

June 27, 2025

Mr. Joshua Brown
joshubrown@pa.gov

Pennsylvania Fish and Boat Commission
Natural Diversity Section
450 Robinson Lane
Bellefonte, PA 16823-9620

RE: Northern Red-bellied Cooter Habitat Assessment Report
Rock Hill Quarry
East Rockhill Township, Bucks County, Pennsylvania
PFBC SIR# 59461

Dear Mr. Brown:

The following report details the results of a Northern Red-bellied Cooter (*Pseudemys rubriventris*) Habitat Assessment conducted at the above-referenced site on May 19, 2025, on behalf of Heidelberg Materials. Included in the following is a description of study methodologies and results along with the supportive information provided as enclosures: project location map, project area aerial photograph, aerial photograph depicting aquatic habitats, and photograph log.

Project Background

Skelly and Loy, Inc., A Terracon Company (Skelly and Loy), conducted a Phase 1 Northern Red-bellied Cooter Habitat Assessment on May 19, 2025, at the Heidelberg Materials Rock Hill Quarry in East Rockhill Township, Bucks County, Pennsylvania. Due to the proposed project specifications, a Pennsylvania Natural Diversity Inventory search (PNDI Search No. 795235_1) was conducted by the applicant and a potential conflict was identified with a species under the jurisdiction of the Pennsylvania Fish and Boat Commission (PFBC). Subsequently, the PFBC requested a Northern Red-bellied Cooter Habitat Assessment in their April 2, 2025, Species Impact Review (SIR) letter (SIR# 60586). The study area for the Phase 1 habitat assessment included all lands within the approximately 100-acre project area.

Project Area and Description

The Rock Hill Quarry is located at 2055 North Rockhill Road in East Rockhill Township, Bucks County, Pennsylvania (40.404115° latitude and -75.299602° longitude), as depicted on the

Project Location Map (Enclosure A). The site has been an active quarry since the late 19th century. An aerial photo of the site is included in Enclosure B and an aerial photograph depicting onsite aquatic habitats for the project is included in Enclosure C.

Natural History of Listed Species

The Northern Red-bellied Cooter (RBC) is a large aquatic turtle that is protected as a state-threatened species under the Pennsylvania Fish and Boat Code. The Pennsylvania Fish and Boat Commission (PFBC) is the state regulatory agency with jurisdiction over the Pennsylvania Fish and Boat Code. Bucks County is located within the extant range of the species. The turtle typically inhabits permanent bodies of water such as streams, rivers, ponds, and lakes. The species nests up to 1,000 feet from aquatic habitats in fields, shrublands, roadside openings, and even gravel parking lots.

Habitat Assessment Methodology

Brandon M. Ruhe (a PFBC Qualified RBC Surveyor) of Skelly and Loy conducted the habitat assessment. Prior to the field investigations, topographic maps and aerial photographs of the project area were reviewed. This included review of historical aerial imagery from the 1930's to present. The habitat investigation was conducted on May 19, 2025. The assessment focused on any apparent waters/wetlands and upland habitats found within the Rock Hill Quarry permit boundaries. Refer to Enclosure D for photographs of assessed habitats and general site conditions.

Results

The subject site is embedded within a rural landscape. A significant amount of modern and historical infrastructure exists within the study area, including railroad tracks, gravel roads, quarry operation structures, and a large (~20 acres), previously excavated quarry (currently inundated). Woodlands exist throughout the periphery of the study area to the north, east, and west of the quarry. The study area slopes from west to east, with the summit of Rock Hill within several hundred meters of the northeastern study area boundary.

Six main aquatic habitat features are contained within the study area. Five of these habitats are ponded water habitats, including one quarry pond and five stormwater/pump-water basins that were constructed in approximately 2019. Two dry stormwater basins exist in the southwestern and northwestern portions of the permit area. Due to the absence of water (or any apparent moisture) in these basins at the time of the habitat investigation, they are not considered in this report as aquatic habitats. A drainage feature, constructed circa 2019, that conveys water from three of the stormwater basins is also within the study area.

