Wetland Delineation and Bog Turtle Habitat (Phase 1) Survey Report

FOR

Water Gap Wellness – Accessory Buildings

Smithfield Township, Monroe County, Pennsylvania

Negative Phase 1 Survey Results by Qualified Bog Turtle Surveyor: USFWS Courtesy Copy

Date: September 3, 2024
Project #: 1022419.004-02-08WETEA

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Professional Scientist
Qualified Bog Turtle Surveyor
Environmental Department

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MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

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Project #1022419.004 September 3, 2024

WETLAND DELINEATION AND BOG TURTLE HABITAT (PHASE 1) SURVEY REPORT

FOR

WATER GAP WELLNESS – ACCESSORY BUILDINGS

Smithfield Township, Monroe County, Pennsylvania

1.0 INTRODUCTION

Barry Isett & Associates, Inc. (Isett), was retained by Water Gap Wellness to identify regulated waters and conduct a Bog Turtle Habitat (Phase 1) Survey for wetlands in and within 300 feet (ft.) of a 3.22-acre (ac.) project area at the existing Water Gap Country Club on Mountain Road in Smithfield Township, Monroe County, Pennsylvania (PA). The site consists of a maintained golf course, forested areas, a wetland and watercourses. A site location map is provided as Appendix A.

Isett conducted site investigations on February 1, April 16, 17, and 23, 2024. The weather was overcast and sunny with temperatures ranging from the 30s (˚F) to the 60s (˚F). One palustrine emergent (PEM) and palustrine scrub/shrub (PSS) wetland complex (Wetland B) was identified and delineated on the site. Wetland A was previously identified and determined to be outside of the 300-ft. buffer. A wetland location map is provided as Appendix B.

2.0 METHODOLOGY

The site was investigated for wetlands and other regulated waters in accordance with the *1987 Corps of Engineers Wetlands Delineation Manual* (1987 Manual) and the *2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Regional Supplement). The 1987 Manual and Regional Supplement are the current Federal delineation manuals used in the Clean Water Act (CWA) Section 404 regulatory program for the identification and delineation of wetlands. According to these sources, positive evidence of hydrophytic vegetation, hydric soils and wetland hydrology is required to make a wetland determination. The CWA is the federal water pollution control act and Section 404 of the CWA regulates discharge of dredged or fill material into Waters of the United States.

Waters of the United States include wetlands, streams and deepwater aquatic habitats and are regulated within the Commonwealth of PA by the United States Environmental Protection Agency, the United States Army Corps of Engineers (USACE) and the PA Department of Environmental Protection (PA DEP).

The 1987 Manual defines wetlands as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wetlands generally include swamps, marshes, bogs and similar areas. The 1987 Manual defines deepwater aquatic habitats as areas that are permanently inundated at mean annual water depths greater than 6.6 ft. or permanently inundated less than 6.6 ft. in depth that do not support rooted-emergent or woody plant species.

The PA Code, Chapter 105 *Dam Safety and Waterway Management* of Title 25 *Environmental Protection*, defines a stream as a watercourse and further defines a watercourse as a channel or conveyance of surface water having defined bed and banks, whether natural or artificial, with perennial or intermittent flow. Title 25 Chapter 87 *Surface Mining of Coal* of the PA Code defines an intermittent stream as a body of water flowing in a channel or bed composed primarily of substrates associated with flowing water, which, during periods of the year, is below the local water table and obtains its flow from both surface runoff and groundwater discharges. Chapter 87 further defines a perennial stream as a body of water flowing in a channel or bed composed primarily of substrates associated with flowing waters and is capable, in the absence of pollution or other manmade stream disturbances, of supporting a benthic macroinvertebrate community which is composed of two or more recognizable taxonomic groups of organisms which are large enough to be seen by the unaided eye and can be retained by a United States Standard No. 30 sieve and live at least part of their life cycles within or upon available substrates in a body of water or water transport system.

Isett conducted preliminary data gathering and onsite routine determinations as described in the 1987 Manual and in subsequent sections of this report. Wetland boundaries were marked in the field with survey ribbons and labeled sequentially.

The Phase 1 Survey was requested by the U.S. Fish and Wildlife Service (USFWS) as result of PA Natural Diversity Inventory (PNDI) search 805812. Isett conducted the Phase 1 Survey in accordance with the USFWS *Guidelines for Bog Turtle Surveys for the Northern Population Range*, revised April 29, 2020. According to the guidelines, evidence of potential bog turtle habitat includes the presence of suitable hydrology, suitable soils and suitable vegetation.

3.0 PROPERTY DESCRIPTION

The project site is an approximate 3.22-ac. area at the Water Gap County Club. The project site plus 300 ft. consists of a maintained golf course, forested areas, a wetland, and watercourses. Golf course, forested areas, and residential properties surround the site.

The National Wetlands Inventory aerial imagery provided by the USFWS depicts a riverine feature to the north of the project site. According to the U.S. Department of Agriculture National Resource Conservation Service (NRCS) Web Soil Survey, soils mapped onsite consist of Bath channery silt loams, 0 to 25 percent slopes (BaB, BaC, BbB, and BbC), Benson-rock outcrop complex, 8 to 25 percent slopes (BeC), Chippewa and Norwich soils, 0 to 8 percent slopes (CnB), Lackawanna and Bath soils, steep (LBE), and Mardin very stony silt loam, 0 to 8 percent slopes (MbB). Bath, BeC, and LBE soils are described as well drained. CnB soils are described as poorly drained and hydric. MbB soils are described as moderately well drained and with hydric components. The Custom Soil Resource Report Map for the site is provided as Appendix C.

The U.S. Geological Survey (USGS) 2021 National Map depicts a site elevation of approximately 450 to 550 ft. with an unnamed tributary (UNT) to the north and Cherry Creek beyond. The topography of the site is sloping to the northwest. Waters on the site drain to Cherry Creek, which is listed 25 Pa Code Chapter 93 *Water Quality Standards* designated water use protection for cold water fishes and migratory fishes (CWF, MF).

A PNDI search on January 25, 2024, (PNDI-805812) indicates potential impacts to federally threatened and endangered species and/or special concern species and resources within the project

area. The USFWS specifically requests a Phase 1 Survey for all wetlands in and within 300 ft. of the project area. The PNDI Receipt is provided as Appendix D.

Water Gap Wellness is proposing stormwater management for land disturbance associated with a recently constructed accessory building. An after-the-fact National Pollutant Discharge Elimination System (NPDES) permit has been required and is being prepared by Isett's Civil Engineering Department. Photographs of the site are provided as Appendix E.

4.0 SITE OBSERVATIONS

On February 1, April 16, 17, and 23, 2024, Isett investigated for regulated waters in and within 300 ft. of the project site and delineated one wetland (Wetland B). Two watercourses were identified in and near the 300-ft. buffer. Isett conducted the Phase 1 Survey and a stream determination on April 23, 2024.

A watercourse (UNT to Cherry Creek) conveys perennial flow from the south to a stream enclosure located west of the project area. The UNT (at its outfall) is shown near the 300-ft. buffer on the attached wetland location map. It enters another stream enclosure at a gravel road near Wetland B and outfalls to the north within a forested area. Further northwest a forested wetland (Wetland A) was identified and later determined to be outside of the 300-ft. buffer. The UNT is approximately 2 to 12 ft. wide with a gravel and cobble substrate. Water observed in the channel was approximately four inches deep.

