moderate)
Porter County
8-Hour Ozone (2015) *Chicago, IL-IN-WI - (Moderate)

IOWA
Muscatine County
*Sulfur Dioxide (2010)**Muscatine, IA

KANSAS
Saline County
Lead (2008) *Saline County, KS

KENTUCKY

Bullitt County
8-Hour Ozone (2015) Louisville, KY-IN - (Moderate)
Henderson County
*Sulfur Dioxide (2010)** Henderson-Webster Counties, KY
Jefferson County
8-Hour Ozone (2015) Louisville, KY-IN - (Moderate)
Oldham County
8-Hour Ozone (2015) Louisville, KY-IN - (Moderate)
Webster County
*Sulfur Dioxide (2010)** Henderson-Webster Counties, KY

LOUISIANA

Evangeline Parish
*Sulfur Dioxide (2010)** Evangeline Parish (Partial), LA
St. Bernard Parish
Sulfur Dioxide (2010) St. Bernard Parish, LA

MARYLAND

Anne Arundel County
*Sulfur Dioxide (2010)** Anne Arundel County and Baltimore County, MD
8-Hour Ozone (2008) Baltimore, MD - (Moderate)
8-Hour Ozone (2015) Baltimore, MD - (Moderate)
Baltimore County
*Sulfur Dioxide (2010)** Anne Arundel County and Baltimore County, MD
8-Hour Ozone (2008) Baltimore, MD - (Moderate)
8-Hour Ozone (2015) Baltimore, MD - (Moderate)
Baltimore city
8-Hour Ozone (2008) Baltimore, MD - (Moderate)
8-Hour Ozone (2015) Baltimore, MD - (Moderate)
Calvert County
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Carroll County
8-Hour Ozone (2008) Baltimore, MD - (Moderate)
8-Hour Ozone (2015) Baltimore, MD - (Moderate)
Cecil County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Charles County
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Frederick County
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Harford County
8-Hour Ozone (2008) Baltimore, MD - (Moderate)
8-Hour Ozone (2015) Baltimore, MD - (Moderate)
Howard County
8-Hour Ozone (2008) Baltimore, MD - (Moderate)
8-Hour Ozone (2015) Baltimore, MD - (Moderate)
Montgomery County
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Prince George's County
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)

MASSACHUSETTS

Dukes County
8-Hour Ozone (2008) Dukes County, MA - (Marginal)

MICHIGAN

Allegan County
*8-Hour Ozone (2015)** Allegan County, MI - (Moderate)
Berrien County
8-Hour Ozone (2015) Berrien County, MI - (Moderate)
Muskegon County
*8-Hour Ozone (2015)** Muskegon County, MI - (Moderate)
St. Clair County
*Sulfur Dioxide (2010)** St. Clair, MI

Wayne County
Sulfur Dioxide (2010) *Detroit, MI

MINNESOTA

Dakota County
Lead (2008) *Eagan, MN

MISSOURI

Dent County
Lead (2008) *Iron, Dent, and Reynolds Counties, MO
Franklin County
8-Hour Ozone (2015) *St. Louis, MO-IL - (Moderate)
Iron County
Lead (2008) *Iron, Dent, and Reynolds Counties, MO
Jefferson County
Lead (1978) *Jefferson County (part); Herculaneum, MO
Lead (2008) *Jefferson County, MO
8-Hour Ozone (2015) St. Louis, MO-IL - (Moderate)
New Madrid County
Sulfur Dioxide (2010) *New Madrid County, MO
Reynolds County
Lead (2008) *Iron, Dent, and Reynolds Counties, MO
St. Charles County
8-Hour Ozone (2015) St. Louis, MO-IL - (Moderate)
St. Louis County
8-Hour Ozone (2015) St. Louis, MO-IL - (Moderate)
St. Louis city
8-Hour Ozone (2015) St. Louis, MO-IL - (Moderate)

MONTANA

Lake County
PM-10 (1987) *Lake County; Polson, MT - (Moderate)
PM-10 (1987) *Lake County; Ronan, MT - (Moderate)
Rosebud County
PM-10 (1987) *Rosebud County; Lame Deer, MT - (Moderate)
Yellowstone County
Sulfur Dioxide (1971) *Laurel Area (Yellowstone County), MT

NEVADA

Clark County
8-Hour Ozone (2015) *Las Vegas, NV - (Moderate)

NEW JERSEY

Atlantic County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Bergen County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Burlington County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Camden County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Cape May County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Cumberland County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Essex County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Gloucester County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)

8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Hudson County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Hunterdon County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Mercer County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Middlesex County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Monmouth County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Morris County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Ocean County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Passaic County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Salem County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Somerset County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Sussex County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Union County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Warren County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)

NEW MEXICO

Dona Ana County
PM-10 (1987) *Dona Ana County; Anthony, NM - (Moderate)
8-Hour Ozone (2015) *El Paso-Las Cruces, TX-NM - (Marginal)

NEW YORK

Bronx County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Chautauqua County
8-Hour Ozone (2008) Jamestown, NY - (Marginal)
Kings County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Nassau County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
New York County
PM-10 (1987) New York County, NY - (Moderate)
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)
Queens County

8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)

Richmond County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)

Rockland County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)

St. Lawrence County
*Sulfur Dioxide (2010)**St. Lawrence County, NY

Suffolk County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)

Westchester County
8-Hour Ozone (2008) New York-N. New Jersey-Long Island, NY-NJ-CT - (Severe 15)
8-Hour Ozone (2015) New York-Northern New Jersey-Long Island, NY-NJ-CT - (Moderate)

OHIO

Cuyahoga County
8-Hour Ozone (2015) Cleveland, OH - (Moderate)

Geauga County
8-Hour Ozone (2015) Cleveland, OH - (Moderate)

Lake County
8-Hour Ozone (2015) Cleveland, OH - (Moderate)

Lorain County
8-Hour Ozone (2015) Cleveland, OH - (Moderate)

Medina County
8-Hour Ozone (2015) Cleveland, OH - (Moderate)

Morgan County
*Sulfur Dioxide (2010)**Muskingum River, OH

Portage County
8-Hour Ozone (2015) Cleveland, OH - (Moderate)

Stark County
Lead (2008) *Canton-Stark County, OH

Summit County
8-Hour Ozone (2015) Cleveland, OH - (Moderate)

Washington County
*Sulfur Dioxide (2010)**Muskingum River, OH

OREGON

Klamath County
PM-2.5 (2006) *Klamath Falls, OR - (Moderate)

PENNSYLVANIA

Allegheny County
PM-2.5 (1997) *Liberty-Clairton, PA - (Moderate)
PM-2.5 (2006) *Liberty-Clairton, PA - (Moderate)
PM-2.5 (2012) Allegheny County, PA - (Moderate)
*Sulfur Dioxide (2010)**Allegheny, PA
8-Hour Ozone (2008) Pittsburgh-Beaver Valley, PA - (Marginal)

Armstrong County
*Sulfur Dioxide (1971)**Armstrong County: Madison, Mahoning, Boggs, Washington, Pine, PA
*Sulfur Dioxide (2010)**Indiana, PA
8-Hour Ozone (2008) Pittsburgh-Beaver Valley, PA - (Marginal)

Beaver County
Lead (2008) *Lower Beaver Valley, PA
*Sulfur Dioxide (2010)**Beaver, PA
8-Hour Ozone (2008) Pittsburgh-Beaver Valley, PA - (Marginal)

Berks County
Lead (2008) *Lyons, PA
Lead (2008) *North Reading, PA
8-Hour Ozone (2008) Reading, PA - (Marginal)

Bucks County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)

8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Butler County
8-Hour Ozone (2008) Pittsburgh-Beaver Valley, PA - (Marginal)
Carbon County
8-Hour Ozone (2008) Allentown-Bethlehem-Easton, PA - (Marginal)
Chester County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Delaware County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Fayette County
8-Hour Ozone (2008) Pittsburgh-Beaver Valley, PA - (Marginal)
Indiana County
Sulfur Dioxide (2010) Indiana, PA
Lancaster County
8-Hour Ozone (2008) Lancaster, PA - (Marginal)
Lehigh County
8-Hour Ozone (2008) Allentown-Bethlehem-Easton, PA - (Marginal)
Montgomery County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Northampton County
8-Hour Ozone (2008) Allentown-Bethlehem-Easton, PA - (Marginal)
Philadelphia County
8-Hour Ozone (2008) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Marginal)
8-Hour Ozone (2015) Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - (Moderate)
Warren County
*Sulfur Dioxide (2010)**Warren, PA
Washington County
8-Hour Ozone (2008) Pittsburgh-Beaver Valley, PA - (Marginal)
Westmoreland County
8-Hour Ozone (2008) Pittsburgh-Beaver Valley, PA - (Marginal)

PUERTO RICO

Arecibo Municipio
Lead (2008) *Arecibo, PR
Bayamon Municipio
*Sulfur Dioxide (2010)**San Juan, PR
Catano Municipio
Sulfur Dioxide (2010) San Juan, PR
Guaynabo Municipio
*Sulfur Dioxide (2010)**San Juan, PR
Salinas Municipio
*Sulfur Dioxide (2010)**Guayama-Salinas, PR
San Juan Municipio
*Sulfur Dioxide (2010)**San Juan, PR
Toa Baja Municipio
*Sulfur Dioxide (2010)**San Juan, PR

TENNESSEE

Sullivan County
*Sulfur Dioxide (2010)**Sullivan County, TN

TEXAS

Anderson County
*Sulfur Dioxide (2010)**Freestone and Anderson Counties, TX
Bexar County
8-Hour Ozone (2015) San Antonio, TX - (Moderate)
Brazoria County
8-Hour Ozone (2008) Houston-Galveston-Brazoria, TX - (Severe 15)
8-Hour Ozone (2015) Houston-Galveston-Brazoria, TX - (Moderate)
Chambers County
8-Hour Ozone (2008) Houston-Galveston-Brazoria, TX - (Severe 15)

8-Hour Ozone (2015) Houston-Galveston-Brazoria, TX - (Moderate)
Collin County
8-Hour Ozone (2008) Dallas-Fort Worth, TX - (Severe 15)
8-Hour Ozone (2015) Dallas-Fort Worth, TX - (Moderate)
Dallas County
8-Hour Ozone (2008) Dallas-Fort Worth, TX - (Severe 15)
8-Hour Ozone (2015) Dallas-Fort Worth, TX - (Moderate)
Denton County
8-Hour Ozone (2008) Dallas-Fort Worth, TX - (Severe 15)
8-Hour Ozone (2015) Dallas-Fort Worth, TX - (Moderate)
El Paso County
PM-10 (1987) *El Paso County, TX - (Moderate)
8-Hour Ozone (2015) El Paso-Las Cruces, TX-NM - (Marginal)
Ellis County
8-Hour Ozone (2008) Dallas-Fort Worth, TX - (Severe 15)
8-Hour Ozone (2015) Dallas-Fort Worth, TX - (Moderate)
Fort Bend County
8-Hour Ozone (2008) Houston-Galveston-Brazoria, TX - (Severe 15)
8-Hour Ozone (2015) Houston-Galveston-Brazoria, TX - (Moderate)
Freestone County
*Sulfur Dioxide (2010)**Freestone and Anderson Counties, TX
Galveston County
8-Hour Ozone (2008) Houston-Galveston-Brazoria, TX - (Severe 15)
8-Hour Ozone (2015) Houston-Galveston-Brazoria, TX - (Moderate)
Harris County
8-Hour Ozone (2008) Houston-Galveston-Brazoria, TX - (Severe 15)
8-Hour Ozone (2015) Houston-Galveston-Brazoria, TX - (Moderate)
Howard County
*Sulfur Dioxide (2010)**Howard County, TX
Hutchinson County
*Sulfur Dioxide (2010)**Hutchinson County, TX
Johnson County
8-Hour Ozone (2008) Dallas-Fort Worth, TX - (Severe 15)
8-Hour Ozone (2015) Dallas-Fort Worth, TX - (Moderate)
Kaufman County
8-Hour Ozone (2008) Dallas-Fort Worth, TX - (Severe 15)
8-Hour Ozone (2015) Dallas-Fort Worth, TX - (Moderate)
Liberty County
8-Hour Ozone (2008) Houston-Galveston-Brazoria, TX - (Severe 15)
Montgomery County
8-Hour Ozone (2008) Houston-Galveston-Brazoria, TX - (Severe 15)
8-Hour Ozone (2015) Houston-Galveston-Brazoria, TX - (Moderate)
Navarro County
*Sulfur Dioxide (2010)**Navarro County, TX
Panola County
*Sulfur Dioxide (2010)**Rusk and Panola Counties, TX
Parker County
8-Hour Ozone (2008) Dallas-Fort Worth, TX - (Severe 15)
8-Hour Ozone (2015) Dallas-Fort Worth, TX - (Moderate)
Rockwall County
8-Hour Ozone (2008) Dallas-Fort Worth, TX - (Severe 15)
Rusk County
*Sulfur Dioxide (2010)**Rusk and Panola Counties, TX
Tarrant County
8-Hour Ozone (2008) Dallas-Fort Worth, TX - (Severe 15)
8-Hour Ozone (2015) Dallas-Fort Worth, TX - (Moderate)
Titus County
*Sulfur Dioxide (2010)**Titus County, TX
Waller County
8-Hour Ozone (2008) Houston-Galveston-Brazoria, TX - (Severe 15)
Wise County

8-Hour Ozone (2008) Dallas-Fort Worth, TX - (Severe 15)
8-Hour Ozone (2015) Dallas-Fort Worth, TX - (Moderate)

UTAH

Box Elder County
PM-2.5 (2006) *Salt Lake City, UT - (Serious)
Davis County
PM-2.5 (2006) Salt Lake City, UT - (Serious)
8-Hour Ozone (2015) Northern Wasatch Front, UT - (Moderate)
Duchesne County
8-Hour Ozone (2015) *Uinta Basin, UT - (Marginal)
Salt Lake County
PM-2.5 (2006) Salt Lake City, UT - (Serious)
Sulfur Dioxide (1971) Salt Lake County, UT
8-Hour Ozone (2015) Northern Wasatch Front, UT - (Moderate)
Tooele County
PM-2.5 (2006) *Salt Lake City, UT - (Serious)
Sulfur Dioxide (1971) *Tooele County, UT
8-Hour Ozone (2015) *Northern Wasatch Front, UT - (Moderate)
Uintah County
8-Hour Ozone (2015) *Uinta Basin, UT - (Marginal)
Utah County
PM-2.5 (2006) *Provo, UT - (Serious)
8-Hour Ozone (2015) *Southern Wasatch Front, UT - (Marginal)
Weber County
PM-2.5 (2006) *Salt Lake City, UT - (Serious)
8-Hour Ozone (2015) *Northern Wasatch Front, UT - (Moderate)

VIRGINIA

Alexandria city
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Arlington County
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Fairfax County
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Fairfax city
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Falls Church city
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Giles County
Sulfur Dioxide (2010) *Giles County, VA
Loudoun County
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Manassas Park city
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Manassas city
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)
Prince William County
8-Hour Ozone (2015) Washington, DC-MD-VA - (Moderate)

WASHINGTON

Whatcom County
Sulfur Dioxide (2010) *Whatcom County, WA

WISCONSIN

Kenosha County
8-Hour Ozone (2015) *Chicago, IL-IN-WI - (Moderate)
Milwaukee County
8-Hour Ozone (2015) Milwaukee, WI - (Moderate)
Ozaukee County
8-Hour Ozone (2015) Milwaukee, WI - (Moderate)
Racine County
8-Hour Ozone (2015) *Milwaukee, WI - (Moderate)
Sheboygan County
8-Hour Ozone (2015) *Sheboygan County, WI - (Moderate)

Washington County
8-Hour Ozone (2015) *Milwaukee, WI - (Moderate)
Waukesha County
8-Hour Ozone (2015) *Milwaukee, WI - (Moderate)

WYOMING

Lincoln County
8-Hour Ozone (2008) *Upper Green River Basin Area, WY - (Marginal)
Sublette County
8-Hour Ozone (2008) Upper Green River Basin Area, WY - (Marginal)
Sweetwater County
8-Hour Ozone (2008) *Upper Green River Basin Area, WY - (Marginal)

ENCLOSURE E

COASTAL ZONE MANAGEMENT

Coastal Zone Management Act (CEST and EA)

General requirements	Legislation	Regulation
Federal assistance to applicant agencies for activities affecting any coastal use or resource is granted only when such activities are consistent with federally approved State Coastal Zone Management Act Plans.	Coastal Zone Management Act (16 USC 1451-1464), particularly section 307(c) and (d) (16 USC 1456(c) and (d))	15 CFR Part 930
References		
https://www.onecpd.info/environmental-review/coastal-zone-management		

Projects located in the following states must complete this form.

Alabama	Florida	Louisiana	Mississippi	Ohio	Texas
Alaska	Georgia	Maine	New Hampshire	Oregon	Virgin Islands
American Samona	Guam	Maryland	New Jersey	Pennsylvania	Virginia
California	Hawaii	Massachusetts	New York	Puerto Rico	Washington
Connecticut	Illinois	Michigan	North Carolina	Rhode Island	Wisconsin
Delaware	Indiana	Minnesota	Northern Mariana Islands	South Carolina	

1. **Is the project located in, or does it affect, a Coastal Zone as defined in your state Coastal Management Plan?**

   ☐Yes → *Continue to Question 2.*

   ☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a Coastal Zone.*

2. **Does this project include activities that are subject to state review**?

   ☐Yes → *Continue to Question 3.*

   ☐No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.*

3. **Has this project been determined to be consistent with the State Coastal Management Program**?

   ☐Yes, with mitigation. → *Continue to Question 4.*

   ☐Yes, without mitigation. → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.*

☐No, project must be canceled.

Project cannot proceed at this location.

4. Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Continue to the Worksheet Summary below. Provide documentation of the consultation (including the State Coastal Management Program letter of consistency) and any other documentation used to make your determination.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

This project is located in a state that does not participate in the Coastal Zone Management Program. Therefore, this project is in compliance with the Coastal Zone Management Act.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

ENCLOSURE F

CONTAMINATION AND TOXIC SUBSTANCES

OMB No. 2506-0177
(exp.2/28/2025)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Contamination and Toxic Substances (Multifamily and Non-Residential Properties) – PARTNER

https://www.hudexchange.info/programs/environmental-review/site-contamination

1. **How was site contamination evaluated?** [1] **Select all that apply.**

   ☒ ASTM Phase I ESA
   ☐ ASTM Phase II ESA
   ☐ Remediation or clean-up plan
   ☒ ASTM Vapor Encroachment Screening
   ☐ None of the above

   → *Provide documentation and reports and include an explanation of how site contamination was evaluated in the Worksheet Summary.*
   Continue to Question 2.

2. **Were any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)**

   ☒ No → **Explain below.**

   A Phase I Environmental Site Assessment in accordance with ASTM E1527-21 was prepared by Linebach Funkhouser for the project site. The report is dated July 24, 2024. No REC, HRECs, or CRECs were identified as part of the report. A vapor encroachment condition was not identified. → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☐ Yes → *Describe the findings, including any recognized environmental conditions (RECs), in Worksheet Summary below. Continue to Question 3.*

3. **Can adverse environmental impacts be mitigated?**

[1] HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site. For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD's toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

☐ Adverse environmental impacts cannot feasibly be mitigated → HUD assistance may not be used for the project at this site. Project cannot proceed at this location.

☒ Yes, adverse environmental impacts can be eliminated through mitigation.
→ *Provide all mitigation requirements*[2] *and documents. Continue to Question 4.*

4. **Describe how compliance was achieved. Include any of the following that apply: State Voluntary Clean-up Program, a No Further Action letter, use of engineering controls**[3]**, or use of institutional controls**[4]**.**
Click here to enter text.

If a remediation plan or clean-up program was necessary, which standard does it follow?
☐ Complete removal
☒ Risk-based corrective action (RBCA)
→ *Continue to the Worksheet Summary.*

Worksheet Summary
Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.
There are no structures at the site currently. Radon testing will occur on the structure(s) once they are complete. All onsite structures will be designed with active radon mitigation systems.

HEROS Worksheet attached as slight different including Radon Requirements.

[2] Mitigation requirements include all clean-up actions required by applicable federal, state, tribal, or local law. Additionally, provide, as applicable, the long-term operations and maintenance plan, Remedial Action Work Plan, and other equivalent documents.
[3] Engineering controls are any physical mechanism used to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls may include, without limitation, caps, covers, dikes, trenches, leachate collection systems, signs, fences, physical access controls, ground water monitoring systems and ground water containment systems including, without limitation, slurry walls and ground water pumping systems.
[4] Institutional controls are mechanisms used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site at levels above the applicable remediation standard which would allow for unrestricted use of the property. Institutional controls may include structure, land, and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

Contamination and Toxic Substances

General Requirements	Legislation	Regulations
It is HUD policy that all properties that are being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of the occupants or conflict with the intended utilization of the property.		24 CFR 58.5(i)(2) 24 CFR 50.3(i)
Reference		
https://www.onecpd.info/environmental-review/site-contamination		

1. How was site contamination evaluated?* Select all that apply.

✓ ASTM Phase I ESA

ASTM Phase II ESA

Remediation or clean-up plan

✓ ASTM Vapor Encroachment Screening.

None of the above

* HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site.
For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD's toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

2. Were any on-site or nearby toxic, hazardous, or radioactive substances* (excluding radon) found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)

Provide a map or other documentation of absence or presence of contamination** and explain evaluation of site contamination in the Screen Summary at the bottom of this screen.

✓ No

Explain:

A Phase I Environmental Site Assessment in accordance with ASTM E1527-21 was prepared by Linebach Funkhouser for the project site. The report is dated July 24, 2024. No REC, HRECs, or CRECs were identified as part of the report. A vapor encroachment condition was not identified.

Yes

* This question covers the presence of radioactive substances excluding radon. Radon is addressed in the Radon Exempt Question.
** Utilize EPA's Enviromapper, NEPAssist, or state/tribal databases to identify nearby dumps, junk yards, landfills, hazardous waste sites, and industrial sites, including EPA National Priorities List Sites (Superfund sites), CERCLA or state-equivalent sites, RCRA Corrective Action sites with release(s) or suspected release(s) requiring clean-up action and/or further investigation. Additional supporting documentation may include other inspections and reports.

3. Evaluate the building(s) for radon. Do all buildings meet any of the exemptions* from having to consider radon in the contamination analysis listed in CPD Notice CPD-23-103?

Yes

Explain:

✓ No

* Notes:
- Buildings with no enclosed areas having ground contact.
- Buildings containing crawlspaces, utility tunnels, or parking garages would not be exempt, however buildings built on piers would be exempt, provided that there is open air between the lowest floor of the building and the ground.
- Buildings that are not residential and will not be occupied for more than 4 hours per day.
- Buildings with existing radon mitigation systems - document radon levels are below 4 pCi/L with test results dated within two years of submitting the application for HUD assistance and document the system includes an ongoing maintenance plan that includes periodic testing to ensure the system continues to meet the current EPA recommended levels. If the project does not require an application, document test results dated within two years of the date the environmental review is certified. Refer to program office guidance to ensure compliance with program requirements.
- Buildings tested within five years of the submission of application for HUD assistance:

test results document indoor radon levels are below current the EPA's recommended action levels of 4.0 pCi/L. For buildings with test data older than five years, any new environmental review must include a consideration of radon using one of the methods in Section A below.

4. Is the proposed project new construction or substantial rehabilitation where testing will be conducted but cannot yet occur because building construction has not been completed?

✓ Yes

Compliance with this section is conditioned on post-construction testing being conducted, followed by mitigation, if needed. Radon test results, along with any needed mitigation plan, must be uploaded to the mitigation section within this screen.

No

8. Mitigation

Document the mitigation needed according to the requirements of the appropriate federal, state, tribal, or local oversight agency. If the adverse environmental impacts cannot be mitigated, then HUD assistance may not be used for the project at this site.

For instances where radon mitigation is required (i.e. where test results demonstrated radon levels at 4.0 pCi/L and above), then you must include a radon mitigation plan*.

Can all adverse environmental impacts be mitigated?

No, all adverse environmental impacts cannot feasibly be mitigated. Project cannot proceed at this location.

✓ Yes, all adverse environmental impacts can be eliminated through mitigation, and/or consideration of radon and radon mitigation, if needed, will occur following construction.
Provide all mitigation requirements** and documents in the Screen Summary at the bottom of this screen.

* Refer to CPD Notice CPD-23-103 for additional information on radon mitigation plans.
** Mitigation requirements include all clean-up requirements required by applicable federal, state, tribal, or local law. Additionally, please upload, as applicable, the long-term operations and maintenance plan, Remedial Action Work Plan, and other equivalent documents.

9. Describe how compliance was achieved. Include any of the following that apply: State Voluntary Clean-up Program, a No Further Action letter, use of engineering controls*, or use

of institutional controls.**

There are no structures at the site currently. Radon testing will occur on the structure(s) once they are complete. All onsite structures will be designed with active radon mitigation systems.

If a remediation plan or clean-up program was necessary, which standard does it follow?

Complete removal

✓ Risk-based corrective action (RBCA)

Other

* Engineering controls are any physical mechanism used to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls may include, caps, covers, dikes, trenches, leachate collection systems, radon mitigation systems, signs, fences, physical access controls, ground water monitoring systems and ground water containment systems including, slurry walls and ground water pumping systems.
** Institutional controls are mechanisms used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site at levels above the applicable remediation standard which would allow for unrestricted use of the property. Institutional controls may include structure, land, and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

Screen Summary

Compliance Determination

Site contamination was evaluated as follows: ASTM Phase I ESA, ASTM Vapor Encroachment Screening. On-site or nearby toxic, hazardous, or radioactive substances that could affect the health and safety of project occupants or conflict with the intended use of the property were not found. Radon analysis indicated elevated levels of radon or consideration of radon will occur following construction. Adverse radon impacts can be mitigated. An active radon mitigation system will be designed into all structure(s) at the site. The system will be designed and installed to the current AARST standards. Wabuck Development Group (Anthony Elmore) is responsible for ensuring the design is included, appropriate, and installed during construction. Post construction radon testing will occur and will be contracted

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Proposed Garrison Gardens
1221 Crewsdon Drive
Bowling Green, Kentucky

July 24, 2024

Prepared by:

Linebach ▪ Funkhouser, Inc.
ENVIRONMENTAL COMPLIANCE & CONSULTING

Linebach ▪ Funkhouser, Inc.
ENVIRONMENTAL COMPLIANCE & CONSULTING

July 24, 2024

Mr. Anthony Elmore
Wabuck Development Co., Inc.
100 Wabuck Drive
Leitchfield, KY 42754

Re: ***Phase I Environmental Site Assessment***
Proposed Garrison Gardens
1221 Crewsdon Drive
Bowling Green, KY 42101
Linebach Funkhouser Project 026-24 T2

Dear Mr. Elmore:

Linebach Funkhouser, Inc. (LFI) has completed the enclosed *Phase I Environmental Site Assessment Report* for the above-referenced property. The assessment activities included a site reconnaissance, interviews with persons knowledgeable about the site, a review of available literature, maps, historical information, and a review of the local, state and federal regulatory agency files regarding the site. The attached report documents the conditions encountered during the assessment and presents our summary and recommendations relative to the site.

We appreciate the opportunity to provide our services to you. Please contact us if you have any questions or comments regarding this submittal, or if we can be of additional service to you.

Sincerely,

Jason P. Boston
Project Scientist

Eric A. Altobellis
Senior Geologist

Enclosure

EXECUTIVE SUMMARY

Linebach Funkhouser, Inc. (LFI) has completed a Phase I Environmental Site Assessment (ESA) of the property located at 1221 Crewsdon Drive in Bowling Green, Kentucky. This ESA 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 E1527-21). Results of the assessment, including a site reconnaissance, a review of historical information, a review of federal, state and local records, as well as interviews with persons knowledgeable about the site, are summarized as follows:

Report Section	Environmental Related Item	Description	REC
SITE/AREA DESCRIPTION			
2.6	Current Use of Property	Undeveloped / pasture	NO
2.7	Current Use of Adjoining Properties	Undeveloped; single-family residential	NO
SITE HISTORY AND HISTORICAL RECORDS REVIEW			
3.1	Past Uses of Property	Primarily undeveloped. Sparce rural-residential & farm structure located along the eastern property boundary	NO
3.2	Past Uses of Adjoining Properties	Single-family residential; undeveloped	NO
ENVIRONMENTAL RECORDS REVIEW			
4.1	Subject Property	None identified	NO
	Adjoining Properties	None identified	NO
4.2	Listings within Established Search Radii	9 total listings	NO
4.3	Vapor Encroachment Screen	Does not exist	NO
SITE RECONNAISSANCE			
5.2	Haz. Substances/Waste and Petroleum Products	None observed	NO
5.3	Storage Tanks (UST/AST)	None observed or reported	NO
5.8	Pits, ponds and lagoons	None observed	NO
5.9	Stained soil/pavement	None observed	NO
5.11	Waste Generation, Storage, and Disposal	Undeveloped. Discarded construction debris and general refuse observed in the wooded portions of the property.	NO
5.13	Wells	None observed or reported	NO
INTERVIEWS			
6.1	Site Representative	N/A - Undeveloped	NO
6.3	Local Government Officials	Warren County PVA	NO

Report Section	Environmental Related Item	Description	REC
		City of Bowling Green – Fire Department	
NON-SCOPE CONSIDERATIONS			
7.1	Asbestos Containing Materials (ACMs)	No structures exist; therefore, the presence of ACM and LBP is considered unlikely	N/A
7.2	Lead Based Paint (LBP)		
7.3	Undefined Emerging Contaminants	No obvious indications of potential contaminants, not currently defined by CERCLA, such as PFAS or biologically derived byproducts were identified.	N/A
USER PROVIDED INFORMATION			
8.1	Env. Liens / AULs	None provided for review.	NO
9.0	**DATA GAPS**		NO
10.0	**FINDINGS AND OPINIONS**		NO
Recognized Environmental Conditions (RECs)		None Identified	
Historical Recognized Environmental Conditions (HRECs)		None Identified	
Controlled Recognized Environmental Conditions (CRECs)		None Identified	
De Minimis Conditions		None Identified	

Conclusions and Recommendations

This assessment has revealed no evidence of *recognized environmental conditions* in connection with the property. Therefore, no further assessment is recommended.

This Executive Summary provides a summation of the results of the Phase I ESA and is not intended to be all-inclusive. The complete report lists the procedures used during our assessment and provides our conclusions and recommendations regarding the site.

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1.0 INTRODUCTION

Linebach Funkhouser, Inc. (LFI) was retained by Wabuck Development Group (the Client), to conduct a Phase I Environmental Site Assessment (ESA) of the property located at 1221 Crewsdon Drive in Bowling Green, Kentucky (the "subject property"). This assessment was completed as part of due diligence activities in relation to a real estate transaction.

1.1 Purpose

The purpose of this ESA was to document current and historical information on the subject property and surrounding areas in order to identify *recognized environmental conditions* (RECs), defined in ASTM E1527-21 as the presence or likely presence of any hazardous substances or petroleum products in, on, or at the property: (1) due to a release to the environment; (2) under conditions indicative of a likely 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 E1527-21 as a condition related to a release 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* conditions are not *recognized environmental conditions* nor *controlled recognized environmental conditions*.

The term *historical recognized environmental condition* (HREC), is defined by ASTM E1527-21 as a past release of any hazardous substances or petroleum products that has occurred affecting 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) and meeting the current 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* (CREC), is defined by ASTM E1527-21 as an REC resulting from a past release of hazardous substances or petroleum products affecting the property and 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 the implementation of required controls (e.g., property use restrictions, activity and use limitations, institutional controls, or engineering controls or other property use limitations).

1.2 Scope of Work

This ESA was conducted utilizing standard practices consistent with ASTM E1527-21. Any significant scope-of-work additions, deletions, or deviations to ASTM E1527-21 are noted below or in the corresponding sections of this 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 geologic 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 ESA did not include a consideration of the following potential environmental conditions that are outside the scope of ASTM Practice E1527-21 including but not limited to: asbestos-containing building materials, biological agents, cultural and historic resources, ecological resources, endangered species, 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, emerging contaminants, and wetlands.

1.3 Terms and Conditions

This Phase I ESA 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 regard to LFI's contract with the Client including but not limited to indemnification by LFI, 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 E1527-21 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 report components, listed in the table below, are updated within 180 days prior to the intended date of purchase or prior to the dated of transaction of the property.

Critical Dates

Phase I ESA Components	Date Completed
Environmental Lien Search	N/A
Radius Report	June 12, 2024
Visual Inspection property and surrounding properties	July 2, 2024
Declaration by Environmental Professional	July 24, 2024

1.4 Assumptions, Limitations and Exceptions

This ESA 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 E1527-21), 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 Phase I Environmental Site Assessment 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 or customary practice" as defined in 42 USC §9601 (35)(B).

LFI conducted this ESA 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 electronic 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; consequently, the completion of a Phase I ESA 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 ESA. 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. LFI 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.

Environmental Data Resources, Inc. (EDR), an independent environmental data research company, provided the records from the government agency databases referenced in this report. 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 LFI's observations or other credible referenced sources reviewed during the ESA. LFI is not a professional title insurance or land surveying 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 SITE DESCRIPTION

The location, description, and current uses of the subject property, as well as surrounding properties are presented in the following sections.

2.1 Location and Description

The subject property is located approximately one-mile northwest of downtown Bowling Green, Kentucky. The property includes two irregular-shaped parcels (039B-21-041 & 039B-21-053) encompassing a total of 13.5 acres. A site location map is provided in **Figure 1** and an aerial photograph depicting the site and surrounding property use is provided in **Figure 2**. Site photographs are included in **Appendix A**.

2.2 Structures / Improvements

The subject property is undeveloped and primarily grass pasture with heavily-wooded areas intermixed.

2.3 Municipal Services and Utilities

Properties in the vicinity are serviced by the following municipal services and private utilities:

Utility	Provider
Potable Water Supply	Warren County Water District
Sewage Disposal	Bowling Green Municipal Utilities
Natural Gas	Atmos Energy
Electricity	Bowling Green Municipal Utilities Warren County Rural Electric Co-Op

2.4 Roads

The property is located along and accessed via the western side of Crewsdon Drive. No publicly owned roads are located on the property.

2.5 Topography and Drainage

A review of the *Bowling Green South, KY* United States Geological Survey (USGS) Topographic Quadrangle (2022) indicates a surface elevation for the subject property averages approximately 514 feet above the National Geodetic Vertical Datum (NGVD) of 1929 (approximately mean sea level). A copy of the topographic map is provided in **Figure 1** and **Appendix B**. According to the

United States Department of Agriculture (USDA) Soil Conservation Service (SCS), the dominant soil composition in the vicinity of the subject property is classified as the Pembroke silt loam, which is characterized by well drained soils with moderate infiltration rates and moderately coarse textures.

Major hydrogeologic features such as a river or lake generally influence regional groundwater flow direction. Surface and/or bedrock topography may also influence regional groundwater flow direction. Based on information gathered during the site visit, the topography of the land, and information contained in the Environmental Data Resources, Inc. (EDR) report, the direction of surface and groundwater flow is interpreted to be northwest with the local topographic gradient towards Jennings Creek located approximately a half-mile to the northwest.

2.6 Current Use of Property

The subject property is unoccupied and vacant.

2.7 Current Use of Adjoining Properties

Nearby property usage could potentially impact the surface and subsurface conditions of a site. Developing a history of past to present uses or occupancies can provide an indication of the likelihood of environmental concern. An aerial photograph illustrating the surrounding property-use relative to the subject property is included as **Figure 2**. A general description of surrounding land use is as follows:

Current Use of Adjoining Properties

Direction	Description
North	Undeveloped wooded area. Single-family residential located farther to the north.
South	Single-family residential and undeveloped wooded area.
East	Single-family residential located across Crewsdon Drive.
West	Single-family residential located along Westmeade Drive.

3.0 SITE HISTORY AND HISTORICAL RECORDS REVIEW

Historical information about the subject property, based on an evaluation of available records reviewed during the Phase I, is included in the following sections.

3.1 Past Uses of Property

LFI attempted to determine the historical use of the subject property dating back to 1940 or the first developed use. The following table summarizes the historical use of the subject property:

Historical Use Summary

Subject Property		
Period		**Source(s)**
1921 - 1966	Subject property is primarily undeveloped pasture with one rural-residential structure and two barn structures located along the eastern property boundary near Crewsdon Drive.	Topographic Maps Aerial Photographs City Directories
1967 - 1981	Fill material appears near the southeastern property boundary in the 1967 aerial.	
1982 - Present	A small pond appears near the southern property boundary in the 1982 aerial. The rural residential structure and barn structures on the property are no longer visible beginning in 1982.	

3.2 Past Uses of Adjoining Properties

Surrounding properties were historically undeveloped pasture with sparse rural residential prior to the development of single-family residential neighborhoods to the east, west and south in the mid to late 1960s.

3.3 Topographic Maps

Historical topographic maps provide information related to physical land configuration such as elevation, ground slope, surface water and other features. While most buildings in densely developed urban centers are not depicted, topographic maps typically show structures equal to or larger than the size of a single-family residence in rural areas. A search for historical topographic maps of the subject property and surrounding area was conducted by EDR and provided to LFI in a *Historical Topographic Map Report* dated June 12, 2024. Topographic maps were provided for various years between 1921 and 2022. A copy of the EDR *Historical Topographic Map Report* is included in **Appendix B** and summarized as follows:

Historical Topographic Maps

Year	Issues Noted	Observations
1921 - 1923	No	**Subject Property:** Undeveloped
		Surrounding Properties: Predominately undeveloped. Sparse rural residential structures depicted near the property boundary to the north and east.
1954 -	No	**Subject Property:** A small barn structure is depicted along the southeastern property boundary.

Historical Topographic Maps

Year	Issues Noted	Observations
1959		**Surrounding Properties:** Predominately undeveloped. Sparse rural residential structures depicted near the property boundary to the north and east.
1968 - 1996	No	**Subject Property:** Small structure depicted near the northeastern property boundary.
		Surrounding Properties: Increasing residential development to the east and west. Properties to the north are unmapped.
2013(1) - 2022	No	**Subject Property:** No structures or identifying features are shown.
		Surrounding Properties: Major roads and highways are shown, no individual structures.

(1) Beginning with the 2010 map updates, the USGS elected to omit building footprints, urban designations, and other points of interest from topographic map updates.

3.4 Aerial Photographs

Aerial photographs are generally of very small scale and only provide a general idea of activity in the area. Aerial photographs are instantaneous records and their usefulness is limited because they do not necessarily reflect the condition of a site before or after the photographs were taken. A search for aerial photographs of the subject property and surrounding area was conducted by EDR and provided to LFI in an *Aerial Photo Decade Package* dated June 12, 2024. Aerial photographs were provided for various years from 1950 to 2020. A copy of the EDR *Aerial Photo Report* is included in **Appendix B** and a summary is presented in the following table:

Aerial Photographs

Year	Issues Noted	Observations
1950 - 1954	No	**Subject Property:** Undeveloped pasture. A single small barn structure visible along the eastern property boundary
		Surrounding Properties: Generally undeveloped pasture. Single-family residential visible along Crewdon Drive.
1967	No	**Subject Property:** Primarily undeveloped. Small barn structure visible to near the eastern property boundary. Fill material visible near the southeastern corner of the property.
		Surrounding Properties: Increasing single-family residential visible to the east, west and south. Undeveloped wooded area to the north.
1982 - 1987	No	**Subject Property:** Undeveloped pasture. Small cattle pond visible near the southern property boundary. Small barn structure visible near the center of the property.
		Surrounding Properties: Single-family residential neighborhood to the west. Single-family residential homes visible to the east across Crewsdon Drive and south on Glen Lily Road.
1993 - 2020	No	**Subject Property:** Undeveloped as observed during the site reconnaissance.
		Surrounding Properties: Surrounding properties appear to be developed as observed during the site reconnaissance.

3.5 Sanborn Fire Insurance Maps

A search for Sanborn fire insurance maps for the subject property and surrounding area was conducted by EDR and provided to LFI in a *Certified Sanborn Map Report,* dated June 12, 2024. Fire insurance maps were unavailable for the subject property and surrounding areas. A copy of the report stating "Unmapped Property" is provided in **Appendix B**.

3.6 City Directories

A search of historical city directories for the subject property and surrounding properties was conducted by EDR and provided to LFI in a *City Directory Abstract* dated June 17, 2024. City directory listings for single-family residences along Crewsdon Drive and Glen Lily Road were available for various years between 1964 and 2020. A copy of the report is provided in **Appendix B**.

EDR maintains several proprietary databases of "high risk historical records" to aid in identification of businesses (e.g. – auto stations, dry cleaners, etc.) commonly associated with potential environmental concerns. Nearby listings appearing on regulatory databases are summarized in the following sections.

4.0 ENVIRONMENTAL RECORDS REVIEW

An electronic database search of files maintained by the U. S. EPA and the Kentucky Department for Environmental Protection (KDEP) was conducted by EDR on June 12, 2024 to evaluate the regulatory history of the subject property and surrounding properties. The search of standard federal, state, and tribal regulatory agency databases was conducted to (1) identify listings for the subject property and adjoining properties and (2) evaluate sites within applicable ASTM E1527-21 and AAI defined search radii that could cause actual or potential environmental impacts to the subject property. A summary of the results of the regulatory agency database search is provided in the following table:

Regulatory Database Search Summary

Regulatory Database	Minimum Search Distance	Property Listed?	# Sites Listed
Federal National Priority List (NPL)	1 Mile	No	0
Federal De-Listed NPL	½ Mile	No	0

Regulatory Database Search Summary

Regulatory Database	Minimum Search Distance	Property Listed?	# Sites Listed
Federal CERCLIS	½ Mile	No	0
Federal CERCLIS NFRAP	½ Mile	No	0
Federal RCRA CORRACTS	1 Mile	No	0
Federal RCRA non-CORRACTS TSD	½ Mile	No	0
Federal RCRA Generators	¼ Mile	No	1
Federal Institutional/Engineering Control Registry	½ Mile	No	0
Federal ERNS	¼ Mile	Yes	0
State/Tribal Haz. Waste Sites (NPL/CERCLIS)	1 Mile	No	9
State/Tribal Landfill or Solid Waste Disposal Sites	½ Mile	No	0
State/Tribal Leaking Storage Tank Lists	½ Mile	No	0
State/Tribal Registered Storage Tank Lists	¼ Mile	No	0
State/Tribal Institutional/Engineering Control Registry	½ Mile	No	0
State/Tribal Voluntary Cleanup Sites	½ Mile	No	0
Federal/State Brownfield Sites	½ Mile	No	0

The fact that sites do or do not appear on a list does not necessarily indicate that an environmental concern exists. In addition, sites may not be mapped in a list search due to inaccuracy of owner/operator records, government records, or errors occurring during conversion of the data by informational sources. A copy of the EDR report that includes a detailed description of each database and the results of the database inquiries is provided in **Appendix C**.

4.1 Listings for Subject Site or Adjoining Properties

The EDR database search did not identify the subject property or any adjoining properties on any ASTM / AAI required databases.

4.2 Listings within Established Search Radii

No additional site listings were identified in the EDR report within a 0.1-mile radius of the subject property. However, the identified listings do not appear to present an obvious release or impact to the property, based on:

- information contained in the regulatory databases;
- information obtained during our site visit;
- regulatory status of the listed facilities, and;

- distance and/or relative elevation of the listed sites from the subject site (>0.1 mile).

The EDR environmental records search also provides a list of "orphan" sites, which are properties identified on ASTM/AAI required databases but that could not be mapped due to poor or inaccurate address information. EDR's records search listed three (3) orphan sites that are not in the immediate vicinity of the subject property.

4.3 Vapor Encroachment Screen

LFI conducted a Vapor Encroachment Screen (VES) utilizing the Tier 1 methodology provided in ASTM's *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions* (E2600-15). The Tier 1 methodology in E2600-15 was utilized in order to identify a *Vapor Encroachment Condition* (VEC), which is "the presence or likely presence of chemicals of concern (COC) (i.e. – petroleum hydrocarbons and/or chlorinated solvents) vapors in the vadose zone of the subject property caused by the release of vapors from contaminated soil and/or groundwater either on or near the subject property". Information provided by EDR was reviewed to identify facilities within the Area of Concern (AOC) to evaluate whether contamination at nearby properties could represent a vapor encroachment condition (VEC) on the Site. The AOC for chlorinated solvents is defined in ASTM E2600-15 as the area within 1/3 mile of the property boundaries. For facilities at which the only COCs are petroleum hydrocarbons, the AOC includes the area within 0.1 mile of the property boundaries.

A review of historical use information and regulatory database documentation collected in the course of this Phase I ESA did not identify obvious evidence of COC that may migrate as vapors onto the subject property as a result of contaminated soil and/or groundwater known to be present on or near the subject property. Therefore, our opinion based on the Tier 1 VES is that a VEC does not exist on the property.

5.0 SITE RECONNAISSANCE

A site reconnaissance was conducted on July 22, 2024 by Mr. Eric Altobellis, Senior Geologist, with LFI. Mr. Altobellis was unaccompanied during the site reconnaissance.

5.1 Site Reconnaissance Methodologies

The purpose of the reconnaissance was to gather information regarding the environmental conditions at the subject property and surrounding areas. The site reconnaissance consisted of visual observations of the subject property and any existing improvements, adjoining properties as viewed from the subject property, and observations of nearby properties made from public thoroughfares.

At the time of the site reconnaissance, weather conditions were partly cloudy and approximately 85° Fahrenheit. Besides dense vegetation in the wooded portions of the property, no other limiting conditions were present. Photographs taken during the site reconnaissance, depicting site conditions at the time of the visit, are provided in **Appendix A**.

5.2 Hazardous Substances/Waste and Petroleum Products

The subject property is undeveloped. Discarded construction debris and general refuse, likely associated with an abandoned homeless encampment, was observed in the wooded portions of the property. No other obvious indications of generation, use, storage, treatment, or disposal of hazardous substances/wastes or petroleum products were observed during site reconnaissance.

5.3 Underground Storage Tanks (USTs) & Aboveground Storage Tanks (ASTs)

The site reconnaissance included a search for physical features such as fill ports, slumped pavement/ground surface, patched pavement, and evidence of underground piping or pump stations commonly associated with the current or historical presence of storage tanks. The absence of common physical features cannot completely rule out the current or historical existence of storage tanks. Site characteristics such as overgrown vegetation, new pavement, or past renovation/construction/demolition activities may prevent the identification of storage tanks.

5.3.1 Underground Storage Tanks (USTs)

No evidence of current or former USTs was observed or reported during site reconnaissance.

5.3.2 Aboveground Storage Tanks (ASTs)

No evidence of current or former ASTs was observed during site reconnaissance.

5.4 Odors

No strong, pungent or noxious odors were noticed during the site reconnaissance.

5.5 Drums and Containers

No obvious indications of drums or containers were observed during the site reconnaissance.

5.6 Polychlorinated Biphenyls (PCBs)

Polychlorinated biphenyls (PCBs) are organic compounds that have been used extensively in electrical capacitors and transformers, lighting ballasts, hydraulic fluids, heat exchange fluids, lubricants, inks, sealants, adhesives and surface coatings since development in 1929. PCB production was banned in the U.S. in 1979 due to health and environmental hazards. Under the Toxic Substances Control Act (TSCA), as outlined in Title 40 of the Code of Federal Regulations (CFR) Part C, 761, the owners of PCB containing equipment are responsible for environmental impairment and liabilities caused by leakage of PCBs to the environment.

Pole-mounted electrical transformers were observed along Crewsdon Drive. No other equipment with the potential to contain PCBs was observed during the site reconnaissance.

5.7 Drains and Sumps

No evidence of drains or sumps was observed during the site reconnaissance.

5.8 Pits, Ponds, and Lagoons

A former small cattle pond was observed near the southern property boundary in the 1982 and 1987 historical aerials. No evidence of this former pond was observed during the site reconnaissance. No obvious evidence of pits, ponds or lagoons used for waste treatment or disposal was observed or reported during the site reconnaissance.

5.9 Stained Soil / Pavement

No obvious evidence of stained soil was noticed during the site reconnaissance.

5.10 Stressed Vegetation

No obvious areas of stressed vegetation were observed on the site.

5.11 Waste Generation, Storage, and Disposal

The subject property is currently undeveloped. Discarded construction debris and general refuse, likely associated with an abandoned homeless encampment, was observed in the wooded portions of the property. No obvious evidence of improper waste generation or storage was observed during the site reconnaissance.

5.12 Waste Water

No obvious evidence of process waste water discharge into a drain, ditch, or stream was observed on the subject property during the site reconnaissance.

5.13 Wells

No wells were observed or reported on the subject property. The EDR Physical Settings map identified no wells in the area.

5.14 Septic Systems

No septic systems were observed or reported on the subject property.

6.0 INTERVIEWS

The following interviews were conducted during the assessment in an effort to obtain information indicating potential RECs in connection with the subject property.

6.1 Property Representative

The subject property is currently undeveloped and unoccupied. No property representative was available for interview.

6.2 Occupants

The subject property is currently undeveloped and unoccupied.

6.3 Local Government Officials

The Warren County Property Valuation Administrator (PVA) and the Bowling Green Fire Department were contacted during this assessment. No fire department files were available for review. A copy of the PVA cards for the subject property parcels are provided in **Appendix D**.

7.0 NON-SCOPE CONSIDERATIONS

The following sections address environmental issues or conditions on the subject property that are outside the scope of ASTM E1527-21. Substances or materials may be present on the subject property that may lead to contamination of the subject property but are not defined by CERCLA as hazardous substances.

7.1 Asbestos Containing Materials (ACMs)

Asbestos is a general term for a group of fibrous minerals (primarily chrysotile, amosite and crocidolite) that have long been used as fireproof insulation and as a strengthener in pipe insulation, roofing tiles, floor tiles, wall coverings and other materials. Undisturbed asbestos-containing material (ACM) is not dangerous; however, when ACM is broken or torn, as during remodeling or demolition, the fibers can be spread into the air, especially if the material is friable. A friable material, by definition, is one that can be crushed, crumbled, pulverized, or reduced by hand pressure when dry. Due to health hazards, ACM use has been phased out since approximately 1978. The U.S. EPA classifies ACM as any material which contains more than 1% asbestos by Polarized Light Microscopy (PLM) analysis.

The property is currently undeveloped; therefore, the presence of ACM is unlikely to exist.

7.2 Lead-Based Paint (LBP)

Use of lead in household paint was banned by the U.S. EPA effective January 1, 1978. The U.S. EPA and the U.S. Department of Housing and Urban Development (HUD) define lead-based paint (LBP) as any paint that contains 1.0 mg/cm^2 or higher of lead by x-ray fluorescence (XRF) analysis or 0.5% (5,000 ppm) lead by weight.

The property is currently undeveloped; therefore, the presence of LBP is considered unlikely.

7.3 Undefined Emerging Contaminants

"Emerging contaminants" (ECs) are substances not currently defined as hazardous under CERCLA, that non-environmental professionals and others may assume to be "hazardous." ECs include biologically derived by-products such as methane and substances about which human understanding is evolving, such as per and polyfluoralkyl substances (PFAS).

No specific sources of biologically derived by-products or PFAS were identified from the site reconnaissance or review of historical and radius data.

8.0 USER PROVIDED INFORMATION

In accordance with the ASTM E1527-21 and AAI standards, the user of this ESA, Wabuck Development Group (the Client), may obtain information through other due diligence activities associated with the pending property transaction that could help identify the possibility of potential environmental conditions in connection with the subject property. A copy of the completed AAI questionnaire is included in **Appendix E**.

8.1 Environmental Liens or Activity and Use Limitations

The Client reported no information regarding environmental liens or use limitations in connection with the subject property.

8.2 Common/Specialized Knowledge or Experience

The Client reported no information regarding common/specialized knowledge or experience relative to the subject property.

8.3 Reasons for Significantly Lower Purchase Price

The Client reported that the purchase price reasonably reflects the fair market value of the property.

9.0 DATA GAPS

No data gaps as defined by ASTM E1527-21, (i.e. considered to have significantly affected the ability to identify recognized environmental conditions in connection with the subject property) were identified during completion of this assessment.

10.0 FINDINGS AND OPINIONS

The following summarizes known or suspected RECs, HRECs, CRECs, *de minimis* conditions, and non-scope environmental conditions in connection with the subject property based on information collected during the assessment. For each condition, LFI provides an opinion of the impact on the site based on an evaluation of the results of record reviews, site reconnaissance work and interviews performed as part of this assessment. LFI also provides a rationale for concluding that an environmental condition is or is not a REC.

Recognized Environmental Conditions (REC)

This assessment has revealed no evidence of RECs in connection with the subject property.

Historical Recognized Environmental Conditions (HREC)

This assessment has revealed no evidence of HRECs in connection with the subject property.

Controlled Recognized Environmental Conditions (CREC)

This assessment has revealed no evidence of CRECs in connection with the subject property.

De Minimis Conditions

Discarded construction materials and general refuse were observed in the wooded portions of the property. No other *de minimis* conditions were observed in connection with the subject property.

Non-Scope Environmental Conditions

No non-scope environmental conditions were observed in connection with the subject property.

11.0 CONCLUSIONS AND RECOMMENDATIONS

LFI has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-21 of the property located at 1221 Crewsdon Drive in Bowling Green, Kentucky, the subject property. Any exceptions to, or deletions from, this practice were described in this report. This assessment has revealed no evidence of *recognized environmental conditions* in connection with the property. Therefore, no further assessment is recommended.

12.0 CERTIFICATION OF ENVIRONMENTAL PROFESSIONAL

LFI has the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of this part.

Environmental Professional	July 24, 2024
	Date

13.0 REFERENCES

Environmental Data Resources, Inc. *The EDR Radius Map Report Garrison Gardens, 1221 Crewsdon Drive Bowling Green, KY 42101. Inquiry Number: 7679809.2s*. June 12, 2024.

Environmental Data Resources, Inc. *EDR Historical Topographic Map Report Garrison Gardens, 1221 Crewsdon Drive Bowling Green, KY 42101. Inquiry Number: 7679809.4*. June 12, 2024.

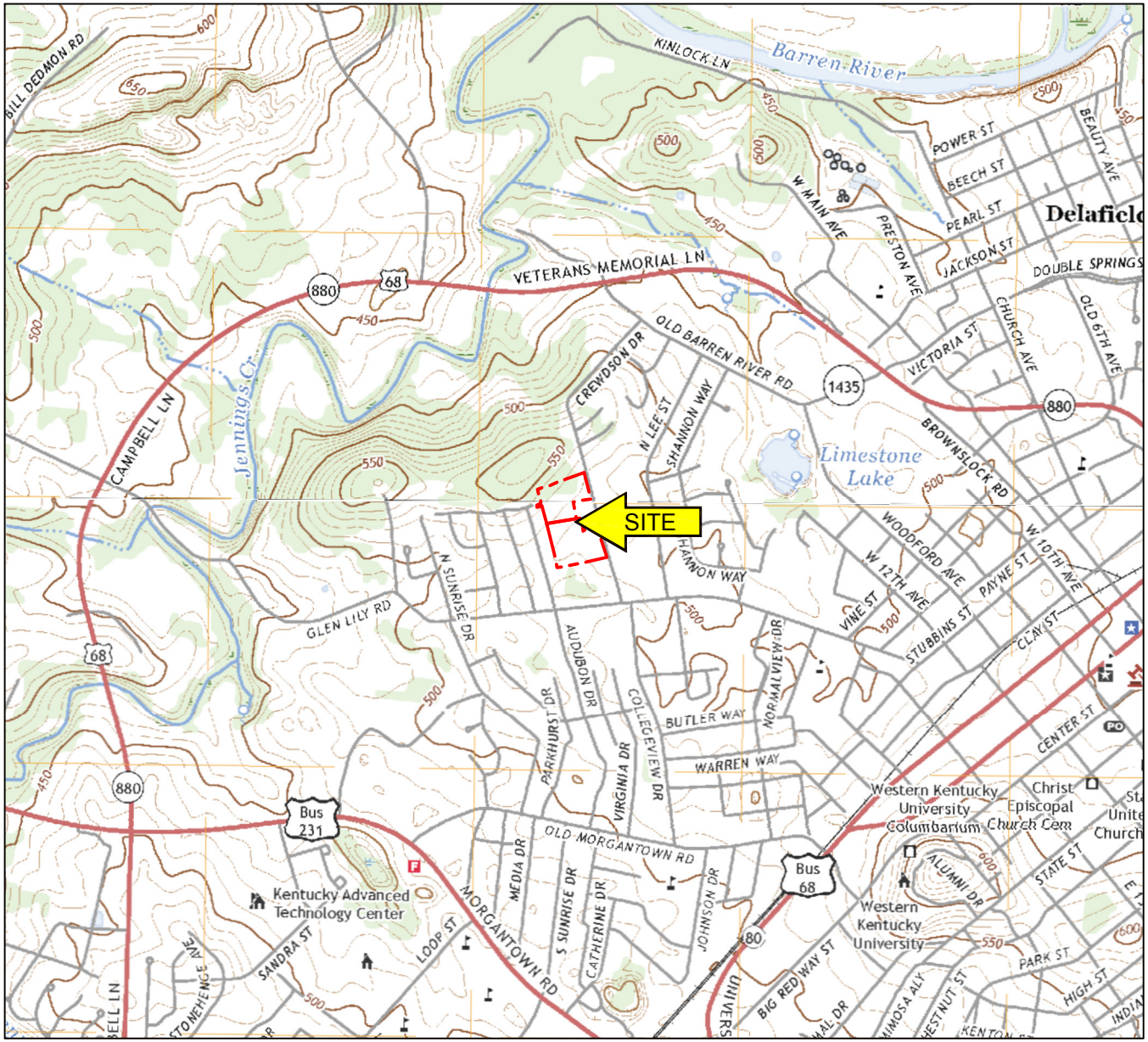
Environmental Data Resources, Inc. *EDR Aerial Photo Decade Package Garrison Gardens, 1221 Crewsdon Drive Bowling Green, KY 42101. Inquiry Number: 7679809.8*. June 12, 2024.

Environmental Data Resources, Inc. *Certified Sanborn Map Report Garrison Gardens, 1221 Crewsdon Drive Bowling Green, KY 42101. Inquiry Number: 7679809.3*. June 12, 2024.

Environmental Data Resources, Inc. *EDR City Directory Image Report Garrison Gardens, 1221 Crewsdon Drive Bowling Green, KY 42101. Inquiry Number: 7679809.5*. June 17, 2024.

Warren County Property Valuation Administrator. Web.

Figures



SCALE 1:24,000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

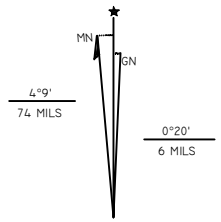
1 0 KILOMETER

CONTOUR INTERVAL 10 FEET

SUPPLEMENTARY CONTOUR INTERVAL 5 FEET

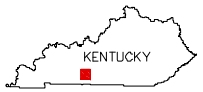
NATIONAL GEODETIC VERTICAL DATUM OF 1929

LEGEND



UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

BOWLING GREEN SOUTH, KY.
2022
7.5 MINUTE SERIES
(TOPOGRAPHIC)



QUADRANGLE LOCATION

SITE LOCATION MAP

GARRISON GARDENS
1221 CREWDSON DRIVE
BOWLING GREEN,
WARREN COUNTY, KENTUCKY

SCALE:	1:24,000
DATE:	06/24/24
PROJ#:	026-24-T2
DRAWN BY:	MKA
CHECKED BY:	

FIGURE 1

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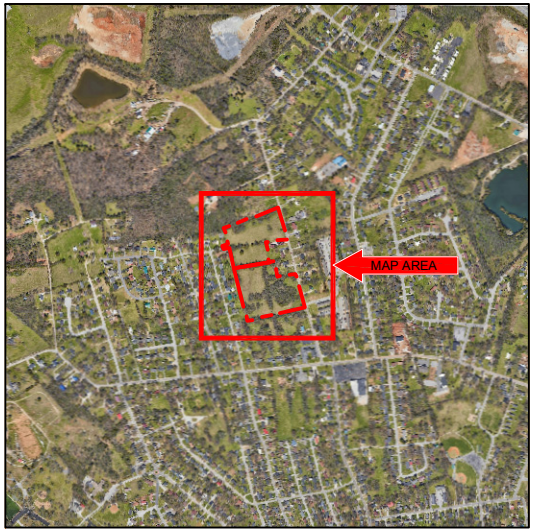
ENVIRONMENTAL COMPLIANCE & CONSULTING

LEGEND



PROPERTY BOUNDARY

0 100 200
SCALE (FT)

SOURCE: Google Earth, Imagery Date: March 28, 2023

AERIAL PHOTOGRAPH SHOWING SITE AND VICINITY	SCALE: 1"=200'	FIGURE 2
	DATE: 06/24/24	
GARRISON GARDENS 1221 CREWDSON DRIVE BOWLING GREEN, WARREN COUNTY, KENTUCKY	PROJ#: 026-24-T2	
	DRAWN BY: MKA	
	CHECKED BY:	

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Appendix A

Site Photographs

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Photographic Record

Client: Wabuck Development
Site Name: Proposed Garrison Gardens
Project Number: 026-24 T2
Site Location: 1221 Crewsdon Drive, Bowling Green, KY

Photo Number:
1

Photographer:
Eric Altobellis

Date:
July 22, 2024

Direction:
East

Comments:
General overview of the central portion of the subject property facing Crewsdon Drive.

Photo Number:
2

Photographer:
Eric Altobellis

Date:
July 22, 2024

Direction:
North

Comments:
General overview of the southern portion of the subject property.

Linebach • Funkhouser, Inc.
environmental compliance & consulting

Photographic Record

Client: Wabuck Development
Site Name: Proposed Garrison Gardens
Project Number: 026-24 T2
Site Location: 1221 Crewsdon Drive, Bowling Green, KY

Photo Number: 3
Photographer: Eric Altobellis
Date: July 22, 2024
Direction: South
Comments: View facing south along Crewsdon Drive.

Photo Number: 4
Photographer: Eric Altobellis
Date: July 22, 2024
Direction: Southeast
Comments: Detail of discarded construction debris and general refuse observed in a heavily wooded area near the central portion of the property.

Linebach • Funkhouser, Inc.
environmental compliance & consulting

Photographic Record

Client: Wabuck Development
Site Name: Proposed Garrison Gardens
Project Number: 026-24 T2
Site Location: 1221 Crewsdon Drive, Bowling Green, KY

Photo Number:
5

Photographer:
Eric Altobellis

Date:
July 22, 2024

Direction:
Northwest

Comments:
Detail of an abandoned homeless encampment and discarded general refuse observed in a wooded area near the central portion of the property.

Photo Number:
6

Photographer:
Eric Altobellis

Date:
July 22, 2024

Direction:
West

Comments:
Detail of garage structure located on an adjoining residential property to the west.

Linebach • Funkhouser, Inc.
environmental compliance & consulting

Photographic Record

Client: Wabuck Development
Site Name: Proposed Garrison Gardens
Project Number: 026-24 T2
Site Location: 1221 Crewsdon Drive, Bowling Green, KY

Photo Number: 7 **Photographer:** Eric Altobellis **Date:** July 22, 2024 **Direction:** West **Comments:** View of the northwestern portion of the site.	
Photo Number: 8 **Photographer:** Eric Altobellis **Date:** July 22, 2024 **Direction:** East **Comments:** View of the southeast portion of the site.	

Appendix B

Historical Research Documentation

Garrison Gardens I/II

1221 Crewdson Drive

Bowling Green, KY 42101

Inquiry Number: 7679809.8

June 12, 2024

The EDR Aerial Photo Decade Package

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

EDR Aerial Photo Decade Package

06/12/24

Site Name:

Garrison Gardens I/II
1221 Crewdson Drive
Bowling Green, KY 42101
EDR Inquiry # 7679809.8

Client Name:

Linebach Funkhouser Inc.
114 Fairfax Ave
Louisville, KY 40207
Contact: Eric Altobellis

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:

Year	*Scale*	*Details*	*Source*
2020	1"=500'	Flight Year: 2020	USDA/NAIP
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2008	1"=500'	Flight Year: 2008	USDA/NAIP
1993	1"=500'	Acquisition Date: March 29, 1993	USGS/DOQQ
1987	1"=500'	Flight Date: June 05, 1987	USDA
1982	1"=500'	Flight Date: March 24, 1982	USDA
1967	1"=500'	Flight Date: April 22, 1967	USGS
1954	1"=500'	Flight Date: February 12, 1954	USGS
1950	1"=500'	Flight Date: April 07, 1950	USGS

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.


INQUIRY #: 7679809.8
YEAR: 2020
= 500'
N
EDR


INQUIRY #: 7679809.8
YEAR: 2016
= 500'
N
EDR


INQUIRY #: 7679809.8
YEAR: 2012
= 500'
N
EDR


INQUIRY #: 7679809.8
YEAR: 2008
= 500'
N
EDR

INQUIRY #: 7679809.8

YEAR: 1993

= 500'

N

EDR


INQUIRY #: 7679809.8
YEAR: 1987
= 500'
N
EDR


INQUIRY #: 7679809.8
YEAR: 1982
= 500'
N
EDR


INQUIRY #: 7679809.8
YEAR: 1967
= 500'
N
EDR


INQUIRY #: 7679809.8
YEAR: 1954
= 500'
N
EDR

INQUIRY #: 7679809.8

YEAR: 1950

= 500'

N

EDR

Garrison Gardens I/II
1221 Crewdson Drive
Bowling Green, KY 42101

Inquiry Number: 7679809.4
June 12, 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

06/12/24

Site Name:

Garrison Gardens I/II
1221 Crewdson Drive
Bowling Green, KY 42101
EDR Inquiry # 7679809.4

Client Name:

Linebach Funkhouser Inc.
114 Fairfax Ave
Louisville, KY 40207
Contact: Eric Altobellis

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Linebach Funkhouser 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. EDRs 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:

P.O.# 026-24 Task 2

Project: Garrison Gardens I/II

Coordinates:

Latitude:	36.999276 36° 59' 57" North
Longitude:	-86.468132 -86° 28' 5" West
UTM Zone:	Zone 16 North
UTM X Meters:	547324.16
UTM Y Meters:	4094924.24
Elevation:	514.64' above sea level

Maps Provided:

2022	1954
2019	1923
2016	1921, 1922
2013	
1996	
1982	
1968	
1959	

Topo Sheet Key

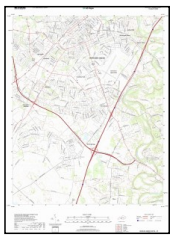
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2022 Source Sheets

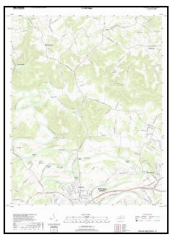
Bowling Green South
2022
7.5-minute, 24000

Bowling Green North
2022
7.5-minute, 24000

2019 Source Sheets

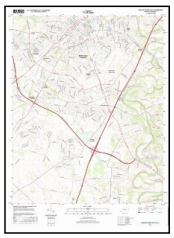


Bowling Green South
2019
7.5-minute, 24000



Bowling Green North
2019
7.5-minute, 24000

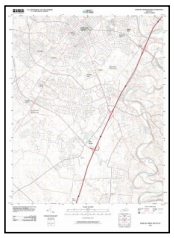
2016 Source Sheets



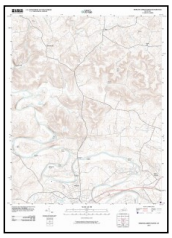
Bowling Green South
2016
7.5-minute, 24000

Bowling Green North
2016
7.5-minute, 24000

2013 Source Sheets



Bowling Green South
2013
7.5-minute, 24000



Bowling Green North
2013
7.5-minute, 24000

Topo Sheet Key

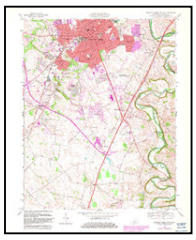
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1996 Source Sheets

Bowling Green South
1996
7.5-minute, 24000
Aerial Photo Revised 1993

Bowling Green North
1996
7.5-minute, 24000
Aerial Photo Revised 1993

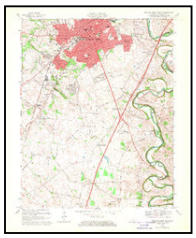
1982 Source Sheets



Bowling Green South
1982
7.5-minute, 24000
Aerial Photo Revised 1979

1968 Source Sheets

Bowling Green North
1968
7.5-minute, 24000
Aerial Photo Revised 1967



Bowling Green South
1968
7.5-minute, 24000
Aerial Photo Revised 1967

1959 Source Sheets

Bowling Green South
1959
7.5-minute, 24000
Aerial Photo Revised 1953

Bowling Green North
1959
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.

1954 Source Sheets

Bowling Green North
1954
7.5-minute, 24000
Aerial Photo Revised 1953

Bowling Green South
1954
7.5-minute, 24000
Aerial Photo Revised 1953

1923 Source Sheets

Bowling Green
1923
15-minute, 62500

Brownsville
1923
15-minute, 62500

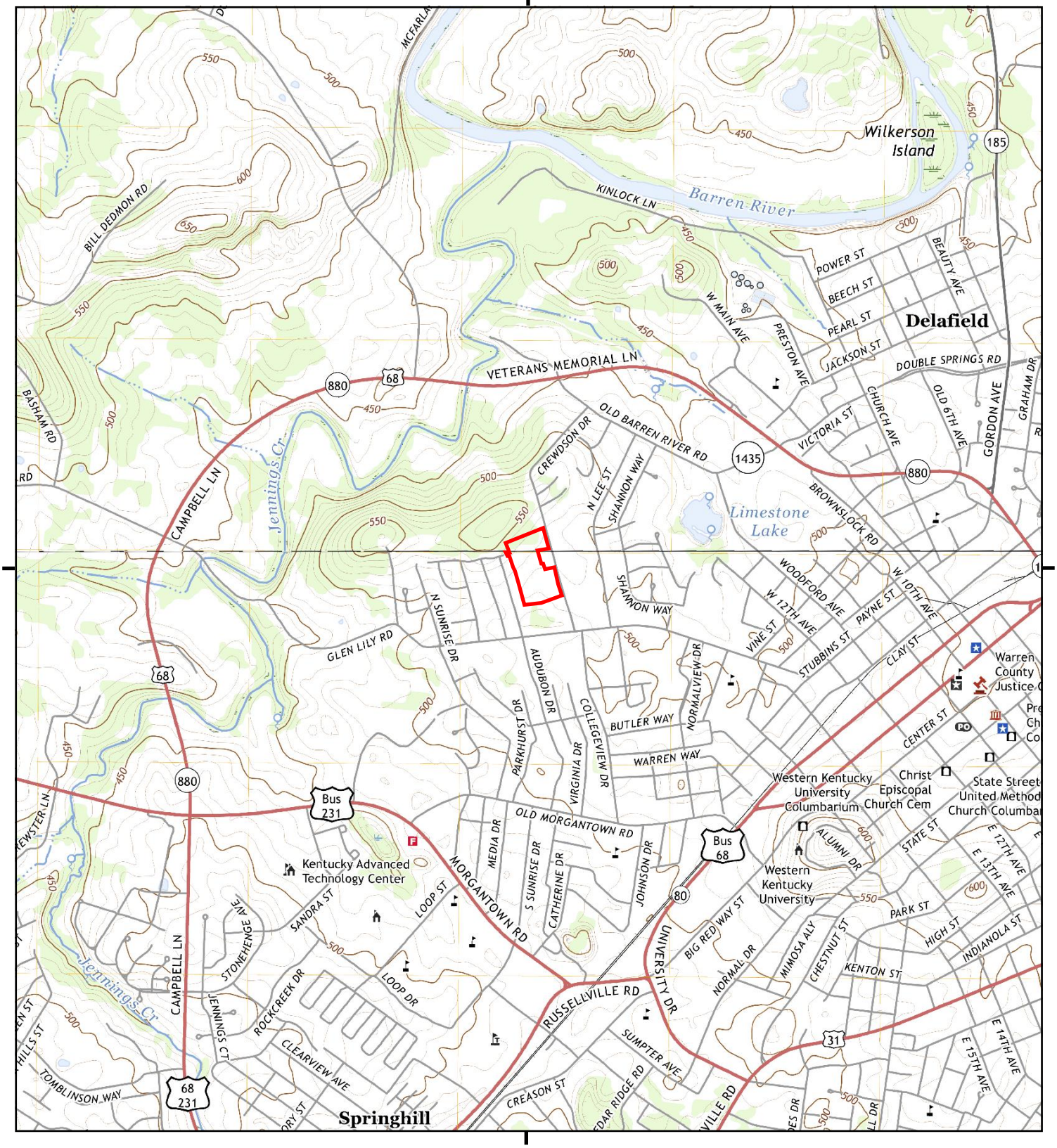
1921, 1922 Source Sheets

Bowling Green
1921
15-minute, 62500

Brownsville
1922
15-minute, 62500

Historical Topo Map

2022



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

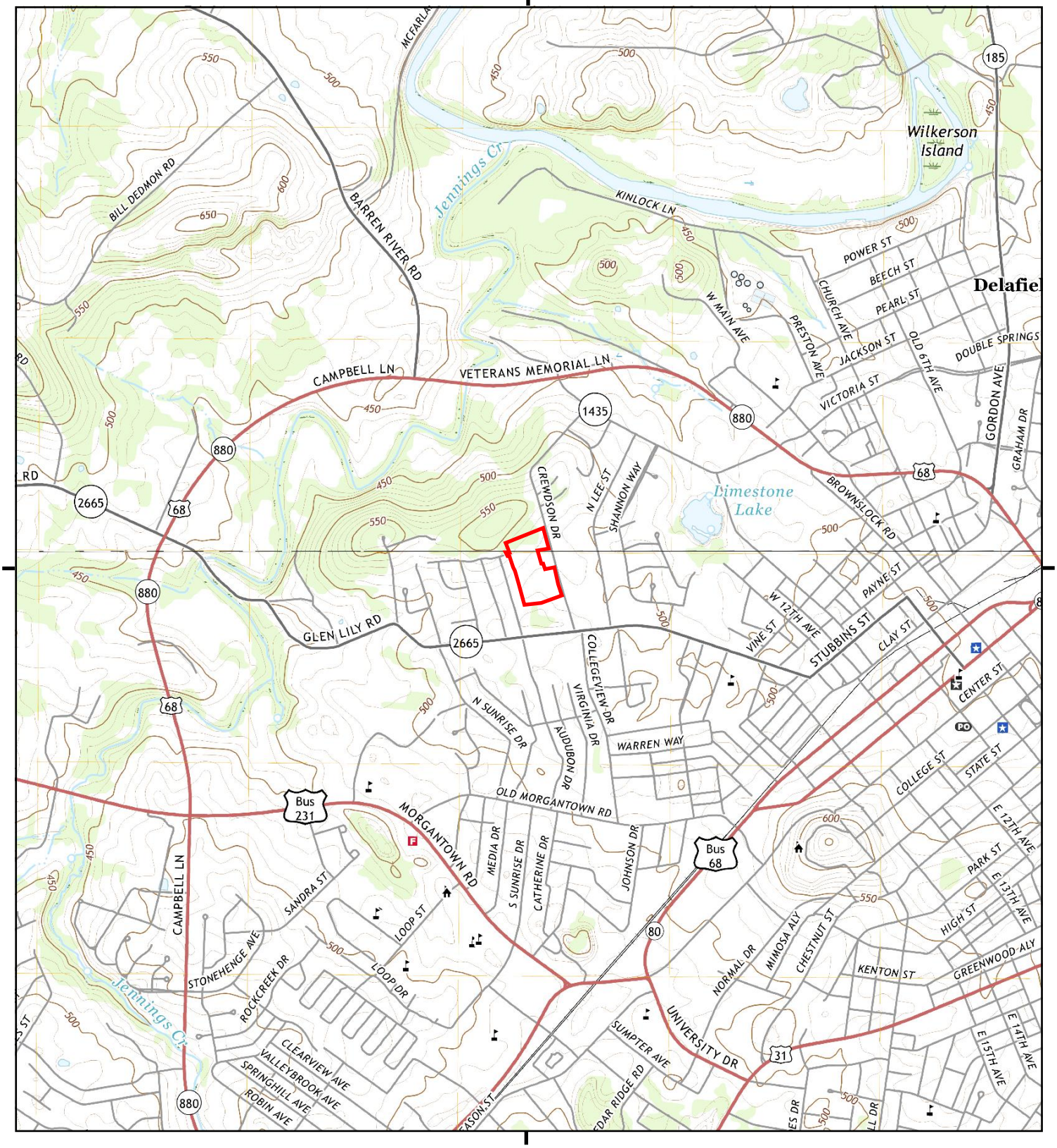
TP, Bowling Green South, 2022, 7.5-minute
N, Bowling Green North, 2022, 7.5-minute

SITE NAME: Garrison Gardens I/II
ADDRESS: 1221 Crewdson Drive
Bowling Green, KY 42101
CLIENT: Linebach Funkhouser Inc.

N

Historical Topo Map

2019



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

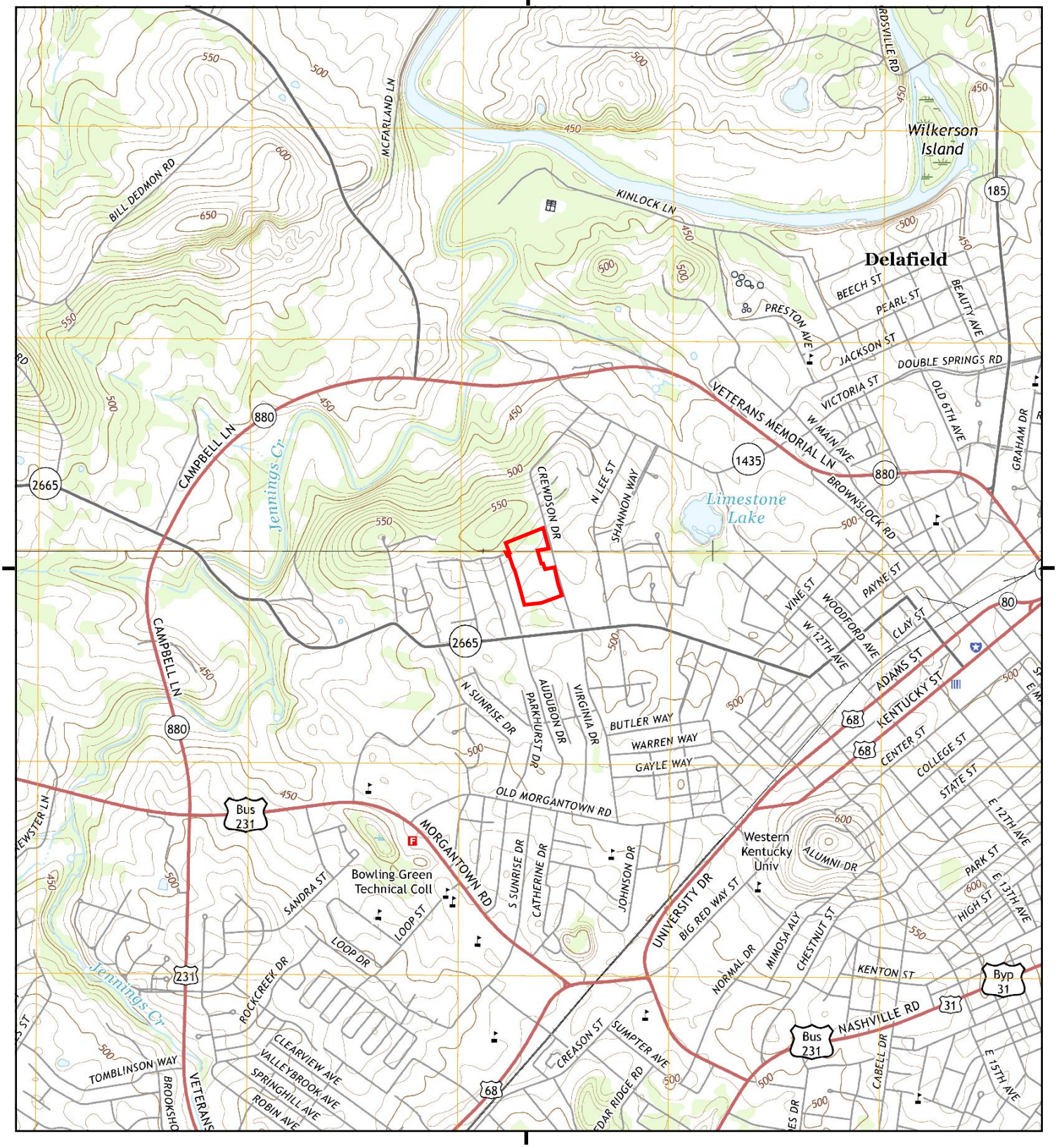
TP, Bowling Green South, 2019, 7.5-minute
N, Bowling Green North, 2019, 7.5-minute

SITE NAME: Garrison Gardens I/II
ADDRESS: 1221 Crewdson Drive
Bowling Green, KY 42101
CLIENT: Linebach Funkhouser Inc.

N

Historical Topo Map

2016



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

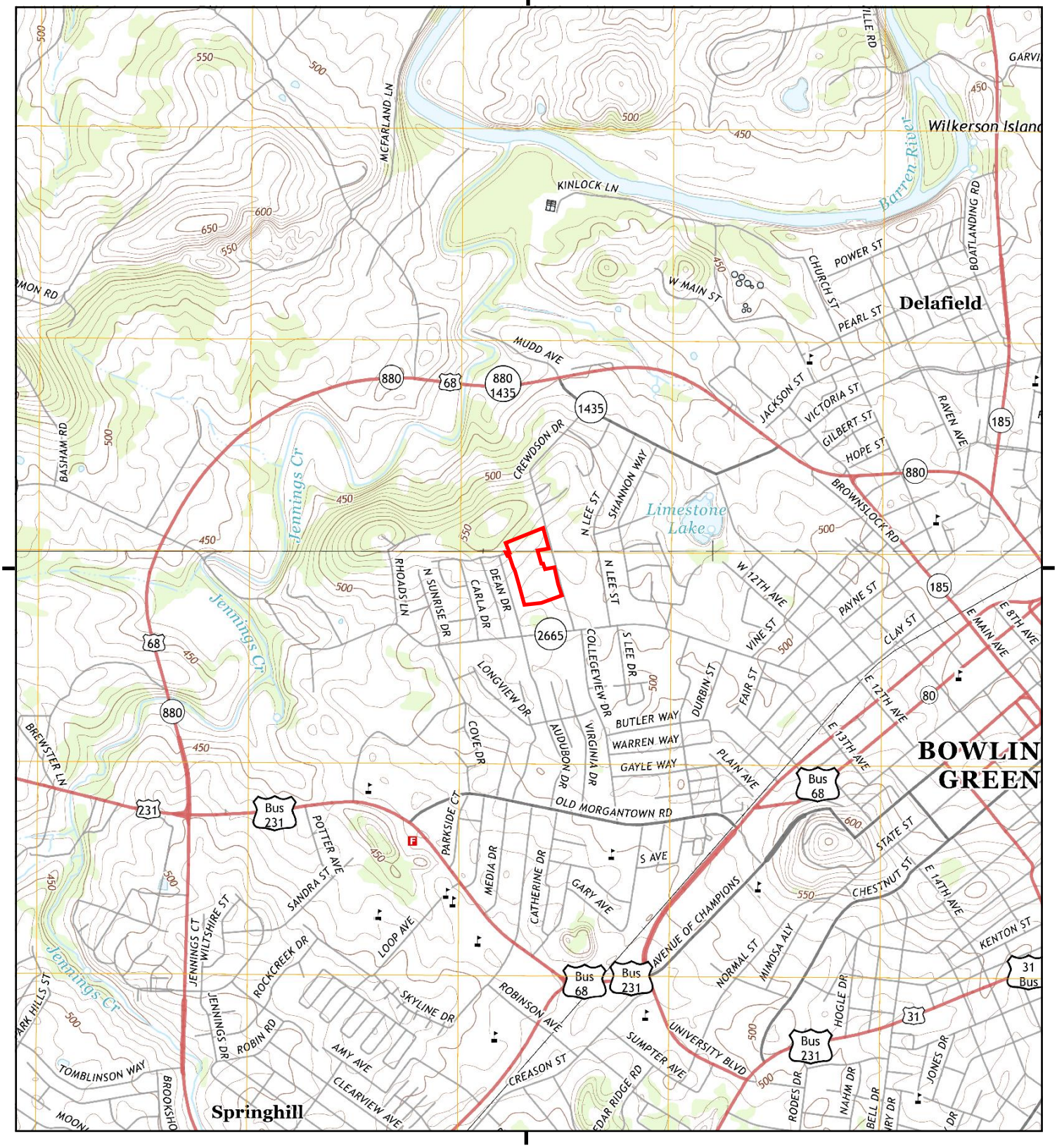
TP, Bowling Green South, 2016, 7.5-minute
N, Bowling Green North, 2016, 7.5-minute

SITE NAME: Garrison Gardens I/II
ADDRESS: 1221 Crewdson Drive
Bowling Green, KY 42101
CLIENT: Linebach Funkhouser Inc.

N

Historical Topo Map

2013



This report includes information from the following map sheet(s).

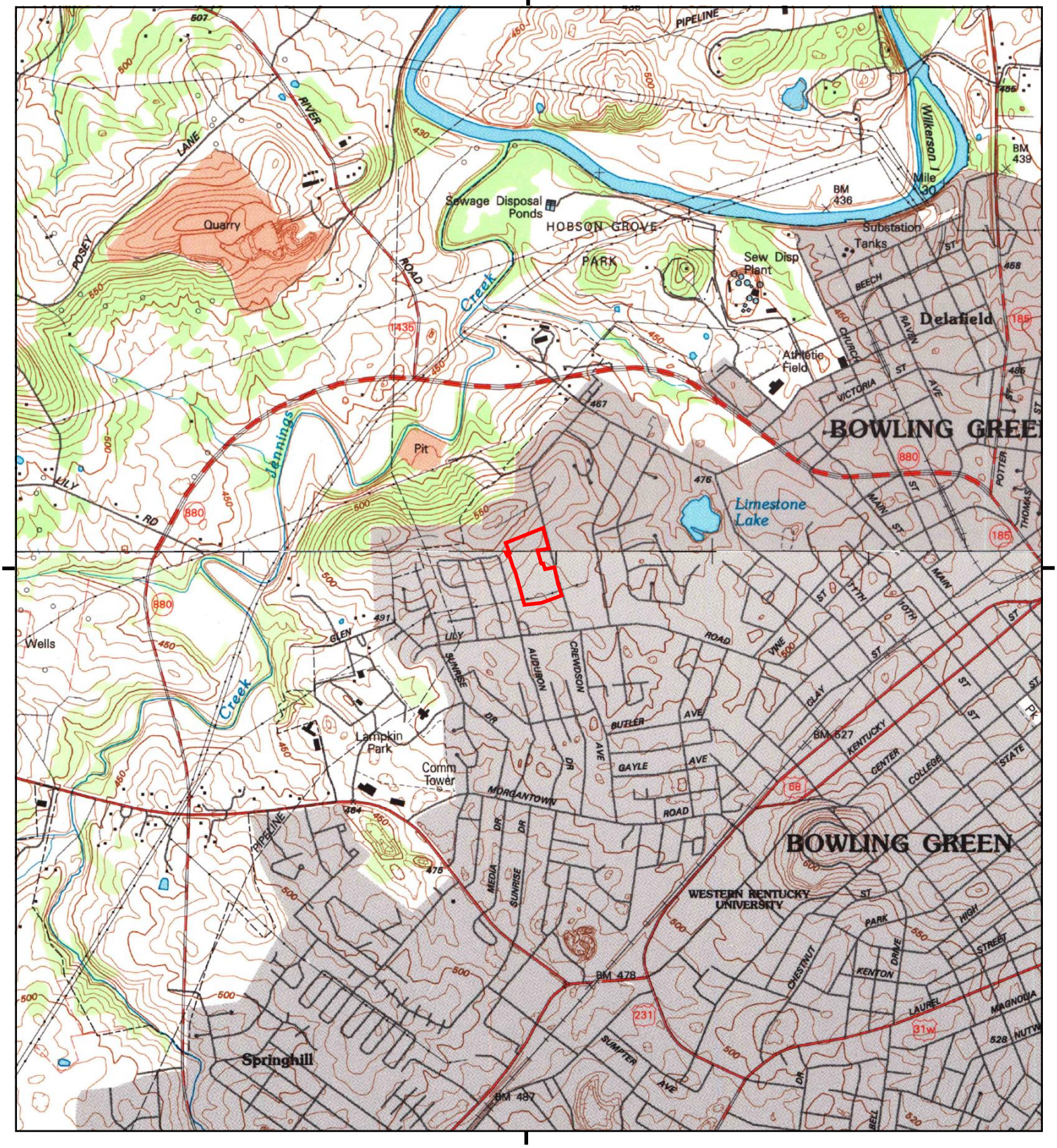
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bowling Green South, 2013, 7.5-minute
N, Bowling Green North, 2013, 7.5-minute

SITE NAME: Garrison Gardens I/II
ADDRESS: 1221 Crewdson Drive
Bowling Green, KY 42101
CLIENT: Linebach Funkhouser Inc.

N



This report includes information from the following map sheet(s).

