

**USFWS Hudson-Housatonic Recovery Unit Bog Turtle
Habitat Evaluation Field Form¹ (Revised 12/2013)***

Project/Property Name: _____
Project Name/Type: _____
Applicant/Landowner Name: _____
County: _____ Quad: _____ Township/Municipality: _____
NYNHP Species Hit Y N Map attached Y N Aerial attached Y N

ACTION AREA²

Action area size: _____ **Does the Phase 1 survey include all wetlands in the action area?** Y N³
If no, give wetland ID #s and reasons for no survey: _____
If yes, give wetland ID #s for each: _____ Submit one survey form per wetland.

WETLAND ID: _____ **PHOTOS TAKEN:** Yes No **WETLAND SIZE:** _____ acres
Wetland size estimation – If actual acreage is not known at time of investigation, check one:
 < 0.1 acre 0.1-0.5 acre >0.5 to <1 acre 1-2 acres 2-4 acres 5+ acres 12+ acres

WETLAND LOCATION: Lat _____ Long _____
(approximate center of wetland) GPS Datum (check one): NAD 27 NAD 83 WGS 84

SURVEY CONDITIONS & LIMITATIONS

Date of survey: _____ Time In: _____ Time Out: _____
Last precipitation: < 24 hours 1-7 days > 1 week unknown Drought conditions? Y N
 Unknown

How much of this wetland is located *off-site* (i.e., outside the project boundaries or right-of-way)?
 none of it – the entire wetland is within the project boundaries (skip next 2 questions)
 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)?⁴
 none of it all of it part of it (_____ % or _____ acres of the off-site portion)

How much of the *off-site portion* of this wetland is visible (e.g., from the subject property or from a public road)? all of it part of it (at least _____ acres) none of it

Are there any wetlands located off-site and close enough to be affected by this project? Y N
 Unknown If yes, *could* they be potential bog turtle habitat? Y N Unknown

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

WETLAND CHARACTERISTICS

Wetland type(s) present and % cover: PEM _____ PSS _____ PFO _____ POW _____
NYSDEC Mapped Wetland Y N Name _____ NWI Mapped Wetland Y N
Edinger *et. al.* (2002)⁵ Community Types: _____

Project Name _____ Wetland ID _____

Y N Are there any signs of disturbance to *hydrology* (ditching, filling, ponds, roads, etc.)? If yes, describe _____

Y N Are there any signs of disturbance to *vegetation* (mowing, pasturing, burning, etc.)? If yes, describe _____

Hydrology

Y N Springs or seeps visible or likely? Muskgrass (*Chara spp.*) present? Yes No

Y N Saturated soils present? If yes, year-round? Likely Unlikely Unknown

Y N Water visible on surface? Check all that apply: small puddles/depressions (____” deep)

rivulets (____” deep) larger pools/ponds (____” deep)

Y N Evidence of flooding? If yes, describe indicators _____

Hydrological Regime (Cowardin 1979)⁶: Semi-permanently flooded Seasonally flooded other

Notes: _____

Soils Mapping Unit (optional): _____

Field observations confirm mapped type? YES NO Unknown

Soils – PEM Portions of Wetland			
Mucky ⁷ ? <input type="checkbox"/> YES <input type="checkbox"/> NO	How much of it (PEM) is mucky? <input type="checkbox"/> <10% <input type="checkbox"/> 10-29% <input type="checkbox"/> 30-49% <input type="checkbox"/> 50-70% <input type="checkbox"/> >70%	Mucky soils range in depth from: _____ to _____”	Most of the mucky part(s) of the wetland can be probed ⁸ : <input type="checkbox"/> 3-5” <input type="checkbox"/> 6-8” <input type="checkbox"/> 9-11” <input type="checkbox"/> ≥12”
Non-mucky ⁹ ? <input type="checkbox"/> YES <input type="checkbox"/> NO	How much of it (PEM) is non-mucky? <input type="checkbox"/> <10% <input type="checkbox"/> 10-29% <input type="checkbox"/> 30-49% <input type="checkbox"/> 50-70% <input type="checkbox"/> >70%		

Soils – PSS and PFO Portions of Wetland			
Mucky ⁷ ? <input type="checkbox"/> YES <input type="checkbox"/> NO	How much of it is mucky? <input type="checkbox"/> <10% <input type="checkbox"/> 10-29% <input type="checkbox"/> 30-49% <input type="checkbox"/> 50-70% <input type="checkbox"/> >70%	Mucky soils range in depth from: _____ to _____”	Most of the mucky part(s) of the wetland can be probed ⁸ : <input type="checkbox"/> 3-5” <input type="checkbox"/> 6-8” <input type="checkbox"/> 9-11” <input type="checkbox"/> ≥12”

Notes: _____

Wetland Vegetation (characterize the wetland as a whole)

Dominant Vegetation: _____

Calciphiles** (See list for examples) tussock sedge grass-of-Parnassus poison sumac shrubby cinquefoil other: _____

Project Name _____ Wetland ID _____

Reptiles and Amphibians

Were any bog turtles observed? YES ¹⁰ NO If yes, how many? _____

If you are permitted to handle bog turtles, please fill out a data form (Appendix A) and submit to state contacts¹⁰.