Another UNT conveys intermittent flow from within the project area to the northwest. The channel was flagged along top-of-banks with 15 flags (C1-1 to C1-7 and C1-101 to C1-108) from its source to a culvert pipe within a forested area. A stream identification worksheet (Appendix F) was completed to determine the type of flow within the channel. The channel forms at boulders near the edge of a fairway hillside which appears to be a spring. The channel is approximately 1 to 2 ft. wide with a gravel and cobble substrate. Water observed in the channel was approximately one inch deep.

Wetland B is a PEM and PSS wetland located on the western portion of the 300-ft. buffer and just north of a gravel access road. Wetland B was delineated with 24 flags (W-B1 to W-B24) in the field. A rivulet was observed within Wetland B that conveys intermittent flow to the northwest, bed and bank is lost outside of the wetland and the surface water was observed to infiltrate into the ground. The rivulet is approximately one foot wide with a gravel substrate. Approximately one inch of water was observed within the rivulet. Dominant vegetation within Wetland B consists of northern spicebush (*Lindera benzoin*, FACW), rambler rose (*Rosa multiflora*, FACU), fowl blue grass (*Poa palustris*, FACW), sensitive fern (*Onoclea sensibilis*, FACW), fringed sedge (*Carex crinita*, FACW), arrow-leaf tearthumb (*Persicaria sagittata*, OBL), purple-leaf willowherb (OBL), lamp rush (*Juncus effusus*, OBL), spotted touch-me-not (*Impatiens capensis*, FACW) and Japanese silt grass (*Microstegium vimineum*, FAC). Soils within Wetland B are a dark gray (10YR 4/1) loam with prominent redox concentrations from 0 to 10 inches. According to the Regional Supplement, the above soil profile description meets hydric soil indicator: Depleted Matrix. Wetland hydrology indicators within Wetland B include surface water, a high-water table, saturation, oxidized rhizospheres on living roots, drainage patterns, shallow aquitard, and FAC-neutral test. Wetland B lacks soft, mucky-like soils required for the bog turtle.

Dominant vegetation within upland areas includes tuliptree (*Liriodendron tulipifera*, FACU), American elm (*Ulmus americana*, FACW), black walnut (*Juglans nigra*, FACU), northern spicebush, rambler rose, garlic mustard (*Alliaria petiolata*, FACU), Japanese stilt grass, common chickweed (*Stellaria media*, FACU, crow garlic (*Alium vineale*, FACU), garden yellow-rocket (*Barbarea vulgaris*, (FAC), mother-of-the-evening (*Hesperis matronalis*, FACU), Canadian goldenrod (*Solidago canadensis*, FACU), pointed broom sedge (*Carex scoparia*, FACW), Indian-strawberry (*Potentilla indica*, FACU), filed thistle (*Cirsium discolor*, UPL), fowl blue grass and Kentucky blue grass (*Poa pratensis*, FACU).

Soils observed are a very dark grayish brown (10YR 3/2) loam and a brown (10YR 5/3 and 10YR 4/3) loam with and without mottles.

Other areas with wetland characteristics were observed; however, they lacked one or more wetland indicators, including hydrophytic vegetation, hydric soils and wetland hydrology; and therefore, were deemed non-wetland under the 1987 Manual and Regional Supplement.

Wetland Determination Data Sheets are provided as Appendix G. Phase 1 Bog Turtle Habitat Survey Data Forms are provided as Appendix H.

5.0 CONCLUSION

Isett investigated for regulated waters in and within 300 ft. of a 3.22-ac. project site in Smithfield Township, Monroe County, PA. One wetland (Wetland B) was delineated on site as defined by the 1987 Manual. Additionally, two watercourses were identified on the project site.

A Phase 1 Survey was conducted within Wetland B. Wetland B lacks mucky-like soils required for the bog turtle.

The investigation was conducted in accordance with the 1987 Manual and Regional Supplement. The conclusions of this report are based upon the training and experience of the delineator, as well as the findings and observations of site conditions that were apparent at the time of the investigation. An investigator's resume is provided as Appendix I.

A jurisdictional determination is not included as part of this report. Coordination with PA DEP and USFWS is recommended prior to any encroachment or impact to regulated waters.

REFERENCES

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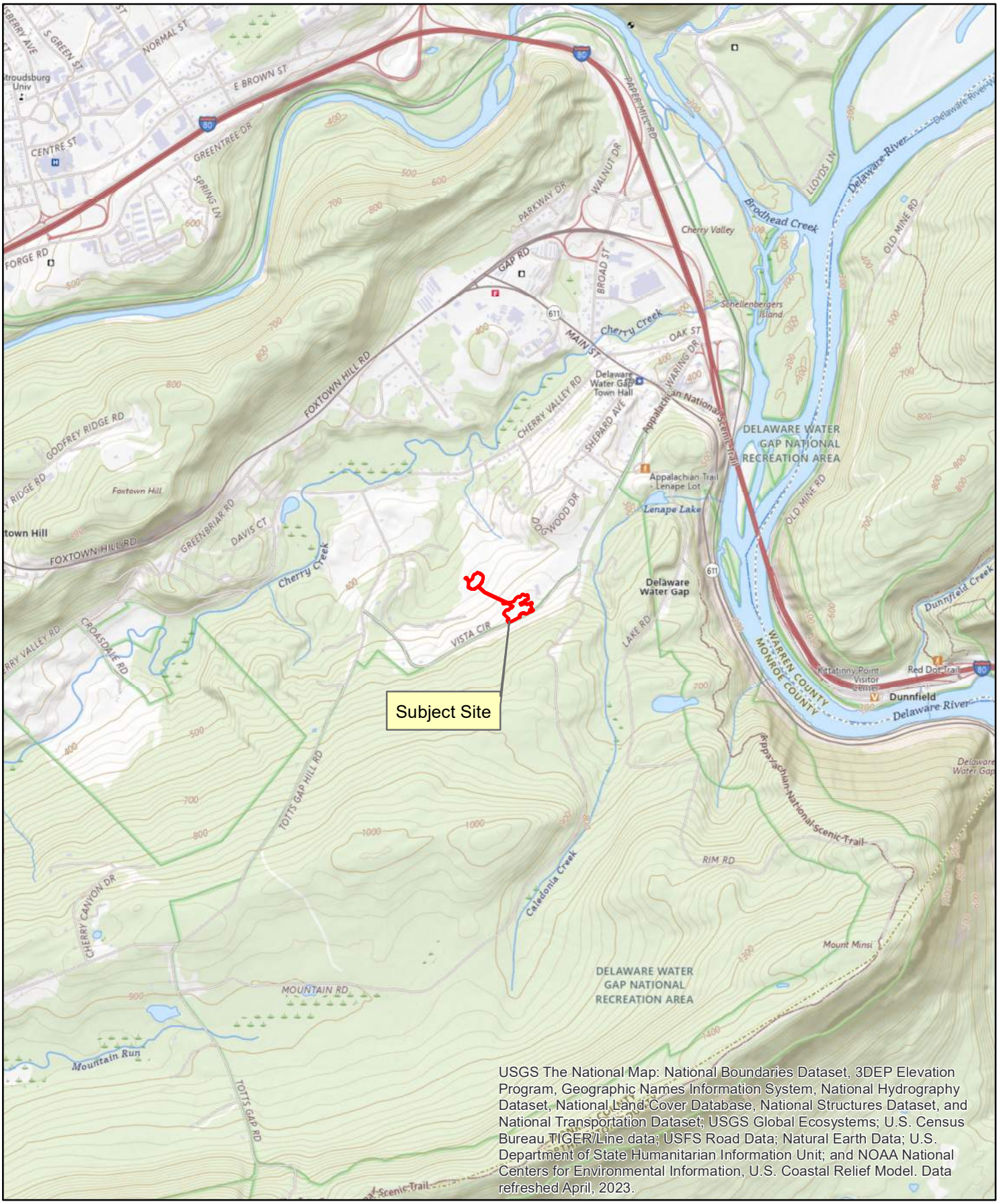
Appendix A