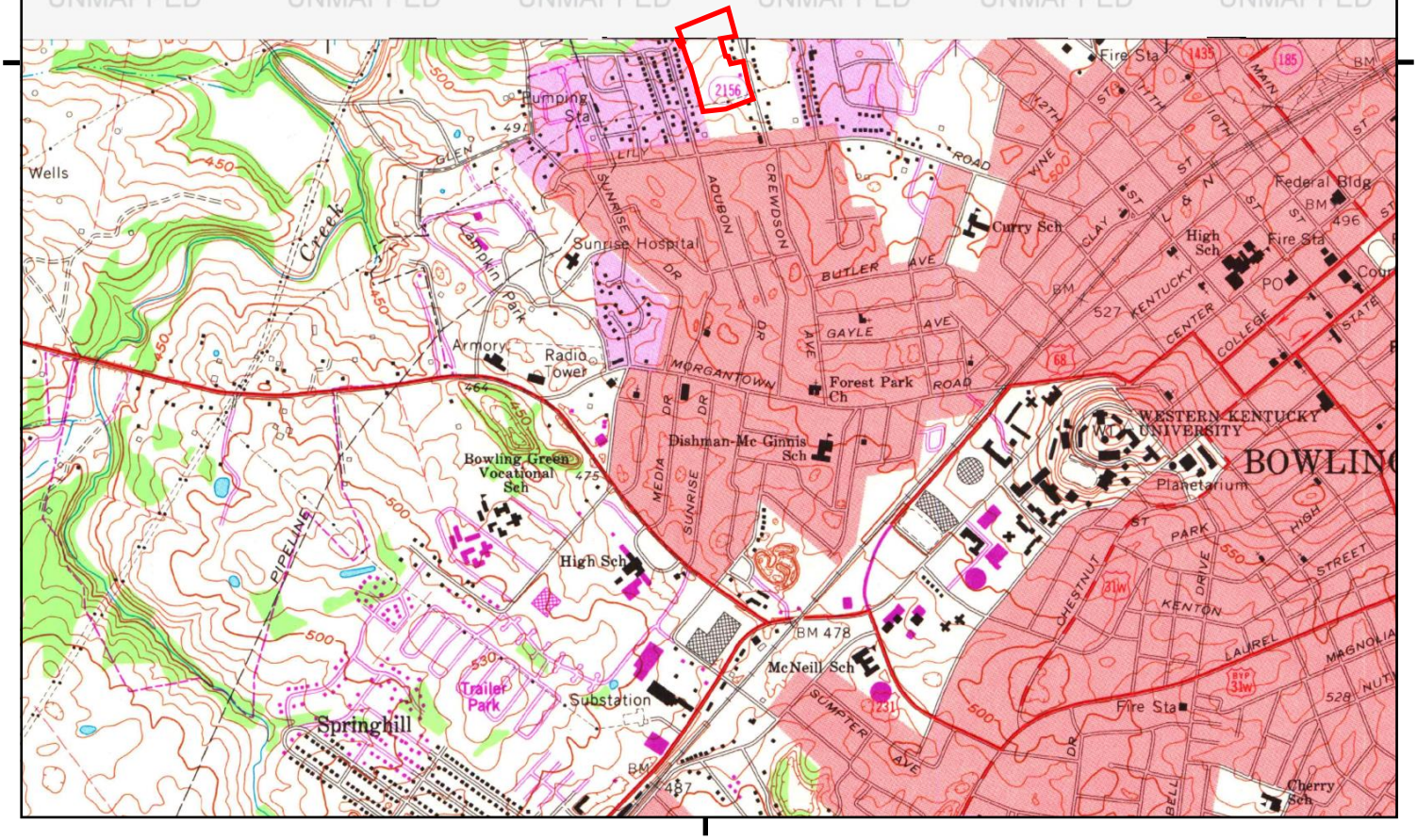
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bowling Green South, 1996, 7.5-minute
N, Bowling Green North, 1996, 7.5-minute

SITE NAME: Garrison Gardens I/II
ADDRESS: 1221 Crewdson Drive
Bowling Green, KY 42101
CLIENT: Linebach Funkhouser Inc.

N



This report includes information from the following map sheet(s).

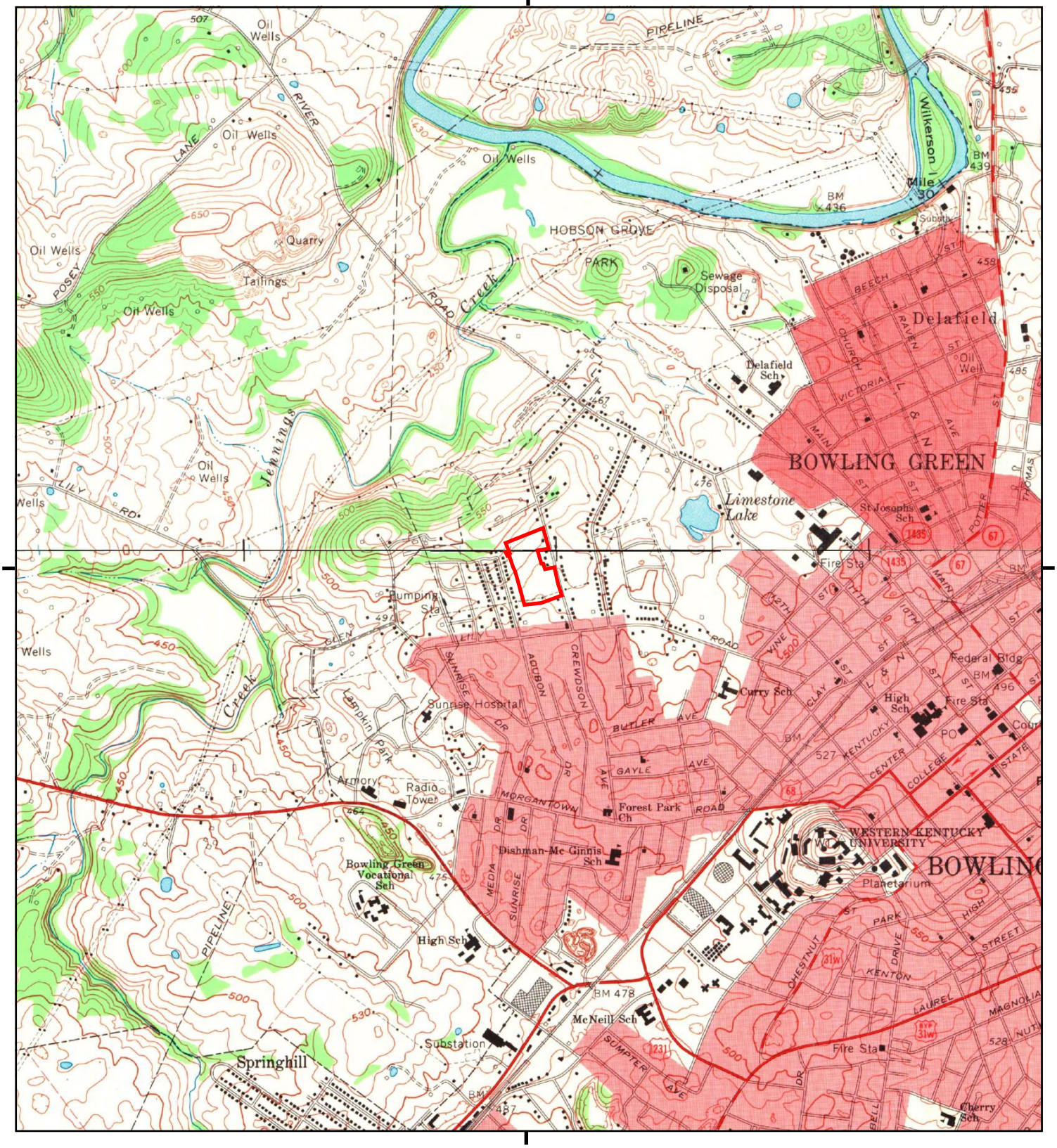
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bowling Green South, 1982, 7.5-minute

SITE NAME: Garrison Gardens I/II
ADDRESS: 1221 Crewdson Drive
Bowling Green, KY 42101
CLIENT: Linebach Funkhouser Inc.

N



This report includes information from the following map sheet(s).

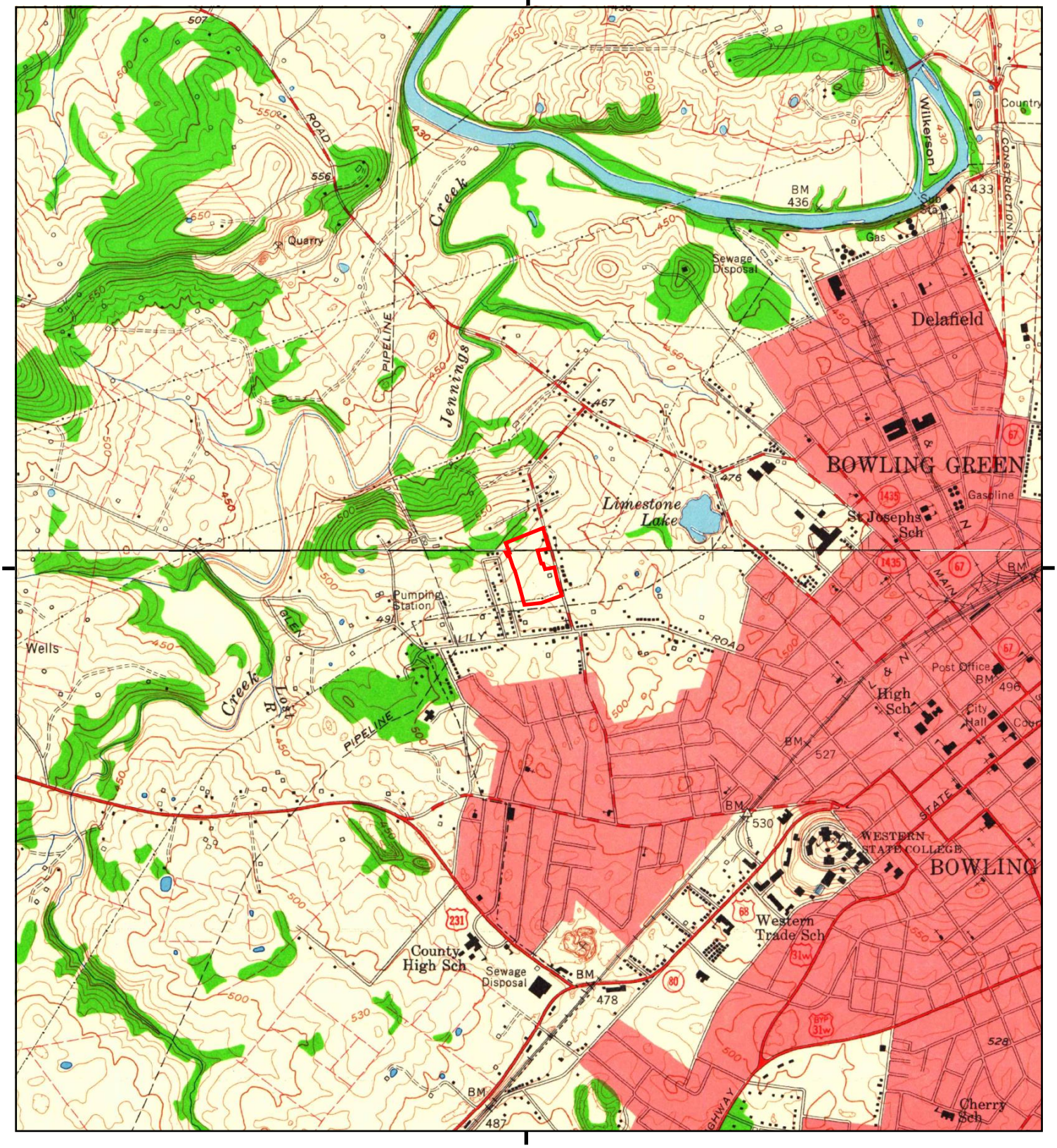
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bowling Green South, 1968, 7.5-minute
N, Bowling Green North, 1968, 7.5-minute

SITE NAME: Garrison Gardens I/II
ADDRESS: 1221 Crewdson Drive
Bowling Green, KY 42101
CLIENT: Linebach Funkhouser Inc.

N



This report includes information from the following map sheet(s).

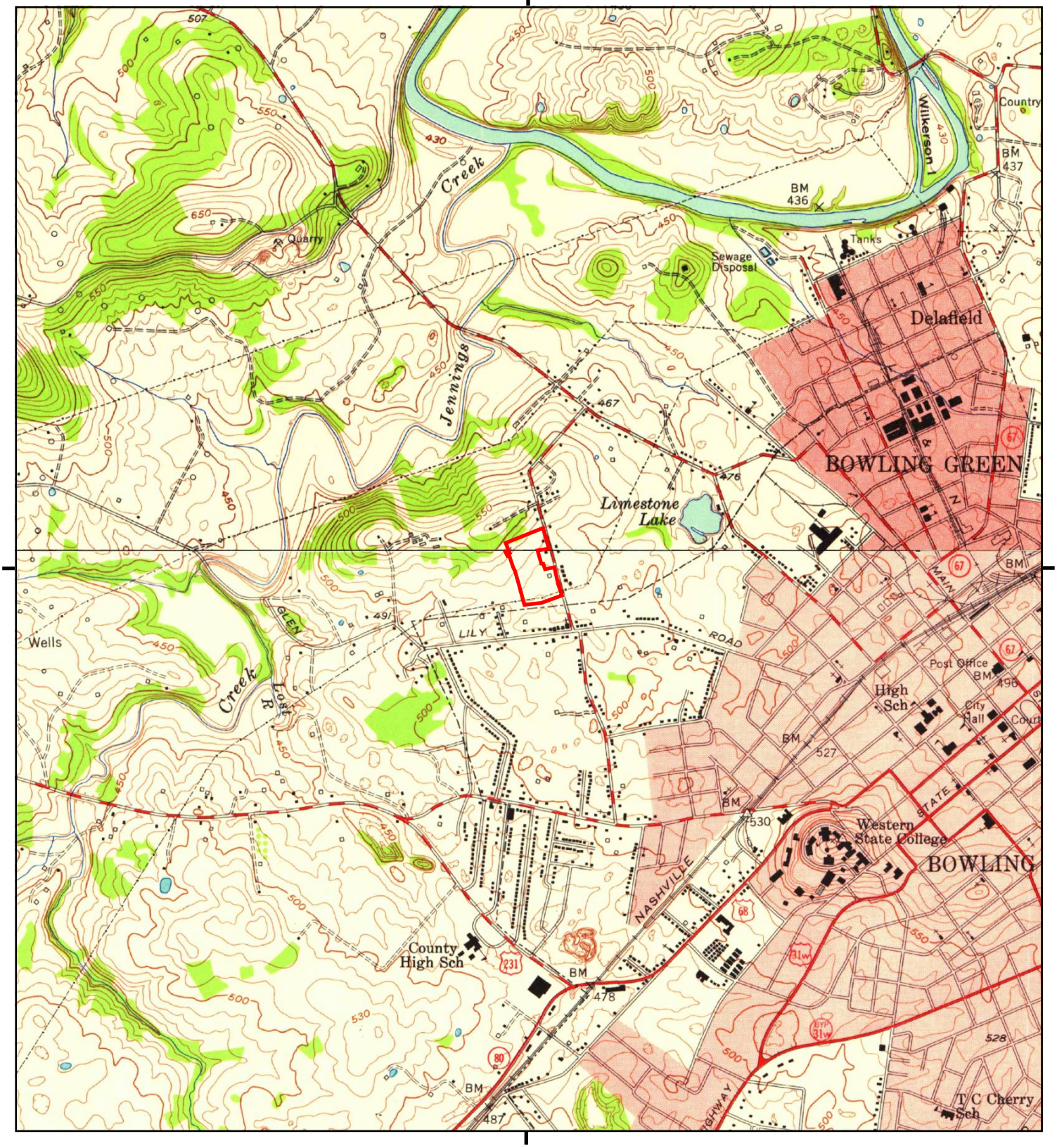
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bowling Green South, 1959, 7.5-minute
N, Bowling Green North, 1959, 7.5-minute

SITE NAME: Garrison Gardens I/II
ADDRESS: 1221 Crewdson Drive
Bowling Green, KY 42101
CLIENT: Linebach Funkhouser Inc.

N



This report includes information from the following map sheet(s).

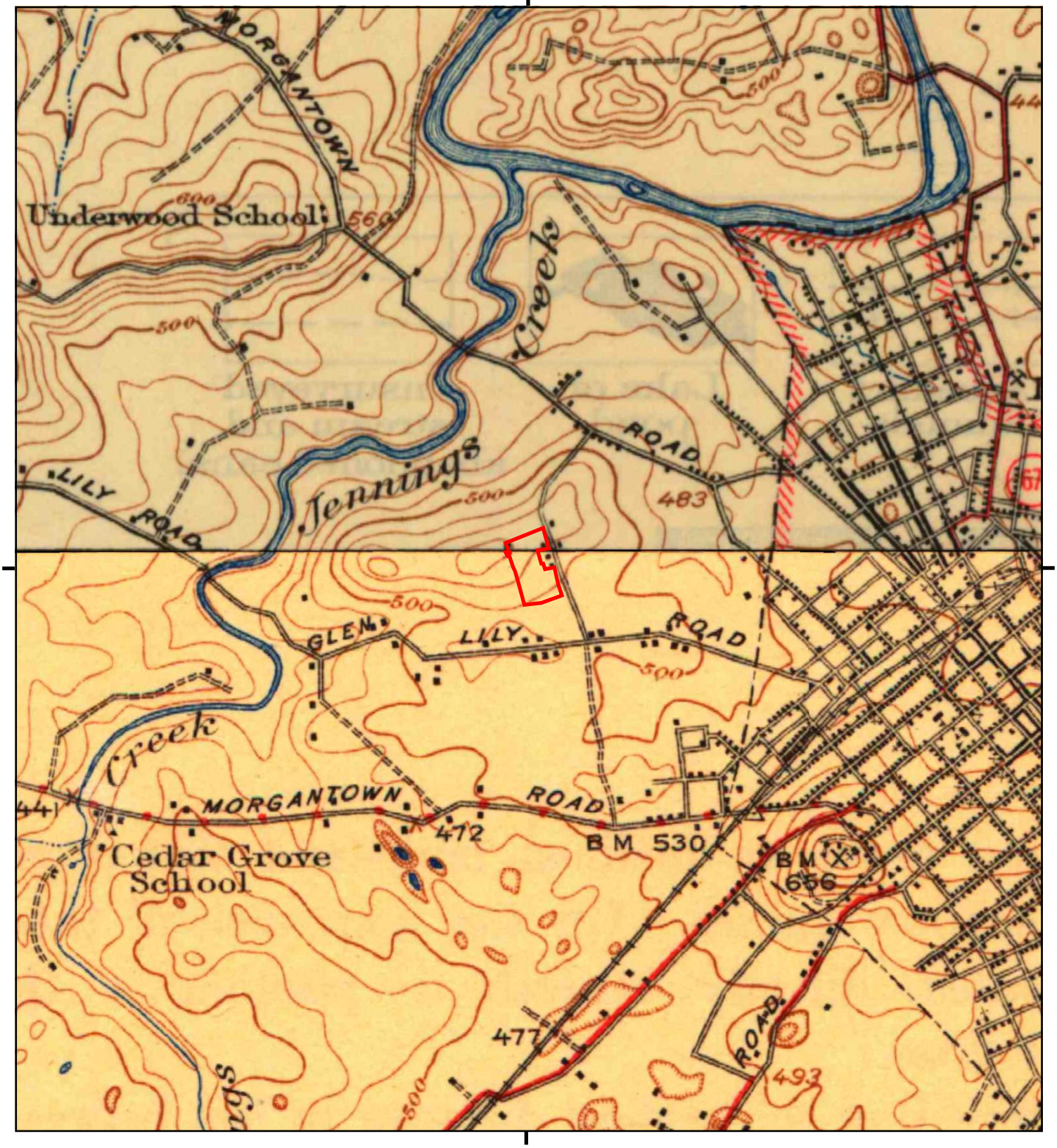
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bowling Green South, 1954, 7.5-minute
N, Bowling Green North, 1954, 7.5-minute

SITE NAME: Garrison Gardens I/II
ADDRESS: 1221 Crewdson Drive
Bowling Green, KY 42101
CLIENT: Linebach Funkhouser Inc.

N



This report includes information from the following map sheet(s).

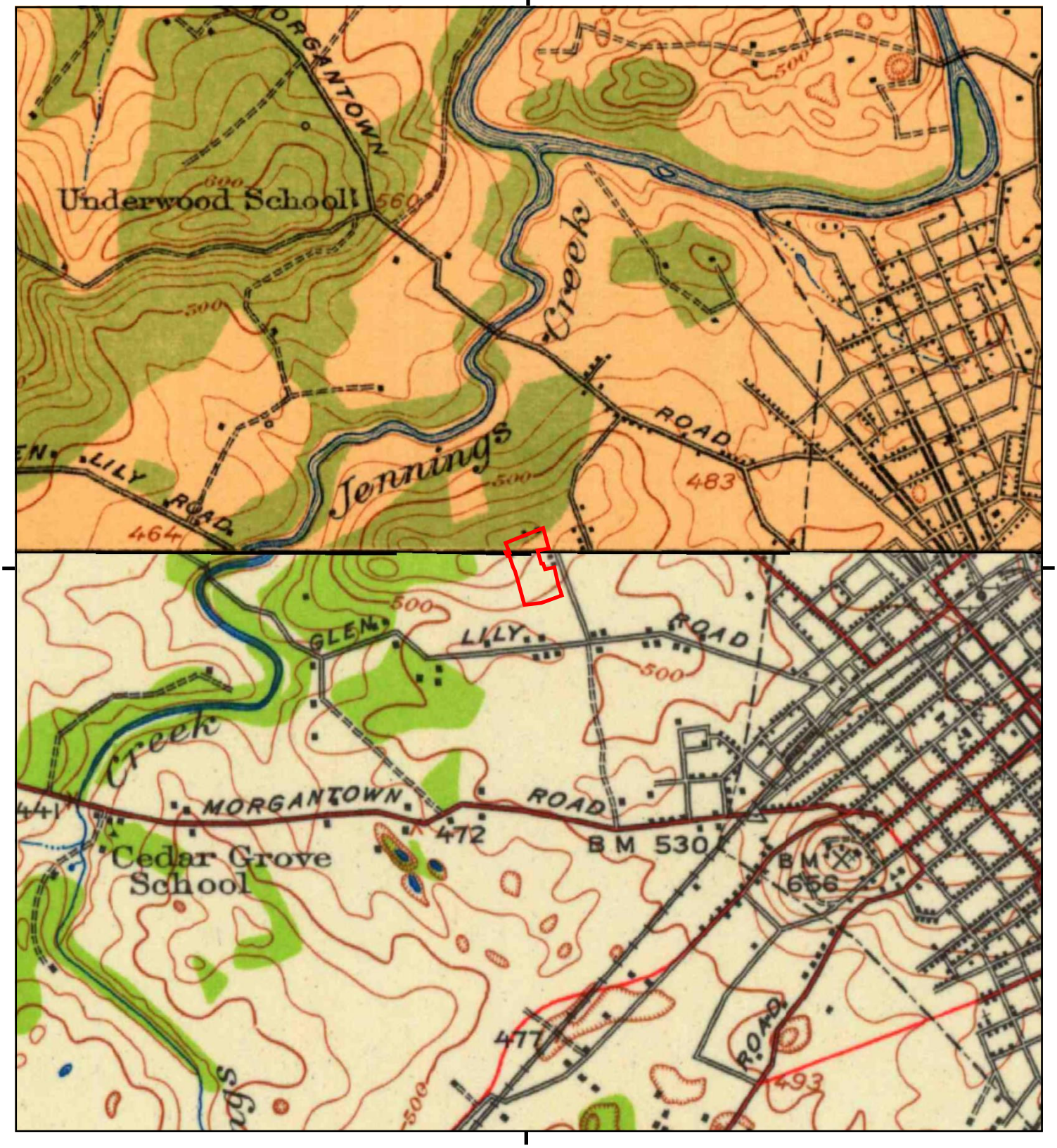
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bowling Green, 1923, 15-minute
NE, Brownsville, 1923, 15-minute

SITE NAME: Garrison Gardens I/II
ADDRESS: 1221 Crewdson Drive
Bowling Green, KY 42101
CLIENT: Linebach Funkhouser Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Bowling Green, 1921, 15-minute
NE, Brownsville, 1922, 15-minute

SITE NAME: Garrison Gardens I/II
ADDRESS: 1221 Crewdson Drive
Bowling Green, KY 42101
CLIENT: Linebach Funkhouser Inc.

N

Garrison Gardens I/II
1221 Crewdson Drive
Bowling Green, KY 42101

Inquiry Number: 7679809.5
June 17, 2024

The EDR-City Directory Image Report

Environmental Data Resources Inc
6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

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

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.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer.

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.

Year	*Target Street*	*Cross Street*	*Source*
2020	☑	☐	EDR Digital Archive
2017	☑	☐	Cole Information
2014	☑	☐	Cole Information
2010	☑	☐	Cole Information
2005	☑	☐	Cole Information
2000	☑	☐	Cole Information
1995	☑	☐	Cole Information
1992	☐	☑	Cole Information
1990	☑	☐	Polk's City Directory
1985	☑	☐	Polk's City Directory
1980	☑	☐	Caron Directory Co
1975	☑	☐	Caron Directory Co
1969	☑	☐	Caron Directory Co
1964	☑	☐	Caron Directory Co

FINDINGS

TARGET PROPERTY STREET

1221 Crewdson Drive
Bowling Green, KY 42101

Year	*CD Image*	*Source*

CREWDSON DR

2020	pg A2	EDR Digital Archive
2017	pg A4	Cole Information
2014	pg A6	Cole Information
2010	pg A8	Cole Information
2005	pg A10	Cole Information
2000	pg A11	Cole Information
1995	pg A12	Cole Information

CREWDSON LN

1990	pg A14	Polk's City Directory
1990	pg A15	Polk's City Directory
1985	pg A16	Polk's City Directory
1980	pg A17	Caron Directory Co
1975	pg A18	Caron Directory Co
1975	pg A19	Caron Directory Co
1969	pg A20	Caron Directory Co
1964	pg A21	Caron Directory Co
1964	pg A22	Caron Directory Co

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*

CREWDSON LN

1992	pg. A13	Cole Information

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CREWDSON DR 2020

1103	BESSIE CARTER
	MELISSA LARSEN
	MELISSA SEEK
	NICHOLAS LARSEN
1107	DEL SHOCKLEY
1111	HOPE HOLLOW
	RASIMA CERIMOVIC
	ZUHOIJA CERIMOVIC
1118	EDWINA LINZY
	ROGER LINZY
1122	CHADWICK SMITH
1123	MISTIE LAZO
	REBECCA MILLER
1126	JACOB DODGE
	PATTY PHELPS
	ROBERT DODGE
1127	LEIGH BARKER
	TANYA TAPLIN
1130	JAMIE SUMMERS
	JERRY GARDNER
	LARRY SUMMERS
1131	MICHAEL PERDUE
1136	JENNIFER MONK
1139	MIRSALA GOLUBOVIC
1140	CHANARY NOP
	MICHELLE PARKER
	RENA MARTIN
1143	FRANCISCO ESPINOZA
1144	LOIS JENT
	SAMMI RAINEY
	VALERIE MANNING
1147	JAMIE CLEARY
	JAMIE DEROSSETT
	JERRAD DEROSSETT
1148	SAMANTHA BOHANNON
	SAMANTHA PULLEY
1150	CARLOS VALENCIA
1151	CARMEN AGUILAR
	JAYRO PINEDA
	KIMBERLY ROBERTS
	LIZBETH AGUILAR
	STEPHEN ROBERTS
1152	CASSANDRA BAILEY
1155	LATOYA DAVIDSON
	TYREE WILSON
1156	COREY THOMAS
	MARY SPEARS
1157	DIANNE SWEETSER
	JACOB SLAMANS
	JENNIFER CUMMINGS

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

CREWDSON DR 2020 (Cont'd)

1159	PAULA ADKINS
1165	BETTY CASTEEL
	BETTY FARMER
	HELEN FARMER
	JEFF CASTEEL
1168	ANITA FARMER
	DOROTHY FARMER
	JAMES FARMER
1171	GELSY AMAYA
	SANTOS GARCIA
1172	JERRY BASHAM
	MARY BASHAM
	VERNON MOSLEY
1180	HELENE NYAMAHOLO
	JAMES TURNER
1201	PAULA BUTTS
	TIMOTHY BUTTS
1204	MATTHEW SMITH
1208	BOBBIE FISHBURN
	WILMA MEADOR
1212	DEBBIE DRAUGHAN
1216	CHARLES BUTTS
	JAN LIWOCH
	TAMARA BOUSQUET
	TINA UNDERWOOD
1220	KATHLEEN DONAN
1224	BARRY CUMMINGS
	LISA CUMMINGS
1229	MUNEVERA SAHMANOVIC
	MUSTAFA SAHMANOVIC
1236	DENA MILLS
	JASON MILLS
1237	JAMES LESSENBERRY
	MARY LESSENBERRY
1240	IMOGENE CHERRY
1244	HILDA DALTON
	JESSICA SIDOCK

Target Street	Cross Street	Source
✓	-	Cole Information

CREWDSON DR 2017

1104	MOONEYHAN, CODY
1107	BREAUX, JARED
1111	CERIMOVIC, ZUHOIJA
1118	LINZY, ROGER D
1126	DODGE, ROBERT W
1127	HINES, ALYSE
1130	GARDNER, JERRY L
1131	HARP, JESSIE
	HARP, SARA
	MOHS, G
	RAMSEY, BRANDY
	SULLIVAN, ROBERT
1136	GILBERT, TIMOTHY D
1139	GOLUBOVIC, MIRSALA
1140	GROCE, KATIE
	PARKER, MICHELLE
1143	BARILLAS, JUAN
1144	BRADY, WENDY
	EDWARDS, PAMELA D
	JENT, LOIS J
1147	DEROSSETT, JERRAD E
1148	BECK, SHAE
	PULLEY, RONALD
1151	AGUILAR, CARMEN
1155	BROWN, AMBER
	DIXON, PAM
	EARTHMAN, RENESHIA
	SHELBY, BRITTANY
	WILSON, TYREE
1156	THOMAS, SPEARS
1157	SWEETSER, DIANNE L
1159	ADKINS, ERIC R
1160	CRAFT, JANE E
1164	SMITH, SHANNON L
1165	FARMER, DAVID
1168	FARMER, ANITA P
1172	BASHAM, JERRY W
1180	TURNER, JAMES L
1200	PHELPS, JAMES R
1201	BUTTS, CHARLES T
1204	DRISKILL, HAROLD C
1208	FISHBURN, BOBBIE J
1211	CROSS, CHARLES C
1212	BLANFORD, ADRIAN
1216	UNDERWOOD, TINA
1224	MADDERN, GARY W
1229	SAHMANOVIC, MUNEVERA
1236	HILL, KASSIE
	MILLS, JASON
1237	LESSENBERRY, JAMES P

Target Street	Cross Street	Source
✓	-	Cole Information

CREWDSON DR 2017 (Cont'd)

1240	WHITESIDE, TONY
1244	COLTTON, APRIL
	LEWIS, E J
1248	BODKIN, MARY H
1252	COULTER, JOHN

Target Street	Cross Street	Source
✓	-	Cole Information

CREWDSON DR 2014

1103	SEEK, ERIN A
1104	PERKINS, JESSIE E
1107	CADLE, BRENDA
1111	OCCUPANT UNKNOWN,
1115	CROSS, TERRY R
1118	LINZY, ROGER D
1119	BURGESS, SCOTT
1122	WALKER, IMOGENE N
1123	KLONOWSKI, JOSH
1126	PHELEPS, PATTY B
1127	GRIMES, NOVA
	HICKS, PAM
	HIGGINBOTHAM, BRENDA
	OCCUPANT UNKNOWN,
	RICHARDSON, TIFFANY
	SLEPPY, DWAN
	WOOD, JALEEL
1130	GARDNER, JERRY L
1131	BELL, CHRISTOPHER
	DUNN, BRENDA
	MORROW, LASHAYE
	OCCUPANT UNKNOWN,
	STATEN, ERVIN D
	SULLIVAN, ALICE
1136	MONK, JENNIFER C
1139	GOLUBOVIC, TAIB
1140	CHATMAN, CHARLES
	DUNN, MICHELLE
	GAYDEN, PATRICIA
	OCCUPANT UNKNOWN,
1143	BARILLAS, JUAN
1144	BRADY, WENDY
	MANNING, VALERIE
	OCCUPANT UNKNOWN,
	SCARBROUGH, TONYA
1147	CLEARY, JAMIE
1148	BECK, SHAE
	BOHANNON, SAMANTHA
	WILLIAMS, MICHAEL
	WRIGHT, DANIELLE L
1150	VALENCIA, CARLOS
1151	OCCUPANT UNKNOWN,
1152	JUSTUS, GREG R
1155	DAVIDSON, LATOYA L
	DIXON, PAM
	EARTHMAN, RENESHIA
	JOHNSON, PEATRICE
	JONES, DONALD P
	OCCUPANT UNKNOWN,
	SANDERS, SHAKELA

Target Street	Cross Street	Source
✓	-	Cole Information

CREWDSON DR 2014 (Cont'd)

1155	SLAPPY, DWAN
	STEVENS, RAY
1157	SWEETSER, DIANNE L
1159	ADKINS, ERIC R
1160	CRAFT, JANE E
1161	STRAIN, NEAL K
1164	SMITH, SHANNON
1165	MOORE, JERRY R
1167	BOBBETT, LARRY D
1168	FARMER, EARL E
1171	LOGAN, S
1172	BASHAM, JERRY W
1180	TURNER, JAMES L
1200	PHELPS, JAMES R
1201	BUTTS, CHARLES T
1204	SMITH, MARK
1208	MEADOR, BRANDON M
1211	CROSS, CHARLES C
1212	STEVENSON, BRETT T
1216	BOUSQUET, JOSEPH D
1220	DONAN, KATHLEEN D
1224	VANHOOK, JACKLYN D
1229	SAHMANOVIC, MUNEVERA
1232	JOHNSON, CHRISTY C
1236	GRAY, MCCLININ J
	OCCUPANT UNKNOWN,
1237	LESSENBERRY, JAMES P
1240	WHITESIDE, TONY
1241	OCCUPANT UNKNOWN,
1244	COLTTON, APRIL
	COTTON, ROSE
	LEWIS, E J
	MICHAEL, DOERING
	OCCUPANT UNKNOWN,
1248	BODKIN, MARY H
1252	HENDERSON, MARTIN L

Target Street	Cross Street	Source
✓	-	Cole Information

CREWDSON DR 2010

1103	CARTER, MELTON T
1104	PERKINS, JESSIE E
1107	CLOPTON, LENETTA
1111	CERIMOVIC, ZINAID
1115	CROSS, TERRY R
1122	CERDA, ARCADIA
1123	MILLER, BRENDA
1126	HAROLD PHELPS PAINTING LLC
	PHELPS, HAROLD C
1127	CHERRY, LONNIE
	GRIMES, NOVA
	PIERCE, HEATHER
	RICHARDSON, TIFFANY
	SLEPPY, DWAN
	WOOD, CARLETTA
1130	GARDNER, JERRY L
1131	BURTON, SOHN
	DUNN, BRENDA
	MORROW, LASHAYE
	OVERTON, CRYSTAL
	ROBINSON, WHITNEY J
	SMITH, MELISSA
1136	HUGGINS, JEROME F
1139	GOLUBOVIC, TAIB
1140	DUNN, MICHELLE
	FRANCE, DEVANTE
	LANDRUM, CELESTINE
	NOP, CHANARY
	PARKER, MICHELLE
1143	LOZANO, RICHARD
1144	BURKE, CARROLL
	MANNING, VALERIE
	SCARBROUGH, TONYA
	STOUT, DONNA M
1147	MCGUIRE, HUGH W
1148	BECK, CRYSTA
	TYSON, CARRIE
	WILLIAMS, MICHAEL
1150	SANCHEZ, ADELA
1151	CARDWELL, ELVIS E
1152	JUSTUS, GREG R
1155	CORNWELL, GLADYS
	FRANCE, TROY
	JONES, DONALD P
	SCOTT, CAROL
	SHELBY, BRITTANY
	STEVENS, BURLEY B
1157	SWEETSER, DIANNE
1159	ADKINS, PAULA
	PHOTOGRAPHY BY PAULA

Target Street	Cross Street	Source
✓	-	Cole Information

CREWDSON DR 2010 (Cont'd)

1161	STRAIN, JAMES F
1164	SMITH, TONY M
1165	CASTEEL, JEFF L
1167	BOBBETT, LARRY D
1168	FARMER, EARL E
1171	LOGAN, LEWIS L
1172	BASHAM, JERRY W
1180	TURNER, JAMES L
1200	PHELPS, JIM J
1201	BUTTS, CHARLES T
1204	BELTRAN, ISMAEL
1208	MEADOR, BRANDON
1211	CROSS, MICHAEL W
1212	STEVENSON, BRETT
1216	BOUSQUET, TAMARA
1220	CASTILLO, NANCY
1224	MADDERN, GARY W
1229	SAHMANOVIC, MUNEVERA
1236	ELLIOT, LINDA J
	JOHNSON, RICK
1237	LESSENBERRY, JAMES P
1240	AMOS, PEARLINE
	BOYERS, DAVID
	COTTON, LACEY R
1244	BUTTS, FREDA
	HUDSON, JIMMY
1248	BODKIN, MARY H
1252	KHAMSAY, TANG

Target Street	Cross Street	Source
✓	-	Cole Information

CREWDSON DR 2005

1103	CARTER, MELTON T
1104	PERKINS, JESSIE E
1111	CASTILLO, JOSE M
1115	WILSON, BENNIE J
1118	BROOKS, HELEN R
1122	WALKER, IMOGENE M
1123	HARROD, KEVIN D
1126	PHELPS, HAROLD C
1127	GAMMONS, ISIAH
1130	GARDNER, JERRY
1139	GOLUBOVIC, TAIB
1140	MARTIN, RENA
	PARKER, E
	PROCTOR, MARY
1143	RIGGSBEE, SHAWN
1147	MCGUIRE, HUGH W
1148	DRAKE, RITA
1151	CARDWELL, ELVIS E
1155	FRANCE, NAKIA
1156	FULLER, DEAN
1157	SWEETSER, DIANNE
1161	STRAIN, JAMES F
1164	SCOTT, MITCHELL
1165	HARRISON, PERCY D
1167	BOBBETT, LARRY D
1168	FARMER, EARL E
1172	BASHAM, JERRY W
1180	TURNER, LOIS D
1200	CALDWELL, CHARLES D
1201	BUTTS, TIM C
1208	HARMON, MATTHEW
1211	CROSS, MICHAEL W
1212	PHANNACHAY, SAMSANOUK
1220	DONAN, CHRISTINA
1229	SAHMANOVIC, MUNEVERA
1232	CHERRY, JONATHAN
1236	JOHNSON, RICK
	PEDIGO, MAE A
1237	LESSENBERRY, JAMES P
1240	BURTON, JESSIE W
	MCCALL, LEHOLMES
1244	BUTTS, ROSE
	COLTON, TYSON B
	HUDSON, JIMMY
	MICHAEL, DOERING
	MORRIS, LESLEE A
	NEAL, E
1248	BODKIN, THOMAS M
1252	KHAMSAY, SY

Target Street	Cross Street	Source
✓	-	Cole Information

CREWDSON DR 2000

1004	ARNOLD, RUNETTA
1103	CARTER, MELTON
1104	PERKINS, JESSIE
1107	WHITMAN, LARRY
1118	BROOKS, HELEN
1119	GREER, SANDERS
1127	ALEXANDER, ASHA R
	CUNNIGHAM, MARCIA
1130	SUMMERS, JAMIE
1131	YOUNG, KATHRYN
1136	BARRY, J
1143	RIGGSBEE, JAMES L
1144	WAMBLES, DANA
1147	MCGUIRE, HUGH W
1148	DRAKE, RITA
1152	TYREE, M E
1160	CRAFT, J E
1161	STRAIN, JAMES F
1164	BUNCH, HARVEY L
1165	HARRISON, PERCY D
1167	BOBBETT, LARRY D
1168	FARMER, EARL
1171	WOOLBRIGHT, G W
1172	BASHAM, JERRY
1200	PHELPS, JIM
1201	MILLER, YOUREE
1208	WARREN, BRAD
1211	CROSS, CHARLES
1212	CASSIDY, BRIAN
1216	BUTTS, TIM
1220	HUNTON, WINNIE
1229	CORSO, SEAN
1236	PEDIGO, MAE A
1240	BURTON, WILLIAM
	TRENT, S
1244	SATTERFIELD, DEVON
1248	BODKIN, T M

Target Street	Cross Street	Source
✓	-	Cole Information

CREWDSON DR 1995

1103 CARTER, MELTON
1104 PERKINS, JESSIE
1107 WHITMAN, LARRY
1111 OBRIEN, DAVID
1115 OCCUPANT UNKNOWNN
1118 BROOKS, GLENDAL
1119 GREER, SANDERS
1122 WATT, DONITA
1126 HIGGS, JOHNNY M
1130 GARDNER, JERRY L
1136 VAUGHN, A M
1139 DETHRIDGE, JOHN B
1143 RIGGSBEE, JAMES L
1147 MCGUIRE, HUGH W
1148 OCCUPANT UNKNOWNN
1150 BOND, JAMES M
1151 MARTIN, LOUIS A
1152 COOTS, KENNETH
1155 RHODES, CAROL
1156 PARKER, STEPHEN
1157 HINES, BOBBY
1160 CRAFT, JOHNNY E
1161 STRAIN, JAMES F
1164 WATT, CLEO D
1165 HARRISON, PERCY D
1167 BOBBETT, LORENE
1168 FARMER, EARL
1171 WOOLBRIGHT, GARDNER D
1172 BASHAM, JERRY
1180 TURNER, JAMES L
1200 PHELPS, JIM
1201 MILLER, YOUREE
1204 JOHNSON, JAMES E
1208 HARMON, PENNI D
1211 CROSS, CHARLES
1212 WILSON, RUTH
1216 OCCUPANT UNKNOWNN
1220 HUNTON, WINNIE
1224 OCCUPANT UNKNOWNN
1229 WHITE, LAROY S
1232 THOMAS, LYNETTE
1236 JOHNSON, ROBBIE
1237 DICKENSON, RANDY D
1240 BURTON, WILLIAM
MCDONALD, DONALD W
1241 WHITNEY, BONNIE
1244 DAVIDSON, JEAN
SATTERFIELD, P
1248 BODKIN, THOMAS M
1252 OCCUPANT UNKNOWNN

Target Street	Cross Street	Source
-	✓	Cole Information

CREWDSON LN 1992

1103 CARTER, MELTON
1104 PERKINS, JESSIE
1107 WHITMAN, LARRY
1111 OBRIEN, DAVID
1115 GAMMONS, LARRY
1119 GREER, SANDERS
1127 CASADA, WARREN
WOOTEN, MARK D
1130 GARDNER, JERRY
1131 ATWELL, LARRY K
BRADY, D F
1136 VAUGHN, A M
1139 DETHRIDGE, JOHN B
1147 MCGUIRE, HUGH W
1148 DRAKE, RITA
1151 MARTIN, LOUIS A
1152 COOTS, KENNETH
1155 FULLEN, B
1156 PARKER, STEPHEN
1157 BROWNING, HENRY
1160 CRAFT, JOHNNY E
1161 STRAIN, JAMES F
1164 WATT, CLEO D
1165 HARRISON, PERCY D
1167 BOBBETT, LORENE
1168 FARMER, EARL
1171 WOOLBRIGHT, GARDNER D
1172 BASHAM, JERRY
1180 TURNER, JAMES L
1200 PHELPS, JIM JR
1201 MILLER, YOUREE
1204 JOHNSON, JAMES E
1208 HARMON, P D
1211 CROSS, CHARLES
1212 WILSON, RUTH
1220 HUNTON, WINNIE
1232 DIEDRICH, KURT U
1237 DICKENSON, RANDY D
1240 CORNELL, MARK
MCDONALD, D W
1241 WHITNEY, BONNIE
1244 DAVIDSON, JEAN
1248 BODKIN, THOMAS M
1252 WHITAKER, EMMA J
122912 WATT, GENTRY H

Target Street	Cross Street	Source
✓	-	Polk's City Directory

CREWDSON LN 1990

STONEBRIDGE LA INTERSECTS

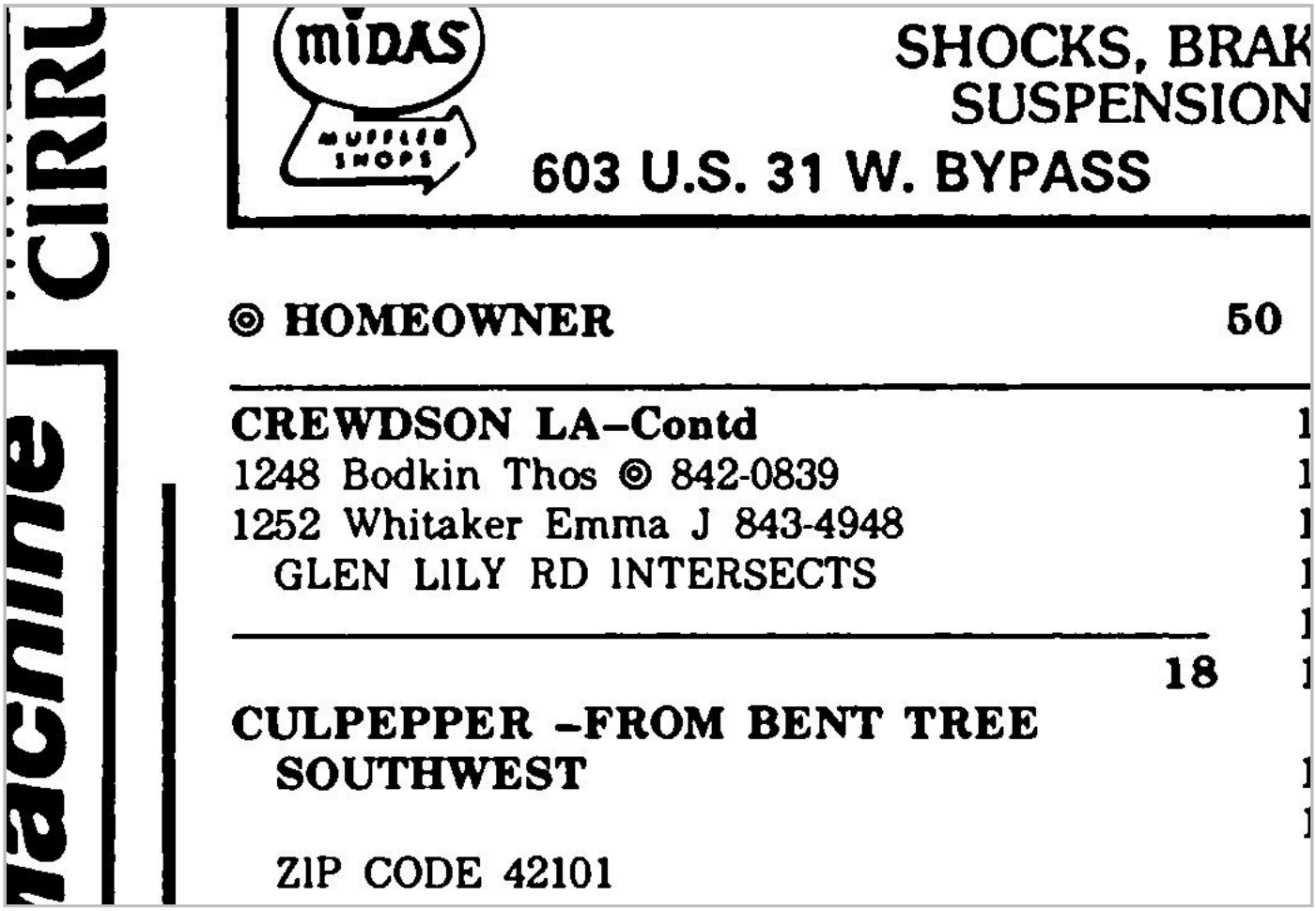
10

CREWDSON LA –FROM 1206 BARREN RIVER RD SOUTHEAST

ZIP CODE 42101
1103 Carter Melton T ◎ 842-7445
1104 Perkins Jerry L ◎ 781-6792
ANGORA CT BEGINS
1107 Whitman Larry D ◎ 781-3208
1111 O'Brian David ◎ 843-1048
ANGORA CT BEGINS
1115 Key Mark
1118 Brooks Helan Mrs ◎
1119 Greer Sanders
1122 Watt Richd A ◎ 782-9625
1126 Byrns Mike ◎
1127a No Return (1127a-1127c)
1130 Gardner Jerry L ◎ 782-2907
1131a★Roppel Andy J 782-8112
1131b Smith Lattie D 843-3364
1136 Douglas Billy J ◎ 781-8369
1139 Dethridge John B ◎ 843-9947
1140a No Return
1140b Vacant
1144a★Meridith Terry 782-6953
1144b★Logan Carrie
1147 Mc Guire Hugh W ◎ 842-2807
1148a Porter Jeff 782-2022
1148b★Woodcock Debbie Mrs 782-7883
1150 Howard Hettie Mrs 842-9557
1151 Nieman Jeffrey S 842-7754
1152 Martin Leroy L 842-6309
GRAY ST BEGINS
1155a★Jones Richd
1155b★Wynn Larry W
1155c Hoffman Debra A Mrs 781-8881
1156 Brewer David R
1157 Browning Henry H ◎ 842-7662
1159 Hamilton Daisy L Mrs ◎ 781-1113
1160 Craft Jane E Mrs ◎ 843-4400
PLAINVIEW DR BEGINS
1161 Strain James F ◎ 842-2181
1163 Vacant
PLAINVIEW DR INTERSECTS
1164 Watt Cleo D ◎ 843-6425
1165 Harrison Percy D ◎ 843-4936
1167 Bobbett Lorene Mrs ◎ 843-3860
1168 Farmer James E ◎ 842-7856
1171 Logan Lewis ◎ 842-7638
1172 Basham Jerry ◎ 782-0276
1200 Grider Joe S ◎ 781-3572
1201 Miller Youree R ◎ 842-5791
1204 Sloan Les
1208 Harmon Chris ◎ 782-2205
1211 Cross Charles ◎ 842-2345
1212 Stout Richard A
1216 Butts Tim
1220 Hunton Winnie Mrs ◎ 842-5177
1224★Lawrence Richd P 782-0534
1229 Watt Gentry H ◎ 842-2681
1232★Diedrich Kurt N ◎
1236a Forshee Zelma Mrs
1236b★Cayleo Harry 782-9782
1237 Dickenson Reuben D 842-1291
1240a★Dethridge Guy W
1240b No Return
1241★Walker Lewis E
1244a★Mc Coy Brenda 782-9610
1244b No Return

Target Street	Cross Street	Source
✓	-	Polk's City Directory

CREWDSON LN 1990



◎ HOMEOWNER 50

CREWDSON LA–Contd

1248 Bodkin Thos ◎ 842-0839

1252 Whitaker Emma J 843-4948

GLEN LILY RD INTERSECTS

18

CULPEPPER –FROM BENT TREE SOUTHWEST

ZIP CODE 42101

CREEKWOOD DR—Contd
706 Woods Kevin 842-8508
707★Mc Pherson Jeffrey W 842-6851
708 Vacant
801★Parigin Carla 842-9575
802 Smith Rich 781-0095
803 Shoiran Lonnie 782-7813
804 Fish Marjorie K Mrs 781-4470
805 Vacant
806★Ashby Mary F 782-8180
807 Vacant
808 Williams Ron 842-8397
901 Payton Norman
902 Vacant
903 Smith Donald 781-9429
904 Vacant
STONEBRIDGE LA INTERSECTS

10

CREWDSON LA —FROM 1206 BARREN RIVER RD SOUTHEAST

ZIP CODE 42101
1103 Carter Melton T ◎ 842-7445
1104 Perkins Jerry L ◎
ANGORA CT BEGINS
1107 Whitman Larry D ◎ 781-3208
1111★Alvey Danny K
ANGORA CT BEGINS
1115 Vacant
1118 Brooks Helan Mrs ◎
1119 Greer Sanders ◎
1122 Watt Richd A ◎ 843-3847
1126 Keown David ◎ 781-0652
1127a★Holland Amy M 842-4616
1127b Black Ricky W 781-5132
1127c★Simpson Detta V 782-2067
1130 Gardner Jerry L ◎ 782-2907
1131a Abney Michl F
1131b★Vickous Terry M 843-1525
1136 Douglas Billy J ◎ 781-8369
1139 Dethridge John B ◎ 843-9947
1140a Vacant
1140b Benningfield Lisa 781-1326
1144a Evans Albert E
1144b Hines Joyce 842-2771
1147 Mc Guire Hugh W ◎ 842-2807
1148a Hawkins Jerome T 781-1081
1148b Windom Richd A
1150★Margerum Peter M
1151 Eubanks Virginia Mrs 842-0370
1152 Martin Leroy L 781-0235
GRAY ST BEGINS
1155a★Person Saml E 842-3887
1155b★Gilmore Marie J
1155c★Hoffman Debra A Mrs 781-8881
1156 Brewer David R ◎ 842-3039
1157 Browning Henry H ◎ 842-7662
1159 Hamilton Daisy L Mrs ◎
1160 Craft Jane R Mrs ◎ 843-4400
PLAINVIEW DR BEGINS
1161 Strain James F ◎
1163 Vacant
1164 Watt Cleo D ◎ 843-6425
1165 Harrison Percy D ◎ 843-4936
1167 Bobbett Lorene Mrs ◎ 843-3860
1168 Farmer James E ◎ 842-7856
1171 Logan Lewis ◎ 842-7638
1172 Basham Jerry ◎
1200 Turner James O ◎ 842-5219
1201 Miller Youree R ◎ 842-5791
1204★Whitehouse Mark ◎
1208★Smith Todd D ◎ 842-3758
1211 Cross Charles ◎ 842-2345
1212 Lack Lidia
1216 Vacant
1220 Hunton Winnie Mrs ◎ 842-5177
1224 No Return
1229 Watt Gentry H ◎ 842-2681
1232 Alexander Alonzo D Jr ◎ 842-8656
1236a Forshee Zelma Mrs 842-0248
1236b Webb Joyce A 782-0115
1237★Dickenson Reuben D ◎ 842-1291
1240a Williams Billy J 843-9453
1240b Vacant
1241 Richey Mike W
1244a Vacant
1244b Pedigo Henry W 781-4067
1248 Austin Laurine H Mrs ◎ 843-1037
1252 Whitaker Elsie L
GLEN LILY RD INTERSECTS

16

CUMBERLAND TRACE —FROM SCOTTSVILLE RD NORTHEAST

ZIP CODE 42101
181 Day's Inn Motel 781-6330

19

CURD AV —FROM MORGANTOWN RD SOUTH

ZIP CODE 42101
1604 Johnson Harold ◎ 781-0613
1605 Flood Flora P Mrs ◎ 842-3607
1608 Vacant
1609★Gammon Debbie K Mrs 781-4962
1612 Womack Ronald
1613 Duff Everett D ◎
1616 Doolin Kim
1617 Vacant
1620 Moran Stella L ◎ 842-4629
1624★Johnson Rabon D
1625 Pond Larry A 781-7482
1628 No Return
1629 Morgan Ruth L Mrs ◎ 842-5548
1632b Wilkerson Robt 782-8547
1633 Forshee David ◎
1636 Bryson Harvey N ◎ 842-0068
1640 Allen Mary F
SOUTH AV INTERSECTS

CREEKWOOD DR—Contd
402 No Return
403★Vincent Owen V 781-7248
404★Bowles Mark
405★Tichenor Charla T
406 Rogers Sydney F Mrs 781-7220
407 Vacant
408★Arnold Joseph R 782-9876
501 Basil Gene
502 Corbman Alice I 781-8520
503★Hayden G J
504★Grider Rita Mrs
505 Biggerstaff Ray P Jr
506 Webb Alonzo
507 Holman Nikki
508★Shahlaee Kamran
601★Yates Edw R 843-2371
602★Grow Brad
603 Barrow Kenneth 782-1928
604 Duncan Joe F 781-3405
605 Fisicaro Sebastiano A 782-2073
606★Morrison Chris
607★Monaco Carlo
608★Whitlock Charles
701 O'Shea T 842-7496
702 Miller Emmitt
703★Pearce Robt M 782-9845
704★Short David R 781-8630
705 Allen Roger
706 Coffman R B
707★Moyers Phil
708 Brizendine Thos S 782-3552
801★Bone Rebecca Mrs
802 Brennan Deloris 843-3018
803★Wyatt Nelda R 781-3965
804 Raymer Glen 781-5457
805★Condis Rebecca 842-6297
806 White Winona 781-9228
807★Biggs David 781-6133
808★Combs Greg
901 Vacant
902 Batson Michl 842-4954
903★Ward Francis
904 Henderson James C 782-0046
905★Upton Jerry ◎ 782-9278
906★Hunter Pam 781-6206
907★Lewis Peggy
908 Harper Diana 781-8098
STONEBRIDGE LA INTERSECTS

10

CREWDSON LA —FROM 1206 BARREN RIVER RD SOUTHEAST

ZIP CODE 42101
1103 Carter Melton T ◎ 842-7445
ANGORA CT BEGINS
1107 Whitman Larry D 781-3208
1111 Russell Jackie R 843-1840
ANGORA CT BEGINS
1115 Pitts David A
1118★Brooks Helan ◎
1119 Greer Sanders 842-0389
1122 Watt Richd ◎ 843-8858
1126 Keown David ◎ 781-0652
1127a★West Kathy 782-0317
1127b Wallace Kenneth
1127c Browning Shirley
1130 No Return
1131a★Holland Geo
1131b Longmire Harry J 843-3608
1136 Douglas Billy J ◎ 781-8369
1139 Dethridge John B 843-9947
1140a Tucker John 782-0067
1140b★Russell Virginia 842-4335
1144a No Return
1144b★Skaggs Jimmy D 781-3433
1147 Mc Guire Hugh W ◎ 842-2807
1148a Morehead Jan Mrs 842-8970
1148b Owens Stephen 842-6014
1150 Coulter James R ◎
1151 Vacant
1152★Grizzle Dennis 782-9593
GRAY ST BEGINS
1155a★Mc Carty Connie
1155b★Jaggers David
1155c★Coyles Robt
1156★Holmes J D
1157 Browning Henry H ◎ 842-7662
1159 Hamilton Daisy L Mrs ◎ 781-5038
1160 Craft Johnny E ◎ 843-4400
PLAINVIEW DR BEGINS
1161 Strain James F ◎ 842-2181
1163 Vacant
1164 Watt Cleo D ◎ 843-6425
1165 Harrison Percy D ◎ 843-4936
1167 Bobbett Lorene Mrs ◎ 843-3860
1168 Farmer James E ◎ 842-7856
1171 Logan Lewis ◎
1172 Parsley Jesse ◎
1200 Turner James ◎ 842-5219
1201 Miller Youree R ◎ 842-5791
1204 Hunt Gary
1211 Cross Charles ◎ 842-2345
1208 Edwards Gene P ◎ 842-3758
1212★Rippy David ◎
1216 Vacant
1220 Vacant
1224★Kagey Earl L 842-3442
1229 Watt Gentry H ◎ 842-2681
1232★Estes Mae 843-8963
1236a Forshee Thelma Mrs 842-0248
1236b Tinsley Pattie Mrs 842-0868
1237 Vacant
1240a Vacant
1240b★Woosley C H
1241 Bent Linda 842-9183
1244a★Jones Johnny
1244b★Akers Alida B 782-2105
1248★Austin Laurine H ◎ 843-1037
1252★Potts Rex 781-6412
GLEN LILY RD INTERSECTS

16

CUMBERLAND TRACE —FROM SCOTTSVILLE RD NORTHEAST

ZIP CODE 42101
1110 Day's Inn 781-6330

19

CURD AV —FROM MORGANTOWN RD SOUTH

ZIP CODE 42101
1604 Johnson Harold ◎ 781-0613
1605 Flood Flora P Mrs ◎ 842-3604
1608 Allen Francis
1609 Kieffer Andy 843-8462
1612 Kieffer Martha 842-1327
1613 Dı 'f Everett D ◎
1616 Cherry Danny 781-9582

CREWDSON LN 1975

607★Parrish David
608★Moran Bruce 781-2373

10

CREWDSON LA —FROM GLEN LILY RD NORTHWEST

ZIP CODE 42101
NUMBERS IRREGULAR

1140a★Cox Johnnie
1140b Kell Lonnie E 781-5250
1144a Hughes Charles C ◎
1144b Vacant
1147 Mc Guire Hugh W ◎ 842-2807
1150 Boyd James 781-1181
1151 Vacant
1148a Creed Bruce 842-4921
1148b Vacant
1155a★Showalter Bobby 843-6207
1155b Matthews Willard E
1155c★Proffitt Phillip 843-8543
1152 No Return
1157 Browning Henry H ◎ 842-7662
1159 Hamilton Daisy L Mrs ◎ 842-2259
1156 Smith W Jauett ◎ 843-3655
1160 Craft Johnny E 843-4400
1161 Strain James F ◎ 842-2181
1163 Long Darrel W 843-1637
1164 Watt Cleo D ◎ 843-6425
1165 Harrison P D ◎ 843-4936
1167 Bobbett Lorene Mrs ◎ 843-3860
1168 Farmer James E ◎ 842-7856
1172 Parsley Jesse E ◎
1200★Turner James ◎ 842-5219
1201 Miller Youree R ◎ 842-5791
1204 Hill Cary
1211 Cross Charles ◎ 842-2345
1208 Edwards Gene P ◎ 842-3758
1212★Haynes Sharon
1216 Vacant
1220 Hunton Winnie K Mrs ◎ 842-5177
1224 Lee Earnest A ◎ 842-5826
1229 Watt Gentry H ◎ 842-2681

CREWDSON LA—Contd

1232 No Return
1236a Butcher Steve 781-2529
1236b Tinsley Wendell 842-0868
1237 Sweeney Albert 843-4640
1240a★Turner Edna B Mrs
843-9822
1240b Depp Wm S 781-6289
PLAINVIEW DR BEGINS
1244a Haire Michl T 781-3144
1244b★Dougherty David R
842-6750
1241 Walker Lewis E 843-1647
1248 Hays Wm T ◎ 842-2835
1252★Phelps Mary Mrs 842-8401
1103 Carter Melton T ◎ 842-7445
1107 Whitman Larry D 781-3208
1104 Hart Ina R Mrs ◎ 842-6993
1111 Vacant
1115★Moore Jerry ◎ 781-5725
1119 Greer Sanders ◎
1122 Dean Patsy Mrs ◎ 842-8654
1126★Wells Charles R ◎ 843-8904
1127a★Adamson Wanda 842-4302
1127b★Smith Terry 781-7398
1127c★Conley Gayle 781-2948
1130 Denton Robt C ◎ 842-2698
1131a★Taylor Joseph 842-4004
1131b★Cundiff Donald R Jr
842-9168
1136 Abbott Wm A ◎ 842-8948
1139 Dethridge John B ◎
843-9947

CUMBERLAND TRACE
—FROM SCOTTSVILLE RD
NORTHEAST

Target Street	Cross Street	Source
✓	-	Caron Directory Co

CREWDSON LN 1969

CRESON DR—Contd

1906 NEWMAN CLIFTON B ● 843-6427
1930 GATTERDAM DEE R
DOERR DENNIS 843-1542

10

CREWDSON LA -FROM GLEN LILY RD NORTHWEST

---ZIP CODE 42101
106 JONES LULA MRS ● 843-4217
108 HAYS W T ● 842-2835
114 SHULZ VERNON J
116 FORSYTH JOHN R
118 STEPHEN SPENCER 842-8833
120 HULSEY TIMMIE
122 TURNER DELBERT
124 GRAHAM BOB
304 WATT GENTRY H ● 842-2681
307 CLOUSE HARLEY D 843-3171
308 SUMMERS JOAN MRS 842-0863
313 HAYS WM T ● 842-2835
312 WALKER LEWIS E
315 TOWE MARTIN A ● 842-5391
317 STRAIN JAMES F
417 HUNTON WINNIE K MRS ● 842-5177
420 CROSS CHARLES R ● 842-3455
421 KIMBRO CLINT ● 842-0831
425 VACANT
429 SMITH NORMA J MRS ● 842-3758
430 BUTTS WALTER E ● 842-5041
435 DAVIS LARRY J ● 842-4858
439 HILL NETTIE M MRS ● 843-3546
447 PARSLEY JESSE E ●
450 BOBBETT LORENE I MRS ● 843-3860
467 FARMER JAMES E ● 842-7856
469 WATT CLEO D ● 843-6425
---PLAINVIEW DR BEGINS
470 HAMILTON DAISY L ●
471 CRAFT JOHNNY E ● 843-4400
473 WHITAKER CLIFFORD ● 842-3332
474 BROWNING HENRY H ● 842-7662
475 MANLEY CHARLES W ● 842-5826
570 HUNT JOHNNY C ● 842-1708
572 MC GUIRE HUGH W ● 842-2807
574 DETHRIDGE JOHN B 843-9947
575 HAWES LYDA M MRS ● 842-4102
578 HART INA R MRS ● 842-6993
579 NO RETURN
581 CARTER MELTON T ● 842-7445
601 HARRIS THOS G ● 842-9316
605 THOMPSON GENEVA ●
609 DEAN JAMES ● 842-8654
703 BURCH AMOS ● 842-8464
711 HALL PEARL MRS
714 GREER SANDERS ● 842-8231

16

CUMBERLAND TRACE -FROM SCOTTSVILLE RD NORTHEAST

---ZIP CODE 42101
EDWARDS GARLAND R ● 843-8885

15

CURD AV -FROM MORGANTOWN RD SOUTH

---ZIP CODE 42101
104 FIELDS JOSEPH 781-1468
105 FLOOD FLORA P MRS ● 842-3604
106 ALLEN JAMES M
107 GAMMON PAUL W
108 PRUETT GALE
111 DUFF EVERETT D
112 NO RETURN
114 JOHNSON NELSON
121 MORGAN EVERETT N ● 842-5548
123 BASKERVILLE ALMA E MRS
196 MURRAY ENNA W MRS ● 842-3452
201 JONES DAVID E ● 842-1582
203 HAYES PRESTON J 842-3349
204 HOWELL DOCK ● 781-2707

Target Street	Cross Street	Source
✓	-	Caron Directory Co

CREWDSON LN 1964

108 Willis Wilson W ◎ 842-7560
112 Guy Larry W 843-4586
116 Buchmann Matt 842-7644
120 Barriger Denval P 843-4157

3

CREWDSON LANE — From Glen Lily rd northwest

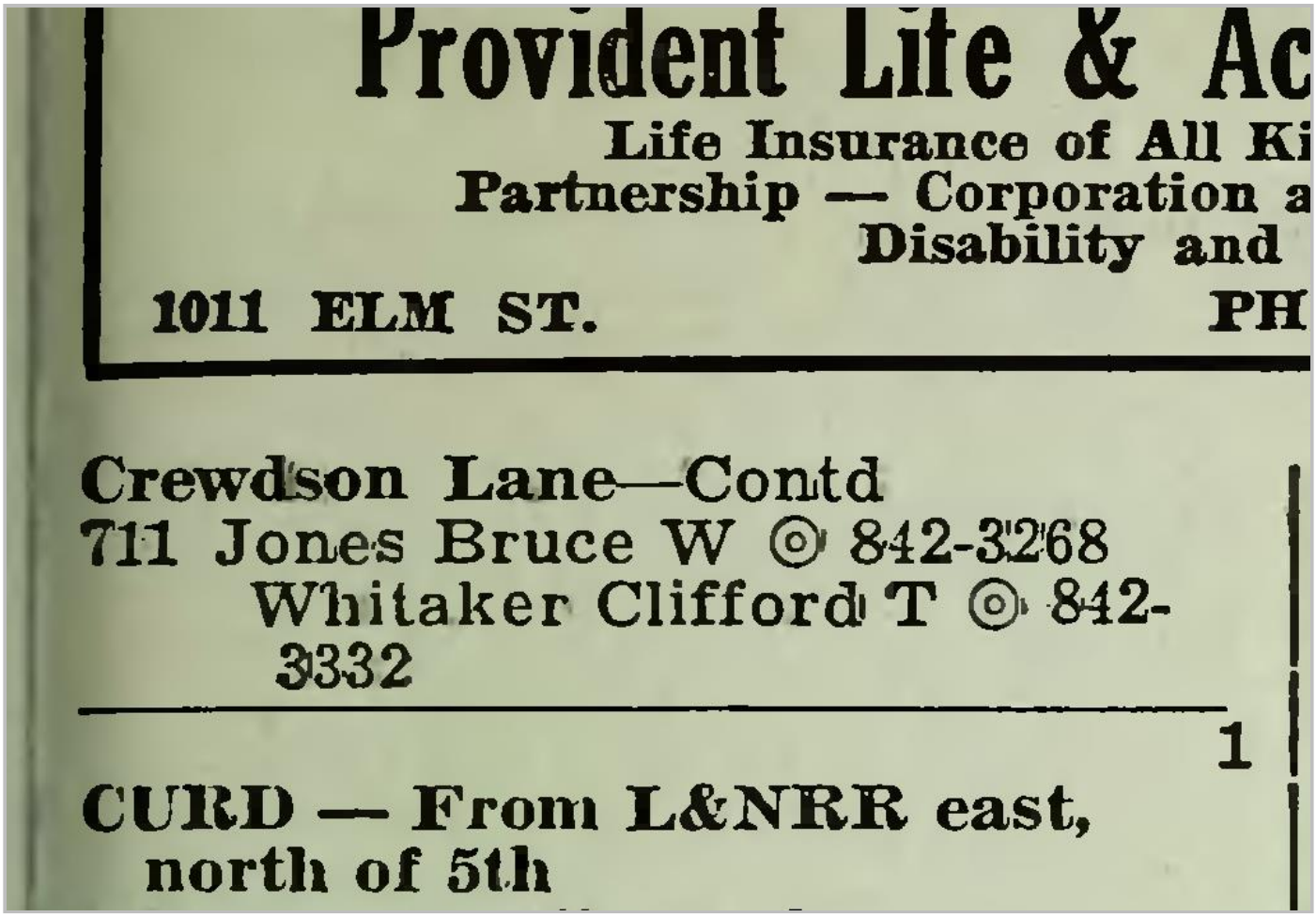
106 James Lula Mrs
304 Watt Gentry E ◎ 842-2681
Watt Cleo D 843-6591
305 No return
307 McLemore Fred trucking 843-4958
308 Vacant
309 Vacant
312 Lawrence Bert piano tuner 842-1892
313 Hays Wm T ◎ 842-2835
315 Higgins James G ◎ 343-3333
417 Hunton Winnie Mrs ◎ 842-5177
420 Gaines Alice M Mrs ◎ 842-5595
421 Kimbro Clint ◎ 842-0831
425 Griffin Geo ◎ 842-7877
Griffin Trucking Co 842-7877
429 Tibbs Wm H 842-7152
430 Butts Walter E ◎ 842-5041
435 Miller Donald R
436 Miller Youree R ◎ well driller 842-5791
439 Hill Nettie M Mrs ◎ 843-3546
447 Parsley Jesse E ◎
450 Bobbett Lorene Mrs ◎ 843-3860
469 Farmer James E ◎ 842-7856

Plainview dr begins

470 Hamilton Maldon A ◎ 843-2259
471 Craft John E ◎ 843-4400
Greer Sanders ◎
Gaines Alice A Mrs 842-5595
Sprouse Wilbur R ◎ 843-4263
473 No return
474 Browning Henry H ◎ 842-7662
477 Towe W C
570 Kitchens Clay jr 842-0402
572 McGuire Hugh G ◎ 842-2807
578 Hart Ina R Mrs ◎
581 Carter Milton T ◎ 842-7445
703 James Edwin M ◎ 843-3977

Target Street	Cross Street	Source
✓	-	Caron Directory Co

CREWDSON LN 1964



Provident Life & Ac
Life Insurance of All Ki
Partnership — Corporation a
Disability and
1011 ELM ST. PH

Crewdson Lane—Contd
711 Jones Bruce W ◎ 842-3268
Whitaker Clifford T ◎ 842-3332

1

CURD — From L&NRR east, north of 5th

Garrison Gardens I/II
1221 Crewdson Drive
Bowling Green, KY 42101

Inquiry Number: 7679809.3
June 12, 2024

Certified Sanborn® Map Report

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

Certified Sanborn® Map Report

06/12/24

Site Name:	Client Name:
Garrison Gardens I/II	Linebach Funkhouser Inc.
1221 Crewdson Drive	114 Fairfax Ave
Bowling Green, KY 42101	Louisville, KY 40207
EDR Inquiry # 7679809.3	Contact: Eric Altobellis

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Linebach Funkhouser Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # BBB5-4999-BB24

PO # 026-24 Task 2

Project Garrison Gardens I/II

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: BBB5-4999-BB24

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Appendix C

Regulatory Database Documentation

Garrison Gardens I/II
1221 Crewdson Drive
Bowling Green, KY 42101

Inquiry Number: 7679809.2s
June 12, 2024

The EDR Radius Map™ Report with GeoCheck®

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

TABLE OF CONTENTS

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

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

1221 CREWDSON DRIVE
BOWLING GREEN, KY 42101

COORDINATES

Latitude (North):	36.9992760 - 36° 59' 57.39''
Longitude (West):	86.4681320 - 86° 28' 5.27''
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	547325.3
UTM Y (Meters):	4094721.0
Elevation:	514 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	50024600 BOWLING GREEN SOUTH, KY
Version Date:	2022
North Map:	50024599 BOWLING GREEN NORTH, KY
Version Date:	2022

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20200531
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
1221 CREWDSON DRIVE
BOWLING GREEN, KY 42101

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	FAMILY DOLLAR #4263	485 GLEN LILY ROAD	RCRA-VSQG	Lower	751, 0.142, SE
2	WARREN CO STATE MAIN	900 MORGANTOWN RD, P	SHWS	Lower	3432, 0.650, SSW
3	WILLIS PROPERTY	520 WOODFORD AVE.	SHWS, CDL	Lower	3698, 0.700, East
4	HINTON PROPERTY	1709 CATHERINE DRIVE	SHWS, CDL	Lower	4179, 0.791, South
5	SCOTT MCLEAN INC	924 MAIN STREET ROAD	SHWS	Lower	4389, 0.831, ENE
6	SOUTHLAND MANUFACTUR	835 VICTORIA STREET	SHWS	Lower	4486, 0.850, ENE
7	BOWLING GREEN SCHOLA	KEN-RAD TUBE AND LAM	SHWS	Lower	4567, 0.865, East
8	CAMPUS MART	1468 KENTUCKY STREET	SHWS	Higher	4729, 0.896, SE
A9	WESTERN KENTUCKY UNI	ONE BIG RED WAY	SHWS	Higher	4963, 0.940, SE
A10	WESTERN KENTUCKY UNI	NONE	SHWS	Higher	4963, 0.940, SE

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

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROLS ---------- Institutional Controls Sites List

EXECUTIVE SUMMARY

Federal ERNS list

ERNS ---------- Emergency Response Notification System

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

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

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
ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
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 Drub 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
SPILLS ---------- State spills

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
US MINES ---------- Mines Master Index File
ABANDONED MINES ---------- Abandoned Mines
MINES MRDS ---------- Mineral Resources Data System
FINDS ---------- Facility Index System/Facility Registry System
DOCKET HWC ---------- Hazardous Waste Compliance Docket Listing
UXO ---------- Unexploded Ordnance Sites
ECHO ---------- Enforcement & Compliance History Information
FUELS PROGRAM ---------- EPA Fuels Program Registered Listing
PFAS NPL ---------- Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES ---------- Federal Sites PFAS Information

PFAS TSCA ---- PFAS Manufacture and Imports Information
PFAS TRIS ---- List of PFAS Added to the TRI
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 TRAIN ---- Facilities in Industries that May Be Handling PFAS Listing
PFAS PT 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
NPDES ---- Permitted Facility Listing
UIC ---- UIC Information
UST FINDER RELEASE ---- UST Finder Releases Database
UST FINDER ---- UST Finder Database
PFAS PROJECT ---- NORTHEASTERN UNIVERSITY PFAS PROJECT
E MANIFEST ---- Hazardous Waste Electronic Manifest System

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

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal RCRA generators

RCRA-VSQG: 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.

A review of the RCRA-VSQG list, as provided by EDR, and dated 12/04/2023 has revealed that there is 1 RCRA-VSQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FAMILY DOLLAR #4263 EPA ID:: KYR000064154	485 GLEN LILY ROAD	SE 1/8 - 1/4 (0.142 mi.)	1	8

Lists of state- and tribal hazardous waste facilities

SHWS: The State Hazardous Waste Sites 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. The data come from the Department of Environmental Protection's Uncontrolled Site Branch List.

A review of the SHWS list, as provided by EDR, and dated 11/27/2023 has revealed that there are 9 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CAMPUS MART Facility Id: 65105 Facility Status: Closed	1468 KENTUCKY STREET	SE 1/2 - 1 (0.896 mi.)	8	21
WESTERN KENTUCKY UNI Facility Id: 11402 Facility Status: Closed	ONE BIG RED WAY	SE 1/2 - 1 (0.940 mi.)	A9	21
WESTERN KENTUCKY UNI Facility Id: 11402 Facility Status: Closed	NONE	SE 1/2 - 1 (0.940 mi.)	A10	22

Lower Elevation	Address	Direction / Distance	Map ID	Page
WARREN CO STATE MAIN Facility Id: 52302 Facility Id: 66507 Facility Status: Closed	900 MORGANTOWN RD, P	SSW 1/2 - 1 (0.650 mi.)	2	17
WILLIS PROPERTY Facility Id: 106779 Facility Status: Closed	***520 WOODFORD AVE.***	***E 1/2 - 1 (0.700 mi.)***	***3***	***17***
HINTON PROPERTY	***1709 CATHERINE DRIVE***	***S 1/2 - 1 (0.791 mi.)***	***4***	***18***

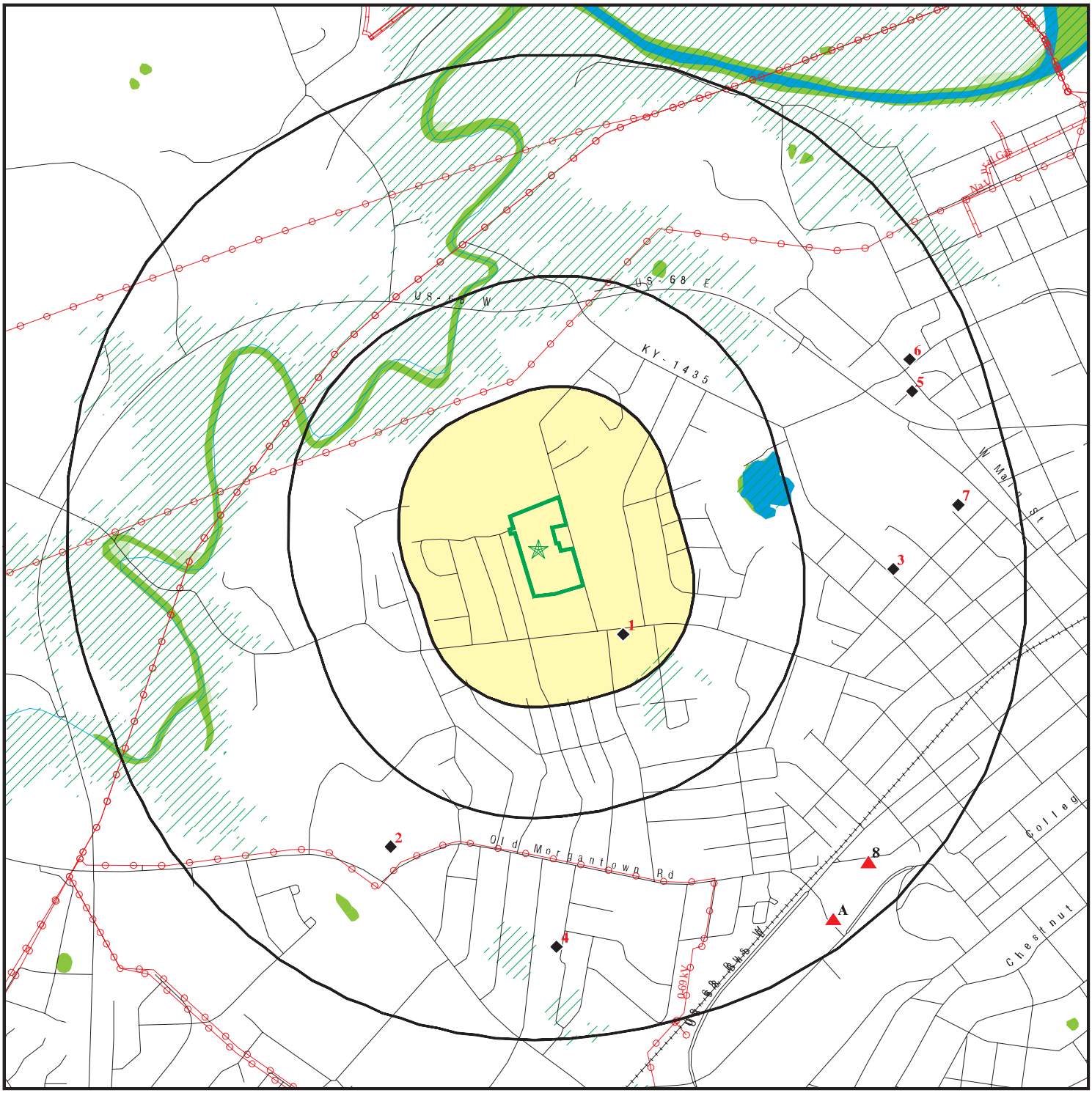
Facility Id: 126552 Facility Status: Closed				
SCOTT MCLEAN INC Facility Id: 48659 Facility Status: Closed	924 MAIN STREET ROAD	ENE 1/2 - 1 (0.831 mi.)	5	19
SOUTHLAND MANUFACTUR Facility Id: 53110 Facility Status: Closed	835 VICTORIA STREET	ENE 1/2 - 1 (0.850 mi.)	6	19
BOWLING GREEN SCHOLA Facility Id: 96609 Facility Status: Closed	KEN-RAD TUBE AND LAM	E 1/2 - 1 (0.865 mi.)	7	20

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
GLEN LILY RD SANITARY LANDFILL	SHWS
TEXAS GAS - WARREN CO	SHWS
BALE OIL CO SPILL	SHWS

OVERVIEW MAP - 7679809.2S



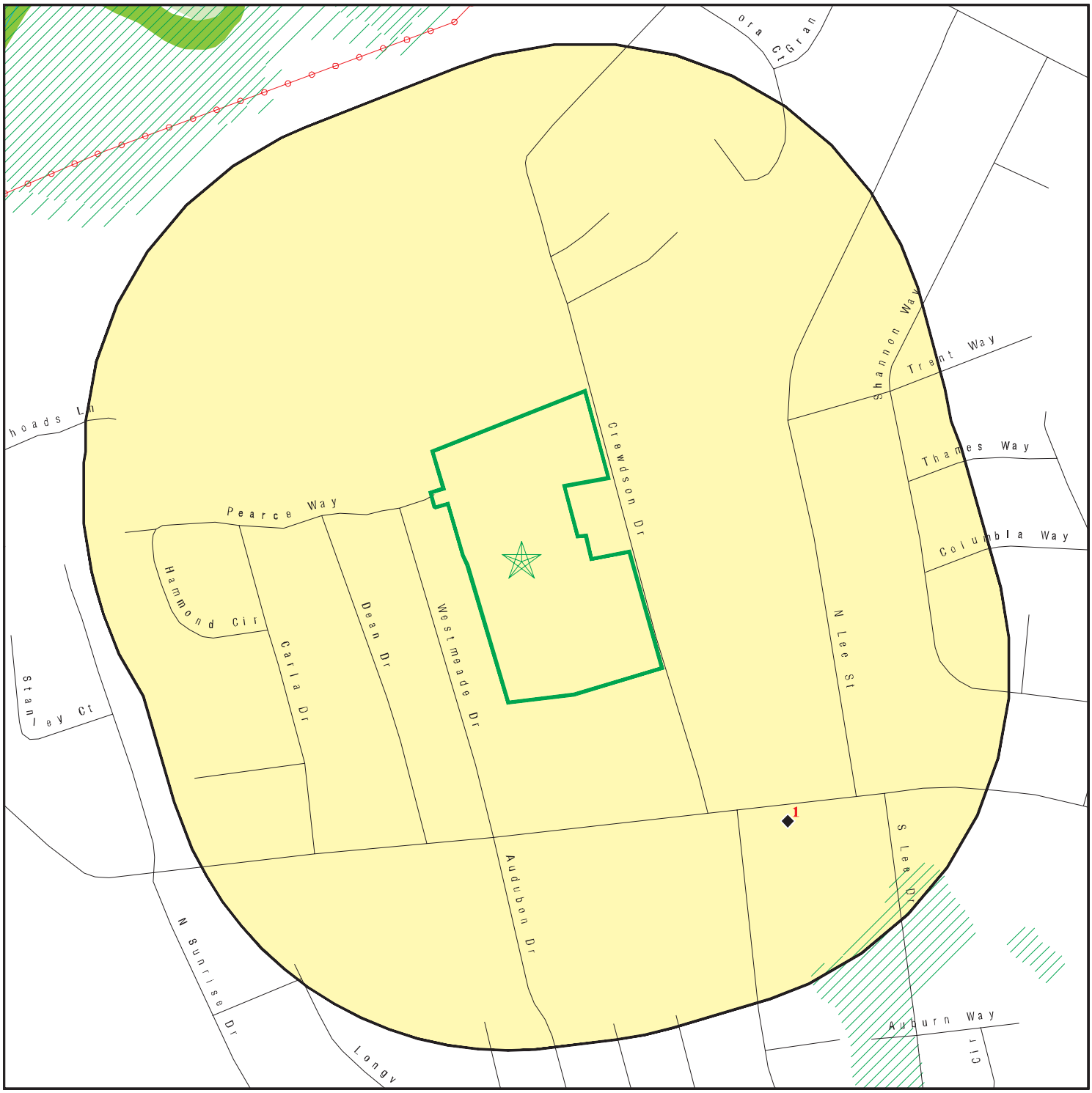
0 1/4 1/2 1 Miles

- 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
- Power transmission lines
- Pipelines
- 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: Garrison Gardens I/II	CLIENT: Linebach Funkhouser Inc.
ADDRESS: 1221 Crewdson Drive Bowling Green KY 42101	CONTACT: Eric Altobellis
LAT/LONG: 36.999276 / 86.468132	INQUIRY #: 7679809.2s DATE: June 12, 2024 3:43 pm

DETAIL MAP - 7679809.2S



0 1/16 1/8 1/4 Miles

- 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
- Power transmission lines
- 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:	Garrison Gardens I/II	CLIENT:	Linebach Funkhouser Inc.
ADDRESS:	1221 Crewdson Drive Bowling Green KY 42101	CONTACT:	Eric Altobellis
LAT/LONG:	36.999276 / 86.468132	INQUIRY #:	7679809.2s
		DATE:	June 12, 2024 3:44 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								
Lists of Federal NPL (Superfund) sites								
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
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
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	1	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
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
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
SHWS	1.000		0	0	0	9	NR	9
Lists of state and tribal landfills and solid waste disposal facilities								
SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
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
Lists of state and tribal registered storage tanks								
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
State and tribal institutional control / engineering control registries								
ENG CONTROLS	0.500		0	0	0	NR	NR	0
INST CONTROL	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
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
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
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
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
SPILLS	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
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		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
MINES MRDS	0.250		0	0	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	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
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 TSCA	0.250		0	0	NR	NR	NR	0
PFAS TRIS	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 TRAIN	0.250		0	0	NR	NR	NR	0
PFAS PT 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		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
UST FINDER RELEASE	0.500		0	0	0	NR	NR	0
UST FINDER	0.250		0	0	NR	NR	NR	0
PFAS PROJECT	0.500		0	0	0	NR	NR	0
E MANIFEST	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
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
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	0.001		0	NR	NR	NR	NR	0
RGA LF	0.001		0	NR	NR	NR	NR	0
- Totals --		0	0	1	0	9	0	10

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
SE
1/8-1/4
0.142 mi.
751 ft.

FAMILY DOLLAR #4263
485 GLEN LILY ROAD
BOWLING GREEN, KY 42101

RCRA-VSQG

1017770433
KYR000064154

Relative:
Lower

Actual:
510 ft.