If you are not permitted, please take a photo(s) of bog turtle (without handling) and submit to state contacts¹⁰.

Other reptiles or amphibians observed previously observed: _____

Additional Comments/Observations: (use additional sheets if necessary)

INVESTIGATOR'S OPINION

YES NO UNSURE The hydrology criterion¹¹ for bog turtle habitat is met.

Notes: _____

YES NO UNSURE The soils criterion¹¹ for bog turtle habitat is met.

Notes: _____

YES NO UNSURE The vegetation criterion¹¹ for bog turtle habitat is met.

Notes: _____

YES NO UNSURE This wetland is potential bog turtle habitat.

Notes: _____

I certify that to the best of my knowledge, all of the information provided herein is accurate and complete.

Investigator's Name (print) Investigator's Signature Date

Contact info: _____

Project Name _____ Wetland ID _____

ENDNOTES – Bog Turtle Habitat Evaluation Form

¹ This is a non-agency field form, to be used by consultants with training and expertise in Phase 1 bog turtle surveys.

² The action area includes all areas that will be affected directly or indirectly by the action and not merely the immediate area involved in the action. For example, if the proposed action is a wetland fill to accommodate access to a proposed development, then the development is included in the action area.

³ The Phase 1 survey should include all wetlands in the action area. Contact the USFWS if you have questions about the extent of the action area for a particular project. **Please submit map(s) and photo(s), along with this form, that indicates area surveyed.**

⁴ As a reminder, landowner permissions may be needed if portion of wetland is outside project boundary.

⁵ Community types as described by Edinger *et al.* (2002) can be found at: www.dec.ny.gov/animals/29392.html.

⁶ Hydrologic regimes as described by Cowardin (1979) can be found at: www.fws.gov/wetlands/documents/classwet/index.html

⁷ Soils are considered “mucky” if one can probe them to a depth of ≥ 3 ”.

⁸ Probing is done with an approximately 1" diameter, blunt-ended pole (*e.g.*, a plastic/aluminum broom handle).

⁹ Soils are considered “non-mucky” if one can probe them to a depth of < 3 ”.

¹⁰ **Please report observations of bog turtles to the New York State Department of Environmental Conservation and the New York Field Office within 48 hours.**

For the HHRU, please submit observations to:

Lisa Masi, NYSDEC Region 3 – (845) 256-3098; lmmasi@gw.dec.state.ny.us

Noelle Rayman, USFWS, New York Field Office – (607) 753-9334; noelle_rayman@fws.gov

¹¹ See “BOG TURTLE HABITAT CRITERIA” (below)

*This form is a modified version of the Pennsylvania Field Office/Pennsylvania Fish and Boat Commission form to be used in the HHRU of NYS. Qualified Bog Turtle Surveyors and state/federal biologists from the region provided comments and suggestions.

Project Name _____ Wetland ID _____

BOG TURTLE HABITAT CRITERIA

Compare your Phase 1 survey observations to the habitat criteria below.

Suitable hydrology. Bog turtle wetlands are typically spring-fed with shallow surface water or saturated soils present year-round, although in summer the wet area(s) may be restricted to near spring head(s). Typically these wetlands are interspersed with dry and wet pockets. There is often subsurface flow. In addition, shallow rivulets (less than 4 inches deep) or pseudo-rivulets are often present. In some cases, the source of a wetland's hydrology is difficult to determine because springs and seeps are not visible. However, the *influence* of springs and seeps will be apparent (*e.g.*, presence of saturated soils year-round).

Suitable soils. Usually a bottom substrate of permanently saturated organic or mineral soils. These are often soft, mucky-like soils (this does not refer to a technical soil type); you will usually sink to your ankles (3-5 inches) or deeper, although in degraded wetlands or summers of dry years this may be limited to areas near spring heads or drainage ditches. In some portions of the species' range, the soft substrate consists of scattered pockets of peat instead of muck. In the areas of the wetland where saturated soils are present, you will be able to probe them to a depth of at least 3 inches, but pockets of 5 to 12 inches are likely to be present. During drought conditions, the extent and depth of mucky soils may be dramatically reduced over non-drought conditions, with soft, saturated soils being limited to areas near springs or seeps. Some sites within the HHRU do not necessarily have mucky soils; therefore suitable hydrology and vegetation may be more heavily weighted when determining a bog turtle wetland.

