

Volunteer Diamondback Terrapin Headcount Surveys

Introduction

Thank you for participating in the Volunteer Diamondback Terrapin Headcount Survey! This packet will provide you with everything you need to know about the survey effort including safety, protocols, survey techniques, materials, and contact information.

This survey is part of a coordinated effort throughout the Northeast Region. For the next three years, volunteers from Massachusetts to Virginia will record information using the same standardized methodology. By participating in this survey together, we will be able to start to paint a picture of the species' population status in the Northeast Region!

Terrapin Headcount Survey

Safety First!

To perform a terrapin headcount survey, you will be visiting one or more survey locations and performing survey observations from a single observation point on land. While the goal of this survey is visual observation of terrapins, volunteers may encounter a number of potential hazards, with the potential for a number of different injuries. Safety is our number one priority. It is essential that all volunteers be familiar with and observe the following practices during the surveys. Volunteers who do not, or cannot, follow these rules will not be permitted to participate.

- Minors must be supervised by an adult at all times.
- If thunderstorms are in progress, **do not** attempt the survey. Performing surveys during foul weather (for example, high winds and cloud coverage) is not encouraged due to the unnecessary risk to the volunteer. It also impacts the visibility of the terrapins—if they hunker down, you should, too.
- Wear appropriate clothing for the weather, wet conditions on the water and/or water's edge. **Closed-toe shoes with soles are required.** No bare feet, flip-flops, or neoprene booties are allowed. We recommend rubber boots, waterproof shoes (with soles), or old sneakers.
- Keep an eye out for tripping hazards or debris that may cause injuries to you or other volunteers.
- If you sustain any type of injury, even if it seems minor, consult a medical provider if you have any concerns. This is particularly important if you sustain a cut or puncture wound that could become infected.
- Use sunscreen and insect repellent when needed.
- Do not take risks or do anything that makes you uncomfortable. Safety is always the most important consideration.

Survey Protocol

Pre-Survey Preparations

- Select your sample access location(s). A small subset of predetermined sites has been identified by NYSDEC for use in Region 2 this season. Additional survey locations in other Regions may also be included in this season's effort, particularly where suitable habitat and known or suspected DBT presence exists. **Landowner permission is required before any survey work is conducted.**

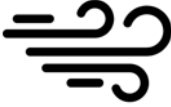


- Before departing for the access location, please be sure to consult the current local weather conditions specific to that location.

In New York, we suggest selecting the closest station to you on NYS Mesonet (<http://www.nysmesonet.org/>) for sustained wind speed and air temperature. To find the closest station, from the homepage select 'Weather' and 'Current and Forecast'. Click on the city listed at the top center of the page and search for your location.

- Download and print the Volunteer Diamondback Terrapin Headcount Survey datasheet (see *Appendix A*).

Weather Conditions and Surveying Frequency

Below we list the SUGGESTED OPTIMAL WEATHER CONDITIONS to perform the survey and maximize the visibility of the terrapins.

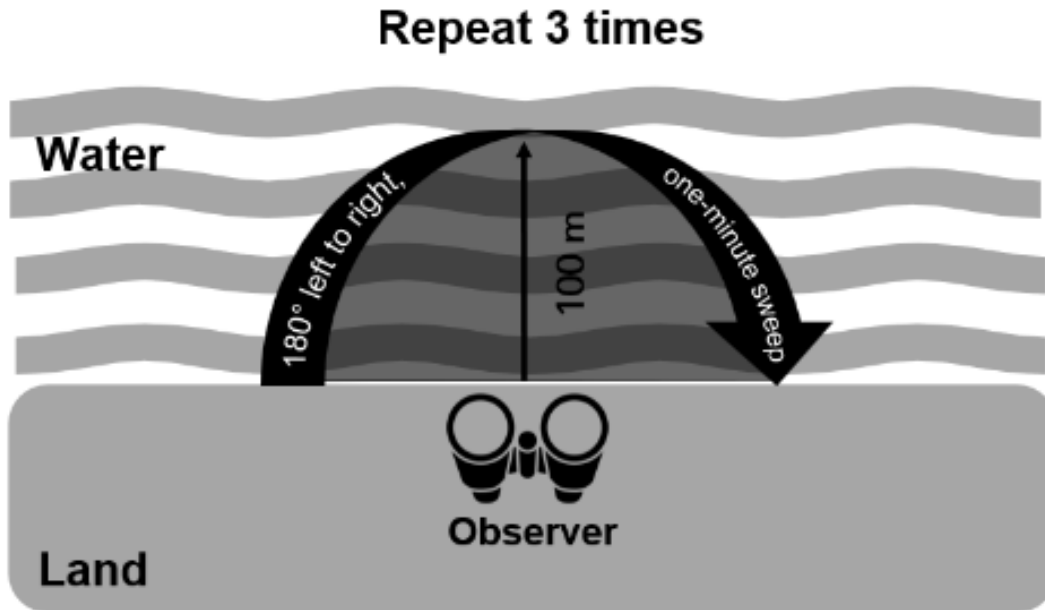
Wind Speed Less than 8 mph	Cloud Coverage Less than 50%	Air Temperature Over 50° Fahrenheit
		