RCRA Listings:

Date Form Received by Agency:	20220620
Handler Name:	Family Dollar #4263
Handler Address:	Glen Lily Road
Handler City,State,Zip:	BOWLING GREEN, KY 42101
EPA ID:	KYR000064154
Contact Name:	ANGELA RYAN
Contact Address:	VOLVO PKWY
Contact City,State,Zip:	CHESAPEAKE, VA 23320
Contact Telephone:	757-321-5265
Contact Fax:	Not reported
Contact Email:	Not reported
Contact Title:	EHS
EPA Region:	04
Land Type:	Private
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
Non-Notifier:	Not reported
Biennial Report Cycle:	Not reported
Accessibility:	Not reported
Active Site Indicator:	Handler Activities
State District Owner:	Ky
State District:	0712
Mailing Address:	VOLVO PKWY
Mailing City,State,Zip:	CHESAPEAKE, VA 23320
Owner Name:	Family Dollar Stores
Owner Type:	Private
Operator Name:	Family Dollar Stores
Operator Type:	Private
Short-Term Generator Activity:	No
Importer Activity:	No
Mixed Waste Generator:	No
Transporter Activity:	No
Transfer Facility Activity:	No
Recycler Activity with Storage:	No
Small Quantity On-Site Burner Exemption:	No
Smelting Melting and Refining Furnace Exemption:	No
Underground Injection Control:	No
Off-Site Waste Receipt:	No
Universal Waste Indicator:	No
Universal Waste Destination Facility:	No
Federal Universal Waste:	No
Active Site State-Reg Handler:	---
Federal Facility Indicator:	Not reported
Hazardous Secondary Material Indicator:	N
Sub-Part K Indicator:	Not reported
2018 GPRA Permit Baseline:	Not on the Baseline
2018 GPRA Renewals Baseline:	Not on the Baseline
202 GPRA Corrective Action Baseline:	No
Subject to Corrective Action Universe:	No
Non-TSDFs Where RCRA CA has Been Imposed Universe:	No
Corrective Action Priority Ranking:	No NCAPS ranking
Environmental Control Indicator:	No
Institutional Control Indicator:	No

FAMILY DOLLAR #4263 (Continued) **1017770433**

Human Exposure Controls Indicator:	N/A
Groundwater Controls Indicator:	N/A
Significant Non-Complier Universe:	No
Unaddressed Significant Non-Complier Universe:	No
Addressed Significant Non-Complier Universe:	No
Significant Non-Complier With a Compliance Schedule Universe:	No
Financial Assurance Required:	Not reported
Handler Date of Last Change:	20220824
Recognized Trader-Importer:	No
Recognized Trader-Exporter:	No
Importer of Spent Lead Acid Batteries:	No
Exporter of Spent Lead Acid Batteries:	No
Recycler Activity Without Storage:	No
Manifest Broker:	No
Sub-Part P Indicator:	No

Hazardous Waste Summary:

Waste Code:	D001
Waste Description:	Ignitable Waste
Waste Code:	D002
Waste Description:	Corrosive Waste
Waste Code:	D004
Waste Description:	Arsenic
Waste Code:	D005
Waste Description:	Barium
Waste Code:	D007
Waste Description:	Chromium
Waste Code:	D008
Waste Description:	Lead
Waste Code:	D009
Waste Description:	Mercury
Waste Code:	D010
Waste Description:	Selenium
Waste Code:	D011
Waste Description:	Silver
Waste Code:	D016
Waste Description:	2,4-D (2,4-Dichlorophenoxyacetic Acid)
Waste Code:	D024
Waste Description:	M-Cresol
Waste Code:	D035
Waste Description:	Methyl Ethyl Ketone
Waste Code:	U002
Waste Description:	2-Propanone (I) (Or) Acetone (I)

FAMILY DOLLAR #4263 (Continued) **1017770433**

Handler - Owner Operator:

Owner/Operator Indicator:	Owner
Owner/Operator Name: FAMILY DOLLAR STORES	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: FAMILY DOLLAR STORES	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: DOLLAR TREE	
Legal Status:	Private
Date Became Current:	20150706
Date Ended Current:	Not reported
Owner/Operator Address:	500 VOLVO PKWY
Owner/Operator City,State,Zip:	CHESAPEAKE, VA 23320
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Operator
Owner/Operator Name: FAMILY DOLLAR STORES	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Owner/Operator Indicator:	Owner
Owner/Operator Name: DOLLAR TREE	
Legal Status:	Private
Date Became Current:	20150706
Date Ended Current:	Not reported
Owner/Operator Address:	500 VOLVO PKWY
Owner/Operator City,State,Zip:	CHESAPEAKE, VA 23320
Owner/Operator Telephone:	Not reported

FAMILY DOLLAR #4263 (Continued) **1017770433**

Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name: FAMILY DOLLAR STORES	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name: DOLLAR TREE	
Legal Status:	Private
Date Became Current:	20150706
Date Ended Current:	Not reported
Owner/Operator Address:	500 VOLVO PKWY
Owner/Operator City,State,Zip:	CHESAPEAKE, VA 23320
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name: DOLLAR TREE	
Legal Status:	Private
Date Became Current:	20150706
Date Ended Current:	Not reported
Owner/Operator Address:	500 VOLVO PKWY
Owner/Operator City,State,Zip:	CHESAPEAKE, VA 23320
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name: FAMILY DOLLAR STORES	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name: FAMILY DOLLAR STORES	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported

FAMILY DOLLAR #4263 (Continued) **1017770433**

Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name: FAMILY DOLLAR STORES	
Legal Status:	Private
Date Became Current:	20000824
Date Ended Current:	Not reported
Owner/Operator Address:	500 VOLVO PKWY
Owner/Operator City,State,Zip:	CHESAPEAKE, VA 23320
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name: DOLLAR TREE	
Legal Status:	Private
Date Became Current:	20150706
Date Ended Current:	Not reported
Owner/Operator Address:	500 VOLVO PKWY
Owner/Operator City,State,Zip:	CHESAPEAKE, VA 23320
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name: FAMILY DOLLAR STORES	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name: FAMILY DOLLAR STORES	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Operator
Owner/Operator Name: FAMILY DOLLAR STORES	

FAMILY DOLLAR #4263 (Continued) **1017770433**

Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name: FAMILY DOLLAR STORES	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported
Owner/Operator Indicator:	Owner
Owner/Operator Name: FAMILY DOLLAR STORES	
Legal Status:	Private
Date Became Current:	Not reported
Date Ended Current:	Not reported
Owner/Operator Address:	Not reported
Owner/Operator City,State,Zip:	Not reported
Owner/Operator Telephone:	Not reported
Owner/Operator Telephone Ext:	Not reported
Owner/Operator Fax:	Not reported
Owner/Operator Email:	Not reported

Historic Generators:

Receive Date:	20150113
Handler Name: FAMILY DOLLAR #4263	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Ky
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	Not reported
Electronic Manifest Broker:	Not reported
Receive Date:	20180905
Handler Name: FAMILY DOLLAR #4263	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Ky
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No

FAMILY DOLLAR #4263 (Continued) **1017770433**

Current Record:	No
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No
Receive Date:	20190717
Handler Name: FAMILY DOLLAR #4263	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Ky
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No
Receive Date:	20200903
Handler Name: FAMILY DOLLAR #4263	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Ky
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No
Receive Date:	20210805
Handler Name: FAMILY DOLLAR #4263	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Ky
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	No
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No
Receive Date:	20220620
Handler Name: FAMILY DOLLAR #4263	
Federal Waste Generator Description:	Conditionally Exempt Small Quantity Generator
State District Owner:	Ky
Large Quantity Handler of Universal Waste:	No
Recognized Trader Importer:	No
Recognized Trader Exporter:	No
Spent Lead Acid Battery Importer:	No
Spent Lead Acid Battery Exporter:	No
Current Record:	Yes
Non Storage Recycler Activity:	No
Electronic Manifest Broker:	No

FAMILY DOLLAR #4263 (Continued) **1017770433**

List of NAICS Codes and Descriptions:
NAICS Code: 44529
NAICS Description: OTHER SPECIALTY FOOD RETAILERS

NAICS Code: 445299
NAICS Description: ALL OTHER SPECIALTY FOOD STORES

NAICS Code: 452112
NAICS Description: DISCOUNT DEPARTMENT STORES

Has the Facility Received Notices of Violations:

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported
Scheduled Compliance Date:	Not reported
Enforcement Identifier:	Not reported
Date of Enforcement Action:	Not reported
Enforcement Responsible Agency:	Not reported
Enforcement Docket Number:	Not reported
Enforcement Attorney:	Not reported
Corrective Action Component:	Not reported
Appeal Initiated Date:	Not reported
Appeal Resolution Date:	Not reported
Disposition Status Date:	Not reported
Disposition Status:	Not reported
Disposition Status Description:	Not reported
Consent/Final Order Sequence Number:	Not reported
Consent/Final Order Respondent Name:	Not reported
Consent/Final Order Lead Agency:	Not reported
Enforcement Type:	Not reported
Enforcement Responsible Person:	Not reported
Enforcement Responsible Sub-Organization:	Not reported
SEP Sequence Number:	Not reported
SEP Expenditure Amount:	Not reported
SEP Scheduled Completion Date:	Not reported
SEP Actual Date:	Not reported
SEP Defaulted Date:	Not reported
SEP Type:	Not reported
SEP Type Description:	Not reported
Proposed Amount:	Not reported
Final Monetary Amount:	Not reported
Paid Amount:	Not reported
Final Count:	Not reported
Final Amount:	Not reported

Found Violation:	No
Agency Which Determined Violation:	Not reported
Violation Short Description:	Not reported
Date Violation was Determined:	Not reported
Actual Return to Compliance Date:	Not reported
Return to Compliance Qualifier:	Not reported
Violation Responsible Agency:	Not reported

FAMILY DOLLAR #4263 (Continued) **1017770433**

Scheduled Compliance Date: Not reported
Enforcement Identifier: Not reported
Date of Enforcement Action: Not reported
Enforcement Responsible Agency: Not reported
Enforcement Docket Number: Not reported
Enforcement Attorney: Not reported
Corrective Action Component: Not reported
Appeal Initiated Date: Not reported
Appeal Resolution Date: Not reported
Disposition Status Date: Not reported
Disposition Status: Not reported
Disposition Status Description: Not reported
Consent/Final Order Sequence Number: Not reported
Consent/Final Order Respondent Name: Not reported
Consent/Final Order Lead Agency: Not reported
Enforcement Type: Not reported
Enforcement Responsible Person: Not reported
Enforcement Responsible Sub-Organization: Not reported
SEP Sequence Number: Not reported
SEP Expenditure Amount: Not reported
SEP Scheduled Completion Date: Not reported
SEP Actual Date: Not reported
SEP Defaulted Date: Not reported
SEP Type: Not reported
SEP Type Description: Not reported
Proposed Amount: Not reported
Final Monetary Amount: Not reported
Paid Amount: Not reported
Final Count: Not reported
Final Amount: Not reported

Evaluation Action Summary:
Evaluation Date: 20191227
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: KYBAP
Evaluation Responsible Sub-Organization: BG
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

Evaluation Date: 20161228
Evaluation Responsible Agency: State
Found Violation: No
Evaluation Type Description: COMPLIANCE EVALUATION INSPECTION
Evaluation Responsible Person Identifier: KYRDE
Evaluation Responsible Sub-Organization: BG
Actual Return to Compliance Date: Not reported
Scheduled Compliance Date: Not reported
Date of Request: Not reported
Date Response Received: Not reported
Request Agency: Not reported
Former Citation: Not reported

2
SSW
1/2-1
0.650 mi.
3432 ft.

WARREN CO STATE MAINTENANCE GARAGE
900 MORGANTOWN RD, PO BOX 599
BOWLING GREEN, KY 42101

SHWS **S106886802**
N/A

Relative:
Lower

Actual:
469 ft.

SHWS:

Name:	WARREN CO DEPT OF TRANSPORTATION COMPOUND DISTRICT OFFICE
Address:	900 MORGANTOWN ROAD
City,State,Zip:	BOWLING GREEN, KY 42101
Facility Id:	52302
Status:	**Closed**
Description:	Closed Option A (No Action Required) 92 MOA
Closure Date:	08/21/2007
Longitude:	-86.474624
Latitude:	36.988655
Subject Item County:	Warren
Sub Item Longitude:	-86.475065
Sub Item Latitude:	36.989193
Subject Item Address:	900 Morgantown Rd
Subject Item Address2:	Not reported
Subject Item City,St,Zip:	Bowling Green, KY 42101
Regulatory Desc:	State Superfund
Closure Option:	Option A No Action Necessary
Side SG:	KTC Property
Acreage:	Not reported

Name:	WARREN CO STATE MAINTENANCE GARAGE
Address:	900 MORGANTOWN RD, PO BOX 599
City,State,Zip:	BOWLING GREEN, KY 42101
Facility Id:	66507
Status:	**Closed**
Description:	Restored option c 12/4/04
Closure Date:	12/04/2004
Longitude:	-86.437771
Latitude:	36.915345
Subject Item County:	Warren
Sub Item Longitude:	-86.433719
Sub Item Latitude:	36.901470
Subject Item Address:	2160 Three Springs Rd
Subject Item Address2:	Not reported
Subject Item City,St,Zip:	Bowling Green, KY 42101
Regulatory Desc:	State Superfund
Closure Option:	Option C Restored
Side SG:	50507
Acreage:	Not reported

3
East
1/2-1
0.700 mi.
3698 ft.

WILLIS PROPERTY
520 WOODFORD AVE.
BOWLING GREEN, KY 42101

SHWS **S110169561**
CDL **N/A**

Relative:
Lower

Actual:
500 ft.

SHWS:

Name:	WILLIS PROPERTY
Address:	520 WOODFORD AVE.
City,State,Zip:	BOWLING GREEN, KY 42101
Facility Id:	106779
Status:	**Closed**
Description:	520 Woodford Ave. Meth Lab (Closed 1/8/2010)

WILLIS PROPERTY (Continued) **S110169561**

Closure Date:	01/08/2010
Longitude:	-86.453420
Latitude:	36.998260
Subject Item County:	Warren
Sub Item Longitude:	-86.453419
Sub Item Latitude:	36.998260
Subject Item Address:	520 Woodford Ave
Subject Item Address2:	Not reported
Subject Item City,St,Zip:	Bowling Green, KY 42101
Regulatory Desc:	State Superfund
Closure Option:	Option C Restored
Side SG:	Meth Lab
Acreage:	Not reported

CDL:

Name:	WILLIS PROPERTY
Address:	520 WOODFORD AVE.
Address 2:	Not reported
City,State,Zip:	BOWLING GREEN, KY 42101
Site Status:	Closed
Facility Group:	AAZZ0001
Agency Interest Id Number:	106779
Designation:	Meth Lab
Description:	520 Woodford Ave. Meth Lab (Closed 1/8/2010)
Regulatory Description:	State Superfund
Closure Option:	Option C Restored
Closure Date:	01/08/2010
Latitude:	36.99826
Longitude:	-86.45342

---

4 **HINTON PROPERTY** **SHWS** **S118153649**
South **1709 CATHERINE DRIVE** **CDL** **N/A**
1/2-1 **BOWLING GREEN, KY 42101**
0.791 mi.
4179 ft.

Relative:
Lower

Actual:
478 ft.

SHWS:

Name:	HINTON PROPERTY
Address:	1709 CATHERINE DRIVE
City,State,Zip:	BOWLING GREEN, KY 42101
Facility Id:	126552
Status:	**Closed**
Description:	1709 Catherine Drive Meth Lab (Closed 7/15/2015)
Closure Date:	07/15/2015
Longitude:	-86.467337
Latitude:	36.986284
Subject Item County:	Warren
Sub Item Longitude:	-86.467337
Sub Item Latitude:	36.986283
Subject Item Address:	1709 Catherine St
Subject Item Address2:	Not reported
Subject Item City,St,Zip:	Bowling Green, KY 42101
Regulatory Desc:	State Superfund
Closure Option:	Option C Restored
Side SG:	Meth Lab
Acreage:	Not reported

HINTON PROPERTY (Continued) **S118153649**

CDL:

Name:	HINTON PROPERTY
Address:	1709 CATHERINE DRIVE
Address 2:	Not reported
City,State,Zip:	BOWLING GREEN, KY 42101
Site Status:	Closed
Facility Group:	AAZZ0001
Agency Interest Id Number:	126552
Designation:	Meth Lab
Description:	1709 Catherine Drive Meth Lab (Closed 7/15/2015)
Regulatory Description:	State Superfund
Closure Option:	Option C Restored
Closure Date:	07/15/2015
Latitude:	36.98628
Longitude:	-86.46734

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5 **SCOTT MCLEAN INC** **SHWS** **S121369795**
ENE **924 MAIN STREET ROAD** **N/A**
1/2-1 **BOWLING GREEN, KY 42101**
0.831 mi.
4389 ft.

Relative: **Lower**
Actual: **485 ft.**

SHWS:

Name:	SCOTT MCLEAN INC
Address:	924 MAIN STREET ROAD
City,State,Zip:	BOWLING GREEN, KY 42101
Facility Id:	48659
Status:	**Closed**
Description:	Former yacht company and director's chair manufacturer (Scott McLean dba The Director's Chair)
Closure Date:	09/26/2018
Longitude:	-86.455547
Latitude:	37.007066
Subject Item County:	Warren
Sub Item Longitude:	-86.453530
Sub Item Latitude:	37.004080
Subject Item Address:	1024 Main Street Rd
Subject Item Address2:	Not reported
Subject Item City,St,Zip:	Bowling Green, KY 42101
Regulatory Desc:	State Superfund
Closure Option:	Non-Incident
Side SG:	Historical Operations
Acreage:	Not reported

---

6 **SOUTHLAND MANUFACTURING FACILITY** **SHWS** **S106886824**
ENE **835 VICTORIA STREET** **N/A**
1/2-1 **BOWLING GREEN, KY 42101**
0.850 mi.
4486 ft.

Relative: **Lower**
Actual: **482 ft.**

SHWS:

Name:	SOUTHLAND MANUFACTURING FACILITY
Address:	835 VICTORIA STREET
City,State,Zip:	BOWLING GREEN, KY 42101
Facility Id:	53110
Status:	**Closed**

SOUTHLAND MANUFACTURING FACILITY (Continued) **S106886824**

Description:	SOUTHLAND MANUFACTURING FACILITY (Closed: Restored)
Closure Date:	02/18/2000
Longitude:	-86.453230
Latitude:	37.005903
Subject Item County:	Warren
Sub Item Longitude:	-86.452932
Sub Item Latitude:	37.005958
Subject Item Address:	835 Victoria St
Subject Item Address2:	Not reported
Subject Item City,St,Zip:	Bowling Green, KY 42101
Regulatory Desc:	Petroleum Cleanup
Closure Option:	Option C Restored
Side SG:	3056
Acreage:	Not reported

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7 **BOWLING GREEN SCHOLAR HOUSE** **SHWS** **S122830331**
East **KEN-RAD TUBE AND LAMP CORP.** **N/A**
1/2-1 **BOWLING GREEN, KY 42101**
0.865 mi.
4567 ft.

Relative: **Lower**

Actual: **503 ft.**

SHWS:

Name:	BOWLING GREEN SCHOLAR HOUSE
Address:	Not reported
City,State,Zip:	BOWLING GREEN, KY
Facility Id:	96609
Status:	**Closed**
Description:	Former Holley Carburetor plant (Closed: non-incident)
Closure Date:	09/10/2018
Longitude:	-86.451010
Latitude:	37.000770
Subject Item County:	Warren
Sub Item Longitude:	-86.451466
Sub Item Latitude:	37.001161
Subject Item Address:	701 Brownslock Rd
Subject Item Address2:	Not reported
Subject Item City,St,Zip:	Bowling Green, KY 42101
Regulatory Desc:	Not reported
Closure Option:	Non-Incident
Side SG:	Chlorinated solvents
Acreage:	Not reported

Name:	BOWLING GREEN SCHOLAR HOUSE
Address:	KEN-RAD TUBE AND LAMP CORP.
City,State,Zip:	BOWLING GREEN, KY 42101
Facility Id:	96609
Status:	**Closed**
Description:	PLANT FACILITY NOBS 1192; Closed 2/7/2012- Referred to the Hazardous Waste Branch
Closure Date:	02/07/2012
Longitude:	-86.451010
Latitude:	37.000770
Subject Item County:	Warren
Sub Item Longitude:	-86.453000
Sub Item Latitude:	37.000014
Subject Item Address:	701 Brownslock Rd
Subject Item Address2:	Not reported
Subject Item City,St,Zip:	Bowling Green, KY 42101

BOWLING GREEN SCHOLAR HOUSE (Continued) **S122830331**

Regulatory Desc:	Federal Superfund
Closure Option:	Referred
Side SG:	63995
Acreage:	Not reported

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8 **CAMPUS MART** **SHWS** **S121116428**
SE **1468 KENTUCKY STREET** **N/A**
1/2-1 **BOWLING GREEN, KY 42101**
0.896 mi.
4729 ft.

Relative: **Higher**
Actual: **541 ft.**

SHWS:

Name:	CAMPUS MART
Address:	1468 KENTUCKY STREET
City,State,Zip:	BOWLING GREEN, KY 42101
Facility Id:	65105
Status:	**Closed**
Description:	Hydraulic elevator closure
Closure Date:	07/12/2017
Longitude:	-86.455536
Latitude:	36.989366
Subject Item County:	Warren
Sub Item Longitude:	-86.455442
Sub Item Latitude:	36.989306
Subject Item Address:	1467 Kentucky St
Subject Item Address2:	Not reported
Subject Item City,St,Zip:	Bowling Green, KY 42101
Regulatory Desc:	Petroleum Cleanup
Closure Option:	Option A No Action Necessary
Side SG:	Exempt Petroleum
Acreage:	Not reported

A9 **WESTERN KENTUCKY UNIVERSITY (WKU)** **SHWS** **S118844846**
SE **ONE BIG RED WAY** **N/A**
1/2-1 **BOWLING GREEN, KY 42101**
0.940 mi.
4963 ft. **Site 1 of 2 in cluster A**

Relative: **Higher**
Actual: **531 ft.**

SHWS:

Name:	WESTERN KENTUCKY UNIVERSITY (WKU)
Address:	ONE BIG RED WAY
City,State,Zip:	BOWLING GREEN, KY 42101
Facility Id:	11402
Status:	**Closed**
Description:	JONES JAGGER HALL (Closed: Restored)
Closure Date:	11/28/1995
Longitude:	-86.456111
Latitude:	36.987222
Subject Item County:	Warren
Sub Item Longitude:	-86.461343
Sub Item Latitude:	36.980114
Subject Item Address:	1906 College Heights Blvd
Subject Item Address2:	Not reported
Subject Item City,St,Zip:	Bowling Green, KY 42101
Regulatory Desc:	Petroleum Cleanup
Closure Option:	Option C Restored

WESTERN KENTUCKY UNIVERSITY (WKU) (Continued) **S118844846**

Side SG: 38613
Acreage: Not reported

A10 **WESTERN KENTUCKY UNIVERSITY (WKU)** **SHWS** **S118844845**
SE **NONE** **N/A**
1/2-1 **BOWLING GREEN, KY 42101**
0.940 mi.
4963 ft. **Site 2 of 2 in cluster A**

Relative:
Higher

Actual:
531 ft.

SHWS:

Name:	WESTERN KENTUCKY UNIVERSITY (WKU)
Address:	NONE
City,State,Zip:	BOWLING GREEN, KY 42101
Facility Id:	11402
Status:	**Closed**
Description:	WESTERN KY UNIV. TANK (Closed: Restored)
Closure Date:	12/04/1996
Longitude:	-86.456111
Latitude:	36.987222
Subject Item County:	Warren
Sub Item Longitude:	-86.457728
Sub Item Latitude:	36.982692
Subject Item Address:	1906 College Heights Blvd
Subject Item Address2:	Not reported
Subject Item City,St,Zip:	Bowling Green, KY 42101
Regulatory Desc:	Petroleum Cleanup
Closure Option:	Option C Restored
Side SG:	39558
Acreage:	Not reported

Count: 3 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BOWLING GREEN	S122374759	GLEN LILY RD SANITARY LANDFILL	GLEN LILY RD	42101	SHWS
BOWLING GREEN	S123196968	TEXAS GAS - WARREN CO	GLEN LILY RD	42101	SHWS
BOWLING GREEN	S127034775	BALE OIL CO SPILL	JCT OF CENTER ST & E 13TH AVE	42101	SHWS

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: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/08/2024
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: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/08/2024
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.

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: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: N/A
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/08/2024
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: 12/20/2023
Date Data Arrived at EDR: 12/20/2023
Date Made Active in Reports: 01/24/2024
Number of Days to Update: 35

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 03/26/2024
Next Scheduled EDR Contact: 07/08/2024
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 know 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: 04/22/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

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: 04/22/2024
Date Data Arrived at EDR: 05/01/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/22/2024
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
Date Data Arrived at EDR: 12/06/2023
Date Made Active in Reports: 12/12/2023
Number of Days to Update: 6

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 07/01/2024
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
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: 06/07/2024
Next Scheduled EDR Contact: 07/01/2024
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
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: 06/07/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

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
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: 06/07/2024
Next Scheduled EDR Contact: 07/01/2024
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
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: 06/07/2024
Next Scheduled EDR Contact: 07/01/2024
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: 02/14/2024
Date Data Arrived at EDR: 02/16/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 48

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 08/19/2024
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: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
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: 02/13/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Varies

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: 12/12/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 77

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/01/2024
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: 06/03/2024
Next Scheduled EDR Contact: 09/02/2024
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: 03/06/2024
Date Data Arrived at EDR: 03/07/2024
Date Made Active in Reports: 04/09/2024
Number of Days to Update: 33

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 04/23/2024
Next Scheduled EDR Contact: 08/05/2024
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: 12/01/2023
Date Data Arrived at EDR: 01/04/2024
Date Made Active in Reports: 03/25/2024
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 502-564-5981
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Quarterly

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: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
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: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

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: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
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: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
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: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
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: 10/04/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
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: 10/25/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

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
Date Data Arrived at EDR: 09/13/2006
Date Made Active in Reports: 10/18/2006
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 502-564-5981
Last EDR Contact: 04/08/2016
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: 11/16/2023
Date Data Arrived at EDR: 11/16/2023
Date Made Active in Reports: 02/13/2024
Number of Days to Update: 89

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 03/19/2024
Next Scheduled EDR Contact: 07/15/2024
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: 02/02/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 05/10/2024
Number of Days to Update: 79

Source: Department of Environmental Protection
Telephone: 502-564-5981
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Quarterly

AST: Above Ground Storage Tanks

A listing of aboveground storage tank site locations.

Date of Government Version: 02/22/2024
Date Data Arrived at EDR: 02/28/2024
Date Made Active in Reports: 05/16/2024
Number of Days to Update: 78

Source: Office of State Fire Marshal
Telephone: 502-564-4010
Last EDR Contact: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
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: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/17/2024
Next Scheduled EDR Contact: 07/29/2024
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: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

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: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
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: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
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: 10/17/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/17/2024
Next Scheduled EDR Contact: 07/29/2024
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: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
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: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
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: 10/24/2023
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 56

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 07/29/2024
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
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: 05/20/2024
Next Scheduled EDR Contact: 09/02/2024
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: 05/20/2024
Date Data Arrived at EDR: 05/22/2024
Date Made Active in Reports: 06/03/2024
Number of Days to Update: 12

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 05/22/2024
Next Scheduled EDR Contact: 09/02/2024
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
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 03/18/2024
Next Scheduled EDR Contact: 07/01/2024
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
Date Data Arrived at EDR: 01/11/2024
Date Made Active in Reports: 01/12/2024
Number of Days to Update: 1

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 03/25/2024
Next Scheduled EDR Contact: 07/08/2024
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
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: 02/06/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/16/2024
Number of Days to Update: 79

Source: Division of Compliance Assistance
Telephone: 502-564-0323
Last EDR Contact: 04/08/2024
Next Scheduled EDR Contact: 07/22/2024
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: 03/11/2024
Date Data Arrived at EDR: 03/12/2024
Date Made Active in Reports: 05/10/2024
Number of Days to Update: 59

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/11/2024
Next Scheduled EDR Contact: 09/23/2024
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Facilities

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

Date of Government Version: 09/11/2023
Date Data Arrived at EDR: 10/10/2023
Date Made Active in Reports: 01/03/2024
Number of Days to Update: 85

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 04/10/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

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
Date Data Arrived at EDR: 03/30/2006
Date Made Active in Reports: 05/01/2006
Number of Days to Update: 32

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

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
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/22/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Varies

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: 04/15/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: No Update Planned

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
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39
Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
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 Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 04/19/2024
Next Scheduled EDR Contact: 08/04/2024
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: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: No Update Planned

CDL: Clandestine Drub 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: 06/03/2024
Next Scheduled EDR Contact: 09/02/2024
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: 12/31/2023
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
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.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/08/2024
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: 12/12/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 77

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/20/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Quarterly

SPILLS: State spills

A listing of spill and/or release related incidents.

Date of Government Version: 01/31/2024
Date Data Arrived at EDR: 02/01/2024
Date Made Active in Reports: 04/23/2024
Number of Days to Update: 82

Source: DEP, Emergency Response
Telephone: 502-564-2380
Last EDR Contact: 04/08/2024
Next Scheduled EDR Contact: 07/22/2024
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: 06/07/2024
Next Scheduled EDR Contact: 07/01/2024
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: 01/30/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
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: 04/11/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

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
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
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
Date Data Arrived at EDR: 02/03/2023
Date Made Active in Reports: 02/10/2023
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/09/2024
Next Scheduled EDR Contact: 08/19/2024
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: 12/11/2023
Date Data Arrived at EDR: 12/13/2023
Date Made Active in Reports: 02/28/2024
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/13/2024
Next Scheduled EDR Contact: 07/01/2024
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
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 04/29/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: No Update Planned

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
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
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
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 03/24/2023
Number of Days to Update: 283

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/14/2024
Next Scheduled EDR Contact: 06/24/2024
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: 12/31/2022
Date Data Arrived at EDR: 11/13/2023
Date Made Active in Reports: 02/07/2024
Number of Days to Update: 86

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/16/2024
Next Scheduled EDR Contact: 08/26/2024
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: 01/16/2024
Date Data Arrived at EDR: 01/17/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 70

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/17/2024
Next Scheduled EDR Contact: 07/29/2024
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: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Annually

RMP: Risk Management Plans

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: 02/01/2024
Date Data Arrived at EDR: 02/08/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/15/2024
Next Scheduled EDR Contact: 07/29/2024
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
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
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
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: 202-564-6023
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 08/12/2024
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
Date Data Arrived at EDR: 04/04/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 66

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
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
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
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
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
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
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
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: 01/02/2024
Date Data Arrived at EDR: 01/16/2024
Date Made Active in Reports: 03/13/2024
Number of Days to Update: 57

Source: Nuclear Regulatory Commission
Telephone: 301-415-0717
Last EDR Contact: 04/15/2024
Next Scheduled EDR Contact: 07/29/2024
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: 12/31/2022
Date Data Arrived at EDR: 11/27/2023
Date Made Active in Reports: 02/22/2024
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
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
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 05/28/2024
Next Scheduled EDR Contact: 09/09/2024
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
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 05/02/2024
Next Scheduled EDR Contact: 08/12/2024
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.

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: 03/25/2024
Next Scheduled EDR Contact: 07/08/2024
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 Transporation, 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 Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 04/23/2024
Next Scheduled EDR Contact: 08/05/2024
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: 03/28/2024
Next Scheduled EDR Contact: 07/15/2024
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: 06/07/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Biennially

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
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
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
Date Data Arrived at EDR: 03/03/2023
Date Made Active in Reports: 06/09/2023
Number of Days to Update: 98

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 04/26/2024
Next Scheduled EDR Contact: 08/12/2024
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
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/16/2024
Next Scheduled EDR Contact: 08/26/2024
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 02/29/2024
Date Data Arrived at EDR: 03/01/2024
Date Made Active in Reports: 03/27/2024
Number of Days to Update: 26

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 06/03/2024
Next Scheduled EDR Contact: 07/08/2024
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 1931and 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
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
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.

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

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: 04/04/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Quarterly

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: 02/05/2024
Date Data Arrived at EDR: 02/21/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 43

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2024
Next Scheduled EDR Contact: 09/02/2024
Data Release Frequency: Semi-Annually

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: 05/22/2024
Next Scheduled EDR Contact: 09/02/2024
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: 05/23/2024
Next Scheduled EDR Contact: 09/02/2024
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.

Date of Government Version: 03/18/2024
Date Data Arrived at EDR: 03/19/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 79

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 05/30/2024
Next Scheduled EDR Contact: 09/16/2024
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: 05/22/2024
Next Scheduled EDR Contact: 09/02/2024
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: 02/09/2024
Date Data Arrived at EDR: 02/27/2024
Date Made Active in Reports: 05/24/2024
Number of Days to Update: 87

Source: EPA
Telephone: (404) 562-9900
Last EDR Contact: 05/29/2024
Next Scheduled EDR Contact: 09/09/2024
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: 04/08/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Varies

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: 05/17/2024
Next Scheduled EDR Contact: 09/02/2024
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: 12/17/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 04/04/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Quarterly

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.

Date of Government Version: 02/12/2024
Date Data Arrived at EDR: 02/13/2024
Date Made Active in Reports: 04/04/2024
Number of Days to Update: 51

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/14/2024
Next Scheduled EDR Contact: 08/26/2024
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: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
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: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
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: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
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: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
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).

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: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
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: 04/22/2024
Next Scheduled EDR Contact: 08/05/2024
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: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
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: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
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: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS ECHO FIRE TRAIN: 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 facilitys 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.

Date of Government Version: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
Data Release Frequency: Varies

PFAS PT 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: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
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: 12/28/2023
Date Data Arrived at EDR: 12/28/2023
Date Made Active in Reports: 03/04/2024
Number of Days to Update: 67

Source: Environmental Protection Agency
Telephone: 202-267-2675
Last EDR Contact: 04/05/2024
Next Scheduled EDR Contact: 07/15/2024
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: 03/29/2024
Next Scheduled EDR Contact: 07/15/2024
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: 12/16/2016
Date Data Arrived at EDR: 01/06/2017
Date Made Active in Reports: 03/10/2017
Number of Days to Update: 63

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 03/29/2024
Next Scheduled EDR Contact: 07/15/2024
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: 04/16/2024
Next Scheduled EDR Contact: 07/29/2024
Data Release Frequency: Varies

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: 05/31/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

AIRS: Permitted Airs Facility Listing
A listing of permitted Airs facilities.

Date of Government Version: 02/14/2024
Date Data Arrived at EDR: 02/15/2024
Date Made Active in Reports: 05/06/2024
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 502-573-3382
Last EDR Contact: 04/22/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Semi-Annually

ASBESTOS: Asbestos Notification Listing
Asbestos sites

Date of Government Version: 01/25/2024
Date Data Arrived at EDR: 01/26/2024
Date Made Active in Reports: 04/16/2024
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 502-782-6780
Last EDR Contact: 04/15/2024
Next Scheduled EDR Contact: 09/09/2024
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Sites
A listing of coal ash pond site locations.

Date of Government Version: 12/15/2023
Date Data Arrived at EDR: 01/23/2024
Date Made Active in Reports: 04/09/2024
Number of Days to Update: 77

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 04/23/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: No Update Planned

DRYCLEANERS: Drycleaner Listing
A listing of drycleaner facility locations.

Date of Government Version: 02/14/2024
Date Data Arrived at EDR: 02/15/2024
Date Made Active in Reports: 05/06/2024
Number of Days to Update: 81

Source: Department of Environmental Protection
Telephone: 502-573-3382
Last EDR Contact: 04/22/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Semi-Annually

FIN ASSURANCE 1: Financial Assurance Information Listing
A listing of financial assurance information.

Date of Government Version: 02/14/2024
Date Data Arrived at EDR: 02/14/2024
Date Made Active in Reports: 05/06/2024
Number of Days to Update: 82

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 04/22/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Varies

FIN 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: 04/22/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Varies

FIN 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: 02/13/2024
Date Data Arrived at EDR: 02/14/2024
Date Made Active in Reports: 05/06/2024
Number of Days to Update: 82

Source: Department of Environmental Protection
Telephone: 502-564-6716
Last EDR Contact: 04/22/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Varies

LEAD: Environmental Lead Program Report Tracking Database

Lead Report Tracking Database

Date of Government Version: 01/27/2017
Date Data Arrived at EDR: 02/02/2017
Date Made Active in Reports: 08/21/2017
Number of Days to Update: 200

Source: Department of Public Health
Telephone: 502-564-4537
Last EDR Contact: 04/26/2024
Next Scheduled EDR Contact: 08/12/2024
Data Release Frequency: Varies

NPDES: Permitted Facility Listing

A listing of permitted wastewater facilities.

Date of Government Version: 02/13/2024
Date Data Arrived at EDR: 02/14/2024
Date Made Active in Reports: 05/06/2024
Number of Days to Update: 82

Source: Department of Environmental Protection
Telephone: 502-564-3410
Last EDR Contact: 04/29/2024
Next Scheduled EDR Contact: 08/12/2024
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
Date Data Arrived at EDR: 10/10/2023
Date Made Active in Reports: 01/02/2024
Number of Days to Update: 84

Source: Kentucky Geological Survey
Telephone: 859-323-0544
Last EDR Contact: 04/10/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Quarterly

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
Date Data Arrived at EDR: 10/31/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 79

Source: Environmental Protecton Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Semi-Annually

PFAS PROJECT: NORTHEASTERN UNIVERSITY PFAS PROJECT

The PFAS Contamination Site Tracker records qualitative and quantitative data from each site in a chart, specifically examining discovery, contamination levels, government response, litigation, health impacts, media coverage, and community characteristics. All data presented in the chart were extracted from government websites, such as state health departments or the Environmental Protection Agency, and news articles.

Date of Government Version: 05/19/2023
Date Data Arrived at EDR: 04/05/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 62

Source: Social Science Environmental Health Research Institute
Telephone: N/A
Last EDR Contact: 06/04/2024
Next Scheduled EDR Contact: 09/16/2024
Data Release Frequency: Varies

E MANIFEST: Hazardous Waste Electronic Manifest System

EPA established a national system for tracking hazardous waste shipments electronically. This system, known as ?e-Manifest,? will modernize the nation?s cradle-to-grave hazardous waste tracking process while saving valuable time, resources, and dollars for industry and states.

Date of Government Version: 07/24/2023
Date Data Arrived at EDR: 04/18/2024
Date Made Active in Reports: 06/06/2024
Number of Days to Update: 49

Source: Environmental Protection Agency
Telephone: 833-501-6826
Last EDR Contact: 06/07/2024
Next Scheduled EDR Contact: 07/01/2024
Data Release Frequency: Varies

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
Date Data Arrived at EDR: 10/04/2023
Date Made Active in Reports: 01/18/2024
Number of Days to Update: 106

Source: Environmental Protection Agency
Telephone: 202-564-0394
Last EDR Contact: 05/08/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: Varies

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

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
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/15/2014
Number of Days to Update: 198

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
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: 02/05/2024
Date Data Arrived at EDR: 02/06/2024
Date Made Active in Reports: 04/25/2024
Number of Days to Update: 79

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/07/2024
Next Scheduled EDR Contact: 08/19/2024
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 03/29/2024
Next Scheduled EDR Contact: 07/15/2024
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
Date Data Arrived at EDR: 11/30/2023
Date Made Active in Reports: 12/01/2023
Number of Days to Update: 1

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 04/25/2024
Next Scheduled EDR Contact: 08/05/2024
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 04/08/2024
Next Scheduled EDR Contact: 07/22/2024
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

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: 05/13/2024
Next Scheduled EDR Contact: 08/26/2024
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: 06/03/2024
Next Scheduled EDR Contact: 09/16/2024
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

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

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

GARRISON GARDENS I/II
1221 CREWDSON DRIVE
BOWLING GREEN, KY 42101

TARGET PROPERTY COORDINATES

Latitude (North):	36.999276 - 36° 59' 57.39''
Longitude (West):	86.468132 - 86° 28' 5.28''
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	547325.3
UTM Y (Meters):	4094721.0
Elevation:	514 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	50024600 BOWLING GREEN SOUTH, KY
Version Date:	2022
North Map:	50024599 BOWLING GREEN NORTH, 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).

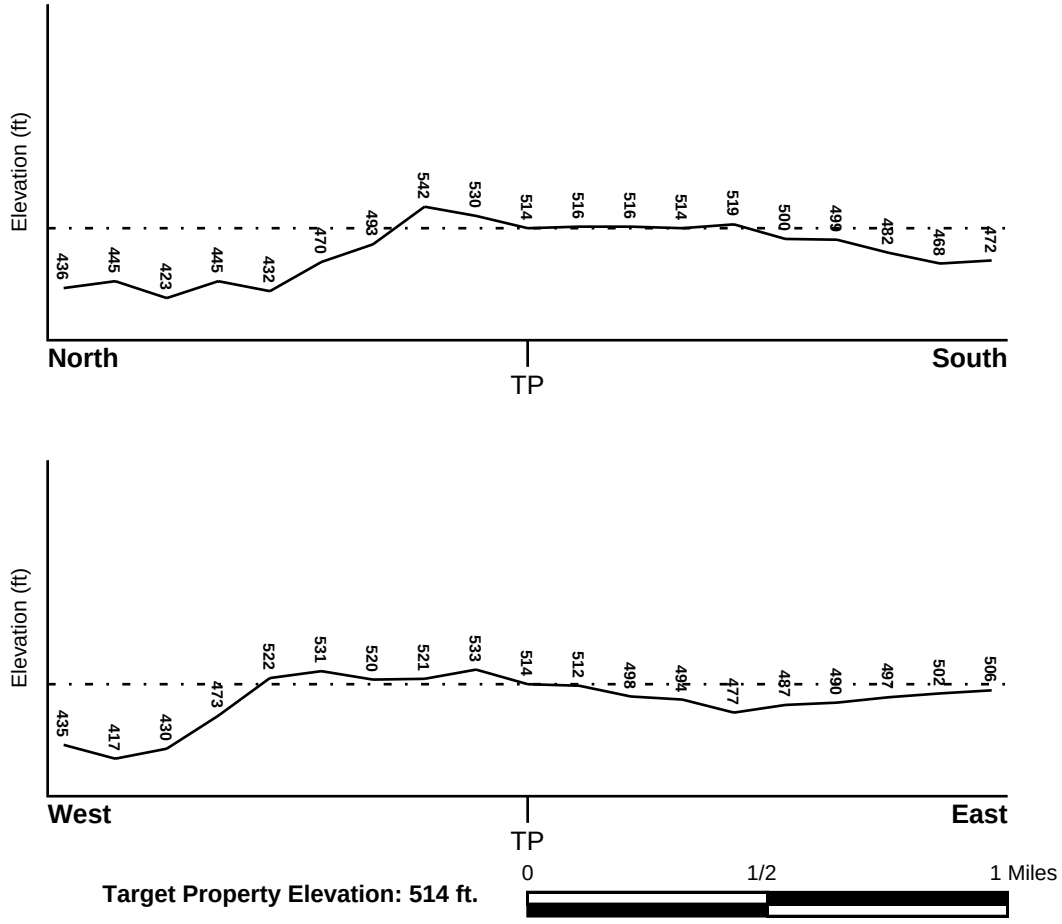
TOPOGRAPHIC INFORMATION

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 ESE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 514 ft.

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

Flood Plain Panel at Target Property	FEMA Source Type
21227C0302E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
21227C0164E	FEMA FIRM Flood data
21227C0163E	FEMA FIRM Flood data
21227C0301E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
BOWLING GREEN SOUTH	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.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
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:	Mississippian
Series:	Meramecian Series
Code:	M2 *(decoded above as Era, System & Series)*

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).

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. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	PEMBROKE
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. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	MODERATE
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	9 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 7.30 Min: 4.50
2	9 inches	33 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
3	33 inches	75 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
4	75 inches	80 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silty clay loam

Surficial Soil Types: silty clay loam

Shallow Soil Types: silt loam

Deeper Soil Types: loam
silty clay loam
clay

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.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000378941	1/4 - 1/2 Mile NNE
2	USGS40000378964	1/2 - 1 Mile NNE
3	USGS40000378987	1/2 - 1 Mile North
5	USGS40000379017	1/2 - 1 Mile NNE

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

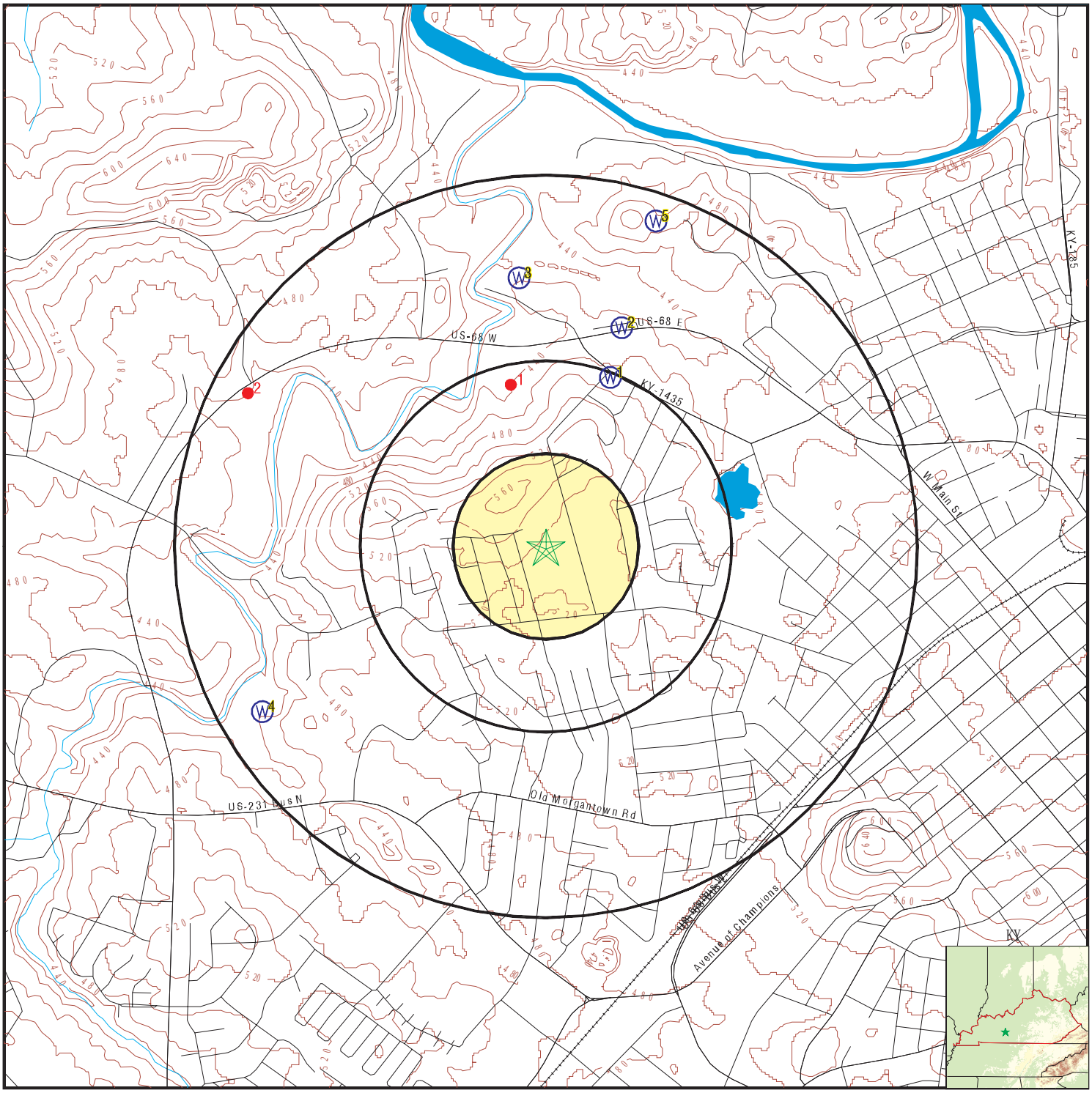
MAP ID	WELL ID	LOCATION FROM TP
4	KY7000000047611	1/2 - 1 Mile WSW

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	KYOG14000035247	1/4 - 1/2 Mile NNW
2	KYOG14000079317	1/2 - 1 Mile WNW

PHYSICAL SETTING SOURCE MAP - 7679809.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

0 1/4 1/2 1 Miles

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- Oil, gas or related wells

N

SITE NAME:	Garrison Gardens I/II	CLIENT:	Linebach Funkhouser Inc.
ADDRESS:	1221 Crewdson Drive Bowling Green KY 42101	CONTACT:	Eric Altobellis
		INQUIRY #:	7679809.2s
LAT/LONG:	36.999276 / 86.468132	DATE:	June 12, 2024 3:44 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NNE
1/4 - 1/2 Mile
Lower

FED USGS **USGS40000378941**

Organization ID:	USGS-KY	Organization Name:	USGS Kentucky Water Science Center
Monitor Location:	I14C0049	Type:	Well
Description:	Not Reported	HUC:	05110002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	80	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1968-11-01
Feet below surface:	58.00	Feet to sea level:	Not Reported
Note:	Not Reported		

2
NNE
1/2 - 1 Mile
Lower

FED USGS **USGS40000378964**

Organization ID:	USGS-KY	Organization Name:	USGS Kentucky Water Science Center
Monitor Location:	I14C0048	Type:	Well
Description:	Not Reported	HUC:	05110002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	73	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1968-11-01
Feet below surface:	40.00	Feet to sea level:	Not Reported
Note:	Not Reported		

3
North
1/2 - 1 Mile
Lower

FED USGS **USGS40000378987**

Organization ID:	USGS-KY	Organization Name:	USGS Kentucky Water Science Center
Monitor Location:	I14C0047	Type:	Well
Description:	Not Reported	HUC:	05110002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	32	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1968-11-01
Feet below surface:	27.00	Feet to sea level:	Not Reported

Note: Not Reported

4
WSW **KY WELLS** **KY7000000047611**
1/2 - 1 Mile
Lower

AKGWA ID:	40000510	Well Type:	Water Well
Well Status:	Not Reported	Alt ID:	Not Reported
PWS ID:	Not Reported	Well Name:	Not Reported
Surface Elevation:	0	Usage:	PUBLIC
Total Depth:	0	Depth to Bedrock:	0
End Date:	Not Reported		

5
NNE **FED USGS** **USGS40000379017**
1/2 - 1 Mile
Lower

Organization ID:	USGS-KY	Organization Name:	USGS Kentucky Water Science Center
Monitor Location:	I14C0043	Type:	Well
Description:	Not Reported	HUC:	05110002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	88	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1968-12-01
Feet below surface:	76.00	Feet to sea level:	Not Reported
Note:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
NNW **OIL_GAS** **KYOG14000035247**
1/4 - 1/2 Mile

OIL_GAS:

API #:	16227029120000	KGS #:	37649
Well Elevation:	438		
Original Farm/Lease Name:	SCOTTY'S CONSTRUCTION, INC		
Original Operator:	BOGLE, EDDIE	Original Well #:	2
Permit #:	62717	Formation:	351DCTR
Deepest Formation:	347CCEK	Init Open or Potential Flow:	3 BOPD
description in result_desc field:	OIL	Original API Classification:	Development Well
How Completed:	Oil producer		
Bore Type:	Conventional vertical well bore		
Completion Date:	26-JUN-84	Plug Date:	26-AUG-88
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=37649		

2
WNW **OIL_GAS** **KYOG14000079317**
1/2 - 1 Mile

OIL_GAS:

API #:	Not Reported	KGS #:	84197
Well Elevation:	0	Original Farm/Lease Name:	SMITH, BILLY RAY
Original Operator:	UNKNOWN	Original Well #:	1
Permit #:	Not Reported	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:	06-DEC-87
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=84197		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: KY Radon

Radon Test Results

Zip	Test Date	Test Result
42101	3/3/2003	3.70
42101	3/22/2003	18.90
42101	3/24/2003	9.10
42101	3/28/2003	0.50
42101	4/4/2003	30.80
42101	4/7/2003	17.30
42101	4/7/2003	22.60
42101	7/23/2003	8.80
42101	8/4/2003	2.60
42101	8/9/2003	5.70
42101	8/14/2003	1.90
42101	4/8/2003	8.20
42101	4/9/2003	8.00
42101	4/9/2003	23.10
42101	4/10/2003	2.40
42101	4/15/2003	2.30
42101	4/16/2003	5.50
42101	6/4/2003	0.70
42101	6/10/2003	3.50
42101	6/14/2003	4.10
42101	6/19/2003	0.00
42101	7/3/2003	1.60
42101	1/26/2002	2.10
42101	1/26/2002	19.80
42101	1/28/2002	2.50
42101	1/28/2002	5.40
42101	1/28/2002	23.10
42101	1/30/2002	5.00
42101	1/30/2002	0.30
42101	1/31/2002	1.60
42101	1/31/2002	0.20
42101	1/31/2002	11.40
42101	2/1/2002	3.70
42101	2/2/2002	1.50
42101	2/3/2002	2.70
42101	2/4/2002	4.50
42101	2/4/2002	4.90
42101	2/5/2002	6.20
42101	2/5/2002	0.80
42101	2/6/2002	20.10
42101	2/6/2002	13.20
42101	2/8/2002	14.80
42101	2/8/2002	1.30
42101	2/9/2002	2.10
42101	2/9/2002	2.30
42101	2/11/2002	2.70
42101		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	2/15/2002	9.10
42101	2/22/2002	14.90
42101	2/22/2002	1.50
42101	2/22/2002	8.50
42101	2/25/2002	6.10
42101	3/1/2002	0.40
42101	3/2/2002	6.00
42101	3/4/2002	6.70
42101	3/5/2002	2.40
42101	3/5/2002	31.40
42101	3/5/2002	7.40
42101	3/5/2002	6.40
42101	3/5/2002	0.20
42101	3/5/2002	19.70
42101	3/5/2002	5.70
42101	3/6/2002	6.40
42101	3/6/2002	13.50
42101	3/6/2002	2.90
42101	3/6/2002	6.30
42101	3/6/2002	4.54
42101	3/7/2002	24.10
42101	3/7/2002	15.20
42101	3/8/2002	1.50
42101	3/8/2002	13.50
42101	3/9/2002	3.40
42101	3/10/2002	16.70
42101	3/10/2002	0.90
42101	3/11/2002	4.10
42101		6.90
42101	1/2/2002	7.30
42101	1/6/2002	2.00
42101	1/7/2002	5.90
42101	1/8/2002	19.30
42101		6.90
42101	1/2/2002	7.30
42101	1/6/2002	2.00
42101	1/7/2002	5.90
42101	1/8/2002	19.30
42101	1/22/2002	8.40
42101	1/22/2002	8.40
42101	1/26/2002	2.10
42101	1/26/2002	19.80
42101	1/28/2002	2.50
42101	1/28/2002	5.40
42101	1/28/2002	23.10
42101	1/30/2002	5.00
42101	1/30/2002	0.30
42101	1/31/2002	1.60
42101	1/31/2002	0.20
42101	1/31/2002	11.40
42101	2/1/2002	3.70
42101	2/2/2002	1.50
42101	2/3/2002	2.70
42101	2/4/2002	4.50
42101	2/4/2002	4.90
42101	2/5/2002	6.20
42101		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	2/5/2002	0.80
42101	2/6/2002	20.10
42101	2/6/2002	13.20
42101	2/8/2002	14.80
42101	2/8/2002	1.30
42101	2/9/2002	2.10
42101	2/9/2002	2.30
42101	2/11/2002	2.70
42101	2/15/2002	9.10
42101	2/22/2002	14.90
42101	2/22/2002	1.50
42101	2/22/2002	8.50
42101	2/25/2002	6.10
42101	4/26/2002	13.60
42101	4/27/2002	4.50
42101	5/7/2002	2.10
42101	5/9/2002	4.50
42101	5/10/2002	4.80
42101	5/18/2002	2.50
42101	5/19/2002	2.10
42101	5/20/2002	1.90
42101	3/1/2002	0.40
42101	3/2/2002	6.00
42101	3/4/2002	6.70
42101	3/5/2002	2.40
42101	3/5/2002	31.40
42101	3/5/2002	7.40
42101	3/5/2002	6.40
42101	3/5/2002	0.20
42101	3/5/2002	19.70
42101	3/5/2002	5.70
42101	3/6/2002	6.40
42101	3/6/2002	13.50
42101	3/6/2002	2.90
42101	3/6/2002	6.30
42101	3/6/2002	4.54
42101	3/7/2002	24.10
42101	3/7/2002	15.20
42101	3/8/2002	1.50
42101	3/8/2002	13.50
42101	3/9/2002	3.40
42101	3/10/2002	16.70
42101	3/10/2002	0.90
42101	3/11/2002	4.10
42101	3/12/2002	12.70
42101	3/12/2002	4.50
42101	3/13/2002	1.80
42101	3/14/2002	5.80
42101	3/14/2002	6.50
42101	3/18/2002	1.00
42101	3/18/2002	13.50
42101	3/21/2002	5.20
42101	3/21/2002	1.30
42101	3/22/2002	12.80
42101	3/23/2002	46.50
42101	3/24/2002	3.20
42101		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	3/27/2002	1.50
42101	3/29/2002	2.80
42101	4/2/2002	45.90
42101	4/2/2002	0.90
42101	4/2/2002	2.60
42101	4/2/2002	2.10
42101	4/2/2002	2.30
42101	4/2/2002	0.85
42101	4/2/2002	2.70
42101	4/5/2002	1.20
42101	4/6/2002	4.65
42101	4/8/2002	11.49
42101	4/9/2002	15.74
42101	4/18/2002	2.90
42101	4/18/2002	1.50
42101	4/22/2002	0.90
42101	4/22/2002	2.80
42101	5/28/2002	1.00
42101	6/3/2002	3.90
42101	6/4/2002	9.40
42101	6/4/2002	1.70
42101	7/12/2002	2.40
42101	7/12/2002	3.20
42101	7/18/2002	2.50
42101	7/28/2002	0.00
42101	7/30/2002	7.50
42101	7/30/2002	1.50
42101	12/2/2002	14.80
42101	12/3/2002	6.10
42101	12/5/2002	3.30
42101	12/9/2002	4.30
42101	12/11/2002	0.00
42101	12/12/2002	2.70
42101	12/12/2002	17.80
42101	12/15/2002	2.40
42101	12/15/2002	11.40
42101	12/16/2002	6.10
42101	12/17/2002	1.20
42101	12/23/2002	3.00
42101	8/24/2002	1.50
42101	8/30/2002	5.00
42101	9/3/2002	1.50
42101	9/3/2002	1.90
42101	9/4/2002	5.60
42101	9/9/2002	11.50
42101	9/19/2002	1.00
42101	9/23/2002	4.60
42101	9/23/2002	7.40
42101	9/27/2002	25.00
42101	9/27/2002	45.00
42101	9/27/2002	21.80
42101	9/29/2002	37.60
42101	9/29/2002	27.20
42101	10/9/2002	1.60
42101	10/17/2002	33.30
42101	10/21/2002	1.40
42101		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	10/21/2002	3.10
42101	10/24/2002	2.50
42101	10/27/2002	1.70
42101	10/29/2002	5.30
42101	11/6/2002	2.20
42101	11/7/2002	2.60
42101	11/9/2002	4.90
42101	11/11/2002	9.40
42101	11/14/2002	0.00
42101	11/22/2002	3.80
42101	11/23/2002	19.30
42101	11/25/2002	12.30
42101	11/25/2002	14.60
42101	11/26/2002	0.00
42101	1/5/2003	12.90
42101	1/13/2003	1.70
42101	1/20/2003	5.00
42101	1/21/2003	5.00
42101	1/22/2003	7.80
42101	1/22/2003	11.80
42101	1/23/2003	5.20
42101	1/23/2003	5.00
42101	1/23/2003	35.40
42101	1/24/2003	104.00
42101	1/26/2003	2.10
42101	1/26/2003	2.90
42101	1/26/2003	2.90
42101	1/27/2003	0.00
42101	1/27/2003	13.30
42101	1/28/2003	1.20
42101	1/28/2003	7.10
42101	1/29/2003	14.10
42101	1/30/2003	10.50
42101	1/31/2003	3.20
42101	2/3/2003	2.20
42101	3/4/2003	35.90
42101	3/4/2003	0.80
42101	3/5/2003	0.00
42101	3/6/2003	3.30
42101	3/6/2003	2.80
42101	3/7/2003	0.70
42101	3/7/2003	0.80
42101	3/7/2003	0.00
42101	3/7/2003	0.00
42101	3/7/2003	0.00
42101	3/7/2003	0.60
42101	3/10/2003	28.90
42101	3/10/2003	11.00
42101	2/4/2003	12.60
42101	2/4/2003	4.10
42101	2/6/2003	0.70
42101	2/7/2003	4.20
42101	2/7/2003	0.80
42101	2/7/2003	5.60
42101	2/8/2003	1.90
42101	2/15/2003	9.90
42101		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	2/16/2003	11.90
42101	2/16/2003	10.90
42101	2/18/2003	4.50
42101	2/19/2003	11.30
42101	2/19/2003	2.70
42101	2/25/2003	3.80
42101	2/25/2003	2.70
42101	8/31/2003	0.00
42101	9/3/2003	0.00
42101	9/21/2003	2.00
42101	9/22/2003	4.00
42101	9/24/2003	4.00
42101	9/26/2003	0.00
42101	10/6/2003	13.60
42101	12/11/2003	5.90
42101	12/11/2003	0.60
42101	12/11/2003	0.60
42101	12/16/2003	0.20
42101	10/20/2003	5.90
42101	10/20/2003	5.90
42101	10/21/2003	0.80
42101	10/21/2003	0.80
42101	10/24/2003	5.50
42101	10/24/2003	5.50
42101	10/25/2003	10.10
42101	10/25/2003	10.10
42101	10/28/2003	11.90
42101	10/28/2003	11.90
42101	10/29/2003	2.00
42101	11/1/2003	4.90
42101	11/2/2003	0.00
42101	11/7/2003	0.90
42101	11/7/2003	0.00
42101	11/8/2003	8.50
42101	11/8/2003	4.00
42101	11/10/2003	1.00
42101	11/11/2003	2.30
42101	11/12/2003	5.80
42101	11/12/2003	5.50
42101	11/12/2003	2.30
42101	11/15/2003	1.30
42101	11/19/2003	4.70
42101	11/25/2003	3.70
42101	11/26/2003	9.10
42101	11/26/2003	0.60
42101	12/1/2003	1.60
42101	12/7/2003	0.40
42101	1/12/2004	2.40
42101	1/26/2004	2.70
42101	1/27/2004	3.60
42101	1/27/2004	5.40
42101	1/27/2004	30.90
42101	1/27/2004	11.20
42101	1/27/2004	29.00
42101	1/27/2004	4.70
42101	1/28/2004	32.40
42101		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	1/28/2004	4.60
42101	1/29/2004	45.90
42101	1/30/2004	6.80
42101	1/30/2004	4.90
42101	1/30/2004	15.60
42101	1/30/2004	11.60
42101	1/31/2004	2.90
42101	2/2/2004	2.60
42101	2/2/2004	12.70
42101	2/2/2004	4.30
42101	2/4/2004	6.80
42101	2/5/2004	9.70
42101	2/5/2004	7.70
42101	2/6/2004	3.50
42101	2/6/2004	4.10
42101	2/7/2004	13.10
42101	2/9/2004	4.30
42101	2/12/2004	0.00
42101	2/13/2004	0.90
42101	6/7/2004	35.00
42101	6/8/2004	3.60
42101	6/8/2004	4.90
42101	6/8/2004	2.70
42101	6/14/2004	0.90
42101	6/14/2004	0.70
42101	6/21/2004	9.40
42101	6/25/2004	0.90
42101	7/4/2004	5.00
42101	7/16/2004	1.80
42101	7/16/2004	2.80
42101	7/17/2004	29.50
42101	7/19/2004	0.60
42101	7/27/2004	52.90
42101	7/28/2004	1.80
42101	2/17/2004	1.20
42101	2/18/2004	26.80
42101	2/18/2004	22.30
42101	2/20/2004	0.50
42101	2/21/2004	0.00
42101	2/22/2004	1.70
42101	2/24/2004	15.70
42101	2/24/2004	7.30
42101	3/4/2004	2.40
42101	3/4/2004	3.50
42101	3/4/2004	5.40
42101	3/5/2004	3.30
42101	3/7/2004	48.50
42101	3/12/2004	8.40
42101	3/13/2004	4.00
42101	3/16/2004	1.70
42101	3/20/2004	5.20
42101	3/21/2004	0.60
42101	3/21/2004	2.10
42101	3/22/2004	12.40
42101	3/26/2004	0.00
42101	3/27/2004	18.90
42101		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	3/31/2004	3.40
42101	4/9/2004	19.90
42101	4/9/2004	1.80
42101	4/28/2004	0.40
42101	5/3/2004	3.00
42101	5/20/2004	3.00
42101	5/26/2004	1.70
42101	8/23/2004	3.70
42101	8/23/2004	1.90
42101	8/28/2004	3.20
42101	9/12/2004	5.90
42101	9/13/2004	2.80
42101	9/13/2004	3.00
42101	9/15/2004	0.70
42101	9/15/2004	1.60
42101	9/15/2004	0.00
42101	9/15/2004	0.00
42101	9/25/2004	4.00
42101	9/25/2004	6.30
42101	9/25/2004	3.80
42101	9/27/2004	3.80
42101	9/28/2004	0.00
42101	10/13/2004	8.40
42101	11/10/2004	45.60
42101	11/10/2004	45.60
42101	11/16/2004	1.30
42101	11/16/2004	2.40
42101	11/16/2004	1.60
42101	11/16/2004	1.30
42101	11/16/2004	2.40
42101	11/16/2004	1.60
42101	11/28/2004	3.10
42101	12/13/2004	3.30
42101	12/18/2004	4.40
42101	12/18/2004	2.60
42101	12/18/2004	1.70
42101	12/18/2004	6.50
42101	12/18/2004	2.00
42101	12/30/2004	15.40
42101	1/6/2005	0.20
42101	1/8/2005	1.00
42101	1/11/2005	4.20
42101	5/21/2005	0.00
42101	5/27/2005	0.90
42101	5/29/2005	13.40
42101	6/19/2005	0.70
42101	7/30/2005	5.50
42101	7/30/2005	4.90
42101	1/21/2005	6.90
42101	1/25/2005	2.10
42101	1/28/2005	13.20
42101	1/29/2005	11.00
42101	2/5/2005	11.30
42101	2/8/2005	36.00
42101	2/12/2005	2.90
42101	3/3/2005	6.00
42101		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	3/4/2005	0.70
42101	3/6/2005	8.30
42101	3/8/2005	3.20
42101	3/12/2005	0.00
42101	3/17/2005	84.80
42101	3/19/2005	1.60
42101	4/4/2005	3.90
42101	4/6/2005	4.00
42101	4/6/2005	2.20
42101	4/6/2005	46.60
42101	4/6/2005	1.10
42101	4/6/2005	4.20
42101	4/6/2005	5.90
42101	4/6/2005	27.80
42101	4/10/2005	0.00
42101	4/10/2005	1.50
42101	4/10/2005	4.40
42101	4/10/2005	3.60
42101	4/10/2005	0.70
42101	4/10/2005	0.00
42101	4/10/2005	6.30
42101	4/10/2005	2.70
42101	4/10/2005	0.70
42101	4/11/2005	16.30
42101	4/12/2005	7.10
42101	4/17/2005	24.30
42101	4/17/2005	7.90
42101	4/21/2005	5.40
42101	4/23/2005	0.50
42101	4/23/2005	8.10
42101	4/23/2005	7.40
42101	4/23/2005	2.10
42101	4/23/2005	23.40
42101	4/23/2005	2.40
42101	4/24/2005	3.40
42101	4/24/2005	1.40
42101	4/24/2005	1.30
42101	4/24/2005	1.30
42101	4/24/2005	13.00
42101	4/29/2005	2.40
42101	4/29/2005	12.10
42101	4/29/2005	5.50
42101	4/29/2005	3.60
42101	4/30/2005	6.90
42101	4/30/2005	6.20
42101	5/1/2005	5.40
42101	5/1/2005	11.20
42101	5/1/2005	38.80
42101	5/2/2005	45.30
42101	5/2/2005	20.40
42101	5/2/2005	24.40
42101	5/2/2005	0.80
42101	5/2/2005	19.00
42101	5/2/2005	6.20
42101	5/2/2005	7.60
42101	5/3/2005	0.50
42101		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	5/3/2005	24.10
42101	5/4/2005	17.80
42101	5/4/2005	23.10
42101	5/7/2005	7.10
42101	5/7/2005	1.70
42101	5/7/2005	8.20
42101	5/7/2005	2.00
42101	5/8/2005	1.50
42101	5/9/2005	11.00
42101	5/10/2005	14.30
42101	9/13/2005	2.40
42101	9/13/2005	2.40
42101	9/17/2005	1.80
42101	9/17/2005	1.80
42101	9/19/2005	1.20
42101	9/19/2005	1.20
42101	9/19/2005	2.10
42101	9/19/2005	0.00
42101	9/19/2005	0.00
42101	9/19/2005	6.40
42101	9/19/2005	2.10
42101	9/19/2005	6.40
42101	9/20/2005	3.70
42101	9/20/2005	3.70
42101	9/26/2005	2.30
42101	9/26/2005	2.30
42101	10/7/2005	7.30
42101	10/7/2005	5.60
42101	10/7/2005	20.10
42101	10/7/2005	2.30
42101	10/7/2005	2.50
42101	10/7/2005	2.40
42101	10/7/2005	3.70
42101	10/7/2005	2.20
42101	10/7/2005	0.00
42101	10/7/2005	13.20
42101	10/7/2005	4.70
42101	10/7/2005	1.80
42101	11/5/2005	9.20
42101	11/5/2005	19.30
42101	11/5/2005	9.30
42101	11/5/2005	2.30
42101	11/7/2005	4.50
42101	11/7/2005	1.40
42101	11/7/2005	4.30
42101	11/8/2005	7.10
42101	11/9/2005	2.50
42101	12/5/2005	2.60
42101	12/5/2005	23.50
42101	12/5/2005	28.00
42101	12/8/2005	0.00
42101	1/21/2006	33.30
42101	1/30/2006	11.80
42101	2/1/2006	5.40
42101	2/16/2006	36.40
42101	4/6/2006	2.10
42101		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

	8/28/2006	4.00
42101	10/6/2006	5.20
42101	12/14/2006	6.9

Federal EPA Radon Zone for WARREN County: 1

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 Zip Code: 42101

Number of sites tested: 19

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	5.479 pCi/L	47%	53%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	23.133 pCi/L	0%	33%	67%

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

Appendix D

PVA Documentation

Summary

Parcel Number	039B-21-041
Account Number	382530
Location Address	1169 CREWDSON DR
Subdivision	
Description	(Note: Not to be used on legal documents)
Class	Residential
Tax District	03 Annex
Deed Book/Page	1092-134
Acres	5.88

View Map

Owners

WESTSIDE VENTURES LLC
1207 US 31W BYP
BOWLING GREEN KY 42101-2031

Valuation

		2024 Working Value	2023 Certified Value	2022	2021	2020
	Residential Land Value	$140,000	$140,000	$140,000	$140,000	$115,000
+	Residential Improvement Value	$0	$0	$0	$0	$0
=	**Residential Total Value**	**$140,000**	**$140,000**	**$140,000**	**$140,000**	**$115,000**
-	Homestead Exemption	$0	$0	$0	$0	$0
-	Disability Exemption	$0	$0	$0	$0	$0
=	**Taxable Assessment Total**	**$140,000**	**$140,000**	**$140,000**	**$140,000**	**$115,000**

Improvement Information

Building Number:		**Carport Type:**	
Description:		**Carport Sq Ft:**	0
Residence Type:		**Pool:**	N
Year Built:		**Tennis Court:**	N
Structure:		**Dining Rooms:**	0
Exterior:		**Family/Den/Rec:**	0
Foundation:		**Bedrooms:**	0
Construction Quality:		**Full Baths:**	0
Roof Type:		**Half Baths:**	0
Roof Cover:		**Total Rooms:**	0
Roof Pitch:		**Living Sq Ft:**	0
Basement Type:		**Basement Sq Ft:**	0
Basement Finish:	0	**Fireplaces:**	
Basement Size:	0	**Mobile Home Make:**	
Garage Type:		**Mobile Home Size:**	
Garage Exterior:		**Central Heating:**	
Width:		**Central Air:**	
Length:		**Porch Sq Ft:**	0
Garage Sq Ft:	0	**Value:**	$0.00

Land

Plat Book		**Depth**	0
Lot Size	0x0	**Zoning**	
Frontage	0	**Flood Plane**	No

Sales

Sale Date	Sale Price	Deed Book/Page	Grantor	Grantee
3/12/2015	$115,000	1092-134	DNB INC	WESTSIDE VENTURES LLC
9/16/2005	$75,000	913-355	MILLER DONALD	DNB INC

Recent Sales in Area

Sale date range:

From: 02/06/2021 **To:** 02/06/2024

Sales by Parcel Group

1500 Feet Sales by Distance

Archive Cards

039b-21-041 (PDF)

No data available for the following modules: Photos.

Summary

Parcel Number	039B-21-053
Account Number	276845
Location Address	1221 CREWDSON DR
Subdivision	
Description	(Note: Not to be used on legal documents)
Class	Residential
Tax District	03 Annex
Deed Book/Page	1243-899
Acres	7.68

View Map

Owners

MILLS JASON
1207 US 31W BYP
BOWLING GREEN KY 42101-2557

Valuation

		2024 Working Value	2023 Certified Value	2022	2021	2020
	Residential Land Value	$220,000	$220,000	$220,000	$275,000	$275,000
+	Residential Improvement Value	$0	$0	$0	$0	$0
=	**Residential Total Value**	**$220,000**	**$220,000**	**$220,000**	**$275,000**	**$275,000**
-	Homestead Exemption	$0	$0	$0	$0	$0
-	Disability Exemption	$0	$0	$0	$0	$0
=	**Taxable Assessment Total**	**$220,000**	**$220,000**	**$220,000**	**$275,000**	**$275,000**

Improvement Information

Building Number:		**Carport Type:**	
Description:		**Carport Sq Ft:**	0
Residence Type:		**Pool:**	N
Year Built:		**Tennis Court:**	N
Structure:		**Dining Rooms:**	0
Exterior:		**Family/Den/Rec:**	0
Foundation:		**Bedrooms:**	0
Construction Quality:		**Full Baths:**	0
Roof Type:		**Half Baths:**	0
Roof Cover:		**Total Rooms:**	0
Roof Pitch:		**Living Sq Ft:**	0
Basement Type:		**Basement Sq Ft:**	0
Basement Finish:	0	**Fireplaces:**	
Basement Size:	0	**Mobile Home Make:**	
Garage Type:		**Mobile Home Size:**	
Garage Exterior:		**Central Heating:**	
Width:		**Central Air:**	
Length:		**Porch Sq Ft:**	0
Garage Sq Ft:	0	**Value:**	$0.00

Land

Plat Book		**Depth**	575
Lot Size	600x575	**Zoning**	Residential
Frontage	600	**Flood Plane**	No

Sales

Sale Date	Sale Price	Deed Book/Page	Grantor	Grantee
10/28/2021	$220,000	1243-899	ROEMER REAL ESTATE HOLDINGS LLC	MILLS JASON
4/26/2019	$275,000	1183-304	GBKA PROPERTIES LLC	ROEMER REAL ESTATE HOLDINGS LLC
1/15/2019	$160,000	1177-687	WHEAT JUDITH	GBKA PROPERTIES LLC
11/23/2015	$40,000	1107-528	WHEAT JAMES A & JUDITH	WHEAT JUDITH

Recent Sales in Area

Sale date range:

From: 02/06/2021 **To:** 02/06/2024

Sales by Parcel Group

1500 Feet Sales by Distance

Archive Cards

039b-21-053 (PDF)

No data available for the following modules: Photos.

Appendix E

User Provided Information

PHASE I ESA – AAI USER QUESTIONNAIRE (ASTM E1527-21)

Presented below is the User Questionnaire cited in Appendix X3 of ASTM E1527-21. In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Relief and Brownfield's Revitalization Act of 2001 (the "Brownfield's Amendments"), the User (i.e. LFI *client(s)*) must conduct the following inquires and provide the information to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

Subject Property: 1221 Crewsdon Drive, Bowling Green, KY LFI Project No: 026-24 T2

1. Environmental Cleanup Liens

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, state, tribal or local law?

☐ Yes ☑ No ☐ Unknown

2. Activity and Use Limitations (AULs)

Are you aware of any AULs, such as engineering controls, land use restrictions, or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, state, tribal or local law?

☐ Yes ☑ No ☐ Unknown

3. Specialized Knowledge or Experience

Do you have any specialized knowledge or experience related to the subject property or surrounding properties? For example, are you involved in the same line of business as the current or former occupants of the subject property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business? Do you have documentation (e.g. – Phase I ESAs, Phase II subsurface investigations, tank removal/closure reports, remedial reports, asbestos & lead-based paint sampling and/or abatement reports, etc.) for the subject property that may be relevant to this Phase I ESA?

☐ Yes ☑ No ☐ Unknown

Comments:

4. Relationship of Purchase Price to Fair Market Value

Does the purchase price being paid for the subject property reasonably reflect the fair market value of the property?

☑ Yes ☐ No ☐ Unknown

If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

☐ Yes ☐ No

Comments:

5. Commonly Known or Reasonably Ascertainable Information

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

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

Comments:

This property is vacant land. No known previous uses.

6. Obvious Presence or Likely Presence of Contamination

As the User of this ESA, based on your knowledge and experience related to the subject property, are there any obvious indicators that point to the presence or likely presence of contamination at the subject property?

☐ Yes ☑ No ☐ Unknown

Comments:

Please be sure to attach copies of documentation, as available.

Completed by:

Anthony Elmore
Name

Vice President
Title

Clayton Watkins Construction Company, Inc
Company Name

July 1, 2024
Date

270-259-9361
Phone Number

ENCLOSURE G

ENDANGERED SPECIES

Endangered Species Act (CEST and EA)

General requirements	ESA Legislation	Regulations
Section 7 of the Endangered Species Act (ESA) mandates that federal agencies ensure that actions that they authorize, fund, or carry out shall not jeopardize the continued existence of federally listed plants and animals or result in the adverse modification or destruction of designated critical habitat. Where their actions may affect resources protected by the ESA, agencies must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service ("FWS" and "NMFS" or "the Services").	The Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq*.); particularly section 7 (16 USC 1536).	50 CFR Part 402
References		
https://www.hudexchange.info/environmental-review/endangered-species		

1. **Does the project involve any activities that have the potential to affect species or habitats?**

☐No, the project will have No Effect due to the nature of the activities involved in the project.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☐No, the project will have No Effect based on a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office.

Explain your determination:

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☒Yes, the activities involved in the project have the potential to affect species and/or habitats. → *Continue to Question 2.*

2. **Are federally listed species or designated critical habitats present in the action area?**

Obtain a list of protected species from the Services. This information is available on the FWS Website or you may contact your local FWS and/or NMFS offices directly.

☐No, the project will have No Effect due to the absence of federally listed species and designated critical habitat.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation*

may include letters from the Services, species lists from the Services' websites, surveys or other documents and analysis showing that there are no species in the action area.

☒Yes, there are federally listed species or designated critical habitats present in the action area. → *Continue to Question 3.*

3. What effects, if any, will your project have on federally listed species or designated critical habitat?

☐No Effect: Based on the specifics of both the project and any federally listed species in the action area, you have determined that the project will have absolutely no effect on listed species or critical habitat.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation should include a species list and explanation of your conclusion, and may require maps, photographs, and surveys as appropriate.*

☒May Affect, Not Likely to Adversely Affect: Any effects that the project may have on federally listed species or critical habitats would be beneficial, discountable, or insignificant.

→ *Continue to Question 4, Informal Consultation.*

☐Likely to Adversely Affect: The project may have negative effects on one or more listed species or critical habitat.

→ *Continue to Question 5, Formal Consultation.*

4. Informal Consultation is required

Section 7 of ESA (16 USC. 1536) mandates consultation to resolve potential impacts to endangered and threatened species and critical habitats. If a HUD-assisted project may affect any federally listed endangered or threatened species or critical habitat, then compliance is required with Section 7. See 50 CFR Part 402 Subpart B Consultation Procedures.

Did the Service(s) concur with the finding that the project is Not Likely to Adversely Affect?

☒Yes, the Service(s) concurred with the finding.

→ *Based on the response, the review is in compliance with this section. Continue to Question 6 and provide the following:*

(1) A biological evaluation or equivalent document
(2) Concurrence(s) from FWS and/or NMFS
(3) Any other documentation of informal consultation

Exception: If finding was made based on procedures provided by a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office, provide whatever documentation is mandated by that agreement.

☐No, the Service(s) did not concur with the finding. → *Continue to Question 5.*

5. Formal consultation is required

Section 7 of ESA (16 USC 1536) mandates consultation to resolve potential impacts to federally listed endangered and threatened species and critical habitats. If a HUD assisted project may affect any endangered or threatened species or critical habitat, then compliance is required with Section 7. See 50 CFR Part 402 Subpart B Consultation Procedures.

→ *Once consultation is complete, the review is in compliance with this section. Continue to Question 6 and provide the following:*

(1) A biological assessment, evaluation, or equivalent document
(2) Biological opinion(s) issued by FWS and/or NMFS
(3) Any other documentation of formal consultation

6. For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the proposed measures that will be implemented to mitigate for the impact or effect, including the timeline for implementation.

☒Mitigation as follows will be implemented:

A voluntary contribution to the Imperiled Bat Conservation Fund (IBCF) as tree removal will occur during the unoccupied timeframe on 2.98-acres of the site (prior to March 31, 2025) for a total of $7,897.00.

☐No mitigation is necessary.

Explain why mitigation will not be made here:

<u>Worksheet Summary</u>

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

This project was found Likely to Adversely Affect listed species (Indiana Bat only), and an informal consultation was conducted. In an email with Taylor Fagin, U.S. Fish and Wildlife Biologist with the KY Ecological Services Field Office on October 28, 2024 "Given there are Primary Maternity Roost Trees (PMRTs) to be cleared, we cannot concur with a "not likely to adversely affect" for the Indiana bat but there are multiple other options to complete Section 7 review: (1) The applicant can make a voluntary contribution to the Imperiled Bat Conservation Fund (IBCF) at a total of $5300 per acre of tree clearing. The multiplier for the project depends on the time of year the trees will be removed so any time of year would be a multiplier of 2, avoiding June and July would be a multiplier of 1, and during the unoccupied timeframe would be a multiplier of 0.5 (See page 27 of the Conservation Strategy for multiplier breakdown). For example, if you are clearing 3.0 acres of trees the payment would be $5300 X 3.0 acres X 2.0 multiplier (clearing anytime of year) for a total contribution of $31,800. More information about this voluntary contribution can be found in the Conservation Strategy for Forest Dwelling Bats attached, page 27. (2) The applicant can perform a mist-net survey or acoustics survey following the Rangewide Survey Guidance (also attached).; or (3) Or we can take this project through formal consultation. Wabuck has committed to tree removal prior to March 31, 2025 and will pay a voluntary contribution to the Imperiled Bat Conservation Fund (IBCF) as tree removal will occur during the unoccupied timeframe on 2.98-acres of the site (prior to March 31, 2025) for a total of $7,897.00. Correspondence of this amount from the US F&W Service is attached. Wabuck will also follow all General Project Design Guidelines per the attached US Fish and Wildlife Service document Generated October 31, 2024. With mitigation, identified in the mitigation section of this review, the project will be in compliance with the Endangered Species Act.

Are formal compliance steps or mitigation required?

☒ Yes

☐ No

Supporting Documentation

Wabuck Projects_Excavation Grading BMPs.pdf
Species List_Kentucky Ecological Services Field Office (1).pdf
general_design_guidelines_combined.pdf
20241007 NE Consistency FedLoanGrant.pdf
20240820 MA Consistency IBat.pdf

From: April Bowman
To: Suzanne Arnzen
Subject: FW: IBCF check received-project FWS# 2024-0112245
Date: Tuesday, November 26, 2024 10:17:28 AM

From: Megan Naseman <megan@knlt.org>
Sent: Tuesday, November 26, 2024 7:52 AM
To: Donna Alexander <donna@knlt.org>; Angie Allman <angie@knlt.org>; April Bowman <april.bowman@wabuck.com>; JOberlin@kyhousing.org
Cc: kentuckyes@fws.gov
Subject: IBCF check received-project FWS# 2024-0112245

Dear Ms. Bowman:

KNLT received a check for the Imperiled Bat Conservation Fund. Please be aware that this receipt does not authorize implementation of any part of the proposed action or remove any permitting requirements that may be required by other state and federal agencies. If you have project specific questions you will need to contact the USFWS staff cc'd on this email.

Wabuck Development Company, Inc. (Garrison Gardens Housing Development Project; Warren County, Kentucky)

Amount Received: $7,897.00 FWS# 2024-0112245

If you are interested in learning more about the Imperiled Bat Conservation Fund, please visit the webpage at http://knlt.org/ibcf/.

Sincerely,
Megan

Megan Naseman, Administrative Specialist
Kentucky Natural Lands Trust
Protecting, Connecting & Restoring Wildlands
Mailing Address: 433 Chestnut Street, Berea, KY 40403
859-986-0744 | KNLT.org
Facebook | Instagram | Twitter | Vimeo | #kywildlands

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: 08/06/2024 15:23:11 UTC
Project code: 2024-0112245
Project Name: Garrison Gardens - Bowling Green, KY

Subject: Consistency letter for the project named 'Garrison Gardens - Bowling Green, KY' for specified threatened and endangered species that may occur in your proposed project location consistent with the Kentucky Determination Key (DKey)

Dear Suzanne Arnzen:

The U.S. Fish and Wildlife Service (Service) received on **August 06, 2024** your effect determination(s) for the 'Garrison Gardens - Bowling Green, KY' (Action) using the Kentucky (DKey) within the Information for Planning and Consultation (IPaC) system. The Service developed this system in accordance with the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

You have agreed to the following conservation measures:

- The project proponent will complete all excavation and grading and put BMPs in place to stabilize all excavated and graded areas within 1 month.

Based on your answers and the assistance of the Service's Kentucky DKey, you made the following effect determination(s) for the proposed Action:

Species	Listing Status	Determination
Clubshell (*Pleurobema clava*)	Endangered	No effect
Fanshell (*Cyprogenia stegaria*)	Endangered	No effect
Gray Bat (*Myotis grisescens*)	Endangered	NLAA
Kentucky Cave Shrimp (*Palaemonias ganteri*)	Endangered	May affect
Longsolid (*Fusconaia subrotunda*)	Threatened	No effect
Pink Mucket (pearlymussel) (*Lampsilis abrupta*)	Endangered	No effect
Price"s Potato-bean (*Apios priceana*)	Threatened	May affect
Rabbitsfoot (*Quadrula cylindrica cylindrica*)	Threatened	No effect
Round Hickorynut (*Obovaria subrotunda*)	Threatened	No effect

Consultation Status

May Affect Determinations: Species with May Affect determinations are those for which the DKey was unable to provide a conclusion or those for which you were either unsure about the determination or you chose to make a “may affect” determination. If the DKey was unable to provide a conclusion, this does not necessarily mean that the project is likely to adversely affect the species. If you think the project may affect the species or want additional technical assistance, please follow the instructions in the "Additional Coordination" section below. If a federal action agency chooses to make a "no effect" determination for the species, there is no statutory requirement to request concurrence with that determination; however, the federal action agency should document the supporting information for this determination in their files. This documentation would typically demonstrate a lack of suitable habitat within the action area, show that no impacts to suitable habitat would occur, or provide information that the species is not reasonably certain to occur in the action area even though suitable habitat is present.

The Service recommends that your agency contact the Kentucky Ecological Services Field Office or re-evaluate the Action in IPaC if: 1) the scope, timing, duration, or location of the Action changes, 2) new information reveals the Action may affect listed species or designated critical habitat, or 3) a new species is listed or critical habitat designated. If any of the above conditions occurs, additional consultation with the Kentucky Ecological Services Field Office should take place before project changes are final or resources committed.

The following species and/or critical habitats may also occur in your project area and **are not** covered by this conclusion:

- Indiana Bat *Myotis sodalis* Endangered
- Monarch Butterfly *Danaus plexippus* Candidate
- Northern Long-eared Bat *Myotis septentrionalis* Endangered
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- Whooping Crane *Grus americana* Experimental Population, Non-Essential

To address effects to other federally listed or proposed species and/or their designated critical habitat, you can request project-specific review by following the instructions in the “Next Steps” section of your species list letter, or you may use another determination key, if available.

Additional Coordination

To request additional technical assistance or consultation, please contact the Kentucky Ecological Services Field Office . When you contact the office, please provide all relevant site-specific information regarding the proposed Action. The Kentucky Ecological Services Field Office will respond within 30 to 60 days of your submittal.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Garrison Gardens - Bowling Green, KY

2. Description

The following description was provided for the project 'Garrison Gardens - Bowling Green, KY':

> Construction of affordable housing.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.998794000000004,-86.46761361790286,14z

QUALIFICATION INTERVIEW

1. Will the proposed Action involve Federal funding, permitting, or authorization, or will it be carried out by a Federal Agency?

   Yes

2. Are you the lead Federal Action Agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

   No

3. [Hidden Semantic] Does the action area intersect critical habitat?

   Automatically answered
   Yes

4. Will the proposed Action involve construction or operation of wind turbines?

   No

5. Will the proposed Action involve blasting (other than a fireworks display)?

   No

6. Will the proposed Action involve a new point source discharge from a facility other than a water treatment plant or storm water system?

   No

7. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g. leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

   No

8. Will the proposed Action include the removal, replacement, repair and/or maintenance of an existing bridge or culvert?

   No

9. Will the proposed Action involve perennial stream loss that would require an individual permit under 404 of the Clean Water Act?

   No

10. Will the proposed Action involve discharge of sediment into a stream?

    No

11. Does the Action Area contain any caves (including their associated sinkholes, fissures, or other karst features), rockshelters, underground quarries, or abandoned mine portals (including associated underground workings)?

    No

12. [Hidden Semantic] Does the Action Area intersect the Kentucky AOI of the gray bat?

    Automatically answered
    Yes

13. Will the proposed Action involve drilling or boring?

    Yes

14. Prior to the drilling or boring, will the project proponent conduct appropriate preliminary evaluations to ensure that proposed drilling or boring is unlikely to encounter karst voids or other voids?

    Yes

15. Will the project proponent contact the Field Office if potentially suitable gray bat hibernacula or roosting habitat is encountered during drilling or boring?

    Yes

16. Based on the responses you have provided, we believe that the proposed Action is consistent with the type of Actions programmatically evaluated by the Service's Kentucky Field Office under the standing analyses that support this determination key. These Actions typically conclude with "no effect" or "may affect - not likely to adversely affect" determinations for the gray bat.

    What is your effect determination for the **gray bat**?

    Note:*IPaC will not provide a concurrence for "no effect" determinations, because there is no statutory requirement to request concurrence from the Service. IPaC will provide concurrence for "May affect – not likely to adversely affect" determinations. If you choose "May affect – likely to adversely affect" or "Unsure," additional coordination with the Service is recommended.*

    2. "May affect - not likely to adversely affect"

17. Will the proposed Action involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds)?

    No

18. Will the proposed Action include any activities that would alter stream flow, such as hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines?

    No

19. Will the proposed Action involve dredging or in-stream gravel mining?

    No

20. Will the proposed Action involve resource extraction (e.g., mining, oil/gas, logging), including exploration activities?

    No

21. Will the proposed Action involve stream impacts (perennial or intermittent) that would require an individual permit under 404 of the Clean Water Act?

    No

22. Will the proposed Action involve activities that would contribute measureable nonpoint source pollution to streams (e.g., sediment, nutrients, etc.)? *See the following EPA webpage for more examples of nonpoint source pollution and activities that can produce it: https://www.epa.gov/nps/basic-information-about-nonpoint-source-nps-pollution*

    No

23. [Hidden Semantic] Does the action area include the 1/2-mile buffer of a stream or river in which any species covered under this key occurs or may occur?

    Automatically answered
    No

24. Will the proposed Action disturb the channel or bank of a perennial or intermittent stream?

    No

25. Will the proposed Action disturb the channel or bank of an ephemeral stream?

    No

26. Will the proposed Action involve vegetation removal within 200 feet of a perennial stream bank?

    No

27. Will the proposed Action involve excavation or grading, including for the construction or improvement of an access road?

    Yes

28. Are all areas proposed for excavation or grading situated more than 200 feet from the banks of perennial and intermittent streams?

    Yes

29. Are any areas proposed for excavation or grading located in or partly in a "special flood hazard area" as designated by FEMA? *You can determine this by searching for your project area at the FEMA Flood Map Service Center (https://msc.fema.gov/portal/home. For technical assistance please contact the Field Office listed in the letterhead of your project's official species list.*

    No

30. Will the excavation or grading create new water bars or ditches that will channel stormwater into a stream?

    No

31. Will the project proponent complete all excavation and grading activities and subsequent soil stabilization measures within 1 month?

    Yes

32. [Hidden Semantic] Does the project area intersect the AOI of the clubshell (*Pleurobema clava*)?

    Automatically answered
    Yes

33. Based on the responses you have provided, we believe that the proposed Action is consistent with the type of Actions programmatically evaluated by the Service's Kentucky Field Office under the standing analyses that support this determination key. These Actions typically conclude with "no effect" or "may affect - not likely to adversely affect" determinations for the clubshell.

    What determination do you want to make for the **clubshell**:

    Note: IPaC will not provide a concurrence for "no effect" determinations, because there is no statutory requirement to request concurrence from the Service. IPaC will provide concurrence for "May affect – not likely to adversely affect" determinations. If you choose "May affect – likely to adversely affect" or "Unsure," additional coordination with the Service is recommended.

    1. "No effect"

34. [Hidden Semantic] Does the project area intersect the AOI of the fanshell (*Cyprogenia stegaria*)?

    Automatically answered
    Yes

35. Based on the responses you have provided, we believe that the proposed Action is consistent with the type of Actions programmatically evaluated by the Service's Kentucky Field Office under the standing analyses that support this determination key. These Actions typically conclude with "no effect" or "may affect - not likely to adversely affect" determinations for the fanshell.

    What is your effect determination for the **fanshell**:

    Note: IPaC will not provide a concurrence for "no effect" determinations, because there is no statutory requirement to request concurrence from the Service. IPaC will provide concurrence for "May affect – not likely to adversely affect" determinations. If you choose "May affect – likely to adversely affect" or "Unsure," additional coordination with the Service is recommended.

    1. "No effect"

36. [Hidden Semantic] Does the project area intersect the AOI of the pink mucket (*Lampsilis abrupta*)?