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Feet

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Water Gap Wellness - Accessory Buildings
PEMA Aerial Photograph, 2018
www.pasda.psu.edu

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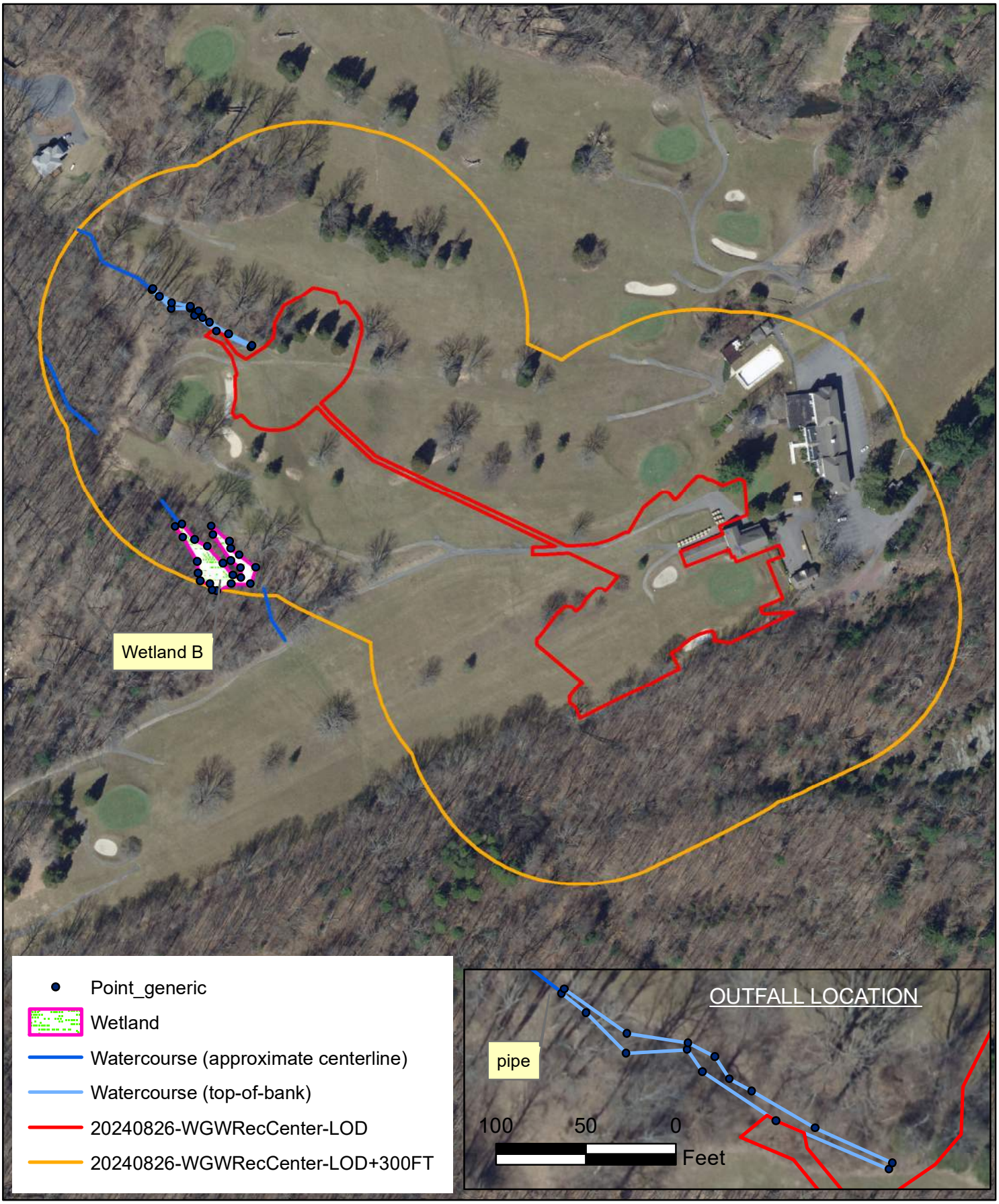
Appendix B



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Water Gap Wellness - Accessory Buildings
PEMA Aerial Photograph, 2018
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Appendix C

Map—Hydric Rating by Map Unit (Water Gap Wellness)

Map Scale: 1:3,550 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

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 1:20,000.

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: Monroe County, Pennsylvania
Survey Area Data: Version 18, Sep 7, 2023

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

Date(s) aerial images were photographed: Jun 3, 2022—Jul 20, 2022

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.

Table—Hydric Rating by Map Unit (Water Gap Wellness)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BaB	Bath channery silt loam, 3 to 8 percent slopes	0	6.1	19.2%
BaC	Bath channery silt loam, 8 to 15 percent slopes	0	6.1	19.2%
BbB	Bath channery silt loam, 0 to 8 percent slopes, extremely stony	0	2.4	7.5%
BbC	Bath channery silt loam, 8 to 25 percent slopes, extremely stony	0	3.3	10.3%
BeC	Benson-Rock outcrop complex, 8 to 25 percent slopes	0	3.6	11.2%
CnB	Chippewa and Norwich soils, 0 to 8 percent slopes, extremely stony	90	3.7	11.7%
LBE	Lackawanna and Bath soils, steep, rubbly	0	5.6	17.6%
MbB	Mardin very stony silt loam, 0 to 8 percent slopes	4	1.1	3.3%
Totals for Area of Interest			**31.9**	**100.0%**

Rating Options—Hydric Rating by Map Unit (Water Gap Wellness)

