

APPENDIX C:

ENVIRONMENTAL OVERVIEW

Noise Abatement Criteria (NAC)

Activity Category	Description of Activity Category (Land Use)	Activity Criteria $L_{eq}(h)$ *	Evaluation Location
A	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue its intended purpose.	57	Exterior
B**	Residential	67	Exterior
C**	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings	67	Exterior
D	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios	52	Interior
E**	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.	72	Exterior
F	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing	-----	-----
G	Undeveloped lands that are not permitted.	-----	-----

*The $L_{eq}(h)$ Activity Criteria values are for impact determination only, and are not design standards for noise abatement measures.

**Includes undeveloped lands permitted for this activity category.

The study area contains a mixture of predominantly Category B residences and Category G undeveloped lands without noise sensitivity. Activity Categories C, D, E, and F are also present in the Study Area, primarily around Richmond and Berea.

Threatened and Endangered Species for Madison County

Scientific Name	Common Name	Class	US Status	KY Status	Habitat
<i>Cryptobranchus alleganiensis alleganiensis</i>	Eastern Hellbender	Amphibia	N	E	Moderate to fast flowing streams and rivers with large flat rocks with well oxygenated water.
<i>Rana pipiens</i>	Northern Leopard Frog	Amphibia	N	S	In or near permanent water with rooted aquatic vegetation such as springs, slow streams, marshes, ponds, and lakes.
<i>Accipiter striatus</i>	Sharp-shinned Hawk	Aves	N	S	Forest and open woodlands.
<i>Actitis macularius</i>	Spotted Sandpiper	Aves	N	E	Shorelines of lakes, ponds, and streams.
<i>Ammodramus henslowii</i>	Henslow's Sparrow	Aves	N	S	Open fields and meadows.
<i>Anas clypeata</i>	Northern Shoveler	Aves	N	E	Shallow fresh-water areas with surrounding cover.
<i>Anas discors</i>	Blue-winged Teal	Aves	N	T	Marshes, ponds, sloughs, lakes and sluggish streams.
<i>Ardea alba</i>	Great Egret	Aves	N	T	Marshes, swampy woods, streams, lakes, and ponds.
<i>Asio flammeus</i>	Short-eared Owl	Aves	N	E	Broad expanses of open land with low vegetation.
<i>Asio otus</i>	Long-eared Owl	Aves	N	E	Deciduous and evergreen forests, orchards, wooded parks, farm woodlots, and river woods.
<i>Bubulcus ibis</i>	Cattle Egret	Aves	N	S	Wet pastureland and marshes, fresh water irrigated agricultural areas.
<i>Certhia americana</i>	Brown Creeper	Aves	N	E	Forest, woodlands, forested floodplains, and swamps.
<i>Chondestes grammacus</i>	Lark Sparrow	Aves	N	T	Various open situations with scattered bushes and trees.
<i>Circus cyaneus</i>	Northern Harrier	Aves	N	T	Various open habitat types such as grasslands, fields and marshes.
<i>Cistothorus platensis</i>	Sedge Wren	Aves	N	S	Grasslands and savanna, especially where wet or boggy.
<i>Falco peregrinus</i>	Peregrine Falcon	Aves	N	E	Various open situations, especially where there are suitable nesting cliffs.

Scientific Name	Common Name	Class	US Status	KY Status	Habitat
<i>Fulica americana</i>	American Coot	Aves	N	E	Freshwater lakes, ponds, marshes, and larger rivers.
<i>Gallinula galeata</i>	Common Gallinule	Aves	N	T	Freshwater marshes, canals, quiet rivers, lakes, ponds, primarily in areas of emergent vegetation and grassy borders.
<i>Junco hyemalis</i>	Dark-eyed Junco	Aves	N	S	Various sorts of coniferous, mixed, and deciduous forests.
<i>Lophodytes cucullatus</i>	Hooded Merganser	Aves	N	T	Streams, lakes, swamps, and marshes.
<i>Pandion haliaetus</i>	Osprey	Aves	N	S	Rivers, lakes, and reservoirs.
<i>Passerculus sandwichensis</i>	Savannah Sparrow	Aves	N	S	Wide range of vegetation types including marshes, bogs, grassy meadows, and native prairie.
<i>Peucaea aestivalis</i>	Bachman's Sparrow	Aves	N	E	Habitat specialist. Historically found in mature to old growth southern pine woodland subject to frequent growing-season fires.
<i>Phalacrocorax auritus</i>	Double-crested Cormorant	Aves	N	T	Open water habitats such as lakes and large rivers.
<i>Podilymbus podiceps</i>	Pied-billed Grebe	Aves	N	E	Freshwater lakes, ponds, and marshes.
<i>Sitta canadensis</i>	Red-breasted Nuthatch	Aves	N	E	Coniferous and mixed forest, open woodland, parks, scrub, and riparian woodland.
<i>Thryomanes bewickii</i>	Bewick's Wren	Aves	N	S	Brushy areas, thickets, open and riparian woodland, and overgrown fields.
<i>Tyto alba</i>	Barn Owl	Aves	N	S	Fields of dense grass, open and partly open country, often around human habitation.
<i>Vermivora chrysoptera</i>	Golden-winged Warbler	Aves	N	T	Shrubby habitats such as clear-cuts and wet thickets as well as open woodlands.
<i>Pseudanophthalmus catoryctos</i>	Lesser Adams Cave Beetle	Insecta	N	E	Caves.
<i>Pseudanophthalmus pholeter</i>	Greater Adams Cave Beetle	Insecta	N	E	Caves.