    Automatically answered
    Yes

37. Based on the responses you have provided, we believe that the proposed Action is consistent with the type of Actions programmatically evaluated by the Service's Kentucky Field Office under the standing analyses that support this determination key. These Actions typically conclude with "no effect" or "may affect - not likely to adversely affect" determinations for the pink mucket.

    What is your effect determination for the **pink mucket**:

    Note: IPaC will not provide a concurrence for "no effect" determinations, because there is no statutory requirement to request concurrence from the Service. IPaC will provide concurrence for "May affect – not likely to adversely affect" determinations. If you choose "May affect – likely to adversely affect" or "Unsure," additional coordination with the Service is recommended.

    1. "No effect"

38. [Hidden Semantic] Does the project area intersect the AOI of the rabbitsfoot (*Theliderma (= Quadrula) cylindrica*)?

    Automatically answered
    Yes

39. Based on the responses you have provided, we believe that the proposed Action is consistent with the type of Actions programmatically evaluated by the Service's Kentucky Field Office under the standing analyses that support this determination key. These Actions typically conclude with "no effect" or "may affect - not likely to adversely affect" determinations for the rabbitsfoot.

    What is your effect determination for the **rabbitsfoot**:

    Note: IPaC will not provide a concurrence for "no effect" determinations, because there is no statutory requirement to request concurrence from the Service. IPaC will provide concurrence for "May affect – not likely to adversely affect" determinations. If you choose "May affect – likely to adversely affect" or "Unsure," additional coordination with the Service is recommended.

    1. "No effect"

40. [Hidden Semantic] Does the project area intersect the AOI for Kentucky Cave Shrimp?

    Automatically answered
    Yes

41. [Hidden Semantic] Does the project area intersect the AOI of the round hickory nut?

    Automatically answered
    Yes

42. Based on the responses you have provided, we believe that the proposed Action is consistent with the type of Actions programmatically evaluated by the Service's Kentucky Field Office under the standing analyses that support this determination key. These Actions typically conclude with "no effect" or "may affect - not likely to adversely affect" determinations for the relict darter.

    What determination do you want to make for the **round hickory nut**:

    Note: IPaC will not provide a concurrence for "no effect" determinations, because there is no statutory requirement to request concurrence from the Service. IPaC will provide concurrence for "May affect – not likely to adversely affect" determinations. If you choose "May affect – likely to adversely affect" or "Unsure," additional coordination with the Service is recommended.

    1. "No effect"

43. [Hidden Semantic] Does the project area intersect the AOI of the longsolid?

    Automatically answered

    Yes

44. Based on the responses you have provided, we believe that the proposed Action is consistent with the type of Actions programmatically evaluated by the Service's Kentucky Field Office under the standing analyses that support this determination key. These Actions typically conclude with "no effect" or "may affect - not likely to adversely affect" determinations for the relict darter.

    What determination do you want to make for the **longsolid**:

    Note: IPaC will not provide a concurrence for "no effect" determinations, because there is no statutory requirement to request concurrence from the Service. IPaC will provide concurrence for "May affect – not likely to adversely affect" determinations. If you choose "May affect – likely to adversely affect" or "Unsure," additional coordination with the Service is recommended.

    1. "No effect"

45. Will all activities occur within an area that is paved, graveled, and/or inside a structure?

    No

46. Does the Action Area include forested slopes?

    Yes

47. Does the Action Area include streams and/or areas within a 300-foot buffer from a stream?

    No

48. Will the proposed Action involve herbicide application?

    No

49. Will the proposed Action involve ground disturbance?

    Yes

50. Will the proposed Action involve vegetation removal or mowing?

    Yes

51. [Hidden Semantic] Does the project area intersect the AOI for Price's potato bean?

    Automatically answered

    Yes

52. Are the entire disturbance limits of the proposed Action in open, non-shaded areas (e.g., fields or lawns with no trees)?

    No

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Suzanne Arnzen
Address: 11450 Watterson Court
Address Line 2: Suite 200
City: Louisville
State: KY
Zip: 40299
Email sarnzen@cmecenvironmental.com
Phone: 5024890850

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Housing and Urban Development

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: 08/20/2024 16:52:47 UTC
Project code: 2024-0112245
Project Name: Garrison Gardens - Bowling Green, KY

Subject: Consistency letter for the project named 'Garrison Gardens - Bowling Green, KY' for the endangered Indiana bat and its critical habitat in the proposed project location, pursuant to the Indiana Bat Determination Key (DKey)

Dear Suzanne Arnzen:

The U.S. Fish and Wildlife Service (Service) received on **August 20, 2024** your effect determination(s) for the 'Garrison Gardens - Bowling Green, KY' using the Indiana Bat DKey within the Information for Planning and Consultation (IPaC) system. The Service developed this system in accordance with the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based on your answers and the assistance of the Service's Indiana Bat DKey, you made the following effect determination(s) for the proposed Action:

Species	**Listing Status**	**Determination**
Indiana Bat (*Myotis sodalis*)	Endangered	May affect

Critical Habitat	**Listing Status**	**Determination**
Indiana Bat (*Myotis sodalis*)	Final	NLAA

Consultation Status

May Affect Determinations: Species with May Affect determinations are those for which the DKey was unable to provide a conclusion or those for which you were either unsure about the determination or you chose to make a "may affect" determination. If the DKey was unable to provide a conclusion, this does not necessarily mean that the project is likely to adversely affect the species. If you think the project may affect the species or want additional technical assistance, please follow the instructions in the "Additional Coordination" section below. If a federal action agency chooses to make a "no effect" determination for the species, there is no statutory requirement to request concurrence with that determination; however, the federal action

agency should document the supporting information for this determination in their files. This documentation would typically demonstrate a lack of suitable habitat within the action area, show that no impacts to suitable habitat would occur, or provide information that the species is not reasonably certain to occur in the action area even though suitable habitat is present.

In addition to the Indiana bat, the following species and/or critical habitats may also occur in your project area and **are not** covered by this conclusion:

- Clubshell *Pleurobema clava* Endangered
- Fanshell *Cyprogenia stegaria* Endangered
- Gray Bat *Myotis grisescens* Endangered
- Kentucky Cave Shrimp *Palaemonias ganteri* Endangered
- Longsolid *Fusconaia subrotunda* Threatened
- Monarch Butterfly *Danaus plexippus* Candidate
- Pink Mucket (pearlymussel) *Lampsilis abrupta* Endangered
- Price"s Potato-bean *Apios priceana* Threatened
- Rabbitsfoot *Quadrula cylindrica cylindrica* Threatened
- Round Hickorynut *Obovaria subrotunda* Threatened
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered
- Whooping Crane *Grus americana* Experimental Population, Non-Essential

To address effects to other federally listed or proposed species and/or their designated critical habitat, you can request project-specific review by following the instructions in the “Next Steps” section of your species list letter, or you may use another determination key, if available.

Additional Coordination

To request additional technical assistance or consultation, please contact the Kentucky Ecological Services Field Office . When you contact the office, please provide all relevant site-specific information regarding the proposed Action. The Kentucky Ecological Services Field Office will respond within 30 to 60 days of your submittal.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Garrison Gardens - Bowling Green, KY

2. Description

The following description was provided for the project 'Garrison Gardens - Bowling Green, KY':

> Construction of 120 new affordable multi-family housing units contained within 16 buildings on an undeveloped 13.56 acre site.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.998794000000004,-86.46761361790286,14z

QUALIFICATION INTERVIEW

1. Will the proposed action involve Federal funding, permitting, or authorization, or will it be carried out by a Federal Agency?

   Yes

2. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead Federal Agency for this action?

   No

3. Are you the lead Federal Action Agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

   No

4. [Semantic] Is the Action Area within 1/2-mile of a known Indiana bat hibernaculum?

   Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact the Field Office listed in the letterhead of this letter.

   Automatically answered
   No

5. Will the proposed Action involve construction or operation of wind turbines?

   No

6. Will the proposed Action involve blasting, other than a fireworks display?

   No

7. Will the proposed Action involve a new point source discharge from a facility other than a water treatment plant or storm water system?

   No

8. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

   Note: For information regarding NSF/ANSI 60 please visit https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects

   No

9. Will the proposed Action include the removal, replacement, repair and/or maintenance of an existing bridge?

   No

10. Will the proposed Action involve perennial stream loss that would require an individual permit under 404 of the Clean Water Act?

    No

11. Will the proposed Action involve discharge of sediment into a stream?

    No

12. Does the Action Area contain any caves (including their associated sinkholes, fissures, or other karst features), rockshelters, underground quarries, or abandoned mine portals (including associated underground workings)?

    No

13. Will the proposed project result in the removal of trees?

    Yes

14. Did a **FWS-approved** habitat model applicable to the project site determine the project site to be of low probability for use by Indiana bats?

    Note: This question will most commonly be answered "no." If the answer to this question is "yes", you will be required to upload your **Habitat Model Report**

    No

15. Will the proposed project result in the removal of potentially suitable summer habitat for the Indiana bat?

    Suitable summer habitat for Indiana bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel. This includes forests and woodlots, linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree (live tree and/or snag ≥5 inches diameter at breast height (dbh) (12.7 centimeter) that has exfoliating bark, cracks, crevices, and/or hollows) and are located within 1,000 feet (305 meters) of other forested/wooded habitat. See the Indiana Bat and Northern Long-eared Bat Survey Guidelines for additional description (https://www.fws.gov/library/collections/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines).

    Note: If "no" upload a document with photos representative of the forested habitat to be removed.

    Yes

16. Will the proposed Action remove any suitable (primary or alternate) Indiana bat roost trees? *Suitable Indiana bat roost trees are live trees and/or snags ≥5 inches diameter at breast height (dbh) (12.7 centimeter) that have exfoliating bark, cracks, crevices, and/or hollows.*

    Note: If "no" upload a document with photos representative of the forested habitat to be removed.

    Yes

17. Will the proposed Action remove any suitable primary roost trees?

    Suitable Indiana bat primary maternity roost tree refers to a dead tree or snag that is nine inches or greater in diameter at breast height and has loose or exfoliating bark, cracks, crevices, and/or hollows. A live tree may also qualify if it contains hollows or dead portions with loose or exfoliating bark, cracks, and/or crevices.

    Note: If "no" upload a document with photos representative of the forested habitat to be removed.

    Yes

18. If appropriate, would you like to conduct a voluntary emergence survey to determine if bats are using all of the suitable roost trees proposed for removal? *Emergence surveys require a surveyor to observe each suitable roost tree for the presence of bats. Surveys should follow the protocol in Appendix E in the USFWS' current Indiana Bat and Northern Long-eared Bat Survey Guidelines at https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.*

    No

19. Would you like to conduct a voluntary summer presence/absence survey (netting or acoustic) of the project area?

    Note: If "yes" upload a survey proposal for the Field Office to review. Surveys should be conducted in accordance with the USFWS' current Indiana Bat and Northern Long-eared Bat Survey Guidelines, found at https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines

    No

20. [Hidden Semantic] Does the action area intersect designated Indiana bat critical habitat?

    Automatically answered
    Yes

21. Based on the responses you have provided, we believe that the proposed Action is consistent with the type of Actions programmatically evaluated by the Service under the standing analyses that supports this determination key. These Actions typically conclude with "no effect" or "may affect - not likely to adversely affect" determinations for Indiana bat critical habitat.

    What determination do you want to make for **Indiana bat critical habitat**:

    Note: IPaC will not provide a concurrence for "no effect" determinations, because there is no statutory requirement to request concurrence from the Service. IPaC will provide concurrence for “May affect – not likely to adversely affect” determinations. If you choose “May affect – likely to adversely affect” or “Unsure,” additional coordination with the Service is recommended.

    May affect – not likely to adversely affect (NLAA)

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Suzanne Arnzen
Address: 11450 Watterson Court
Address Line 2: Suite 200
City: Louisville
State: KY
Zip: 40299
Email sarnzen@cmecenvironmental.com
Phone: 5024890850

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Housing and Urban Development

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: 10/07/2024 17:45:09 UTC
Project code: 2024-0099361
Project Name: 431 East Liberty Street
Please provide this document to the Federal agency or their designee with your loan/grant application.

Subject: Consistency letter for the project named '431 East Liberty Street' for specified threatened and endangered species that may occur in your proposed project location, pursuant to the IPaC determination key titled 'Clearance to Proceed with Federally-Insured Loan and Grant Project Requests'.

To whom it may concern:

On October 07, 2024, Suzanne Arnzen used the IPaC determination key 'Clearance to Proceed with Federally-Insured Loan and Grant Project Requests'; dated August 08, 2024, in the U.S. Fish and Wildlife Service's online IPaC tool to evaluate potential impacts to listed species from a project named '431 East Liberty Street' in Jefferson County, Kentucky (shown below):

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.25143235,-85.74523086964987,14z

The following description was provided for the project '431 East Liberty Street':

> Demolition of existing non-residential structure and construction of new structure.

Based on your answers provided, the proposed project is unlikely to have any detrimental effects to federally-listed species or critical habitat. Therefore, per this guidance, Suzanne Arnzen has determined that 431 East Liberty Street will have No Effect on the species listed below.

This letter serves as documentation of your consideration of endangered species, bald eagles, and migratory birds. No further coordination with the Service is necessary.

Please be advised that, if later modifications are made to the project that do not meet the criteria described above, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.

BIRDS

- Whooping Crane *Grus americana* Experimental Population, Non-Essential

CLAMS

- Fanshell *Cyprogenia stegaria* Endangered
- Pink Mucket (pearlymussel) *Lampsilis abrupta* Endangered

INSECTS

- Monarch Butterfly *Danaus plexippus* Candidate

MAMMALS

- Gray Bat *Myotis grisescens* Endangered
- Indiana Bat *Myotis sodalis* Endangered
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

ADDITIONAL CONSIDERATIONS FOR NON-FEDERALLY LISTED SPECIES

- **Bald Eagle Nest Issues.** If any of the above-referenced activities (rehabilitation, demolition, or rebuilding) are proposed to occur **within 660 feet** of an active or alternate bald eagle (*Haliaeetus leucocephalus*) nest during the nesting season (October 1 through May 15), we recommend the applicant or their designated agent coordinate with the agency responsible for managing wildlife in their state. For additional information, please visit the Service's regional web page: https://www.fws.gov/service/3-200-71-eagle-take-associated-not-purpose-activity-incidental-take.
- **Migratory Bird Issues.** If any native birds are using the structures for nesting then actions should be taken so as not to disturb the adults, nests, eggs, or chicks as this could lead to a potential violation of the Migratory Bird Treaty Act. If nests are present or any birds are using the structures regularly for roosting purposes, we recommend the applicant or their designated agent coordinate with the appropriate Service’s Field Office and visit the Service’s Migratory Bird Program website at https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds for recommendations on how impacts can be avoided and minimized.

Suzanne Arnzen answered the determination key questions for this project as follows:

1. Does the project intersect Monroe County, FL?

   Automatically answered
   No

2. Does the project include federal grant funding, a federally-insured loan, or a federal loan transfer?

   Yes, the project includes a federally-insured loan or federal grant funding.

3. Does the project involve a federal loan transfer, where the original lending or mortgage institutions for existing projects are no longer holding the loan and the property is being transferred via a federally-backed loan?

   No

4. Is the entire site currently developed/hard-surfaced (i.e., the site consists entirely of existing roads, sidewalks, buildings, driveways, etc., and does not contain any undeveloped and/or vegetated areas)?

   Yes, the entire site is already developed/hard-surfaced.

5. Will completion of this project require clearing or land disturbance of previously **undeveloped** habitat (*e.g.*, native habitat, agricultural areas, pasture, etc.) **beyond the original footprint of the existing project**?

   Note: Examples of land disturbance may include, but is not limited to: grading, vegetation removal, excavation, etc.

   *No, this project will **not** require clearing of any undeveloped habitat.*

6. Is the federally-insured loan or federal grant funding being used for demolition, rehabilitation, renovation, and/or rebuilding of one or more existing facilities (*e.g.*, residential, commercial and industrial sites, or utilities)?

   Yes, the project includes Federal funding for work on existing facilities.

7. Does your project involve structures that are being used by any federally endangered or threatened species (*e.g.*, roosting bonneted bats, denning indigo snakes, etc.) or are there known reports of species using the site?

   *No, the site and/or structure(s) are **not** being used by any federally listed species.*

8. Will the project disturb undeveloped areas (e.g., native habitat, agricultural areas, pasture, etc.) within rights-of-way?

   No

Attachments:

- Project questionnaire

- Determination key description: Clearance to Proceed with Federally-Insured Loan and Grant Project Requests
- U.S. Fish & Wildlife Service contact list

PROJECT INFORMATIONAL QUESTIONNAIRE

As part of completing the determination key, Suzanne Arnzen provided the following information about their project:

1. Which types of structures this funding will address:

   Commercial
   Residential – multi family

2. Please describe the activity you will be conducting:

   Demolition of existing structure that was formerly a grocery store, site preparation and rebuilding of multi-family housing.

3. How many square feet of facilities will be affected by this project?

   13000

4. Are there bald eagles within 660 feet of the site, or migratory birds or bats using structures on the site?

   None of the above

5. Please describe the loan/grant program you are using

   HUD Insured and funded

6. Which Federal Agency is the lead agency providing the funding?

   U.S. Department of Housing and Urban development (HUD)

7. Which types of activities you will be conducting:

   Demolition
   Infrastructure
   Rebuilding
   Utilities

DETERMINATION KEY DESCRIPTION: CLEARANCE TO PROCEED WITH FEDERALLY-INSURED LOAN AND GRANT PROJECT REQUESTS

This key was last updated in IPaC on August 08, 2024. Keys are subject to periodic revision.

This determination key is for all Federally-insured loans, loan transfers, or grant project requests that may be completed without requiring additional clearing of undisturbed habitat beyond the original footprint of the existing project. Projects may include demolition, rehabilitation, renovations, and/or rebuilding of existing structures (*e.g.*, commercial buildings, multi-family housing, single-family housing), and various utility and infrastructure projects such as water and wastewater treatment facilities, sewer or power line repair, telecommunications upgrades , etc. For the purposes of this key, Federal loan transfers are those transfers where the original lending or mortgage institutions for existing projects are no longer holding the loans, and the properties are being transferred via federally-backed loans.

The U.S. Fish and Wildlife Service is the lead Federal agency charged with the protection and conservation of Federal Trust Resources, such as threatened and endangered species and migratory birds, in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 et seq.), the Bald and Golden Eagle Protection Act, (16 U.S.C. 668-668d) (Eagle Act), and the Migratory Bird Treaty Act (40 Stat. 755; 16 U.S.C. 701 et seq.).

Recently, many Federal agencies have activated programs that have resulted in an increased consumer demand to initiate projects through federally-backed loans and grants, all of which require those same Federal agencies to comply with Section 7 of the Act. Consequently, we have experienced an increase in the number of requests for review of these government-backed loan and grant projects. These include, but are not limited to:

1. U.S. Department of Housing and Urban Development’s (HUD) Neighborhood Stabilization and Community Development Block Grant programs;

2. U.S. Department of Energy’s (DOE) Energy Efficiency and Renewable Energy program;

3. U.S. Department of Agriculture’s (USDA) Housing Assistance and Rural Development Loan and Grant Assistance programs;

4. U.S. Federal Aviation Administration (FAA) regulatory airport and runway modifications;

5. U.S. Federal Emergency Management Agency’s (FEMA) Hazard Mitigation Assistance program;

6. U.S. Environmental Protection Agency’s (EPA) Clean Water State Revolving Fund; and

7. U.S. Department of Commerce's (DOC) National Telecommunications and Information Administration Broadband Grant programs.

In order to fulfill the Act's statutory obligations in a timely and consistent manner, and to assist Federal agencies, State and local governments, and consultants in addressing Section 7 and National Environmental Policy Act (NEPA) environmental impact review requirements, we provide the following guidance and clearance relative to the criteria stated below for Federally-insured loan and grant project requests.

This guidance is based on the signed letters:
U.S. Fish and Wildlife Service Clearance to Proceed with Federally-Insured Loan and Grant Project Requests in Florida.
U.S. Fish and Wildlife Service Clearance to Proceed with Federally-Insured Loan and Grant Project Requests in Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

IPAC USER CONTACT INFORMATION

Agency: Department of Housing and Urban Development
Name: Suzanne Arnzen
Address: 11450 Watterson Court
Address Line 2: Suite 200
City: Louisville
State: KY
Zip: 40299
Email sarnzen@cmecenvironmental.com
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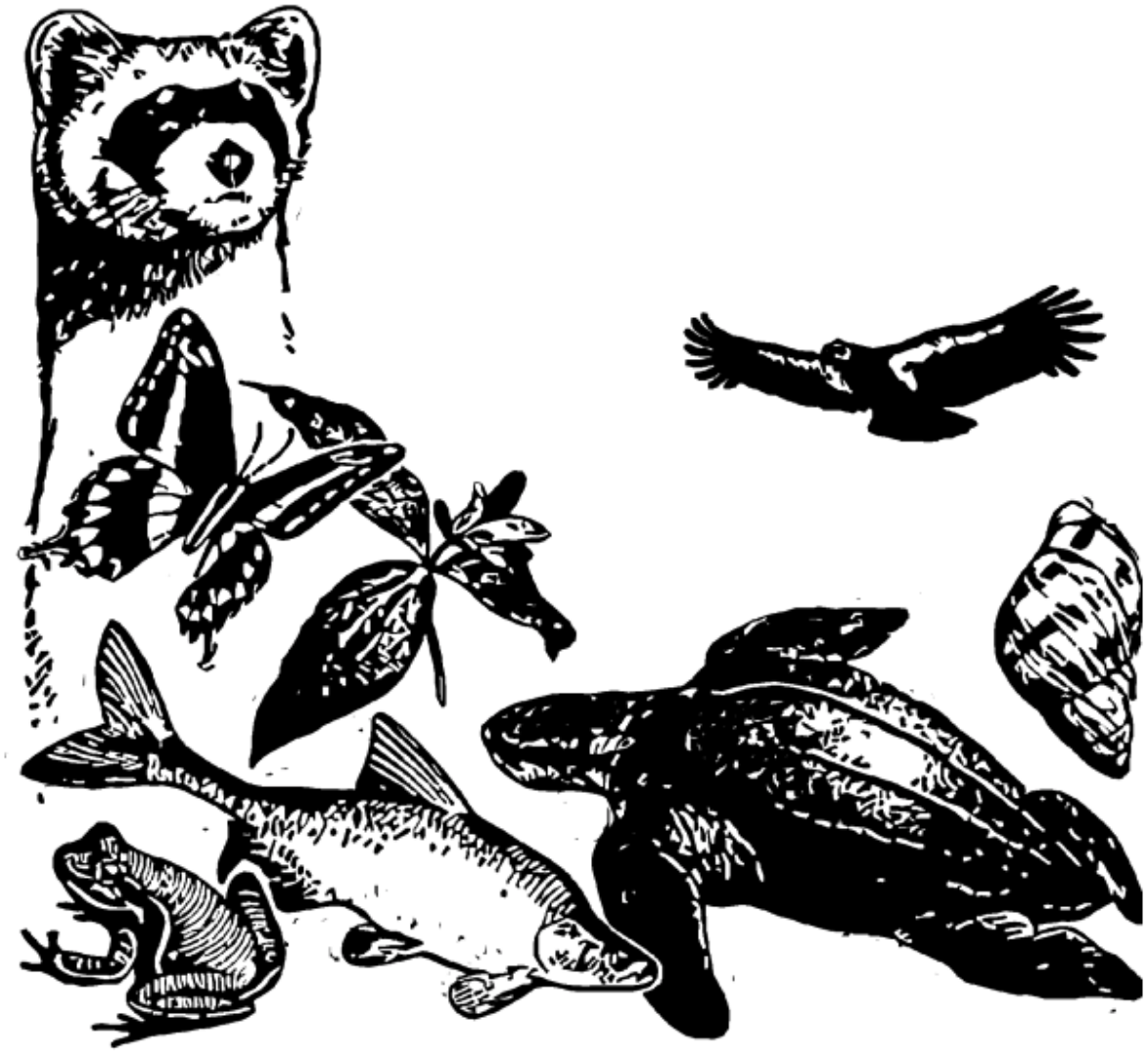
LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Housing and Urban Development

U.S. Fish & Wildlife Service

General Project Design Guidelines (5 Species)

Generated October 31, 2024 12:19 PM UTC, IPaC v6.114.0-rc2



IPaC - Information for Planning and Consultation (https://ipac.ecosphere.fws.gov/): A project planning tool to help streamline the U.S. Fish and Wildlife Service environmental review process.

Table of Contents

Species Document Availability

Species with general design guidelines

Fanshell *Cyprogenia stegaria*

Gray Bat *Myotis grisescens*

Indiana Bat *Myotis sodalis*

Pink Mucket (pearlymussel) *Lampsilis abrupta*

Rabbitsfoot *Quadrula cylindrica cylindrica*

Species without general design guidelines available

Kentucky Cave Shrimp *Palaemonias ganteri*

Longsolid *Fusconaia subrotunda*

Monarch Butterfly *Danaus plexippus*

Price"s Potato-bean *Apios priceana*

Round Hickorynut *Obovaria subrotunda*

Tricolored Bat *Perimyotis subflavus*

Whooping Crane *Grus americana*

General Project Design Guidelines - Indiana Bat and 11 more species

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

- Indiana Bat *Myotis sodalis*
- Kentucky Cave Shrimp *Palaemonias ganteri*
- Tricolored Bat *Perimyotis subflavus*
- Pink Mucket (pearlymussel) *Lampsilis abrupta*
- Whooping Crane *Grus americana*
- Fanshell *Cyprogenia stegaria*
- Price"s Potato-bean *Apios priceana*
- Gray Bat *Myotis grisescens*
- Round Hickorynut *Obovaria subrotunda*
- Monarch Butterfly *Danaus plexippus*
- Longsolid *Fusconaia subrotunda*
- Rabbitsfoot *Quadrula cylindrica cylindrica*

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 11 more species

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

- Indiana Bat *Myotis sodalis*
- Kentucky Cave Shrimp *Palaemonias ganteri*
- Tricolored Bat *Perimyotis subflavus*
- Pink Mucket (pearlymussel) *Lampsilis abrupta*
- Whooping Crane *Grus americana*
- Fanshell *Cyprogenia stegaria*
- Price"s Potato-bean *Apios priceana*
- Gray Bat *Myotis grisescens*
- Round Hickorynut *Obovaria subrotunda*
- Monarch Butterfly *Danaus plexippus*
- Longsolid *Fusconaia subrotunda*
- Rabbitsfoot *Quadrula cylindrica cylindrica*

Freshwater mussels are one of the most imperiled groups of animals in North America. Reservoir construction, sedimentation, channelization, runoff from urban areas, and water pollution are all factors that have contributed to the decline of our native mussel populations. As filter feeders, mussels are sensitive to contaminants and function as indicators of water quality.

The mussel species listed in the table below are known to occur or may potentially occur in the specified medium to large rivers in Kentucky. One or more species will appear on an IPaC-generated species list if the project area you delineated is located in or near one of these rivers.

	Rivers in Kentucky in Which the Species is Known to Occur or May Potentially Occur
Clubshell (*Pleurobema clava*)	Barren, Green, Licking, Ohio
Dromedary pearly mussel (*Dromus dromas*)	Big South Fork of the Cumberland
Fanshell (*Cyprogenia stegaria*)	Barren, Green, Licking, Ohio, Rolling Fork, Tennessee
Fat pocketbook (*Potamilus capax*)	Clarks (lower), Cumberland (lower), Green (lower), Mississippi, Ohio (lower), Tennessee, Tradewater (lower)
Northern riffleshell (*Epioblasma torulosa rangiana*) [1]	Green, Licking, Ohio
Orangefoot pimpleback (*Plethobascus cooperianus*)	Green, Ohio, Salt, Tennessee
Oyster mussel (*Epioblasma capsaeformis*)	Big South Fork of the Cumberland
Pink mucket (*Lampsilis abrupta*)	Barren, Green, Licking, Rolling Fork, Salt
Purple catspaw (*Epioblasma o. obliquata*) [2]	Green, Licking, Ohio
Rabbitsfoot (*Quadrula c. cylindrica*) [3]	Barren, Cumberland (below the falls), Green, Ohio, Rolling Fork, South Fork Kentucky, Tennessee
Ring pink (*Obovaria retusa*)	Barren, Cumberland (below the falls), Green, Ohio, Tennessee
Rough pigtoe (*Pleurobema plenum*)	Barren, Green, Licking, Ohio
Sheepnose (*Plethobasus cyphyus*)	Barren, Green, Kentucky, Licking, Ohio, Tennessee
Spectaclecase (*Cumberlandia monodonta*) [4]	Barren, Cumberland (below the falls), Green, Little South Fork of the Cumberland, Ohio, Tennessee

[1] This species has been renamed *Epioblasma walkeri*.
[2] This species has been renamed *Epioblasma obliquata*.
[3] This species has been renamed *Theliderma cylindrica*.
[4] This species has been renamed *Margaritifera monodonta*.

In-channel activities in the rivers listed above may potentially directly or indirectly affect one or more species of mussels. Even projects that do not involve in-channel activities still have the potential to impact listed mussel species and their habitats. Development activities that disturb

uplands in watersheds containing listed mussel species can degrade streams and rivers by increasing siltation/sedimentation, introducing pollutants, and/or altering riparian areas.

If the project area is within one-half to five miles from a river in which one of these mussel species is known to occur or may potentially occur, the IPaC-generated species list will include a condition stating the following: “The species may be affected by projects that significantly impact, directly or indirectly, the following rivers:.” The potential for indirect effects to these species should be carefully considered in these project areas.

When practicable, we recommend siting projects to avoid impacting streams and rivers that contain listed mussel species and utilizing methods, such as horizontal directional drilling and clear span bridges, to avoid direct impacts to listed mussel species and their habitats. The following are some general recommendations to minimize indirect impacts to streams and rivers and reduce impacts to federally-listed mussels:

- Utilize Best Management Practices to minimize erosion from work areas;
- Limit vegetation removal to minimize impacts in 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 U.S. Fish and Wildlife Service’s Kentucky Field Office 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 habitats.

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: 08/13/2024 18:32:10 UTC
Project Code: 2024-0112245
Project Name: Garrison Gardens - Bowling Green, KY

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: 2024-0112245
Project Name: Garrison Gardens - Bowling Green, KY
Project Type: Residential Construction
Project Description: Construction of affordable housing.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.998794000000004,-86.46761361790286,14z

Counties: Warren County, Kentucky

ENDANGERED SPECIES ACT SPECIES

There is a total of 13 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 4 of these species should be considered only under certain conditions.

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

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

---

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

MAMMALS

NAME	STATUS
Gray Bat *Myotis grisescens* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ The project area includes potential gray bat habitat. Species profile: https://ecos.fws.gov/ecp/species/6329 General project design guidelines: https://ipac.ecosphere.fws.gov/project/DBPJJQIRBZE4BP2KBJQPLTIGJ4/documents/generated/6422.pdf	Endangered
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location overlaps the critical habitat. This species only needs to be considered under the following conditions: ▪ The project area includes 'potential' habitat. All activities in this location should consider possible effects to this species. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/DBPJJQIRBZE4BP2KBJQPLTIGJ4/documents/generated/6422.pdf	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Whooping Crane *Grus americana* Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

CLAMS

NAME	STATUS
Clubshell *Pleurobema clava* Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ The species may be affected by projects that significantly impact the Green River and/or the Barren River. Species profile: https://ecos.fws.gov/ecp/species/3789 General project design guidelines: https://ipac.ecosphere.fws.gov/project/DBPJJQIRBZE4BP2KBJQPLTIGJ4/documents/generated/5639.pdf	Endangered
Fanshell *Cyprogenia stegaria*	Endangered

NAME STATUS

No critical habitat has been designated for this species.
This species only needs to be considered under the following conditions:
- The species may be affected by projects that significantly impact the Green River and/or the Barren River.

Species profile: https://ecos.fws.gov/ecp/species/4822
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/DBPJJQIRBZE4BP2KBJQPLTIGJ4/documents/generated/5639.pdf

Longsolid *Fusconaia subrotunda* Threatened
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/9880

Pink Mucket (pearlymussel) *Lampsilis abrupta* Endangered
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/7829
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/DBPJJQIRBZE4BP2KBJQPLTIGJ4/documents/generated/5639.pdf

Rabbitsfoot *Quadrula cylindrica cylindrica* Threatened
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/5165
General project design guidelines:
https://ipac.ecosphere.fws.gov/project/DBPJJQIRBZE4BP2KBJQPLTIGJ4/documents/generated/5639.pdf

Round Hickorynut *Obovaria subrotunda* Threatened
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/9879

INSECTS

NAME STATUS

Monarch Butterfly *Danaus plexippus* Candidate
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRUSTACEANS

NAME STATUS

Kentucky Cave Shrimp *Palaemonias ganteri* Endangered
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/5008

FLOWERING PLANTS

NAME STATUS

Price"s Potato-bean *Apios priceana* Threatened

NAME	STATUS

Population:
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/7422

CRITICAL HABITATS

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Indiana Bat *Myotis sodalis* https://ecos.fws.gov/ecp/species/5949#crithab	Final

IPAC USER CONTACT INFORMATION

Agency: State of Kentucky
Name: Jennifer Oberlin
Address: 1231 Louisville Road
City: Frankfort
State: KY
Zip: 40601
Email joberlin@kyhousing.org
Phone: 5025647630

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Housing and Urban Development

Wabuck Development Company, Inc.

EQUAL HOUSING OPPORTUNITY

P.O. Box 556
Leitchfield, KY 42755-0556
Tel. (270) 259-5607
Fax (270) 259-6071

August 20, 2024

Kentucky Fish and Wildlife Service
Kentucky Ecological Services Field Office
JC Watts Federal Building, Room 265
330 West Broadway
Frankfort, Kentucky 40601-8670
Phone (502) 695-0467
Fax (502) 695-1024
kentuckyes@fws.gov

Re: **Smiley Terrace – 1295 Glass Avenue Hopkinsville, Kentucky**
Tracey Terrace – 1525 Cuba Road Mayfield, Kentucky
Canon Court – 13500 Nortonville Road Dawson Springs, Kentucky
Harper Village – 445 Browning Street Madisonville, Kentucky
Garrison Gardens – 1221 Crewdson Drive Bowling Green, Kentucky
LifeWorks Annex – 1176 Adams Street Bowling Green, Kentucky

To Whom it May Concern

Wabuck Development Company (Wabuck) was selected as a developer as part of the governor of Kentucky's Western Kentucky Disaster Recovery. As such, the above noted projects include new construction of multi-family housing (some modular). All six projects listed above will complete all excavations and grading and put in Best Management Practices (BMPs) to stabilize all excavated and graded areas within 1 month.

Feel free to contact April Bowman at 270-259-9361 or at april.bowman@wabuck.com if you have any questions or require additional information.

Respectfully submitted,

April J Bowman

April Bowman
Wabuck Development Company, Inc.

ENCLOSURE H

EXPLOSIVE AND FLAMMABLE HAZARDS

Explosive and Flammable Hazards (CEST and EA)

General requirements	Legislation	Regulation
HUD-assisted projects must meet Acceptable Separation Distance (ASD) requirements to protect them from explosive and flammable hazards.	N/A	24 CFR Part 51 Subpart C
Reference		
https://www.hudexchange.info/environmental-review/explosive-and-flammable-facilities		

1. **Is the proposed HUD-assisted project itself the development of a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries)?**

   ☒ No

   → *Continue to Question 2.*

   ☐ Yes

   Explain:

   → *Go directly to Question 5.*

2. **Does this project include any of the following activities: development, construction, rehabilitation that will increase residential densities, or conversion?**

   ☐ No

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☒ Yes

   → *Continue to Question 3.*

3. **Within 1 mile of the project site, are there any current *or planned* stationary aboveground storage containers that are covered by 24 CFR 51C? Containers that are NOT covered under the regulation include:**
   - **Containers 100 gallons or less in capacity, containing common liquid industrial fuels OR**
   - **Containers of liquified petroleum gas (LPG) or propane with a water volume capacity of 1,000 gallons or less that meet the requirements of the 2017 version of National Fire Protection Association (NFPA) Code 58.**

   If all containers within the search area fit the above criteria, answer "no." For any other type of aboveground storage container within the search area that holds one of the

flammable or explosive materials listed in Appendix I of 24 CFR part 51 subpart C, answer "yes."

☒ No

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide all documents used to make your determination.*

☐ Yes

→ *Continue to Question 4.*

4. **Visit HUD's website to identify the appropriate tank or tanks to assess and to calculate the required separation distance using the electronic assessment tool. To document this step in the analysis, please attach the following supporting documents to this screen:**
   - **Map identifying the tank selected for assessment, and showing the distance from the tank to the proposed HUD-assisted project site; and**
   - **Electronic assessment tool calculation of the required separation distance.**

   Based on the analysis, is the proposed HUD-assisted project site located at or beyond the required separation distance from all covered tanks?

   ☐ Yes

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☐ No

   → *Go directly to Question 6.*

5. **Is the hazardous facility located at an acceptable separation distance from residences and any other facility or area where people may congregate or be present?**

   Please visit HUD's website for information on calculating Acceptable Separation Distance.

   ☐ Yes

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.*

   ☐ No

   → *Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.*
   Continue to Question 6.

6. **For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Mitigation measures may include both natural and manmade barriers, modification of the project design, burial or removal of the hazard, or other engineered solutions. Describe selected mitigation measures, including the timeline for implementation, and attach an implementation plan. If negative effects cannot be mitigated, cancel the project at this location.**
   Note that only licensed professional engineers should design and implement blast barriers. If a barrier will be used or the project will be modified to compensate for an unacceptable separation distance, provide approval from a licensed professional engineer.

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

There are no current or planned stationary aboveground storage containers of concern within 1 mile of the project site other than containers 100 gallons or less in capacity containing common liquid industrial fuels or LPG of 10000 gallons or less meeting the NFPA code. The project is in compliance with explosive and flammable hazard requirements.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

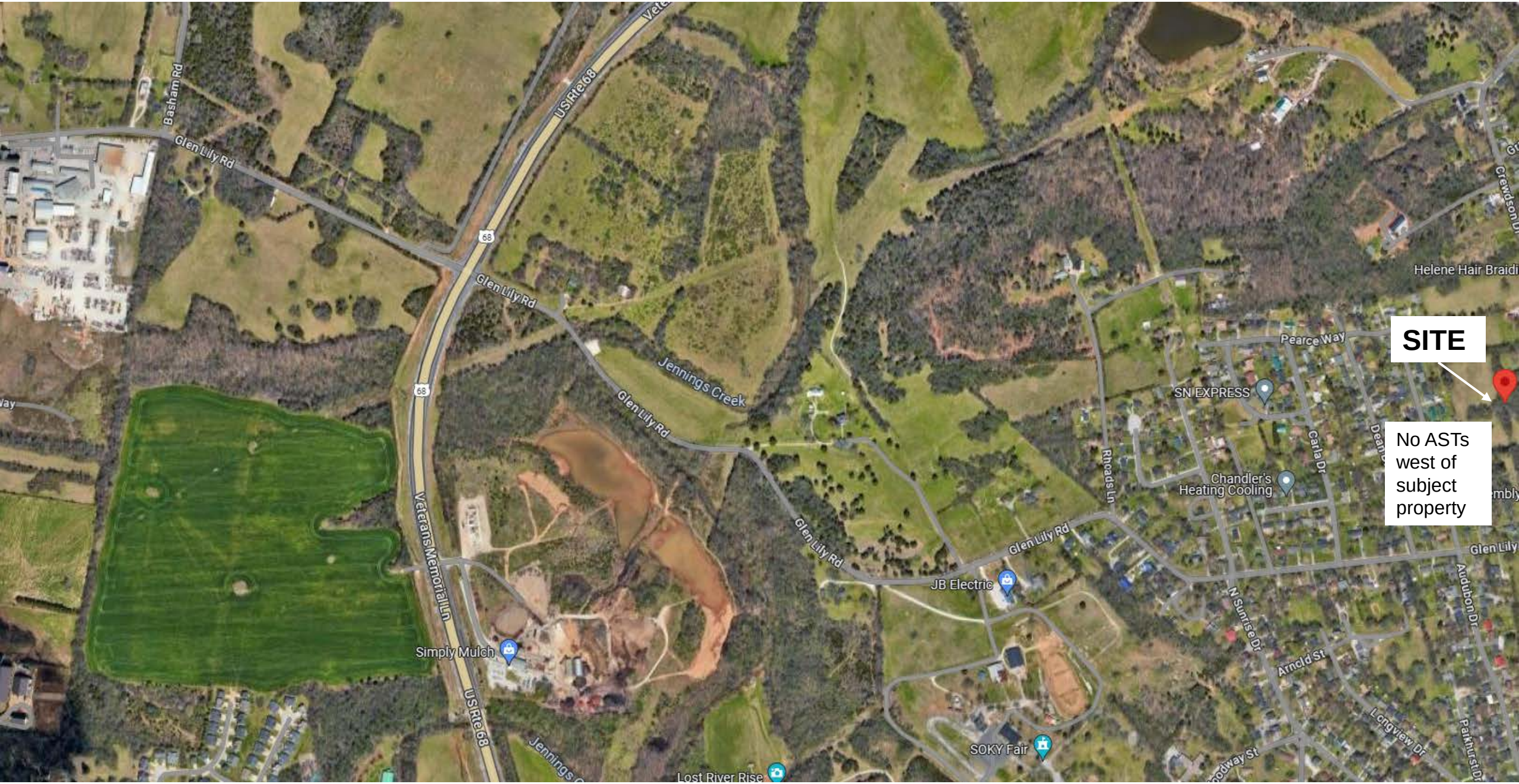
Garrison Gardens Explosives Appendix(1).pdf


Garrison Gardens
1221 Crewdson Drive
Bowling Green, KY
Legend
1221 Crewdson Dr
1-mile Radius
1221 Crewdson Dr
Barren River
Gordon Ave
Barren River
Old Morgantown Rd
University Dr
COLLEGE HILL HISTORIC DISTRICT
1435
68
185
165
231
31W
Google Earth
© 2023 Google
N
4000 ft


SITE
No ASTs south of subject property
SN EXPRESS
Chandler's Heating Cooling
Christ Assembly Church
Family Dollar
Pedigo Park
Dishman McGinnis Elementary School
SOKY Fair
EVOLUTION MOVING AND...
LifeSkills Haven4Change
Phenix Place Apartments
Bowling Green Jaycees
La Placita Antojitos
BEHAR CAFE
Glen Lily Rd
Andrew Way
Arnold St
Woodway St
Longview Dr
Strathmoor Dr
Butler Way
Warren Way
Plain Ave
Gayle Way
Cherry Way
Old Morgantown Rd
Columbia Way
W 12th Ave
W 15th Ave
Wade Ave
Vine St
Wilson St
Durbin Ln
Durbin Dr
Stratford Dr
Crewdson Dr
N Lee Dr
S Lee Dr
Lee Cir
Collegeview Dr
Normalview Dr
Audubon Dr
Parkhurst Dr
Lynhurst Dr
Virginia Dr
N Sunrise Dr
Parkside Dr
Cove Dr
Carla Dr
Rhoads Ln
Regis OConnor Blvd
Stubbins St
Rochester Ave
Madison St


SITE
No ASTs east of subject property
Metals-N-More
US Rte 68
Brownslock Rd
W Main Ave
Scott St
El Calvario AD
Garden Apartments
Helene Hair Braiding
Trent Way
N Lee Dr
Shannon Way
Woodford Ave
IAA Bowling Green
The Foundry Christian Community Center
Salvation Army Bowling Green Corps
Dover OTN
Columbia Way
Avon Ave
Regis Oconnor Blvd
W 12th Ave
Garfield St
W 11th Ave
Fair St
Payne St
Wilson St
Vine St
Durbin Ln
Stratford Dr
Glen Lily Rd
Wade Ave
Family Dollar
Audubon Dr
Collegeview Dr
S Lee Dr
Normalview Dr
Pedigo Park
Stubbins St
Clay St
Mi Cocina
Google


Riverview At Hobson Grove
Church Ave
W Main Ave
Republic Services
Waky Signs
Bowling Green Handyman
Environmental Wood Recycling
Bill Dedmon Rd
1435
Mudd Ave
Craighead Ln
Astral Games
W Main Ave
Jackson St
Barren River Rd
Mission Church
Prime Diesel Diagnostics
Abel Court Apartments
Angora Court Office
Angora Ct
First Apostolic Church
Victoria St
N Lee Dr
Shannon Way
Veterans Memorial Ln
US-Rte 68
Barren River Rd
Metals-N-More
Gray St
El Calvario AD
Crewdson Dr
Garden Apartments
Helene Hair Braiding
IAA Bowling Green
Glen Lily Rd
Jennings Creek
Pearce Way
Dover OTN
Columbia Way
W 12th Ave
Garfield St
Woodford Ave
SN EXPRESS
SITE
No ASTs north of subject property


SITE
No ASTs west of subject property
Basham Rd
Glen Lily Rd
US Rte 68
Veterans Memorial Ln
Jennings Creek
Pearce Way
SN EXPRESS
Chandler's Heating Cooling
Rhoads Ln
Carla Dr
JB Electric
Simply Mulch
SOKY Fair
Lost River Rise
N Sunrise Dr
Arnold St
Longview Dr
Audubon Dr
Helene Hair Braidi

ENCLOSURE I

FARMLANDS PROTECTION

OMB No. 2506-0177
(exp.2/28/2025)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Farmlands Protection (CEST and EA) - PARTNER

https://www.hudexchange.info/environmental-review/farmlands-protection

1. **Does your project include any activities, including new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use?**
   ☒ Yes → *Continue to Question 2.*
   ☐ No
   → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. **Does your project meet one of the following exemptions?**
   - Project on land already in or committed to urban development or used for water storage (7 CFR 658.2(a)). To check whether the project location is located in an urbanized area, use the following US Census Bureau application: TIGERweb
   - Construction limited to on-farm structures needed for farm operations
   - Construction is limited to new minor secondary (accessory) structures such as a garage or storage shed

     - ☐ Yes → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination*

     - ☒ No → *Continue to Question 3.*

3. **Does "important farmland," including prime farmland, unique farmland, or farmland of statewide or local importance regulated under the Farmland Protection Policy Act, occur on the project site?**
   You may use the links below to determine important farmland occurs on the project site:
   - Utilize USDA Natural Resources Conservation Service's (NRCS) Web Soil Survey http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
   - Check with your city or county's planning department and ask them to document if the project is on land regulated by the FPPA (zoning important farmland as non-agricultural does not exempt it from FPPA requirements)
   - Contact NRCS at the local USDA service center http://offices.sc.egov.usda.gov/locator/app?agency=nrcs or your NRCS state soil scientist http://soils.usda.gov/contact/state_offices/ for assistance

☒ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☐ Yes → *Continue to Question 4.*

4. **Consider alternatives to completing the project on important farmland and means of avoiding impacts to important farmland.**
   - Complete form **AD-1006**, "Farmland Conversion Impact Rating" and contact the state soil scientist before sending it to the local NRCS District Conservationist.
   - Work with NRCS to minimize the impact of the project on the protected farmland. When you have finished with your analysis, return a copy of form AD-1006 to the USDA-NRCS State Soil Scientist or his/her designee informing them of your determination.

Work with the RE/HUD to determine how the project will proceed. Document the conclusion:

☐Project will proceed with mitigation.

Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

Click here to enter text.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

☐Project will proceed without mitigation.

Explain why mitigation will not be made here:

See below

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

The project includes activities that could convert agricultural land to a non-agricultural use, but "prime farmland", "unique farmland", or "farmland of statewide or local importance" regulated under the Farmland Protection Policy Act does not occur on the project site. The subject site is in 'urban development'. The subject site is identified as ''urbanized area'' (UA) on the Census Bureau Map. Secondarily, a Custom Soil Resource Report for Warren County Kentucky - Garrison Gardens 1221 Crewdson Drive Bowling Green, Kentucky" indicates that site is comprised of 48.3% Fredonia-Bertrees-Urban land complex, 2 to 6% slopes, rocky (not prime farmland) and 51.7% Fredonia-Vertrees-Urban land complex, 6 to 12% slopes, eroded, rocky

(not prime farmland). Web soil survey attached. The project is in compliance with the Farmland Protection Policy Act. The project is in compliance with the Farmland Protection Policy Act.

Supporting Documentation

20240708_10264510357_78_Soil_Report.pdf

Garrison Gardens USA Census Urban Areas Map.pdf

Garrison Gardens - Urban Areas

8/8/2024

1:48,480

0 0.33 0.65 1.3 mi

0 0.5 1 2 km

USA Census Urban Areas

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

9.6m Resolution Metadata

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 Warren County, Kentucky

Garrison Gardens - 1221 Crewdson Drive Bowling Green, KY

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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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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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

Soil Map

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

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,610 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N 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 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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: Warren County, Kentucky
Survey Area Data: Version 23, Sep 10, 2023

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

Date(s) aerial images were photographed: Apr 10, 2023—Apr 12, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FnB	Fredonia-Vertrees-Urban land complex, 2 to 6 percent slopes, rocky	3.7	48.3%
FnC2	Fredonia-Vertrees-Urban land complex, 6 to 12 percent slopes, eroded, rocky	4.0	51.7%
Totals for Area of Interest		**7.7**	**100.0%**

Map Unit Descriptions

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

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

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

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

Warren County, Kentucky

FnB—Fredonia-Vertrees-Urban land complex, 2 to 6 percent slopes, rocky

Map Unit Setting

National map unit symbol: ll98
Elevation: 430 to 600 feet
Mean annual precipitation: 44 to 58 inches
Mean annual air temperature: 46 to 67 degrees F
Frost-free period: 177 to 211 days
Farmland classification: Not prime farmland

Map Unit Composition

Fredonia and similar soils: 37 percent
Vertrees and similar soils: 30 percent
Urban land: 25 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fredonia

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone

Typical profile

H1 - 0 to 5 inches: silt loam
H2 - 5 to 22 inches: silty clay
H3 - 22 to 37 inches: clay
R - 37 to 47 inches: bedrock

Properties and qualities

Slope: 2 to 6 percent
Surface area covered with cobbles, stones or boulders: 3.0 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Hydrologic Soil Group: C
Ecological site: F122XY005KY - Moderately Deep Well Drained Uplands
Hydric soil rating: No

Description of Vertrees

Setting

Landform: Ridges
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone, sandstone, and shale

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 15 inches: silty clay loam
H3 - 15 to 80 inches: silty clay

Properties and qualities

Slope: 2 to 6 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 low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Hydrologic Soil Group: C
Ecological site: F122XY005KY - Moderately Deep Well Drained Uplands
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Ridges

Interpretive groups

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

Minor Components

Crider

Percent of map unit: 3 percent
Hydric soil rating: No

Nicholson

Percent of map unit: 2 percent
Hydric soil rating: No

Pembroke

Percent of map unit: 2 percent
Hydric soil rating: No

Rock outcrop
Percent of map unit: 1 percent
Hydric soil rating: No

FnC2—Fredonia-Vertrees-Urban land complex, 6 to 12 percent slopes, eroded, rocky

Map Unit Setting
National map unit symbol: ll99
Elevation: 420 to 760 feet
Mean annual precipitation: 44 to 58 inches
Mean annual air temperature: 46 to 67 degrees F
Frost-free period: 177 to 211 days
Farmland classification: Not prime farmland

Map Unit Composition
Fredonia and similar soils: 37 percent
Vertrees and similar soils: 30 percent
Urban land: 25 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fredonia

Setting
Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone

Typical profile
H1 - 0 to 3 inches: silt loam
H2 - 3 to 22 inches: silty clay
H3 - 22 to 37 inches: clay
R - 37 to 47 inches: bedrock

Properties and qualities
Slope: 6 to 12 percent
Surface area covered with cobbles, stones or boulders: 3.0 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very low (0.06 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 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Hydrologic Soil Group: C
Ecological site: F122XY005KY - Moderately Deep Well Drained Uplands
Hydric soil rating: No

Description of Vertrees

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone, sandstone, and shale

Typical profile

H1 - 0 to 3 inches: silt loam
H2 - 3 to 15 inches: silty clay
H3 - 15 to 80 inches: clay

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Hydrologic Soil Group: C
Ecological site: F122XY005KY - Moderately Deep Well Drained Uplands
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Ridges

Interpretive groups

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

Minor Components

Baxter

Percent of map unit: 4 percent

Hydric soil rating: No

Crider

Percent of map unit: 3 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: No

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Glossary

Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the following National Soil Survey Handbook link: “National Soil Survey Handbook.”

ABC soil

A soil having an A, a B, and a C horizon.

Ablation till

Loose, relatively permeable earthy material deposited during the downwasting of nearly static glacial ice, either contained within or accumulated on the surface of the glacier.

AC soil

A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil

The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil

Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil

A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial cone

A semiconical type of alluvial fan having very steep slopes. It is higher, narrower, and steeper than a fan and is composed of coarser and thicker layers of material deposited by a combination of alluvial episodes and (to a much lesser degree) landslides (debris flow). The coarsest materials tend to be concentrated at the apex of the cone.

Alluvial fan

A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone. The material was deposited by a stream at the place where it issues from a narrow mountain valley or upland valley or where a tributary stream is near or at its junction with the main stream. The fan is steepest near its apex, which points upstream, and slopes gently and convexly outward (downstream) with a gradual decrease in gradient.

Alluvium

Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl

A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM)

The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions

Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon

A subsoil horizon characterized by an accumulation of illuvial clay.

Arroyo

The flat-floored channel of an ephemeral stream, commonly with very steep to vertical banks cut in unconsolidated material. It is usually dry but can be transformed into a temporary watercourse or short-lived torrent after heavy rain within the watershed.

Aspect

The direction toward which a slope faces. Also called slope aspect.

Association, soil

A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity)

The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low: 0 to 3
Low: 3 to 6
Moderate: 6 to 9
High: 9 to 12
Very high: More than 12

Backslope

The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp

A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Badland

A landscape that is intricately dissected and characterized by a very fine drainage network with high drainage densities and short, steep slopes and narrow interfluves. Badlands develop on surfaces that have little or no vegetative cover overlying unconsolidated or poorly cemented materials (clays, silts, or sandstones) with, in some cases, soluble minerals, such as gypsum or halite.

Bajada

A broad, gently inclined alluvial piedmont slope extending from the base of a mountain range out into a basin and formed by the lateral coalescence of a series of alluvial fans. Typically, it has a broadly undulating transverse profile, parallel to the mountain front, resulting from the convexities of component fans. The term is generally restricted to constructional slopes of intermontane basins.

Basal area

The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation

The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology)

A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding plane

A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology)

from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedding system

A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock

The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography

A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace

A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum

Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout (map symbol)

A saucer-, cup-, or trough-shaped depression formed by wind erosion on a preexisting dune or other sand deposit, especially in an area of shifting sand or loose soil or where protective vegetation is disturbed or destroyed. The adjoining accumulation of sand derived from the depression, where recognizable, is commonly included. Blowouts are commonly small.

Borrow pit (map symbol)

An open excavation from which soil and underlying material have been removed, usually for construction purposes.

Bottom land

An informal term loosely applied to various portions of a flood plain.

Boulders

Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks

A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.

Breast height

An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management

Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Butte

An isolated, generally flat-topped hill or mountain with relatively steep slopes and talus or precipitous cliffs and characterized by summit width that is less than the height of bounding escarpments; commonly topped by a caprock of resistant material and representing an erosion remnant carved from flat-lying rocks.

Cable yarding

A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing. To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Calcareous soil

A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Caliche

A general term for a prominent zone of secondary carbonate accumulation in surficial materials in warm, subhumid to arid areas. Caliche is formed by both geologic and pedologic processes. Finely crystalline calcium carbonate forms a nearly continuous surface-coating and void-filling medium in geologic (parent) materials. Cementation ranges from weak in nonindurated forms to very strong in indurated forms. Other minerals (e.g., carbonates, silicate, and sulfate) may occur as accessory cements. Most petrocalcic horizons and some calcic horizons are caliche.

California bearing ratio (CBR)

The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy

The leafy crown of trees or shrubs. (See Crown.)

Canyon

A long, deep, narrow valley with high, precipitous walls in an area of high local relief.

Capillary water

Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena

A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.

Cation

An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity

The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Catsteps

See Terracettes.

Cement rock

Shaly limestone used in the manufacture of cement.

Channery soil material

Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment

Control of unwanted vegetation through the use of chemicals.

Chiseling

Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Cirque

A steep-walled, semicircular or crescent-shaped, half-bowl-like recess or hollow, commonly situated at the head of a glaciated mountain valley or high on the side of a mountain. It was produced by the erosive activity of a mountain glacier. It commonly contains a small round lake (tarn).

Clay

As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions

See Redoximorphic features.

Clay film

A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Clay spot (map symbol)

A spot where the surface texture is silty clay or clay in areas where the surface layer of the soils in the surrounding map unit is sandy loam, loam, silt loam, or coarser.

Claypan

A dense, compact subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. The layer restricts the downward movement of water through the soil. A claypan is commonly hard when dry and plastic and sticky when wet.

Climax plant community

The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil

Sand or loamy sand.

Cobble (or cobblestone)

A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material

Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility)

See Linear extensibility.

Colluvium

Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex slope

Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil

A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions

See Redoximorphic features.

Conglomerate

A coarse grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system

Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage

A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil

Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping

Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section

The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coprogenous earth (sedimentary peat)

A type of limnic layer composed predominantly of fecal material derived from aquatic animals.

Corrosion (geomorphology)

A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

Corrosion (soil survey interpretations)

Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop

A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management

Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system

Growing crops according to a planned system of rotation and management practices.

Cross-slope farming

Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown

The upper part of a tree or shrub, including the living branches and their foliage.

Cryoturbate

A mass of soil or other unconsolidated earthy material moved or disturbed by frost action. It is typically coarser than the underlying material.

Cuesta

An asymmetric ridge capped by resistant rock layers of slight or moderate dip (commonly less than 15 percent slopes); a type of homocline produced by differential erosion of interbedded resistant and weak rocks. A cuesta has a long, gentle slope on one side (dip slope) that roughly parallels the inclined beds; on the other side, it has a relatively short and steep or clifflike slope (scarp) that cuts through the tilted rocks.

Culmination of the mean annual increment (CMAI)

The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave

The walls of excavations tend to cave in or slough.

Decreasers

The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing

Postponing grazing or resting grazing land for a prescribed period.

Delta

A body of alluvium having a surface that is fan shaped and nearly flat; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer

A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depression, closed (map symbol)

A shallow, saucer-shaped area that is slightly lower on the landscape than the surrounding area and that does not have a natural outlet for surface drainage.

Depth, soil

Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Desert pavement

A natural, residual concentration or layer of wind-polished, closely packed gravel, boulders, and other rock fragments mantling a desert surface. It forms where wind action and sheetwash have removed all smaller particles or where rock fragments have migrated upward through sediments to the surface. It typically protects the finer grained underlying material from further erosion.

Diatomaceous earth

A geologic deposit of fine, grayish siliceous material composed chiefly or entirely of the remains of diatoms.

Dip slope

A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace)

A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming

A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural)

Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Drainage, surface

Runoff, or surface flow of water, from an area.

Drainageway

A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Draw

A small stream valley that generally is shallower and more open than a ravine or gulch and that has a broader bottom. The present stream channel may appear inadequate to have cut the drainageway that it occupies.

Drift

A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.

Drumlin

A low, smooth, elongated oval hill, mound, or ridge of compact till that has a core of bedrock or drift. It commonly has a blunt nose facing the direction from which the ice approached and a gentler slope tapering in the other direction. The longer axis is parallel to the general direction of glacier flow. Drumlins are products of streamline (laminar) flow of glaciers, which molded the subglacial floor through a combination of erosion and deposition.

Duff

A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Dune

A low mound, ridge, bank, or hill of loose, windblown granular material (generally sand), either barren and capable of movement from place to place or covered and stabilized with vegetation but retaining its characteristic shape.

Earthy fill

See Mine spoil.

Ecological site

An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation

The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation

A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian deposit

Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.

Ephemeral stream

A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation

A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion

The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (accelerated)

Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion (geologic)

Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion pavement

A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

Erosion surface

A land surface shaped by the action of erosion, especially by running water.

Escarpment

A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Escarpment, bedrock (map symbol)

A relatively continuous and steep slope or cliff, produced by erosion or faulting, that breaks the general continuity of more gently sloping land surfaces. Exposed material is hard or soft bedrock.

Escarpment, nonbedrock (map symbol)

A relatively continuous and steep slope or cliff, generally produced by erosion but in some places produced by faulting, that breaks the continuity of more gently sloping land surfaces. Exposed earthy material is nonsoil or very shallow soil.

Esker

A long, narrow, sinuous, steep-sided ridge of stratified sand and gravel deposited as the bed of a stream flowing in an ice tunnel within or below the ice (subglacial) or between ice walls on top of the ice of a wasting glacier and left

behind as high ground when the ice melted. Eskers range in length from less than a kilometer to more than 160 kilometers and in height from 3 to 30 meters.

Extrusive rock

Igneous rock derived from deep-seated molten matter (magma) deposited and cooled on the earth's surface.

Fallow

Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan remnant

A general term for landforms that are the remaining parts of older fan landforms, such as alluvial fans, that have been either dissected or partially buried.

Fertility, soil

The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat)

The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity

The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope

A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil

Sandy clay, silty clay, or clay.

Firebreak

An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom

An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flaggy soil material

Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone

A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain

The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms

A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain splay

A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

Flood-plain step

An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial

Of or pertaining to rivers or streams; produced by stream or river action.

Foothills

A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

Footslope

The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb

Any herbaceous plant not a grass or a sedge.

Forest cover

All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type

A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan

A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil

The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai

Commonly, a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope. Typically, the microrelief of clayey soils that shrink and swell considerably with changes in moisture content.

Glaciofluvial deposits

Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur in the form of outwash plains, valley trains, deltas, kames, eskers, and kame terraces.

Glaciolacustrine deposits

Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are bedded or laminated.

Gleyed soil

Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping

Growing crops in strips that grade toward a protected waterway.

Grassed waterway

A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel

Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravel pit (map symbol)

An open excavation from which soil and underlying material have been removed and used, without crushing, as a source of sand or gravel.

Gravelly soil material

Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Gravelly spot (map symbol)

A spot where the surface layer has more than 35 percent, by volume, rock fragments that are mostly less than 3 inches in diameter in an area that has less than 15 percent rock fragments.

Green manure crop (agronomy)

A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water

Water filling all the unblocked pores of the material below the water table.

Gully (map symbol)

A small, steep-sided channel caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage whereas a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock

Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim

Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan

A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology)

A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat)

Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops

Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill

A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope

A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil

A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the “Soil Survey Manual.” The major horizons of mineral soil are as follows:

O horizon: An organic layer of fresh and decaying plant residue.

L horizon: A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon: The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon: The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon: The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon: The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon: Soft, consolidated bedrock beneath the soil.

R layer: Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

M layer: A root-limiting subsoil layer consisting of nearly continuous, horizontally oriented, human-manufactured materials.

W layer: A layer of water within or beneath the soil.

Humus

The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups

Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties include depth to a seasonal high water table, the infiltration rate, and depth to a layer that significantly restricts the downward movement of water. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock

Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation

The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil

A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers

Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration

The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity

The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate

The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate

The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Very low: Less than 0.2
Low: 0.2 to 0.4
Moderately low: 0.4 to 0.75
Moderate: 0.75 to 1.25
Moderately high: 1.25 to 1.75
High: 1.75 to 2.5
Very high: More than 2.5

Interfluve

A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology)

A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream

A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders

On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions

See Redoximorphic features.

Irrigation

Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin: Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border: Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding: Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation: Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle): Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow: Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler: Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation: Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding: Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame

A low mound, knob, hummock, or short irregular ridge composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin of a melting glacier; by a supraglacial stream in a low place or hole on the surface of the glacier; or as a ponded deposit on the surface or at the margin of stagnant ice.

Karst (topography)

A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

Knoll

A small, low, rounded hill rising above adjacent landforms.

Ksat

See Saturated hydraulic conductivity.

Lacustrine deposit

Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake plain

A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace

A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Landfill (map symbol)

An area of accumulated waste products of human habitation, either above or below natural ground level.

Landslide

A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones

Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Lava flow (map symbol)

A solidified, commonly lobate body of rock formed through lateral, surface outpouring of molten lava from a vent or fissure.

Leaching

The removal of soluble material from soil or other material by percolating water.

Levee (map symbol)

An embankment that confines or controls water, especially one built along the banks of a river to prevent overflow onto lowlands.

Linear extensibility

Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^{1}/_{3}$- or $^{1}/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit

The moisture content at which the soil passes from a plastic to a liquid state.

Loam

Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess

Material transported and deposited by wind and consisting dominantly of silt-sized particles.

Low strength

The soil is not strong enough to support loads.

Low-residue crops

Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Marl

An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

Marsh or swamp (map symbol)

A water-saturated, very poorly drained area that is intermittently or permanently covered by water. Sedges, cattails, and rushes are the dominant vegetation in marshes, and trees or shrubs are the dominant vegetation in swamps. Not used in map units where the named soils are poorly drained or very poorly drained.

Mass movement

A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses

See Redoximorphic features.

Meander belt

The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.

Meander scar

A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.

Meander scroll

One of a series of long, parallel, close-fitting, crescent-shaped ridges and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.

Mechanical treatment

Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil

Very fine sandy loam, loam, silt loam, or silt.

Mesa

A broad, nearly flat topped and commonly isolated landmass bounded by steep slopes or precipitous cliffs and capped by layers of resistant, nearly horizontal rocky material. The summit width is characteristically greater than the height of the bounding escarpments.

Metamorphic rock

Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth’s crust. Nearly all such rocks are crystalline.

Mine or quarry (map symbol)

An open excavation from which soil and underlying material have been removed and in which bedrock is exposed. Also denotes surface openings to underground mines.

Mine spoil

An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

Mineral soil

Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage

Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area

A kind of map unit that has little or no natural soil and supports little or no vegetation.

Miscellaneous water (map symbol)

Small, constructed bodies of water that are used for industrial, sanitary, or mining applications and that contain water most of the year.

Moderately coarse textured soil

Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil

Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon

A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine

In terms of glacial geology, a mound, ridge, or other topographically distinct accumulation of unsorted, unstratified drift, predominantly till, deposited primarily by the direct action of glacial ice in a variety of landforms. Also, a general term for a landform composed mainly of till (except for kame moraines, which are composed mainly of stratified outwash) that has been deposited by a glacier. Some types of moraines are disintegration, end, ground, kame, lateral, recessional, and terminal.

Morphology, soil

The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil

Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain

A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can

occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion.

Muck

Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mucky peat

See Hemic soil material.

Mudstone

A blocky or massive, fine grained sedimentary rock in which the proportions of clay and silt are approximately equal. Also, a general term for such material as clay, silt, claystone, siltstone, shale, and argillite and that should be used only when the amounts of clay and silt are not known or cannot be precisely identified.

Munsell notation

A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon

A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil

A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules

See Redoximorphic features.

Nose slope (geomorphology)

A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant

Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter

Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low: Less than 0.5 percent
Low: 0.5 to 1.0 percent
Moderately low: 1.0 to 2.0 percent
Moderate: 2.0 to 4.0 percent
High: 4.0 to 8.0 percent
Very high: More than 8.0 percent

Outwash

Stratified and sorted sediments (chiefly sand and gravel) removed or “washed out” from a glacier by meltwater streams and deposited in front of or beyond the end moraine or the margin of a glacier. The coarser material is deposited nearer to the ice.

Outwash plain

An extensive lowland area of coarse textured glaciofluvial material. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Paleoterrace

An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan

A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material

The unconsolidated organic and mineral material in which soil forms.

Peat

Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped

An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment

A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

Pedon

The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation

The movement of water through the soil.

Perennial water (map symbol)

Small, natural or constructed lakes, ponds, or pits that contain water most of the year.

Permafrost

Ground, soil, or rock that remains at or below 0 degrees C for at least 2 years. It is defined on the basis of temperature and is not necessarily frozen.

pH value

A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil

A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping

Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting

Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit

The moisture content at which a soil changes from semisolid to plastic.

Plasticity index

The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plateau (geomorphology)

A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

Playa

The generally dry and nearly level lake plain that occupies the lowest parts of closed depressions, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff. Playa deposits are fine grained and may or may not have a high water table and saline conditions.

Plinthite

The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan

A compacted layer formed in the soil directly below the plowed layer.

Ponding

Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded

Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings

See Redoximorphic features.

Potential native plant community

See Climax plant community.

Potential rooting depth (effective rooting depth)

Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning

Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil

The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil

A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use

Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and

promotes the accumulation of litter and mulch necessary to conserve soil and water.

Rangeland

Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Reaction, soil

A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid: Less than 3.5
Extremely acid: 3.5 to 4.4
Very strongly acid: 4.5 to 5.0
Strongly acid: 5.1 to 5.5
Moderately acid: 5.6 to 6.0
Slightly acid: 6.1 to 6.5
Neutral: 6.6 to 7.3
Slightly alkaline: 7.4 to 7.8
Moderately alkaline: 7.9 to 8.4
Strongly alkaline: 8.5 to 9.0
Very strongly alkaline: 9.1 and higher

Red beds

Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations

See Redoximorphic features.

Redoximorphic depletions

See Redoximorphic features.

Redoximorphic features

Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
   A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*
   B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*
   C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:
   A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*
   B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).
3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix

See Redoximorphic features.

Regolith

All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief

The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

Residuum (residual soil material)

Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

Rill

A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

Riser

The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

Road cut

A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments

Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Rock outcrop (map symbol)

An exposure of bedrock at the surface of the earth. Not used where the named soils of the surrounding map unit are shallow over bedrock or where “Rock outcrop” is a named component of the map unit.

Root zone

The part of the soil that can be penetrated by plant roots.

Runoff

The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil

A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Saline spot (map symbol)

An area where the surface layer has an electrical conductivity of 8 mmhos/cm more than the surface layer of the named soils in the surrounding map unit. The surface layer of the surrounding soils has an electrical conductivity of 2 mmhos/cm or less.

Sand

As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone

Sedimentary rock containing dominantly sand-sized particles.

Sandy spot (map symbol)

A spot where the surface layer is loamy fine sand or coarser in areas where the surface layer of the named soils in the surrounding map unit is very fine sandy loam or finer.

Sapric soil material (muck)

The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saturated hydraulic conductivity (Ksat)

The ease with which pores of a saturated soil transmit water. Formally, the proportionality coefficient that expresses the relationship of the rate of water movement to hydraulic gradient in Darcy's Law, a law that describes the rate of water movement through porous media. Commonly abbreviated as "Ksat." Terms describing saturated hydraulic conductivity are:

Very high: 100 or more micrometers per second (14.17 or more inches per hour)

High: 10 to 100 micrometers per second (1.417 to 14.17 inches per hour)

Moderately high: 1 to 10 micrometers per second (0.1417 inch to 1.417 inches per hour)

Moderately low: 0.1 to 1 micrometer per second (0.01417 to 0.1417 inch per hour)

Low: 0.01 to 0.1 micrometer per second (0.001417 to 0.01417 inch per hour)

Very low: Less than 0.01 micrometer per second (less than 0.001417 inch per hour).

To convert inches per hour to micrometers per second, multiply inches per hour by 7.0572. To convert micrometers per second to inches per hour, multiply micrometers per second by 0.1417.

Saturation

Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification

The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Sedimentary rock

A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

Sequum

A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil

A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Severely eroded spot (map symbol)

An area where, on the average, 75 percent or more of the original surface layer has been lost because of accelerated erosion. Not used in map units in which “severely eroded,” “very severely eroded,” or “gullied” is part of the map unit name.

Shale

Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.

Sheet erosion

The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Short, steep slope (map symbol)

A narrow area of soil having slopes that are at least two slope classes steeper than the slope class of the surrounding map unit.

Shoulder

The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell

The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Shrub-coppice dune

A small, streamlined dune that forms around brush and clump vegetation.

Side slope (geomorphology)

A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica

A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio

The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt

As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone

An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils

Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole (map symbol)

A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Site index

A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides (pedogenic)

Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slide or slip (map symbol)

A prominent landform scar or ridge caused by fairly recent mass movement or descent of earthy material resulting from failure of earth or rock under shear stress along one or several surfaces.

Slope

The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Slope alluvium

Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill

The slow filling of ponds, resulting from restricted water transmission in the soil.

Slow water movement

Restricted downward movement of water through the soil. See Saturated hydraulic conductivity.

Sodic (alkali) soil

A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodic spot (map symbol)

An area where the surface layer has a sodium adsorption ratio that is at least 10 more than that of the surface layer of the named soils in the surrounding map unit. The surface layer of the surrounding soils has a sodium adsorption ratio of 5 or less.

Sodicity

The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^{+} to $Ca^{++} + Mg^{++}$. The degrees of sodicity and their respective ratios are:

Slight: Less than 13:1
Moderate: 13-30:1
Strong: More than 30:1

Sodium adsorption ratio (SAR)

A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock

Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil

A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates

Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand: 2.0 to 1.0
Coarse sand: 1.0 to 0.5
Medium sand: 0.5 to 0.25
Fine sand: 0.25 to 0.10
Very fine sand: 0.10 to 0.05
Silt: 0.05 to 0.002
Clay: Less than 0.002

Solum

The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Spoil area (map symbol)

A pile of earthy materials, either smoothed or uneven, resulting from human activity.

Stone line

In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones

Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony

Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stony spot (map symbol)

A spot where 0.01 to 0.1 percent of the soil surface is covered by rock fragments that are more than 10 inches in diameter in areas where the surrounding soil has no surface stones.

Strath terrace

A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).

Stream terrace

One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping

Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil

The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are:

Platy: Flat and laminated

Prismatic: Vertically elongated and having flat tops

Columnar: Vertically elongated and having rounded tops

Angular blocky: Having faces that intersect at sharp angles (planes)

Subangular blocky: Having subrounded and planar faces (no sharp angles)

Granular: Small structural units with curved or very irregular faces

Structureless soil horizons are defined as follows:

Single grained: Entirely noncoherent (each grain by itself), as in loose sand

Massive: Occurring as a coherent mass

Stubble mulch

Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil

Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling

Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum

The part of the soil below the solum.

Subsurface layer

Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow

The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit

The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer

The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil

The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus

Rock fragments of any size or shape (commonly coarse and angular) derived from and lying at the base of a cliff or very steep rock slope. The accumulated mass of such loose broken rock formed chiefly by falling, rolling, or sliding.

Taxadjuncts

Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terminal moraine

An end moraine that marks the farthest advance of a glacier. It typically has the form of a massive arcuate or concentric ridge, or complex of ridges, and is underlain by till and other types of drift.

Terrace (conservation)

An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field

generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology)

A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Terracettes

Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.

Texture, soil

The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer

Otherwise suitable soil material that is too thin for the specified use.

Till

Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.

Till plain

An extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines.

Tilth, soil

The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope

The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil

The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements

Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread

The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Tuff

A generic term for any consolidated or cemented deposit that is 50 percent or more volcanic ash.

Upland

An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Valley fill

The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation

Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve

A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Very stony spot (map symbol)

A spot where 0.1 to 3.0 percent of the soil surface is covered by rock fragments that are more than 10 inches in diameter in areas where the surface of the surrounding soil is covered by less than 0.01 percent stones.

Water bars

Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering

All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded

Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wet spot (map symbol)

A somewhat poorly drained to very poorly drained area that is at least two drainage classes wetter than the named soils in the surrounding map unit.

Wilting point (or permanent wilting point)

The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow

The uprooting and tipping over of trees by the wind.

ENCLOSURE J

FLOODPLAIN MANAGEMENT

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Floodplain Management (CEST and EA)

General Requirements	Legislation	Regulation
Executive Order 11988, Floodplain Management, requires Federal activities to avoid impacts to floodplains and to avoid direct and indirect support of floodplain development to the extent practicable.	Executive Order 11988 Executive Order 13690 42 USC 4001-4128 42 USC 5154a	24 CFR 55
Reference		
https://www.hudexchange.info/environmental-review/floodplain-management		

1. **Does this project meet an exemption at 24 CFR 55.12 from compliance with HUD's floodplain management regulations in Part 55 or utilize the delayed compliance date for certain Office of Housing programs?**
   ☐ Yes
   Select the applicable citation at 24 CFR 55.12 and provide supporting documentation for the determination if applicable.

   a) ☐ HUD-assisted activities described in 24 CFR 58.34 and 58.35(b)
   b) ☐ HUD-assisted activities described in 24 CFR 50.19, except as otherwise indicated in § 50.19
   c) ☐ The approval of financial assistance for restoring and preserving the natural and beneficial functions and values of floodplains and wetlands, including through acquisition of such floodplain and wetland property, where a permanent covenant or comparable restriction is place on the property's continued use for flood control, wetland projection, open space, or park land, but only if:
      (1) The property is cleared of all existing buildings and walled structures; and
      (2) The property is cleared of related improvements except those which:
         (i) Are directly related to flood control, wetland protection, open space, or park land (including playgrounds and recreation areas);
         (ii) Do not modify existing wetland areas or involve fill, paving, or other ground disturbance beyond minimal trails or paths; and
         (iii) Are designed to be compatible with the beneficial floodplain or wetland function of the property.

d) ☐ An action involving a repossession, receivership, foreclosure, or similar acquisition of property to protect or enforce HUD's financial interests under previously approved loans, grants, mortgage insurance, or other HUD assistance

e) ☐ Policy-level actions described at 24 CFR 50.16 that do not involve site-based decisions

f) ☐ A minor amendment to a previously approved action with no additional adverse impact on or from a floodplain or wetland;

g) ☐ HUD's or the responsible entity's approval of a project site, an incidental portion of which is situated in the FFRMS floodplain (not including the floodway, LiMWA, or coastal high hazard area) but only if:

(1) The proposed project site does not include any existing or proposed buildings or improvements that modify or occupy the FFRMS floodplain except de minimis improvements such as recreation areas and trails; and

(2) the proposed project will not result in any new construction in or modifications of a wetland

h) ☐ Issuance or use of Housing Vouchers or other forms of rental subsidy where HUD, the awarding community, or the public housing agency that administers the contract awards rental subsidies that are not project-based (i.e., do not involve site-specific subsidies)

i) ☐ Special projects directed to the removal of material and architectural barriers that restrict the mobility of and accessibility to elderly and persons with disabilities.

Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.

☐ Yes. Office of Housing programs utilizing the January 1, 2025 compliance date. These reviews must comply with the 2013 version of the Part 55 regulations. Continue to Worksheet Summary for 2013 version to upload supporting documentation.

☒ No. *Continue to Question 2.*

2. Does the project include a Critical Action?

☐ Yes. Describe the Critical Action. Examples of Critical Actions include projects involving hospitals, fire and police stations, nursing homes, hazardous chemical storage, storage of valuable records, and utility plants. Continue to Question 4.

☒ No. Continue to Question 3.

3. **Determine the extent of the FFRMS floodplain and provide mapping documentation in support of that determination.**
The extent of the FFRMS floodplain can be determined using a Climate Informed Science Approach (CISA), 0.2 percent flood approach (0.2 PFA), or freeboard value approach (FVA). For projects in areas without available CISA data or without FEMA Flood Insurance Rate Maps (FIRMs), Flood Insurance Studies (FISs) or Advisory Base Flood Elevations (ABFEs), use the best available information to determine flood elevation. Include documentation and an explanation of why this is the best available information for the site. Note that newly constructed and substantially improved structures must be elevated to the FFRMS floodplain regardless of the approach chosen to determine the floodplain.

Select one of the following three options:

☐ CISA for non-critical actions. If using a local tool, data, or resources, ensure that the FFRMS elevation is higher than would have been determined using the 0.2 PFA or the FVA.

☐ 0.2-PFA. Where FEMA has defined the 0.2-percent-annual-chance floodplain, the FFRMS floodplain is the area that FEMA has designated as within the 0.2-percent-annual-chance floodplain.

☒ FVA. If neither CISA nor 0.2-PFA is available, for non-critical actions, the FFRMS floodplain is the area that results from adding two feet to the base flood elevation as established by the effective FIRM or FIS or—if available —a FEMA-provided preliminary or pending FIRM or FIS or advisory base flood elevations, whether regulatory or informational in nature. However, an interim or preliminary FEMA map cannot be used if it is lower than the current FIRM or FIS.

a. **Does your project occur in the FFRMS floodplain?**
☐Yes, continue to part b.
☒ No. Review for floodplain management is complete.

b. **Is your project located in any of the floodplain categories below? Select all that apply. If none apply, continue to question 7.**

☐ Floodway: *Continue to Question 5. Floodways.*

☐ Coastal High Hazard Area (V Zone) or Limit of Moderate Wave Action (LiMWA): *Continue to Question 6. Coastal High Hazard Areas and LiMWAs.*

4. **Determine the extent of the FFRMS floodplain and provide mapping documentation in support of that determination.**
The extent of the FFRMS floodplain can be determined using a Climate Informed Science Approach (CISA), or the higher of the 0.2 percent flood approach (0.2 PFA), or freeboard value approach (FVA). For projects in areas without available CISA data or without FEMA Flood Insurance Rate Maps (FIRMs), Flood Insurance Studies (FISs) or Advisory Base Flood Elevations (ABFEs), use the best available information to determine flood elevation. Note that newly constructed and substantially improved structures must be elevated to the FFRMS floodplain regardless of the approach chosen to determine the floodplain.

Utilize CISA to determine the FFRMS floodplain for critical actions

☐ CISA for Critical Actions. If using a local tool, ensure that the FFRMS elevation provided is higher than the 0.2 PFA or 3' above the base flood elevation.

OR;

Choose the higher of 0.2 PFA or FVA elevations

☐ 0.2-PFA. Where FEMA has defined the 0.2-percent-annual-chance floodplain, the FFRMS floodplain is the area that FEMA has designated as within the 0.2-percent-annual-chance floodplain.

☐ FVA. For critical actions, the FFRMS floodplain is the area that results from adding three feet to the base flood elevation as established by the effective FEMA FIRM or FIS or—if available —a FEMA-provided preliminary or pending FIRM or FIS or advisory base flood elevations, whether regulatory or informational in nature. However, an interim or preliminary FEMA map cannot be used if it is lower than the current FIRM or FIS.

a. Does your project occur in the FFRMS floodplain?

☐Yes, continue to part b.

☐No. Review for floodplain management is complete.

b. Is your project located in any of the floodplain categories below? Select all that apply. If none apply, continue to question 7.

☐ Floodway: *Continue to Question 5. Floodways.*

☐ Coastal High Hazard Area (V Zone) or LiMWA: *Continue to Question 6. Coastal High Hazard Areas and LiMWAs.*

5. Floodways

Do the floodway exemptions at 55.8 or 55.21 apply?

☐ Yes

The 8-Step Process is required. Document mitigation measures necessary to meet the requirements in 55.8 or 55.21. Provide a completed 8-Step Process, including the early public notice and the final notice.

Continue to Question 7. 8-Step Process.

☐ No

Federal assistance may not be used at this location. You must either choose an alternate site or cancel the project at this location.

6. Coastal High Hazard Area (V Zone) and LiMWAs

Do the exemptions at 55.8 or 55.21 apply?

☐ Yes

The 8-Step Process is required. Document mitigation measures necessary to mee the requirements in 55.8 or 55.21. Provide a completed 8-Step Process, including the early public notice and the final notice.

Continue to Question 7. 8-Step Process.

☐ No

Federal assistance may not be used at this location. You must either choose an alternate site or cancel the project at this location.

7. 8-Step Process.

Does the 8-Step Process apply? Select one of the following options:

☐ 8-Step Process is inapplicable per 55.13.

Select the applicable citation:

☐ (a) HUD's mortgage insurance actions and other financial assistance for the purchasing, mortgaging, or refinancing of existing one- to four-family properties in communities that are in the Regular Program of the NFIP and in good standing (i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24), where the action is not a critical action and the property is not located in a floodway, coastal high hazard area, or LiMWA;

☐ (b) Financial assistance for minor repairs or improvements on one- to four-family properties that do not meet the thresholds for "substantial improvement" under § 55.2(b)(12);

☐ (c) HUD or a recipient's actions involving the disposition of individual HUD or recipient held, one- to four-family properties;

☐ (d) HUD guarantees under the Loan Guarantee Recovery Fund Program (24 CFR part 573), where any new construction or rehabilitation financed by the existing loan or mortgage has been completed prior to the filing of an application under the program, and the refinancing will not allow further construction or rehabilitation, nor result in any physical impacts or changes except for routine maintenance;

☐ (e) The approval of financial assistance to lease units within an existing structure located within the floodplain, but only if;

(1) The structure is located outside the floodway or coastal high hazard area, and is in a community that is in the Regular Program of the NFIP and in good standing (i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24); and

(2) The project is not a critical action; and

(3) The entire structure is or will be fully insured or insured to the maximum extent available under the NFIP for at least the term of the lease.

☐ (f) Special projects for the purpose of improving efficiency of utilities or installing renewable energy that involve the repair, rehabilitation, modernization, weatherization, or improvement of existing structures or infrastructure, do not meet the thresholds for "substantial improvement" under § 55.2(b)(12), and do not include the installation of equipment below the FFRMS floodplain elevation.

Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.

☐ 5-Step Process is applicable per 55.14.

Provide documentation of 5-Step Process.

Select the applicable citation:

- ☐ (a) HUD actions involving the disposition of HUD-acquired multifamily housing projects or "bulk sales" of HUD-acquired one- to four-family properties in communities that are in the Regular Program of the National Flood Insurance Program (NFIP) and in good standing (i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24).
- ☐ (b)HUD's actions under the National Housing Act (12 U.S.C. 1701) for the purchase or refinancing of existing multifamily housing projects, hospitals, nursing homes, assisted living facilities, board and care facilities, and intermediate care facilities, in communities that are in good standing under the NFIP.
- ☐ (c) HUD's or the recipient's actions under any HUD program involving the repair, rehabilitation, modernization, weatherization, or improvement of existing multifamily housing projects, hospitals, nursing homes, assisted living facilities, board and care facilities, intermediate care facilities, and one- to four-family properties, in communities that are in the Regular Program of the National Flood Insurance Program (NFIP) and are in good standing, provided that the number of units is not increased more than 20 percent, the action does not involve a conversion from nonresidential to residential land use, the action does not meet the thresholds for "substantial improvement" under § 55.2(b)(10), and the footprint of the structure and paved areas is not increased by more than 20 percent.
- ☐ (d) HUD's (or the recipient's) actions under any HUD program involving the repair, rehabilitation, modernization, weatherization, or improvement of existing nonresidential buildings and structures, in communities that are in the Regular Program of the NFIP and are in good standing, provided that the action does not meet the thresholds for "substantial improvement" under § 55.2(b)(10) and that the footprint of the structure and paved areas is not increased by more than 20 percent
- ☐ (e) HUD's or the recipient's actions under any HUD program involving the repair, rehabilitation, or replacement of existing nonstructural improvements including streets, curbs and gutters, where any increase of the total impervious surface area of the facility is de minimis. This provision does not include critical actions, levee systems, chemical storage facilities (including any tanks), wastewater facilities, or sewer lagoons.

Continue to Question 8. Mitigation.

☐ 8-Step Process applies.

Provide a completed 8-Step Process, including the early public notice and the final notice.

Continue to Question 8. Mitigation.

8. Mitigation

For the project to comply with this section, all adverse impacts must be mitigated. Explain in detail the measures that must be implemented to mitigate the impact or effect, including the timeline for implementation. Note: newly constructed and substantially improved structures within the FFRMS floodplain must be elevated to the FFRMS floodplain elevation or floodproofed, if applicable.

Which of the following if any mitigation/minimization measures have been identified for this project in the 8-Step or 5-Step Process? Select all that apply.

- ☐ Buyout and demolition or other supported clearance of floodplain structures
- ☐ Insurance purchased in excess of statutory requirement under the Flood Disaster Protection Act of 1973
- ☐ Permeable surfaces
- ☐ Natural landscape enhancements that maintain or restore natural hydrology
- ☐ Planting or restoring native plant species
- ☐ Bioswales
- ☐ Stormwater capture and reuse
- ☐ Green or vegetative roofs with drainage provisions
- ☐ Natural Resources Conservation Service conservation easements or similar easements
- ☐ Floodproofing of structures as allowable (e.g. non-residential floors)
- ☐ Elevating structures (including freeboard above the required base flood elevations)
- ☐ Levee or structural protection from flooding
- ☐ Channelizing or redefining the floodway or floodplain through a Letter of Map Revision (LOMR)

Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- FIRM panel numbers
- CISA data or maps
- Information on other data or tools used or accessed
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

Include all documentation supporting your findings in your submission to HUD

This project does not occur in the FFRMS floodplain. The FVA was used via the beta program for the FFRMS floodplain evaluation tool recognized by HUD. The FFRMS Freeboard Value Approach report created 7/20/2024 states "Based on the user-defined location and non-critical designation, the proposed action IS NOT in the FFRMS floodplain." The project is in compliance with Executive Orders 11988 and 13690.

Worksheet Summary for 2013 Version
Compliance Determination

Attach 'Floodplain Management Partner Worksheet' (OMB No. 2506-0177), FIRM map indicating project location, and summary of 8-step or 5-step decision making process if applicable.

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

Include all documentation supporting your findings in your submission to HUD

This project does not occur in the FFRMS floodplain. The FVA was used via the beta program for the FFRMS floodplain evaluation tool recognized by HUD. The FFRMS Freeboard Value Approach report created 7/20/2024 states "Based on the user-defined location and non-critical designation, the proposed action IS NOT in the FFRMS floodplain." The project is in compliance with Executive Orders 11988 and 13690.

Supporting Documentation

FFRMS-Freeboard-Value-Approach-Report.pdf

FFRMS Freeboard Value Approach Report

Created: 7/20/2024

Summary

Based on the user-defined location and non-critical designation, the proposed action is not in the FFRMS floodplain. However, there are additional resilience measures you might consider. Check on the resources below to learn more.

Projects located in the FFRMS floodplain should be designed consistent with the applicable policies and directives of the agency taking or approving the action.

Proposed Action Details

Location centroid (Latitude, Longitude): 36°59'55.32"N 86°28'3.72"W

Service criticality: Non-critical Service Life: Through 2050

Consult with the applicable agency to identify any agency-specific policies, guidance, protocols, or direction on the critical action determination. The services of a professional engineer, architect, or other licensed design professional are recommended for designing critical actions or assets with long intended service life, and for other situations where risk tolerance is low because of unique characteristics of the action.

Considerations of Freeboard approach at this location

No additional considerations at this location.