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

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Appendix D

1. PROJECT INFORMATION

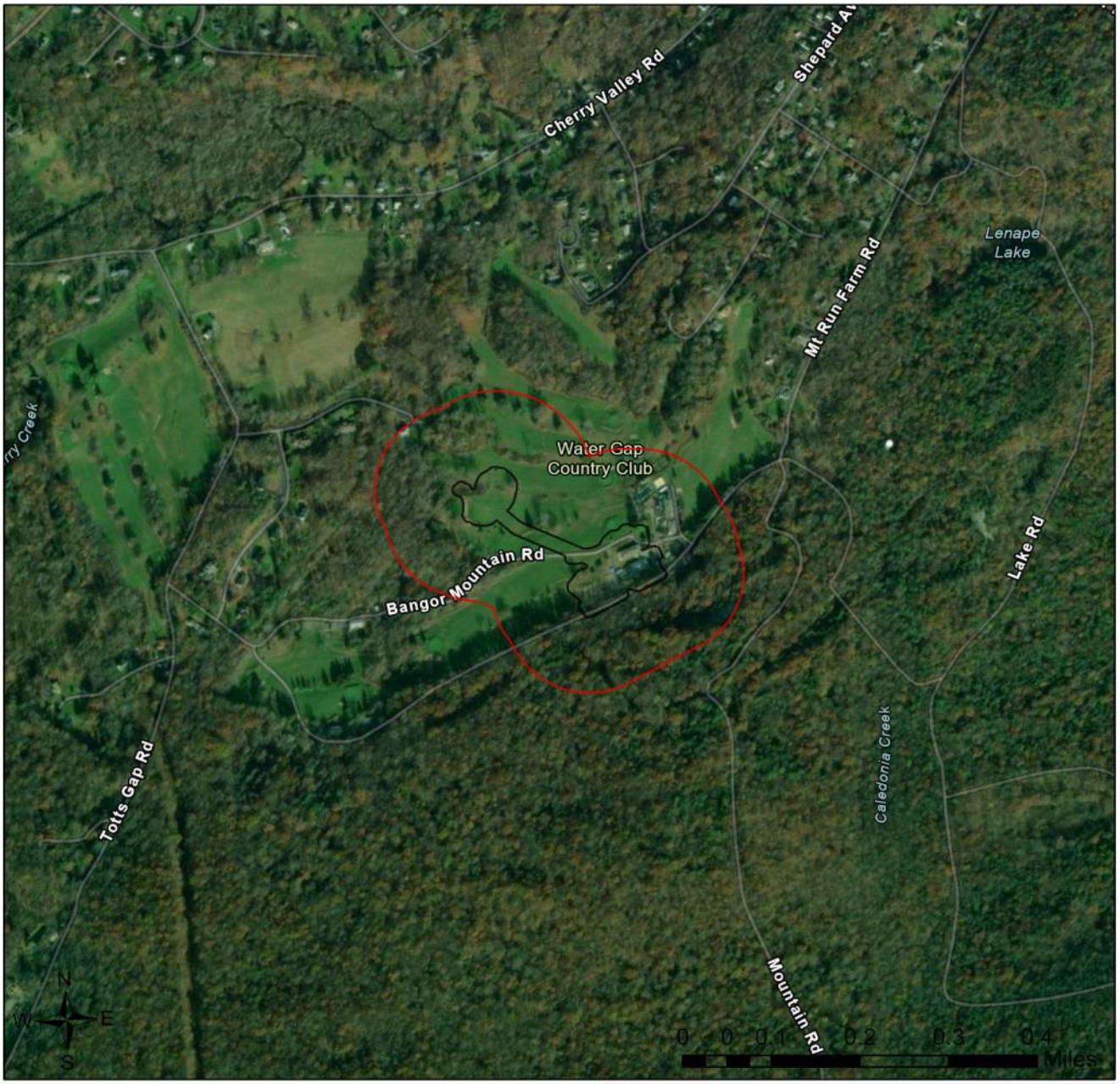
Project Name: **Water Gap Wellness Accessory Buildings**
Date of Review: **8/27/2024 11:26:06 AM**
Project Category: **Development, Other**
Project Area: **6.22 acres**
County(s): **Monroe**
Township/Municipality(s): **SMITHFIELD TOWNSHIP**
ZIP Code:
Quadrangle Name(s): **STROUDSBURG**
Watersheds HUC 8: **Middle Delaware-Mongaup-Brodhead**
Watersheds HUC 12: **Cherry Creek**
Decimal Degrees: **40.974270, -75.149805**
Degrees Minutes Seconds: **40° 58' 27.3717" N, 75° 8' 59.2973" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	**Potential Impact**	**MORE INFORMATION REQUIRED, See Agency Response**

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Water Gap Wellness Accessory Buildings

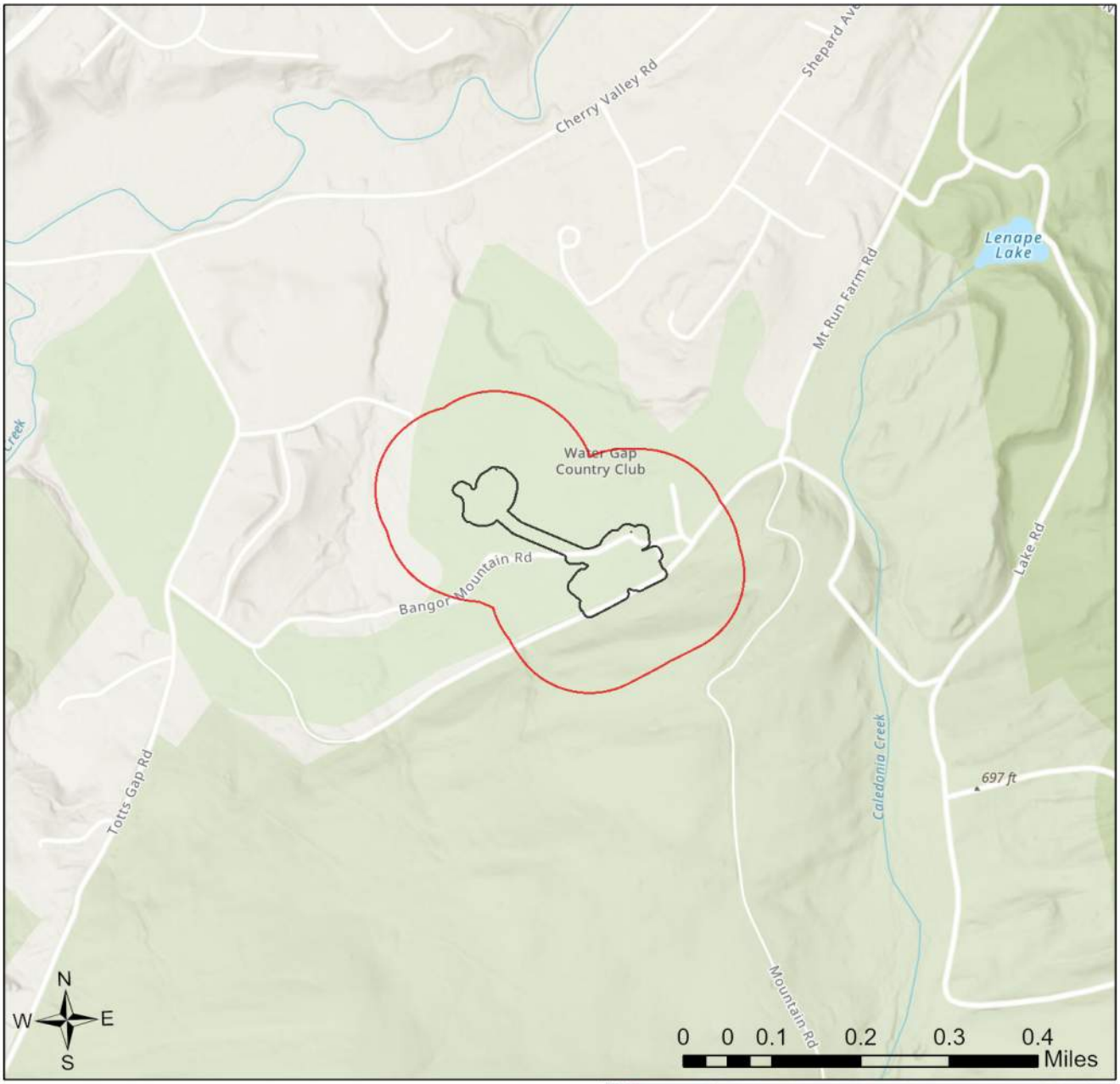


Buffered Project Boundary

Project Boundary

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Water Gap Wellness Accessory Buildings