Pond 1

Pond 1 is a large (~20 acres) quarry pit waterbody and largest aquatic feature found within the study area. The inundated quarry pit is quite deep (the bottom is not visible) and depth estimated at greater than 50 feet. Pond 1 is steep-sided, with near vertical highwalls, and the bottom quickly drops off from a narrow, stony, littoral edge. The pond does not contain basking logs or substantial shallow areas. No aquatic vegetation nor submerged aquatic vegetation beds were noted in the pond. Disturbed areas (gravel roads and lots) and reclaimed meadows abut the pond to the west and south.

Despite the presence of adjacent potentially suitable nesting habitat, Pond 1 is not RBC habitat due to the apparent absence of submerged aquatic vegetation, steep banks, and absence of basking habitat.

Pond 2

Pond 2 is a small (approximately 0.15-acre) stormwater feature in the southern tip of the permit area. The depth of the pond is unknown but estimated at approximately two feet. The recently constructed pond basin is ringed in crushed modified stone and contains a stone substrate. Pond 2 contains spatterdock (*Nuphar* sp.) and is enclosed by giant reed (*Phragmites australis*) and broadleaf cattail (*Typha latifolia*). Reclaimed meadows and gravel/stone rock fields are to the north and east of the pond. Despite the presence of adjacent potentially suitable nesting habitat, Pond 2 is not potentially suitable RBC habitat due to the presence of a rocky substrate, shallow depth, small size, and recent construction.

Pond 3

Pond 3 is a small (approximately 0.25-acre) stormwater/pump-water feature in the southwestern portion of the permit area. The depth of the pond is unknown but the eastern portion of the basin appears to be greater than three feet in times of high water. The recently constructed pond basin is ringed in crushed modified stone and contains a stone substrate. The pond consists of several channels and is used for the collection and conveyance of quarry pit discharge during times of mine operation. The western portion of the pond is shallow (less than two feet in depth) with open water choked by giant reed. The eastern portion of Pond 3 contains spatterdock and is enclosed by woody vegetation. Potentially suitable basking habitat is absent. The pond appears to be significantly shaded during the growing season due to the mature trees that grow along its steep banks. Reclaimed meadows and gravel/stone rock fields are to the north and east of the pond. Despite the presence of adjacent potentially suitable nesting habitat, Pond 3 is not potentially suitable RBC habitat due to the presence of a rocky substrate, small size, absence of basking habitat, and recent construction.

Pond 4

Pond 4 is a small (approximately 0.3-acre) stormwater feature in the western portion of the permit area. The depth of the pond is unknown but appears to be greater than two feet in times of high water. The recently constructed pond basin is ringed in crushed modified stone and contains a stone substrate. Pond 4 contains spatterdock and is enclosed by cattail, giant reed, and willows (*Salix* sp.). Potentially suitable basking habitat is absent. Reclaimed meadows and gravel/stone rock driveways are to the north, east, south, and west of the pond. Despite the presence of adjacent potentially suitable nesting habitat, Pond 4 is not potentially suitable RBC habitat due to the presence of a rocky substrate, small size, absence of basking habitat, and recent construction.

Pond 5

Pond 5 is a small (approximately 0.7-acre) stormwater feature in the western portion of the permit area. The depth of the pond is unknown but appears to be greater than two feet in times of high water. The recently constructed pond basin is ringed in crushed modified stone and contains a stone substrate. Pond 5 contains spatterdock and is enclosed by cattail, giant reed, and willows. Potentially suitable basking habitat is absent. Reclaimed meadows and gravel/stone rock driveways are to the north, east, south, and west of the pond. Despite the presence of adjacent potentially suitable nesting habitat, Pond 5 is not potentially suitable RBC habitat due to the presence of a rocky substrate, small size, absence of basking habitat, and recent construction.