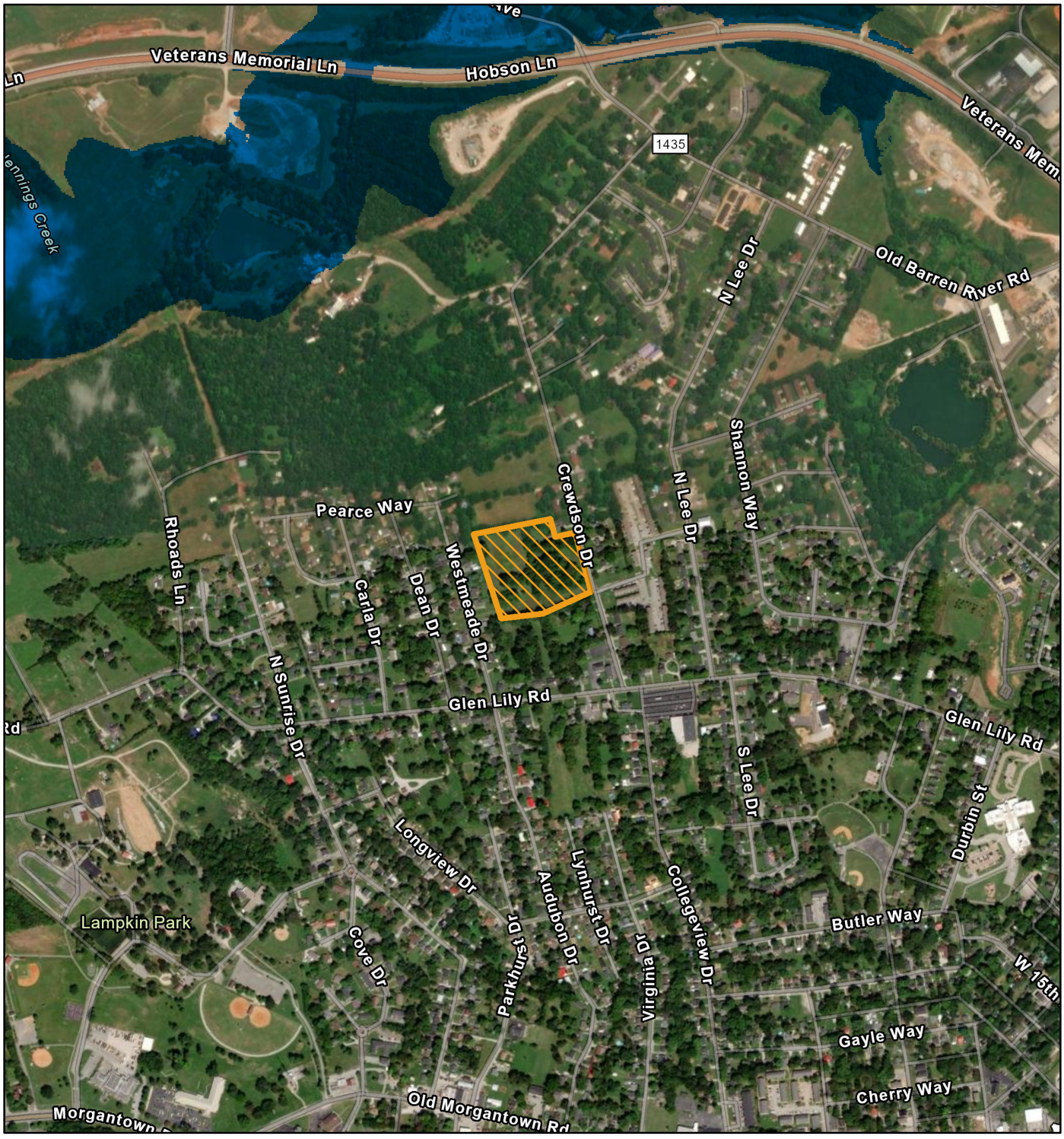
Next Steps

This is the Step 1 of the 8-step decision-making process required in section 2(a) of Executive Order 11988, Floodplain Management (Determine if the proposed action within the FFRMS floodplain). Follow the remainder of the 8-step process outlined in the Implementation Guidelines (2015), page 4, including Step 5 which include minimizing harm and restoring and preserving natural and beneficial values. (Please refer to the Nature Based Solutions section). A licensed design professional should be contacted for the design or engineering of the action. If an action is in the FFRMS floodplain and its location is the only practicable alternative, then you may need the services of a professional engineer, architect, or other licensed design professional to determine how to minimize the impacts of flood and make the action resilient (e.g., elevation, flood-proofing and/or nature-based solutions), especially when dealing with critical actions.

Assistance

To contact the FEMA Regional Floodplain Management & Insurance FFRMS Point of Contact for assistance, e-mail FEMA at FEMA-FFRMS-SUPPORT-REQUEST@fema.dhs.gov

Project Location



July 20, 2024

Project Location

FFRMS Floodplain

1:13,260

0 0.07 0.15 0.3 mi

0 0.13 0.25 0.5 km

ENCLOSURE K

HISTORIC PRESERVATION

OMB No. 2506-0177
(exp.2/28/2025)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Historic Preservation (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/historic-preservation

Threshold

Is Section 106 review required for your project?

☐ No, because a Programmatic Agreement states that all activities included in this project are exempt. (See the PA Database to find applicable PAs.)
Either provide the PA itself or a link to it here. Mark the applicable exemptions or include the text here:
Click here to enter text.

→ *Continue to the Worksheet Summary.*

☐ No, because the project consists solely of activities included in a No Potential to Cause Effects memo or other determination [36 CFR 800.3(a)(1)].
Either provide the memo itself or a link to it here. Explain and justify the other determination here:
Click here to enter text.

→ *Continue to the Worksheet Summary.*

☒Yes, because the project includes activities with potential to cause effects (direct or indirect). → *Continue to Step 1.*

The Section 106 Process
After determining the need to do a Section 106 review, HUD or the RE will initiate consultation with regulatory and other interested parties, identify and evaluate historic properties, assess effects of the project on properties listed on or eligible for the National Register of Historic Places, and resolve any adverse effects through project design modifications or mitigation.
Step 1: Initiate consultation
Step 2: Identify and evaluate historic properties
Step 3: Assess effects of the project on historic properties
Step 4: Resolve any adverse effects

Only RE or HUD staff may initiate the Section 106 consultation process. Partner entities may gather information, including from SHPO records, identify and evaluate historic properties, and make initial assessments of effects of the project on properties listed in or eligible for the National Register of Historic Place. Partners should then provide their RE or HUD with all of their analysis and documentation so that they may initiate consultation.

Step 1 - Initiate Consultation

The following parties are entitled to participate in Section 106 reviews: Advisory Council on Historic Preservation; State Historic Preservation Officers (SHPOs); federally recognized Indian tribes/Tribal Historic Preservation Officers (THPOs); Native Hawaiian Organizations (NHOs); local governments; and project grantees. The general public and individuals and organizations with a demonstrated interest in a project may participate as consulting parties at the discretion of the RE or HUD official. Participation varies with the nature and scope of a project. Refer to HUD's website for guidance on consultation, including the required timeframes for response. Consultation should begin early to enable full consideration of preservation options.

Use the When To Consult With Tribes checklist within Notice CPD-12-006: Process for Tribal Consultation to determine if the RE or HUD should invite tribes to consult on a particular project. Use the Tribal Directory Assessment Tool (TDAT) to identify tribes that may have an interest in the area where the project is located. Note that only HUD or the RE may initiate consultation with Tribes. Partner entities may prepare a draft letter for the RE or HUD to use to initiate consultation with tribes, but may not send the letter themselves.

List all organizations and individuals that you believe may have an interest in the project here:

The Kentucky SHPO was contacted for their review via the Section 106 process. Their finding of "No Historic Properties Affected" was received August 6, 2024. Tribes, as identified in the Tribal Directory Assessment Information (TDAT) included three tribes for Warren County, Kentucky including the Cherokee Nation, Eastern Band of Cherokee Indians, and Osage Nation. All tribes were invited to be consulting parties on August 13, 2024. The Cherokee Nation responded on September 11, 2024 stating that the Nation does not foresee this project imparting impacts to Cherokee cultural resources as this time. No response was received from the Eastern Band of Cherokee Indians as of October 22, 2024. No response was received from the Osage Nation as of October 22, 2024.

→ *Continue to Step 2.*

Step 2 - Identify and Evaluate Historic Properties

Provide a preliminary definition of the Area of Potential Effect (APE), either by entering the address(es) or providing a map depicting the APE. Attach an additional page if necessary.

Click here to enter text.

Gather information about known historic properties in the APE. Historic buildings, districts and archeological sites may have been identified in local, state, and national surveys and registers, local historic districts, municipal plans, town and county histories, and local history websites. If not already listed on the National Register of Historic Places, identified properties are then evaluated to see if they are eligible for the National Register. Refer to HUD's website for guidance on identifying and evaluating historic properties.

In the space below, list historic properties identified and evaluated in the APE.

Every historic property that may be affected by the project should be listed. For each historic property or district, include the National Register status, whether the SHPO has concurred with the finding, and whether information on the site is sensitive. Attach an additional page if necessary.
Click here to enter text.

Provide the documentation (survey forms, Register nominations, concurrence(s) and/or objection(s), notes, and photos) that justify your National Register Status determination.

Was a survey of historic buildings and/or archeological sites done as part of the project?
If the APE contains previously unsurveyed buildings or structures over 50 years old, or there is a likely presence of previously unsurveyed archeological sites, a survey may be necessary. For Archeological surveys, refer to HP Fact Sheet #6, Guidance on Archeological Investigations in HUD Projects.

☒ Yes → *Provide survey(s) and report(s) and continue to Step 3.*
Additional notes:
Click here to enter text.

☐ No → *Continue to Step 3.*

Step 3 - Assess Effects of the Project on Historic Properties

Only properties that are listed on or eligible for the National Register of Historic Places receive further consideration under Section 106. Assess the effect(s) of the project by applying the Criteria of Adverse Effect. (36 CFR 800.5) Consider direct and indirect effects as applicable as per HUD guidance.

Choose one of the findings below to recommend to the RE or HUD.
Please note: this is a recommendation only. It is **not** the official finding, which will be made by the RE or HUD, but only your suggestion as a Partner entity.

☒ No Historic Properties Affected
Document reason for finding:
☐ No historic properties present.
☒ Historic properties present, but project will have no effect upon them.

☐ No Adverse Effect
Document reason for finding and provide any comments below.
Comments may include recommendations for mitigation, monitoring, a plan for unanticipated discoveries, etc.
Click here to enter text.

☐ Adverse Effect
Document reason for finding:
Copy and paste applicable Criteria into text box with summary and justification.
Criteria of Adverse Effect: 36 CFR 800.5]
Click here to enter text.

Provide any comments below:
Comments may include recommendations for avoidance, minimization, and/or mitigation.

Based on Section 106 consultation, there are No Historic Properties Affected because the project will have no effect on the historic properties that are present. Per a letter from the Kentucky Heritage Council (KY SHPO) dated March 11, 2024, an archaeological study was warranted (letter attached <<SHPO Letter.pdf>>. A Phase I archaeology report was prepared and dated August 2024. The findings of the abbreviated archaeological report for the Phase I survey of the Wabuck Development Company Garrison Gardens I Apartment Complex Project in Warren County, Kentucky was accepted by the Kentucky SHPO without revision (see attached letter). Their finding of "No Historic Properties Affected" was received August 6, 2024. Tribes, as identified in the Tribal Directory Assessment Information (TDAT) included three tribes for Warren County, Kentucky including the Cherokee Nation, Eastern Band of Cherokee Indians, and Osage Nation. All tribes were invited to be consulting parties on August 8, 2024. The Cherokee Nation responded on September 11, 2024 stating that the Nation does not foresee this project imparting impacts to Cherokee cultural resources as this time. No response was received from the Eastern Band of Cherokee Indians as of October 22, 2024. No response was received from the Osage Nation as of October 22, 2024. The project is in compliance with Section 106.

Remember to provide all documentation that justifies your National Register Status determination and recommendations along with this worksheet.

Supporting Documentation

GarrisonGardens_TribalCnslt_FNL.pdf
Final garrison gardens Phase I Arch Report lwe 8124.pdf
241922 240494 DLG Garrison Gardens Apt Complex Bowling Green Warren.pdf
SHPO Letter.pdf

ANDY BESHEAR
GOVERNOR

JACQUELINE COLEMAN
LT. GOVERNOR

TOURISM, ARTS AND HERITAGE CABINET
KENTUCKY HERITAGE COUNCIL
THE STATE HISTORIC PRESERVATION OFFICE
410 HIGH STREET
FRANKFORT, KENTUCKY 40601
(502) 564-7005
www.heritage.ky.gov

LINDY CASEBIER
SECRETARY

CRAIG A. POTTS
EXECUTIVE DIRECTOR &
STATE HISTORIC PRESERVATION OFFICER

March 11, 2024

April Bowman
Wabuck
100 Wabuck Drive
Leitchfield, KY 42754
April.Bowman@wabuck.com

RE: **DLG**, Garrison Gardens I Apartment Complex, 1221 Crewdson Drive, Bowling Green, Warren County, Kentucky

Dear Ms. Bowman:

Thank you for your submittal of maps and project specifics for the above-referenced undertaking. We understand the Applicant is proposing to construct the Garrison Gardens I affordable housing complex in Bowling Green, Kentucky. Proposed project activities include the construction of ten buildings, as well as parking, access, and associated infrastructure.

Based on the documentation provided, an archaeological survey **is warranted** for all areas where ground disturbing activities are to take place. The archaeological survey should be conducted by a qualified archaeologist. Upon completion of the investigation, a pdf version of the report should be submitted to our office via email at khc.section106@ky.gov.

Adjacent above-ground historic-age resources have not been evaluated for inclusion on the National Register of Historic Places (NRHP). Resources primarily date from the 1950s-present, with some outliers, though most resources were likely constructed between 1950-1980, and primarily consist of Ranch and Minimal Traditional residences. They do not appear to be Eligible for the NRHP as a larger group. And though some may have potential individual NRHP significance, no adverse effects to these resources will be introduced as part of this undertaking.

Should you have any questions, please feel free to contact Gabrielle Fernandez of my staff at Gabrielle.Fernandez@ky.gov.

Sincerely,

Craig A. Potts,
Executive Director and
State Historic Preservation Officer

KHC# 240494
CP: gf, sd

KENTUCKY TOURISM, ARTS & HERITAGE CABINET

Project E&A – 3794
OSA FY24-12891

August 2024

**ABBREVIATED ARCHAEOLOGICAL REPORT
FOR THE PHASE I SURVEY OF THE
WABUCK DEVELOPMENT COMPANY
GARRISON GARDENS I APARTMENT COMPLEX PROJECT
WARREN COUNTY, KENTUCKY
KHC# 240494**

Prepared For:

Wabuck Development Company
100 Wabuck Drive
Leitchfield, KY 42754
Attn: Mr. Anthony Elmore

Lead Agency:
United States Department of Housing and Urban Development

Prepared By:
Environment & Archaeology
221 Main Street
Florence, Kentucky 41042
(859) 746-1778 (phone)
(859) 746-1788 (fax)

Luke W. Erickson, M.A.
Principal Investigator
lerickson@environment-archaeology.com

ABSTRACT

Wabuck Development Company (Wabuck) is proposing to construct nine new two-story residential buildings and one community building in the City of Bowling Green, Warren County, Kentucky. This will create 72 new units of affordable housing and will include parking, access, walkways, and utilities. This project is known as the Garrison Gardens I Apartment Complex Project (Project). The Project appears on the 1996 USGS 7.5-minute Bowling Green South, Kentucky quadrangle. The proposed Project is jurisdictional to the United States Department of Housing and Urban Development (HUD). The Area of Potential Effect (APE) for the Project was 8.2-acres (ac) (3.3 -hectares [ha]) in size.

The Office of State Archaeologist (OSA) and the Kentucky Heritage Council (KHC) records checks indicated that one archaeology site was previously recorded within the Project APE. This site, 15Wa943, was recorded as an Indeterminate Prehistoric undetermined site type with an unassessed NRHP status. In addition, 21 archaeology sites, nine archaeological surveys, four NRHP listed districts, one large NRHP resource, eight demolished historic resources, one linear historic resource, 298 historic resources, 181 NRHP-listed resources, 58 preliminary historic resources, and five NRHP-listed resources that have been demolished, were previously recorded within a 1.2-mile (mi) (2-kilometer [km]) radius of the APE. None of these resources were located within the Project APE.

These cultural resource investigations were conducted in compliance with Section 106 of the National Historic Preservation Act (NHPA) (1966, as amended). All work completed for the Project was conducted following the standards established by the State Historic Preservation Office (SHPO) and meets the professional standards set forth in the Secretary of the Interior's (SOI) Guidelines. The archaeological survey of the Project APE was conducted from July 22 to July 24, 2024. No archaeological sites were identified within the APE as a result of the Phase I Survey and Site 15Wa943 was not relocated during the Phase I Survey because it was located in a low spot that was underwater.

The APE sits in open fields, with some mature trees present, between Crewdson Drive to the east and Westmeade Drive to the west. In a March 11, 2024 letter to Wabuck, the SHPO determined that the proposed Project will have no adverse effects to nearby unevaluated historic-age resources that may be individually eligible for inclusion in the NRHP. Adjacent above-ground historic-age resources have not been evaluated for inclusion on the NRHP. Resources primarily date from the 1950s-present, with some outliers, though most resources were likely constructed between 1950-1980, and primarily consist of Ranch and Minimal Traditional residences. They do not appear to be Eligible for the NRHP as a larger group. And though some may have potential individual NRHP significance, no adverse effects to these resources will be introduced as part of this undertaking. As such, a viewshed analysis and historic structural survey were not performed for the proposed Project. It is the recommendation of *Environment & Archaeology* that the proposed Project does not affect any cultural resources eligible for the NRHP; therefore, no further consultation under Section 106 of NHPA is recommended.

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INTRODUCTION

Environment & Archaeology, under contract to Wabuck, conducted Phase I archaeological investigations for the Project. The Project will consist of nine new two-story residential buildings and one new community building, resulting in 72 new units of affordable housing in the City of Bowling Green, Warren County, Kentucky. The Project appears on the 1996 USGS 7.5-minute Bowling Green South, Kentucky quadrangle (Figure 1 and Figure 2). The Project is under the jurisdiction of the HUD; therefore, the Project is subject to review under Section 106 of the NHPA, 1966 (as amended).

The LOD covered 8.2-ac (3.3-ha) and was determined by Wabuck in order to meet their construction requirements; the LOD constitutes the APE for the Project. The APE was located within open fields with some forested areas, between Crewdson Drive to the east and Westmeade Drive to the west (Figure 3 and Figure 4). A site file check project registration request was submitted by *Environment & Archaeology* Principal Investigator Luke W. Erickson, M.A. to the OSA in Lexington, Kentucky on July 1, 2024 (FY24-12891). The online site file check database at the KHC was accessed by Mr. Erickson on July 2, 2024. The data received from these checks revealed that one archaeological site, 15Wa943, was previously recorded within the southern portion of the APE. Site 15Wa943 was not able to be relocated or reinvestigated during the Phase I Survey of the Project because that part of the APE was underwater and had been for some time. Approximately 30 hours were spent in the field from July 22 to July 24, 2024. There were no constraints to the survey and the APE was investigated through the excavation of shovel test probes. No previously undocumented archaeological sites or cultural materials were identified.

In a March 11, 2024 letter to Wabuck, the SHPO determined that the proposed Project will have no adverse effects to nearby unevaluated historic-age resources that may be individually eligible for inclusion in the NRHP (Appendix A). As such, a viewshed analysis and historic structural survey were not performed for the proposed Project.

This work was conducted in compliance with Section 106 of the NHPA of 1966 (PL 89-665) and the implementing regulations contained in the Protection of Historic Cultural Properties (36 CFR 800). The Phase I Survey of the proposed Project was performed to SHPO standards (Sanders 2017) and followed the SOI Guidelines.

The Project was managed by Principal Investigator Luke Erickson, M.A. The fieldwork was under the direction of *Environment & Archaeology* Senior Field Director Michael Shaw, M.A., who was assisted by Field Technician Tom Carmody. Project reporting was the responsibility of Luke Erickson, M.A., who meets the SOI Professional Qualification Standards for Archaeological Investigations. Resumes of Project personnel are already on file with the SHPO. Copies of this report will be provided to Wabuck and the HUD. The Phase I survey was conducted for Mr. Anthony Elmore of Wabuck.

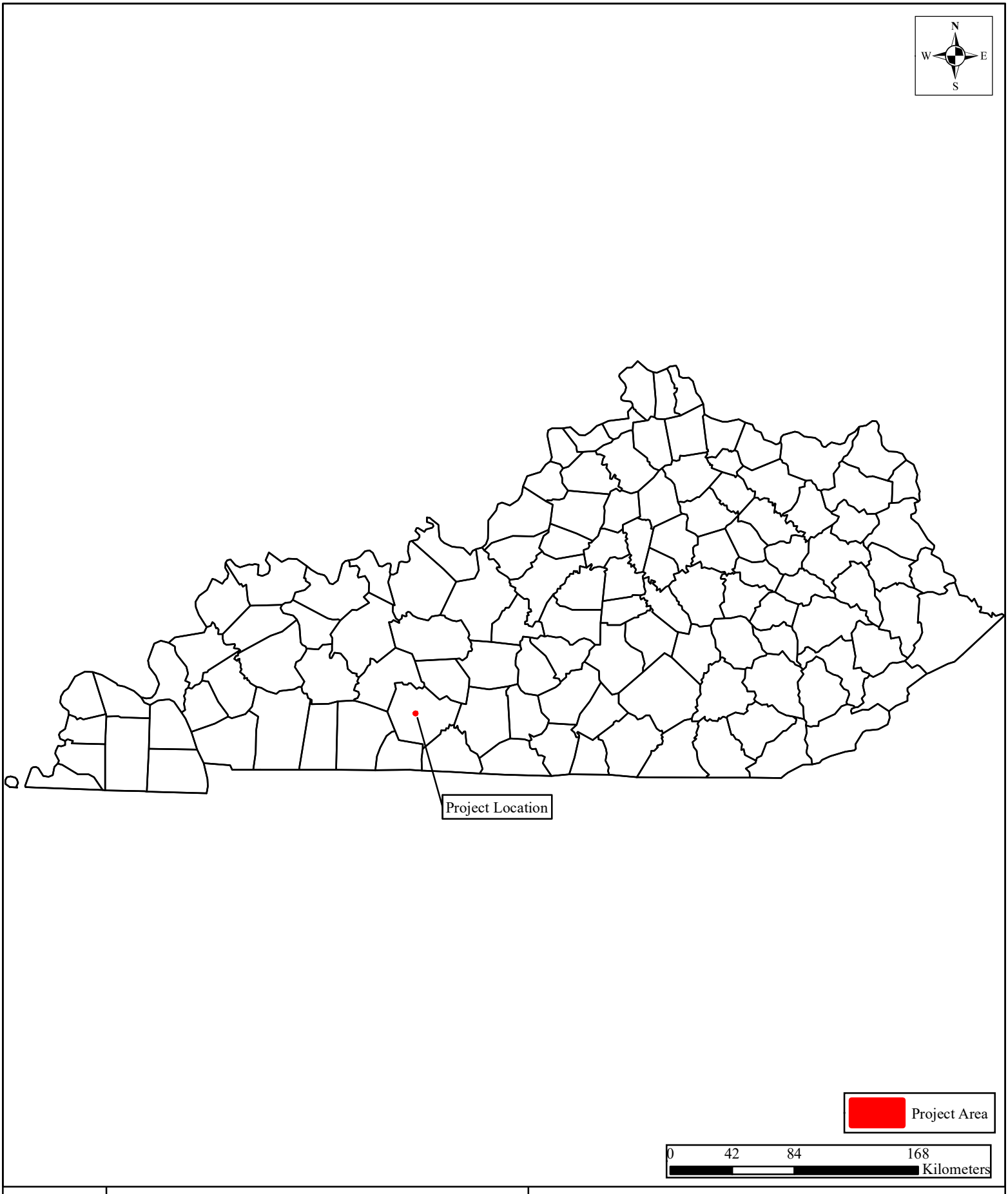

Figure 1	Wabuck Development Company Garrison Gardens I Apartment Complex Project Warren County, Kentucky	State Map With Project Location

Environment & Archaeology

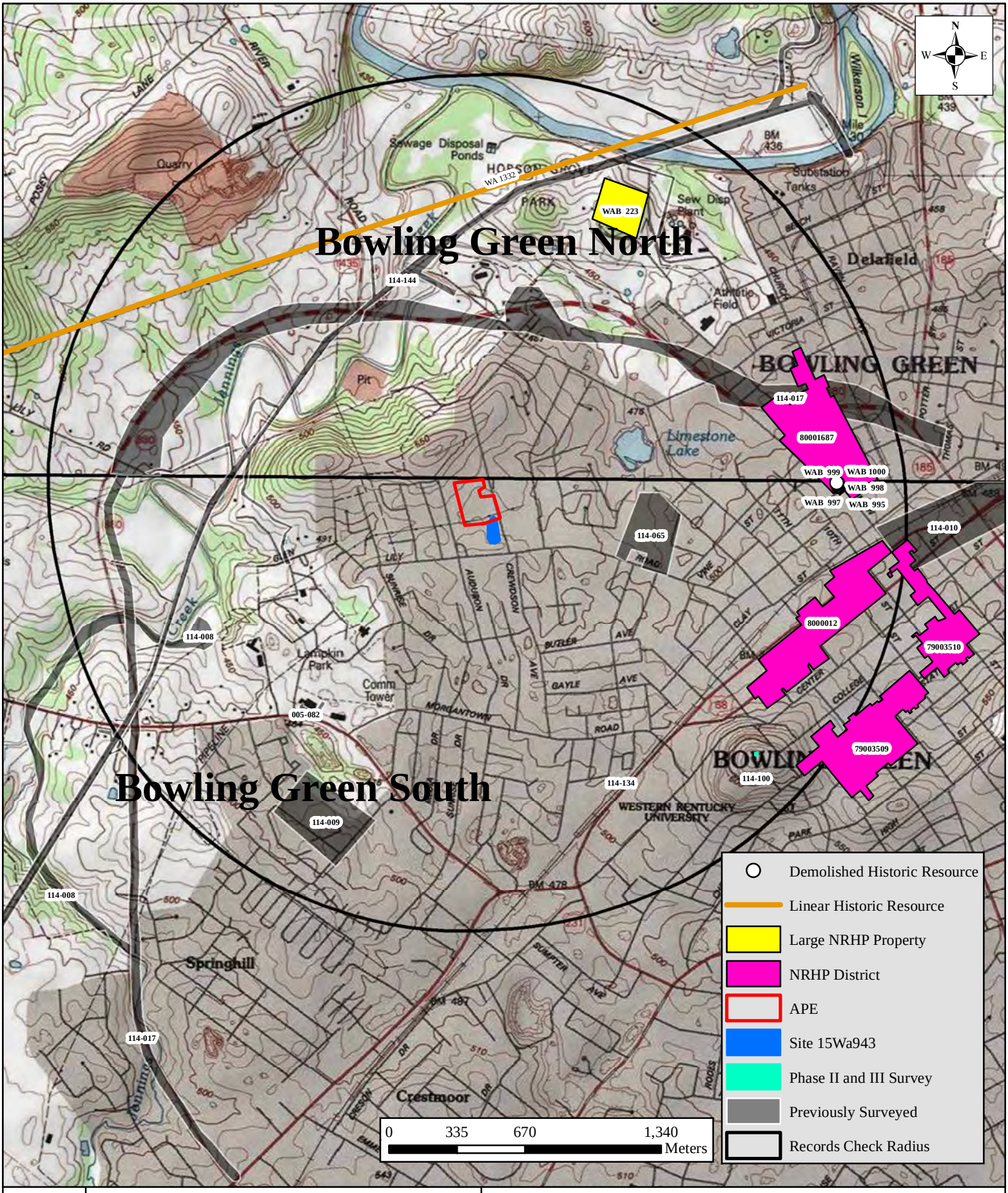

Figure 2	Wabuck Development Company Garrison Gardens I Apartment Complex Project Warren County, Kentucky	7.5' USGS Topographic Map Bowling Green North (1996) and Bowling Green South (1996), Kentucky Quadrangles

Environment & Archaeology

Figure 3. Overview of APE facing west from STP D12.

Figure 4. Overview of the forested APE area from STP E6.

CULTURAL OVERVIEW AND RESULTS OF LITERATURE REVIEW

Cultural Overview of Kentucky

Kentucky is separated into five pre-contact archaeological contexts (Table 1). There are seven Management Areas and 17 Sections in Kentucky with the current APE located within the Pennyroyal (Section F) of the Green River Management Area (Area 2) (Stackelbeck and Mink 2008: 12). Within Section F, approximately 1.1 percent has been surveyed for cultural resources with 1,519 archaeological sites recorded (Stackelbeck and Mink 2008:47).

Section F has 54 Paleoindian sites recorded with 45 of those sites categorized as open habitation w/o mound(s) (Maggard and Stackelbeck 2008:139). There are 298 Archaic sites recorded in Section F. Most (n=258) are categorized as open habitation sites w/o mound(s) (Jefferies 2008:228). Section F contains 182 Woodland sites with 122 of those sites categorized as open habitation w/o mound(s) (Applegate 2008:387). There are 605 Mississippian sites recorded within Area 2 with 469 identified as open habitation sites w/o mound(s) (Pollack 2008:609).

Table 1. Pre-Contact Overview for Kentucky.

Context	Sub Periods	Date Range	Characteristics
Paleoindian	ca 9,500 - 8,000 BC		Small groups of highly mobile hunter-gathers, fluted projectile points (ex - Clovis, Cumberland, Ganey, Plano, Dalton projectile points)
Archaic	8,000 - 1,000 BC		Mobile hunter-gatherers, expanded exploitation of natural resources and introduction of new processing techniques and tools, increased social complexity. Introduction of stemmed projectile points.
	Early	8,000 - 6,000 BC	Continuation of mobile hunter-gatherer patterns of the Paleoindian period. Introduction of stemmed projectile points (ex - Kirk Corner Notched, Thebes, LeCroy, Kanawha projectile points).
	Middle	6,000 - 3,000 BC	Increased regional specialization, expansion of exploited resources and introduction of new processing techniques. (ex - Morrow Mountain II, Big Sandy/Godar, Matanzas projectile points)
	Late	3,000 - 1,000 BC	Greater regional specialization and adaptation, increased social complexity. Projectile points include an assortment of large straight, expanding, and contracting stem points and smaller stemmed and side notched types (ex - Ledbetter, Merom-Trimble projectile points)
Woodland	1,000 BC - 1000 AD		Distinguished by the manufacture of pottery, earthworks, and farming subsistence.
	Early	1000 - 200 BC	Ceramics appear (Pine Mountain, Baumer, and Alexandria series pottery), construction of earthen enclosures and burial mounds initiated (ex - Cresap, Robbins, Adena Stemmed, Cypress Creek projectile points)
	Middle	200 BC - 500 AD	Construction of earthen enclosures and burial mounds expands. Adena and Crab Orchard cultural adaptions appear. (ex - Synders, Copena, Steuben, Lowe, and Chesser projectile points)
	Late	500 - 1000 AD	Increased nucleation of local populations and shift toward more sedentary lifestyle with an increased use of native cultigens, development of bow and arrow (ex - Jack's Reef, Raccoon, Levanna projectile points)

Table 1. Pre-Contact Overview for Kentucky.

Context	Sub Periods	Date Range	Characteristics
Late Prehistoric	1000-1700 AD		Shell tempered ceramics, small triangular projectile points, increased reliance on corn and beans, permanent villages, decreased use of native plants and cultigens (Madison, Fort Ancient projectile points)

Protohistoric and Historic Aboriginal Occupation (ca. A.D. 1700 on)

By the beginning of the sixteenth century the Ohio Valley was populated by a number of apparently sedentary aboriginal groups. It is assumed that as long as 200 years before direct contact with Europeans was established in the Ohio Valley, their presence in the New World affected an ecological system that had existed over many millennia (Sharp 1996:181). Through indirect exchange, the Fort Ancient/Shawnee peoples of the Ohio Valley obtained European trade goods, as well as European diseases (Cowan 1987:30-31; Sharp 1996:181): Etiological studies of disease have shown that contagion follows the same routes along which goods and information are transmitted. Consequently, the diseases that remained muted as endemic forms in European raged in epidemic proportions in the New World, devastating the aboriginal inhabitants.

After 1680, aboriginal groups in the Ohio Valley were disrupted by stress created in the wake of shifting fur trade patterns, as other tribes from the northeast forced the local groups out to utilize the territory to hunt for beaver pelts (Cowan 1987:31; Sharp 1996:181). The economics of fur trading demanded a reorganization of territories that had previously been exploited only for hunting and gathering. In 1672, the Iroquois conquered the Shawnee and forced them from Ohio and Kentucky to Illinois, South Carolina and Alabama. The consequences of this, coupled with the increasing westward displacement of eastern aboriginal groups, resulted in the region being "repopulated by Indian groups whose original homes lay beyond its borders" (Hunter 1978:588).

In the 1750s, the Shawnee returned to the central Ohio Valley, only to face the Europeans rather than the Iroquois (Cowan 1987:31). Although the majority of the Shawnees lived north of the Ohio River, there were numerous small settlements through Kentucky by 1750, in addition to the large Shawnee trading centers of Lower Shawneetown and Eskipakithiki along the Warriors Trail (Jobe et al. 1980:36). Shawnee villages were semi-permanent settlements composed of bark-covered lodges, sweathouses, and central structures used for ritual and secular celebrations (Clark 1974:85-90). During the summer months, crops were tended in fields near the towns. In the fall, the inhabitants dispersed to winter camps in sheltered valleys to hunt and trap, as the fur trade had become part of the Shawnee economy (Muller 1986:264). By 1795, when the Treaty of Greenville absorbed the previously aboriginal land of Ohio into the United States, only a few Native American communities remained in the area (Henderson et al. 1992:270).

Contact Period sites in northeastern Kentucky such as Hardin Village (occupied between 1500-1600) and Bentley (occupied from 1730-1758) have yielded European trade goods in association with artifacts diagnostic of the Madisonville Phase of Fort Ancient (Railey 1996:171-175). The artifact assemblage of the Bentley site (also known as Lower Shawneetown) contains both Madisonville Phase artifacts, similar to those found at Hardin Village, and Euro-American trade goods dated to

the middle of the eighteenth century (Henderson et al. 1992:271). Because Lower Shawneetown is a historically documented Shawnee village, they suggest that at least some of the Madisonville Fort Ancient sites are historically antecedent to later Shawnee groups.

Early Historic Occupation (ca. AD 1700 on)

Throughout the first half of the eighteenth century, Britain and France vied for control of much of the area west of the Alleghenies since access to a profitable fur trading network was at stake. The fur traders themselves served as surrogates for the respective countries in this network, and their presence in the New World entangled the aboriginal groups with whom they were trading, (in particular, the Shawnees), in nationalistic conflicts. The frontier was shattered by tensions between aboriginal groups displaced by expanded hunting territories and encroaching settlers, between foreign governments struggling for control of valuable trade networks, and between foreign governments and nonallied aboriginal groups. The number of factions which resulted in intermittent skirmishes and full-scale war was staggering.

Following the American Revolution, the peace treaty signed with the British granted America a boundary that extended to the Mississippi River. Along with this territory, the British abandoned their native allies as well, and it was within this context that post-war Indian policy was formulated. The treaty signed at Fort Stanwix in 1784, for example, reflected the notion that the Iroquois had forfeited all claim to their land by fighting with the British against the emerging American nation (Johnson et al. 1978:80). Prior to the Treaty of Fort Stanwix, the area was still claimed by the Iroquois Confederacy, together with the Shawnees, Delawares and Mingos.

Aboriginal trails were used extensively by the first settlers, and not only directed their movements but also outlined many later transportation systems (Wallace 1971). The trails provided direct routes between villages and towns, and most traversed dry, level land. They provided the first access to suitably habitable areas and later guided engineers in constructing stable, permanent road systems. The evolution of the modern highway network parallels the development of settlements. Initial settlement was retarded not only by the uncertainty of land titles and the danger of Indian attacks, but also by inadequate transportation. Farmsteads were geared to subsistence partly because marketing products was difficult and expensive. The chief avenues for bringing goods and provisions into the project area, prior to the building of all-weather roads, were the major drainages and their larger tributaries.

Agriculture, originally for subsistence and later for profit, often shaped settlement priorities in the Central Ohio Valley. As choice land along larger drainages became inhabited, later settlers were forced to move inland to less immediately hospitable environments. In the upland areas, one of the most important criteria for situating early Euro-American homesteads was the proximity of a source of pure water. Perceptions of vegetation as an indicator of soil fertility played a part as well. Sincewells were an expensive proposition, settlements were often made near springs (Hulbert 1930:144).In addition, the farms of the settlers frequently used natural topographic features as boundaries--generally creeks or the tops of ridges. As a result, farmsteads were often shaped like bowls, since farm buildings were laid out in valleys, and the surrounding uplands formed the boundaries. The first homesteads were built of unhewn logs joined by a mixture of moss or straw

and mud. Later, as sawmills increased production, frame dwellings were built, along with occasional brick or stone houses. Besides the main dwelling structure and a shelter for livestock, farmsteads often included a springhouse, woodhouse, and smokehouse.

Around 1800, the primary source of energy harnessed to exploit the environment was human labor. After 1830, livestock were employed to draw carts, plows, cultivators, and harvesting equipment. With the introduction of improved farm machinery, there was an increased demand for horses a general displacement of oxen. In the winter, however, oxen could be driven through the snow more safely than horses, and were depended upon to initially clear the roads. In 1885, the combined harvester and thresher was developed. When this combination was harnessed to a steam-powered (and later a gasoline-powered) traction device farm acreage increased, and labor subsequently decreased. By the beginning of the twentieth century, the total number of acres devoted to farming in the state began to shrink, as did the number of farms and farmers, while the absolute size of individual farms began to increase. This was partly due to the intensification of technology, the amalgamation of small plots, encroaching urbanization, and the abandonment of poorer districts (Warminski 2000).

Saw mills and grist mills were the first industries to extensively utilize local resources. Originally, lumbering was chiefly a by-product of land clearing for agricultural purposes, with local consumers being the chief beneficiaries. However, with the advent of steam-powered machinery (1815-1825), saw mills began to produce lumber for outside markets. While lumber mills were apparently transient and subject to the supply of timber in a local area, grist mills, sometimes located beside or near lumber mills, provided a stabilizing influence on regional economics. Indeed, the primary purpose of most early roads was to provide access to mills for farmers to grind their grain. The successful harnessing of water power ensured that productive energy was concentrated in a single, fixed location, which caused the further concentration of auxiliary shops and services (Warminski 2000).

Specific events in the study area occurred within the larger developmental pattern of early American history. In 1768, the Treaty of Fort Stanwix wrested Kentucky from the Iroquois confederacy, the Shawnees, and the Delawares. Prior to this time it was illegal for white settlers to encroach upon the Kentucky area because it had been reserved as Indian territory. Kentucky was made part of Fincastle County, Virginia, by the Treaty of Fort Stanwix and placed under the ultimate jurisdiction of the British Crown until after the American Revolution. Kentucky County was created out of Fincastle County in 1776. After several other subdivisions of counties in the late 1780's, Kentucky was made a Commonwealth in 1792 (Warminski 2000).

Brief History of Warren County

Warren County became the 23rd county of Kentucky when it was formed in 1796 from a portion of Logan County and was named for General Joseph Warren. General Warren was the person who dispatched Paul Revere on his famous ride to warn of the impending British invasion. General Warren was also a hero of the Battle of Bunker Hill. Due to the early riverboat trade, Warren County was initially an agricultural heavy county until the 1960s and 1970s when it switched over to an industrial based county when I-65 was completed through the county. The county seat is Bowling Green. Warren County is now a wet county after voters approved the measure in 2018. The 2020 US census

counted 134,554 individuals living in Warren County, making it the fifth most populated county in Kentucky.

Results of the Background and Literature Reviews

Prior to the initiation of fieldwork, a project registration and data request was submitted to the OSA (FY24-12891) on July 1, 2024 by *Environment & Archaeology* Principal Investigator Luke W. Erickson, M.A. Mr. Erickson also performed a records check of the KHC database using their online portal. These results indicated that one archaeological site was previously recorded within the APE (Figure 2). This site, 15Wa943, was recorded as an Indeterminate Prehistoric undetermined site type with an unassessed NRHP status. The OSA did not have a copy of the site form for 15Wa943 so no additional data was available for this site.

Previously Recorded Resources

In addition to Site 15Wa943, the OSA and KHC records checks produced the following results within a 1.2-mi (2-km) radius of the APE (Figure 2):

- 17 archaeology sites and four preliminary archaeology sites (Table 2);
- Nine archaeological surveys (Table 3);
- Four NRHP listed districts and one large NRHP listed property (Table 4);
- Eight demolished historic resources (Table 5);
- One linear historic resource, WA 1332 (Transmission Line), and;
- 298 Historic Resources, 181 NRHP listed historic resources, 58 Historic Resources with only Preliminary Data available, and five NRHP listed Historic Resources that have been demolished. Unfortunately, due to issues with the KHC GIS website, no GIS data was provided for these resources so they could not be mapped on Figure 2. However, they are provided in Appendix B.

Historic Maps and Aerials

The 1956 7.5-minute USGS Bowling Green South, Kentucky quadrangle contained one mapped barn icon within the APE (Figure 5). However, this barn icon is gone on the 1970 7.5-minute USGS Bowling Green South, Kentucky quadrangle (Figure 6). The 1970 quadrangle does have a residence icon partially mapped within the northeastern boundary of the APE, but field investigations revealed this residence is actually located outside of the APE. Aerial imagery for the APE was available from 1954 through 2020. The historic and current land use of the APE appears to have been open fields with tree lines as boundaries between the fields.

Table 2. Previously Recorded Archaeological Sites within 1.2-mi (2-km) of the APE.

Site No.	Description	NRHP Status
15Wa22	Indeterminate Prehistoric, open habitation w/o mounds site	Not Assessed
15Wa50	Indeterminate Prehistoric, open habitation w/o mounds site	Not Assessed
15Wa51	Indeterminate Prehistoric, open habitation w/o mounds site	Not Assessed
15Wa52	Indeterminate Prehistoric, open habitation w/o mounds site	Inventory Site
15Wa53	Indeterminate Prehistoric, Historic Euro-American, open habitation w/o mounds site	Not Assessed
15Wa54	Indeterminate Prehistoric, open habitation w/o mounds site	Not Assessed
15Wa158	Historic Euro-American military site, 1851-1950	NRHP property
15Wa320	Indeterminate Prehistoric, undetermined site, Late Woodland (Tri Pt Only)	Not Assessed
15Wa328	Indeterminate Prehistoric, undetermined site	Not Assessed
15Wa334	Indeterminate Prehistoric, undetermined site, Late Woodland (Tri Pt Only)	No Recorded
15Wa335	Indeterminate Prehistoric, undetermined site, Late Woodland (Tri Pt Only)	Not Assessed
15Wa941	Indeterminate Prehistoric, undetermined site	Not Assessed
15Wa943	Indeterminate Prehistoric, undetermined site (within APE)	Not Assessed
15Wa952	Indeterminate Prehistoric, undetermined site	Not Assessed
15Wa962	Indeterminate Prehistoric, open habitation w/o mounds site	Inventory Site
15Wa964	Indeterminate Prehistoric, undetermined site	Not Assessed
15Wa965	Indeterminate Prehistoric, undetermined site	Not Assessed
15Wa194	Preliminary archaeology site, no data available	n/a
15Wa199	Preliminary archaeology site, no data available	n/a
15Wa200	Preliminary archaeology site, no data available	n/a
15Wa444	Preliminary archaeology site, no data available	n/a

Table 3. Previously Performed Cultural Resource Surveys within 1.2-mi (2-km) of the APE.

SHPO Id, Year	Description
114-009, 1976	Schock, J.M. and G.S. Foster, Survey for the Expansion of Bowling Green State Vocational-Technical School.
114-010, 1976	Schock, J.M. and G.S. Foster, Survey of the Proposed Relocation of US-31 W and 68, Warren Co., KY.
114-080, 1978	Schock, J.M., Survey of Interceptor Sewer Lines along Jennings Creek and Nashville Road at Bowling Green, Warren Co., KY.
114-017, 1986	Schock, J.M., Survey of 5.3-miles for the Preferred Alternate for the Bowling Green Bypass in Bowling Green, Warren Co., KY.
114-065, 1997	Schock, J.M., Survey of 17-acres for the Durbin Subdivision at Bowling Green, Warren Co., KY.
114-100, 2007	Stevens, J.S., Phase II and III Surveys of Proposed Van Meter Hall Renovation and Fort Lytle (15Wa158), Western Kentucky University, Bowling Green, Warren Co., KY.
005-082, 2007	Schlarb, E.J. and S. Winter, Survey of National Guard Armories in the State of Kentucky.
114-134, 2015	Barrett, J., Survey for the Proposed WKU Cell Tower, Warren Co., KY.
114-144, 2019	Warner, V.D. et al., Survey of the Bwoling Green - Memphis Junction, Warren Co., KY.

Table 4. NRHP Listed Districts and Property within 1.2-mi (2-km) of the APE.

ID No.	Description
79003509	College Hill District, NRHP listed December 1979, Local significance level for Architecture.
79003510	Downtown Commercial District, NRHP listed December 1979, Local significance level for Commerce and Architecture.
80001687	St. Josephs District, NRHP listed November 1980, Local significance level for European and Architecture.
8000012	Adams-Kentucky District, NRHP listed December 2008, Local significance level for Social History.
WAB 223	Riverview-Hobson House (previously WA-161), 1850-1874, Single family dwelling, Italianate Style, NRHP listed.

Table 5. Demolished Historic Resources within 1.2-mi (2-km) of the APE.

Site No.	Description	NRHP Status
WAB 992	Multiple family dwelling, Duplex, Vernacular, Victorian, 1875-1899	Demolished
WAB 994	Single family dwelling, Fred Hespen House, Greek Revival, 1875-1899	Demolished
WAB 995	Single family dwelling, House, Vernacular, Victorian, 1875-1899	Demolished
WAB 996	Single family dwelling, House, Vernacular, Turn of the Century, 1900-1924	Demolished
WAB 997	Single family dwelling, House, Vernacular, Victorian, 1875-1899	Demolished
WAB 998	Single family dwelling, House, Vernacular, Turn of the Century, 1900-1924	Demolished
WAB 999	Single family dwelling, House, Vernacular, Victorian, 1875-1899	Demolished
WAB 1000	Single family dwelling, WH Payne House, Vernacular, Victorian, 1875-1899	Demolished

Figure 5	Wabuck Development Company Garrison Gardens I Apartment Complex Project Warren County, Kentucky	7.5' USGS Topographic Map 1956 Bowling Green South Kentucky Quadrangle

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Figure 6	Wabuck Development Company Garrison Gardens I Apartment Complex Project Warren County, Kentucky	7.5' USGS Topographic Map 1970 Bowling Green South Kentucky Quadrangle

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FIELD METHODS

The methodology employed for this Phase I Survey emphasized inspection of sample loci. Any designated point at which data was collected is referred to as a sample locus. For this Project, sample loci included shovel test probe (STP) locations.

Phase I investigations of the proposed APE conformed to the requirements established by the Sanders (2017) Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports. Shovel testing was conducted at 66-foot (ft) (20-meter [m]) intervals within the APE.

The shovel test probes excavated adhered to SHPO standards and were completed in areas of the APE where the ground surface was not obscured. Shovel tests were 12-inches (in) (30-centimeters [cm]) in diameter. All deposits excavated via shovel testing were screened through a 0.25-in (0.64-cm) mesh screen. Shovel tests were excavated to a maximum of 4-in (10-cm) into sterile subsoil or 20-in (50-cm) below ground surface. The location of each sample locus was recorded with a GPS and notes taken of the results. Notes describing soil color and soil texture were recorded for each shovel test. All shovel tests were backfilled and tamped. Representative photographs were taken of the APE and excavated shovel tests.

RESULTS

The investigated archaeological APE is in open fields currently covered in grass with a few forested areas (Figure 7 and Figure 8). The APE is in the Pembroke-Crider soil association (Barton 1981). These are deep, nearly level to sloping, well drained soils that have a loamy and clayey subsoil, formed in loess and the residuum of limestone, found on uplands. There were two mapped soil series within the investigated APE (Table 6 and Figure 9).

Table 4. Soil Series mapped within the APE.

Soil	Description
FnB	Fredonia-Vertrees-Urban land complex, 2 to 6 percent slopes, rocky, non-hydric, well drained soils consisting of clayey residuum weathered from limestone, sandstone, and shale, found on ridges.
FnC2	Fredonia-Vertrees-Urban land complex, 6 to 12 percent slopes, eroded, rocky, non-hydric, well drained soils consisting of clayey residuum weathered from limestone, sandstone, and shale, found on ridges.

There was less than five percent surface visibility in the APE, so the APE was investigated with shovel testing. In all, 98 STP were investigated, of those: 88 STPs were excavated, contained intact soils, and were negative for cultural material; seven were located in an area covered with water and were not able to be excavated; two were excavated and became inundated with water; and one was located in a previously disturbed location (house) and was not able to be investigated (Figure 9). Previously recorded Site 15Wa943 was located along the southern edge of the APE. At the time of the Phase I Survey, Site 15Wa943 was covered with water, which prevented its reinvestigation.

The observed soil profiles were consistent with the mapped soils series within the APE. The most common soil profile encountered consisted of a 20-cm (8-in) thick layer of 7.5YR 4/4 silt loam followed by a 7.5YR 5/4 silt loam (Figure 10 and Figure 11).

In a March 11, 2024 letter to Wabuck, the SHPO determined that the proposed Project would have no adverse effects to the nearby unevaluated historic-age resources that may be individually eligible for inclusion in the NRHP. As such, a viewshed analysis and historic structural survey were not performed for the proposed Project.

It is the recommendation of *Environment & Archaeology* that the proposed Project does not affect any cultural resources eligible for the NRHP; therefore, no further consultation under Section 106 of NHPA is recommended.

Figure 7. Overview of the flooded APE area containing Site 15Wa943 facing east.

Figure 8. Overview of the APE facing north from STP F6.

Figure 9	Wabuck Development Company Garrison Gardens I Apartment Complex Project Warren County, Kentucky	Aerial with USDA Soil Series Overaly and Survey Results Aerial Provided by ArcGIS Online

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Figure 10. STP F10.

Figure 11. STP H1.

CONCLUSIONS AND RECOMMENDATIONS

Environment & Archaeology, under contract to Wabuck, conducted Phase I archaeological investigations for the proposed Project. The Project will consist of the construction of nine new two-story residential buildings resulting in 72 new individual units of affordable housing in Bowling Green, Warren County, Kentucky. The Project appears on the 1996 USGS 7.5-minute Bowling Green South, Kentucky quadrangle. The Project is under the jurisdiction of the HUD; therefore, the Project is subject to review under Section 106 of the NHPA, 1966 (as amended).

The 8.2-ac (3.3-ha) archaeological APE was located within open grass fields with areas of dense woods between Crewdson Drive to the east and Westmeade Drive to the west. Site file checks with the OSA and the KHC revealed one previously recorded archaeology site, 15Wa943, within the APE. Approximately 30 hours were spent in the field from July 22 to July 24, 2024. There were no constraints to the survey and the APE was investigated through the excavation of STPs. This work was conducted in compliance with Section 106 of the NHPA of 1966 (PL 89-665) and the implementing regulations contained in the Protection of Historic Cultural Properties (36 CFR 800). The Phase I Survey of the proposed Project was performed to SHPO standards and followed the SOI Guidelines. No archaeological sites were identified as a result of the Phase I Survey of the Project APE and Site 15Wa943 was not relocated or reinvestigated because it was under water at the time of the Phase I Survey.

In a March 11, 2024 letter to Wabuck, the SHPO determined that the proposed Project will have no adverse effects to nearby unevaluated historic-age resources. Adjacent above-ground historic-age resources have not been evaluated for inclusion on the NRHP. Resources primarily date from the 1950s-present, with some outliers, though most resources were likely constructed between 1950-1980, and primarily consist of Ranch and Minimal Traditional residences. They do not appear to be Eligible for the NRHP as a larger group. And though some may have potential individual NRHP significance, no adverse effects to these resources will be introduced as part of this undertaking. As such, a viewshed analysis and historic structural survey were not performed for the proposed Project. It is the recommendation of *Environment & Archaeology* that the proposed Project does not affect any cultural resources eligible for the NRHP; therefore, no further consultation under Section 106 of NHPA is recommended.

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APPENDIX A:
Project Correspondence

ANDY BESHEAR
GOVERNOR

JACQUELINE COLEMAN
LT. GOVERNOR

TOURISM, ARTS AND HERITAGE CABINET
KENTUCKY HERITAGE COUNCIL
THE STATE HISTORIC PRESERVATION OFFICE
410 HIGH STREET
FRANKFORT, KENTUCKY 40601
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LINDY CASEBIER
SECRETARY

CRAIG A. POTTS
EXECUTIVE DIRECTOR &
STATE HISTORIC PRESERVATION OFFICER

March 11, 2024

April Bowman
Wabuck
100 Wabuck Drive
Leitchfield, KY 42754
April.Bowman@wabuck.com

RE: **DLG**, Garrison Gardens I Apartment Complex, 1221 Crewdson Drive, Bowling Green, Warren County, Kentucky

Dear Ms. Bowman:

Thank you for your submittal of maps and project specifics for the above-referenced undertaking. We understand the Applicant is proposing to construct the Garrison Gardens I affordable housing complex in Bowling Green, Kentucky. Proposed project activities include the construction of ten buildings, as well as parking, access, and associated infrastructure.

Based on the documentation provided, an archaeological survey **is warranted** for all areas where ground disturbing activities are to take place. The archaeological survey should be conducted by a qualified archaeologist. Upon completion of the investigation, a pdf version of the report should be submitted to our office via email at khc.section106@ky.gov.

Adjacent above-ground historic-age resources have not been evaluated for inclusion on the National Register of Historic Places (NRHP). Resources primarily date from the 1950s-present, with some outliers, though most resources were likely constructed between 1950-1980, and primarily consist of Ranch and Minimal Traditional residences. They do not appear to be Eligible for the NRHP as a larger group. And though some may have potential individual NRHP significance, no adverse effects to these resources will be introduced as part of this undertaking.

Should you have any questions, please feel free to contact Gabrielle Fernandez of my staff at Gabrielle.Fernandez@ky.gov.

Sincerely,

Craig A. Potts,
Executive Director and
State Historic Preservation Officer

KHC# 240494
CP: gf, sd

KENTUCKY TOURISM, ARTS & HERITAGE CABINET

APPENDIX B:
Historic Resource from the KHC SFC

Screenshot from the KHC records check for the Garrison Gardens Project. This image present the results that were no able to be mapped on Figure 2 due to some unknown issue with the KHC GIS data.

Site No.	Historic Name	Construction Year	Style	NRHP Status	Function
WA 248	MT PLEASANT VIEW BAPTIST CHURCH	1925-1949	GOTHIC REVIVAL	N/R DISTRICT CONTRI. SITE	CHURCH/RELIGIOUS BUILDING
WA 248	MT PLEASANT VIEW BAPTIST CHURCH	1925-1949	GOTHIC REVIVAL	N/R DISTRICT CONTRI. SITE	CHURCH/RELIGIOUS BUILDING
WAB 101	COMMERCIAL BLDG	1875-1899	COMMERCIAL-VICTORIAN	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 101	COMMERCIAL BLDG	1875-1899	COMMERCIAL-VICTORIAN	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 102	COMMERCIAL BLDG	1900-1924	COMMERCIAL-TOC	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 102	COMMERCIAL BLDG	1900-1924	COMMERCIAL-TOC	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 103	COMMERCIAL BLDG	1875-1899	COMMERCIAL-VICTORIAN	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 103	COMMERCIAL BLDG	1875-1899	COMMERCIAL-VICTORIAN	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 104	COMMERCIAL BLDG (NOW VACANT LOT)	1875-1899	COMMERCIAL-VICTORIAN	DEMOL FR ND,NN	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 106	COMMERCIAL BLDG	1875-1899	RICHARDSONIAN ROMANESQUE	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 106	COMMERCIAL BLDG	1875-1899	RICHARDSONIAN ROMANESQUE	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 107	COMMERCIAL BLDG	1900-1924	COMMERCIAL-TOC	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 107	COMMERCIAL BLDG	1900-1924	COMMERCIAL-TOC	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 108	COMMERCIAL BLDG	1875-1899	COMMERCIAL-VICTORIAN	DEMOL FR ND,NN	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 111	BOWLING GREEN PLANING MILL	1875-1899	COMMERCIAL-VICTORIAN	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 111	BOWLING GREEN PLANING MILL	1875-1899	COMMERCIAL-VICTORIAN	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 112	HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 112	HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 113	ST JOSEPHS ROMAN CATHOLIC CHURCH	1850-1874	GOTHIC REVIVAL	NATIONAL REGISTER	RELIGIOUS - UNKNOWN
WAB 113	ST JOSEPHS ROMAN CATHOLIC CHURCH	1850-1874	GOTHIC REVIVAL	NATIONAL REGISTER	RELIGIOUS - UNKNOWN
WAB 114	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 114	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 114	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 115	DUNCAN HOUSE (BURNED 1981)	1900-1924	VERNACULAR-20TH CENT.	DEMOL FR ND,NN	SINGLE DWELLING
WAB 116	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 116	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 117	NEW BETHEL BAPTIST	1875-1899	GOTHIC-VICTORIAN	N/R DISTRICT CONTRI. SITE	RELIGIOUS - UNKNOWN
WAB 117	NEW BETHEL BAPTIST	1875-1899	GOTHIC-VICTORIAN	N/R DISTRICT CONTRI. SITE	RELIGIOUS - UNKNOWN
WAB 118	HOUSES (THREE)	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 118	HOUSES (THREE)	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 119	ST JOSEPHS CATHOLIC CHURCH	1825-1849	VERNACULAR-ANTEBELLUM	N/R DISTRICT CONTRI. SITE	RELIGIOUS - UNKNOWN
WAB 119	ST JOSEPHS CATHOLIC CHURCH	1825-1849	VERNACULAR-ANTEBELLUM	N/R DISTRICT CONTRI. SITE	RELIGIOUS - UNKNOWN
WAB 120	COMMERCIAL BLDG	1900-1924	COMMERCIAL-TOC	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 120	COMMERCIAL BLDG	1900-1924	COMMERCIAL-TOC	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 121	HOUSES (6)	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 121	HOUSES (6)	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 122	DUPLEX	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 122	DUPLEX	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 123	HALL HOUSE	1800-1824	FEDERAL	NATIONAL REGISTER	SINGLE DWELLING
WAB 123	HALL HOUSE	1800-1824	FEDERAL	NATIONAL REGISTER	SINGLE DWELLING
WAB 124	SCOTT TOBACCO CO FACTORY/DAVIDSON BROS BLDG	1900-1924	INDUSTRIAL-TOC	N/R DISTRICT CONTRI. SITE	PROCESSING/MANUFACTURING FACILITY
WAB 124	SCOTT TOBACCO CO FACTORY/DAVIDSON BROS BLDG	1900-1924	INDUSTRIAL-TOC	N/R DISTRICT CONTRI. SITE	PROCESSING/MANUFACTURING FACILITY
WAB 127	HINES HOUSE (DEMOLISHED) NOW PARKING LOT	1825-1849	FEDERAL	N/R DISTRICT NON-CONTRIB.	SINGLE DWELLING
WAB 127	HINES HOUSE (DEMOLISHED) NOW PARKING LOT	1825-1849	FEDERAL	N/R DISTRICT NON-CONTRIB.	SINGLE DWELLING

Site No.	Historic Name	Construction Year	Style	NRHP Status	Function
WAB 128	KISTER-HOUCHENS HOUSE	1900-1924	CLASSICAL REVIVAL	NATIONAL REGISTER	SINGLE DWELLING
WAB 128	KISTER-HOUCHENS HOUSE	1900-1924	CLASSICAL REVIVAL	NATIONAL REGISTER	SINGLE DWELLING
WAB 130	COMMERCIAL BLDG	1900-1924	COMMERCIAL-TOC	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 130	COMMERCIAL BLDG	1900-1924	COMMERCIAL-TOC	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 131	KERR MEMORIAL UNITED METHODIST CHURCH	1875-1899	GOTHIC-VICTORIAN	N/R DISTRICT CONTRI. SITE	RELIGIOUS - UNKNOWN
WAB 131	KERR MEMORIAL UNITED METHODIST CHURCH	1875-1899	GOTHIC-VICTORIAN	N/R DISTRICT CONTRI. SITE	RELIGIOUS - UNKNOWN
WAB 132	BOWLING GREEN MILLING CO	1875-1899	ECLECTIC	NATIONAL REGISTER	PROCESSING/MANUFACTURING FACILITY
WAB 132	BOWLING GREEN MILLING CO	1875-1899	ECLECTIC	NATIONAL REGISTER	PROCESSING/MANUFACTURING FACILITY
WAB 133	HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 133	HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 134	CHURCH OF CHRIST	1875-1899	RICHARDSONIAN ROMANESQUE	N/R DISTRICT CONTRI. SITE	RELIGIOUS - UNKNOWN
WAB 134	CHURCH OF CHRIST	1875-1899	RICHARDSONIAN ROMANESQUE	N/R DISTRICT CONTRI. SITE	RELIGIOUS - UNKNOWN
WAB 137	W H BLAKELY HOUSE (DEMOLISHED)	1850-1874	ITALIANATE	DEMOLISHED FR N/R	SINGLE DWELLING
WAB 139	W H EVERHARDT HOUSE	1875-1899	ITALIANATE	NATIONAL REGISTER	SINGLE DWELLING
WAB 139	W H EVERHARDT HOUSE	1875-1899	ITALIANATE	NATIONAL REGISTER	SINGLE DWELLING
WAB 140	ERAZMUS POTTER HOUSE	1875-1899	ECLECTIC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 140	ERAZMUS POTTER HOUSE	1875-1899	ECLECTIC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 141	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 141	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 142	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 142	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 142	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 143	HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 143	HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 144	HOUSE	1875-1899	GOTHIC-VICTORIAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 144	HOUSE	1875-1899	GOTHIC-VICTORIAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 145	SETTLE HOUSE	1875-1899	ECLECTIC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 145	SETTLE HOUSE	1875-1899	ECLECTIC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 146	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 146	HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 147	HUGHES HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 147	HUGHES HOUSE	1900-1924	VERNACULAR-20TH CENT.	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 203	CHERRY HALL	1925-1949	CLASSICAL REVIVAL	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 203	CHERRY HALL	1925-1949	CLASSICAL REVIVAL	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 204	GORDON WILSON HALL	1925-1949	CLASSICAL REVIVAL	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 204	GORDON WILSON HALL	1925-1949	CLASSICAL REVIVAL	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 205	VAN METER HALL	1900-1924	CLASSICAL REVIVAL	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 205	VAN METER HALL	1900-1924	CLASSICAL REVIVAL	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 206	KENTUCKY BUILDING	1925-1949	VERNACULAR-MODERN	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 206	KENTUCKY BUILDING	1925-1949	VERNACULAR-MODERN	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 207	PRESIDENTS HOME	1925-1949	VERNACULAR-MODERN	NATIONAL REGISTER	SINGLE DWELLING
WAB 207	PRESIDENTS HOME	1925-1949	VERNACULAR-MODERN	NATIONAL REGISTER	SINGLE DWELLING
WAB 208	WEST HALL	1925-1949	VERNACULAR-MODERN	NATIONAL REGISTER	INSTITUTIONAL HOUSING

Site No.	Historic Name	Construction Year	Style	NRHP Status	Function
WAB 208	WEST HALL	1925-1949	VERNACULAR-MODERN	NATIONAL REGISTER	INSTITUTIONAL HOUSING
WAB 209	HEATING PLANT	1925-1949	INDUSTRIAL-20TH CENT.	NATIONAL REGISTER	PROCESSING/MANUFACTURING FACILITY
WAB 209	HEATING PLANT	1925-1949	INDUSTRIAL-20TH CENT.	NATIONAL REGISTER	PROCESSING/MANUFACTURING FACILITY
WAB 210	STADIUM	1925-1949	CLASSICAL REVIVAL	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 210	STADIUM	1925-1949	CLASSICAL REVIVAL	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 211	HEALTH BUILDING / GYMNASIUM	1925-1949	ECLECTIC	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 211	HEALTH BUILDING / GYMNASIUM	1925-1949	ECLECTIC	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 212	INDUSTRIAL ARTS BUILDING	1925-1949	CLASSICAL REVIVAL	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 212	INDUSTRIAL ARTS BUILDING	1925-1949	CLASSICAL REVIVAL	NATIONAL REGISTER	COLLEGE/UNIVERSITY
WAB 213	HOME ECONOMICS BUILDING	1925-1949	CLASSICAL REVIVAL	DEMOLISHED FR N/R	COLLEGE/UNIVERSITY
WAB 223	RIVERVIEW- HOBSON HOUSE (PREVIOUSLY WA-161)	1850-1874	ITALIANATE	NATIONAL REGISTER	SINGLE DWELLING
WAB 223	RIVERVIEW- HOBSON HOUSE (PREVIOUSLY WA-161)	1850-1874	ITALIANATE	NATIONAL REGISTER	SINGLE DWELLING
WAB 224	KINLOCK (PREVIOUSLY WA-162)	1850-1874	GREEK REVIVAL	NATIONAL REGISTER	SINGLE DWELLING
WAB 224	KINLOCK (PREVIOUSLY WA-162)	1850-1874	GREEK REVIVAL	NATIONAL REGISTER	SINGLE DWELLING
WAB 226	FORT LYTLE	1850-1874	No Data	NATIONAL REGISTER	MILITARY - UNKNOWN
WAB 226	FORT LYTLE	1850-1874	No Data	NATIONAL REGISTER	MILITARY - UNKNOWN
WAB 254	NATIONAL FURNITURE STORE	1900-1924	COMMERCIAL-2OTH CENT.	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 254	NATIONAL FURNITURE STORE	1900-1924	COMMERCIAL-2OTH CENT.	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 298	JOHN H. FENWICK HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 298	JOHN H. FENWICK HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 310	HOUSE (SEE ALSO 1274)	1825-1849	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 310	HOUSE (SEE ALSO 1274)	1825-1849	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 320	HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 320	HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 322	HOUSE (SEE ALSO WAB-1277)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 322	HOUSE (SEE ALSO WAB-1277)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 510	BOWLING GREEN OMS #10	1925-1949	OTHER MODERN	NATIONAL REGISTER	MILITARY - OTHER
WAB 510	BOWLING GREEN OMS #10	1925-1949	OTHER MODERN	NATIONAL REGISTER	MILITARY - OTHER
WAB 512	HENRY L GALVIN HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 512	HENRY L GALVIN HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 556	HOUSE (DEMOLISHED) NOW VACANT LOT	1900-1924	QUEEN ANNE	N/R DISTRICT NON-CONTRIB.	SINGLE DWELLING
WAB 556	HOUSE (DEMOLISHED) NOW VACANT LOT	1900-1924	QUEEN ANNE	N/R DISTRICT NON-CONTRIB.	SINGLE DWELLING
WAB 587	HOUSE (SEE ALSO WAB-1278)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 587	HOUSE (SEE ALSO WAB-1278)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 594	HOUSE (SEE ALSO WAB-1279)	1975-2000	OTHER MODERN	N/R DISTRICT NON-CONTRIB.	SINGLE DWELLING
WAB 594	HOUSE (SEE ALSO WAB-1279)	1975-2000	OTHER MODERN	N/R DISTRICT NON-CONTRIB.	SINGLE DWELLING
WAB 615	HOUSE (SEE ALSO WAB-1281)	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 615	APARTMENT BUILDING # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 615	HOUSE (SEE ALSO WAB-1281)	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 615	APARTMENT BUILDING # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING

Site No.	Historic Name	Construction Year	Style	NRHP Status	Function
WAB 644	HOUSE (SEE ALSO WAB-1259)	1875-1899	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 644	HOUSE (SEE ALSO WAB-1259)	1875-1899	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 645	HOUSE (SEE ALSO WAB-1241)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 645	HOUSE (SEE ALSO WAB-1241)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 646	HOUSE (SEE ALSO WAB-1242)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 646	HOUSE (SEE ALSO WAB-1242)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 648	HOUSE	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 648	HOUSE	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 649	HOUSE	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 649	HOUSE	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 651	HOUSE	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 651	HOUSE	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 652	VACANT LOT	No Data	No Data	N/R DISTRICT NON-CONTRIB.	No Data
WAB 652	VACANT LOT	No Data	No Data	N/R DISTRICT NON-CONTRIB.	No Data
WAB 655	HOUSE (SEE ALSO WAB-1269)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 655	HOUSE (SEE ALSO WAB-1269)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 656	HOUSE (SEE ALSO WAB-1270)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 656	HOUSE (SEE ALSO WAB-1270)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 657	HOUSE (SEE ALSO WAB-1271)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 657	HOUSE (SEE ALSO WAB-1271)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 658	HOUSE (SEE ALSO WAB-1272)	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 658	HOUSE (SEE ALSO WAB-1272)	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 660	HOUSE (SEE ALSO WAB-1275)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 660	HOUSE (SEE ALSO WAB-1275)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 661	HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 661	HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 662	HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 662	HOUSE	1875-1899	VERNACULAR-TOC	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 734	APARTMENT BUILDING (SEE ALSO WAB-1215)	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 734	APARTMENT BUILDING (SEE ALSO WAB-1215)	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 837	HOUSE (SEE ALSO WAB-1214)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 837	GARAGE AND HERRINGBONE SIDEWALK	No Data	No Data	N/R DISTRICT NON-CONTRIB.	GARAGE
WAB 837	HOUSE (SEE ALSO WAB-1214)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 837	GARAGE AND HERRINGBONE SIDEWALK	No Data	No Data	N/R DISTRICT NON-CONTRIB.	GARAGE
WAB 838	HOUSE (SEE ALSO WAB-1213)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 838	HOUSE (SEE ALSO WAB-1213)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 845	HOUSE	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 845	HOUSE	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 931	HOUSE	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 931	HOUSE	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 932	HOUSE (SEE ALSO WAB-1221)	1875-1899	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 932	HOUSE (SEE ALSO WAB-1221)	1875-1899	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING

Site No.	Historic Name	Construction Year	Style	NRHP Status	Function
WAB 933	HOUSE (SEE ALSO WAB-1220)	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 933	HOUSE (SEE ALSO WAB-1220)	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 934	HOUSE (SEE ALSO WAB-1219)	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 934	HOUSE (SEE ALSO WAB-1219)	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 935	HOUSE (SEE ALSO WAB-1218)	1900-1924	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 935	HOUSE (SEE ALSO WAB-1218)	1900-1924	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 936	DUPLEX (SEE ALSO WAB-1216)	1950-1974	RANCH	N/R DISTRICT NON-CONTRIB.	SINGLE DWELLING
WAB 936	DUPLEX (SEE ALSO WAB-1216)	1950-1974	RANCH	N/R DISTRICT NON-CONTRIB.	SINGLE DWELLING
WAB 937	HOUSE (SEE ALSO WAB-1217)	1875-1899	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 937	HOUSE (SEE ALSO WAB-1217)	1875-1899	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 938	DUPLEX	1925-1949	OTHER MODERN	N/R DISTRICT NON-CONTRIB.	MULTIPLE FAMILY DWELLING
WAB 938	DUPLEX	1925-1949	OTHER MODERN	N/R DISTRICT NON-CONTRIB.	MULTIPLE FAMILY DWELLING
WAB 939	HOUSE	1925-1949	OTHER MODERN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 939	HOUSE	1925-1949	OTHER MODERN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 940	HOUSE (SEE ALSO WAB-1228)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 940	HOUSE (SEE ALSO WAB-1228)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 941	MOLLIE ANDREWS HOUSE (SEE ALSO WAB-1229)	1900-1924	GREEK REVIVAL	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 941	MOLLIE ANDREWS HOUSE (SEE ALSO WAB-1229)	1900-1924	GREEK REVIVAL	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 942	APARTMENT BUILDING (SEE ALSO WAB-1230)	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 942	APARTMENT BUILDING (SEE ALSO WAB-1230)	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 943	HOUSE (SEE ALSO WAB-1243)	1925-1949	TUDOR REVIVAL	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 943	HOUSE (SEE ALSO WAB-1243)	1925-1949	TUDOR REVIVAL	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 944	HOUSE (SEE ALSO WAB- 1244)	1875-1899	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 944	HOUSE (SEE ALSO WAB- 1244)	1875-1899	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 945	HOUSE (SEE ALSO WAB-1246)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 945	GARAGE/APARTMENT BUILDING # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	RESIDENTIAL - OTHER
WAB 945	HOUSE (SEE ALSO WAB-1246)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 945	GARAGE/APARTMENT BUILDING # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	RESIDENTIAL - OTHER
WAB 946	HOUSE (SEE ALSO WAB-1245)	1950-1974	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 946	OUTBUILDING # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	DOMESTIC OUTBUILDINGS - UNKNOWN
WAB 946	HOUSE (SEE ALSO WAB-1245)	1950-1974	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 946	OUTBUILDING # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	DOMESTIC OUTBUILDINGS - UNKNOWN
WAB 947	HOUSE (SEE ALSO WAB-1247)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 947	OUTBUILDING # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	DOMESTIC OUTBUILDINGS - UNKNOWN
WAB 947	HOUSE (SEE ALSO WAB-1247)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 947	OUTBUILDING # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	DOMESTIC OUTBUILDINGS - UNKNOWN
WAB 948	OUTBUILDING # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	DOMESTIC OUTBUILDINGS - UNKNOWN
WAB 948	OUTBUILDING # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	DOMESTIC OUTBUILDINGS - UNKNOWN
WAB 949	VACANT LOT (GARDEN FOR 1134 ADAMS)	No Data	No Data	N/R DISTRICT NON-CONTRIB.	No Data
WAB 949	VACANT LOT (GARDEN FOR 1134 ADAMS)	No Data	No Data	N/R DISTRICT NON-CONTRIB.	No Data
WAB 950	HOUSE (SEE ALSO WAB-1250)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 950	HOUSE (SEE ALSO WAB-1250)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING

Site No.	Historic Name	Construction Year	Style	NRHP Status	Function
WAB 951	HOUSE (SEE ALSO WAB-1252)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 951	OUTBUILDING # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	DOMESTIC OUTBUILDINGS - UNKNOWN
WAB 951	HOUSE (SEE ALSO WAB-1252)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 951	OUTBUILDING # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	DOMESTIC OUTBUILDINGS - UNKNOWN
WAB 952	HOUSE (SEE ALSO WAB-952)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 952	APARTMENT BUILDING # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 952	HOUSE (SEE ALSO WAB-952)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 952	APARTMENT BUILDING # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 953	HOUSE (SEE ALSO WAB-1254)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 953	HOUSE (SEE ALSO WAB-1254)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 955	HOUSE (SEE ALSO WAB-955)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 955	SHED # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	SHED
WAB 955	HOUSE (SEE ALSO WAB-955)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 955	SHED # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	SHED
WAB 957	HOUSE (SEE ALSO WAB-1251)	1900-1924	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 957	HOUSE (SEE ALSO WAB-1251)	1900-1924	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 958	HOUSE (SEE ALSO WAB-1257)	1925-1949	COLONIAL REVIVAL	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 958	HOUSE (SEE ALSO WAB-1257)	1925-1949	COLONIAL REVIVAL	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 959	HOUSE (SEE ALSO WAB-1258)	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 959	APARTMENT BUILDING # EL #	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 959	HOUSE (SEE ALSO WAB-1258)	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 959	APARTMENT BUILDING # EL #	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 961	HOUSE (SEE ALSO WAB-1267)	1925-1949	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 961	HOUSE (SEE ALSO WAB-1267)	1925-1949	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 992	DUPLEX	1875-1899	VERNACULAR-VICTORIAN	DEMOLISHED	MULTIPLE FAMILY DWELLING
WAB 994	FRED HESPEN HOUSE	1875-1899	GREEK REVIVAL	DEMOLISHED	SINGLE DWELLING
WAB 995	HOUSE	1875-1899	VERNACULAR-VICTORIAN	DEMOLISHED	SINGLE DWELLING
WAB 996	HOUSE	1900-1924	VERNACULAR-TOC	DEMOLISHED	SINGLE DWELLING
WAB 997	HOUSE	1875-1899	VERNACULAR-VICTORIAN	DEMOLISHED	SINGLE DWELLING
WAB 998	HOUSE	1900-1924	VERNACULAR-TOC	DEMOLISHED	SINGLE DWELLING
WAB 999	HOUSE	1875-1899	VERNACULAR-VICTORIAN	DEMOLISHED	SINGLE DWELLING
WAB 1000	W H PAYNE HOUSE	1875-1899	VERNACULAR-VICTORIAN	DEMOLISHED	SINGLE DWELLING
WAB 1005	HOUSE (SEE ALSO WAB-1282)	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1005	HOUSE (SEE ALSO WAB-1282)	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1006	HOUSE (SEE ALSO WAB-1268)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1006	HOUSE (SEE ALSO WAB-1268)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1007	HOUSE (SEE ALSO WAB-1266)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1007	METAL SHED # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	SHED
WAB 1007	HOUSE (SEE ALSO WAB-1266)	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1007	METAL SHED # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	SHED
WAB 1008	NANCY OLIVER ROBERTS OFFICES (SEE ALSO WAB-1265)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1008	NANCY OLIVER ROBERTS OFFICES (SEE ALSO WAB-1265)	1875-1899	ITALIANATE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING

Site No.	Historic Name	Construction Year	Style	NRHP Status	Function
WAB 1009	HOUSE (SEE ALSO WAB-1264)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1009	GARAGE # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	GARAGE
WAB 1009	HOUSE (SEE ALSO WAB-1264)	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1009	GARAGE # EL #	No Data	No Data	N/R DISTRICT NON-CONTRIB.	GARAGE
WAB 1010	DUPLEX	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1010	DUPLEX	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1011	HOUSE (SEE ALSO WAB-1280)	1925-1949	OTHER MODERN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1011	GARAGE # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	GARAGE
WAB 1011	HOUSE (SEE ALSO WAB-1280)	1925-1949	OTHER MODERN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1011	GARAGE # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	GARAGE
WAB 1012	COMMERCIAL BUILDING (SEE ALSO WAB-1231)	1975-2000	OTHER MODERN	N/R DISTRICT CONTRI. SITE	BUSINESS
WAB 1012	COMMERCIAL BUILDING (SEE ALSO WAB-1231)	1975-2000	OTHER MODERN	N/R DISTRICT CONTRI. SITE	BUSINESS
WAB 1013	VACANT LOT	No Data	No Data	N/R DISTRICT NON-CONTRIB.	No Data
WAB 1013	VACANT LOT	No Data	No Data	N/R DISTRICT NON-CONTRIB.	No Data
WAB 1014	HOUSE (SEE ALSO WAB-1212)	1875-1899	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1014	COMMERCIAL BUILDING (NOW HOUSE) # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 1014	HOUSE (SEE ALSO WAB-1212)	1875-1899	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1014	COMMERCIAL BUILDING (NOW HOUSE) # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	COMMERCIAL/PROFESSIONAL/OFFICE - UNKNOWN
WAB 1041	HOUSE	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1041	APARTMENT BUILDING # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1041	HOUSE	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1041	APARTMENT BUILDING # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1042	HOUSE	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1042	HOUSE	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1125	MARY BELLE PRICE HOUSE/PHELPS HOUSE	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1125	MARY BELLE PRICE HOUSE/PHELPS HOUSE	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1126	FIRST BAPTIST CHURCH PARSONAGE	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1126	APARTMENT BUILDINGS # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	No Data
WAB 1126	FIRST BAPTIST CHURCH PARSONAGE	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1126	APARTMENT BUILDINGS # EL #	No Data	No Data	N/R DISTRICT CONTRI. SITE	No Data
WAB 1127	JOHN RILEY HOUSE/GEORGE KERR HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1127	JOHN RILEY HOUSE/GEORGE KERR HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1128	L WRIGHT AND LUCILLE COOK HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1128	L WRIGHT AND LUCILLE COOK HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1129	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1129	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1130	RUTH AND H R BRIGHTWELL HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1130	RUTH AND H R BRIGHTWELL HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1131	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1131	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1132	HELM/BENJAMIN/NANNIE CALDWELL HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1132	HELM/BENJAMIN/NANNIE CALDWELL HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING

Site No.	Historic Name	Construction Year	Style	NRHP Status	Function
WAB 1133	E J AND EFFIE CLAY HOUSE	1925-1949	TUDOR REVIVAL	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1133	E J AND EFFIE CLAY HOUSE	1925-1949	TUDOR REVIVAL	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1134	HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1134	HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1135	J W AND VIRGINIA BELLE COOKE HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1135	J W AND VIRGINIA BELLE COOKE HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1136	HOUSE	1900-1924	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1136	HOUSE	1900-1924	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1137	W D BUCKBERRY HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1137	W D BUCKBERRY HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1138	BELLE GALLOWAY HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1138	BELLE GALLOWAY HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1139	HOUSE	1875-1899	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1139	HOUSE	1875-1899	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1140	HOUSE	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1140	HOUSE	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1141	HOUSE	1875-1899	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1141	HOUSE	1875-1899	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1142	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1142	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1143	HOUSE	1925-1949	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1143	HOUSE	1925-1949	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1143	HOUSE	1925-1949	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1144	HOUSE	1950-1974	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1144	HOUSE	1950-1974	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1145	HOUSE (BURNED) NOW VACANT LOT	1875-1899	QUEEN ANNE	N/R DISTRICT NON-CONTRIB.	SINGLE DWELLING
WAB 1145	HOUSE (BURNED) NOW VACANT LOT	1875-1899	QUEEN ANNE	N/R DISTRICT NON-CONTRIB.	SINGLE DWELLING
WAB 1146	L R AND M H BRIDGES HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1146	L R AND M H BRIDGES HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1147	ELIZABETH AND EDWARD HUFFMAN (HOFFMAN?) HOUSE	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1147	ELIZABETH AND EDWARD HUFFMAN (HOFFMAN?) HOUSE	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1148	HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1148	HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1149	HOUSE	1900-1924	COLONIAL REVIVAL	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1149	HOUSE	1900-1924	COLONIAL REVIVAL	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1150	DUPLEX	1900-1924	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1150	DUPLEX	1900-1924	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1151	HOUSE	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1151	HOUSE	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1152	HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1152	HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1153	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1153	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING

Site No.	Historic Name	Construction Year	Style	NRHP Status	Function
WAB 1154	HOUSE	1900-1924	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1154	HOUSE	1900-1924	AMERICAN FOURSQUARE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1155	DUPLEX	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1155	DUPLEX	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1156	HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1156	HOUSE	1900-1924	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1157	WILLIAM AND FRANCIS REW (REUS?) HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1157	WILLIAM AND FRANCIS REW (REUS?) HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1158	WESTERFIELD HOUSE (DUPLEX)	1925-1949	TUDOR REVIVAL	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1158	WESTERFIELD HOUSE (DUPLEX)	1925-1949	TUDOR REVIVAL	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1165	HOUSE	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1165	HOUSE	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1173	DUPLEX AND APARTMENTS	No Data	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1173	DUPLEX # EL #	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1173	DUPLEX AND APARTMENTS	No Data	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1173	DUPLEX # EL #	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1174	DUPLEX	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1174	DUPLEX	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1175	DUPLEX	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1175	DUPLEX	1925-1949	No Data	N/R DISTRICT CONTRI. SITE	MULTIPLE FAMILY DWELLING
WAB 1176	HOUSE	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1176	HOUSE	1925-1949	CRAFTSMAN	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1198	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1198	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1199	HOUSE # EL #	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1199	HOUSE # EL #	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1201	DIEMERS D & F SUPERMARKET	1950-1974	No Data	N/R DISTRICT NON-CONTRIB.	GENERAL/DEPARTMENT STORE
WAB 1201	DIEMERS D & F SUPERMARKET	1950-1974	No Data	N/R DISTRICT NON-CONTRIB.	GENERAL/DEPARTMENT STORE
WAB 1202	HOUSE	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1202	HOUSE	1875-1899	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1203	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1203	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1204	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1204	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1205	HOUSE	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1205	HOUSE	1900-1924	No Data	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1206	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1206	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1207	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING
WAB 1207	HOUSE	1900-1924	QUEEN ANNE	N/R DISTRICT CONTRI. SITE	SINGLE DWELLING

APPENDIX C:
Shovel Test Log

Garrison Gardens I Apartment Complex Project Shovel Test Log

STP#	Depth (cm)	Soil Description	Artifacts
A1	n/a	Flooded, standing water	-
A2	n/a	Flooded, standing water	-
A3	n/a	Flooded, standing water	-
A4	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
A5	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
A6	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
A7	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
B1	n/a	Flooded, standing water	-
B2	n/a	Flooded, standing water	-
B3	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
B4	0-20	7.5YR 4/4 silt loam	
	20-30	7.5YR 5/4 silt clay loam	
B5	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
B6	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
B7	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
B8	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
B9	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
B10	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
C1	n/a	Flooded, standing water	-
C2	n/a	Flooded, standing water	-
C3	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
C4	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
C5	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
C6	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
C7	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
C8	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
C9	n/a	Disturbed, located where a modern house is	-
D1	0-10	7.5YR 5/4 silt loam. Water inundation after 10-cm.	-
D2	0-10	7.5YR 5/4 silt loam. Water inundation after 10-cm.	-
D3	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
D4	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
D5	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
D6	0-20	7.5YR 4/4 silt loam	-

STP#	Depth (cm)	Soil Description	Artifacts
	20-30	7.5YR 5/4 silt clay loam	
D7	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
D8	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
D9	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
D10	0-20	7.5YR 4/4 silt loam	-
	20-30	7.5YR 5/4 silt clay loam	
D11	0-25	7.5YR 4/4 silt loam	-
	Rock	Rock impasse	
D12	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
E1	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
E2	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
E3	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
E4	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
E5	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
E6	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
E7	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
E8	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
E9	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
E10	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
E11	0-20	7.5YR 4/4 silt loam	-
	Rock	Rock Impasse	
E12	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
F1	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
F2	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
F3	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
F4	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
F5	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
F6	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
F7	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
F8	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
F9	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
F10	0-20	7.5YR 4/4 silt loam	-

STP#	Depth (cm)	Soil Description	Artifacts
	30-20	7.5YR 5/4 silt clay loam	
F11	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
F12	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G1	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G2	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G3	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G4	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G5	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G6	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G7	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G8	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G9	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G10	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G11	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
G12	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H1	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H2	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H3	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H4	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H5	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H6	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H7	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H8	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H9	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H10	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H11	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
H12	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
I1	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
I2	0-20	7.5YR 4/4 silt loam	-

STP#	Depth (cm)	Soil Description	Artifacts
	30-20	7.5YR 5/4 silt clay loam	
I3	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
I4	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
I5	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
I6	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
I7	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
I8	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
I9	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
I10	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
I11	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	
I12	0-20	7.5YR 4/4 silt loam	-
	30-20	7.5YR 5/4 silt clay loam	

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221 Main Street
Florence, KY 41042
lerickson@environmental-archaeology.com

RE: **DLG,**,*Abbreviated Archaeological Report for the Phase I Survey of the Wabuck Development Company Garrison Gardens I Apartment Complex Project in Warren County, Kentucky*
Report by: Luke Erickson

Dear Mr. Erickson:

Thank you for your recent submission of the above referenced archaeology report pertaining to this undertaking. We understand that this investigation covered approximately 8.2 acres with archaeological survey methods including pedestrian survey and supplemental shovel testing. No cultural resources were identified during this investigation.

We would concur with a finding of **No Historic Properties Affected** and accept this report without revisions.

Should you have any questions, please contact Stephanie Dooley of my staff at Stephanie.Dooley@ky.gov.

Sincerely,

Craig A. Potts,
Executive Director and
State Historic Preservation Officer

KHC #s: 241795; previous: 240495
cp: sd
e.cc: Luke Erickson

MEMORANDUM

TO: Project File

FROM: Jennifer Oberlin, Environmental Review Technical Administrator

SUBJECT: Tribal Response to Section 106 Consultation Letter

DATE: October 22, 2024

Below you will find a chart that details what tribes were sent a request to be a consulting party for the project describe below, what date they received the consultation request, when a response was received from the tribe and any pertinent comment regarding the response received.

All consultation requests were sent by me via email. Copies of the emails and correspondences sent, and responses received (if they were received) have been included in the source documentation following.

Project Description: Garrison Gardens consist of the new construction of 120 multi-family units contained within 16 buildings built on an undeveloped 13.56 acre site located at 1221 Crewdson Drive, Bowling Green, Warren County, KY (36.9986, -86.4676).

Please note per HUD CPD Notice 12-006 tribes have a 30-day threshold to respond to tribal consultation request. To date no responses have been received.

Chart below reflects the Tribal Consultation Request(s):

Tribe Consulted:	Date Sent:	Response Received or Deadline to Respond Expired Date:
Cherokee Nation	08/13/2024	The Cherokee Nation responded on 9/11/2024 stating that the Nation does not foresee this project imparting impacts to Cherokee cultural resources at this time. .
Eastern Band of Cherokee Indians	08/13/2024	No response received by 10/22/2024.
Osage Nation	08/13/2024	No response received by 10/22/2024.

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CHEROKEE NATION®
P.O. Box 948 • Tahlequah, OK 74465-0948
918-453-5000 • www.cherokee.org

Chuck Hoskin Jr.
Principal Chief
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Bryan Warner
Deputy Principal Chief
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September 11, 2024

Jennifer Oberlin
Kentucky Housing Corporation
1231 Louisville Rd.
Frankfort, KY 40601

Re: 1221 Crewdson Drive

Ms. Jennifer Oberlin:

The Cherokee Nation (Nation) is in receipt of your correspondence about the **1221 Crewdson Drive**, and appreciates the opportunity to provide comment upon this project. This communication is intended for government-to-government consultation with a sovereign federally recognized Tribal Nation. Information received in consultation will be deemed confidential unless explicit consent is provided by the Nation.

The Nation maintains databases and records of cultural, historic, and pre-historic resources in this area. Our Historic Preservation Office (Office) reviewed this project, cross referenced the project's legal description against our information, and found no instances where this project intersects or adjoins such resources. Thus, the Nation does not foresee this project imparting impacts to Cherokee cultural resources at this time.

However, the Nation requests that the Kentucky Housing Corporation (KHC) halt all project activities immediately and re-contact our Office for further consultation if items of cultural significance are discovered during the course of this project. Additionally, the Nation requests that the KHC conduct appropriate inquiries with other pertinent Historic Preservation Offices regarding historic and prehistoric resources not included in the Nation's databases or records.

If you require additional information or have any questions, please contact me at your convenience. Thank you for your time and attention to this matter.

Wado,

Elizabeth Toombs

Elizabeth Toombs, Tribal Historic Preservation Officer
Cherokee Nation Tribal Historic Preservation Office
elizabeth-toombs@cherokee.org
918.453.5389

Jennifer Oberlin

From: Jennifer Oberlin
Sent: Tuesday, August 13, 2024 4:24 PM
To: 'Elizabeth-toombs@cherokee.org'
Cc: sarnzen@cmecenvironmental.com; April Bowman
Subject: HUD funded MF Units (120 units; 13.56 Acres) - 1221 Crewdson Drive, Bowling Green, Warren County, KY - (36.9986, -86.4676)

Dear THPO Toombs – Please find attached KHC's tribal consultation request for the above referenced property.