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

RESPONSE TO QUESTION(S) ASKED

Q1: Which of the following closest describes the proposed project?
Your answer is: No groundwater extraction (e.g., water supply well, well for irrigation, groundwater pumping to facilitate mining, pump-and-treat operation) is proposed in order to implement or support this project.

Q2: Describe how wastewater (effluent) will be handled (select one). For the purpose of this question, wastewater/effluent does not include stormwater runoff. If the project involves solely the renewal or modification of an existing discharge permit (e.g., NPDES permit), select from options 3, 4, 5, or 6 below.
Your answer is: Some or all wastewater/effluent from this project/activity will be discharged on land (e.g., via spray irrigation, drip irrigation, on-lot septic, drain field, leach field), but the discharge will not exceed 1000 gallons/day.

Q3: Accurately describe what is known about wetland presence in the project area or on the land parcel by selecting ONE of the following. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected -- either directly or indirectly -- by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.
Your answer is: Someone qualified to identify and delineate wetlands (holding a natural resource degree or equivalent work experience) has investigated the site, and determined that wetlands ARE located in or within 300 feet of the project area. (A written report from the wetland specialist, and detailed project maps should document this.)

Q4: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).
Your answer is: No forests, woodlots or trees will be affected by the project.

Q5: Is tree removal, tree cutting or forest clearing necessary to implement all aspects of this project?
Your answer is: No

Q6: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?
Your answer is: No

Q7: How many acres of woodland, forest, forested fencerows and trees will be cut, cleared, removed, disturbed or flooded (inundated) as a result of carrying out all aspects or phases of this project? [Round acreages UP to the nearest acre (e.g., 0.2 acres = 1 acre).]
Your answer is: zero acres

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service
RESPONSE:
Information Request: Conduct a Bog Turtle Habitat (Phase 1) Survey in accordance with USFWS Guidelines for Bog Turtle Surveys (April 2020). Evaluate all wetlands within 300 feet of the project area, which includes all areas that will be impacted by earth disturbance or project features (e.g., roads, structures, utility lines, lawns, detention basins, staging areas, etc.). IF THE PHASE 1 SURVEY IS DONE BY A QUALIFIED BOG TURTLE SURVEYOR (see Pennsylvania Qualified Surveyors | FWS.gov): 1) Send positive results to USFWS for concurrence, along with a project description documenting how impacts will be avoided. OR, conduct a Phase 2 survey and send Phase 1 and 2 results to USFWS for concurrence. 2) Send a courtesy copy of negative results to USFWS (label as "Negative Phase 1 Survey Results by Qualified Bog Turtle Surveyor: USFWS Courtesy Copy"). USFWS approval of negative results is not necessary when a qualified surveyor does the survey in full accordance with USFWS guidelines. IF THE PHASE 1 SURVEY IS NOT DONE BY A QUALIFIED SURVEYOR: Send ALL Phase 1 results to USFWS for concurrence, and if potential habitat is found, also send a project description documenting how impacts will be avoided.
As a qualified bog turtle surveyor, I __Michael Ronco__ (name) certify that I conducted a Phase 1 survey of all wetlands in and within 300 feet of the project area on __4/23/2024__(date) and determined that bog turtle habitat is absent.
_____ (Signature)

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email the following information to the agency(s) (see AGENCY CONTACT INFORMATION). Instructions for uploading project materials can be found here. This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies (but not USFWS).
*If information was requested by USFWS, applicants must email, or mail, project information to IR1_ESPenn@fws.gov to initiate a review. USFWS will not accept uploaded project materials.

Check-list of Minimum Materials to be submitted:
____Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.
____A map with the project boundary and/or a basic site plan(particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)
In addition to the materials listed above, USFWS REQUIRES the following
____**SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.
____Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)
____Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Collin Stout
Company/Business Name: Barry Isett & Associates, Inc.
Address: 5420 Crackersport Road
City, State, Zip: Allentown, PA, 18104
Phone:(610) 398-0904 Fax:( )
Email: cstout@barryisett.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Collin R Stout
applicant/project proponent signature

8/27/2024
date

BARRY ISETT & associates INC

MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

Appendix E

Photo #1 – Southern portion of the LOD, looking northeast (2/1/2024).

Photo #2 – Northerly view of Wetland B from flag W-B21 (4/16/2024).

Photo #3 – Northwesterly view of Wetland B, rivulet and PSS area (4/23/2024).

Photo #4 – Watercourse to stream enclosure at gravel road, Wetland B beyond (2/1/2024).

Photo #5 – Southeasterly view of an intermittent watercourse at spring (4/17/2024).

Photo #6 – Northwesterly view of intermittent watercourse (4/17/2024).

BARRY ISETT & associates INC

MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

Appendix F

NC DWQ Stream Identification Form Version 4.11

Date: 4/23/2024	**Project/Site**: Water Gap Wellness Accessory Buildings	**Latitude:** 40.97555
Evaluator: Michael Ronco, Barry Isett & Associates	**County:** Monroe	**Longitude:** -75.15260
Total Points: *Stream is at least intermittent if ≥ 19 or perennial if ≥ 30** 23.75	**Stream Determination (circle one)** Ephemeral (Intermittent) Perennial	**Other** *e.g. Quad Name*:

A. Geomorphology (Subtotal = 14.0)	Absent	Weak	Moderate	Strong
1[a]. Continuity of channel bed and bank	0	1	(2)	3
2. Sinuosity of channel along thalweg	0	(1)	2	3
3. In-channel structure: ex. riffle-pool, step-pool, ripple-pool sequence	0	1	(2)	3
4. Particle size of stream substrate	0	1	(2)	3
5. Active/relict floodplain	0	(1)	2	3
6. Depositional bars or benches	0	(1)	2	3
7. Recent alluvial deposits	0	1	(2)	3
8. Headcuts	0	1	(2)	3
9. Grade control	0	0.5	(1)	1.5
10. Natural valley	(0)	0.5	1	1.5
11. Second or greater order channel	No = (0)		Yes = 3	

[a] artificial ditches are not rated; see discussions in manual

B. Hydrology (Subtotal = 5.0)				
12. Presence of Baseflow	0	1	(2)	3
13. Iron oxidizing bacteria	0	(1)	2	3
14. Leaf litter	1.5	(1)	0.5	0
15. Sediment on plants or debris	0	(0.5)	1	1.5
16. Organic debris lines or piles	0	(0.5)	1	1.5
17. Soil-based evidence of high water table?	No = (0)		Yes = 3	

C. Biology (Subtotal = 4.75)				
18. Fibrous roots in streambed	3	(2)	1	0
19. Rooted upland plants in streambed	3	(2)	1	0
20. Macrobenthos (note diversity and abundance)	(0)	1	2	3
21. Aquatic Mollusks	(0)	1	2	3
22. Fish	(0)	0.5	1	1.5
23. Crayfish	(0)	0.5	1	1.5
24. Amphibians	(0)	0.5	1	1.5
25. Algae	(0)	0.5	1	1.5
26. Wetland plants in streambed	FACW = (0.75) OBL = 1.5 Other = 0			

*perennial streams may also be identified using other methods. See p. 35 of manual.