Drainage Feature

A single, constructed drainage feature exists along the western boundary of the permit area. This drainageway extends for approximately 1,500 feet, beginning as an outflow from stormwater/pump-water basin Pond 3 and was constructed in approximately 2019. The narrow (2 to 4 feet in width) water conveyance is contained within a defined crushed/modified stone channel. The drainageway passes through a series of culverts and pipes as it flows north and offsite, and contained water depths that ranged from three to ten inches. The onsite water-course is not RBC habitat due to its shallow depth, recent construction, and stony channel.

Amphibians and Reptiles Observed

The following species of amphibians and reptiles were observed during the habitat investigation:

- American Toad (*Anaxyrus americanus*)
- Snapping Turtle (*Chelydra serpentina*)
- Painted Turtle (*Chrysemys picta* ssp.)
- Spotted Turtle (*Clemmys guttata*)
- Gray Treefrog (*Hyla versicolor*)
- Bullfrog (*Lithobates catesbeianus*)
- Green Frog (*Lithobates clamitans*)
- Pickerel Frog (*Lithobates palustris*)
- Box Turtle (*Terrapene carolina*)

Opinions & Recommendations

A Northern Red-bellied Cooter habitat assessment was conducted by Skelly and Loy's Brandon M. Ruhe, a Qualified Northern Red-bellied Cooter Surveyor (as designated by the PFBC). This assessment was completed in accordance with regulatory agency recommendations and previous experience conducting Northern Red-bellied Cooter research. Based upon the scope of work and the information described above, Skelly and Loy relates the following observations and opinions:

- 1) Upland habitats within the permit area contain potentially suitable Northern Red-bellied Cooter nesting habitat due to the presence of reclaimed meadows and gravel driveways/parking areas.
- 2) No Aquatic habitat within the permit area contains the characteristics necessary for Northern Red-bellied Cooter.
- 3) As a result of the above, no potentially suitable Northern Red-bellied Cooter habitat was found within the subject site.
- 4) Due to the apparent absence of Northern Red-bellied Cooter habitat within the Rock Hill Quarry site, no additional studies related to the species are recommended for the proposed project.

We appreciate your time and attention related to this important project and respectfully request written concurrence with our findings for PNDI clearance. Please contact Brandon Ruhe (610-844-5440) or Ben Berra (717-576-1168) if you have any questions regarding this summary report.