This initiative consists of the construction of 120 new affordable multi-family housing units contained within 16 buildings on an undeveloped 13.56 acre site.

We determine that these actions will have no effect on historic properties.

This link provides you with pertinent project information. Here's the attachment as a link for your review:
SHPO_Docs.pdf

Please feel free to reach out to me with any questions or concerns. I can be reached at joberlin@kyhousing.org or 502.564.7630 (121).

Thanks, Jen

Jennifer Oberlin
Pronouns: (she/her)
Environmental Review Technical Administrator
Kentucky Housing Corporation
1231 Louisville Rd.
Frankfort, KY 40601
502-564-7630 (121)
joberlin@kyhousing.org
www.kyhousing.org

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KHC partners can subscribe to FREE email updates for KHC news and announcements. Subscribe to eGrams today!

Jennifer Oberlin

From: postmaster@ebci-nsn.gov
To: Stephen Yerka
Sent: Tuesday, August 13, 2024 4:30 PM
Subject: Delivered: HUD funded MF Units (120 units; 13.56 Acres) - 1221 Crewdson Drive, Bowling Green, Warren County, KY - (36.9986, -86.4676)

Your message has been delivered to the following recipients:

Stephen Yerka (syerka@nc-cherokee.com)

Subject: HUD funded MF Units (120 units; 13.56 Acres) - 1221 Crewdson Drive, Bowling Green, Warren County, KY - (36.9986, -86.4676)

Jennifer Oberlin

From: Jennifer Oberlin
Sent: Tuesday, August 13, 2024 4:30 PM
To: Stephen Yerka; ashlstep@nc-cherokee.com
Cc: sarnzen@cmecenvironmental.com; April Bowman
Subject: HUD funded MF Units (120 units; 13.56 Acres) - 1221 Crewdson Drive, Bowling Green, Warren County, KY - (36.9986, -86.4676)

Dear Principal Chief Sneed and THPO Townsend – Please find attached KHC's tribal consultation request for the above referenced property.

This initiative consists of the construction of 120 new affordable multi-family housing units contained within 16 buildings on an undeveloped 13.56 acre site.

We determine that these actions will have no effect on historic properties.

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Thanks, Jen

Jennifer Oberlin
Pronouns: (she/her)
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Kentucky Housing Corporation
1231 Louisville Rd.
Frankfort, KY 40601
502-564-7630 (121)
joberlin@kyhousing.org
www.kyhousing.org

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KHC partners can subscribe to FREE email updates for KHC news and announcements. Subscribe to eGrams today!

Jennifer Oberlin

From: Microsoft Outlook <MicrosoftExchange329e71ec88ae4615bbc36ab6ce41109e@kyhousing.org>
To: s106@osagenation-nsn.gov
Sent: Tuesday, August 13, 2024 4:40 PM
Subject: Relayed: HUD funded MF Units (120 units; 13.56 Acres) - 1221 Crewdson Drive, Bowling Green, Warren County, KY - (36.9986, -86.4676)

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:

s106@osagenation-nsn.gov (s106@osagenation-nsn.gov)

Subject: HUD funded MF Units (120 units; 13.56 Acres) - 1221 Crewdson Drive, Bowling Green, Warren County, KY - (36.9986, -86.4676)

Jennifer Oberlin

From: Jennifer Oberlin
Sent: Tuesday, August 13, 2024 4:40 PM
To: s106@osagenation-nsn.gov
Cc: sarnzen@cmecenvironmental.com; April Bowman
Subject: HUD funded MF Units (120 units; 13.56 Acres) - 1221 Crewdson Drive, Bowling Green, Warren County, KY - (36.9986, -86.4676)

Dear Director/THPO Hunter – Please find attached KHC's tribal consultation request for the above referenced property.

This initiative consists of the construction of 120 new affordable multi-family housing units contained within 16 buildings on an undeveloped 13.56 acre site.

We determine that these actions will have no effect on historic properties.

This link provides you with pertinent project information: SHPO_Docs.pdf

Please feel free to reach out to me with any questions or concerns. I can be reached at joberlin@kyhousing.org or 502.564.7630 (121).

Thanks, Jen

Jennifer Oberlin

Pronouns: (she/her)
Environmental Review Technical Administrator
Kentucky Housing Corporation
1231 Louisville Rd.
Frankfort, KY 40601
502-564-7630 (121)
joberlin@kyhousing.org
www.kyhousing.org

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Tribal Directory Assessment Information

Contact Information for Tribes with Interests in Warren County, Kentucky

	Tribal Name	County Name
−	Cherokee Nation	Warren

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Email Address	URL
Elizabeth Toombs	THPO	PO Box 948, Tahlequah, OK - 74465	(918) 453-5389		elizabeth-toombs@cherokee.org	http://www.cherokee.org

	Tribal Name	County Name
−	Eastern Band of Cherokee Indians	Warren

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Email Address	URL
Russell Townsend	Tribal Historic Preservation Specialist	Qualla Boundary P.O. Box 455, Cherokee, NC - 28719	(828) 554-6851	(828) 497-1590	syerka@nc-cherokee.com	https://ebci.com/
Richard Sneed	Principal Chief	88 Council House Loop Road, Cherokee, NC - 28719	(828) 359-7000	(828) 359-0344	ashlstep@nc-cherokee.com	https://ebci.com/

	Tribal Name	County Name
−	Osage Nation	Warren

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Email Address	URL
Andrea A. Hunter	Director and THPO	N/A, Pawhuska, OK - 74056	(918) 287-5328	(918) 287-5376	s106@osagenation-nsn.gov	https://www.osageculture.com/culture/historic-preservation-office

1 - 3 of 3 results « ‹ 1 › » 10

ENCLOSURE L

NOISE ABATEMENT AND CONTROL

OMB No. 2506-0177
(exp.2/28/2025)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Noise (EA Level Reviews) – PARTNER

https://www.hudexchange.info/programs/environmental-review/noise-abatement-and-control

1. **What activities does your project involve? Check all that apply:**

☒ New construction for residential use

NOTE: HUD assistance to new construction projects is generally prohibited if they are located in an Unacceptable zone, and HUD discourages assistance for new construction projects in Normally Unacceptable zones. See 24 CFR 51.101(a)(3) for further details.

→ *Continue to Question 2.*

☐ Rehabilitation of an existing residential property

NOTE: For major or substantial rehabilitation in Normally Unacceptable zones, HUD encourages mitigation to reduce levels to acceptable compliance standards. For major rehabilitation in Unacceptable zones, HUD strongly encourages mitigation to reduce levels to acceptable compliance standards. See 24 CFR 51 Subpart B for further details.

→ *Continue to Question 2.*

☐ None of the above

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. **Complete the Preliminary Screening to identify potential noise generators in the vicinity (1000' from a major road, 3000' from a railroad, or 15 miles from an airport).**
Indicate the findings of the Preliminary Screening below:

☐ There are no noise generators found within the threshold distances above.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing the location of the project relative to any noise generators.*

☒ Noise generators were found within the threshold distances.

→ *Continue to Question 3.*

3. **Complete the Noise Assessment Guidelines to quantify the noise exposure. Indicate the findings of the Noise Assessment below:**

☒ Acceptable (65 decibels or less; the ceiling may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

Indicate noise level here: 51

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide noise analysis, including noise level and data used to complete the analysis.*

☐ Normally Unacceptable: (Above 65 decibels but not exceeding 75 decibels; the floor may be shifted to 70 decibels in circumstances described in 24 CFR 51.105(a))

Indicate noise level here: Click here to enter text.

<u>If project is rehabilitation:</u>

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

<u>If project is new construction:</u>

Is the project in a largely undeveloped area[1]?

☐ No

☐ Yes → ***The project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i).***

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

☐ Unacceptable: (Above 75 decibels)

Indicate noise level here: Click here to enter text.

<u>If project is rehabilitation:</u>

HUD strongly encourages conversion of noise-exposed sites to land uses compatible with high noise levels. Consider converting this property to a non-residential use compatible with high noise levels.

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis, and any other relevant information.*

<u>If project is new construction:</u>

The project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i). *Work with HUD or the RE to either complete an EIS or obtain a waiver signed by the appropriate authority.*

→ *Continue to Question 4.*

4. **HUD strongly encourages mitigation be used to eliminate adverse noise impacts. Work with the RE/HUD on the development of the mitigation measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

☐ Mitigation as follows will be implemented:

[1] A largely undeveloped area means the area within 2 miles of the project site is less than 50 percent developed with urban uses and does not have water and sewer capacity to serve the project.

Click here to enter text.
→ *Provide drawings, specifications, and other materials as needed to describe the project's noise mitigation measures.*
Continue to the Worksheet Summary.

☒ No mitigation is necessary.
Explain why mitigation will not be made here:
Click here to enter text.
→ *Continue to the Worksheet Summary.*

Worksheet Summary
Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

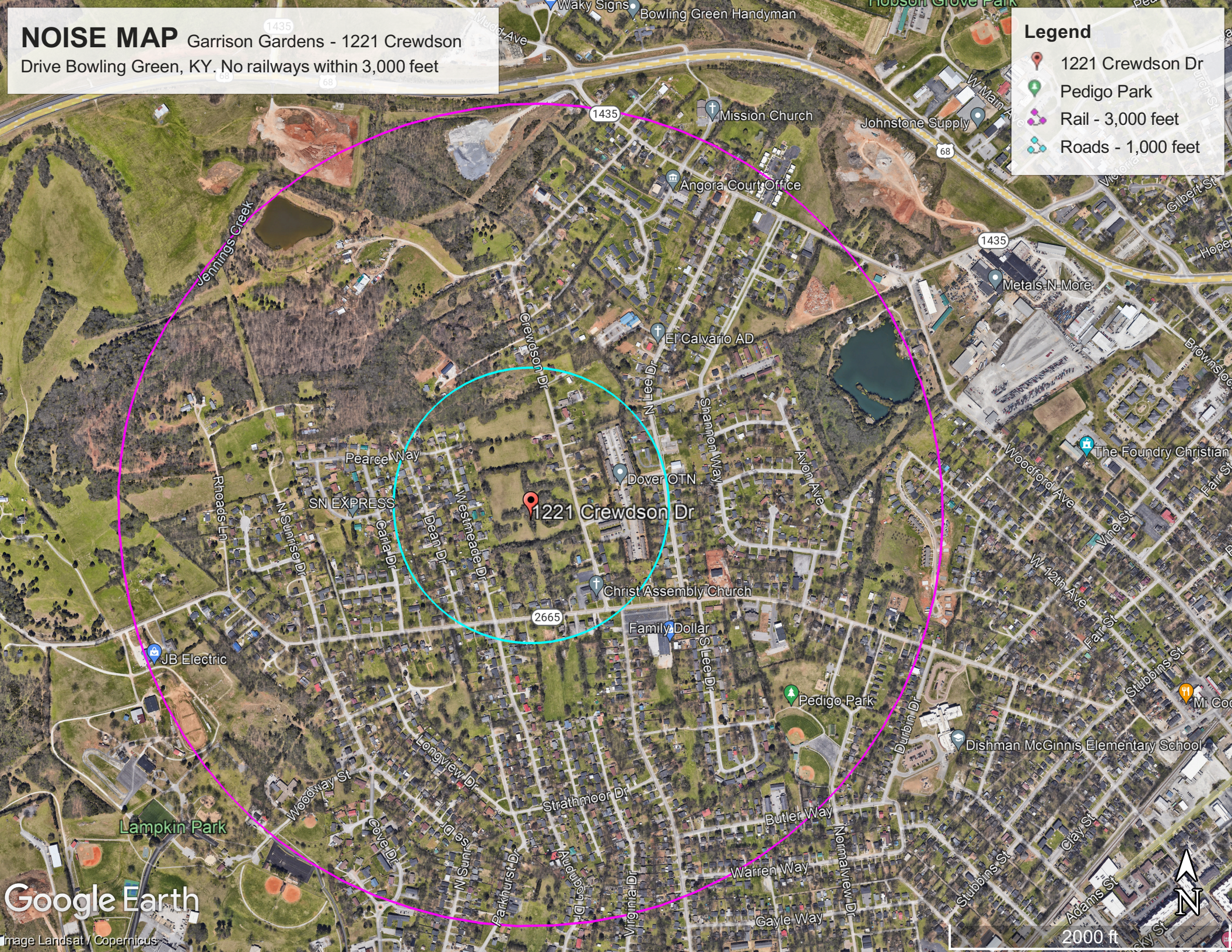
A Noise Assessment was conducted. The noise level was acceptable: 51.0 db. The site is approximately 3.4 miles from the Bowling Green-Woodhurst airport. Noise is not expected to be generated beyond the airport boundaries as annual air carrier operations, annual air taxi operations, annual military operations, and annual general aviation operations are below the threshold, and it is assumed, per HUD, that the noise attributed to the airplanes will not extend beyond the boundaries of the airport. One road with KY AADT traffic counts was within the 1000-foot threshold, Glen Lily Road south of the site. The project site is 295 feet from Glen Lily Road which has a FY34 projected AADT of 2878. The standard assumption of 15%-night volume was used, and the road gradient was calculated at 1%. The HUD DNL calculator indicated a total of 51 dB for this roadway. See noise analysis. The project is in compliance with HUD's Noise regulation.

Supporting Documentation

Garrison Gardens Noise.pdf

NOISE MAP

Garrison Gardens - 1221 Crewdson Drive Bowling Green, KY. No railways within 3,000 feet

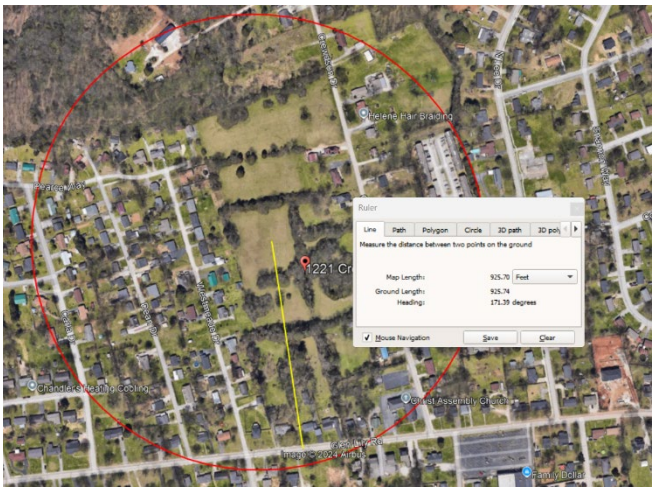


Garrison Gardens

1221 Crewdson Drive
Bowling Green, Warren Co., Kentucky

BWG Airport is within 15 miles of the project site.

ROAD #1: Glen Lily (South of Site)



Glen Lily Road		
Slope (Source: *KYTC Interactive map*)		
1000 foot East Elevation		505.684
1000 foot West Elevation		522.125
Δ		-16.441
Slope*		0.82%
** % Slope = (rise / run x 100)*		
Traffic Counts (Source: *KYTC Interactive map*)		
Previous KAADT (2019)		3611
Current AADT (2022)		2,878
Δ		-733
Annual Change (AADT Difference/Years)		-244.3333
Projection for 2024 (2022 year used)		2878
Projecion for 2034		2878
	%	Projected 2034 AADT
Vehicle Percentage (Source *KYTC Traffic Count Histoic Traffic Volume)*		
Car	94.70%	2725
Medium Truck	4.10%	118
Heavy Truck	1.20%	35

HUD Noise Calculation Values	
NAL 1	
Effective Distance	295
Distance to Stop Sign	0
Average Speed (posted speed limit)	35
Night Fraction	15%
Road Gradient %	1.00%

The project site is located 295 feet from Glen Lily Road which has a projected FY34 AADT of 2,878 which is the same as than the most recent AADT (2022) of 2034. Note: Negative projects require most recent AADT count be used. Reports from KYTC attached. Standard assumption of night volume of 15% was used. The average road grade of the segment of the roadway, approximately 1,000 feet either side of a perpendicular line between the project site and Glen Lily Road, was determined to be 0.82% (1% used). The speed limit is 35 MPH. There are no stop signs or intersections within 600 feet on either side of the site. The HUD DNL Calculator was used to calculate a total of 51 decibels for this roadway. The individual source's DNL calculation was included in the combined total DNL calculation for all noise sources of 51 dB

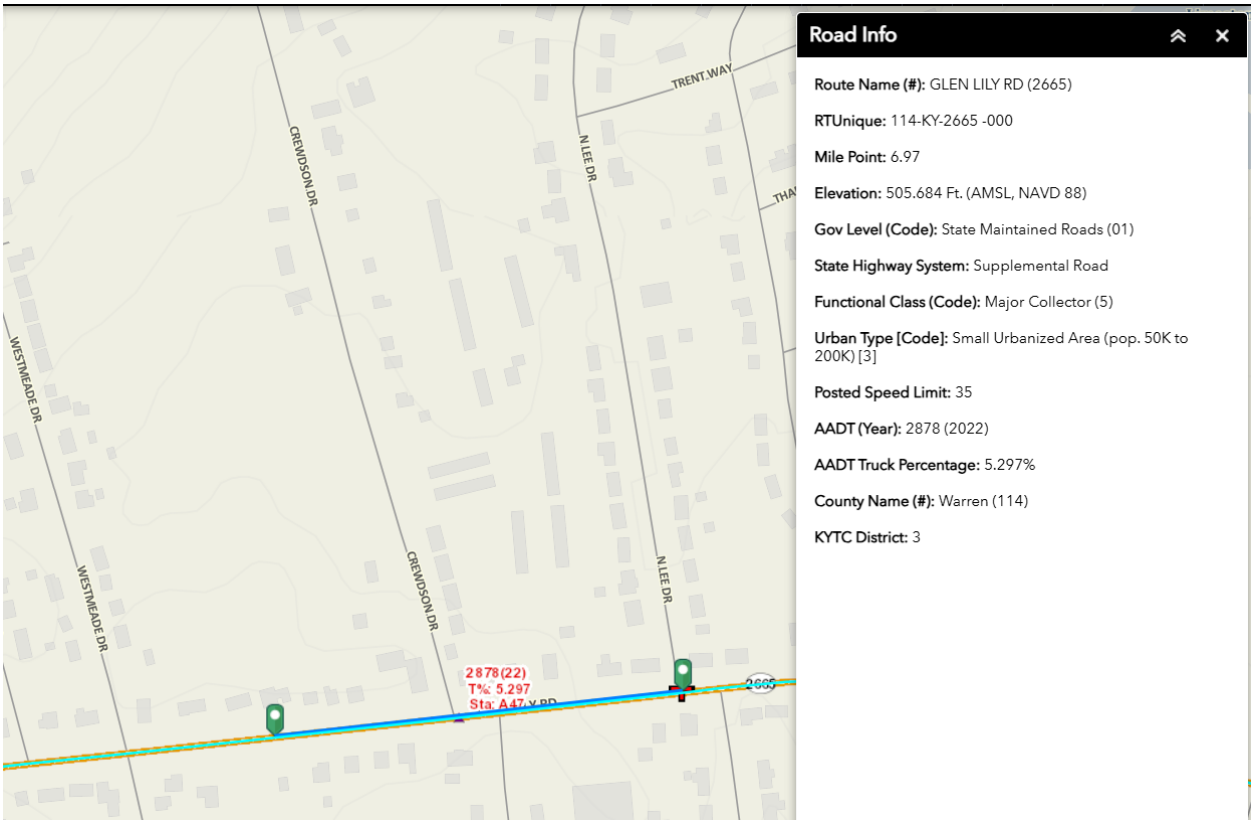
HUD EXCHANGE

Road # 1 Name:	Glen Lily Road (South of Site)		
Road #1			
Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	295	295	295
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	2725	118	35
Night Fraction of ADT	15	15	15
Road Gradient (%)			1
Vehicle DNL	47	43	48
Calculate Road #1 DNL	51	Reset	

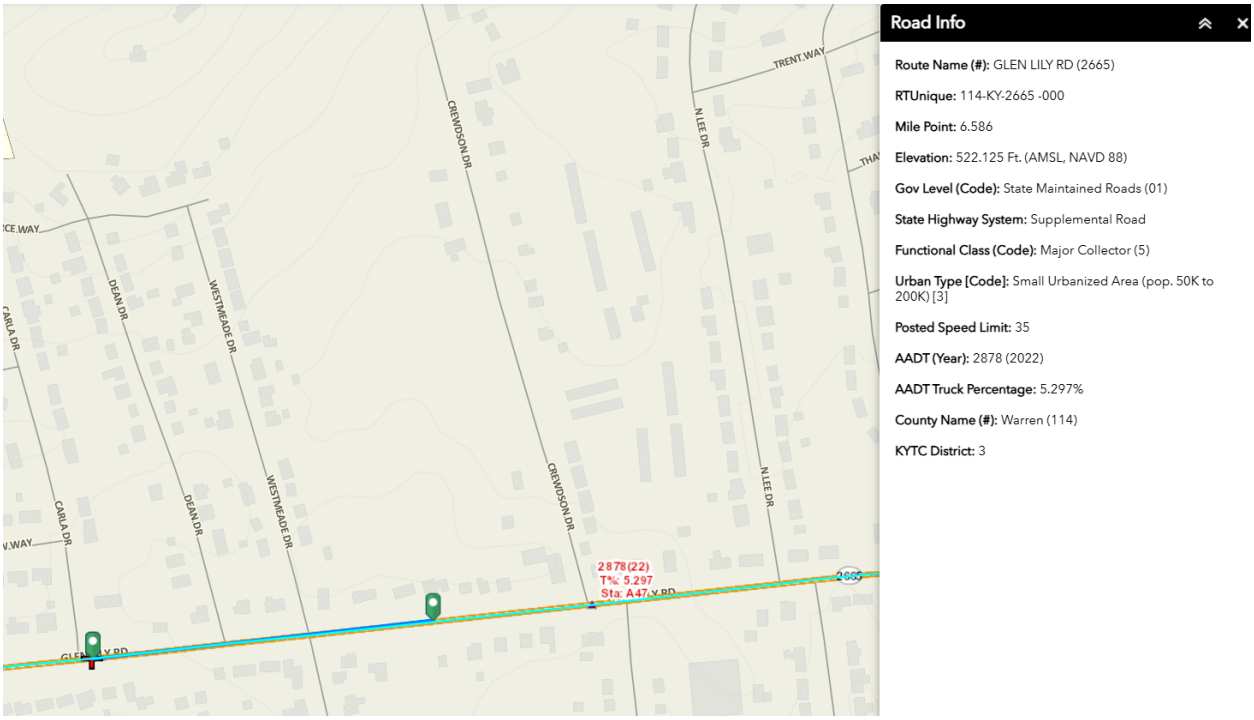
Canon Court – Approx 13500 Nortonville Road Dawson Springs, Hopkins Co., Kentucky

ROAD #1: Glen Lily (South of Site)

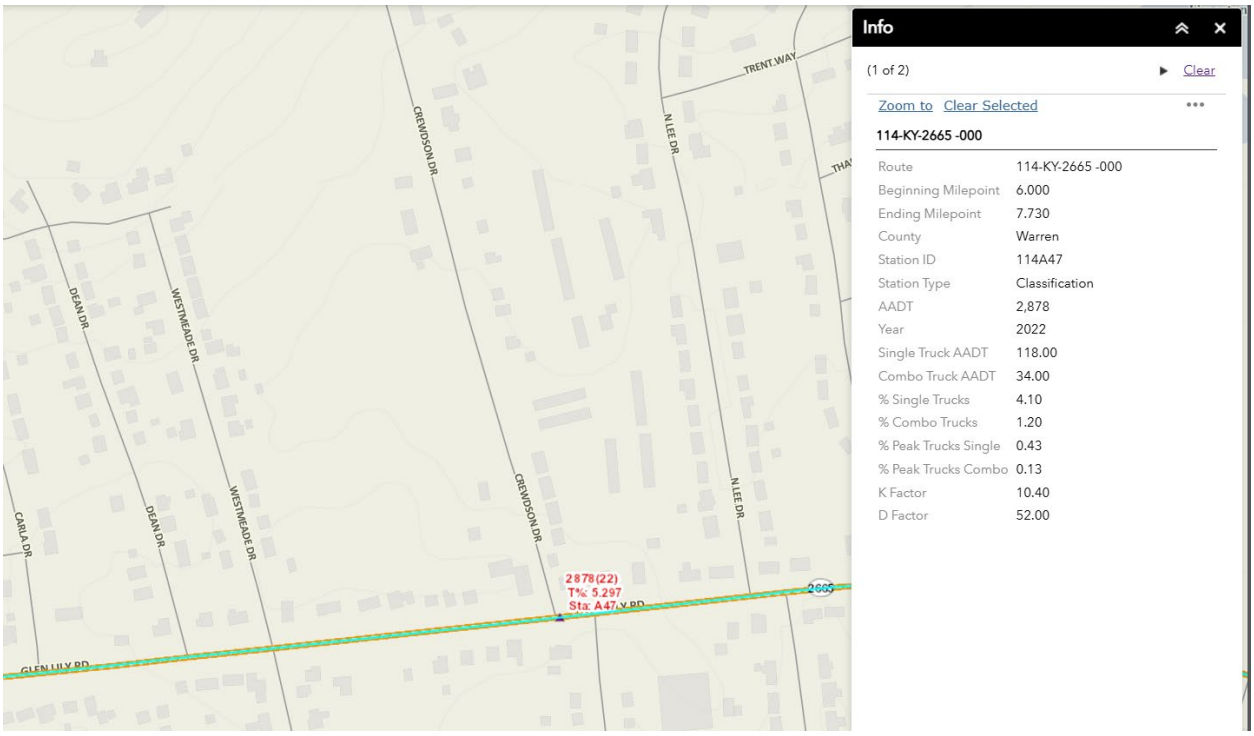
Glen Lily – 1000 ft east elevation = 505.684



Glen Lily- 1000 ft west elevation = 522.125



ROAD #1: Glen Lily (South of Site)



Historical Traffic Volume Summary

Station Details:

Sta ID:	114A47
Sta Type:	Classification
Map:	MapIt
District:	3
County:	Warren
Route:	114-KY-2665 -000
Route Desc:	GLEN LILY RD+STUBBINS ST+W 12TH AVE

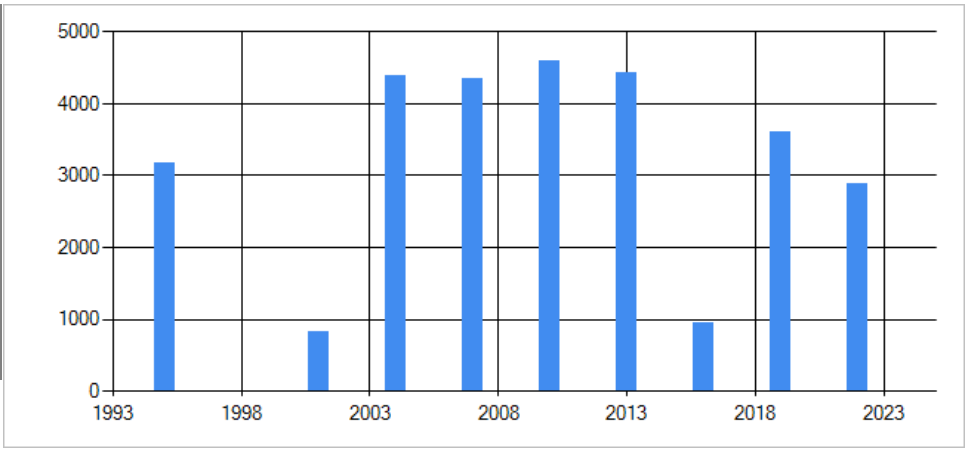
Begin MP:	6
Begin Desc:	STRATFORD STREET
End Mp:	7.73
End Desc:	CLAY STREET
Impact Year:	
Year Added:	

Newest Count:

AADT:	2878
Year:	2022
% Single:	4.0990
% Combo:	1.1980
K Factor:	10.40
D Factor:	52

Definitions:
Sta. ID - Three digit county number + station number
MP - milepoint
Impact Year – year of significant change to traffic pattern within station segment
AADT – Annual Average Daily Traffic – the annualized average 24-hour volume of vehicles on a segment of roadway
% Single – single unit truck volume as a percentage of the AADT
% Combo – combination truck volume as a percentage of the AADT
K Factor – peak hour volume as a percentage of the AADT
D Factor – percentage of peak hour volume flowing in the peak direction

Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	4380
2023		2013	4437	2003	
2022	2878	2012		2002	
2021		2011		2001	823
2020		2010	4600	2000	
2019	3611	2009		1999	
2018		2008		1998	
2017		2007	4340	1997	
2016	958	2006		1996	
2015		2005		1995	3170



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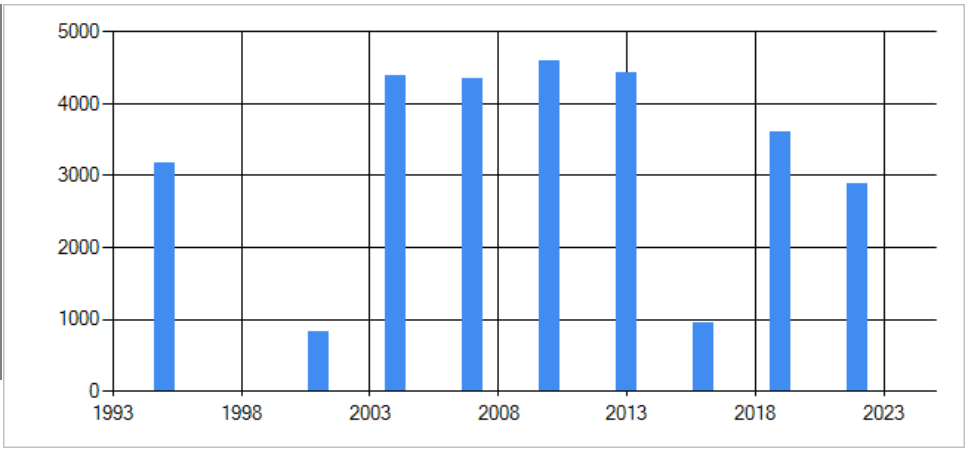
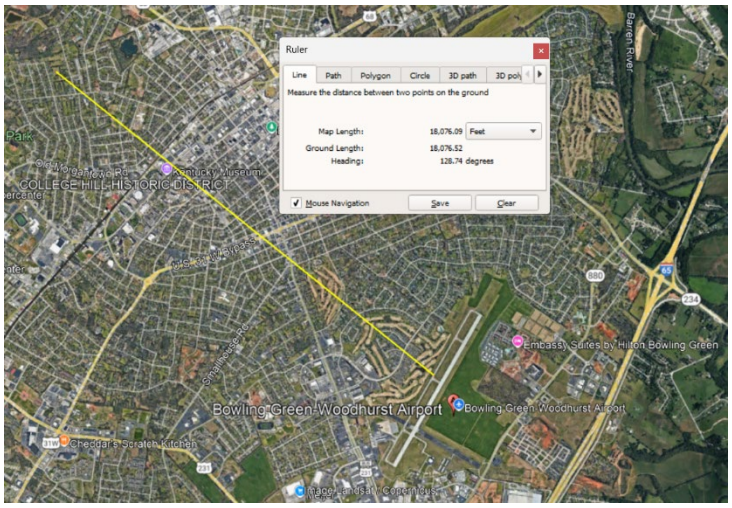
Year	AADT	Year	AADT	Year	AADT
2024		2014		2004	4380
2023		2013	4437	2003	
2022	2878	2012		2002	
2021		2011		2001	823
2020		2010	4600	2000	
2019	3611	2009		1999	
2018		2008		1998	
2017		2007	4340	1997	
2016	958	2006		1996	
2015		2005		1995	3170



Airport #1 – Bowling Green Woodhurst Airport (BWG)



The project site is located 18,076 feet from the nearest edge of the Bowling Green Woodhurst Airport (BWG). The HUD Airport Noise Worksheet for the airport documents that noise is not expected to be generated beyond the airport boundaries

Airport Noise Worksheet

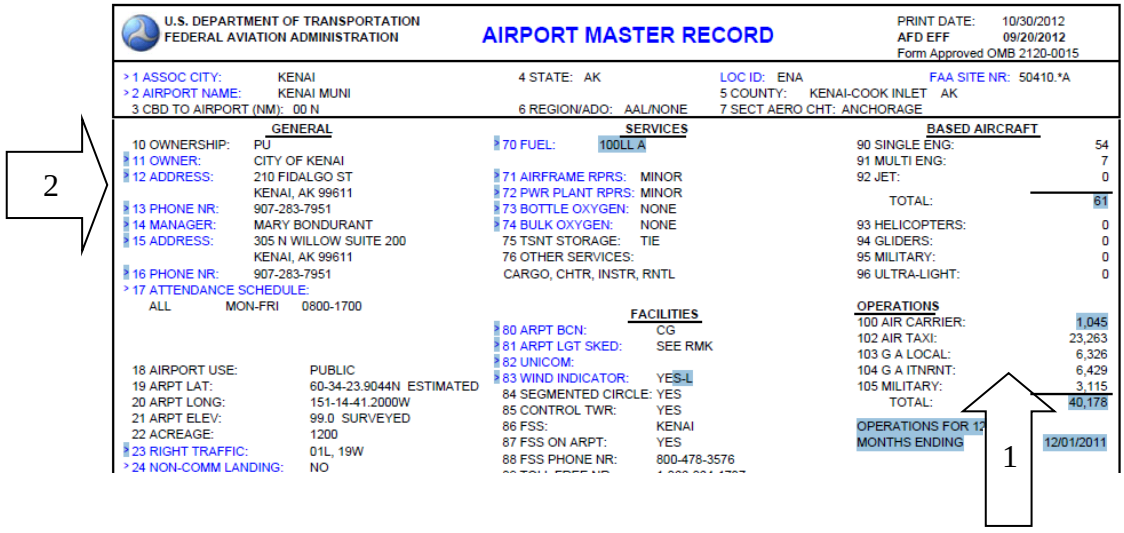
Use this worksheet to identify information needed to evaluate a site's exposure to aircraft noise.

Name and Location of Project: Garrison Gardens 1221 Crewdson Dr Date: 8/9/2024
Name of Airport: BWG Person completing worksheet: Suzanne Arnzen, CMec

1. Determine if the proposed site/project is within 15 miles of a civil or military airport.

☐ No. Attach a map identifying the location of the proposed project site and the location of any airports. This worksheet is not required.
☒ Yes. Attach a map identifying the location of the proposed project site and the location of any airports. Continue

2. Determine the number of operations at the airport by:
   - Going to: http://www.gcr1.com/5010web/
   - Type in the name of the city press search
   - Find your airport.
   - Open the report under "Print 5010"
   - Complete section 3 below by using the information found in the report (see arrow #1 in the example below)



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 10/30/2012
AFD EFF 09/20/2012
Form Approved OMB 2120-0015

> 1 ASSOC CITY: KENAI
> 2 AIRPORT NAME: KENAI MUNI
3 CBD TO AIRPORT (NM): 00 N
4 STATE: AK
6 REGION/ADO: AAL/NONE
LOC ID: ENA
5 COUNTY: KENAI-COOK INLET AK
7 SECT AERO CHT: ANCHORAGE
FAA SITE NR: 50410.*A

GENERAL

10 OWNERSHIP: PU
> 11 OWNER: CITY OF KENAI
> 12 ADDRESS: 210 FIDALGO ST
KENAI, AK 99611
> 13 PHONE NR: 907-283-7951
> 14 MANAGER: MARY BONDURANT
> 15 ADDRESS: 305 N WILLOW SUITE 200
KENAI, AK 99611
> 16 PHONE NR: 907-283-7951
> 17 ATTENDANCE SCHEDULE:
ALL MON-FRI 0800-1700

18 AIRPORT USE: PUBLIC
19 ARPT LAT: 60-34-23.9044N ESTIMATED
20 ARPT LONG: 151-14-41.2000W
21 ARPT ELEV: 99.0 SURVEYED
22 ACREAGE: 1200
> 23 RIGHT TRAFFIC: 01L, 19W
> 24 NON-COMM LANDING: NO

SERVICES

> 70 FUEL: 100LL A
> 71 AIRFRAME RPRS: MINOR
> 72 PWR PLANT RPRS: MINOR
> 73 BOTTLE OXYGEN: NONE
> 74 BULK OXYGEN: NONE
75 TSNT STORAGE: TIE
76 OTHER SERVICES:
CARGO, CHTR, INSTR, RNTL

FACILITIES

> 80 ARPT BCN: CG
> 81 ARPT LGT SKED: SEE RMK
> 82 UNICOM:
> 83 WIND INDICATOR: YES-L
84 SEGMENTED CIRCLE: YES
85 CONTROL TWR: YES
86 FSS: KENAI
87 FSS ON ARPT: YES
88 FSS PHONE NR: 800-478-3576

BASED AIRCRAFT

90 SINGLE ENG:	54
91 MULTI ENG:	7
92 JET:	0
TOTAL:	61
93 HELICOPTERS:	0
94 GLIDERS:	0
95 MILITARY:	0
96 ULTRA-LIGHT:	0

OPERATIONS

100 AIR CARRIER:	1,045
102 AIR TAXI:	23,263
103 G A LOCAL:	6,326
104 G A ITNRNT:	6,429
105 MILITARY:	3,115
TOTAL:	40,178
OPERATIONS FOR 12 MONTHS ENDING	12/01/2011

2

1

3. Determine if the annual number of operations for air carriers #100, air taxis #102, military #105, and general aviation #103 plus #104 exceeds thresholds.

Annual air carrier operations	26 .	Is this 9000 or more	Yes ___ No X
Annual air taxi operations	3,476 .	Is this 18,000 or more	Yes____No x
Annual military operations	152 .	Is this 18,000 or more	Yes____No X
Annual general aviation operations	23,482 .	Is this 72000 or more	Yes____No X

1. If you answer "No" on each of the questions above, it is assumed that the noise attributed to the airplanes will not extend beyond the boundaries of the airport. Maintain the documentation in your Environmental Review Record. You are finished with the evaluation of airport noise for this airport. If you have marked any question in #3 with "Yes," continue to 5.

2. Contact the airport manager, (see arrow #2 above) and ask them if the airport has noise contour maps. Are contour maps available?

☐ Yes. Locate your project on the noise contour map. If there are no roads or railroads that are being considered for noise, utilize the information from the contour map to determine if the site is acceptable. If roads or railroads are being considered input the information obtained from the airport noise contours, along with the road and railroad information in the HUD Noise Assessment Guidelines (NAG) or the online tool at https://www.hudexchange.info/environmental-review/dnl-calculator.

☐ No. Construct the approximate DNL contours by using the guidance on page 52 and 53 of the NAG. You will need to obtain the following information from the airport: 1). The number of nighttime jet operations (10pm to 7 am) 2). The number of daytime jet operations (7 am to 10 pm) 3). The flight paths of the major runways. 4). Any available information about expected changes in airport traffic (e.g. will the number of operations increase or decrease in the next 10 to 15 years).

Contact your HUD Representative if you need assistance

REPORT

Data Source: https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/

1 ASSOC CITY:	BOWLING GREEN	4 STATE: KY	LOC ID: BWG	FAA SITE NR:	07055.*A
2 AIRPORT NAME:	BOWLING GREEN-WARREN COUNTY RGNL		5 COUNTY: WARREN, KY		
3 CBD TO AIRPORT (NM): 2 SE		6 REGION/ADO: ASO /MEM	7 SECT AERO CHT: ST LOUIS		

GENERAL

10 OWNERSHIP:	PUBLIC
11 OWNER:	CITY BOWLING GREEN-WARREN CO
12 ADDRESS:	1000 WOODHURST ST BOWLING GREEN, KY 42103
13 PHONE NR:	270-842-1101
14 MANAGER:	SUSAN HARMON
15 ADDRESS:	1000 WOODHURST ST BOWLING GREEN, KY 42103
16 PHONE NR:	270-842-1101

17 ATTENDANCE SCHEDULE:

MONTHS	DAYS	HOURS
ALL	ALL	ALL

18 AIRPORT USE:	PUBLIC
19 ARPT LAT:	36-57-52.3N ESTIMATED
20 ARPT LONG:	86-25-10.8W
21 ARPT ELEV:	547.2 SURVEYED
22 ACREAGE:	566
23 RIGHT TRAFFIC:	NO
24 NON-COMM LANDING:	NO
25 NPIAS/FED AGREEMENTS:	YES / NGY3
26 FAR 139 INDEX:	IV A U 05/1976

SERVICES

70 FUEL:	100LL A
71 AIRFRAME RPRS:	MAJOR
72 PWR PLANT RPRS:	MAJOR
73 BOTTLE OXYGEN:	
74 BULK OXYGEN:	
75 TSNT STORAGE:	HGR TIE
76 OTHER SERVICES:	AFRT,AMB,CARGO, CHTR,INSTR,RNTL, SALES

FACILITIES

80 ARPT BCN:	WG
81 ARPT LGT SKED:	SEE RMK
BCN LGT SKED:	SS-SR
82 UNICOM:	123.000
83 WIND INDICATOR:	YES-L
84 SEGMENTED CIRCLE:	NONE
85 CONTROL TWR:	NO
86 FSS:	LOUISVILLE
87 FSS ON ARPT:	
88 FSS PHONE NR:	
89 TOLL FREE NR:	1-800-WX-BRIEF

BASED AIRCRAFT

90 SINGLE ENG:	55
91 MULTI ENG:	9
92 JET:	5
93 HELICOPTERS:	2
TOTAL:	71
94 GLIDERS:	0
95 MILITARY:	0
96 ULTRA-LIGHT:	0

OPERATIONS

100 AIR CARRIER:	26
102 AIR TAXI:	3,479
103 G A LOCAL:	16,976
104 G A ITNRNT:	6,506
105 MILITARY:	152
TOTAL:	27,139

OPERATIONS FOR 12 MONTHS ENDING 12/31/2023

RUNWAY DATA

		03/21	12/30
30 RUNWAY IDENT:			
31 LENGTH:		6,501	3,956
32 WIDTH:		150	150
33 SURF TYPE-COND:		ASPH-G	ASPH-P
34 SURF TREATMENT:		NONE	NONE
35 GROSS WT:	S	120.0	25.5
36 (IN THSDS)	D	221.0	40.0
37	2D	358.0	
38	2D/2DS		
39 PCN / PCR:		63/F/C/X/T (PCN)	9/F/C/X/T (PCN)

LIGHTING/APCH AIDS

40 EDGE INTENSITY:	HIGH	MED
42 RWY MARK TYPE-COND:	PIR- G / NPI- G	BSC- G / BSC- G
43 VGSI:	P4L / P4L	/
44 THR CROSSING HGT:	44 / 30	/
45 VISUAL GLIDE ANGLE:	3.00 / 3.00	/
46 CNTRLN-TDZ:	- / -	- / -
47 RVR-RVV:	- / -	- / -
48 REIL:	Y / Y	/
49 APCH LIGHTS:	/	/

OBSTRUCTION DATA

50 FAR 77 CATEGORY:	PIR / C	A(V) / A(V)
51 DISPLACED THR:	/	/ 349
52 CTLG OBSTN:	/	/
53 OBSTN MARKED/LGTD:	/	/
54 HGT ABOVE RWY END:	/	/
55 DIST FROM RWY END:	0 / 0	0 / 0
56 CNTRLN OFFSET:	/	/
57 OBSTN CLNC SLOPE:	50:1 / 50:1	/
58 CLOSE-IN OBSTN:	N / N	N / N

DECLARED DISTANCES

60 TAKE OFF RUN AVBL (TORA):	6,500 / 6,500	/
61 TAKE OFF DIST AVBL (TODA):	6,500 / 6,500	/
62 ACLT STOP DIST AVBL (ASDA):	6,500 / 6,500	/
63 LNDG DIST AVBL (LDA):	6,500 / 6,500	/

110 REMARKS:

A 026	OPS WITH MORE THAN 30 PAX SEATS 24 HR PPR - AMGR.
A 030	RWY 12/30 NOT AVBL FOR SKED ACR OPS MORE THAN 9 PAX SEATS OR UNSKED ACR AT LEAST 31 PAX SEATS.
A 033	RWY 12/30 LONGL & TRANSVERSE CRACKING; UNEVEN SFC.
A 057	RWY 03 FIRST 1300 FT LONGL GRADIENT SLOPE 1.5 PERCENT; STEEPER THAN STD FOR APCH SPD GTR THAN 122 KTS.
A 057	RWY 30 +54 FT TREE DIST 860 FT 200 FT L; 15:1 BASED ON DTHR.
A 081	ACTVT REIL RWY 03 & 21; HIRL RWY 03/21 - CTAF.
A 110-001	BIRDS ON & INVOF ARPT.

111 INSPECTOR: (F) 112 LAST INSP: 03/13/2024 113 LAST INFO RES:

REPORT

Data Source: https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/

1 ASSOC CITY:	BOWLING GREEN	4 STATE: KY	LOC ID: BWG	FAA SITE NR:	07055.*A
2 AIRPORT NAME:	BOWLING GREEN-WARREN COUNTY RGNL		5 COUNTY: WARREN, KY		
3 CBD TO AIRPORT (NM): 2 SE		6 REGION/ADO: ASO /MEM	7 SECT AERO CHT: ST LOUIS		

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13 PHONE NR:	270-842-1101
14 MANAGER:	SUSAN HARMON
15 ADDRESS:	1000 WOODHURST ST BOWLING GREEN, KY 42103
16 PHONE NR:	270-842-1101

17 ATTENDANCE SCHEDULE:

MONTHS	DAYS	HOURS
ALL	ALL	ALL

18 AIRPORT USE:	PUBLIC
19 ARPT LAT:	36-57-52.3N ESTIMATED
20 ARPT LONG:	86-25-10.8W
21 ARPT ELEV:	547.2 SURVEYED
22 ACREAGE:	566
23 RIGHT TRAFFIC:	NO
24 NON-COMM LANDING:	NO
25 NPIAS/FED AGREEMENTS:	YES / NGY3
26 FAR 139 INDEX:	IV A U 05/1976

SERVICES

70 FUEL:	100LL A
71 AIRFRAME RPRS:	MAJOR
72 PWR PLANT RPRS:	MAJOR
73 BOTTLE OXYGEN:	
74 BULK OXYGEN:	
75 TSNT STORAGE:	HGR TIE
76 OTHER SERVICES:	AFRT,AMB,CARGO, CHTR,INSTR,RNTL, SALES

BASED AIRCRAFT

90 SINGLE ENG:	55
91 MULTI ENG:	9
92 JET:	5
93 HELICOPTERS:	2
TOTAL:	71
94 GLIDERS:	0
95 MILITARY:	0
96 ULTRA-LIGHT:	0

FACILITIES

80 ARPT BCN:	WG
81 ARPT LGT SKED:	SEE RMK
BCN LGT SKED:	SS-SR
82 UNICOM:	123.000
83 WIND INDICATOR:	YES-L
84 SEGMENTED CIRCLE:	NONE
85 CONTROL TWR:	NO
86 FSS:	LOUISVILLE
87 FSS ON ARPT:	
88 FSS PHONE NR:	
89 TOLL FREE NR:	1-800-WX-BRIEF

OPERATIONS

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102 AIR TAXI:	3,479
103 G A LOCAL:	16,976
104 G A ITNRNT:	6,506
105 MILITARY:	152
TOTAL:	27,139

OPERATIONS FOR 12 MONTHS ENDING 12/31/2023

RUNWAY DATA

30 RUNWAY IDENT:	
31 LENGTH:	
32 WIDTH:	
33 SURF TYPE-COND:	
34 SURF TREATMENT:	
35 GROSS WT:	S
36 (IN THSDS)	D
37	2D
38	2D/2DS
39 PCN / PCR:	

LIGHTING/APCH AIDS

40 EDGE INTENSITY:
42 RWY MARK TYPE-COND:
43 VGSI:
44 THR CROSSING HGT:
45 VISUAL GLIDE ANGLE:
46 CNTRLN-TDZ:
47 RVR-RVV:
48 REIL:
49 APCH LIGHTS:

OBSTRUCTION DATA

50 FAR 77 CATEGORY:
51 DISPLACED THR:
52 CTLG OBSTN:
53 OBSTN MARKED/LGTD:
54 HGT ABOVE RWY END:
55 DIST FROM RWY END:
56 CNTRLN OFFSET:
57 OBSTN CLNC SLOPE:
58 CLOSE-IN OBSTN:

DECLARED DISTANCES

60 TAKE OFF RUN AVBL (TORA):
61 TAKE OFF DIST AVBL (TODA):
62 ACLT STOP DIST AVBL (ASDA):
63 LNDG DIST AVBL (LDA):

110 REMARKS:

A 110-002 CNL IFR - LOUISVILLE FSS 122.2.

A 110-003 FOR CD CTC MEMPHIS ARTCC AT 901-368-8453/8449.

111 INSPECTOR: (F) 112 LAST INSP: 03/13/2024 113 LAST INFO RES:

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	Garrison Gardens - 1221 Crewdson Drive Bowling Green, KY
Record Date	08/09/2024
User's Name	Suzanne Arnzen

Road # 1 Name:	**Glen Lily Road (South of Site)**

Road #1

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	295	295	295
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	2725	118	35
Night Fraction of ADT	15	15	15
Road Gradient (%)			1
Vehicle DNL	47	43	48
Calculate Road #1 DNL	51	Reset	

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○**Yes** ○**No**

Combined DNL for all Road and Rail sources	**51**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
  - Incorporate natural or man-made barriers. See ***The Noise Guidebook (/resource/313/hud-noise-guidebook/)***
  - Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)

ENCLOSURE M

SOLE SOURCE AQUIFER

OMB No. 2506-0177
(exp.2/28/2025)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Sole Source Aquifers (CEST and EA) - PARTNER

https://www.hudexchange.info/environmental-review/sole-source-aquifers

1. **Is the project located on a sole source aquifer (SSA)[1]?**
   ☒No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination, such as a map of your project or jurisdiction in relation to the nearest SSA.*

   ☐Yes → *Continue to Question 2.*

2. **Does the project consist solely of acquisition, leasing, or rehabilitation of an existing building(s)?**
   ☐Yes → *The review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☐No → *Continue to Question 3.*

3. **Does your region have a memorandum of understanding (MOU) or other working agreement with EPA for HUD projects impacting a sole source aquifer?**
   Contact your Field or Regional Environmental Officer or visit the HUD webpage at the link above to determine if an MOU or agreement exists in your area.
   ☐Yes → *Continue to Question 4.*

   ☐No → *Continue to Question 5.*

4. **Does your MOU or working agreement exclude your project from further review?**
   ☐Yes → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination and document where your project fits within the MOU or agreement.*

   ☐No → *Continue to Question 5.*

5. **Will the proposed project contaminate the aquifer and create a significant hazard to public health?**
   Consult with your Regional EPA Office. Your consultation request should include detailed information about your proposed project and its relationship to the aquifer and associated streamflow source area.

[1] A sole source aquifer is defined as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. This includes streamflow source areas, which are upstream areas of losing streams that flow into the recharge area.

EPA will also want to know about water, storm water and waste water at the proposed project. Follow your MOU or working agreement or contact your Regional EPA office for specific information you may need to provide. EPA may request additional information if impacts to the aquifer are questionable after this information is submitted for review.

☐No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide your correspondence with the EPA and all documents used to make your determination*.

☐Yes → *The RE/HUD will work with EPA to develop mitigation measures. If mitigation measures are approved, attach correspondence with EPA and include the mitigation measures in your environmental review documents and project contracts. If EPA determines that the project continues to pose a significant risk to the aquifer, federal financial assistance must be denied. Continue to Question 6.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

The project is not located on a sole source aquifer area. There are no sole source aquifers in Kentucky. See attached. The project is in compliance with Sole Source Aquifer requirements.

Supporting Documentation

Sole Source Aquifer Backup Garrison Gardens Bowling Green KY.pdf

ENCLOSURE N

WETLANDS PROTECTION

OMB No. 2506-0177
(exp.2/28/2025)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

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Wetlands (CEST and EA) – Partner

https://www.hudexchange.info/environmental-review/wetlands-protection

1. **Does this project involve new construction as defined in Executive Order 11990, expansion of a building's footprint, or ground disturbance?**
   The term "new construction" includes draining, dredging, channelizing, filling, diking, impounding, and related activities and construction of any any structures or facilities.

   ☐ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☒ Yes → *Continue to Question 2.*

2. **Will the new construction or other ground disturbance impact a wetland as defined in E.O. 11990?**

   ☒ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map or any other relevant documentation to explain your determination.*

   ☐ Yes → *Work with HUD or the RE to assist with the 8-Step Process. Continue to Question 3.*

3. **Does Section 55.12 state that the 8-Step Process is not required?**

   ☐ No, the 8-Step Process applies.
   This project will require mitigation and may require elevating structure or structures. See the link to the HUD Exchange above for information on HUD's elevation requirements.
   → *Work with the RE/HUD to assist with the 8-Step Process. Continue to Worksheet Summary.*

   ☐ 5-Step Process is applicable per 55.12(a).
   Provide the applicable citation at 24 CFR 55.12(a) here.
   Click here to enter text.
   → *Work with the RE/HUD to assist with the 5-Step Process. This project may require mitigation or alternations. Continue to Worksheet Summary.*

   ☐ 8-Step Process is inapplicable per 55.12(b).
   Provide the applicable citation at 24 CFR 55.12(b) here.
   Click here to enter text.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.*

☐ 8-Step Process is inapplicable per 55.12(c).

Provide the applicable citation at 24 CFR 55.12(c) here.

Click here to enter text.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

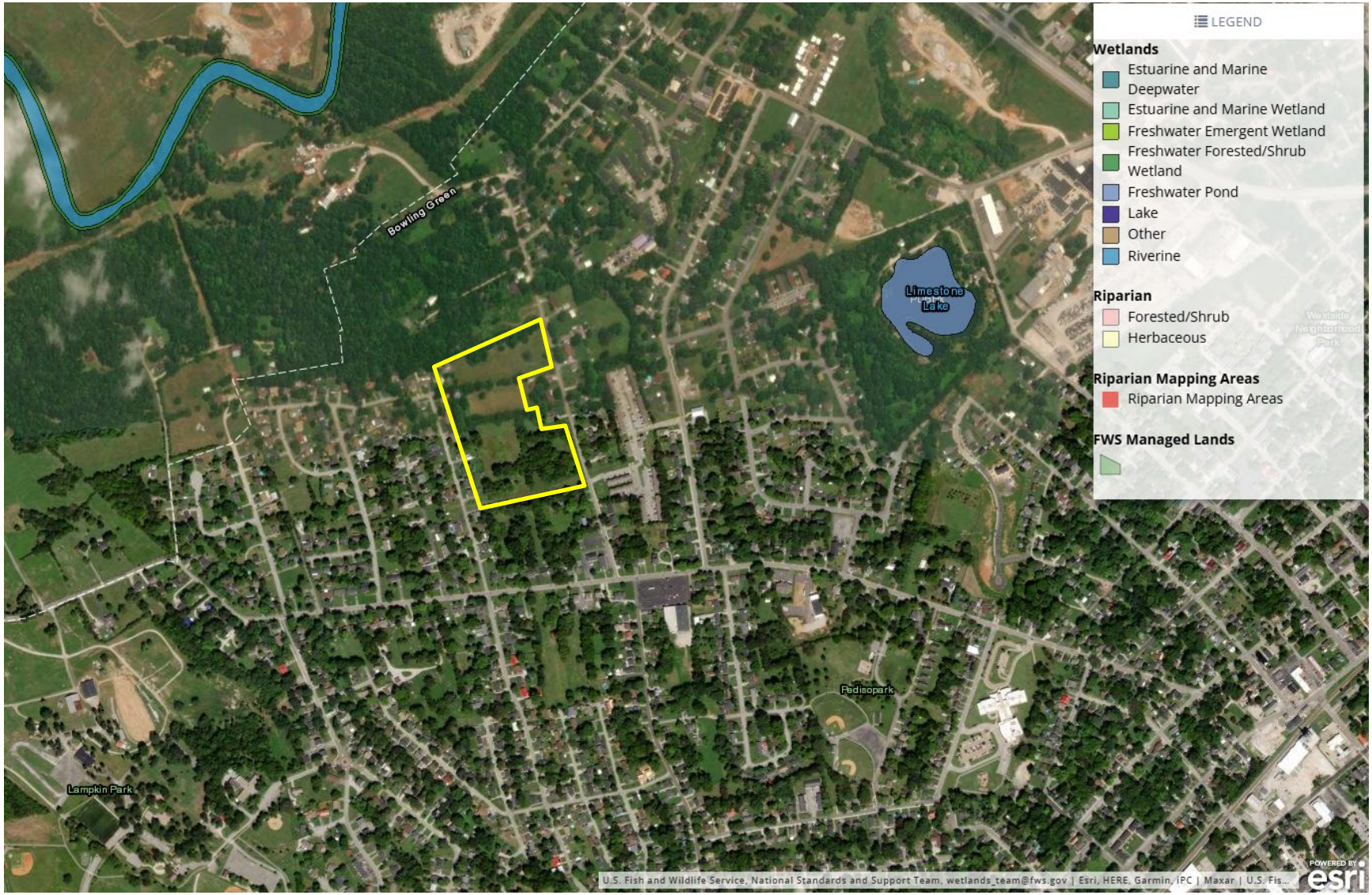
Include all documentation supporting your findings in your submission to HUD.

The project will not impact on- or off-site wetlands. The USFWS National Wetlands Inventory map shows there are no wetlands on or adjacent to the project site. CETCO also provided a site reconnaissance on August 5, 2024 including soil sampling. The site contains only one ''lowland'' area of potential wetland hydrology observed. This is a very limited wet ponded water season (likely less than 5% of the year). The soils in this area have been re-graded (several times based on observations). Soils sampled indicated the ground is a mixture of gravelly fill and red and brown lean to fat clay soils with no hydric soil indicators (no oxidization markings and no mottling). Vegetation included greater than 70% ground cover of ''winter creeper'' or similar invasive species of non-wetland types and at least half of the area contained dense Japanese honeysuckle or similar bushy growth. These are not usually considered dominant wetland type species. As such CETO indicated that "it is our opinion that the site does not contain wetland areas. The project is in compliance with Executive Order 11990.

Supporting Documentation

CETCO Garrison Gardens Wetlands Letter.pdf
Garrison Gardens Wetland Map.pdf

GARRISON GARDENS – 1221 Crewdson Drive Bowling Green,KY



CETCO, PLLC
624 Wellington Way
Lexington, Kentucky 40503
joe.cooke2020@gmail.com
www.cetcopllc.com

September 1, 2024

Mr. Marty Cummings
Clayton Watkins Construction Co.
100 Wabuck Drive
Leitchfield, KY 42754
via email: martin.cummings@claytonwatkins.com

Subject: **Wetlands Assessment**
Garrison Gardens Apartments
Bowling Green, Kentucky
CETCO Project No. 1015-24-0121

Dear Marty:

CETCO is providing this wetlands assessment letter for the project site in Bowling Green, Kentucky. We conducted a site reconnaissance on August 5, 2024 and also provided soil sampling as part of our services.

It is our opinion that the **site does not contain wetland areas**. The site contains only one "lowland" area of potential wetland hydrology observed. This area is a large sinkhole which remains dry, except during large rain events and then water ponds for only a few hours. This is a very limited wet ponded water season (likely less than 5% of the year). The soils in this area have been re-graded (several times based on observations). Soils sampled indicated the ground is a mixture of gravelly fill and red and brown lean to fat clay soils with no hydric soil indicators (no oxidization markings and no mottling). Vegetation included greater than 70% ground cover of "winter creeper" or similar invasive species of non-wetland types and at least half of the area contained dense Japanese honeysuckle or similar bushy growth. These are not usually considered dominant wetland type species.

We appreciate the opportunity to provide our services to you and the project team. Please do not hesitate to contact us for questions or comments about the information contained herein.

Cordially,

Joseph S. Cooke, P.E.
Principal

ENCLOSURE O

WILD AND SCENIC RIVERS

Wild and Scenic Rivers (CEST and EA) – PARTNER

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

General requirements	Legislation	Regulation
The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS) from the effects of construction or development.	The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287), particularly section 7(b) and (c) (16 U.S.C. 1278(b) and (c))	36 CFR Part 297
References		
https://www.hudexchange.info/environmental-review/wild-and-scenic-rivers		

1. Is your project within proximity of a NWSRS river as defined below?

Wild & Scenic Rivers: These rivers or river segments have been designated by Congress or by states (with the concurrence of the Secretary of the Interior) as wild, scenic, or recreational

Study Rivers: These rivers or river segments are being studied as a potential component of the Wild & Scenic River system.

Nationwide Rivers Inventory (NRI): The National Park Service has compiled and maintains the NRI, a register of river segments that potentially qualify as national wild, scenic, or recreational river areas

☒ No

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide documentation used to make your determination, such as a map identifying the project site and its surrounding area or a list of rivers in your region in the Screen Summary at the conclusion of this screen.*

☐ Yes, the project is in proximity of a Nationwide Rivers Inventory (NRI) River.

→ *Continue to Question 2.*

2. **Could the project do *any* of the following?**
   - Have a direct and adverse effect within Wild and Scenic River Boundaries,
   - Invade the area or unreasonably diminish the river outside Wild and Scenic River Boundaries, or
   - Have an adverse effect on the natural, cultural, and/or recreational values of a NRI segment.

   Consultation with the appropriate federal/state/local/tribal Managing Agency(s) is required, pursuant to Section 7 of the Act, to determine if the proposed project may have an adverse effect on a Wild & Scenic River or a Study River and, if so, to determine the appropriate avoidance or mitigation measures.
   Note: Concurrence may be assumed if the Managing Agency does not respond within 30 days; however, you are still obligated to avoid or mitigate adverse effects on the rivers identified in the NWSRS

   ☐ No, the Managing Agency has concurred that the proposed project will not alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.
   → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*

   ☐ Yes, the Managing Agency was consulted and the proposed project may alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.
   → *The RE/HUD must work with the Managing Agency to identify mitigation measures to mitigate the impact or effect of the project on the river.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

This project is not within proximity of a NWSRS river. There are no study rivers or eligible suitable rivers in Kentucky. The full list of study river and eligible / suitable rivers is attached. The project is in compliance with the Wild and Scenic Rivers Act.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

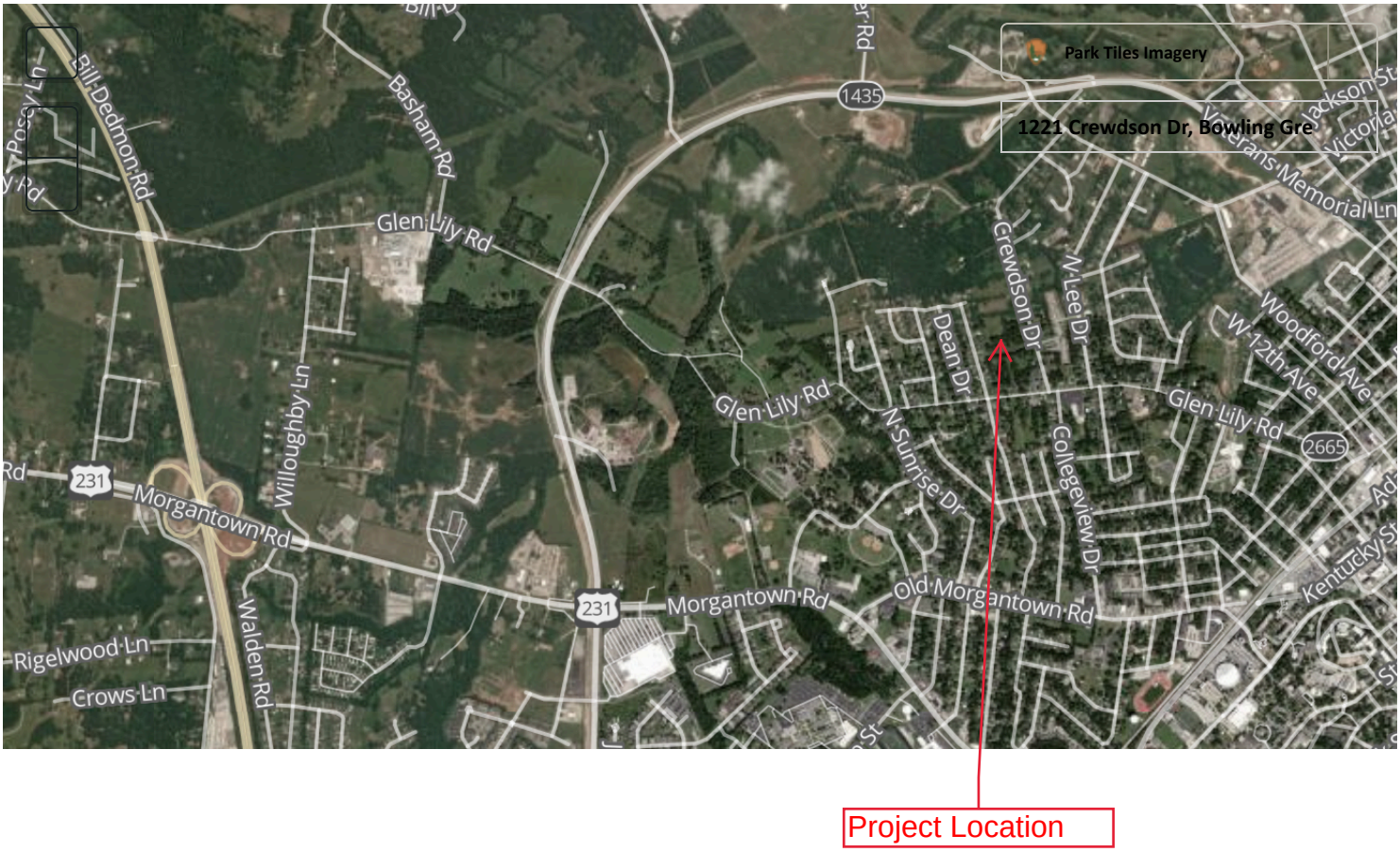
Supporting Documentation

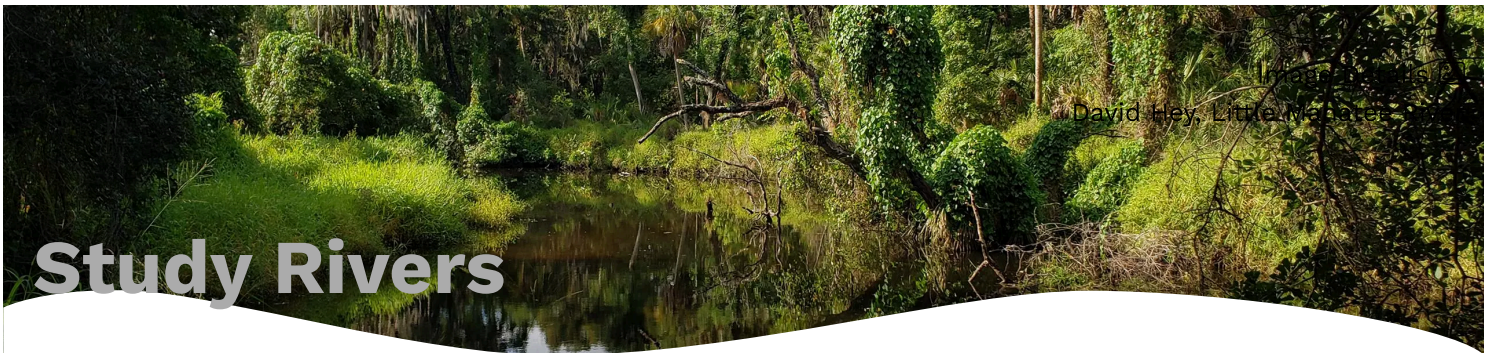
3 Study Rivers_None in Kentucky.pdf
2 Eligible Suitable Rivers Official_None in Kentucky.csv
1 Nationwide Rivers Inventory_Garrison Gardens.pdf

Nationwide Rivers Inventory

National Park Service
U.S. Department of the Interior

This is a listing of more than 3,200 free-flowing river segments in the U.S.…





Study Rivers

There are two study provisions in the Act — Section 5(a), through which Congress directs the study of select rivers, and Section 5(d)(1), which directs federal agencies to identify potential additions to the National Wild and Scenic Rivers System (National System) through federal agency plans. A brief explanation is provided in the following respective sections below.

Current Active Studies

Currently, there are two rivers or river systems under “authorized” study under Section 5(a) of the Wild & Scenic Rivers Act. This does not include those that might be under assessment as part of normal agency land-planning processes.

- Kissimmee River, Florida (Public Law 117-328, December 29, 2022) – Study not yet initiated by the National Park Service.
- Little Manatee River, Florida (Public Law 117-328, December 29, 2022) – Study not yet initiated by the National Park Service.

Section 2(a)(ii) Studies

Under Section 2(a)(ii) of the Act, a governor (or governors for a river in multiple states) of a state can request that a river be designated, provided certain conditions are met (refer to the **Council White Paper on Section 2(a)(ii) (/sites/rivers/files/2023-01/2aii.pdf)** for specifics). The National Park Service then conducts a study to determine of certain conditions are met. Here are some of the studies conducted under Section 2(a)(ii). Again, if you don’t see a study listed, we do not have a copy.

Section 2(a)(ii) Studies

- **Allagash River Study Report (/sites/rivers/files/2022-12/allagash-study.pdf)**, Maine

- **American River Eligibility Report (/sites/rivers/files/2022-12/american-eel-klamath-smith-trinity-study.pdf)**, California
- **American River Environmental Impact Statement (/sites/rivers/files/2022-12/american-eel-klamath-smith-trinity-eis.pdf)**, California
- **Big & Little Darby Creeks Study Report & Environmental Assessment (/sites/rivers/files/2022-12/big-little-darby-creeks-study-ea.pdf)**, Ohio
- **Eel River Eligibility Report (/sites/rivers/files/2022-12/american-eel-klamath-smith-trinity-study.pdf)**, California
- **Eel River Environmental Impact Statement (/sites/rivers/files/2022-12/american-eel-klamath-smith-trinity-eis.pdf)**, California
- **Klamath River Eligibility Report (/sites/rivers/files/2022-12/american-eel-klamath-smith-trinity-study.pdf)**, California
- **Klamath River Environmental Impact Statement (/sites/rivers/files/2022-12/american-eel-klamath-smith-trinity-eis.pdf)**, California
- **Klamath River Study Report (/sites/rivers/files/2023-01/klamath-study.pdf)**, Oregon
- **Lumber River Study Report (/sites/rivers/files/2023-01/lumber-study.pdf)**, North Carolina
- **New River (South Fork) Study Report & Environmental Impact Statement (/sites/rivers/files/2023-01/new-sf-study-eis.pdf)**, North Carolina
- **Smith River Eligibility Report (/sites/rivers/files/2022-12/american-eel-klamath-smith-trinity-study.pdf)**, California
- **Smith River Environmental Impact Statement (/sites/rivers/files/2022-12/american-eel-klamath-smith-trinity-eis.pdf)**, California
- **Trinity River Eligibility Report (/sites/rivers/files/2022-12/american-eel-klamath-smith-trinity-study.pdf)**, California
- **Trinity River Environmental Impact Statement (/sites/rivers/files/2022-12/american-eel-klamath-smith-trinity-eis.pdf)**, California
- **Wallowa River Study Report (/sites/rivers/files/2023-01/wallowa-study.pdf)**, Oregon
- **Westfield River Study Report & Environmental Assessment (Initial Study 1993) (/sites/rivers/files/2023-01/westfield-river-evaluation-ea.pdf)**, Massachusetts
- **Westfield River Draft Study Report (Expansion 2002) (/sites/rivers/files/2023-01/westfield-draft-2aii-addition-study.pdf)**, Massachusetts

Musconetcong River Special Study

In 1997, 18 of 19 municipalities along the Musconetcong River in New Jersey voted to request that the National Park Service study the river to determine its eligibility and suitability for inclusion into the National System. This was done under the authorities of

Public Law 102-460,the lower Delaware River study legislation. (The Musconetcong River is a tributary to the Delaware River.) Here is the **Musconetcong River Study Report (/sites/rivers/files/2023-01/musconetcong-study.pdf)**. Following that, the Musconetcong River was designated under **Public Law 109-452 (/sites/rivers/files/2022-10/Public%20Law%20109-452.pdf)**. That same law authorized an additional segment for study, and that segment was added in June of 2022. Here is the **Federal Register notice (/sites/rivers/files/2023-02/musconetcong_frn-vol.87-no.107.pdf)** adding that additional segment.

Wolf River Special Study

Even before the Wild & Scenic Rivers Act, the Bureau of Outdoor Recreation (since absorbed into the National Park Service) looked at the Wolf River in Wisconsin for protection as a “wild river.” Here is the **Wolf River Lake Central Regional Task Group Draft Study Report (/sites/rivers/files/2023-01/wolf_river_wisconsin_draft-study_sept_1964.pdf)** and **Wolf River Study Report (/sites/rivers/files/2022-12/wolf-bor-study.pdf)**.

Section 5(d)(1), Agency-Identified Studies

In recent years, hundreds of rivers have been identified for study through Section 5(d)(1) of the Act. This provision directs federal agencies to identify potential addition to the National System through their respective resource and management plans. Its application has resulted in numerous individual river designations, statewide legislation (e.g., Omnibus Oregon Wild and Scenic Rivers Act, P.L. 100-557; Michigan Scenic Rivers Act, P.L. 102-249) and multi-state legislation (e.g., Omnibus Public Land Management Act of 2009, P.L. 111-11). Here are examples of agency-identified studies and transmittal documents (if available).

Section 5(d)(1) Studies

- **Arctic National Wildlife Refuge Wild & Scenic River Review (/sites/rivers/files/2023-01/arctic-nwr.pdf)**
- **Arizona Bureau of Land Management Statewide Study LEIS (/sites/rivers/files/2023-01/arizona-blm-study-leis.pdf)**
- **Arizona Bureau of Land Management Statewide Study River Assessments (/sites/rivers/files/2023-01/arizona-blm-study-leis-rivers.pdf)**

- **Blue River & KP Creek (Arizona) (/sites/rivers/files/2023-01/blue-kp-creek-study.pdf)**
- **Flathead River Draft Proposed Addition & Environmental Impact Statement (Montana) (/sites/rivers/files/2023-01/flathead-deis.pdf)**

Utah Statewide Suitability Study:

- **Record of Decision (/sites/rivers/files/2023-02/utah-study-rod.pdf)**
- **Environmental Impact Statement (/sites/rivers/files/2023-02/utah-study-eis.pdf)**
- **Appendices (/sites/rivers/files/2023-02/utah-study-addendices.pdf)**

Section 5(d)(2) Study – Klamath River

One river was authorized for study by Congress through Section 5(d)(2) of the Act, the Klamath River in Oregon. Here is the **Klamath River Draft Study Report (/sites/rivers/files/2023-01/klamath-upper-draft-study_0.pdf)**.

Section 5(a), Congressionally Authorized Studies

Through Section 5(a), Congress authorizes the study of select rivers and directs one of the four federal river-administering agencies to conduct the study, as outlined in Sections 4(a) and 5(c) of the Wild & Scenic Rivers Act. The enabling legislation of 1968, P.L. 90-542, authorized 27 rivers for study as potential components of the National System. Amendments to the law have increased the number of studies authorized by Congress to 144.

These studies have lead to 50 designations by either Congress or the Secretary of the Interior. One study led to the establishment of a National Recreation Area.

The number of rivers included in the National System differs from the number of rivers authorized for study by Congress for the following reasons:

- Not all rivers studied are found eligible or suitable for designation—many study rivers will not be included in the National System.
- Some rivers are designated by Congress or the Secretary of the Interior without a pre-authorization or 5(a) study (e.g., Niobrara River).
- Some rivers are designated as a result of recommendations in federal agency plans (e.g., 49 rivers designated in Oregon in 1988).

The 146 rivers below have been authorized for study. The agency leading the study is indicated as National Park Service (NPS), Bureau of Outdoor Recreation (BOR), Heritage Conservation and Recreation Service (HCRS), Bureau of Land Management (BLM), or U.S.

Forest Service (USFS). Within the Department of the Interior, the study function was transferred from the HCRS (formerly the BOR) to the NPS by Secretarial Order Number 3017, January 25, 1978. All studies indicated as BOR or HCRS were completed by these agencies before the program was transferred to the NPS. The BLM was delegated responsibility for conducting studies on Public Lands on October 11, 1988. The USFS (Department of Agriculture) has always conducted studies on National Forest System Lands and as directed by Congress.

We have collected a few of the study reports and associated documents prepared at the direction of Congress; those documents are noted below. If you do not see a report here, we do not have it, and you will have to contact the study agency at the local level for a copy.

For each study river, the number in parentheses is the approximate number of miles to be studied. If river segments were designated, the total designated mileage appears in the text.

I. Public Law 90-542 (October 2, 1968) — 27 Rivers, Studies Due October 2, 1978

(1) **Allegheny, Pennsylvania.** (BOR) Letter report to Congress on January 23, 1974. River not qualified. **Study Report & EIS (/sites/rivers/files/2023-01/allegheny-study-deis.pdf)** (69.5 miles)

(2) **Bruneau, Idaho.** (BOR) Report recommending congressional designation transmitted to Congress on May 23, 1977. **Study Report (/sites/rivers/files/2023-01/bruneau-study.pdf)** (121 miles)

(3) **Buffalo, Tennessee.** (NPS) Report transmitted to Congress on October 2, 1979. Preservation of river by state recommended. **Study Report (/sites/rivers/files/2023-01/buffalo-study.pdf)** (117 miles)

(4) **Chattooga, North Carolina, South Carolina, and Georgia.** (USFS) Fifty-six point nine miles added to the National System, Public Law 93-279, May 10, 1974. **Study Report (/sites/rivers/files/2023-01/chattooga-study.pdf)** (56.9 miles)

(5) **Clarion, Pennsylvania.** (BOR) Letter report to Congress on February 22, 1974. River not qualified. **Study Report (/sites/rivers/files/2023-01/clarion-study.pdf)** (90 miles)

(6) **Delaware, Pennsylvania and New York.** (BOR) Seventy-five point four miles added to the National System, Public Law 95-625, November 10, 1978. **Study Report (/sites/rivers/files/2023-01/upper-delaware-study.pdf)** (75.4 miles)

(7) **Flathead, Montana.** (USFS) Two hundred nineteen miles added to the National System, Public Law 94-486, October 12, 1976. **Flathead River Study Report and Draft Environmental Impact Statement (/sites/rivers/files/2023-01/flathead-study.pdf)** (219 miles)

(8) **Gasconade, Missouri.** (BOR) Report transmitted to Congress on May 23, 1977. Preservation of river by state recommended. (265 miles)

(9) **Illinois, Oregon.** (USFS) Fifty point four miles added to the National System, Public Law 98-494, October 19, 1984. **Study Report (/sites/rivers/files/2023-01/illinois-study.pdf)** (88 miles)

(10) **Little Beaver, Ohio.** (BOR) Thirty-three miles added to the National System by the Secretary of the Interior on October 23, 1975. Report transmitted to Congress on February 10, 1976. **Study Report (/sites/rivers/files/2023-01/little-beaver-creek-study.pdf)** (33 miles)

(11) **Little Miami, Ohio.** (BOR) Sixty-six miles added to the National System by the Secretary of the Interior on August 20, 1973. Report transmitted to Congress on November 5, 1973. An additional 28-mile segment was added by the Secretary of the Interior on January 28, 1980. **Study Report (/sites/rivers/files/2023-02/little-miami-study.pdf)** (94 miles)

(12) **Maumee, Ohio and Indiana.** (BOR) Report transmitted to Congress on September 13, 1974. River not qualified. (236 miles)

(13) **Missouri, Montana.** (BOR) One hundred forty-nine miles added to the National System, Public Law 94-486, October 12, 1976. **Study Report (/sites/rivers/files/2023-01/missouri-study-mt.pdf)**, **Environmental Statement (/sites/rivers/files/2023-01/missouri-study-environmental-statement.pdf)** (180 miles)

(14) **Moyie, Idaho.** (USFS) Report transmitted to Congress on September 13, 1982. Designation not recommended. (26.1 miles)

(15) **Obed, Tennessee.** (BOR/NPS) Forty-five miles added to the National System, Public Law 94-486, October 12, 1976. Report transmitted to Congress on April 26, 1985. Submission of final report was in abeyance pending completion of a mineral evaluation. Further designation was not recommended. **Study Report (/sites/rivers/files/2023-02/obed-study.pdf)** (100 miles)

(16) **Penobscot, Maine.** (BOR) Report transmitted to Congress on May 23, 1977. Preservation of river by state recommended. (327 miles)

(17) **Pere Marquette, Michigan.** (USFS) Sixty-six point four miles added to the National System, Public Law 95-625, November 10, 1978. **Study Report (/sites/rivers/files/2023-02/pere-marquette-study.pdf)** (153 miles)

(18) **Pine Creek, Pennsylvania.** (NPS) Report transmitted to Congress on October 2, 1979. Preservation of river by state recommended. (51.7 miles)

(19) **Priest, Idaho.** (USFS) Report recommending congressional designation transmitted to Congress on October 2, 1979. (67 miles)

(20) **Rio Grande, Texas.** (BOR) One hundred ninety-one point two miles added to the National System, Public Law 95-625, November 10, 1978. **Study Report (/sites/rivers/files/2023-02/rio-grande-tx-study.pdf)**, **Environmental Impact Statement (/sites/rivers/files/2023-02/rio-grande-tx-eis.pdf)** (556 miles)

(21) **Saint Croix, Minnesota and Wisconsin.** (BOR) Twenty-seven mile federally administered segment added to the National System by Public Law 92-560, October 25, 1972. Twenty-five mile state-administered segment added by the Secretary of the Interior on June 17, 1976. **Study Report (/sites/rivers/files/2023-02/lower-st-croix-study.pdf)** (52 miles)

(22) **St. Joe, Idaho.** (USFS) Sixty-six point three miles added to the National System, Public Law 95-625, November 10, 1978. (132.1 miles)

(23) **Salmon, Idaho.** (USFS) One hundred twenty-five miles added to the National System, Public Law 96-312, July 23, 1980. Additional 53 miles subject to provisions of Section 7(a) of Public Law 90-542. (237 miles)

(24) **Skagit, Washington.** (USFS) One hundred fifty-seven point five miles added to the National System, Public Law 95-625, November 10, 1978. **Study Report (/sites/rivers/files/2023-02/skagit-study.pdf)** (166.3 miles)

(25) **Suwannee, Florida and Georgia.** (BOR) Report transmitted to Congress on March 15, 1974. Preservation of river by state recommended. **Study Report (/sites/rivers/files/2023-02/suwannee-study.pdf)** (272 miles)

(26) **Upper Iowa, Iowa.** (BOR) Report transmitted to Congress on May 11, 1972. Preservation of river by state recommended. (80 miles)

(27) **Youghigheny, Maryland and Pennsylvania.** (NPS) Report transmitted to Congress on October 2, 1979. Preservation of river by state recommended. (49 miles)

II. Public Law 93-621 (January 3, 1975) — 29 Rivers, Studies Due October 2, 1979, (Dolores River Due October 2, 1976, Green and Yampa Rivers Due January 1, 1987)

(28) **American, California.** (USFS) Thirty-eight point three miles added to the National System, Public Law 95-625, November 10, 1978. (41.1 miles)

(29) **Au Sable, Michigan.** (USFS) Twenty-three miles added to the National System, Public Law 98-444, October 4, 1984. **Study Report & Environmental Impact Statement (/sites/rivers/files/2023-01/ausable-study-eis.pdf)** (165 miles)

(30) **Big Thompson, Colorado.** (NPS) Report transmitted to Congress on October 2, 1979. Designation not recommended. (13.6 miles)

(31) **Cache la Poudre, Colorado.** (USFS) Seventy-six miles added to the National System, Public Law 99-590, October 30, 1986. **Study Report & Environmental Impact Statement (/river/cache-la-poudre)** (76 miles)

(32) **Cahaba, Alabama.** (USFS) Report transmitted to Congress on December 14, 1979. River not qualified. (116 miles)

(33) **Clarks Fork, Wyoming.** (USFS) Twenty point five miles added to the National System, Public Law 101-628, November 28, 1990. **Study Report & Environmental Statement (/sites/rivers/files/2023-02/yellowstone-study-environmental-statement.pdf)** (23 miles)

(34) **Colorado, Colorado and Utah.** (NPS) Report transmitted to Congress on April 26, 1985. Designation not recommended. (75.7 miles)

(35) **Conejos, Colorado.** (USFS) Report recommending congressional designation transmitted to Congress on September 13, 1982. (48.8 miles)

(36) **Elk, Colorado.** (USFS) Report recommending congressional designation transmitted to Congress on September 13, 1982. (35 miles)

(37) **Encampment, Colorado.** (USFS) Report recommending congressional designation transmitted to Congress on October 2, 1979. (19.5 miles)

(38) **Green, Colorado and Utah.** (NPS) Report transmitted to Congress in combination with the Yampa River on November 14, 1983. The river was determined eligible, but the Secretary did not include a recommendation for designation. (91 miles)

(39) **Gunnison, Colorado.** (NPS) Report recommending congressional designation transmitted to Congress on October 2, 1979. (29 miles)

(40) **Illinois, Oklahoma.** (HCRS) Report transmitted to Congress on October 2, 1979. Preservation of river by state recommended. (115 miles)

(41) **John Day, Oregon.** (NPS) One hundred forty-seven point five miles added to the National System, Public Law 100-557, October 28, 1988. **Study Report (/sites/rivers/files/2023-01/john-day-study.pdf)** (149 miles)

(42) **Kettle, Minnesota.** (NPS) Report transmitted to Congress on October 2, 1979. Preservation of river by state recommended. (79 miles)

(43) **Los Pinos, Colorado.** (USFS) Report recommending congressional designation transmitted to Congress on September 13, 1982. (54 miles)

(44) **Manistee, Michigan.** (USFS) Twenty-six miles added to the National System, Public Law 102-249, March 3, 1992. **Study Report & Environmental Impact Statement (/sites/rivers/files/2023-01/manistee-study-eis.pdf)** (232 miles)

(45) **Nolichucky, Tennessee and North Carolina.** (NPS) Report transmitted to Congress on April 26, 1985. River not qualified. (110 miles)

(46) **Owyhee, Idaho & Oregon.** (NPS) One hundred twenty miles added to the National System, Public Law 98-494, October 19, 1984. **Study Report (/sites/rivers/files/2023-02/owyhee-id-study-eis.pdf)** (192 miles)

(47) **Piedra, Colorado.** (USFS) Report recommending congressional designation transmitted to Congress on September 13, 1982. (53 miles)

(48) **Shepaug, Connecticut.** (NPS) Report transmitted to Congress on October 2, 1979. Preservation of river by state and local action recommended. (28 miles)

(49) **Sipsey Fork, Alabama.** (USFS) Sixty-one miles added to the National System, Public Law 100-547, October 28, 1988. (71 miles)

(50) **Snake, Wyoming.** (USFS) Report recommending congressional designation transmitted to Congress on September 13, 1982. (50 miles)

(51) **Sweetwater, Wyoming.** (NPS) Report transmitted to Congress on November 14, 1979. Designation not recommended. **Study Report (/sites/rivers/files/2023-02/sweetwater-study.pdf)** (9.5 miles)

(52) **Tuolumne, California.** (NPS/USFS) Eighty-three miles added to the National System, Public Law 98-425, September 28, 1984. **Study Report (/sites/rivers/files/2023-02/tuolumne-study.pdf)** (92 miles)

(53) **Upper Mississippi, Minnesota.** (BOR) Report recommending congressional designation transmitted to Congress on August 25, 1977. (466 miles)

(54) **Wisconsin, Wisconsin.** (NPS/USFS) Report transmitted to Congress on October 2, 1979. Preservation of river by state recommended. (82.4 miles)

(55) **Yampa, Colorado.** (NPS) Report transmitted to Congress in combination with Green River on November 14, 1983. The river was determined eligible, but the Secretary did not include a recommendation for designation. (47 miles)

(56) **Dolores, Colorado.** (BOR/USFS) Report recommending Congressional designation transmitted to Congress on May 23, 1977. (105 miles)

III. Public Law 94-199 (December 31, 1975) — 1 River, Study Due October 1, 1979

(57) **Snake, Washington, Oregon and Idaho.** (NPS) Report transmitted to Congress on April 26, 1985. Designation not recommended. **Study Report & Environmental Impact Statement (/sites/rivers/files/2023-02/snake-study-eis.pdf)** (33 miles)

IV. Public Law 94-486 (October 12, 1976) — 1 River, Study Due October 1, 1980

(58) **Housatonic, Connecticut.** (NPS) Thirty point eight miles added the National System, Public Law 117-328, December 29, 2022. Report transmitted to Congress on October 2, 1979. Preservation of river by state and local action initially recommended. **Study Report (/sites/rivers/files/2023-01/housatonic-study.pdf)**, **Section 2(a)(ii) Application (/sites/rivers/files/2023-01/housatonic-2aii-application.pdf)**, **Federal Register 2(a)(ii) Notice (/sites/rivers/files/2023-01/housatonic-federal-register-notice-2aii-application.pdf)**, (51 miles)

V. Public Law 95-625 (November 10, 1978) — 17 rivers, studies due October 1, 1984

V. Public Law 95-625 (November 10, 1978) — 17 Rivers, Studies Due April 1, 1981

(59) **Kern (North Fork), California.** (USFS) One hundred fifty-one miles of the North and South Forks added to the National System, Public Law 100-174, November 24, 1987. **North Fork Study Report (/sites/rivers/files/2023-01/kern-nf-study.pdf)**, **North Fork Environmental Impact Statement (/sites/rivers/files/2023-02/kern-nf-study-eis.pdf)**, **South Fork Study Report & Draft Environmental Impact Statement (/sites/rivers/files/2023-01/kern-sf-study-deis.pdf)**, **North & South Forks Record of Decision (/sites/rivers/files/2023-01/kern-nf-sf-rod.pdf)** (74 miles)

(60) **Loxahatchee, Florida.** (NPS) Seven point five miles added to the National System by the Secretary of the Interior on May 17, 1985. **Study Report & Environmental Impact Statement (/sites/rivers/files/2023-01/loxahatchee-study-eis.pdf)** (25 miles)

(61) **Ogeechee, Georgia.** (NPS) Report transmitted to Congress on April 26, 1985. Preservation of river by state recommended. (246 miles)

(62) **Salt, Arizona.** (USFS) Report transmitted to Congress on September 13, 1982. Designation not recommended. (22 miles)

(63) **Verde, Arizona.** (USFS) Forty point five miles added to the National System, Public Law 98-406, August 28, 1984. **Study Report & Environmental Assessment (/sites/rivers/files/2023-02/verde-study-eis.pdf)** (78 miles)

(64) **San Francisco, Arizona.** (USFS) Report transmitted to Congress on September 13, 1982. Designation not recommended. (29 miles)