Notes: Spotted touch-me-not and sensitive fern prevalent within portions of streambed. Iron oxidizing bacteria observed near source (spring under boulders). Water at source to flag C1-2 during site visit.

Sketch:

BARRY ISETT & associates INC

MULTI-DISCIPLINE ENGINEERS AND CONSULTANTS

Appendix G

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Water Gap Wellness City/County: Monroe County Sampling Date: 4/16/2024

Applicant/Owner: Water Gap Acquisitions Partners, LLC State: PA Sampling Point: UPL 1

Investigator(s): Michael Ronco, PWS, Barry Isett & Associates, Inc. Section, Township, Range: Smithfield Township

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): none Slope %: 0-8

Subregion (LRR or MLRA): LRR R, MLRA 140 Lat: 40.97436 Long: -75.15218 Datum: WGS84

Soil Map Unit Name: Chippewa and Norwich soils (CnB) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL 1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Liriodendron tulipifera*	20	Yes	FACU
2. *Ulmus americana*	15	Yes	FACW
3. *Juglans nigra*	15	Yes	FACU
4.			
5.			
6.			
7.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Lindera benzoin*	10	Yes	FACW
2. *Rosa multiflora*	10	Yes	FACU
3. *Liriodendron tulipifera*	5	Yes	FACU
4.			
5.			
6.			
7.			
	25	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Alliaria petiolata*	25	Yes	FACU
2. *Microstegium vimineum*	20	Yes	FAC
3. *Stellaria media*	15	Yes	FACU
4. *Allium vineale*	15	Yes	FACU
5. *Solidago canadensis*	10	No	FACU
6. *Ageratina altissima*	10	No	FACU
7. *Rubus allegheniensis*	5	No	FACU
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 30.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	20	x 3 =	60
FACU species	130	x 4 =	520
UPL species	0	x 5 =	0
Column Totals:	175 (A)		630 (B)

Prevalence Index = B/A = 3.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Loamy/Clayey	
6-10	10YR 3/2	98	10YR 4/6	2	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: rock

Depth (inches): 10

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Water Gap Wellness City/County: Monroe County Sampling Date: 4/16/2024

Applicant/Owner: Water Gap Acquisitions Partners, LLC State: PA Sampling Point: UPL 2

Investigator(s): Michael Ronco, PWS, Barry Isett & Associates, Inc. Section, Township, Range: Smithfield Township

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): none Slope %: 8-15

Subregion (LRR or MLRA): LRR R, MLRA 140 Lat: 40.97407 Long: -75.15129 Datum: WGS84

Soil Map Unit Name: Bath channery silt loam (BaC) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes X	No ____	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL 2

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Microstegium vimineum*	20	Yes	FAC
2. *Barbarea vulgaris*	15	Yes	FAC
3. *Hesperis matronalis*	15	Yes	FACU
4. *Solidago canadensis*	15	Yes	FACU
5. *Rosa multiflora*	10	No	FACU
6. *Cirsium discolor*	10	No	UPL
7. *Poa palustris*	10	No	FACW
8. *Poa pratensis*	10	No	FACU
9. *Alliaria petiolata*	10	No	FACU
10.			
11.			
12.			
	115	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	35	x 3 =	105
FACU species	60	x 4 =	240
UPL species	10	x 5 =	50
Column Totals:	115 (A)		415 (B)

Prevalence Index = B/A = 3.61

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10YR 3/2	100					Loamy/Clayey	
6-14	10YR 5/3	95	10YR 5/8	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: rock

Depth (inches): 14

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Water Gap Wellness City/County: Monroe County Sampling Date: 4/17/2024

Applicant/Owner: Water Gap Acquisitions Partners, LLC State: PA Sampling Point: UPL 3

Investigator(s): Michael Ronco, PWS, Barry Isett & Associates, Inc. Section, Township, Range: Smithfield Township

Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): none Slope %: 8-25

Subregion (LRR or MLRA): LRR R, MLRA 140 Lat: 40.97563 Long: -75.15065 Datum: WGS84

Soil Map Unit Name: Benson-Rock outcrop complex (BeC) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ___	No X	**Is the Sampled Area within a Wetland?** **Yes** ___ **No** X
Hydric Soil Present?	Yes ___	No X	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes X	No ___	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 1
Water Table Present?	Yes X	No ___	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 8

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL 3

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Carex scoparia*	15	Yes	FACW
2. *Potentilla indica*	15	Yes	FACU
3. *Microstegium vimineum*	10	Yes	FAC
4. *Cirsium discolor*	10	Yes	UPL
5. *Poa palustris*	10	Yes	FACW
6. *Poa pratensis*	10	Yes	FACU
7. *Taraxacum officinale*	5	No	FACU
8. *Rosa multiflora*	5	No	FACU
9. *Solidago canadensis*	5	No	FACU
10. *Artemisia vulgaris*	5	No	UPL
11. *Stellaria media*	5	No	FACU
12. *Rubus allegheniensis*	5	No	FACU
	100	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	10	x 3 =	30
FACU species	50	x 4 =	200
UPL species	15	x 5 =	75
Column Totals:	100 (A)		355 (B)

Prevalence Index = B/A = 3.55

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/3	95	10YR 4/6	5	C	M	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: rock

Depth (inches): 12

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Water Gap Wellness City/County: Monroe County Sampling Date: 4/16/2024

Applicant/Owner: Water Gap Acquisitions Partners, LLC State: PA Sampling Point: W-B

Investigator(s): Michael Ronco, PWS, Barry Isett & Associates, Inc. Section, Township, Range: Smithfield Township

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope %: 0-8

Subregion (LRR or MLRA): LRR R, MLRA 140 Lat: 40.97399 Long: -75.15190 Datum: WGS84

Soil Map Unit Name: Chippewa and Norwich soils (CnB) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID:
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 1
Water Table Present?	Yes X	No ____	Depth (inches): 2
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 2

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W-B

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Lindera benzoin*	20	Yes	FACW
2. *Rosa multiflora*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	30 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Poa palustris*	20	Yes	FACW
2. *Onoclea sensibilis*	20	Yes	FACW
3. *Carex crinita*	15	Yes	OBL
4. *Persicaria sagittata*	10	Yes	OBL
5. *Epilobium coloratum*	10	Yes	OBL
6. *Juncus effusus*	10	Yes	OBL
7. *Impatiens capensis*	10	Yes	FACW
8. *Microstegium vimineum*	10	Yes	FAC
9. *Nasturtium officinale*	5	No	OBL
10. *Solidago canadensis*	5	No	FACU
11.			
12.			
	115 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 9 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 90.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W-B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/1	95	10YR 5/6	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
X Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)
___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Red Parent Material (F21) **(outside MLRA 145)**
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: rock

Depth (inches): 10

Hydric Soil Present? **Yes** X **No** ___

Remarks:

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Appendix H

Phase 1 Bog Turtle Habitat Survey Data Form** for the **Northern Population Range
(Revised April 29, 2020) Please do not edit document.