Sincerely,
Skelly and Loy, Inc., A Terracon Company



Brandon Ruhe
Senior Scientist
Qualified Northern Red-bellied Cooter Surveyor

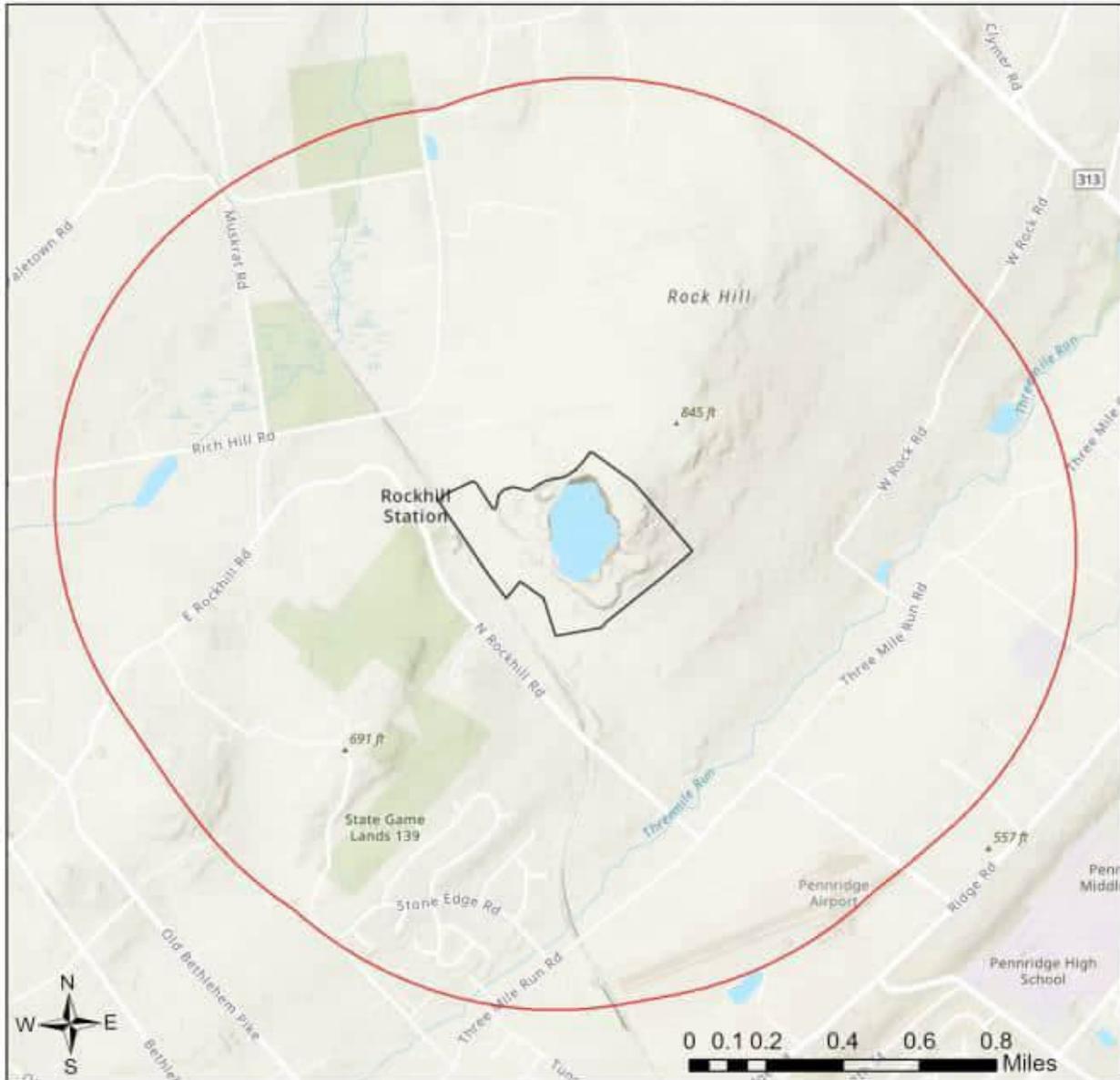


Ben Berra
Principal