Suitable vegetation. Dominant vegetation of low grasses and sedges (in emergent wetlands), often with a scrub-shrub wetland component. Common emergent vegetation includes, but is not limited to: tussock sedge (*Carex stricta*), soft rush (*Juncus effusus*), rice cut grass (*Leersia oryzoides*), sensitive fern (*Onoclea sensibilis*), tearthumbs (*Polygonum* spp.), jewelweeds (*Impatiens* spp.), arrowheads (*Sagittaria* spp.), skunk cabbage (*Symplocarpus foetidus*), panic grasses (*Panicum* spp.), other sedges (*Carex* spp.), spike rushes (*Eleocharis* spp.), grass-of-Parnassus (*Parnassia glauca*), shrubby cinquefoil (*Dasiphora fruticosa*), sweet-flag (*Acorus calamus*), and in disturbed sites, reed canary grass (*Phalaris arundinacea*), purple loosestrife (*Lythrum salicaria*) or common reed (*Phragmites australis*). Common scrub-shrub species include alder (*Alnus* spp.), red maple (*Acer rubrum*), willow (*Salix* spp.), tamarack (*Larix laricina*), and in disturbed sites, multiflora rose (*Rosa multiflora*). Some forested wetland habitats are suitable given hydrology, soils and/or historic land use. These forested wetlands include red maple, tamarack, and cedar swamps.

****Calciphiles:** "include numerous herbs, such as marsh muhly (*Muhlenbergia glomerata*), bluejoint grass (*Calamagrostis canadensis*), twig rush (*Cladium mariscoides*), several sedges (*Carex flava*, *C. hystericina*, *C. sterilis*, *C. lasiocarpa*, *C. lacustris*, *C. stricta*, and *C. utriculata*), thinleaf cotton-sedge (*Eriophorum viridicarinaratum*), moor rush (*Juncus stygius*), grass-of-Parnassus (*Parnassia glauca*), white beakrush (*Rhynchospora alba*), rough-leaved goldenrod (*Solidago patula*), swamp goldenrod (*Solidago uliginosa*), purple avens (*Geum rivale*), white lady's slipper (*Cypripedium candidum*), and marsh cinquefoil (*Comarum palustre* = *Potentilla palustris*), plus several shrubs including shrubby cinquefoil (*Dasiphora fruticosa* ssp. *floribunda* = *Potentilla fruticosa*), alderleaf buckthorn (*Rhamnus alnifolia*), sageleaf willow (*Salix candida*), autumn willow (*S. serissima*), bog birch (*Betula pumila*), sweetgale (*Myrica gale*), speckled alder (*Alnus incana*), and red-osier dogwood (*Cornus stolonifera*). Minerotrophic moss species (*e.g.*, *Drapanocladus aduncus* and *Campylium stellatum*) may or may not be present".

From: U.S. Army Corps of Engineers. 2011. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Project Name _____ Wetland ID _____

Turtle Data Sheet

County: _____ Town: _____ Quad: _____

Site name: _____ Date: ____/____/____

Capture Time: _____ (E.S.T.) Investigator(s) _____

GPS Model: _____ Coord: _____ WAAS? Yes No

Species: _____ Sex: M, F, JUV, HATCH, UNK: _____

ID: L _____ R _____ Marked this capture? Yes No Weight (g): _____

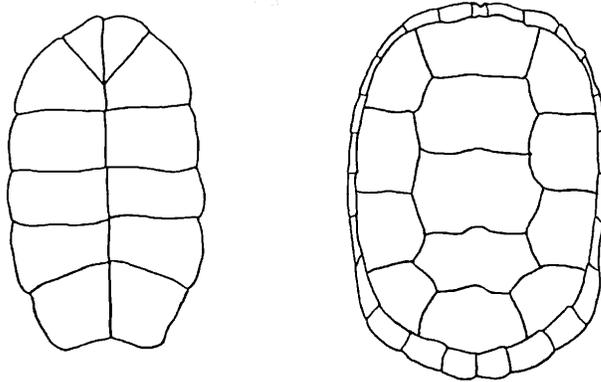
Transmitter? Yes No Frequency? _____ Annuli: [worn] _____

Gravid? Yes No N/A Carapace Length (mm) _____ Width (mm) _____ Height (mm) _____

Plastron Length (mm) _____ Width (mm) _____ Ectoparasites? Yes No _____

=====

Specimen Characters (markings, deformities, scars, etc.) [noted below]



Photos: Yes No

=====

Method of capture: Trap Hand _____ Trap #: _____

Behavior: in trap basking walking swimming stationary feeding
mating escaping nesting other _____

Behavioral notes: _____

Habitat: _____

_____ Water temp: _____ °C Air temp: _____ °C

Substrate type _____ Substrate temp: _____ °C Cloud Cover: _____ %

Notes: _____