Wetland ID: Wetland-B
PNDI # (for PA): PNDI-805812

General Info

Property/Project Name Water Gap Wellness - Accessory Buildings

Coordinates 40.97404, -75.15170 **Project Type** Land Development

Entity Requesting Phase 1 Survey USFWS request on PNDI-805812

County/Township/Municipality Smithfield Township, Monroe County

Lead Surveyor Michael C. Ronco, PWS, QBTS **Affiliation** Barry Isett & Associates, Inc.

Other Assistants Present N/A

Date/Condition

Date of Survey 4/23/2024 **Time In** 1210 **Time Out** 1255 **Air Temp.** 64 (F°) C°

Last Precipitation __ < 24 hours X 1-7 days __ > 1 week __ unknown **Drought conditions?** __ Yes X No __ Unknown

Drought Index*[1] (Circle): (none) D0 D1 D2 D3 D4 **Wetland Photos Taken** X Yes __ No (Provide photo location map)

Notes (*e.g.*, details about drought, flood, abnormally dry, and/or snow/ice conditions, and any other seasonal conditions observed):

Wetland Info

Wetland Size 0.2 acres, if known **# Wetlands w/in Project Area**[2] 1

Estimate wetland size (acres) __ < 0.1 X 0.1 - 0.5 __ 0.5 - 1 __ 1 - 2 __ 2 - 4 __ 5+ __ 10+

Estimate % Canopy Cover*[3] __ 0% __ ≤ 5 X 6-20 __ 21-40 __ 41-60 __ > 60

Hydrology and Soils (check all that apply): **use additional pages to further discuss pertinent general wetland information**

X Springs/Seeps __ Springhouse __ Trib/Stream __ Pond __ Stormwater __ Iron Bacteria X Watercress

X Water Visible on Surface Evidence of Flooding __ Yes X No If yes, (__ Seasonal Flooding[4] __ Routine Flooding[5])

X Rivulets (4 inches deep) __ Subsurface Tunnel/Rivulets X Tire Ruts (4 inches deep)

X Small Puddles/Depressions (1 inches deep) X Saturated soils present? If yes, year-round? __ Likely __ Unlikely X Unk

X Yes __ No Are there any signs of disturbance to *hydrology* (*e.g.*, drainage ditches, tile drainages, berms, culverts, fill material, ponds, roads, beaver activity)?

A gravel road is located just south of Wetland B with a watercourse beyond. The watercourse conveys perennial flow to a pipe at the road and it is conveyed subsurface to the north. The outfall is located in a forested area to the northwest of Wetland B.

Estimate time period (in years) of disturbance*: __ ≤ 5 __6-10 __11-20 X > 20

For ditches that may be present, is there bog turtle habitat? If yes, describe: N/A

[1] (*) Denotes reference to the **Supplemental Information** document that provides more details on this particular question.
[2] Each wetland must have a separate Phase 1 habitat assessment data form completed.
[3] Determine percent cover of abundant species for the wetland, not by wetland type. Abundant species are those that are most prominent in the wetland and have the highest percent of coverage compared to other species.
[4] Seasonal flooding in wetlands/streams can occur as a result of spring snow melt/heavy rain that increases water levels in these systems.
[5] Routine flooding refers to tidally-influenced wetland/stream systems or the occurrence of normal rain patterns throughout the year.

Wetland ID: Wetland-B

__ Yes X No Are there any signs of disturbance to ***vegetation*** (*e.g.*, mowing, pasturing, burning)? If yes, describe:

Wetland Info

Rate (scale of 1-4) level of vegetation disturbance* (Circle): 1. Light to moderate grazing or mowing 2. No grazing, mowing, burning observed[6] 3. Moderate to high grazing or mowing 4. Mowing occurs during bog turtle active season

Soil types present*: Chippewa and Norwich soils, 0 to 8 percent slopes, extremely stony (CnB)
Soils observed in Wetland B are firm and not mucky-like soils.

How much suitable habitat is in this wetland? Estimate acreage or percentage: N/A

Wetland Type	% of Total Wetland	% of Wetland Type w/Muck	Avg. Muck Depth	Max. Muck Depth
PEM Portion of Wetland:	80	60	2 in.	3 in.
PSS Portion of Wetland:	20	5	2 in.	3 in.
PFO Portion of Wetland:			in.	in.
POW/PUB Portion of Wetland:			in.	in.

CIRCLE all vegetation* from list below that is dominant (≥ 20% for each wetland type listed above) and add other species you observe that are not listed in table in the "notes" space provided below or in the extra table cells.

Wetland Type/Vegetation

Alder Spp. *Alnus* spp.	Common Reed *Phragmites australis*	Jewelweed *Impatiens capensis*	Rice Cutgrass *Leersia oryzoides*	(Spicebush *Lindera benzoin*)	Willow spp. *Salix* spp.
Alder-leaved Buckthorn *Rhamnus alnifolia*	Dogwood Spp. *Cornus* spp.	Mile-A-Minute *Persicaria perfoliata*	Rough-leaved Goldenrod *Solidago patula*	Spike-Rush *Eleocharis palustris*	Woolly-fruited Sedge *Carex lasiocarpa*
American Elm *Ulmus americana*	Duck Potato *Sagittaria latifolia*	(Multiflora Rose *Rosa multiflora*)	(Sensitive Fern *Onoclea sensibilis*)	Swamp Rose *Rosa palustris*	Woolly Bulrush or Woolgrass *Scirpus cyperinus*
Arrowhead *Sagittaria latifolia*	Eastern Red Cedar *Juniperus virginiana*	Poison Sumac *Toxicodendron vernix*	Shrubby Cinquefoil *Dasiphora fruticosa*	Sweetflag *Acorus calamus*	Yellow-Green Sedge *Cyperus esculentus*
Carpetgrass *Axonopus fissifolius*	Eastern Tamarack *Larix laricina*	Porcupine Sedge *Carex hystericina*	Skunk Cabbage *Symplocarpus foetidus*	Tearthumb Spp. *Polygonum* spp.	(fowl blue grass ***Poa palustris***)
Cattail *Typha* spp.	Grass-of-Parnassus *Parnassia glauca*	Purple Loosestrife *Lythrum salicaria*	Smooth Sawgrass *Cladium mariscoides*	. Tussock Sedge *Carex stricta*	(fringed sedge Carex crinita)
Cinnamon Fern *Osmundastrum cinnamomeum*	Inland sedge *Carex interior*	Red Maple *Acer rubrum*	Soft Rush or Common Rush *Juncus effusus*	Viburnum Spp. *Viburnum* spp.	
Common Boneset *Eupatorium perfoliatum*	Japanese Stiltgrass *Microstegium vimineum*	Reed Canary Grass *Phalaris arundinacea*	Sphagnum Moss *Sphagnum* spp.	White turtlehead *Chelone glabra*	

Notes on additional plant species (*e.g.*, sedge, rush, grass, shrub, tree species):

[6] No grazing, mowing, or burning is given a "2" rank as this is considered more harmful to bog turtle wetlands than Rank 1 (light to moderate grazing or mowing). Light to moderate habitat management is beneficial to suppressing succession of native and non-native plant species.