<i>*All surveys must be <u>completed</u> no sooner than 30 minutes after sunrise and no later than 30 min before sundown.</i>		

We encourage volunteers to survey as often as possible with a **minimum** described in the timeline below:

Timeline	Suggested Number of Surveys
May 1st- June 30th	3 surveys per site
July 1st- August 31st	1 survey per site
September 1st- October 31st	1 survey per site

Surveying Techniques

- The Land-Based Headcount Survey is conducted at a single observation point completed from an access location and can be completed by a solo observer. Larger groups traveling together are perfectly fine, but each person should perform the survey separately and fill out a separate survey form (one person for each survey form).
- The single observation point will be from a designated access location. Volunteers will position themselves to have an unobstructed view of the water and perform three 180-degree visual sweeps left to right, with one minute between each sweep. Each sweep should take approximately one minute to complete.



- Each survey will take approximately 10 minutes to complete. Please budget enough time to complete the entire survey during daylight hours.
- If completing multiple surveys at different locations, submit an independent survey form for each survey completed.

Tips When Searching for Terrapins

- Submerged or floating objects like sticks can look like terrapin heads from a distance but will remain in the same spot. Terrapin heads will move, submerge, and most likely reappear.
- Loud noises can startle basking terrapins. While talking may be necessary to complete the survey, we recommend you keep the overall noise to a minimal level.

Completing the Survey (Step-by-Step)

Once you arrive at your access location, start a new datasheet and complete all the listed information from top to bottom. *Please write legibly and with a dark writing utensil (pencil preferred).* Data is scanned and light writing can make it illegible and the data unusable.

1. Start by selecting the State in which you are performing the survey, the date, the arrival time, and the location name.

2. Next, complete the surveyor's information: full name, email, and phone number. *This information will not be shared beyond the survey management, and it will only be utilized for Quality Assurance purposes in case any clarification about your survey is needed.*
3. Fill out the weather conditions box, first indicating wind speed using the provided Beaufort Wind Scale.
4. Then, use the nearest NYS Mesonet Station for determining sustained wind speed and air temperatures. Recording water temperature is listed but optional.
5. Complete the weather conditions box by indicating cloud coverage and fog presence. Please be sure to note any changes in the weather throughout the course of the survey.
6. Indicate the equipment you are using to perform the survey.
7. Next, position yourself along the water's edge in a place with a clear view of 180° of water in front of you and take a GPS point- report coordinates in Decimal degrees (example: latitude 41.58743, longitude -73.0745). *If you do not have a handheld GPS device, we suggest using Google Maps to drop a point and obtain coordinates.* Please indicate the coordinate source on your datasheet.
8. Fill in the *Start Time* for survey period one, and perform your first observation/sweep.
9. Face the water and perform a slow 180° sweep from left to right (should take about a minute to complete). Observe to 100 meters from shore and just count over your line of sight. Do not count terrapins if they appear in an area you have already passed over during the sweep. Count all terrapins between you and a 100-meter distance (approximately the length of a football field).
10. Fill in the number of terrapins observed and record the *End Time* for the survey period.
11. Wait one minute and repeat steps 8 to 10 for the survey period/sweep two and three, waiting one minute between each period/sweep. Each sweep is left to right.
12. If no terrapins are seen, write "no turtles" or "zero" under the "Terrapins Observed" column. *Do not leave the number of terrapins observed blank; this will indicate that the sweep was not completed. If you cannot complete all three sweeps, leave the "Terrapin Observed" cell blank and indicate "not completed" in the note column.*
13. Add any additional comments or notes. For example, if your site is inaccessible due to flooding at high tide, or if the access point is difficult to reach due to overgrown vegetation.
14. Complete the datasheet by providing your total volunteer hours (including travel time) dedicated to this survey location (round to the closest 15 minutes), signing, and dating at the bottom.
15. See below for datasheet submission instructions.