(65) **Fish Creek, East Branch, New York.** (NPS) Report transmitted to Congress on April 26, 1985. Preservation of river by state and local action recommended. (49 miles)

(66) **Black Creek, Mississippi.** (USFS) Twenty-one miles added to the National System, Public Law 99-590, October 30, 1986. **Draft Study Report & Draft Environmental Impact Statement (/sites/rivers/files/2023-01/black-creek-study-deis.pdf)** (122.8 miles)

(67) **Allegheny, Pennsylvania.** (USFS) Eighty-five miles added to the National System, Public Law 102-271, April 20, 1992. Allegheny River Study Report & Draft Environmental Impact Statement (128 miles)

(68) **Cacapon, West Virginia.** (NPS) Report transmitted to Congress on April 26, 1985. Preservation of river by state and local action recommended. (114 miles)

(69) **Escatawpa, Alabama and Mississippi.** (NPS) Report transmitted to Congress on April 26, 1985. Preservation of river by state and local action recommended. (72 miles)

(70) **Myakka, Florida.** (NPS) Report transmitted to Congress on April 26, 1985. Preservation of river by state recommended. (37 miles)

(71) **Soldier Creek, Alabama.** (NPS) Report transmitted to Congress on April 26, 1985. River not qualified. (.2 miles)

(72) **Red, Kentucky.** (USFS) Nineteen point four miles added to the National System, Public Law 103-170, December 2, 1993. **Draft Study Report & Environmental Impact Statement (/sites/rivers/files/2023-02/red-draft-study-eis.pdf)** (19.4 miles)

(73) **Bluestone, West Virginia.** (NPS) Ten miles added to the National System, Public Law 100-534, October 26, 1988. **Study Report (/sites/rivers/files/2023-01/bluestone-study.pdf)** (40 miles)

(74) **Gauley, West Virginia.** (NPS) A 25-mile segment established as a National Recreation Area on October 26, 1988. (164 miles)

(75) **Greenbrier, West Virginia.** (USFS) Report transmitted to Congress on January 7, 1993. Preservation of river by state and local action recommended. (175 miles)

VI. Public Law 96-199 (March 5, 1980) — 1 River, Study Due October 1, 1984

(76) **Birch, West Virginia.** (NPS) Report transmitted to Congress on April 26, 1985. Preservation of river by state and local action recommended. (20 miles)

VII. Public Law 96-487 (December 2, 1980) — 12 Rivers, Studies Due October 1, 1984 (Sheenjek and Squirrel Rivers Due January 1, 1987)

(77) **Colville, Alaska.** (NPS) Study submitted to Congress on April 12, 1979, as part of 105(c) study mandated by Public Law 94-258. This was prior to passage of ANILCA. (428 miles)

(78) **Etivluk-Nigu, Alaska.** (NPS) Study submitted to Congress on April 12, 1979, as part of 105(c) study mandated by Public Law 94-258. This was prior to passage of ANILCA. (160 miles)

(79) **Utukok, Alaska.** (NPS) Study submitted to Congress on April 12, 1979, as part of 105(c) study mandated by Public Law 94-258. This was prior to passage of ANILCA. (250 miles)

(80) **Kanektok, Alaska.** (NPS) Report transmitted to Congress on April 26, 1985. Designation not recommended. (75 miles)

(81) **Kisaralik, Alaska.** (NPS) Report transmitted to Congress on April 26, 1985. Designation not recommended. (75 miles)

(82) **Melozitna, Alaska.** (NPS) Report transmitted to Congress on April 26, 1985. River not qualified. (270 miles)

(83) **Sheenjek (lower segment), Alaska.** (NPS) Report recommending congressional designation transmitted to Congress on January 19, 2001. **Study Report & Legislative Environmental Impact Statement (/sites/rivers/files/2023-02/sheenjek-study-leis.pdf)** (109 miles)

(84) **Situk, Alaska.** (USFS) Report transmitted to Congress on April 26, 1985. Designation not recommended. (21 miles)

(85) **Porcupine, Alaska.** (NPS) Report transmitted to Congress on April 26, 1985. Designation not recommended. (75 miles)

(86) **Yukon (Ramparts section), Alaska.** (NPS) Report transmitted to Congress on April 26, 1985. Designation not recommended. (128 miles)

(87) **Squirrel, Alaska.** (Initiated by NPS/Completed by BLM) Final report/EIS issued January 26, 1999. Designation not recommended. (72 miles)

(88) **Koyuk, Alaska.** (NPS) Report transmitted to Congress on April 26, 1985. River not qualified. (159 miles)

VIII. Public Law 98-323 (June 6, 1984) — 1 River, Study Due October 1, 1990

(89) **Wildcat Creek, New Hampshire.** (NPS) Fourteen point five miles added to the National System, Public Law 100-554, October 28, 1988. **Draft Study Report (/sites/rivers/files/2022-12/wildcat-brook-draft-study.pdf)** (21 miles)

IX. Public Law 98-484 (October 17, 1984) — 1 River, Study Due October 17, 1987

(90) **Horsepasture, North Carolina.** (USFS) Four point two miles added to the National System, Public Law 99-530, October 27, 1986. (4.2 miles)

X. Public Law 98-494 (October 19, 1984) — 1 River, Study Due October 1, 1988

(91) **North Umpqua, Oregon.** (USFS) Thirty-three point eight miles added to the National System, Public Law 100-557, October 28, 1988. (33.8 miles)

XI. Public Law 99-590 (October 30, 1986) — 2 Rivers, Studies Due October 30, 1989, For The Great Egg Harbor River, October 1, 1990, For The Farmington River

(92) **Farmington, West Branch, Connecticut and Massachusetts.** (NPS) Fourteen miles added to the National System, Public Law 103-313, August 26, 1994. Report transmitted to Congress on December 13, 1995. **Study Report (/sites/rivers/files/2023-01/farmington-study.pdf)** (25 miles)

(93) **Great Egg Harbor, New Jersey.** (NPS) One hundred twenty-nine miles added to the National System, Public Law 102-536, October 26, 1992. **Study Report (/sites/rivers/files/2023-01/great-egg-harbor-study.pdf)** (127 miles)

XII. Public Law 99-663 (November 17, 1986) — 2 Rivers, Studies Due October 1, 1990

(94) **Klickitat, Washington.** (USFS) Draft report issued June 1990. Final report completed, but not transmitted to Congress. (30 miles)

(95) **White Salmon, Washington.** (USFS) Twenty miles added to the National System, Public Law 109-44, August 2, 2005. The portion designated was added to the study by the USFS and is the headwaters above the segment authorized for study. (13.5 miles)

XIII. Public Law 100-33 (May 7, 1987) — 3 Rivers, Studies Due October 1, 1990

(96) **Maurice, New Jersey.** (NPS) Ten point five miles added to the National System, Public Law 103-162, December 1, 1993. **Eligibility & Classification Report (/sites/rivers/files/2023-01/maurice-eligibility-classification-report_0.pdf)**, **Study Report (/sites/rivers/files/2023-01/maurice-study.pdf)** (14 miles)

(97) **Manumuskin, New Jersey.** (NPS) Fourteen point three miles added to the National System, Public Law 103-162, December 1, 1993. (3.5 miles)

(98) **Menantico Creek, New Jersey.** (NPS) Seven point nine miles added to the National System, Public Law 103-162, December 1, 1993. (7 miles)

XIV. Public Law 100-149 (November 2, 1987) — 1 River, Study Due October 1, 1991

(99) **Merced, California.** (BLM) Eight miles added to the National System, Public Law 102-432, October 23, 1992. (8 miles)

XV. Public Law 100-557 (October 28, 1988) — 6 Rivers, Studies Due October 1, 1992

(100) **Blue, Oregon.** (USFS) Study initiated in 1989. River determined ineligible, but report not transmitted to Congress. (9 miles)

(101) **Chewaucan, Oregon.** (USFS) Study initiated in 1989. River determined ineligible, but report not transmitted to Congress. (23 miles)

(102) **North Fork Malheur, Oregon.** (BLM) River determined eligible, but report not transmitted to Congress. **Study Report (/sites/rivers/files/2023-01/malheur-nf-study.pdf)** (15 miles)

(103) **South Fork McKenzie, Oregon.** (USFS) Study initiated in 1989. River determined eligible, with plans to complete the study at revision of the Willamette National Forest Land and Resource Management Plan. (26 miles)

(104) **Steamboat Creek, Oregon.** (USFS) Final report completed in 1993. River determined eligible, but report not transmitted to Congress. (24 miles)

(105) **Wallowa, Oregon.** (USFS) Ten miles added to the National System by the Secretary of the Interior on July 25, 1996. (10 miles)

XVI. Public Law 101-356 (August 10, 1990) — 1 River, Study Due August 10, 1993

(106) **Merrimack, New Hampshire.** (NPS) Draft report issued October 7, 1999. River was determined eligible, but final report not transmitted to Congress. **Draft Study Report (/sites/rivers/files/2023-01/merrimack-draft-study.pdf)** (22 miles)

XVII. Public Law 101-357 (August 10, 1990) — 1 River, Study Due August 10, 1993

(107) **Pemigewasset, New Hampshire.** (NPS) Report transmitted to Congress on May 5, 1998. Designation not recommended. **Draft Study Report (/sites/rivers/files/2023-02/pemigewasset-draft-study.pdf)**, **Draft Study Report Appendices (/sites/rivers/files/2023-02/pemigewasset-draft-study-appendices.pdf)** (36 miles)

XVIII. Public Law 101-364 (August 15, 1990) — 1 River, Study Due August 15, 1993

(108) **St. Marys, Florida.** (NPS) Draft report issued on March 16, 1994. River was determined eligible, but final report not transmitted to Congress. **Study Report (/sites/rivers/files/2023-02/st-marys-study.pdf)** (120 miles)

XIX. Public Law 101-538 (November 8, 1990) — 1 River, Study Due September 30, 1994

(109) **Mills, North Carolina.** (USFS) Final report completed in 1996 but not transmitted to Congress. (33 miles)

XX. Public Law 101-628 (November 28, 1990) — 1 River, Study Due September 30, 1994

(110) **Concord, Assabet and Sudbury, Massachusetts.** (NPS) Twenty-nine miles added to the National System, Public Law 106-20, April 9, 1999. **Draft Study Report (/sites/rivers/files/2023-01/suasco-draft-study.pdf)** (29 miles)

XXI. Public Law 102-50 (May 24, 1991) — 1 River, Study Due September 30, 1994

(111) **Niobrara, Nebraska.** (NPS) Six miles added to the National System, Public Law 102-50, May 24, 1996. **Study Report (/sites/rivers/files/2023-02/niobrara-study.pdf)** (6 miles)

XXII. Public Law 102-214 (December 11, 1991) — 1 River, Study due December 11, 1994

(112) **Lamprey, New Hampshire.** (NPS) Eleven point five miles added to the National System, Public Law 104-333, November 12, 1996. Twelve miles added to the National System, Public Law 106-192, May 5, 2000. **Study Report (/sites/rivers/files/2023-01/lamprey-study.pdf)**, **Resource Assessment (/sites/rivers/files/2023-01/lamprey-resource-assessment.pdf)** (10 miles)

XXIII. Public Law 102-215 (December 11, 1991) — 1 River, Study Due December 11, 1994

(113) **White Clay Creek, Pennsylvania and Delaware.** (NPS) One hundred ninety miles added to the National System, Public Law 106-357, October 24, 2000. **Draft Study Report (/sites/rivers/files/2023-02/white-clay-creek-draft-study.pdf)** (23+ miles)

XXIV. Public Law 102-249 (March 3, 1992) — 11 Rivers, Studies due October 1, 1995

(114) **Brule, Michigan and Wisconsin.** (USFS) River determined eligible; suitability study not completed. (33 miles)

(115) **Carp, Michigan.** (USFS) River determined eligible; suitability study not completed. (7.6 miles)

(116) **Little Manistee, Michigan.** (USFS) River determined eligible; suitability study not completed. (42 miles)

(117) **White, Michigan.** (USFS) River determined eligible; suitability study not completed. (75.4 miles)

(118) **Ontonagon, Michigan.** (USFS) River determined eligible; suitability study not completed. (32 miles)

(119) **Paint, Michigan.** (USFS) River determined eligible; suitability study not completed. (70 miles)

(120) **Presque Isle, Michigan.** (USFS) River determined eligible; suitability study not completed. (13 miles)

(121) **Sturgeon (Ottawa National Forest), Michigan.** (USFS) River determined eligible; suitability study not completed. (36 miles)

(122) **Sturgeon (Hiawatha National Forest), Michigan.** (USFS) River determined eligible; suitability study not completed. (18.1 miles)

(123) **Tahquamenon, Michigan.** (USFS) River determined eligible; suitability study not completed. (103.5 miles)

(124) **Whitefish, Michigan.** (USFS) River determined eligible; suitability study not completed. (26 miles)

XXV. Public Law 102-271 (April 20, 1992) — 2 Rivers, Studies Due September 30, 1995

(125) **Clarion, Pennsylvania.** (USFS) Fifty-one point seven miles added to the National System, Public Law 104-333, October 19, 1996. **Study Report (/sites/rivers/files/2023-01/clarion-study.pdf)** (104 miles)

(126) **Mill Creek, Pennsylvania.** (USFS) River determined eligible, suitability study not completed. (18 miles)

XXVI. Public Law 102-301 (June 19, 1992) — 5 Rivers, Studies Due September 30, 1995

(127) **Piru Creek, California.** (USFS) Seven point three miles of area below Pyramid Lake added to the National System, Public Law 111-11, March 30, 2009. Two areas of river authorized for study—source to Pyramid Lake and 300 feet below Pyramid Lake to Lake Piru. Study of area above Pyramid Lake completed in revision of Los Padres National Forest Land and Resource Management Plan. (49 miles)

(128) **Little Sur, California.** (USFS) Study completed in revision of Los Padres National Forest Land and Resource Management Plan. River determined eligible, but report not transmitted to Congress. (23 miles)

(129) **Matilija Creek, California.** (USFS) Study completed in revision of Los Padres National Forest Land and Resource Management Plan. River determined ineligible, but report not transmitted to Congress. (16 miles)

(130) **Lopez Creek, California.** (USFS) Study completed in revision of Los Padres National Forest Land and Resource Management Plan. River determined ineligible, but report not transmitted to Congress. (11 miles)

(131) **Sespe Creek, California.** (USFS) Study completed in revision of Los Padres National Forest Land and Resource Management Plan. River determined eligible, but report not transmitted to Congress. (10.5 miles)

XXVII. Public Law 102-432 (October 23, 1992) — 1 River, Study Due September 30, 1995

(132) **North Fork Merced, California.** (BLM) Study has been completed through the Folsom Resource Management Plan. River determined ineligible, but report not transmitted to Congress. (15 miles)

XXVIII. Public Law 102-460 (October 23, 1992) — 1 River, Study Due October 23, 1993

(133) **Delaware, Pennsylvania and New Jersey.** (NPS) Sixty-seven point three miles added to the National System, Public Law 106-418, November 1, 2000. **Study Report (/sites/rivers/files/2023-01/lower-delaware-study.pdf)** (70 miles)

XXIX. Public Law 102-525 (October 26, 1992) — 1 River, Study Due October 26, 1993

(134) **New, Virginia and West Virginia.** (NPS) Report transmitted to Congress on April 8, 2011. Designation not recommended. (20 miles) **Study Report (/sites/rivers/files/2023-02/new-study.pdf)**, **Transmittal Memos (/sites/rivers/files/2023-02/new-study-memos.pdf)**

XXX. Public Law 103-242 (May 4, 1994) — 1 River, Study Due May 4, 1997

(135) **Rio Grande, New Mexico.** (BLM) Final report issued on January 4, 2000, but not transmitted to Congress. Seven point six miles determined eligible. (8 miles)

XXXI. Public Law 104-311 (October 19, 1996) — 1 River, Study Due October 19, 1998

(136) **Wekiva, Florida.** (NPS) Forty-one point six miles added to the National System, Public Law 106-299, October 13, 2000. **Study Report (/sites/rivers/files/2023-02/wekiva-study.pdf)** (27 miles)

XXXII. Public Law 106-318 (October 19, 2000) — 1 River, Study Due October 19, 2003

(137) **Taunton, Massachusetts.** (NPS) Forty point zero miles added to the National System, Public Law 111-11, March 30, 2009. **Draft Study Report & Environmental Assessment (/sites/rivers/files/2023-02/taunton-draft-study-ea.pdf)** (22 miles)

XXXIII. Public Law 107-65 (November 6, 2001) — 1 River, Study Due November 6, 2004

(138) **Eight Mile, Connecticut.** (NPS) Twenty-five point three miles added to the National System, Public Law 110-229, May 8, 2008. (15 miles)

XXXIV. Public Law 109-370 (November 27, 2006) — 1 River, Study Due November 27, 2009

(139) **Lower Farmington and Salmon Brook, Connecticut.** (NPS) Sixty-one point seven miles added to the National System, Public Law 116-9, March 12, 2019. **Study Report & Environmental Assessment (/sites/rivers/files/2023-01/lower-farmington-study-ea.pdf)** (70 miles)

XXXV. Public Law 111-11 (March 3, 2009) — 1 River, Study Due March 30, 2012

(140) **Missisquoi and Trout, Vermont.** (NPS) Forty-six point one miles added to the National System, Public Law 113-291, December 19, 2014. **Study Report & Environmental Assessment (/sites/rivers/files/2023-01/missisquoi-trout-study-ea.pdf)** (70 miles)

XXXVI. Public Law 113-291 (December 19, 2014) — 4 Rivers, Studies Due 3 years After Funding

(141) **Lake Creek, Lower Cave Creek, Lake Creek, No Name Creek, Panther Creek, and Upper Cave Creek, Oregon.** (NPS) Lake Creek and Upper Cave Creek found eligible and suitable for designation; No Name Creek, Panther Creek, and Upper Cave Creek found ineligible. Report transmitted to Congress April 7, 2020. (8.3 miles) Oregon Caves (Lower & Upper Cave Creek, Lake Creek, No Name Creek, Panther Creek, & Waterfelt Creek) **Study Report (/sites/rivers/files/2022-12/oregon-caves-study.pdf)**, **Transmittal Letters (/sites/rivers/files/2023-02/oregon-caves-study-transmittal.pdf)**

(142) **Beaver, Chipuxet, Queen, Wood and Pawcatuck Rivers, Rhode Island and Connecticut.** (NPS) One hundred ten miles added to the National System, Public Law 116-9, March 12, 2019. **Study Report (/sites/rivers/files/2022-12/wood-pawcatuck-study.pdf)** (86 miles)

(143) **Nashua River, Massachusetts.** (NPS) Fifty-two point eight miles added to the National System, Public Law 116-9, March 12, 2019. **Study Report (/sites/rivers/files/2023-05/nashua_studyreport_full_2019.pdf)** (32.5 miles)

(144) **York River, Maine.** (NPS) Thirty point eight miles added to the National System, Public Law 117-328, December 29, 2022. **York River Study Report (/sites/rivers/files/2022-12/york-study.pdf)**, **Transmittal Letters (/sites/rivers/files/2023-01/york-congressional-letter.pdf)** (11.3 miles)

XXXVII. Public Law 117-328 (December 29, 2022) — 2 Rivers, Studies Due 3 years After Funding

(145) **Kissimmee River, Florida.** (NPS)

Study not yet initiated. (TBD miles)

(146) **Little Manatee River, Florida.** (NPS) Study not yet initiated. (50.0 miles)

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PARTNERS

Bureau of Land Management (https://blm.gov/programs/national-conservation-lands/wild-and-scenic-rivers)

National Park Service (https://www.nps.gov/orgs/1912/index.htm)

NPS Partnership Rivers (https://www.nps.gov/orgs/1912/partnership-wild-and-scenic-rivers.htm)

U.S. Fish & Wildlife Service (https://www.fws.gov/story/wild-and-scenic-rivers)

U.S. Forest Service (https://www.fs.usda.gov/managing-land/wild-scenic-rivers)

River Management Society (http://river-management.org/)

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NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT


FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE


NATIONAL
PARK
SERVICE


U.S.
FISH & WILDLIFE
SERVICE
DEPARTMENT OF THE INTERIOR

ELIGIBLE SUITABLE RIVERS OFFICIAL LIST

River_Nam	Status	Miles	State1	State2	State3	Eligibility_S	Suitability_	Administrative_Unit1
Little River	Eligible	39	Alabama	None	None	https://irma.nps.gov/D		Little River Canyon National Preserve
Cinder Rive	Eligible	26	Alaska	None	None	https://irma.nps.gov/D		Aniakchak National Monument & Preserve
Main Creek	Eligible	17	Alaska	None	None	https://irma.nps.gov/D		Aniakchak National Monument & Preserve
Meshik Riv	Eligible	24	Alaska	None	None	https://irma.nps.gov/D		Aniakchak National Monument & Preserve
Espenberg	Eligible	10	Alaska	None	None	https://irma.nps.gov/D		Bering Land Bridge National Preserve
Goodhope	Eligible	441	Alaska	None	None	https://irma.nps.gov/D		Bering Land Bridge National Preserve
Kuzitrin Riv	Eligible	259	Alaska	None	None	https://irma.nps.gov/D		Bering Land Bridge National Preserve
Noxapaga I	Eligible	270	Alaska	None	None	https://irma.nps.gov/D		Bering Land Bridge National Preserve
Nugnugalu	Eligible	311	Alaska	None	None	https://irma.nps.gov/D		Bering Land Bridge National Preserve
Serpentine	Eligible	127	Alaska	None	None	https://irma.nps.gov/D		Bering Land Bridge National Preserve
Nenana Riv	Eligible	34	Alaska	None	None	https://irma.nps.gov/D		Denali National Park & Preserve
Anaktuvuk	Eligible	37	Alaska	None	None	https://irma.nps.gov/D		Gates Of The Arctic National Park & Preserve
Chandler R	Eligible	32	Alaska	None	None	https://irma.nps.gov/D		Gates Of The Arctic National Park & Preserve
Etivluk Rive	Eligible	20	Alaska	None	None	https://irma.nps.gov/D		Gates Of The Arctic National Park & Preserve
Ernie Creek	Eligible	16	Alaska	None	None	https://irma.nps.gov/D		Gates Of The Arctic National Park & Preserve
Itkillik Rive	Eligible	41	Alaska	None	None	https://irma.nps.gov/D		Gates Of The Arctic National Park & Preserve
Killik River	Eligible	73	Alaska	None	None	https://irma.nps.gov/D		Gates Of The Arctic National Park & Preserve
Kugrak Rive	Eligible	22	Alaska	None	None	https://irma.nps.gov/D		Gates Of The Arctic National Park & Preserve
Nigu River	Eligible	27	Alaska	None	None	https://irma.nps.gov/D		Gates Of The Arctic National Park & Preserve
Reed River	Eligible	40	Alaska	None	None	https://irma.nps.gov/D		Gates Of The Arctic National Park & Preserve
Alsek River	Eligible	34	Alaska	None	None	https://irma.nps.gov/D		Glacier Bay National Park & Preserve
American C	Eligible	39	Alaska	None	None	https://irma.nps.gov/D		Katmai National Park & Preserve
Big River	Eligible	21	Alaska	None	None	https://irma.nps.gov/D		Katmai National Park & Preserve
Headwater	Eligible	20	Alaska	None	None	https://irma.nps.gov/D		Katmai National Park & Preserve
Moraine Cr	Eligible	38	Alaska	None	None	https://irma.nps.gov/D		Katmai National Park & Preserve
Hallo Creek	Eligible	9	Alaska	None	None	https://irma.nps.gov/D		Katmai National Park & Preserve
Savonoski	Eligible	96	Alaska	None	None	https://irma.nps.gov/D		Katmai National Park & Preserve
Katmai Riv	Eligible	48	Alaska	None	None	https://irma.nps.gov/D		Katmai National Park & Preserve
Ukak River	Eligible	48	Alaska	None	None	https://irma.nps.gov/D		Katmai National Park & Preserve
Kulik River	Eligible	2	Alaska	None	None	https://irma.nps.gov/D		Katmai National Park & Preserve
Naknek Riv	Eligible	8	Alaska	None	None	https://irma.nps.gov/D		Katmai National Park & Preserve
Swikshak F	Eligible	11	Alaska	None	None	https://irma.nps.gov/D		Katmai National Park & Preserve
Addison Cr	Eligible	3	Alaska	None	None	https://irma.nps.gov/D		Kenai Fjords National Park
Bear Glacie	Eligible	7	Alaska	None	None	https://irma.nps.gov/D		Kenai Fjords National Park
Delight Cre	Eligible	4	Alaska	None	None	https://irma.nps.gov/D		Kenai Fjords National Park
Desire Cree	Eligible	3	Alaska	None	None	https://irma.nps.gov/D		Kenai Fjords National Park
Nuka River	Eligible	12	Alaska	None	None	https://irma.nps.gov/D		Kenai Fjords National Park
Resurrectio	Eligible	17	Alaska	None	None	https://irma.nps.gov/D		Kenai Fjords National Park
Skagway Ri	Eligible	6	Alaska	None	None	https://irma.nps.gov/D		Klondike Gold Rush National Historical Park
Taiya River	Eligible	19	Alaska	None	None	https://irma.nps.gov/D		Klondike Gold Rush National Historical Park
Beaver Cre	Eligible	37	Alaska	None	None	https://irma.nps.gov/D		Wrangell - St Elias National Park & Preserve
Bremner Ri	Eligible	101	Alaska	None	None	https://irma.nps.gov/D		Wrangell - St Elias National Park & Preserve
Chisana Ri	Eligible	47	Alaska	None	None	https://irma.nps.gov/D		Wrangell - St Elias National Park & Preserve
Chitina Riv	Eligible	320	Alaska	None	None	https://irma.nps.gov/D		Wrangell - St Elias National Park & Preserve
Copper Riv	Eligible	72	Alaska	None	None	https://irma.nps.gov/D		Wrangell - St Elias National Park & Preserve
Nabesna R	Eligible	31	Alaska	None	None	https://irma.nps.gov/D		Wrangell - St Elias National Park & Preserve
White River	Eligible	33	Alaska	None	None	https://irma.nps.gov/D		Wrangell - St Elias National Park & Preserve
Seventymil	Eligible	26	Alaska	None	None	https://irma.nps.gov/D		Yukon - Charley Rivers National Preserve
Chilligan R	Eligible	17	Alaska	None	None	https://irma.nps.gov/D		Lake Clark National Park & Preserve
Chokotonk	Eligible	23	Alaska	None	None	https://irma.nps.gov/D		Lake Clark National Park & Preserve
Crescent R	Eligible	40	Alaska	None	None	https://irma.nps.gov/D		Lake Clark National Park & Preserve
Kijik River	Eligible	23	Alaska	None	None	https://irma.nps.gov/D		Lake Clark National Park & Preserve
Neacola Ri	Eligible	25	Alaska	None	None	https://irma.nps.gov/D		Lake Clark National Park & Preserve
Necons Riv	Eligible	45	Alaska	None	None	https://irma.nps.gov/D		Lake Clark National Park & Preserve
Red River	Eligible	5	Alaska	None	None	https://irma.nps.gov/D		Lake Clark National Park & Preserve

Stony River	Eligible	39	Alaska	None	None	https://irma.nps.gov/D	Lake Clark National Park & Preserve
Tanalian Ri	Eligible	20	Alaska	None	None	https://irma.nps.gov/D	Lake Clark National Park & Preserve
Tazimina R	Eligible	57	Alaska	None	None	https://irma.nps.gov/D	Lake Clark National Park & Preserve
Telaquana	Eligible	44	Alaska	None	None	https://irma.nps.gov/D	Lake Clark National Park & Preserve
Kelly River	Eligible	56	Alaska	None	None	https://irma.nps.gov/D	Noatak National Preserve
West Glaci	Eligible	32	Alaska	None	None	https://irma.nps.gov/D	Lake Clark National Park & Preserve
Middle Gla	Eligible	6	Alaska	None	None	https://irma.nps.gov/D	Lake Clark National Park & Preserve
East Glacie	Eligible	11	Alaska	None	None	https://irma.nps.gov/D	Lake Clark National Park & Preserve
Colorado R	Eligible	509	Arizona	None	None	https://irma.nps.gov/D	Grand Canyon National Park
Puerco Riv	Eligible	2	Arizona	None	None	https://irma.nps.gov/D	Petrified Forest National Park
San Joaqui	Suitable	27	California	None	None	https://irma.nps.gov/D	Devils Postpile National Monument
San Joaqui	Suitable	11	California	None	None	https://irma.nps.gov/D	Kings Canyon National Park
Kaweah Ri	Suitable	34	California	None	None	https://irma.nps.gov/D	Sequoia & Kings Canyon National Parks
Kaweah Ri	Suitable	14	California	None	None	https://irma.nps.gov/D	Sequoia & Kings Canyon National Parks
Kaweah Ri	Suitable	12	California	None	None	https://irma.nps.gov/D	Sequoia & Kings Canyon National Parks
Big Sycam	Eligible	10	California	None	None	https://irma.nps.gov/D	Santa Monica Mountains National Recreation Area
Olema Cre	Eligible	11	California	None	None	https://irma.nps.gov/D	Point Reyes National Seashore
Redwood C	Eligible	19	California	None	None	https://irma.nps.gov/D	Redwood National and State Parks
Tuolumne I	Eligible	18	California	None	None	https://irma.nps.gov/D	Yosemite National Park
Tuolumne I	Eligible	15	California	None	None	https://irma.nps.gov/D	Yosemite National Park
Redwood C	Eligible	5	California	None	None	https://irma.nps.gov/D	Muir Woods National Monument
Mosca Cre	Suitable	39	Colorado	None	None	https://irma.nps.gov/D	Great Sand Dunes National Park & Preserve
Sand Creel	Suitable	32	Colorado	None	None	https://irma.nps.gov/D	Great Sand Dunes National Park & Preserve
Deadman (	Suitable	7	Colorado	None	None	https://irma.nps.gov/D	Great Sand Dunes National Park & Preserve
Big Spring (	Suitable	10	Colorado	None	None	https://irma.nps.gov/D	Great Sand Dunes National Park & Preserve
Gunnison F	Eligible	1	Colorado	None	None	https://irma.nps.gov/D	Curecanti National Recreation Area
Blue Creek	Eligible	2	Colorado	None	None	https://irma.nps.gov/D	Curecanti National Recreation Area
Curecanti (	Eligible	1	Colorado	None	None	https://irma.nps.gov/D	Curecanti National Recreation Area
West Elk C	Eligible	0	Colorado	None	None	https://irma.nps.gov/D	Curecanti National Recreation Area
Coal Creek	Eligible	0	Colorado	None	None	https://irma.nps.gov/D	Curecanti National Recreation Area
Arkansas R	Eligible	3	Colorado	None	None	https://irma.nps.gov/D	Bent's Old Fort National Historic Site
Colorado R	Eligible	23	Colorado	None	None	https://irma.nps.gov/D	Rocky Mountain National Park
Big Thomp	Eligible	16	Colorado	None	None	https://irma.nps.gov/D	Rocky Mountain National Park
Big Thomp	Eligible	8	Colorado	None	None	https://irma.nps.gov/D	Rocky Mountain National Park
Fall River	Eligible	8	Colorado	None	None	https://irma.nps.gov/D	Rocky Mountain National Park
North St. V	Eligible	9	Colorado	None	None	https://irma.nps.gov/D	Rocky Mountain National Park
Gunnison F	Suitable	14	Colorado	None	None	https://irm	https://irm Black Canyon Of The Gunnison National Park
Waikolu St	Eligible	4	Hawaii	None	None	https://irma.nps.gov/D	Kalaupapa National Historical Park
Waihānau	Eligible	4	Hawaii	None	None	https://irma.nps.gov/D	Kalaupapa National Historical Park
Yellow Rive	Suitable	4	Iowa	None	None	https://irma.nps.gov/D	Effigy Mounds National Monument
Pleasant Ri	Eligible	40	Maine	None	None	https://irma.nps.gov/D	Appalachian National Scenic Trail
Katahdin S	Eligible	9	Maine	None	None	https://irma.nps.gov/D	Appalachian National Scenic Trail
Penobscot	Mixed - see	344	Maine	None	None	https://irm	https://irm Appalachian National Scenic Trail
Miners Rive	Eligible	7	Michigan	None	None	https://irma.nps.gov/D	Pictured Rocks National Lakeshore
Mosquito R	Eligible	6	Michigan	None	None	https://irma.nps.gov/D	Pictured Rocks National Lakeshore
Platte River	Eligible	4	Michigan	None	None	https://irma.nps.gov/D	Sleeping Bear Dunes National Lakeshore
Crystal Riv	Eligible	3	Michigan	None	None	https://irma.nps.gov/D	Sleeping Bear Dunes National Lakeshore
Pigeon Rive	Eligible	1	Minnesota	None	None	https://irma.nps.gov/D	Grand Portage National Monument
						https://ir ma.nps.g ov/DataSt ore/Downl oadFile/5 47130	
Kettle River	Suitable	59	Minnesota	None	None		https://irm Saint Croix National Scenic River

						https://ir ma.nps.g ov/DataSt ore/Downl oadFile/5 81692	
Mississippi	Suitable	359	Minnesota	None	None	https://irm	Mississippi National River & Recreation Area
Current Riv	Eligible	135	Missouri	None	None	https://irma.nps.gov/D	Ozark National Scenic Riverways
Missouri Ri	Eligible	2	Montana	North Dako	None	https://irma.nps.gov/D	Knife River Indian Villages National Historic Site
Black Cany	Eligible	4	Montana	None	None	https://irma.nps.gov/D	Bighorn Canyon National Recreation Area
Slough Cre	Eligible	18	Montana	Wyoming	None	https://irma.nps.gov/D	Yellowstone National Park
Soda Butte	Eligible	18	Montana	Wyoming	None	https://irma.nps.gov/D	Yellowstone National Park
Niobrara R	Eligible	11	Nebraska	None	None	https://irma.nps.gov/D	Agate Fossil Beds National Monument
Big Wash, S	Eligible	5	Nevada	None	None	https://irma.nps.gov/D	Great Basin National Park
Pemigewas	Eligible and	33	New Hamp	None	None	https://irm	https://irm Appalachian National Scenic Trail
Gila River, \	Eligible	1	New Mexic	None	None	https://irma.nps.gov/D	Gila Cliff Dwellings National Monument
Little Missc	Eligible	26	North Dako	None	None	https://irma.nps.gov/D	Theodore Roosevelt National Park
Cuyahoga I	Eligible	8	Ohio	None	None	https://irma.nps.gov/D	Cuyahoga Valley National Park
Cave Creek	Eligible	0	Oregon	None	None		Oregon Caves National Monument
Lake Creek	Eligible	1	Oregon	None	None		Oregon Caves National Monument
Buffalo Riv	Suitable	118	Tennessee	None	None	https://irm	https://irm Natchez Trace Parkway
Neches Riv	Eligible	249	Texas	None	None	https://irma.nps.gov/D	Big Thicket National Preserve
Menard Cr	Eligible	27	Texas	None	None	https://irma.nps.gov/D	Big Thicket National Preserve
Courthous	Eligible	12	Utah	None	None	https://irma.nps.gov/D	Arches National Park
Salt Wash	Eligible	7	Utah	None	None	https://irma.nps.gov/D	Arches National Park
Salt Creek	Eligible	10	Utah	None	None	https://irma.nps.gov/D	Canyonlands National Park
Horseshoe	Eligible	4	Utah	None	None	https://irma.nps.gov/D	Canyonlands National Park
Colorado R	Eligible	146	Utah	None	None	https://irma.nps.gov/D	Canyonlands National Park
Fremont Ri	Eligible	13	Utah	None	None	https://irma.nps.gov/D	Capitol Reef National Park
Pleasant C	Eligible	7	Utah	None	None	https://irma.nps.gov/D	Capitol Reef National Park
Halls Creek	Eligible	49	Utah	None	None	https://irma.nps.gov/D	Capitol Reef National Park
Bowns Can	Eligible	6	Utah	None	None	https://irma.nps.gov/D	Glen Canyon National Recreation Area
Escalante I	Eligible	182	Utah	None	None	https://irma.nps.gov/D	Glen Canyon National Recreation Area
San Juan R	Eligible	111	Utah	None	None	https://irma.nps.gov/D	Glen Canyon National Recreation Area
Dirty Devil	Eligible	23	Utah	None	None	https://irma.nps.gov/D	Glen Canyon National Recreation Area
Llewellyn C	Eligible	8	Utah	None	None	https://irma.nps.gov/D	Glen Canyon National Recreation Area
Moqui Can	Eligible	5	Utah	None	None	https://irma.nps.gov/D	Glen Canyon National Recreation Area
Reflection	Eligible	3	Utah	None	None	https://irma.nps.gov/D	Glen Canyon National Recreation Area
Trachyte C	Eligible	3	Utah	None	None	https://irma.nps.gov/D	Glen Canyon National Recreation Area
White Can	Eligible	18	Utah	None	None	https://irma.nps.gov/D	Natural Bridges National Monument
American F	Eligible	1	Utah	None	None	https://irma.nps.gov/D	Timpanogos Cave National Monument
Coalpits W	Eligible	15	Utah	None	None	https://irma.nps.gov/D	Zion National Park
Camp Cree	Eligible	5	Utah	None	None	https://irma.nps.gov/D	Zion National Park
Green Rive	Suitable	139	Utah	Colorado	None	https://irm	https://irm Dinosaur National Monument
Appomatto	Eligible	47	Virginia	None	None	https://irma.nps.gov/D	Appomattox Court House National Historical Park
Skagit Rive	Suitable	33	Washingto	None	None	http://parkplanning.np	Ross Lake National Recreation Area
Chilliwack	Eligible	15	Washingto	None	None	https://irma.nps.gov/D	North Cascades National Park
Thunder Cr	Eligible	29	Washingto	None	None	https://irma.nps.gov/D	North Cascades National Park
Ruby Creek	Eligible	1	Washingto	None	None	https://irma.nps.gov/D	North Cascades National Park
Nooksack I	Eligible	2	Washingto	None	None	https://irma.nps.gov/D	North Cascades National Park
Baker River	Eligible	11	Washingto	None	None	https://irma.nps.gov/D	North Cascades National Park
Stehekin Ri	Eligible	631	Washingto	None	None	https://irma.nps.gov/D	North Cascades National Park
White River	Eligible	8	Washingto	None	None	https://irma.nps.gov/D	Mount Rainier National Park
Cowlitz Riv	Eligible	22	Washingto	None	None	https://irma.nps.gov/D	Mount Rainier National Park
Carbon Riv	Eligible	10	Washingto	None	None	https://irma.nps.gov/D	Mount Rainier National Park
Royal Cree	Eligible	22	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Gray Wolf F	Eligible	98	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park

Elwha Rive	Eligible	710	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Quinault Ri	Eligible	414	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Ozette Rive	Eligible	5	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Skokomish	Eligible	126	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Duckabush	Eligible	95	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Dosewallip	Eligible	148	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Sol Duc Riv	Eligible	277	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Bogachiel F	Eligible	321	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Hoh River	Eligible	457	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Queets Riv	Eligible	481	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Calawah R	Eligible	167	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Skokomish	Eligible	1	Washingto	None	None	https://irma.nps.gov/D	Olympic National Park
Gauley Riv	Mixed - see	105	West Virgin	None	None	https://irm	https://irm	Gauley River National Recreation Area
Shoshone I	Eligible	4	Wyoming	None	None	https://irma.nps.gov/D	Bighorn Canyon National Recreation Area
Yellowston	Eligible	85	Wyoming	Montana	None	https://irma.nps.gov/D	Yellowstone National Park
Bechler Riv	Eligible	17	Wyoming	None	None	https://irma.nps.gov/D	Yellowstone National Park
Falls River	Eligible	29	Wyoming	None	None	https://irma.nps.gov/D	Yellowstone National Park
Firehole Ri	Eligible	32	Wyoming	None	None	https://irma.nps.gov/D	Yellowstone National Park
Lamar Rive	Eligible	48	Wyoming	None	None	https://irma.nps.gov/D	Yellowstone National Park
Madison Ri	Eligible	21	Wyoming	Montana	None	https://irma.nps.gov/D	Yellowstone National Park
Gibbon Riv	Eligible	35	Wyoming	None	None	https://irma.nps.gov/D	Yellowstone National Park
Gardner Ri	Eligible	30	Wyoming	None	None	https://irma.nps.gov/D	Yellowstone National Park
Gallatin Ri	Eligible	27	Wyoming	Montana	None	https://irma.nps.gov/D	Yellowstone National Park

ENCLOSURE P

ENVIRONMENTAL JUSTICE

OMB No. 2506-0177
(exp.2/28/2025)

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Environmental Justice (CEST and EA) – PARTNER

https://www.hudexchange.info/environmental-review/environmental-justice

HUD strongly encourages starting the Environmental Justice analysis only after all other laws and authorities, including Environmental Assessment factors if necessary, have been completed.

1. **Were any adverse environmental impacts identified in any other compliance review portion of this project's total environmental review?**
   ☒Yes → *Continue to Question 2.*

   ☐No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. **Were these adverse environmental impacts disproportionately high for low-income and/or minority communities?**
   ☐Yes
   Explain:
   Click here to enter text.
   → *The RE/HUD must work with the affected low-income or minority community to decide what mitigation actions, if any, will be taken. Provide any supporting documentation.*

   ☒No
   Explain:

The mitigating factors associated with the proposed project includes Endangered Species (details below) and Contamination and Toxic (details below). Both of these factors can be appropriately mitigated and are not disproportionately high for low-income and/or minority communities. There are no additional mitigating environmental factors resulting from the proposed project, which is in compliance with all remaining related laws and authorities. The site will impact the Indiana but and, as such, a voluntary contribution to the Imperiled Bat Conservation Fund (IBCF) and commitment to remove the trees during the unoccupied (by bats) season prior to March 31, 2025. There is no evidence of contamination or toxic substances that would pose a threat to the residents at the project site as verified in the Phase I Environmental Site Assessment. Post construction radon testing and mitigation (if required) will occur. As radon is naturally occurring it does not disproportionately affect low-income and/or/minority communities. Post construction is the only reliable method to measure for radon

concentration.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

Adverse environmental impacts are not disproportionately high for low-income and/or minority communities. The mitigating factors associated with the proposed project includes Endangered Species (details below) and Contamination and Toxic (details below). Both of these factors can be appropriately mitigated and are not disproportionately high for low-income and/or minority communities. There are no additional mitigating environmental factors resulting from the proposed project, which is in compliance with all remaining related laws and authorities. The site will impact the Indiana but and, as such, a voluntary contribution to the Imperiled Bat Conservation Fund (IBCF) and commitment to remove the trees during the unoccupied (by bats) season prior to March 31, 2025. There is no evidence of contamination or toxic substances that would pose a threat to the residents at the project site as verified in the Phase I Environmental Site Assessment. Post construction radon testing and mitigation (if required) will occur. As radon is naturally occurring it does not disproportionately affect low-income and/or/minority communities. Post construction is the only reliable method to measure for radon concentration. The project is in compliance with Executive Order 12898.

ENCLOSURE Q

ENVIRONMENTAL ASSESSMENT FACTOR BACKUP

Arts & Entertainment in Bowling Green, Ky

After more than a year of closed curtains, this town is hopping again with entertainment options!

Being less than an hour north of Music City, USA, Bowling Green audiences have long been a testing ground for emerging Nashville artists while supporting the trailblazing talents of local musicians and ensembles. From performing arts centers to independent venues to restaurants regularly hosting musicians, we hope you'll check out some live music in Bowling Green.

Visual and performing arts are also readily available with multiple galleries around town, two theatre troupes, The **Downing Museum**, and a bustling WKU Department of Theatre and Dance performance schedule. Families visiting BG are entertained by professional **minor league baseball**, escape games and historic tours, too!

KEYWORD SEARCH

REGIONS

- ☐ Downtown (11)
- ☐ Near WKU (4)
- ☐ I-65 Exit 22 (1)
- ☐ US 31W Bypass (1)

CLEAR FILTERS

View: Grid List | Sort: Recommended Near Me | Show Map

1 - 12 of 18

BLUE HOLLER BREWERY
1266 31-W Bypass

BOWLING GREEN HOT RODS BASEBALL
(270) 901-2121
300 8th Avenue

BOWLING GREEN PIPE AND CIGAR
(270) 904-2285
434 East Main

CONUNDRUM WORKSHOP
(270) 282-0792
1901 Russellville Road

DOWNING MUSEUM
(270) 842-7415
4801 Morgantown Road

FOUNTAIN SQUARE PLAYERS
(270) 782-3119
313 State Street

JOHN CARPENTER'S REEL SITES, REAL SCARY DRIVING TOUR
Driving tour begins on Scottsville Road

ORCHESTRA KENTUCKY
270-846-2426
PO Box 748

PUBLIC THEATRE OF KENTUCKY
545 Morris Alley

SOUTHERN KENTUCKY PERFORMING ARTS CENTER
(270) 904-1880
601 College Street

THE PHOENIX THEATRE
(270) 781-6233
545 Morris Alley

THE POTS PLACE GALLERY & STUDIO
(270) 904-0599
428 East Main

Find a Park

You can find a park with the feature, facility or amenity by choosing it in the menu below.

Click Here to Reserve Online! (https://playbgpr.bgky.org/wbwsc/webtrac.wsc/search.html?module=FR)

Choose a Park By Feature

Show All (/bgpr/parks/find)

(/bgpr/parks/7)

Bowling Green / F.O. Moxley Community Center (/bgpr/parks/7)

(/bgpr/parks/9)

Cemeteries (/bgpr/parks/9)

(/bgpr/parks/11)

Chuck Crume Nature Park (/bgpr/parks/11)

(/bgpr/parks/36)

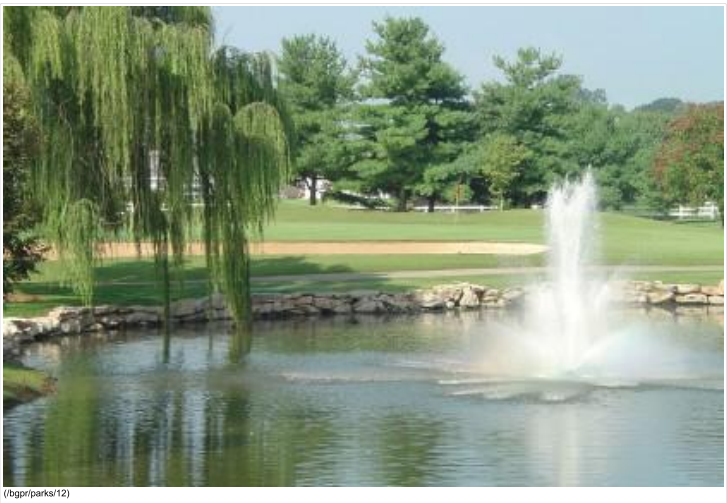
Circus Square Park (/bgpr/parks/36)

(/bgpr/parks/10)

Covington Woods Park (/bgpr/parks/10)

(/bgpr/parks/13)

Crossings Neighborhood Park (/bgpr/parks/13)



(/bgpr/parks/12)

CrossWinds Golf Course (/bgpr/parks/12)

(/bgpr/parks/14)

Fort Webb Park (/bgpr/parks/14)

(/bgpr/parks/5)

Fountain Square Park (/bgpr/parks/5)

(/bgpr/parks/28)

H.D. Carpenter Park (formerly known as Westend Park) (/bgpr/parks/28)

(/bgpr/parks/34)

H.P. Thomas Park (/bgpr/parks/34)

(/bgpr/parks/16)

Hobson Grove Park (/bgpr/parks/16)

(/bgpr/parks/15)

James Hines Park (/bgpr/parks/15)

(/bgpr/parks/6)

Kaz Abe Landscape Facility (/bgpr/parks/6)

(/bgpr/parks/17)

Kereiakes Park (Spero Kereiakes Park) (/bgpr/parks/17)

(/bgpr/parks/35)

Kummer/Little Recreation Center (/bgpr/parks/35)

(/bgpr/parks/18)

Lampkin Park (C.W. Lampkin Park) (/bgpr/parks/18)

(/bgpr/parks/37)

Lee Square Playground (/bgpr/parks/37)

(/bgpr/parks/19)

Lovers Lane Soccer Complex (/bgpr/parks/19)

(/bgpr/parks/24)

Ogden Park (/bgpr/parks/24)

(/bgpr/parks/20)

Parker-Bennett Community Center (/bgpr/parks/20)

(/bgpr/parks/21)

Parks Maintenance Shop (/bgpr/parks/21)

(/bgpr/parks/31)

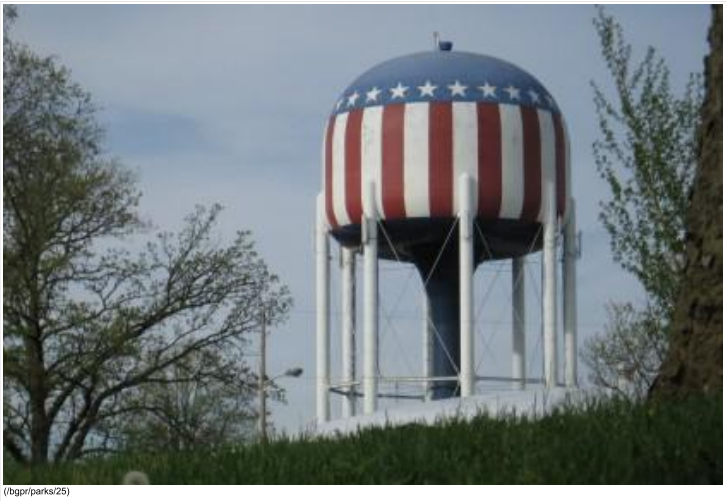
Paul Walker Golf Course (/bgpr/parks/31)

(/bgpr/parks/22)

Pedigo Park (/bgpr/parks/22)

(/bgpr/parks/23)

Preston Miller Park (/bgpr/parks/23)



(/bgpr/parks/25)

Reservoir Hill Park (/bgpr/parks/25)

(/bgpr/parks/26)

RiverWalk/McConnell Park (/bgpr/parks/26)

(/bgpr/parks/8)

Roland Bland Park (/bgpr/parks/8)

(/bgpr/parks/29)

Russell Sims Aquatic Center (/bgpr/parks/29)

(/bgpr/parks/44)

Weldon Peete Park (/bgpr/parks/44)

Suggestions or problems with this page?

Residents

Community Resources (https://www.bgky.org/community-resources)

Housing Assistance (https://www.bgky.org/ncs/housing)

Report a Problem (https://www.bgky.org/ncs/common-requests)

Find a Contractor (https://www.bgky.org/contractorslicensing/search)

View Local Parks (https://www.bgky.org/bgpr/parks/find)

Visitors

Convention & Visitors Bureau (http://www.visitbgky.com/)

Relocation Guide (https://www.bgchamber.com/livehere)

Russell Sims Aquatic Center (https://www.bgky.org/bgpr/aquatics/)

Golf Courses (https://www.bgky.org/golf/)

Business

Procurement Opportunities (Bids) (https://www.bgky.org/bids)

Forms & Applications (https://www.bgky.org/forms)

Office of Occupational License (https://www.bgky.org/finance/license)

Government

Elected Officials (https://www.bgky.org/city-commission/)

Department List (https://www.bgky.org/government/department-list)

Boards & Commissions (https://www.bgky.org/government/boards)

City Employees (https://www.bgky.org/employee-only)

Bowling Green, KY

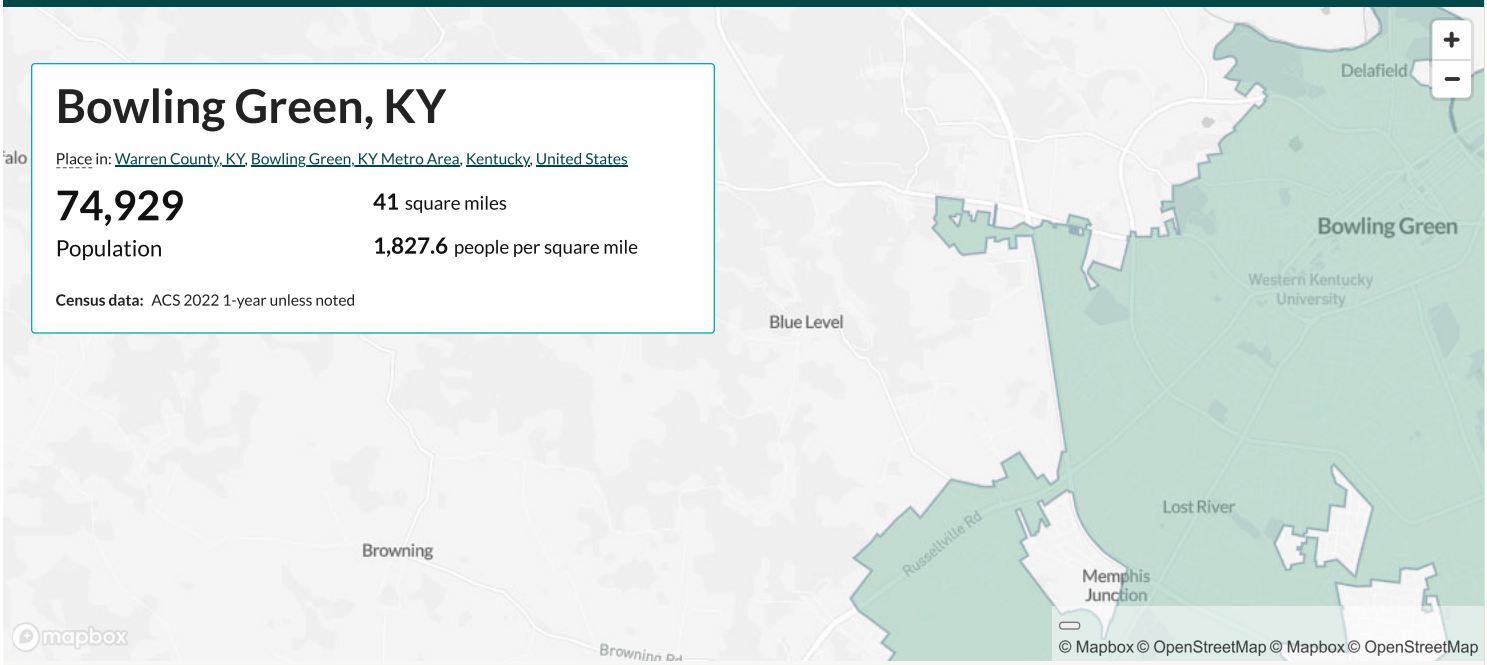
Place in: Warren County, KY, Bowling Green, KY Metro Area, Kentucky, United States

74,929
Population

41 square miles

1,827.6 people per square mile

Census data: ACS 2022 1-year unless noted



Find data for this place

Search by table or column name...

Hover for margins of error and contextual data.

Demographics

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

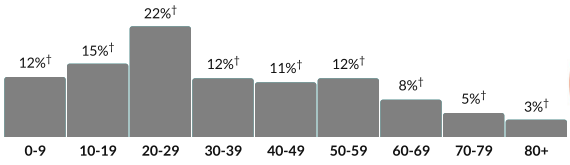
Age

31.1
Median age

about 90 percent of the figure in the Bowling Green, KY Metro Area: 36.1

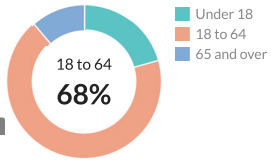
about 80 percent of the figure in Kentucky: 39.4

Population by age range



Show data / Embed

Population by age category



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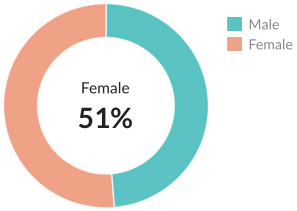
† Margin of error is at least 10 percent of the total value. Take care with this statistic.

Sex



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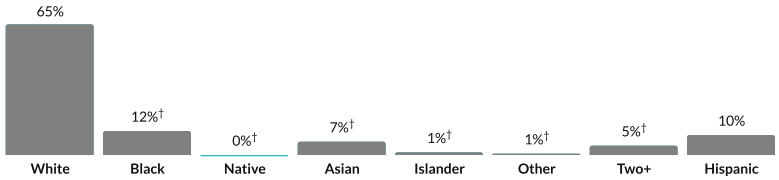
Race & Ethnicity



* Hispanic includes respondents of any race. Other categories are non-Hispanic.

Show data / Embed

Economics

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

Income

$25,937
Per capita income

about 80 percent of the amount in the Bowling Green, KY Metro Area: $32,307

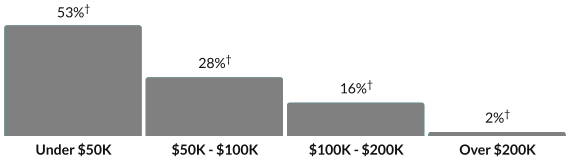
about three-quarters of the amount in Kentucky: $33,980

$45,812
Median household income

about three-quarters of the amount in the Bowling Green, KY Metro Area: $59,629

about three-quarters of the amount in Kentucky: $59,341

Household income



Show data / Embed

Poverty

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

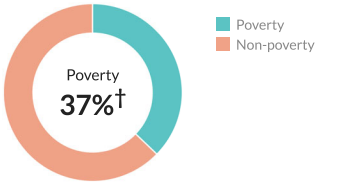
29.2%

Persons below poverty line

about 1.5 times the rate in the Bowling Green, KY Metro Area: 18.5% †

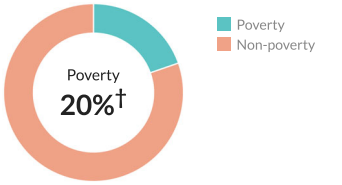
more than 1.5 times the rate in Kentucky: 16.5%

Children (Under 18)



Show data / Embed

Seniors (65 and over)



Show data / Embed

Transportation to work

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

19.1 minutes

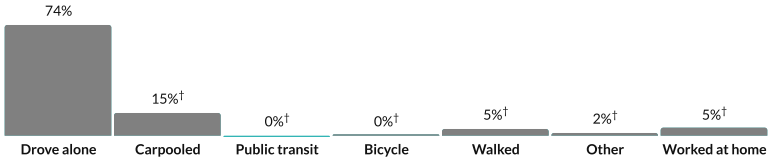
Mean travel time to work

* ACS 2022 5-year data

about 80 percent of the figure in the Bowling Green, KY Metro Area: 22.4

about 80 percent of the figure in Kentucky: 23.9

Means of transportation to work



* Universe: Workers 16 years and over

Show data / Embed

Families

Households

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

31,530

Number of households

the Bowling Green, KY Metro Area: 72,037

Kentucky: 1,828,680

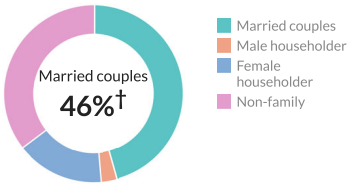
2.2

Persons per household

about 90 percent of the figure in the Bowling Green, KY Metro Area: 2.5

about 90 percent of the figure in Kentucky: 2.4

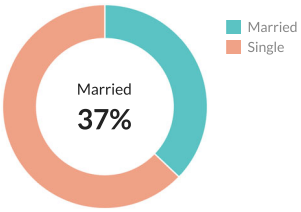
Population by household type



Show data / Embed

Marital status

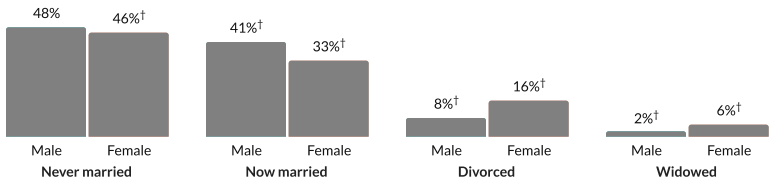
† Margin of error is at least 10 percent of the total value. Take care with this statistic.



* Universe: Population 15 years and over

Show data / Embed

Marital status, by sex



Show data / Embed

Fertility

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

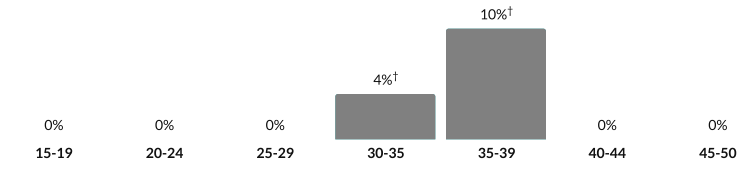
1.2%

Women 15-50 who gave birth during past year

about one-quarter of the rate in the Bowling Green, KY Metro Area: 5.4% †

about one-fifth of the rate in Kentucky: 5.5%

Women who gave birth during past year, by age group



* Universe: Women 15 to 50 years

Show data / Embed

Housing

Units & Occupancy

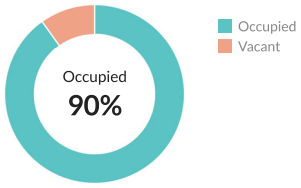
34,987

Number of housing units

the Bowling Green, KY Metro Area: 80,690

Kentucky: 2,023,679

Occupied vs. Vacant



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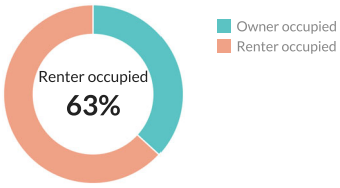
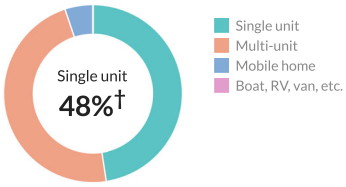
Ownership of occupied units



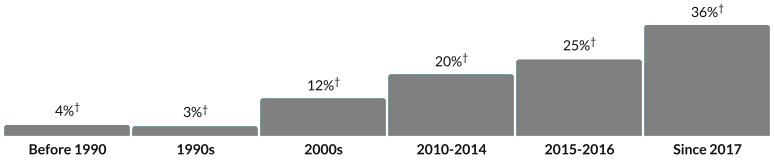
Show data / Embed

Types of structure



Show data / Embed

Year moved in, by percentage of population



Show data / Embed

Value

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

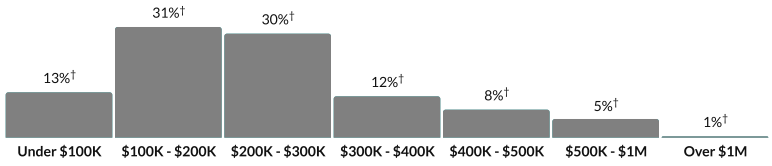
$247,200

Median value of owner-occupied housing units

a little higher than the amount in the Bowling Green, KY Metro Area: $237,400

about 25 percent higher than the amount in Kentucky: $196,300

Value of owner-occupied housing units



* ACS 2022 5-year data

Show data / Embed

Geographical mobility

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

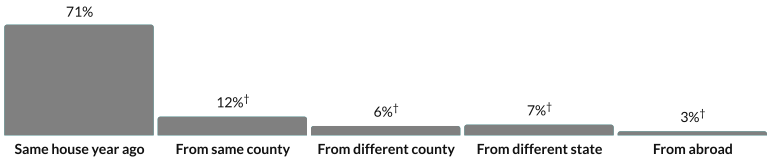
28.7%

Moved since previous year

about 1.4 times the rate in the Bowling Green, KY Metro Area: 20.1% †

more than double the rate in Kentucky: 12.8%

Population migration since previous year



Show data / Embed

Social

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

Educational attainment

86.2%

High school grad or higher

a little less than the rate in the Bowling Green, KY Metro Area: 89.1%

a little less than the rate in Kentucky: 89%

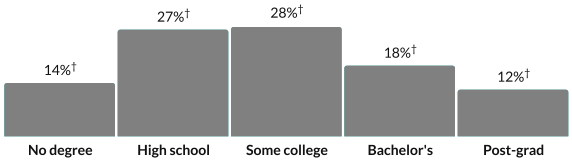
30.3%

Bachelor's degree or higher

about 10 percent higher than the rate in the Bowling Green, KY Metro Area: 27.5%

about 10 percent higher than the rate in Kentucky: 27.9%

Population by highest level of education



* Universe: Population 25 years and over

Show data / Embed

Language

N/A

Persons with language other than English spoken at home

Language at home, children 5-17

No data available

Language at home, adults 18+

No data available

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

Place of birth

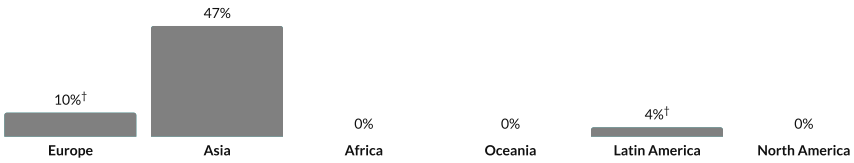
16.3%

Foreign-born population

nearly double the rate in the Bowling Green, KY Metro Area: 8.5% †

more than double the rate in Kentucky: 4%

Place of birth for foreign-born population



* ACS 2022 5-year data

Show data / Embed

† Margin of error is at least 10 percent of the total value. Take care with this statistic.

Veteran status

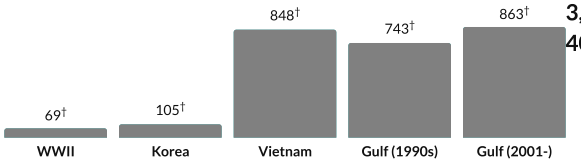
6.3%

Population with veteran status

about 90 percent of the rate in the Bowling Green, KY Metro Area: 7.3% †

a little less than the rate in Kentucky: 6.7%

Veterans by wartime service



3,764 Total veterans
3,356 Male
408 Female

* Civilian veterans who served during wartime only; ACS 2022 5-year data

Show data / Embed

Hover for margins of error and contextual data.

*This profile displays data from more than one ACS release. Charts not derived from ACS 2022 1-year data are noted with an *.*

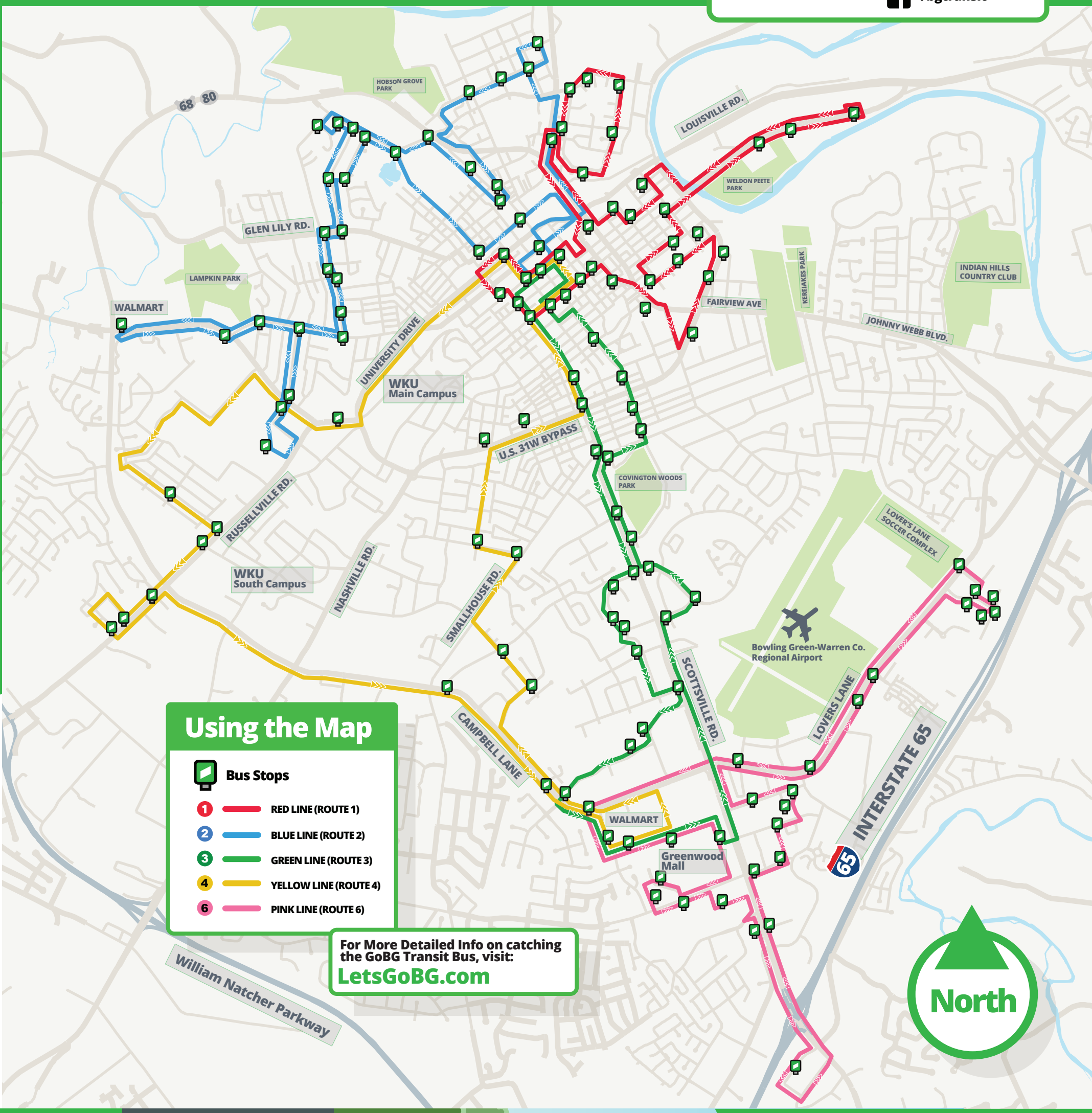
Citation: U.S. Census Bureau (2022). *American Community Survey 1-year estimates.* Retrieved from *Census Reporter Profile page for Bowling Green, KY* <http://censusreporter.org/profiles/16000US2108902-bowling-green-ky/>

Citation: U.S. Census Bureau (2022). *American Community Survey 5-year estimates.* Retrieved from *Census Reporter Profile page for Bowling Green, KY* <http://censusreporter.org/profiles/16000US2108902-bowling-green-ky/>

GOBG TRANSIT Route Map

For updates on scheuldes & news, follow GoBG Transit online:

@gobgtransit
@gobgtransit
/bgtransit



Using the Map

Bus Stops

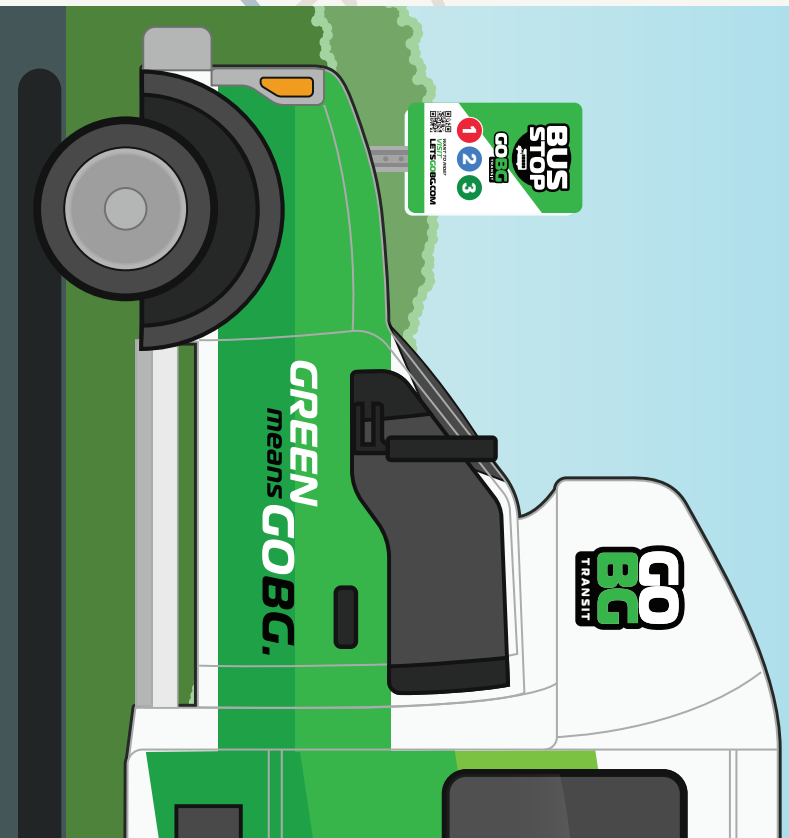
- 1 — RED LINE (ROUTE 1)
- 2 — BLUE LINE (ROUTE 2)
- 3 — GREEN LINE (ROUTE 3)
- 4 — YELLOW LINE (ROUTE 4)
- 6 — PINK LINE (ROUTE 6)

For More Detailed Info on catching the GoBG Transit Bus, visit:
LetsGoBG.com

Bus Routes & Information

GOBG TRANSIT

Bowling Green, KY's Public Transportation



info@letsgobg.com
270-393-3695

Scan this code with your smartphone camera

LetsGoBG.com

Buy Digital Bus Passes
Trip Planner
Useful Information and More!

GOBG TRANSIT Bowling Green, KY's Public Transportation

How GoBG Transit Works:

1. Plan your trip.

GoBG Transit has 5 routes that cover the Bowling Green area.

1 2 3 4 6

Use the map on the other side to find the route that takes you nearest your destination.

2. Buy a bus pass.

There are two ways to pay for a ride on a GoBG Transit Bus:

GoBG Transit uses Token Transit for digital bus passes.

VISIT TOKENTRANSIT.COM

The Token Transit app can be downloaded from both Google Play & Apple App Store.

You can also pay in cash when you get on a bus.

Note: Drivers only take exact change.

How much does a bus ride cost?

Bus Fares

You can buy a single ride on a GoBG Transit Bus.

Adult	*12 years old & older*	$2.00
Children	*7-11 with Adult*	$1.00
Children	*6 & under with Adult*	FREE
Seniors (60+)	*& Persons with disabilities*	$1.00

Transit Passes

A transit pass allows you to ride more than once with one purchase.

All-Day Pass	4-Ride Pass	9-Ride Pass	Monthly Pass
$5.00	$5.00	$10.00	$40.00

Student Pass

$50.00 per semester

Must be currently enrolled as a full-time student in an area school.

For more info about GoBG Transit, visit:

LetsGoBG.com

1 Red Line

Monday - Friday
Every hour, on the hour

- :00 **Center St.** 2 3 4 — at E 11th Ave.
- :01 **Adams St.** 4 — at E 11th Ave
- :02 **E 12th Ave.** at Kentucky St. — at Kentucky St. (Grant Village)
- :03 **E 12th Ave.** at College St. 3 — (BG Public Library/ Towers)
- :04 **State St.** at E 11th Ave
- :05 **State St.** at Fountain Sq.
- :06 **State St.** at E 8th Ave.
- :06 **State St.** at E 7th Ave. (Post Office)
- :07 **Fairview Ave.** at BG Internal Med. & Ped. Assoc.
- :08 **Fairview Ave.** at Sheldon's Express
- :09 **Lehman Ave.** at Josephine St.
- :10 **31W Bypass** at Fairview Plaza
- :12 **31W Bypass** at Riverwood Center
- :14 **31W Bypass** at Papa Johns & Sun Tan City
- :16 **High St.** at Medical Center ER
- :17 **High St.** at E 5th Ave Med Center Hosp. House
- :18 **Park St.** at Med Center/Graves Gilbert
- :20 **E 2nd Ave** at State Street
- :22 **River St.** at Mayfair Motel
- :24 **River St.** at Hope in Messiah / US Awning
- :26 **River St.** at TPM
- :27 **Center St.** at E 2nd Ave.
- :28 **College St.** at 200 E 4th Ave. Kummer Little Rec Center
- :29 **Center St.** at 200 E 4th Ave. Shelter
- :30 **E 6th Ave.** 2 — at NAPA / Skate Park
- :34 **Scott Way** at Mt. Zion Baptist Church
- :34 **Webb Dr.** at Ida Dr.
- :35 **Webb Dr.** at Ragland Way
- :35 **Webb Dr.** at Double Springs Rd.
- :36 **Double Springs Rd.** at HABG Learning Center
- :37 **Graham Dr.** at Double Springs Rd.
- :38 **Graham Dr.** at Ragland Way
- :38 **Scott Way** 2 — at Gordon Ave.
- :40 **Gordon Ave.** at Teresa's Restaurant
- :43 **College St.** at E 8th Ave. Parking Garage
- :44 **Center St.** at E 8th Ave. / BGMU
- :45 **Center St.** 2 3 4 — at E 11th Ave.

2 Blue Line

Monday - Friday
Every hour, on the hour

- :00 **Center St.** 1 3 4 — at E 11th Ave
- :01 **Kentucky St.** at E Main Ave.
- :03 **Gordon Ave.** 1 — at Scott Way (Past Light)
- :05 **Beauty Ave.** at Community Action Central Off.
- :06 **Pearl St.** at Boatlanding Rd. (Hotel Inc)
- :06 **Pearl St.** at Lewis Ave.
- :06 **Jackson St.** at Raven Ave.
- :06 **Jackson St.** at Church St.
- :07 **Jackson St.** at W Main Ave.
- :08 **W Main Ave.** at Salvation Army
- :08 **Payne St.** at Brownslock Rd.
- :08 **Brownslock Rd.** at Scott St.
- :12 **Old Barren River Rd.** at Veterans Memorial Ln.
- :13 **Grant Way** at Shelter between Shannon Way & North Lee Dr.
- :14 **Angora Court** at Crewdson Dr.
- :15 **North Lee Dr.** at Old Barren River Rd.
- :16 **North Lee Dr.** at Trent Way
- :16 **North Lee Dr.** at Glen Lily Rd.
- :17 **Collegeview Dr.** at Glen Lily Rd.
- :17 **Collegeview Dr.** at Strathmoor Dr.
- :17 **Collegeview Dr.** at Old Morgantown Rd.
- :19 **South Sunrise Dr.** at Old Morgantown Rd.
- :20 **South Sunrise Dr.** at Morgantown Rd.
- :20 **Dragon Way** at WCHS Shelter
- :22 **Western Gateway Center** at PriceLess IGA/Roses Shelter
- :24 **Morgantown Rd.** at Loop St. (SKY CTC)
- :28 **Walmart (East Door)** at Morgantown Rd.
- :31 **Walmart** @ SKY Entrance
- :31 **Morgantown Rd.** 4 — at Dollar General
- :33 **Old Morgantown Rd.** at Lampkin Park
- :35 **Old Morgantown Rd.** at South Sunrise Dr.
- :36 **Collegeview Dr.** at Gayle Way
- :36 **Collegeview Dr.** at Auburn Way
- :37 **Trent Way** at Shannon Way
- :38 **Shannon Way** at Barren River Rd.
- :40 **Woodford Ave** at Barren River Rd.
- :40 **Woodford Ave.** at Vine St.
- :40 **Woodford Ave.** at Clay St.
- :41 **Clay St.** at W 10th Ave. (Hope House)
- :42 **Clay St.** at W Main St. (beyond stop sign)
- :46 **Center St.** 1 3 4 — at E 11th Ave.

3 Green Line

Monday - Friday
Every hour, on the hour

- :05 **Center St.** 1 3 4 — at E 11th Ave.
- :06 **E 12th Ave. at College St.** 1 — at (BG Towers)
- :06 **E 12th Ave. at College St.** 1 — at (BG Public Library/Towers)
- :10 **E. 12th Ave** 4 — at Chestnut St.
- :11 **Broadway Ave.** 4 — at Indianola St.
- :11 **Scottsville Rd.** at Smallhouse Rd.
- :11 **Scottsville Rd.** at New Life Church
- :13 **Ashley Circle** by Fords Furniture
- :13 **Ashley Circle** at Westen St.
- :13 **Ashley Circle** at Greenview Hospital
- :16 **Lyda Ave.** at Andrea St.
- :16 **Lyda Ave.** at Woodhurst St.
- :16 **Scottsville Rd. Access Road** at Farmers Bank & Trust
- :17 **Gary Farms Blvd.** at Home Depot
- :18 **Westpark Dr.** at FMO / Ollie's
- :20 **Westpark Dr.** at Meijer's Aisle J Sign
- :21 **Westpark Dr.** at Campbell Lane
- :23 **Access Road** Between Walmart & Target
- :24 **Walmart (East Door)** 4 6 — at Campbell Lane
- :35 **Greenwood Mall** 4 6 — at North West Entrance
- :37 **Scottsville Rd.** at Rapid Relief Urgent Care
- :39 **Ashley St.** at Wallace Ct.
- :40 **Wilkinson Trace** at The Sloan Convention Center
- :41 **Wilkinson Trace** at Nat's Outdoor Sports
- :42 **Scottsville Rd** at South Park Dr.
- :43 **Covington St.** at Scottsville Rd.
- :44 **E 10th Ave.** between Covington & Nutwood St.
- :45 **E 10th Ave.** at Magnolia St.
- :45 **E 10th Ave.** at Kenton St.
- :46 **E 10th Ave.** at Top of Hill (Shelter)
- :46 **Elm St.** at E 11th Ave.
- :49 **Center St.** 1 2 3 — at E 11th Ave.

4 Yellow Line

Monday - Friday
Every hour, on the hour

- :00 **Center St.** 1 2 3 — at E 11th Ave.
- :01 **Adams St.** 1 — at E 11th Ave.
- :02 **Adams St.** at Burkmann Feed
- :02 **Adams St.** at E 14th Ave.
- :04 **University Blvd.** at WKU Supply
- :07 **Loop St.** 2 — at SKY/Warren Elem/Skyline
- :08 **Rock Creek Dr.** at Loop St.
- :09 **Rock Creek Dr.** at Greenhaven Apartments
- :09 **Rock Creek Dr.** at Western Green Apartments
- :10 **Springhill Ave.** at Hickory St.
- :12 **Springhill Ave.** at PNC Bank
- :13 **Russellville Rd.** at Emmett Dr.
- :15 **Creekwood Ave.** at Russellville Rd.
- :16 **Woodmont Ave.** at Russellville Rd.
- :18 **Russellville Rd.** at Lifeskills
- :19 **Campbell Lane** at Industrial Drive
- :21 **Campbell Lane** at Burger King / Kroger
- :22 **Campbell Lane** at Thoroughbred Dr.
- :23 **Campbell Lane** at Westen St.
- :24 **Campbell Lane** at ALDI
- :26 **Access Road** Between Walmart / Target
- :28 **Walmart (East Door)** 3 6 — at Campbell Lane
- :30 **Greenwood Mall** 3 6 — at North West Entrance
- :34 **Campbell Lane** at McDonalds
- :35 **McIntosh St.** at Campbell Lane
- :35 **Highland Way** at McIntosh St.
- :36 **Highland Way** at Westen St.
- :38 **Ridgecrest Way** at Smallhouse Rd.
- :39 **Cabell Dr.** at Ridgecrest Way
- :40 **Cabell Dr.** at Liberty Way
- :40 **Cabell Dr.** at 31 W Bypass
- :41 **31W Bypass** at Dollar General
- :42 **31W Bypass** at E 15th Ave.
- :44 **Broadway Ave.** 3 — at Chase Bank
- :45 **Broadway Ave.** 3 — at Chestnut St.
- :46 **E 11th Ave.** at State St.
- :48 **Center St.** 1 2 3 — at E 11th Ave.

6 Pink Line

Monday - Friday
Every hour, on the hour

- :35 **Greenwood Mall** 3 4 — at North West Entrance
- :38 **Titan Way** at Fairfield Inn
- :41 **Cave Mill Rd.** at Cave Mill Station Blvd.
- :42 **Scottsville Rd.** at Kroger
- :43 **Pascoe Blvd.** at Morning Sun Apartments
- :44 **Pascoe Blvd.** at Sunday Sun Apartments
- :45 **Cave Springs Ave.** at Kenilwood Way
- :46 **Blue Lake Way** at Spring Hollow Ave.
- :47 **Barnwood Ave.** at Kenilwood Way
- :49 **Scottsville Rd.** at America's Best Value Inn
- :52 **Greenwood Ln.** at Greenwood Flats Apartments
- :54 **Mel Browning St.** at La Quinta Inn
- :58 **Scottsville Rd.** at McDonalds
- :00 **Shive Lane** at Jewelry Barn
- :00 **Shive Lane** at Access Drive
- :01 **Bryant Way** at Willow Creek Apartments
- :02 **Bryant Way Apartments** at Shelter
- :02 **Bryant Way Apartments** at Pedigo Way
- :03 **Pedigo Way** at Capitol Commons
- :04 **Scottsville Rd. Access Road** at Rapid Relief Urgent Care
- :05 **Lovers Lane** at Lovers Lane Apartments
- :07 **Lovers Lane** at JC Kirby & Son Funeral Home
- :07 **Lovers Lane** at Traditions Blvd
- :10 **Natchez Trace Ave.** at WKONA
- :12 **Suwannee Trail St.** at DaVita Dialysis
- :14 **Suwannee Trail St.** at Lifeskills
- :14 **Suwannee Trail St.** in front of CHFS
- :15 **New Towne Dr.** at Vision Source
- :16 **Lovers Lane** at Lovers Lane Complex
- :18 **Lovers Lane** at Searcy Way
- :19 **Lovers Lane** at Lapsley Lane
- :20 **Access Road** between Walmart / Target
- :21 **Walmart (East Door)** 3 4 — at Campbell Lane
- :25 **Greenwood Mall** 3 4 — at North West Entrance

Rules for Riding

For a complete list of rules, visit LetsGoBG.com.

BUS FARES

- Please have correct fare or a pass ready when boarding the bus.
- Drivers do not make change.
- Fares are exact change or passes only.

PASSENGER ASSISTANCE

- Drivers provide limited assistance to riders when loading wheelchairs and on lifts.
- For Kentucky TTY service, call 711.

SERVICE CANCELLATION

- If severe weather causes us to cancel service for any portion of the service day, we will notify the public thru radio and television announcements and thru AlertSense.
- Driver has the right to refuse service. Animals other than Guide or Assist must be in an approved carrier that fits under a bus seat.

CONDUCT & CARRY-ON ITEMS

- Passenger may bring on board only the number of items they can carry and keep secure in one trip.
- Items & conduct that are prohibited on our buses per police include: Weapons, hazardous materials, explosives and dangerous liquids, solicitation of goods or services, vaping, use of tobacco products and illegal substances, open containers of alcohol, offensive conduct & profanity, phones/devices on speaker -mode, animals without carriers, urination, defecation, & bodily fluids.

ADA SERVICE

- To qualify for specialized Americans with Disabilities (ADA) service, you must complete an application and an in-person interview with Staff. Call 270-393-3695 to schedule an appointment.
- GoBG Transit will make reasonable modifactions as needed to meet riders' needs and comply with FTA Guidelines.

NO SERVICE ON THESE DAYS:

- Martin Luther King, Jr. Day
- Presidents' Day
- Memorial Day
- Independence Day (July 4)
- Labor Day
- Thanksgiving Day
- Christmas Eve
- Christmas Day
- New Year's Day

GOBG TRANSIT
is managed by RATP Dev.

304 E 11th Ave
Bowling Green, KY 42101
Phone: 270-393-3695

BGMU WATER

CONNECTING BOWLING GREEN

PWS KY 1140038

2024 *Water Quality* Report

VAZNO

Ovaj report sadrzi veoma vazne informacije o vodi za pijenje. Prevedi ovaj report ili razgovaraj sa nekim ko razumije dobro podatke iz reporta.

ATTENCION

Este informe contiene informacion muy importante sobre su agua potable. Traduzcalo o hable con alguien que lo entienda bien.

Pictured above is BGMU's state-certified laboratory where testing is performed as required by the Energy and Environment Cabinet.

With over 19,000 water service connections in Bowling Green and over 29,000 Warren County Water District water connections, it is important that your water be constantly sampled and tested. Over 2,800,000 automated tests are conducted throughout the distribution system every year, and our chemists perform over 280,000 manual tests per year.

BGMU is dedicated to providing safe, clean, and reliable drinking water to the community. Our water exceeds all EPA regulations, and we work diligently to provide a product that enhances your quality of life.

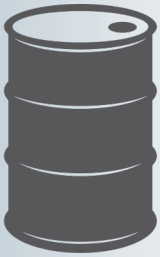
The Drinking Water Treatment Plant expansion was complete in 2023. The plant can treat 45 million gallons of water per day.

BGMU Board of Directors meet on the second Monday of each month at City Hall at 4:30 p.m. If you have any questions, please contact Doug Kimbler, Treatment Plants Superintendent, or John Gott, Chief Chemist, at 270-782-1200. You may also send an email to customerinquiry@bgmu.com.

Helpful Terms

PPM or Part Per Million

Ex: 4 drops of ink mixed in a 55 gallon barrel of water

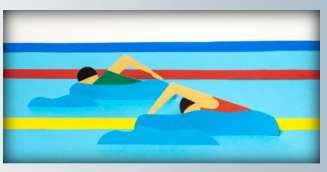


PPB or Part Per Billion

Ex: 1 drop of ink mixed in a 9000 gallon fuel tank truck

PPT or Part Per Trillion

Ex: 1 drop of ink mixed in **TWENTY** olympic –sized swimming pools



Big Barren River
Our Source Water

The source of drinking water (both tap and bottled water) includes rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, including some radioactive material. Water is also exposed to substances resulting from the presence of animals or from human activity.

To ensure that tap water is safe to drink, U.S. EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that shall provide protection for the pubic health.

BGMU uses the Big Barren River as its source of water. The Big Barren River flows out of the Barren River Reservoir, a flood-control lake designed to help prevent flooding in populated communities west of Allen and Barren counties. Drakes Creek joins the Big Barren River above BGMU's raw water intake. Drakes Creek is fed by Trammel Creek and flows north out of Franklin, Kentucky.

The final source water assessment with the system's susceptibility to potential sources of contamination is available for review at the Barren River Area Development District (B.R.A.D.D.) office located at 177 Graham Avenue. A summary of the susceptibility of the BGMU public water supply to contamination indicates that the susceptibility is generally moderate. There are, however, some areas of concern. There are two bridges located in the area near the intake. Should an accidental release of contaminants occur at either of these sites, contaminants could potentially reach Bowling Green's intake.

In the immediate area around our water intake on the Barren River, there is one KPDES permitted discharger, several hazardous generators or transporters, Tier II hazardous chemical users, an inactive landfill, and underground storage tank facilities. Within the greater watershed, there are numerous permitted operations and activities and other potential contaminant sources that cumulatively increase the potential for the release of contaminants. These potential contaminant sources include several underground storage tanks, oil and gas wells, bridges, agricultural use, hazardous chemical users (one of which is registered with the Toxic Release Inventory System), and Tier II hazardous chemical users. If you have any questions about the source water assessment, including the susceptibility analysis, you may contact the B.R.A.D.D. office at 270-781-2381.

Contaminants That May Be Present in Source Water

Microbial Contaminants, such as viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater dis-charges, oil and gas production, mining or farming.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.

Radioactive Contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

A Message from the EPA Regarding Lead

Lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. BGMU is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water.

If you are concerned about lead in your water and wish to have your water tested, contact BGMU at 270-782-1200. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead.

2023 Test Results

PWS ID# KY 1140038

The data presented in this table are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by the EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. Definitions can be found on page 5.