Scientific Name	Common Name	Class	US Status	KY Status	Habitat
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	Mammalia	N	S	Forested regions, hibernation in caves or similar sites.
<i>Mustela nivalis</i>	Least Weasel	Mammalia	N	S	Habitat varies geographically and includes open forests, farmlands and cultivated areas, grassy fields and meadows, riparian woodlands, hedgerows, scrub, and sometimes rural residential areas.
<i>Myotis grisescens</i>	Gray Myotis	Mammalia	E	T	Exclusively restricted to caves throughout the year with foraging along streams.
<i>Myotis septentrionalis</i>	Northern Myotis	Mammalia	T	E	Forested landscapes with hibernation in caves.
<i>Myotis sodalis</i>	Indiana Bat	Mammalia	E	E	Forested landscapes with hibernation in caves.
<i>Nycticeius humeralis</i>	Evening Bat	Mammalia	N	S	Deciduous and mixed forest interspersed with cultivated areas.
<i>Ursus americanus</i>	American Black Bear	Mammalia	N	S	Forests and nearby openings, including forested wetlands.
<i>Eumeces anthracinus</i>	Coal Skink	Reptilia	N	T	Humid wooded areas with abundant leaf litter and loose rocks.
<i>Heteranthera limosa</i>	Blue Mud-plantain	Vascular Plant	N	S	Moist soil environments or wetland areas.
<i>Bolboschoenus fluviatilis</i>	River Bulrush	Vascular Plant	N	E	Moist soil environments or wetland areas.
<i>Trifolium stoloniferum</i>	Running Buffalo Clover	Vascular Plant	E	T	Somewhat open areas with partial shade and periodic disturbance such as partly shaded woodlots, mowed areas, and along streams and trails.
<i>Bouteloua curtipendula</i>	Side-oats Grama	Vascular Plant	N	S	Dry upland areas such as prairies and open woodlands.
<i>Dryopteris carthusiana</i>	Spinulose Wood Fern	Vascular Plant	N	S	Various woodland habitats.
<i>Ranunculus ambigens</i>	Waterplantain Spearwort	Vascular Plant	N	S	Marshes, ponds and wetland areas.
<i>Physaria globosa</i>	Short's Bladderpod	Vascular Plant	E	N	Steep, rocky wooded slopes near rivers or streams.

Note: Yellow shading denotes federally listed species.

Status Under the US Endangered Species Act	Abbreviation
<i>Endangered</i>	E
<i>Threatened</i>	T
<i>Usually indicates that the taxon does not have any federal status. However, because of potential lag time between publication in the Federal Register and entry in the central databases and refresh of this website, some taxa may have a status which does not yet appear</i>	N or Blank

Kentucky State Nature Preserves Commission Status	Abbreviation
<i>Endangered</i>	E
<i>Threatened</i>	T
<i>Special Concern</i>	S
<i>Historic</i>	H
<i>None</i>	N or Blank

Resources

Kentucky Department of Fish & Wildlife Resources. Species Information. NatureServe Explorer.
<http://explorer.natureserve.org>. December 4, 2015.

Kentucky State Nature Preserves Commission. Data Request. December 4, 2015.

US Fish & Wildlife Service. IPac-Information, Planning, and Conservation.
<http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action>. December 7, 2015.

Potential UST / Hazmat Site: US EPA EnviroMapper, US EPA Cleanups in My Community, Kentucky Division of Waste Management, Kentucky Division of Waste Management Underground Storage Tank Branch. December 2, 2015; December 4, 2015.
Landfill: Solid Waste Landfills in Kentucky. Kentucky Division of Waste Management. December 3, 2015; December 4, 2015.
Oil and Gas Well: KGS Oil and Gas Wells in Kentucky. Kentucky Geological Survey. December 3, 2015.
Permitted Water Withdrawal: Permitted Water Withdrawals. Kentucky Division of Water. December 2, 2015.
Stream: National Hydrology Dataset. US Geological Survey. February 21, 2003.
FEMA 100-year Floodplain: Flood Map Service Center. FEMA. US Department of Homeland Security. October 2, 2012.
NWI Wetland: National Wetlands Inventory. US Fish and Wildlife Service. May 31, 2001.
Hydric Soil: Kentucky Soils Data. USDA – NRCS. December 2012.
County Line: County Boundary Lines of Kentucky. Kentucky Geography Network. January 25, 1999.
Study Area: Parsons Brinkerhoff data. September 18, 2015.
Basemap: Esri, DeLorme, HERE, USGS, Intermap, IPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, TomTom. 2014.