Department Manager, Natural Resources

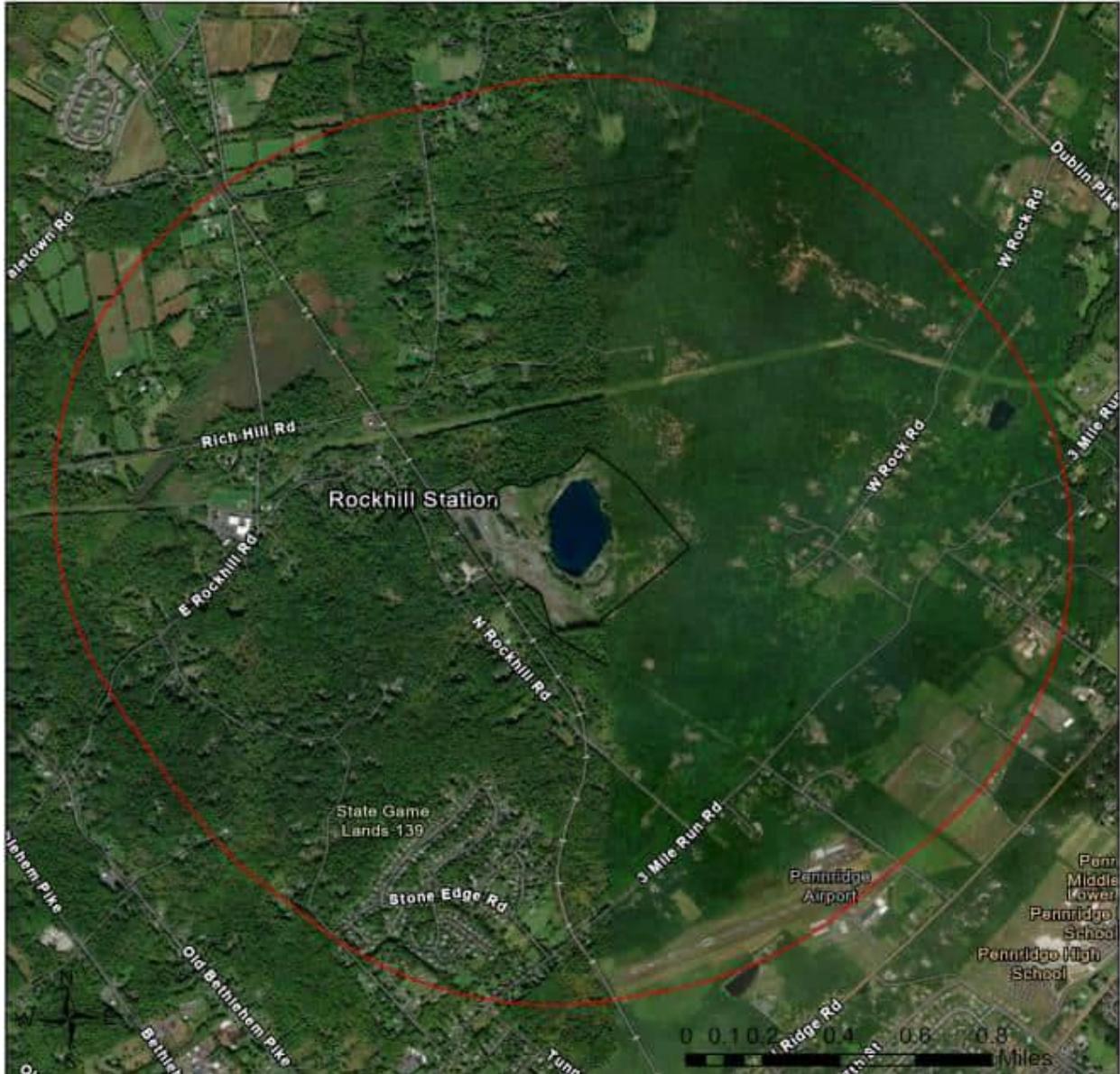
Enclosures

- A - Project Location Map
- B - Project Area Aerial Photograph
- C - Aquatic Features Aerial Photograph
- D - Photograph Log