Contaminant	MCL	MCLG	Highest Level Detected	Range	Compliance Achieved	Major Sources in Drinking Water
			MICROBIOLOGICAL			
Total Organic Carbon (ppm) 2023	TT*	n/a	1.29 (Lowest Running Annual Average)	1.00-2.03 (Monthly Ratios)	YES	Naturally present in the environment.
Turbidity (ntu) (%) 2023	TT = 1 ntu TT = 95% of monthly samples < 0.3 ntu	n/a	0.077	0.015-0.077	YES	Soil runoff.
			RADIOLOGICAL			
Alpha Emitters (pCi/l) 2016	15	0	ND	n/a	YES	Erosion of natural deposits.
Combined Radium (pCi/l) 2016	5	0	ND Measured as RA-228 + RA-226	n/a	YES	Erosion of natural deposits.
			INORGANIC			
Copper (ppm) 2021	AL = 1.3	0	90th percentile < 0.025 with 0 sites above AL	ND-0.082	YES	Corrosion of household plumbing systems. Erosion of natural deposits.
Lead (ppb) 2021	AL = 15	0	90th percentile = 2.6 with 1 site above AL	ND-38.0	YES	Corrosion of household plumbing systems. Erosion of natural deposits.
Barium (ppm) 2023	2	2	0.027	n/a	YES	Erosion of natural deposits.
Fluoride (ppm) 2023	4	4	0.75	n/a	YES	Additive that promotes strong teeth.
			DISINFECTION BYPRODUCTS			
Haloacetic Acids (ppb) Stage 2 2023	60	n/a	48.5 = Locational Average	17-68	YES	By-product of drinking water disinfection.
Total Trihalomethanes (ppb) Stage 2 2023	80	n/a	64.3 = Locational Average	20-112	YES	By-product of drinking water disinfection.
Chlorine (ppm) 2023	MRDL = 4	MRDLG = 4	1.9 Annual Average WTP**	0.20-2.64	YES	Water additive used to control microbes.
			SECONDARY CONTAMINANTS			
Chloride (ppm) - 2023	250	n/a	14.4	n/a	YES	n/a
Sulfate (ppm) - 2023	250	n/a	16.8	n/a	YES	n/a
Aluminum (ppb) - 2023	50-200	n/a	120	n/a	YES	n/a
			VOLATILE ORGANICS			
No contaminants on the Volatile Organics list were detected.						
			NITRATES & SYNTHETIC ORGANICS			
Nitrate (ppm) 2023	10	10	1.78	n/a	YES	Surface runoff. Septic tanks. Erosion of natural deposits.

BGMU collects and processes 60 distribution samples each month, testing for total coliforms and E. coli. None of our compliance (distribution) samples tested positive for coliforms in 2023.
No violations for turbidity occurred during the 2023 monitoring period.
Bowling Green's water is tested daily for hardness. The annual average for Total Hardness was 142.0 ppm.
Bowling Green's water was tested for sodium in February. The sodium level was 7.67 ppm.
Bowling Green's water was tested for calcium in February and September. The calcium levels were 43.9 ppm and 48.9 ppm, respectively.

(*) Treatment Technique for TOC is based on the lowest running annual average of the monthly ratios of the % TOC removal achieved to the % TOC removal required. A minimum ratio of 1.00 is required to meet the TT.
(**) The BGMU Water Treatment Plant continuously chlorinates finished water for disinfection purposes. In 2023, the annual average concentration of free chlorine in the distribution system was 1.30 ppm. The range reported for chlorine reflects testing in the distribution system.

Important Information about Your Drinking Water

Availability of Monitoring Data for Unregulated Contaminants for Bowling Green Municipal Utilities

KY Water System ID#: **1140038** Date Distributed: **5/1/2024**

As required by the US Environmental Protection Agency (EPA), BGMU has sampled for a series of unregulated contaminants. This is the fifth round of unregulated contaminant monitoring (UCMR5) that includes samples for twenty-nine (29) per– and ployfluoroalkyl substances (PFAS) and lithium. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a regulated public health protection standard.

BGMU has completed all required USEPA UCMR5 testing. Our quarterly testing results were "non-detect" for all thirty (30) UCMR5 contaminants.

If you have any questions concerning the test data, please contact Doug Kimbler at 270-782-1200, or send an email to customerinquiry@bgmu.com. We also encourage you to share this information with others, especially those who may not have directly received this notice (i.e. nursing home residents, food establishments, medical facilities, and those who live in apartments).

WHAT ARE PFAS?

Per– and polyfluoroalkyl substances (PFAS) are manufactured chemicals used in many household products such as non-stick cookware, waterproof fabric, fast food packaging, pesticides, and stain repellants. They are also used in industrial applications such as in firefighting foams and electronics production.

Two well-known PFAS chemicals are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). These have been phased out of production in the United States. The EPA says most of our exposure to PFAS chemicals comes from consumer goods and not drinking water. However, scientists routinely detect PFAS in lakes, rivers, and groundwater. EPA's Unregulated Contaminant Monitoring Rule program, or UCMR, will be used to determine if new drinking water limits need to be created.

WHERE CAN I FIND MORE INFORMATION?

More information on PFAS can be found at https://www.epa.gov/pfas.

If you'd like more information regarding the Fifth Unregulated Contaminant Monitoring Program, the EPA UCMR5 Fact Sheet can be accessed at www.epa.gov/system/files/documents/2022-02/ucmr5-factsheet.pdf.

Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. BGMU tests for Cryptosporidium in our source and finished water. No Cryptosporidium detections were found in the four finished water samples collected in 2023, and no Cryptosporidium detections were found in the four source water samples collected in 2023.

At the present time, there is no Maximum Contaminant Level (MCL) established for Cryptosporidium. Therefore, we are not required to test for these organisms. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100% removal. Our monitoring indicates the presence of low levels of these organisms in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. The presence of these organisms does not cause us concern because we have not had any detections in finished water. Nevertheless, we will continue testing for the organisms to ensure public health is protected.

NOTICE: Important Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Another source for information on water quality is the KY Division of Water's website, https://eec.ky.gov.

Explanation of Expected Contaminants

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects may be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

Should you wish to obtain information concerning contaminants, specifically related to BGMU water quality or our testing program, please feel free to call us at 270-782-1200.

Definitions

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

Not Applicable (n/a): Does not apply.

ND: Not detected.

Nepthelometric Turbidity Units (NTU): A measure of the clarity of water. Turbidity has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

Picocuries per liter (pCi/l): A measure of radioactivity.

Parts per billion (ppb): Equal to micrograms per liter. One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per million (ppm): Equal to milligrams per liter. One part per million corresponds to one minute in two years or a single penny in $10,000.

Total Coliform Bacteria: Coliform bacteria are an indication that disease-producing organisms may be present in the water supply. Total coliform bacteria includes bacteria that is found in soil, in water that is on or near the ground, and in human or animal waste.

Turbidity: The cloudiness of water.

Treatment Technique (TT): A required process intended to reduce the level of contaminants in drinking water.

<: Less than.

National Risk Index

August 12, 2024

Warren County, Kentucky

Summary

Risk Index is **Relatively Moderate** Score **83.0**

Expected Annual Loss is **Relatively Low** Score **82.5**

Social Vulnerability is **Relatively High** Score **72.7**

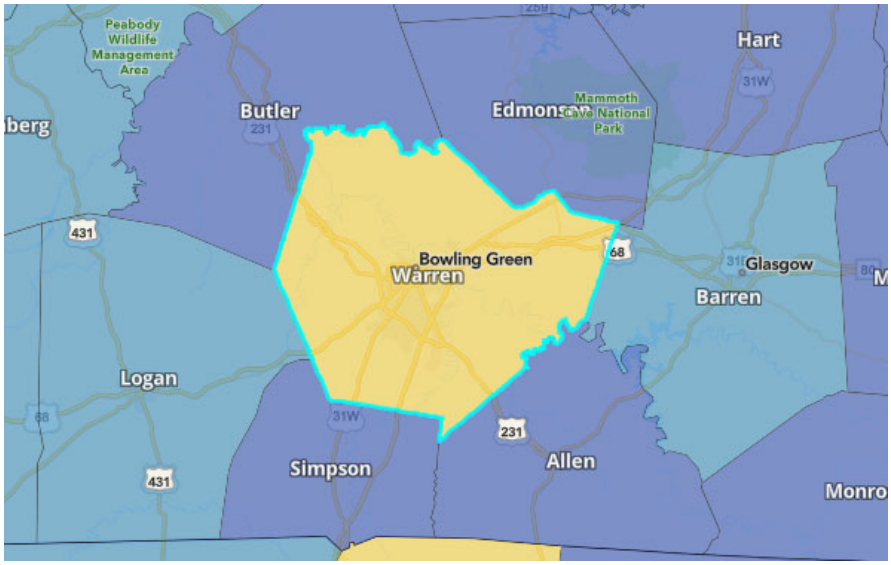
Community Resilience is **Relatively High** Score **65.0**

While reviewing this report, keep in mind that low risk is driven by lower loss due to natural hazards, lower social vulnerability, and higher community resilience.

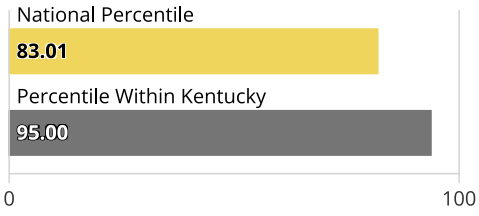
For more information about the National Risk Index, its data, and how to interpret the information it provides, please review the **About the National Risk Index** and **How to Take Action** sections at the end of this report. Or, visit the National Risk Index website at hazards.fema.gov/nri/learn-more to access supporting documentation and links.

Risk Index

The Risk Index rating is **Relatively Moderate** for **Warren County, KY** when compared to the rest of the U.S.



Score **83.01**



83% of U.S. counties have a lower Risk Index

95% of counties in Kentucky have a lower Risk Index

Risk Index Legend

Very High | Relatively High | Relatively Moderate | Relatively Low | Very Low

No Rating | Not Applicable | Insufficient Data

Hazard Type Risk Index

Hazard type Risk Index scores are calculated using data for only a single hazard type, and reflect a community's Expected Annual Loss value, community risk factors, and the adjustment factor used to calculate the risk value.

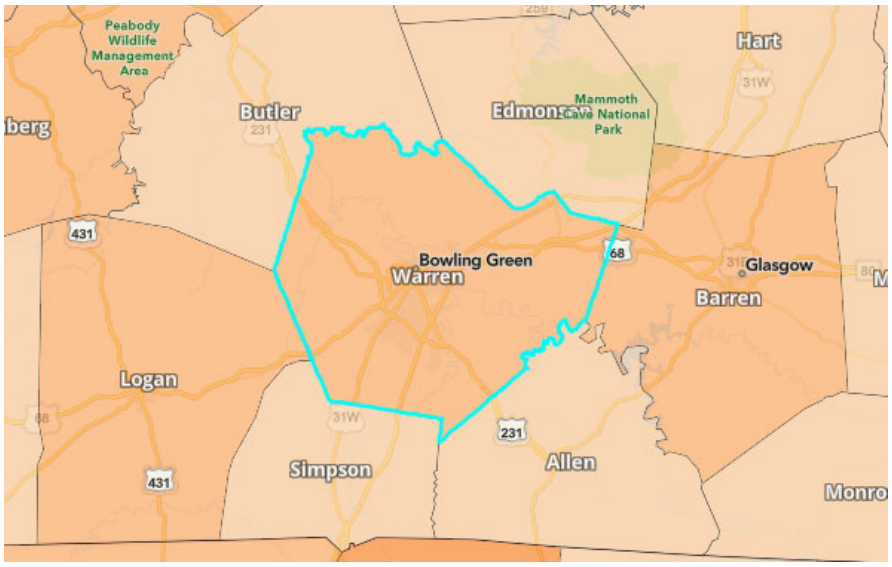
Hazard Type	Risk Index Rating	Risk Index Score	National Percentile
Avalanche	Not Applicable	--	
Coastal Flooding	Not Applicable	--	
Cold Wave	Relatively Moderate	80.6	
Drought	Very Low	36.6	
Earthquake	Relatively Low	93.2	
Hail	Relatively Moderate	95.5	
Heat Wave	Relatively Moderate	94.6	
Hurricane	Very Low	42.6	
Ice Storm	Relatively High	95	
Landslide	Relatively Low	21.7	
Lightning	Relatively Low	60.7	
Riverine Flooding	Relatively Low	50.5	
Strong Wind	Relatively Moderate	82.1	
Tornado	Relatively High	93.7	
Tsunami	Not Applicable	--	
Volcanic Activity	Not Applicable	--	
Wildfire	Very Low	38.3	
Winter Weather	Relatively Moderate	76.6	

Risk Factor Breakdown

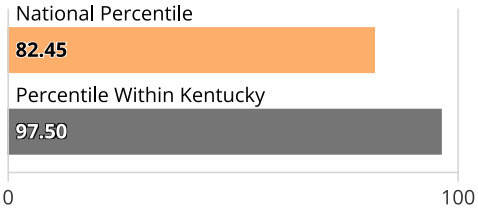
Hazard Type	EAL Value	Social Vulnerability	Community Resilience	CRF	Risk Value	Risk Index Score
Tornado	$8,818,164	Relatively High	Relatively High	1.14	$10,003,631	93.7
Earthquake	$5,220,800	Relatively High	Relatively High	1.14	$5,990,990	93.2
Hail	$2,133,436	Relatively High	Relatively High	1.14	$2,408,838	95.5
Heat Wave	$1,857,063	Relatively High	Relatively High	1.14	$2,106,172	94.6
Ice Storm	$1,116,891	Relatively High	Relatively High	1.14	$1,260,647	95
Strong Wind	$981,420	Relatively High	Relatively High	1.14	$1,096,552	82.1
Riverine Flooding	$382,059	Relatively High	Relatively High	1.14	$475,190	50.5
Cold Wave	$338,007	Relatively High	Relatively High	1.14	$383,365	80.6
Winter Weather	$153,081	Relatively High	Relatively High	1.14	$173,507	76.6
Lightning	$129,876	Relatively High	Relatively High	1.14	$147,618	60.7
Hurricane	$96,011	Relatively High	Relatively High	1.14	$108,087	42.6
Landslide	$21,900	Relatively High	Relatively High	1.14	$20,705	21.7
Wildfire	$18,924	Relatively High	Relatively High	1.14	$20,164	38.3
Drought	$8,667	Relatively High	Relatively High	1.14	$7,794	36.6
Avalanche	--	Relatively High	Relatively High	1.14	--	--
Coastal Flooding	--	Relatively High	Relatively High	1.14	--	--
Tsunami	--	Relatively High	Relatively High	1.14	--	--
Volcanic Activity	--	Relatively High	Relatively High	1.14	--	--

Expected Annual Loss

In **Warren County, KY**, expected loss each year due to natural hazards is **Relatively Low** when compared to the rest of the U.S.



Score	82.45



82% of U.S. counties have a lower Expected Annual Loss

98% of counties in Kentucky have a lower Expected Annual Loss

Expected Annual Loss Legend

Very High | Relatively High | Relatively Moderate | Relatively Low | Very Low

No Expected Annual Losses | Not Applicable | Insufficient Data

Composite Expected Annual Loss	**$21,276,298.03**
Composite Expected Annual Loss Rate National Percentile	**40.9**

Building EAL	**$10,131,367.14**	Population EAL	**0.95** fatalities
Building EAL Rate	**$1 per $2.43K of building value**	Population EAL Rate	**1 per 141.51K people**
Agriculture EAL	**$120,950.90**	Population Equivalence EAL	**$11,023,979.99**
Agriculture EAL Rate	**$1 per $1.05K of agriculture value**		

Expected Annual Loss for Hazard Types

Expected Annual Loss scores for hazard types are calculated using data for only a single hazard type, and reflect a community's relative expected annual loss for only that hazard type.

14 of 18 hazard types contribute to the expected annual loss for **Warren County, KY**.

Hazard Type	Expected Annual Loss Rating	EAL Value	Score
Tornado	Relatively High	$8,818,164	93.6
Earthquake	Relatively Moderate	$5,220,800	92.5

Hazard Type	Expected Annual Loss Rating	EAL Value	Score
Hail	Relatively High	$2,133,436	95.5
Heat Wave	Relatively Moderate	$1,857,063	94.6
Ice Storm	Relatively High	$1,116,891	95.0
Strong Wind	Relatively Moderate	$981,420	82.4
Riverine Flooding	Relatively Low	$382,059	49.6
Cold Wave	Relatively Moderate	$338,007	80.8
Winter Weather	Relatively Moderate	$153,081	77.2
Lightning	Relatively Low	$129,876	62.4
Hurricane	Very Low	$96,011	41.9
Landslide	Relatively Low	$21,900	51.7
Wildfire	Very Low	$18,924	38.5
Drought	Very Low	$8,667	40.1
Avalanche	Not Applicable	--	--
Coastal Flooding	Not Applicable	--	--
Tsunami	Not Applicable	--	--
Volcanic Activity	Not Applicable	--	--

Expected Annual Loss Values

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Avalanche	--	--	--	--	--
Coastal Flooding	--	--	--	--	--
Cold Wave	$338,007	$856	$337,026	0.03	$124
Drought	$8,667	n/a	n/a	n/a	$8,667
Earthquake	$5,220,800	$3,733,021	$1,487,779	0.13	n/a
Hail	$2,133,436	$1,966,780	$147,014	0.01	$19,642
Heat Wave	$1,857,063	$16,595	$1,839,521	0.16	$947
Hurricane	$96,011	$89,160	$955	0.00	$5,895
Ice Storm	$1,116,891	$1,071,018	$45,874	0.00	n/a
Landslide	$21,900	$4,500	$17,400	0.00	n/a
Lightning	$129,876	$16,565	$113,311	0.01	n/a
Riverine Flooding	$382,059	$61,809	$314,085	0.03	$6,164

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Strong Wind	$981,420	$334,706	$575,071	0.05	$71,642
Tornado	$8,818,164	$2,816,389	$5,994,443	0.52	$7,332
Tsunami	--	--	--	--	--
Volcanic Activity	--	--	--	--	--
Wildfire	$18,924	$17,073	$1,849	0.00	$2
Winter Weather	$153,081	$2,895	$149,652	0.01	$534

Exposure Values

Hazard Type	Total	Building Value	Population Equivalence	Population	Agriculture Value
Avalanche	--	--	--	--	--
Coastal Flooding	--	--	--	--	--
Cold Wave	$1,584,757,086,126	$24,638,681,134	$1,559,991,200,000	134,482.00	$127,204,992
Drought	$62,306,552	n/a	n/a	n/a	$62,306,552
Earthquake	$1,585,464,776,000	$24,638,376,000	$1,560,826,400,000	134,554.00	n/a
Hail	$1,584,757,086,126	$24,638,681,134	$1,559,991,200,000	134,482.00	$127,204,992
Heat Wave	$1,584,757,086,126	$24,638,681,134	$1,559,991,200,000	134,482.00	$127,204,992
Hurricane	$1,544,876,550,477	$23,779,078,000	$1,520,976,439,819	131,118.66	$121,032,658
Ice Storm	$1,584,629,881,134	$24,638,681,134	$1,559,991,200,000	134,482.00	n/a
Landslide	$188,058,543,753	$2,624,436,342	$185,434,107,412	15,985.70	n/a
Lightning	$1,584,629,881,134	$24,638,681,134	$1,559,991,200,000	134,482.00	n/a
Riverine Flooding	$13,080,265,251	$190,805,153	$12,878,484,838	1,110.21	$10,975,261
Strong Wind	$1,584,757,086,126	$24,638,681,134	$1,559,991,200,000	134,482.00	$127,204,992
Tornado	$1,584,757,086,126	$24,638,681,134	$1,559,991,200,000	134,482.00	$127,204,992
Tsunami	--	--	--	--	--
Volcanic Activity	--	--	--	--	--
Wildfire	$220,464,899,292	$3,188,490,864	$217,264,819,252	18,729.73	$11,589,176
Winter Weather	$1,584,757,086,126	$24,638,681,134	$1,559,991,200,000	134,482.00	$127,204,992

Annualized Frequency Values

Hazard Type	Annualized Frequency	Events on Record	Period of Record
Avalanche	--	--	--

Hazard Type	Annualized Frequency	Events on Record	Period of Record
Coastal Flooding	--	--	--
Cold Wave	0.1 events per year	1	2005-2021 (16 years)
Drought	2.8 events per year	77	2000-2021 (22 years)
Earthquake	0.116% chance per year	n/a	2021 dataset
Hail	3.4 events per year	115	1986-2021 (34 years)
Heat Wave	1.2 events per year	20	2005-2021 (16 years)
Hurricane	0 events per year	1	East 1851-2021 (171 years) / West 1949-2021 (73 years)
Ice Storm	0.7 events per year	50	1946-2014 (67 years)
Landslide	0 events per year	0	2010-2021 (12 years)
Lightning	82.3 events per year	1,811	1991-2012 (22 years)
Riverine Flooding	2.7 events per year	65	1996-2019 (24 years)
Strong Wind	6.2 events per year	210	1986-2021 (34 years)
Tornado	0.4 events per year	24	1950-2021 (72 years)
Tsunami	--	--	--
Volcanic Activity	--	--	--
Wildfire	0.002% chance per year	n/a	2021 dataset
Winter Weather	1.7 events per year	27	2005-2021 (16 years)

Historic Loss Ratios

Hazard Type	Overall Rating
Avalanche	--
Coastal Flooding	--
Cold Wave	Relatively Low
Drought	Very Low
Earthquake	Relatively High
Hail	Relatively Moderate
Heat Wave	Relatively Low
Hurricane	Very Low
Ice Storm	Relatively Moderate
Landslide	Very Low
Lightning	Very Low

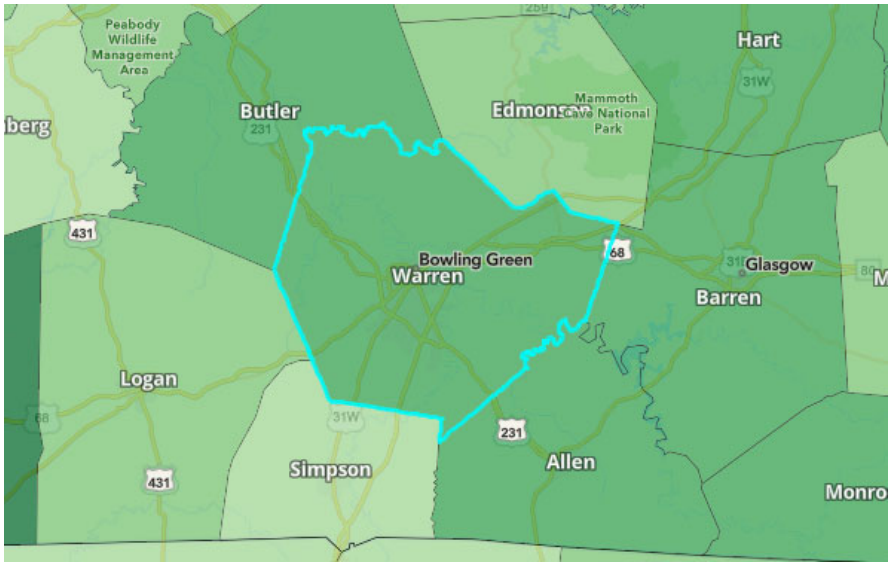
Hazard Type	Overall Rating
Riverine Flooding	Very Low
Strong Wind	Very Low
Tornado	Relatively Moderate
Tsunami	--
Volcanic Activity	--
Wildfire	Relatively Low
Winter Weather	Relatively Low

Expected Annual Loss Rate

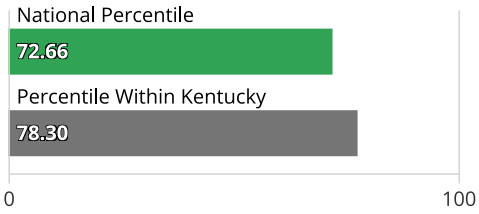
Hazard Type	Building EAL Rate (per building value)	Population EAL Rate (per population)	Agriculture EAL Rate (per agriculture value)
Avalanche	--	--	--
Coastal Flooding	--	--	--
Cold Wave	$1 per $28.78M	1 per 4.63M	$1 per $1.02M
Drought	--	--	$1 per $14.68K
Earthquake	$1 per $6.60K	1 per 1.05M	--
Hail	$1 per $12.53K	1 per 10.61M	$1 per $6.48K
Heat Wave	$1 per $1.48M	1 per 848.04K	$1 per $134.37K
Hurricane	$1 per $276.34K	1 per 1.63B	$1 per $21.58K
Ice Storm	$1 per $23.00K	1 per 34.01M	--
Landslide	$1 per $5.48M	1 per 89.65M	--
Lightning	$1 per $1.49M	1 per 13.77M	--
Riverine Flooding	$1 per $398.63K	1 per 4.97M	$1 per $20.64K
Strong Wind	$1 per $73.61K	1 per 2.71M	$1 per $1.78K
Tornado	$1 per $8.75K	1 per 260.24K	$1 per $17.35K
Tsunami	--	--	--
Volcanic Activity	--	--	--
Wildfire	$1 per $1.44M	1 per 843.69M	$1 per $52.51M
Winter Weather	$1 per $8.51M	1 per 10.42M	$1 per $238.15K

Social Vulnerability

Social groups in **Warren County, KY** have a **Relatively High** susceptibility to the adverse impacts of natural hazards when compared to the rest of the U.S.



Score	72.66



73% of U.S. counties have a lower Social Vulnerability

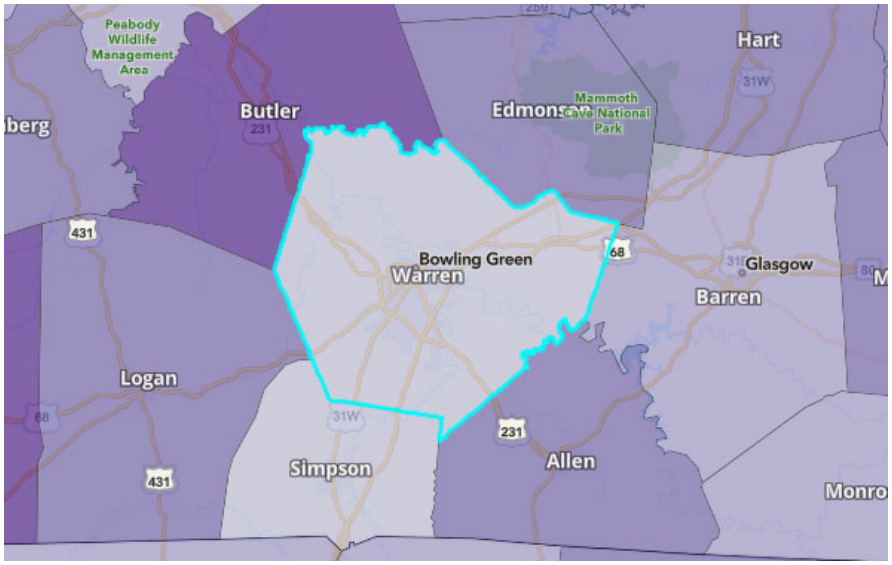
78% of counties in Kentucky have a lower Social Vulnerability

Social Vulnerability Legend

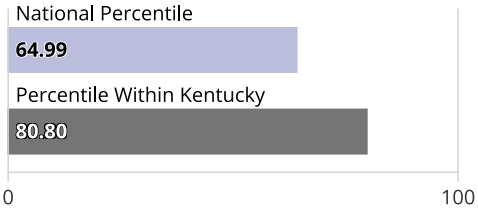
Very High | Relatively High | Relatively Moderate | Relatively Low | Very Low | Data Unavailable

Community Resilience

Communities in **Warren County, KY** have a **Relatively High** ability to prepare for anticipated natural hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions when compared to the rest of the U.S.



Score	64.99



35% of U.S. counties have a higher Community Resilience

19% of counties in Kentucky have a higher Community Resilience

Community Resilience Legend

Very High | Relatively High | Relatively Moderate | Relatively Low | Very Low | Data Unavailable

About the National Risk Index

The National Risk Index is a dataset and online tool to help illustrate the United States communities most at risk for 18 natural hazards: Avalanche, Coastal Flooding, Cold Wave, Drought, Earthquake, Hail, Heat Wave, Hurricane, Ice Storm, Landslide, Lightning, Riverine Flooding, Strong Wind, Tornado, Tsunami, Volcanic Activity, Wildfire, and Winter Weather.

The National Risk Index leverages available source data for Expected Annual Loss due to these 18 hazard types, Social Vulnerability, and Community Resilience to develop a baseline relative risk measurement for each United States county and Census tract. These measurements are calculated using average past conditions, but they cannot be used to predict future outcomes for a community. The National Risk Index is intended to fill gaps in available data and analyses to better inform federal, state, local, tribal, and territorial decision makers as they develop risk reduction strategies.

Explore the National Risk Index Map at **hazards.fema.gov/nri/map**.

Visit the National Risk Index website at hazards.fema.gov/nri/learn-more to access supporting documentation and links.

Calculating the Risk Index

Risk Index scores are calculated using an equation that combines scores for Expected Annual Loss due to natural hazards, Social Vulnerability and Community Resilience:

```
Risk Index = Expected Annual Loss × Social Vulnerability ÷ Community Resilience
```

Risk Index scores are presented as a composite score for all 18 hazard types, as well as individual scores for each hazard type.

For more information, visit hazards.fema.gov/nri/determining-risk.

Calculating Expected Annual Loss

Expected Annual Loss scores are calculated using an equation that combines values for exposure, annualized frequency, and historic loss ratios for 18 hazard types:

```
Expected Annual Loss = Exposure × Annualized Frequency × Historic Loss Ratio
```

Expected Annual Loss scores are presented as a composite score for all 18 hazard types, as well as individual scores for each hazard type.

For more information, visit hazards.fema.gov/nri/expected-annual-loss.

Calculating Social Vulnerability

Social Vulnerability is measured using the Social Vulnerability Index (SVI) published by the Centers for Disease Control and Prevention (CDC).

For more information, visit **hazards.fema.gov/nri/social-vulnerability**.

Calculating Community Resilience

Community Resilience is measured at the County level using the Baseline Resilience Indicators for Communities (HVRI BRIC) published by the University of South Carolina's Hazards and Vulnerability Research Institute (HVRI).

For more information, visit hazards.fema.gov/nri/community-resilience.

How to Take Action

There are many ways to reduce natural hazard risk through mitigation. Communities with high National Risk Index scores can take action to reduce risk by decreasing Expected Annual Loss due to natural hazards, decreasing Social Vulnerability, and increasing Community Resilience.

For information about how to take action and reduce your risk, visit hazards.fema.gov/nri/take-action.

Disclaimer

The National Risk Index (the Risk Index or the Index) and its associated data are meant for planning purposes only. This tool was created for broad nationwide comparisons and is not a substitute for localized risk assessment analysis. Nationwide datasets used as inputs for the National Risk Index are, in many cases, not as accurate as available local data. Users with access to local data for each National Risk Index risk factor should consider substituting

the Risk Index data with local data to recalculate a more accurate risk index. If you decide to download the National Risk Index data and substitute it with local data, you assume responsibility for the accuracy of the data and any resulting data index. Please visit the Contact Us page if you would like to discuss this process further.

The methodology used by the National Risk Index has been reviewed by subject matter experts in the fields of natural hazard risk research, risk analysis, mitigation planning, and emergency management. The processing methods used to create the National Risk Index have produced results similar to those from other natural hazard risk analyses conducted on a smaller scale. The breadth and combination of geographic information systems (GIS) and data processing techniques leveraged by the National Risk Index enable it to incorporate multiple hazard types and risk factors, manage its nationwide scope, and capture what might have been missed using other methods.

The National Risk Index does not consider the intricate economic and physical interdependencies that exist across geographic regions. Keep in mind that hazard impacts in surrounding counties or Census tracts can cause indirect losses in your community regardless of your community's risk profile.

Nationwide data available for some risk factors are rudimentary at this time. The National Risk Index will be continuously updated as new data become available and improved methodologies are identified.

The National Risk Index Contact Us page is available at hazards.fema.gov/nri/contact-us.

About Us
Our Organization
- Administration
- Public Information
- Communications
- Criminal Investigations
- Patrol Operations
- District Sergeants
- Cadet Unit
- Central Records Unit
- Evidence & Property
- Professional Standards

Jobs & Employment
Community Programs
Initiatives
Policies
Police Statistics
Forms
Links

Bowling Green Police Department

Mission Statement

We, the members of the Bowling Green Police Department, in partnership with the community and on behalf of the City, commit ourselves to maintaining order, creating safe and secure neighborhoods and promoting driver safety. In doing so, we shall adhere to the following principles:

Service:
We are committed to quality service and are responsive to the needs of our citizens through problem-solving partnerships.

Integrity:
We foster the highest performance standards, ethical conduct, and truthfulness.

Respect:
We value the dignity of every individual and understand ethnic and cultural diversity. We uphold the principles of the constitution of the United States and the laws of the Commonwealth of Kentucky.

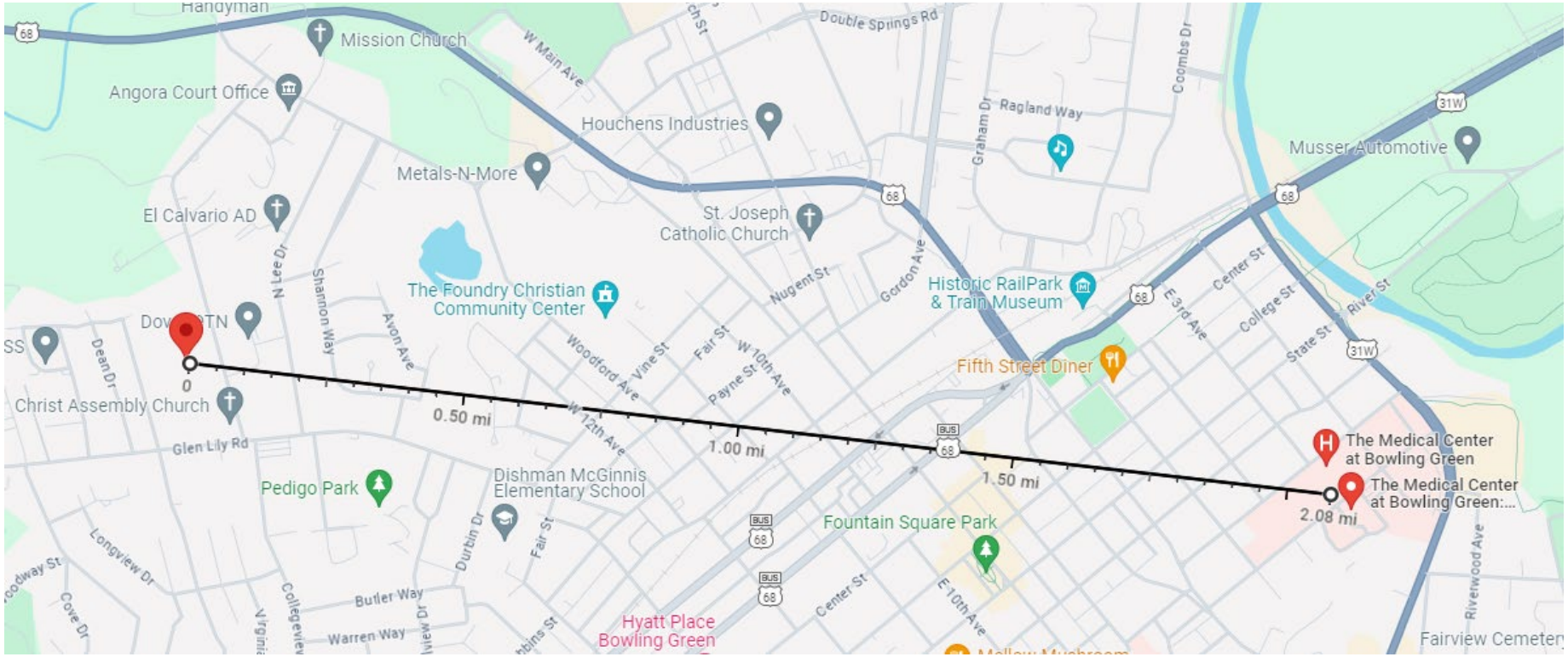
Contact Us

Citizen Online Police Report

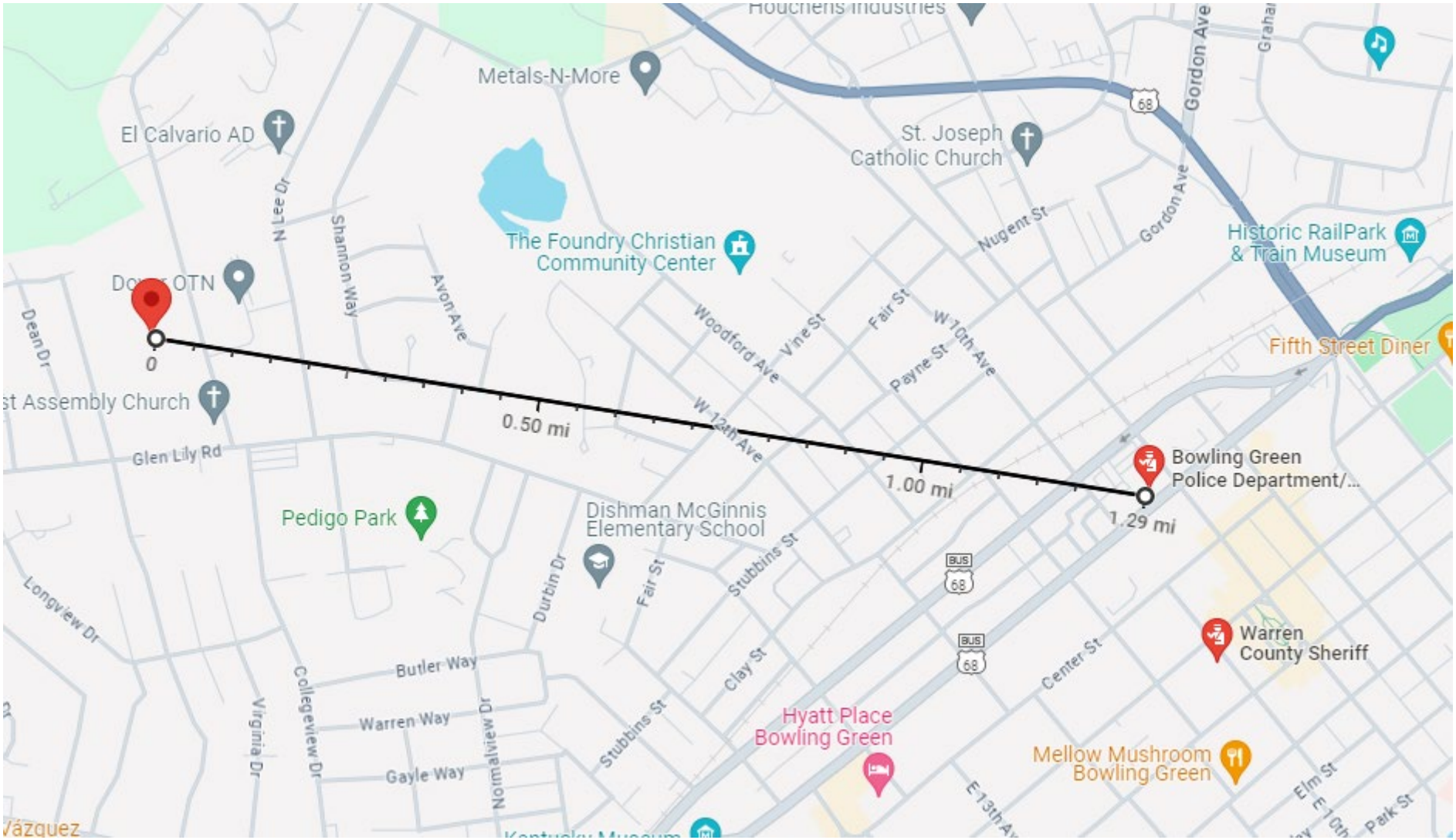
Phone:
Emergency: 911
Non-Emergency: **270-393-BGPD**

Address:
911 Kentucky Street
Bowling Green, KY 42101

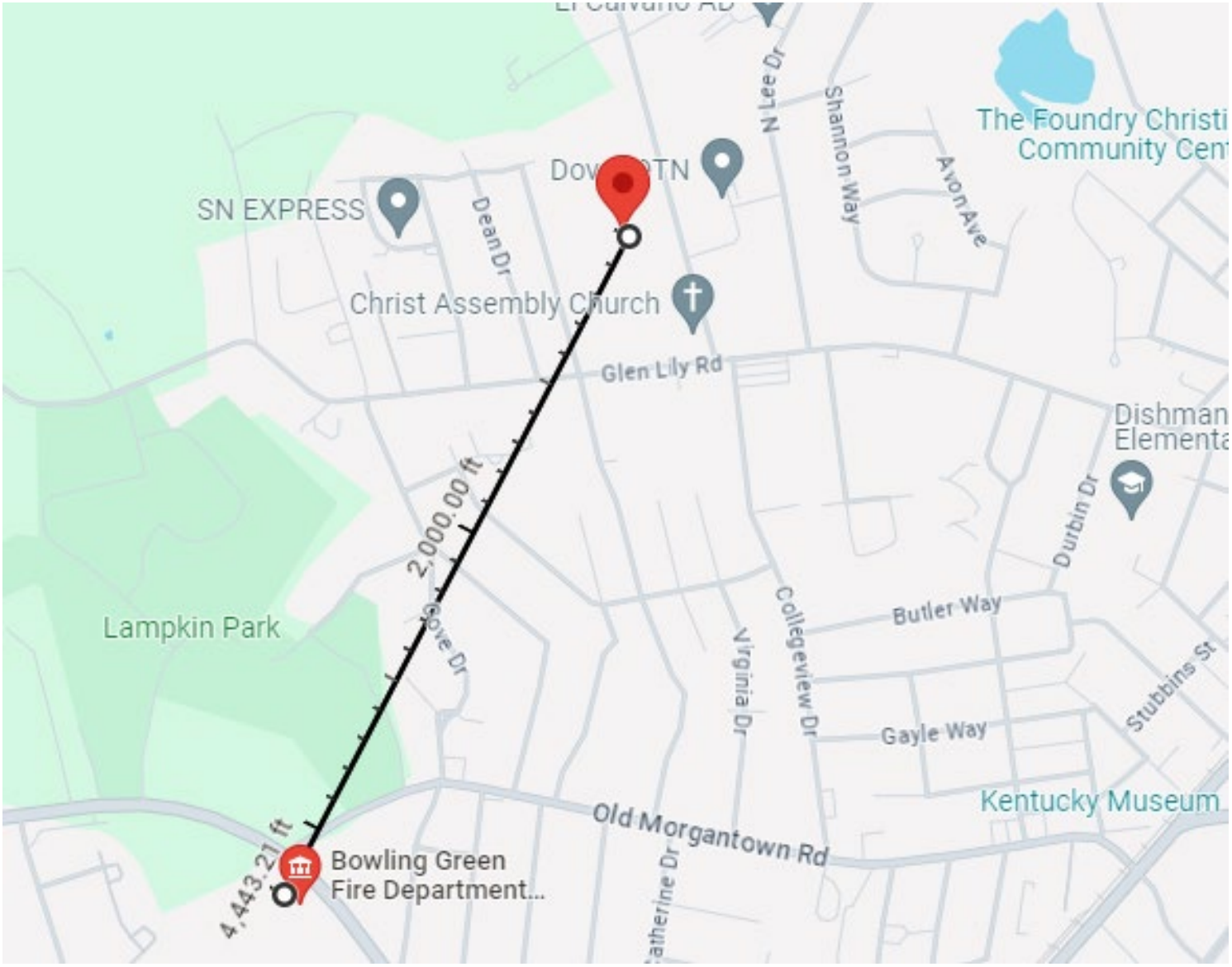
Hours:
7:30am - 4:30pm



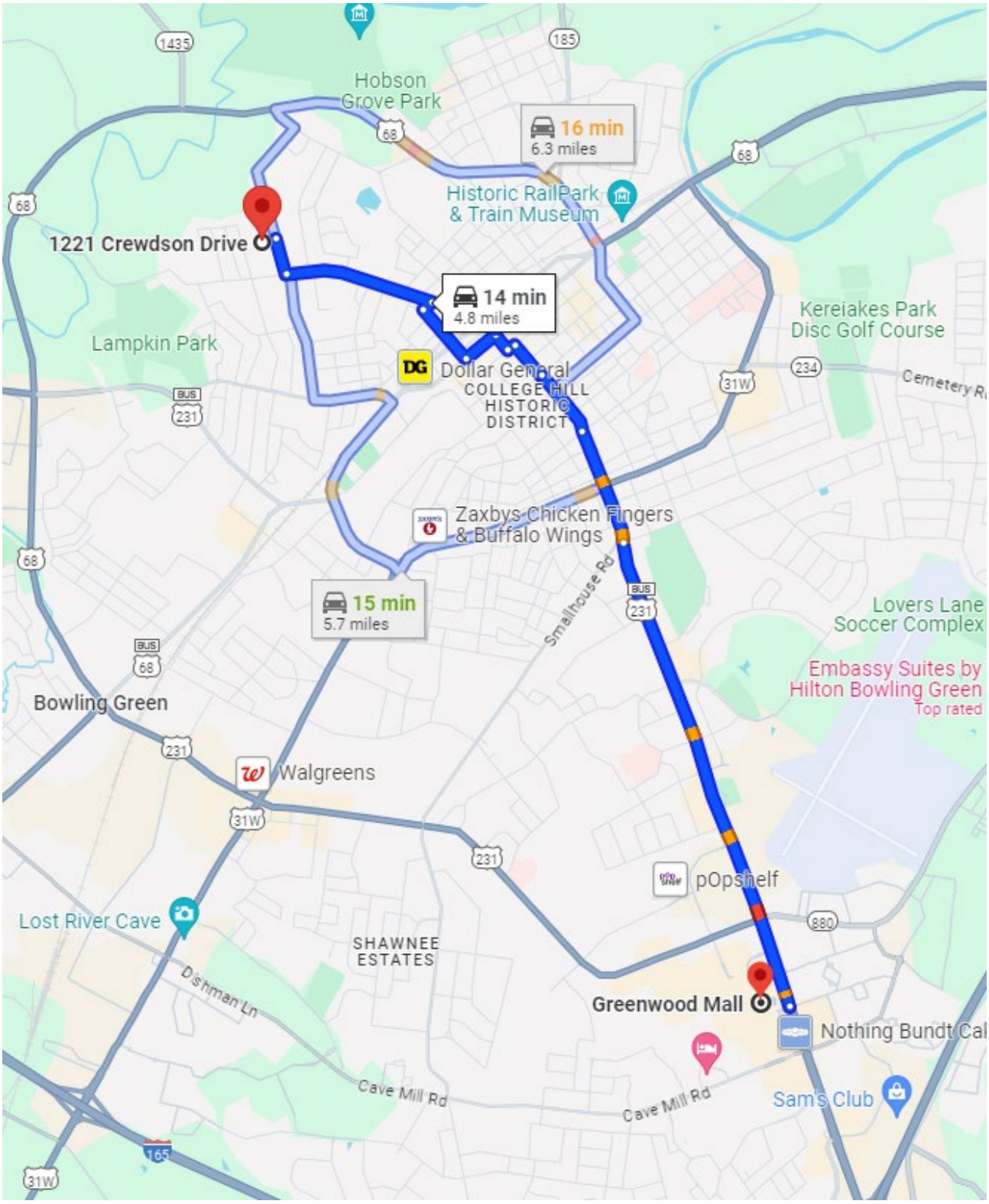
N		**Subject site to closest Emergency Room** Bowling Green, KY
	NTS	August 2024



N		**Subject site to closest Police Station** Bowling Green, KY
	NTS	August 2024

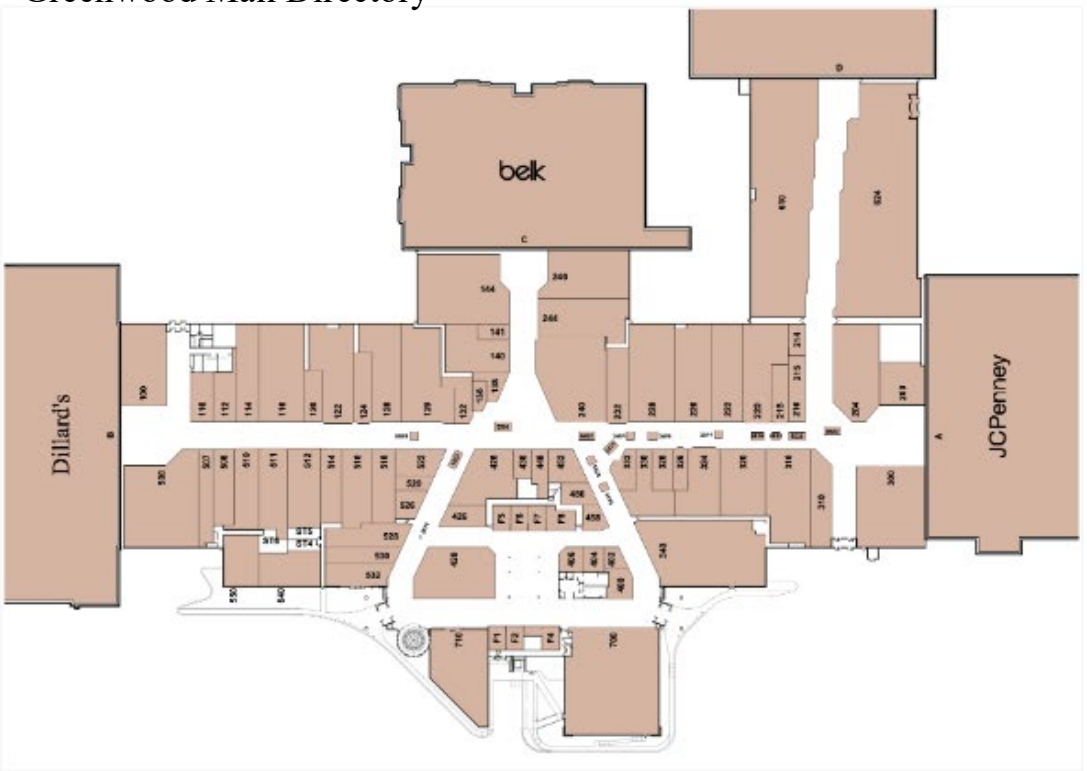


N		**Subject site to closest Fire Department** Bowling Green, KY
	NTS	August 2024



N		**Subject Site to Greenwood Mall** Bowling Green, Kentucky
	NTS	August 2024

Greenwood Mall Directory



FOOD & DRINK

	Auntie Anne's® Hand-Rolled Soft Pretzels
Near Claire's	BG Market & Vape
216	Candy Craze
300	Chuck E. Cheese's
138	Cinnabon
402	The Cookie Store
F8	Sam's Gyros
F2	Sbarro
F5	The Smoothie & Pretzel Co.
F1	Subway
F6	Suki Hana
F7	Lotus Express

ENTERTAINMENT

300	Chuck E. Cheese's
456	GameStop
Dillard's Wing	go! Calendars Toys Games
	Regal Greenwood Mall Stadium 10
	Spider Jump
	The Portal

ELECTRONICS & CELL SERVICES

400	AT&T
	CellAXS
456	GameStop

APPAREL

516	Aéropostale
122	American Eagle Outfitters
	Belk
500	Boot Barn
129	Buckle
140	The Children's Place
144	Citi Trends
511	City Gear
	Dillard's
624	Dunham's Sports
528	Earthbound Trading Company
220	Finish Line
120	francesca's
246	Hibbett Sporting Goods
316	Hollister Co.
328	Hot Topic
	JCPenney
514	Journeys
218	Journeys Kidz
Near Mall Carousel	Luxe Boutique
Next to Buckle	Market 270
244	maurices
540	Men's Wearhouse
Dillard's Wing	Nina's Fashions
700	Old Navy
Near Food Court	Palmetto Moon
240	Pink
226	Rue 21 (Coming Soon)
114	Torrid
240	Victoria's Secret

WELLNESS & BEAUTY

428	Bath & Body Works
	Dillard's
112	GNC
Next to Cinnabon	Hilltopper Hemp
	JCPenney
	JCPenney Beauty
Near Mall Carousel	Luxe Boutique
Next to Buckle	Market 270
215	Neel Thredz Spa
Center Court Next to Buckle	Perfume Villa
507	RELAX ZONE
340	ULTA Beauty

SPORTING GOODS & APPAREL

624	Dunham's Sports
220	Finish Line
320	Foot Locker
246	Hibbett Sporting Goods
458	Lids
Center Court	Sports Country

SERVICES

	Mall Management
507	RELAX ZONE
	Security Office
	Truist Bank Or Branch Bank & Trust Compa

JEWELRY & ACCESSORIES

516	Aéropostale
122	American Eagle Outfitters
522	Ashcroft & Oak® Jewelers
	Belk
500	Boot Barn
129	Buckle
144	Citi Trends
426	Claire's
	Dillard's
528	Earthbound Trading Company
120	francesca's
	Intrigue Jewelers
	JCPenney
452	Kay Jewelers
Near Mall Carousel	Luxe Boutique
Next to Buckle	Market 270
Near Food Court	Palmetto Moon
436	Sunglass Hut
332	Zales Jewelers

HOME & DECOR

200	Bath Planet
144	Citi Trends
	Dillard's
	JCPenney
Next to Buckle	Market 270

FOOTWEAR

500	Boot Barn
129	Buckle
140	The Children's Place
511	City Gear
	Dillard's
624	Dunham's Sports
220	Finish Line
320	Foot Locker
246	Hibbett Sporting Goods
	JCPenney
514	Journeys
218	Journeys Kidz
Near Food Court	Palmetto Moon
	Remix
610	SHOE DEPT. ENCORE
518	Shoe Show
124	Tradehome Shoes

Map Unit Description

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 in this report, 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, soils that are similar to the named components, and some minor components that differ in use and management from the major soils.

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

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

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

Soils that have profiles that are almost alike make up a *soil series*. All the soils of a series have major horizons that are similar in composition, thickness, and arrangement. Soils of a given 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.

Additional information about the map units described in this report is available in other soil reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the soil reports define some of the properties included in the map unit descriptions.

Warren County, Kentucky

FnC2—Fredonia-Vertrees-Urban land complex, 6 to 12 percent slopes, eroded, rocky

Map Unit Setting

National map unit symbol: ll99
Elevation: 420 to 760 feet
Mean annual precipitation: 44 to 58 inches
Mean annual air temperature: 46 to 67 degrees F

Frost-free period: 177 to 211 days
Farmland classification: Not prime farmland

Map Unit Composition

Fredonia and similar soils: 37 percent
Vertrees and similar soils: 30 percent
Urban land: 25 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Fredonia

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone

Typical profile

H1 - 0 to 3 inches: silt loam
H2 - 3 to 22 inches: silty clay
H3 - 22 to 37 inches: clay
R - 37 to 47 inches: bedrock

Properties and qualities

Slope: 6 to 12 percent
Surface area covered with cobbles, stones or boulders: 3.0 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very low (0.06 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 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Hydrologic Soil Group: C
Ecological site: F122XY005KY - Moderately Deep Well Drained Uplands
Hydric soil rating: No

Description of Vertrees

Setting

Landform: Ridges
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope

Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone, sandstone, and shale

Typical profile

H1 - 0 to 3 inches: silt loam
H2 - 3 to 15 inches: silty clay
H3 - 15 to 80 inches: clay

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Hydrologic Soil Group: C
Ecological site: F122XY005KY - Moderately Deep Well Drained Uplands
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Ridges

Interpretive groups

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

Minor Components

Baxter

Percent of map unit: 4 percent
Hydric soil rating: No

Crider

Percent of map unit: 3 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Warren County, Kentucky
Survey Area Data: Version 23, Sep 10, 2023

FnB - Fredonia Vertrees – Urban land complex
FnC - Fredonia Vertrees – Urban land complex
FnC2 - Fredonia Vertrees – Urban land complex

N		**USDA Soil Survey – 1221 Crewdson Drive** Bowling Green, Kentucky
	NTS	August 2024

N		**Subject site zoned as RM-3** Bowling Green, Kentucky
	NTS	August 2024

ARTICLE 5
USE REGULATIONS

SEC. 5.1 USE TABLE

The table on the following pages lists the uses allowed within zoning districts.

5.1.1 Use Categories

All of the use categories listed in the following table are explained in Sec. 5.2, Use Categories. The second column of the use table contains an abbreviated explanation of the respective use category. If there is a conflict between the abbreviated definition and the full explanation contained in Sec. 5.2, the provisions of Sec. 5.2 shall control.

5.1.2 P Uses Permitted By-Right

A "P" indicates that a use category is allowed by-right in the respective zoning district. These permitted uses are subject to all other applicable regulations of this Zoning Ordinance.

5.1.3 C Conditional Uses

A "C" indicates that a use category is allowed only if reviewed and approved as a conditional use, in accordance with the conditional use permit procedures of Sec. 3.9, Conditional Use Permit. Conditional uses are subject to all other applicable regulations of this Zoning Ordinance.

5.1.4 P* or C* Uses Subject to Specific Conditions

A "P" or a "C" that is accompanied by the symbol "*" indicates that the listed use type is subject to use-specific conditions. The standards are listed in each category in Sec. 5.2.

5.1.5 Uses Not Allowed

A blank or empty cell indicates that a use type is not allowed in the respective zoning district, unless it is otherwise expressly allowed by other regulations of this Zoning Ordinance. Any use not allowed is deemed prohibited.

5.1.6 New or Unlisted Uses

If an application is submitted for a use type that is not listed in the use table, the Zoning Administrator shall be authorized to make a similar use interpretation based on the use category descriptions of Sec. 5.2, Use Categories, and the similar use interpretation criteria of Sec. 5.2.1.B.

If the Executive Director determines that the proposed use does not fit any of the use category descriptions of Sec. 5.2, no similar use interpretation shall be made. The Executive Director shall make a determination as to the use category for the application which has been made.

AG (Agriculture)
RR (Rural Residential) (county only)
R-E (Residential Estate)
RS-1 (Single Family Residential)
RM-2 (Two Family Residential)
RM-3 (Multi-Family Residential)
RM-4 (Multi-Family Residential)
MHP (Mobile Home Park)
P (Public)
NB (Neighborhood Business)
GB (General Business
CB (Central Business)
HB (Highway Business)
OP-R (Office/Professional – Residential)
OP-C (Office/Professional – Commercial)
LI (Light Industrial
HI (Heavy Industrial)

Use Category / Definition Excerpt (See Sec. 5.2)	Specific Use Type (If Applicable)	AG	RR and RE	RS1	RM2	RM3	RM4	MHP	P	NB	GB	CB	HB	OPR	OPC	LI	HI
P = Permitted Use C = Conditional Use * = Specific Use Standards Apply																	
RESIDENTIAL (See Section 5.2.2)																	
Household Living *(pg. 5-7)* Residential occupancy of a dwelling unit by a "household." See Sec. 4.3, 4.4 ,4.5 and 4.6 for permitted structure types	Single Family	P	P	P	P	P	P	P*		P	P			P			
	Multi-Family				P	P	P				P						
	Household Living Uses Serving Disabled Residents Protected Under the Federal Fair Housing Act *(5-7)*	P*	P*	P*	P*	P*	P*	P*		P*	P*			P*			
	Home Office *(5-8)*	P*	P*	P*	P*	P*	P*	P*		P*	P*	P*		P*	P*		
	Home Occupation *(5-8)*	C*	C*	C*	C *	C*	C*	C*		C*	C*	C*		C*	C*		
	Accessory Apartment	P	P	P					P	P	P		P	P	P		
	Within Mixed-Use Development									P	P	P	P	P	P		
Group Living *(pg. 5-9)* Residential occupancy of a structure by a group of people who do not meet the definition of "Household Living."	University District Uses *(5-9)*					P*	P*		P*	P*	P*		P*				
	Group Living Uses Serving Disabled Residents Protected Under the Federal Fair Housing Act *(5-9)*	P*	P*	P*	P*	P*	P*	P*		P*	P*			P*			
	All Other Group Living Uses	C*				C*	C*		P*		P*	P*	P*	C*	C*		
INSTITUTIONAL (See Section 5.2.3)																	
College *(pg. 5-10)* Colleges and institutions of higher learning									P		P	P	P		P	P	
Community Services *(pg. 5-10)* Public, nonprofit or charitable uses, generally providing a local service to the community							C		P	C	P	P	P	C	C		
Day Care *(pg. 5-10)* Care, protection and supervision for children or adults on a regular basis away from their primary residence for less than 24 hours per day		C*	C*	C*	C*	C*	C*	C*	P*	P*	P*	P*	P*	P*	P*	C*	
Detention Facility *(pg. 5-11)* Facilities for the detention or incarceration of people									P								
Health Care Facility *(pg. 5-12)* Facilities providing health care or assistance to patients.	Medical or Surgical Care to Patients, With Overnight Care								P		P		P		P	P	
	Nursing Home, Convalescent Home or Assisted Living Facility						C*		P*	C*	P*	P*	P*	C*	P*		
Parks and Open Areas *(pg. 5-12)* Natural areas consisting mostly of vegetative landscaping or outdoor recreation, community gardens, etc.		P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*
Religious Institution *(pg. 5-13)* Meeting area for religious activities		C*	C*	C*	C*	C*	C*	C*	P*	C*	P*	P*	P*	C*	P*	C*	
Safety Services *(pg. 5-13)* Public safety and emergency response services		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
School *(pg. 5-13)* Schools at the primary, elementary, middle, junior high or high school level		C*	C*	C*	C*	C*	C*		P*	C*	C*	C*	P*	C*	C*		

AG (Agriculture)
RR (Rural Residential) (county only)
R-E (Residential Estate)
RS-1 (Single Family Residential)
RM-2 (Two Family Residential)
RM-3 (Multi-Family Residential)
RM-4 (Multi-Family Residential)
MHP (Mobile Home Park)
P (Public)
NB (Neighborhood Business)
GB (General Business
CB (Central Business)
HB (Highway Business)
OP-R (Office/Professional – Residential)
OP-C (Office/Professional – Commercial)
LI (Light Industrial
HI (Heavy Industrial)

Use Category / Definition Excerpt (See Sec. 5.2)	Specific Use Type (If Applicable)	AG	RR and RE	RS 1	RM 2	RM 3	RM 4	MHP	P	NB	GB	CB	HB	OPR	OPC	LI	HI
P = Permitted Use C = Conditional Use * = Specific Use Standards Apply																	
Utilities, Basic *(pg. 5-14)* Infrastructure services that need to be located in or near the area where the service is provided	Utilities, Basic *(5-14)*	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
	Merchant Electric Generating Facility *(5-14)*	P*														P*	P*
Commercial (See Section 5.2.4)																	
Eating Establishment *(pg. 5-16)* Establishments that sell food for on- or off-premises consumption	No Drive-Through *(5-16)*									P	P	P	P			P	
	With Drive-Through *(5-17)*										P*	P*	P*			P*	
	Bar/Lounge (<50% income from food sales) *(5-16)*									C*	P*	P*	P*			P*	
	Craft Beverage Production *(5-17)*	C*								C*	P*	P*	P*			P*	P*
Office *(pg. 5-17)* Activities conducted in an office setting and generally focusing on business, government, professional, medical or financial services									P	P	P	P	P	P	P	P	P
Off-Premise Advertising Sign Consolidated Shopping Center, Campus-Style Signage & Billboard Signs (See Section 4.6.8.F.9, 10 & 11)													P			P	P
Overnight Accommodation *(pg. 5-18)* Uses arranged for stays of less than 30 days	Hotel, Motel, Inn, Extended Stay Facility *(5-18)*										P*	P	P				
	Bed and Breakfast *(5-18)*	C*	C*	C*	C*	C*	C*			P	P	P	P	C*			
	Short-Term Rental *(5-19)*	C*	C*		C*	C*	C*			C*	P	P	P	C*			
	Recreational Vehicle Park *(5-19)*	C*							P*				P*				
	Limited RV Stay *(5-21)* (Maximum 1 RV Per Night)	P*							P*			P*	P*				
	Limited RV Stay *(5-21)* (Maximum 4 RVs Per Night)	C*							C*			C*	C*				
Parking, Commercial *(pg. 5-21)* Parking that is not accessory to a specific use - fees may or may not be charged									P		P	P	P		P	P	P
Recreation and Entertainment *(pg. 5-22)* Large, generally commercial uses that provide continuous indoor or outdoor recreation or entertainment- oriented activities	Indoor *(5-22)*								P		P*	P	P			P	
	Active Outdoor *(5-22)*	C							P		C		P			P	
	Passive Outdoor (riding stable, fishing lake) *(5-22)*	P							P*		P		P				
	Sportsmen's Farms, Firearm Ranges *(5-22)*	C*							P*				P*			P*	P*
	Major Entertainment Event/Venue *(5-23)*								P			C*	C*				
	Campground *(5-23)*	C*							P*				P*				
Retail Sales and Service *(pg. 5-24)* Firms involved in the sale, lease or rental of new or used products to the general public...they may also provide personal services or entertainment or provide product repair or services for consumer and business goods	Animal Hospital, Commercial Kennel or Veterinarian *(5-24)*	C*									C*		P*			P*	
	Adult Entertainment *(5-25)*																P*
	Commercial Greenhouse or Nursery *(5-25)*	C*							P*		P*	P*	P*			P*	P*

AG (Agriculture)
RR (Rural Residential) (county only)
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RM-4 (Multi-Family Residential)
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Use Category / Definition Excerpt (See Sec. 5.2)	Specific Use Type (If Applicable)	AG	RR and RE	RS1	RM2	RM3	RM4	MHP	P	NB	GB	CB	HB	OPR	OPC	LI	HI
P = Permitted Use C = Conditional Use * = Specific Use Standards Apply																	
Retail Sales and Service (Continued)	Retail Up to 4,000 s.f. *(5-25)*						C*			P	P	P	P			P	
	Retail 4,001 s.f. to 10,000 s.f.										P	P	P			P	
	Retail Greater Than 10,000 s.f.											P	P			P	
	Personal Service-Oriented *(5-24)*									P	P	P	P	C	P	P	
	Live Animal or Poultry Sales	P															P
	Vehicle Sales (Class 1-5) and Small Equipment Sales (up to 2,500 pounds) *(5-26)*										P*		P*			P*	P*
	Retail with Drive-Through or Pick-Up Window *(5-25)*										P*	P*	P*			P*	
	Retail Sales of Medical Cannabis *(5-26)*												P*				
Self-Service Storage *(pg. 5-26)* Uses providing separate storage areas for individual or business uses													P*			P*	P*
Vehicle Repair *(pg. 5-27)* Service to passenger vehicles (Class 1-5); generally, the customer does not wait at the site while the service or repair is being performed											C		P			P	P
Vehicle Service, Limited *(pg. 5-27)* Direct services to motor vehicles where the driver or passengers generally wait in the car or nearby while the service is performed	Fuel stations or Sales *(5-27)*									P*	P*	P*	P*			P*	
	Other Limited Vehicle Service *(5-27)*										P	C	P			P	
INDUSTRIAL (See Section 5.2.5)																	
Industrial Service *(pg. 5-28)* Firms engaged in the repair or servicing of industrial, business or consumer machinery, equipment, products.	Light *(5-28)*															P	P
	Heavy *(5-28)*																P
Manufacturing and Production *(pg. 5-31)* Firms involved in the manufacturing, processing, fabrication, packaging or assembly of goods	Light *(5-29)*															P	P
	Heavy *(5-30)*																P
	Concrete and Asphalt Batch Plant																C
	Manufacturing and Production of Medical Cannabis																P*
Above Ground Storage Tanks *(pg. 5-30)* For storage of hazardous or flammable materials		P*														P*	P*
Warehouse and Freight Movement *(pg. 5-30)* Firms involved in the storage or movement of goods	Storage or Movement of Goods										C*		C*			P*	P*
	Storage of Explosives, Ammunition, Etc. *(5-31)*																C*
Waste-Related Use *(pg. 5-31)*	Uses That Receive Solid or Liquid Wastes From Others for Disposal on the Site *(5-31)*																C
	Transfer station *(5-31)*																C*
	C & D Debris Landfill *(5-31)*	C*															C*

AG (Agriculture)	**RM-4 (Multi-Family Residential)**	**HB (Highway Business)**
RR (Rural Residential) (county only)	**MHP (Mobile Home Park)**	**OP-R (Office/Professional – Residential)**
R-E (Residential Estate)	**P (Public)**	**OP-C (Office/Professional – Commercial)**
RS-1 (Single Family Residential)	**NB (Neighborhood Business)**	**LI (Light Industrial**
RM-2 (Two Family Residential)	**GB (General Business**	**HI (Heavy Industrial)**
RM-3 (Multi-Family Residential)	**CB (Central Business)**	

Use Category / Definition Excerpt (See Sec. 5.2)	Specific Use Type (If Applicable)	AG	RR and RE	RS 1	RM 2	RM 3	RM 4	MHP	P	NB	GB	CB	HB	OPR	OPC	LI	HI
P = Permitted Use C = Conditional Use * = Specific Use Standards Apply																	
Waste-Related Use (Continued)	Recycling Operations *(5-32)*																C*
	Mulch/Wood Operations *(5-32)*	C*															P*
	All Other Waste-Related Uses																C*
Wholesale Sales *(pg. 5-33)* The sale, lease or rental of products primarily intended for industrial, institutional or commercial businesses																P	P
Vehicle and Equipment Sales *(pg. 5-33)* The sale, lease or rental of vehicles or equipment	Vehicle Sales (Class 6 and above) and Large Equipment Sales (greater than 2,500 pounds)															P*	P*
Manufactured and Mobile Home Sales *(pg. 5-34)*	Manufactured & Mobile Home Sales															P*	P*
OTHER (See Sec. 5.2.6)																	
Agriculture *(pg. 5-34)* Raising, producing or keeping plants or animals	Confined Animal Feeding Operation, Livestock Auction *(5-34)*	P*															P*
	Roadside Stand *(5-35)*	P*	P*														
	Farming/Crop Production	P	P														
	Limited Meat Processing *(5-35)*	C*									C*		C*			P*	P*
	Agritourism Uses Permitted Under KRS 247.800 *(5-35)*	C*															
	Production/Growing of Medical Cannabis *(5-36)*	P*															
Transportation-Related Uses *(pg. 5-37)* Passenger terminals for aircraft, regional bus service and regional rail service	Light Aviation	C*							P*				P*			P*	P*
	Commercial Aviation								P*								P*
	Ground Transportation								P				P			P	P
Burial-Related Use *(pg. 5-37)*	Cemetery, Mausoleum or Columbarium	C*							P*	C*	C*		P*				
	Crematory	C*							C*		C*		C*				P*
Mining *(pg. 5-38)* Mining or extraction of mineral or aggregate resources from the ground for off-site use	Oil or Gas Production, Storage & Distribution *(5-38)*	C*														C*	C*
	Mine, Quarry, Borrow Pit *(5-38)*	C*															C*
	Topsoil Removal *(5-38)*	C*														C*	C*
Telecommunications Facilities *(pg. 5-39)* Devices and supporting elements necessary to produce non-ionizing electromagnetic radiation...operating	Telecommunications Support Structure *(5-39)*	P*							P*		P*	P*	P*		P*	P*	P*
	Attached Telecommunications Facility	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
TEMPORARY USES (See Sec. 5.3)																	
Temporary Use *(pg. 5-40)* Uses allowed for limited periods of time		P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*	P*

ENCLOSURE R

PHOTOLOG

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No: 001 **Photo Date:** 07/18/2024 	
Photo No: 002 **Photo Date:** 07/18/2024 	

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No: 003 **Photo Date:** 07/18/2024 	
Photo No: 004 **Photo Date:** 07/18/2024 	

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No: 005 **Photo Date:** 07/18/2024 	
Photo No: 006 **Photo Date:** 07/18/2024 	

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No: 007 **Photo Date:** 07/18/2024 	
Photo No: 008 **Photo Date:** 07/18/2024 	

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No: 009 **Photo Date:** 07/18/2024 	
Photo No: 010 **Photo Date:** 07/18/2024 	

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No: 011 **Photo Date:** 07/18/2024 	
Photo No: 012 **Photo Date:** 07/18/2024 	

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No: 013 **Photo Date:** 07/18/2024 	
Photo No: 014 **Photo Date:** 07/18/2024 	

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No: 015 **Photo Date:** 07/18/2024 	
Photo No: 016 **Photo Date:** 07/18/2024 	

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No:
017

Photo Date:
07/18/2024

Photo No:
018

Photo Date:
07/18/2024

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No:
019

Photo Date:
07/18/2024

Photo No:
020

Photo Date:
07/18/2024

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No:
021

Photo Date:
07/18/2024

Photo No:
022

Photo Date:
07/18/2024

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No: 023 **Photo Date:** 07/18/2024 	
Photo No: 024 **Photo Date:** 07/18/2024 	

Project Location: Garrison Gardens, Bowling Green, KY
CMec Project Number: 061-24-W
Date: July 2024

Photo No: 025 **Photo Date:** 07/18/2024 	
Photo No: 026 **Photo Date:** 07/18/2024 	

ENCLOSURE S

DLG CLEARINGHOUSE LETTER

Please note that Garrison Gardens was initially going to be split into multiple projects and we submitted our Intergovernmental Review to e-Clearinghouse in multiple requests. The Crewdson Drive site is now being submitted as a single project. Per KHC's instructions, I am submitting both e-Clearinghouse letters. The proposed activities nor the site locations have changed.

Please see the KHC email attached.

April Bowman

From: multifamily <multifamily@kyhousing.org>
Sent: Monday, March 4, 2024 1:57 PM
To: April Bowman
Subject: RE: Kentucky Intergovernmental Review

This sender is trusted.

April,

Thank you for that clarification. You can upload both letters with the one project. You do not need to submit a new clearinghouse letter. Please upload this email with your clearing house letters for the person reviewing your application. Have a wonderful day, Diane

Diane Beidleman, HDFP
Multifamily Programs Administrator
dbeidleman@kyhousing.org
502-564-7630, ext. 368
Direct Line: 502-874-5203
KHC Kentucky Housing Corporation

From: April Bowman <april.bowman@wabuck.com>
Sent: Monday, March 04, 2024 10:49 AM
To: multifamily <multifamily@kyhousing.org>
Subject: RE: Kentucky Intergovernmental Review

Good morning.

The proposed activity will not change. It is still New Construction.

We have 2 adjacent tracts of land that were initially going to be 2 separate projects in the NOFA, so I submitted 2 separate clearinghouse requests and got back 2 separate letters. We have now decided to combine those 2 tracts into one project. Can I upload both letters with the project, as opposed to submitting a new clearinghouse request?

Thank you!

From: multifamily <multifamily@kyhousing.org>
Sent: Monday, March 4, 2024 9:20 AM

To: April Bowman <april.bowman@wabuck.com>
Subject: RE: Kentucky Intergovernmental Review

April,

To answer your question, I will need more information.

- Are the activities proposed at each address for the original clearinghouse letters going to remain the same now that they are going to be combine?
    - What are the proposed activities?
- If there are going to be changes in the proposed activities now?
    - What are the specific changes?

Reach out with questions. Have a wonderful day, Diane

Diane Beidleman, HDFP
Multifamily Programs Administrator
dbeidleman@kyhousing.org
502-564-7630, ext. 368
Direct Line: 502-874-5203
KHC Kentucky Housing Corporation

From: April Bowman <april.bowman@wabuck.com>
Sent: Saturday, March 02, 2024 5:20 PM
To: multifamily <multifamily@kyhousing.org>
Subject: Kentucky Intergovernmental Review

Good afternoon. As you know, we initially had some sites in our bond deal divided into 2 separate projects. We have now consolidated every site to a single project. I initially made the E-Clearinghouse requests on the divided sites. So, now I have 2 letters for a couple of these projects that are now single sites. The sites and addresses did NOT change.

Amy Frogue from the Pennyrile Area Development District instructed me that this should not be an issue, that 'most often these things aren't set in stone when clearinghouse is submitted for any project'.

Can I just include both Clearinghouse letters for those project applications, or will this be an issue for KHC and I need to get revised Clearinghouse letters?

Wabuck DEVELOPMENT COMPANY, INC.

Andy Beshear
Governor

OFFICE OF THE GOVERNOR
DEPARTMENT FOR LOCAL GOVERNMENT
100 AIRPORT ROAD, THIRD FLOOR
FRANKFORT, KENTUCKY 40601
PHONE (502) 573-2382
FAX (502) 227-8691
www.kydlgweb.ky.gov

Dennis Keene
Commissioner

January 18, 2024

Mr. Anthony Elmore
Wabuck Development Company Inc
100 Wabuck Dr
Leitchfield, KY 42754

RE: Garrison Gardens I
SAI# KY202312221835
CFDA# 14.239

Dear Mr. Elmore:

The Kentucky State e-Clearinghouse is the official designated Single Point of Contact (SPOC) for the Commonwealth pursuant to Presidential Executive Order 12372, and supported by Kentucky Statutes KRS 45.031. The primary function of the SPOC is to streamline the review aforementioned process for the applicant and the funding agency. This process helps in vocalizing the statutory and regulatory requirements. Information in the form of comments, if any, will be attached to this correspondence.

This proposal has been reviewed by the appropriate state agencies in the e-Clearinghouse for conflicts with state or local plans, goals and objectives. After receiving this letter, you should make it available to the funding agency and continue with the funding agencies application process. This e-Clearinghouse SPOC letter signifies only that the project has followed the state reviewing requirements, and is neither a commitment of funds from this agency or any other state or federal agency. Please remember if any federal reviews are required the applicant must follow through with those federal agencies.

The results of this review are valid for one year from the date of this letter. If the project is not submitted to the funding agency or not approved within one year after the completion of this review, the applicant can request an extension by email to Lee.Nalley@ky.gov. If the project changes in any way after the review, the applicant must reapply through the e-Clearinghouse for a new review. There are no exceptions.

If you have any questions regarding this letter or the review process please contact the e-Clearinghouse office at 502-892-3462.

Sincerely,

Lee Nalley

Lee Nalley, SPOC
Kentucky State Clearinghouse

Attachment

TEAM KENTUCKY

Department for Environmental Protection
Louanna Aldridge

This review was based upon the information that was provided by the applicant through the Clearinghouse for this project. An endorsement of this project does not satisfy, or imply, the acceptance or issuance of any permits, certifications, or approvals that may be required from this agency under Kentucky Revised Statutes or Kentucky Administrative Regulations. Such endorsement means this agency has found no major concerns from the review of the proposed project as presented other than those stated as conditions or comments.

401 KAR 63:010, Fugitive Emissions, states that no person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Additional requirements include the covering of open bodied trucks, operating outside the work area transporting materials likely to become airborne, and that no one shall allow earth or other material being transported by truck or earth-moving equipment to be deposited onto a paved street or roadway. Please note the Fugitive Emissions Fact Sheet located at http://air.ky.gov/SiteCollectionDocuments/Fugitive%20Dust%20Sheet.pdf

401 KAR 63:005 states that open burning shall be prohibited except as specifically provided. Open Burning is defined as the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney. However, open burning may be utilized for the expressed purposes listed on the Open Burning Brochure located at http://air.ky.gov/Pages/OpenBurning.aspx

All solid waste generated by this project must be disposed at a permitted facility. If underground storage tanks are encountered they must be properly addressed. If asbestos, lead paint, and/or other contaminants are encountered during this project, they must be properly addressed.

Constructions located in floodplains require Division of Water (DOW) prior approval. If the construction area disturbed is 1 acre or more, the applicant will need to apply for a Kentucky Pollutant Discharge Elimination System storm water discharge permit.

Utility line projects that cross a stream will require a Section 404 permit from the US Army Corps of Engineers and a 401 Water Quality Certification from DOW.

Best Management Practices (BMPs) should be utilized to control storm water runoff and sediment damage to water quality and aquatic habitat. For technical assistance on the kinds of BMPs most appropriate for housing and related construction, please contact the local Soil and Water Conservation District or the Division of Conservation.

WATER SUPPLY - If an existing water server is to be utilized for new water tap-ons (rehabilitations, new constructions), ascertain the capacity and operating condition of the originating water treatment plant and of the server (if different) in comparison to the water needs of the proposed housing. DOW cannot permit connections to water servers under tap-on bans, Agreed Orders, or Court Orders. DOW may not give approval to connections to water systems operating near, at, or over capacity. If a new water source is to be utilized, ascertain the source's (stream's or well's) low flow ability to serve the proposed housing. Prior approval from DOW is required for water withdrawals of over 10,000 gallons per day and for all public drinking water. Final plans and specifications are subject to review by DOW.

WASTEWATER TREATMENT - If an existing wastewater server is to be utilized for new wastewater tap-ons (rehabilitations, new construction), ascertain the capacity and operating conditions of the receiving wastewater treatment facility (wastewater treatment plant or package sewage treatment plant) and of the server (if different) in comparison to the wastewater needs of the proposed housing. DOW cannot permit connections to wastewater servers under tap-on bans, Agreed Orders, or Court Orders. DOW may not give approval to connections to

wastewater systems at or over hydraulic capacity. If a new wastewater treatment, facility is to be utilized, ascertain the discharge stream's ability to absorb the proposed housing's treated wastewater.

DOW notes the requirements of onsite sewage disposal statutes, KRS 211.350 to 211.380, and administrative regulations, 902 KAR 10:060 to 10:110, must be met. DOW requests provisions be made for future connections to a wastewater treatment system. A Groundwater Protection Plan, as required by 401 KAR 5:037, needs to be prepared by all onsite wastewater system owners. Contact the DOW regarding requirements.

Prior approval from DOW is required for all discharges into streams and for all wastewater treatment facilities. DOW reminds the applicant to seal abandoned wastewater service connections.

Your project might have the potential of impacting federally or state listed species and natural communities. Go to the Kentucky Biological Assessment Tool (kynaturepreserves.org) to obtain a Standard Occurrence Report for information regarding listed species known within your project area. The report will also provide information on public and private conservation lands, areas of biodiversity significance, and other natural resources in your project area for which the Office of Kentucky Nature Preserves maintains data.

Department of Housing Buildings and Construction
Don Newberry

The Department of Housing Buildings and Construction, Division of Building Code Enforcement, has no comments concerning this proposed project. A building permit from the Local Jurisdiction will be required, prior to construction.

Kentucky Fish & Wildlife
Mike Hardin

No comments.

Kentucky Transportation Cabinet
Joseph Plunk

KYTC has no jurisdiction on this request. No state right of way or impact to state highways.

KY Heritage Council
Yvonne Sherrick

To receive a review from the KY Heritage Council/State Historical Preservation Office (SHPO) you must follow the instructions located on their website at https://heritage.ky.gov/compliance/Pages/overview.aspx. There you will find the required documents for the Section 106 Review and Compliance for 36 CFR Part 800. This Section 106 submission process to SHPO will assist applicants and agencies in providing the appropriate level of information to receive comments from SHPO. If you have any questions please contact Yvonne Sherrick, via email at yvonne.sherrick@ky.gov.

Please note: If your project is funded through Transportation Alternative (TAP), Transportation Enhancements (TE), Congestion, Mitigation, Air Quality (CMAQ), or Safe Routes to School (SRTS) you will need to send this information to Michael Jones, Historic Preservation Program Administrator with the Kentucky Transportation Cabinet via email to MichaelR.Jones2@ky.gov or hard copy to Michael Jones, Office of Local Programs, KY Transportation Cabinet, 200 Mero Street Frankfort, KY 40622. Do not send materials directly to SHPO if your project involves funding from these four sources as it will cause delays in the review process. Michael Jones will consult directly with the SHPO on projects with these funding sources to complete the Section 106 review.

Andy Beshear
Governor

OFFICE OF THE GOVERNOR
DEPARTMENT FOR LOCAL GOVERNMENT
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FRANKFORT, KENTUCKY 40601
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www.kydlgweb.ky.gov

Dennis Keene
Commissioner

January 18, 2024

Mr. Anthony Elmore
Wabuck Development Company Inc
100 Wabuck Dr
Leitchfield, KY 42754

RE: Garrison Gardens II
SAI# KY202312221836
CFDA# 14.239

Dear Mr. Elmore:

The Kentucky State e-Clearinghouse is the official designated Single Point of Contact (SPOC) for the Commonwealth pursuant to Presidential Executive Order 12372, and supported by Kentucky Statutes KRS 45.031. The primary function of the SPOC is to streamline the review aforementioned process for the applicant and the funding agency. This process helps in vocalizing the statutory and regulatory requirements. Information in the form of comments, if any, will be attached to this correspondence.

This proposal has been reviewed by the appropriate state agencies in the e-Clearinghouse for conflicts with state or local plans, goals and objectives. After receiving this letter, you should make it available to the funding agency and continue with the funding agencies application process. This e-Clearinghouse SPOC letter signifies only that the project has followed the state reviewing requirements, and is neither a commitment of funds from this agency or any other state or federal agency. Please remember if any federal reviews are required the applicant must follow through with those federal agencies.

The results of this review are valid for one year from the date of this letter. If the project is not submitted to the funding agency or not approved within one year after the completion of this review, the applicant can request an extension by email to Lee.Nalley@ky.gov. If the project changes in any way after the review, the applicant must reapply through the e-Clearinghouse for a new review. There are no exceptions.

If you have any questions regarding this letter or the review process please contact the e-Clearinghouse office at 502-892-3462.

Sincerely,

Lee Nalley

Lee Nalley, SPOC
Kentucky State Clearinghouse

Attachment

TEAM KENTUCKY

Department for Environmental Protection
Louanna Aldridge

This review was based upon the information that was provided by the applicant through the Clearinghouse for this project. An endorsement of this project does not satisfy, or imply, the acceptance or issuance of any permits, certifications, or approvals that may be required from this agency under Kentucky Revised Statutes or Kentucky Administrative Regulations. Such endorsement means this agency has found no major concerns from the review of the proposed project as presented other than those stated as conditions or comments.

401 KAR 63:010, Fugitive Emissions, states that no person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Additional requirements include the covering of open bodied trucks, operating outside the work area transporting materials likely to become airborne, and that no one shall allow earth or other material being transported by truck or earth-moving equipment to be deposited onto a paved street or roadway. Please note the Fugitive Emissions Fact Sheet located at http://air.ky.gov/SiteCollectionDocuments/Fugitive%20Dust%20Sheet.pdf

401 KAR 63:005 states that open burning shall be prohibited except as specifically provided. Open Burning is defined as the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney. However, open burning may be utilized for the expressed purposes listed on the Open Burning Brochure located at http://air.ky.gov/Pages/OpenBurning.aspx

All solid waste generated by this project must be disposed at a permitted facility. If underground storage tanks are encountered they must be properly addressed. If asbestos, lead paint, and/or other contaminants are encountered during this project, they must be properly addressed.

Constructions located in floodplains require Division of Water (DOW) prior approval. If the construction area disturbed is 1 acre or more, the applicant will need to apply for a Kentucky Pollutant Discharge Elimination System storm water discharge permit.

Utility line projects that cross a stream will require a Section 404 permit from the US Army Corps of Engineers and a 401 Water Quality Certification from DOW.

Best Management Practices (BMPs) should be utilized to control storm water runoff and sediment damage to water quality and aquatic habitat. For technical assistance on the kinds of BMPs most appropriate for housing and related construction, please contact the local Soil and Water Conservation District or the Division of Conservation.

WATER SUPPLY - If an existing water server is to be utilized for new water tap-ons (rehabilitations, new constructions), ascertain the capacity and operating condition of the originating water treatment plant and of the server (if different) in comparison to the water needs of the proposed housing. DOW cannot permit connections to water servers under tap-on bans, Agreed Orders, or Court Orders. DOW may not give approval to connections to water systems operating near, at, or over capacity. If a new water source is to be utilized, ascertain the source's (stream's or well's) low flow ability to serve the proposed housing. Prior approval from DOW is required for water withdrawals of over 10,000 gallons per day and for all public drinking water. Final plans and specifications are subject to review by DOW.

WASTEWATER TREATMENT - If an existing wastewater server is to be utilized for new wastewater tap-ons (rehabilitations, new construction), ascertain the capacity and operating conditions of the receiving wastewater treatment facility (wastewater treatment plant or package sewage treatment plant) and of the server (if different) in comparison to the wastewater needs of the proposed housing. DOW cannot permit connections to wastewater servers under tap-on bans, Agreed Orders, or Court Orders. DOW may not give approval to connections to

wastewater systems at or over hydraulic capacity. If a new wastewater treatment, facility is to be utilized, ascertain the discharge stream's ability to absorb the proposed housing's treated wastewater.

DOW notes the requirements of onsite sewage disposal statutes, KRS 211.350 to 211.380, and administrative regulations, 902 KAR 10:060 to 10:110, must be met. DOW requests provisions be made for future connections to a wastewater treatment system. A Groundwater Protection Plan, as required by 401 KAR 5:037, needs to be prepared by all onsite wastewater system owners. Contact the DOW regarding requirements.

Prior approval from DOW is required for all discharges into streams and for all wastewater treatment facilities. DOW reminds the applicant to seal abandoned wastewater service connections.

Your project might have the potential of impacting federally or state listed species and natural communities. Go to the Kentucky Biological Assessment Tool (kynaturepreserves.org) to obtain a Standard Occurrence Report for information regarding listed species known within your project area. The report will also provide information on public and private conservation lands, areas of biodiversity significance, and other natural resources in your project area for which the Office of Kentucky Nature Preserves maintains data.

Department of Housing Buildings and Construction
Don Newberry

The Department of Housing Buildings and Construction, Division of Building Code Enforcement, has no comments concerning this proposed project. A building permit from the Local Jurisdiction will be required, prior to construction.

Kentucky Fish & Wildlife
Mike Hardin

No comments.

Kentucky Transportation Cabinet
Joseph Plunk

KYTC has no jurisdiction on this request. No state right of way or impact to state highways.

KY Heritage Council
Yvonne Sherrick

To receive a review from the KY Heritage Council/State Historical Preservation Office (SHPO) you must follow the instructions located on their website at https://heritage.ky.gov/compliance/Pages/overview.aspx. There you will find the required documents for the Section 106 Review and Compliance for 36 CFR Part 800. This Section 106 submission process to SHPO will assist applicants and agencies in providing the appropriate level of information to receive comments from SHPO. If you have any questions please contact Yvonne Sherrick, via email at yvonne.sherrick@ky.gov.

Please note: If your project is funded through Transportation Alternative (TAP), Transportation Enhancements (TE), Congestion, Mitigation, Air Quality (CMAQ), or Safe Routes to School (SRTS) you will need to send this information to Michael Jones, Historic Preservation Program Administrator with the Kentucky Transportation Cabinet via email to MichaelR.Jones2@ky.gov or hard copy to Michael Jones, Office of Local Programs, KY Transportation Cabinet, 200 Mero Street Frankfort, KY 40622. Do not send materials directly to SHPO if your project involves funding from these four sources as it will cause delays in the review process. Michael Jones will consult directly with the SHPO on projects with these funding sources to complete the Section 106 review.