Return Datasheets

It is important that you return all datasheets to us as soon as possible, as this will allow us to manage data entry in a timely manner.

- Scan or take a picture of the datasheet immediately after it is completed and email it to NYSDEC wildlife biologist, John Butler, at john.butler@dec.ny.gov.
- Mail all datasheets to the NYSDEC after each survey month to: Attn: John Butler, NYSDEC, 47-40 21st Street, 4th floor, Long Island City, NY 11101 Note: Please do not fax datasheets, we need originals!

Equipment & Supplies

- Datasheets for the Volunteer Diamondback Terrapin Headcount Survey (**see Appendix A**)
- Clipboard
- Binoculars (required)
- Sunscreen and head covering for sunny days
- Insect repellent
- Closed-toe shoes with soles are required.
- Water or other hydration, especially during hot weather
- Camera for recording some turtley-cool action shots!

Volunteer Terrapin Headcount Survey Contacts

For questions about access location information, weather conditions, survey protocol or other general questions contact:

John Butler, NYSDEC Wildlife Biologist, Region 2

Email: john.butler@dec.ny.gov

Appendix A

Datasheets for the Volunteer Diamondback Terrapin Headcount Survey

Volunteer Diamondback Terrapin Land-Based Headcount Survey 2026

State (circle one): Virginia | Maryland | Delaware | New Jersey | New York | Connecticut | Rhode Island | Massachusetts

Date: _____ Arrival time: _____

Access location name: _____

Surveyor's Full Name: _____ Email: _____ Phone: _____

Weather Conditions

Wind speed (Beaufort scale, mph)	<input type="checkbox"/> Calm (0: 0-1 mph)	<input type="checkbox"/> Light Air (1: 1-3)	<input type="checkbox"/> Light Breeze (2: 4-7)	<input type="checkbox"/> Gentle Breeze (3: 8-12)
	Water surface smooth and mirror-like	Scaly ripples, <u>no</u> foam crests	Small wavelets, crests glassy, <u>no</u> breaking	Large wavelets, crests begin to break, scattered whitecaps
Using your local weather station, provide the information below. We suggest using the nearest Station on NYS Mesonet (http://www.nysmesonet.org) for sustained wind speed and air temperature.				
Station used (if applicable): _____				
Sustained wind speed (mph): _____				
Air temperature (°F): _____ Water temperature (°F) (optional): _____				
Cloud coverage:	<input type="checkbox"/> None/ Clear	<input type="checkbox"/> Less than 25%	<input type="checkbox"/> 25-50%	<input type="checkbox"/> More than 50%
Is it foggy?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Any additional weather notes (changes during survey, rain, etc.): _____				
Survey equipment used:	<input type="checkbox"/> Binoculars	<input type="checkbox"/> Spotting Scope	<input type="checkbox"/> None	<input type="checkbox"/> Other: _____

Terrapin Observations

Location Coordinates
If a handheld GPS device is not available, we suggest using Google Maps to drop a point and obtain coordinates.

Latitude (Decimal Degrees i.e. 41.58743): _____ Coordinate Source (e.g. GPS) _____

Longitude (Decimal Degrees i.e. -73.07451): _____

Please, remember to:

- Reach your location and stand near the water's edge in a place where you have an uninterrupted 180° view of the water.
- Face the water, perform a slow 180° sweep from left to right (should take about one minute to complete).
- Observe up to a 100 meters from shore (approx. the length of a football field).
- Only count over your line of sight.
- Repeat the sweep three times.

Repeat 3 times

Survey Period/ Sweep	Start Time	End Time	Number of Terrapins Observed*	Notes
1				
Wait 1 minute between survey periods (sweeps).				
2				
Wait 1 minute				
3				
*If no terrapins are seen write "no turtles" or "zero" under the "Terrapins Observed" column				

Additional comments or notes:

Including travel time how many hours have you dedicated to this particular survey location today (round to the nearest 15 minutes)? _____

By signing this datasheet, I agree that I completed all the data fields following the survey protocols and certify my volunteer hours.

Surveyor's signature: _____ Date: _____

Return data sheets within 72 hours of completing surveys by scanning and emailing them to John Butler at, john.butler@dec.ny.gov. Then, mail all datasheets to the New York State Department of Environmental Conservation at the end of each survey month to **Attn: John Butler, NYSDEC, 47-40 21st Street, 4th floor, Long Island City, NY 11101**. Note: Please do not fax datasheets, we need originals.