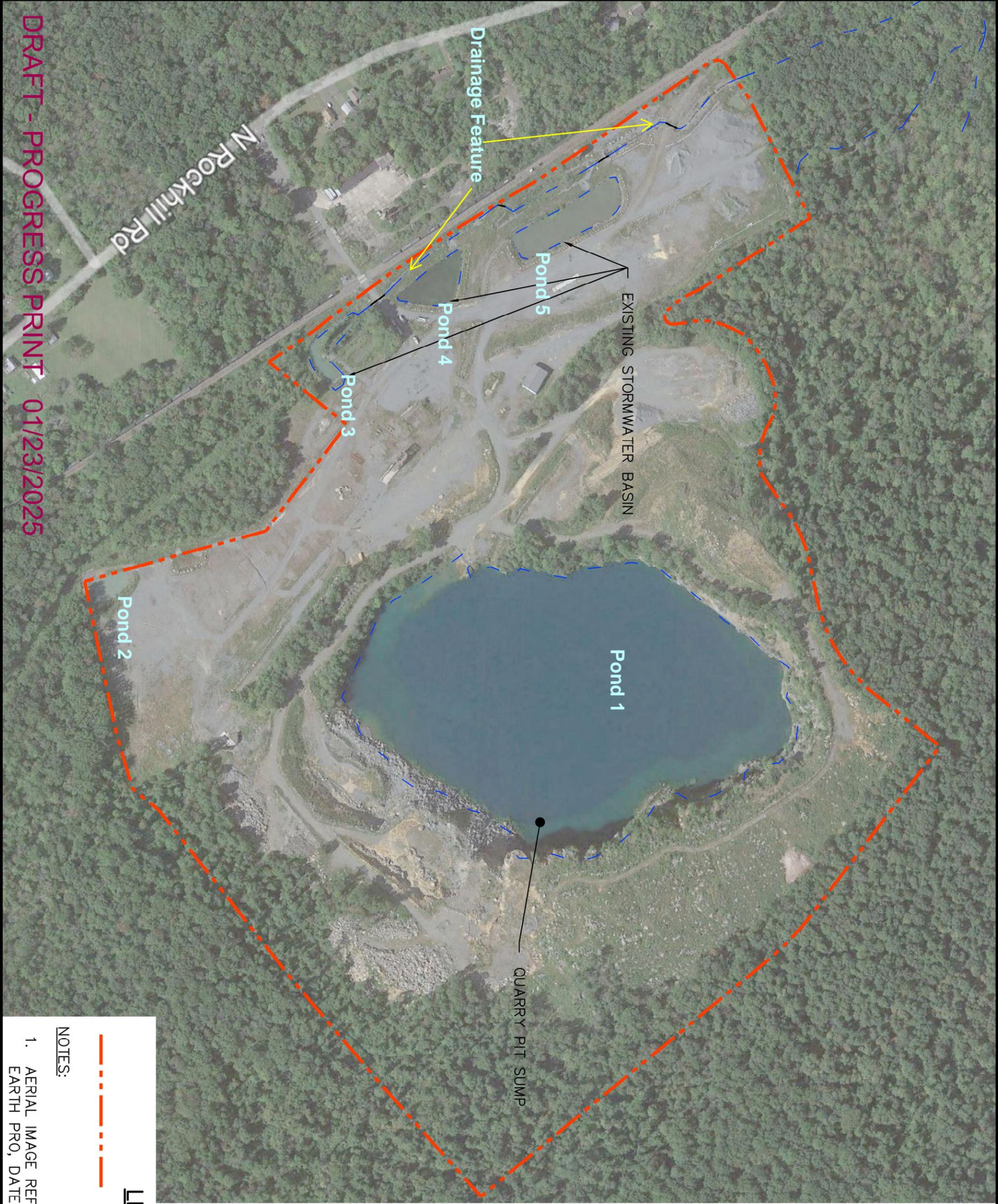
ENCLOSURE A
PROJECT LOCATION MAP



ENCLOSURE B
PROJECT AREA AERIAL PHOTOGRAPH



DRAFT - PROGRESS PRINT 01/23/2025



LEGEND

--- SMP BOUNDARY

NOTES:

1. AERIAL IMAGE REFERENCED FROM GOOGLE EARTH PRO, DATED SEPTEMBER 21, 2020.

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DRAWN BY: <i>JTK</i>	CHECKED BY: <i>MSW</i>
DATE: 6/17/22	PROJECT NO: 061003.052
DRAWING SCALE: 1" = 300'	

FIGURE 1
MAP VIEW OF AREA

HEIDELBERG MATERIALS NORTHEAST LLC
SMP NO. 7974SM1
EAST ROCKHILL TOWNSHIP, BUCKS COUNTY
PENNSYLVANIA

ENCLOSURE D
PHOTOGRAPH LOG



PHOTO 1: Example of onsite potentially suitable Northern Red-bellied Cooter nesting habitat found onsite.



PHOTO 2: View north of onsite inundated quarry pit (Pond 1). Note the near vertical highwalls, depth, and absence of basking habitat.



PHOTO 3: View north of Pond 3.



PHOTO 4: View south of Pond 3.



PHOTO 5: View south of Pond 4.



PHOTO 6: View north of Pond 5.



PHOTO 7: View west of onsite drainage feature.