Wetland ID: Wetland-B

Describe surrounding landscape (*e.g.*, wetlands, forest, subdivision, agricultural field, fallow field, etc.):

Maintained golf course and forested areas.

Landscape Info

How much of this wetland is located **off-site** (*i.e.*, outside the property boundaries or right-of-way)?

X None of it – the entire wetland is within the property boundaries

__ Some of it – _____ Acres or _____% of the wetland appears to be located off-site

If part of this wetland continues off-site, how much of the **off-site portion** was surveyed (on foot)?

__ None of it __ All of it __ Part of it (____ acres or ____% of the off-site portion)

Is there potential bog turtle habitat **within 300 feet***? __ Yes X No __ Unk Habitat **off-site**? __ Yes __ No X Unk

If yes, how did you conclude this?

Species

Were any bog turtles observed? __ Yes X No If yes, how many?_____

Other herps observed? __ Yes X No If yes, which ones?

*Note that you must be permitted by the state you are conducting the survey in to handle bog turtles.

*Report bog turtle observations to your local FWS Field Office and state wildlife office within 48 hrs.

Lead Surveyor Opinion

X Yes __ No __ Unsure The **hydrology** criterion for bog turtle habitat is met.

__ Yes X No __ Unsure The **soils** criterion for bog turtle habitat is met.

X Yes __ No __ Unsure The **vegetation** criterion for bog turtle habitat is met.

__ Yes X No __ Unsure This wetland **HAS** potential bog turtle habitat (fair to good quality).

__ Yes X No __ Unsure This wetland **HAS** potential bog turtle habitat (low to very low quality).

X This wetland does **NOT** have potential bog turtle habitat. __ **UNSURE** if suitable habitat is present.

Notes (How did you reach this opinion?):

Wetland B lacks mucky-like soils required for the bog turtle.

Lead Surveyor – **please sign** below certifying to the best of your knowledge that all of the information provided herein is accurate and complete.

Print Name Michael C. Ronco **Signature** _____

Date 4/23/2024

Contact Information (272) 200-2013; mronco@barryisett.com

****Important**** Please include all Phase 1 data forms in a final Phase 1 bog turtle habitat assessment report (see Attachment 3 in *Guidelines for Bog Turtle Surveys* for checklist) and submit to your local state wildlife agency and U.S. Fish and Wildlife Service Field Office (see Attachment 1 in *Guidelines for Bog Turtle Surveys*).

Phase 1 Bog Turtle Habitat Survey Data Form for the Northern Population Range Wetland ID: Wetland-B
(Revised April 29, 2020)

Additional space for notes, color photos, or maps/sketch of wetland (or attach printed map with each wetland type carefully outlined; include all wetland types [PEM, PSS, PFO, POW/PUB], streams/ditches, north arrow, property/project borders, and areas of core bog turtle habitat. Include **color photos** for each wetland assessed and separate Phase 1 data forms for each when submitting to agencies, as well as any reptile and amphibian species you encounter, if possible.

Please see Wetland Delineation and Bog Turtle Habitat (Phase 1) Survey Report appendices for GIS mapping and site photographs.

Additionally, see below for large scale view of Wetland B with wetland classifications and flow descriptions.

BARRY ISETT & associates INC

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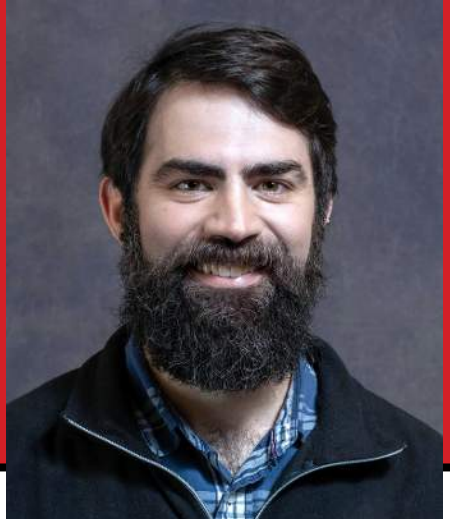
Appendix I



MICHAEL C. RONCO, PWS

Professional Scientist
Environmental Consulting
Company Shareholder

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Michael C. Ronco, PWS, joined the Environmental Consulting department of Barry Isett & Associates, Inc. (Isett) in 2019. Mr. Ronco is a Professional Wetland Scientist and conducts wetland and watercourse delineations using guidelines set forth by the United States Army Corps of Engineers (USACE) and the Pennsylvania Department of Environmental Protection (PA DEP). With more than 20 years of experience as a wetland scientist, he has delineated thousands of acres of wetland and watercourse habitat. He is well-versed with the USACE and PA DEP Joint and General Permit processes.

As an environmental professional (EP), he has expertise in environmental due diligence and has performed numerous Phase I Environmental Site Assessments (ESAs) and provided monitoring and sampling assistance in support of Phase II site investigation and site remediation activities.

EDUCATION

M.S., Biology, East Stroudsburg University, 2011 | B.S., Biology and Environmental Studies, East Stroudsburg University, 2001

LICENSE/CERTIFICATION

Professional Wetland Scientist: PWS #3062

Qualified Bog Turtle Surveyor: PA 2024, MD 2023, NJ 2023

ASTM Environmental Professional: PA 2017

Wetland Delineation Program: Rutgers University, 2006

Mr. Ronco's work supports a wide variety of clients across commercial, industrial, municipal, institutional, financial, legal, insurance, and residential markets. He has performed wetlands delineation for parks; farms; industrial and commercial developments; residential subdivisions; and hospital campuses.

PROJECT EXPERIENCE

WETLAND DELINEATION, SURVEY & PERMITTING
Numerous Locations throughout PA
Professional Wetlands Scientist
Vast experience in the delineation of wetlands and watercourses using USACE and PA DEP methodology, including development and monitoring of wetland mitigation and Phase I & Phase II Bog Turtle Surveys for numerous public and private sites throughout Pennsylvania.

ENVIRONMENTAL DUE DILIGENCE
Numerous Locations throughout PA
Environmental Professional
Expertise in environmental due diligence performing numerous Phase I Environmental Site Assessments (ESA). Clients have included lenders, buyers, investors, brokers, and attorneys. Mr. Ronco is proficient in groundwater monitoring and sampling involved with Phase II site investigation and site remediation.

LAKE AND WATERSHED MANAGEMENT
Numerous Locations throughout PA
Environmental Professional
Mr. Ronco has conducted watershed investigations for point and non-point source water pollution and offered best management practices to enhance and protect watersheds, leaning on his extensive experience in limnological, biological, and chemical water quality monitoring.