



western pond
TURTLE
survey

2020 Field Packet

A companion document to the 2020 Northwestern Pond Turtle Survey Training



Prepared by: Samara Group

Last updated April 11, 2020

Pre-Site Visit Preparations

Check Weather Conditions

Target days and times where the temperature is between 13 and 30 degrees Celsius (55 and 85 degrees Fahrenheit) and it is at least partly sunny with light/no wind.

Field Equipment Checklist

- Binoculars (8x32) or Spotting Scope (20-60x)
- Handheld device or smartphone for data entry and photos
- Clipboard with maps and paper data sheets
- GPS unit & camera (if not using a smartphone device)
- Stopwatch or timer
- Thermometer (air and water in degrees C)
- Meter tape or yard stick
- Tan or dark clothes; plain hat; Muck boots/waders as needed
- Personal items such as: water bottle, folding light chair, etc.

Know your Site

Look at aerial photos of the area you are going to survey and make a note of:

- The basic shape of the water body and areas with high sun exposure.
- Potential observation points to view most of the survey water body including the sunniest locations and large basking logs.
- Potential access points, preferring existing roads and trails.

Plan your visits

The survey season runs from May 1st to September 15th. A total of three site visits should be conducted at each survey site and they **should be at least three days apart**, with no maximum as long as all are completed between May 1st and September 15th.

Site Visit

Setting up in the Field

- When you arrive be sure to **silence your phone** to limit the possibility of disturbing turtles with unexpected noise. Decide on an observation point where you can see most basking sites with sun exposure. These are usually on the northern edge of the water body with minimal vegetation that could block your view (now and later in the season).
- **Make sure the equipment is as prepared as possible** before approaching the site to limit disturbance to turtles (i.e. scope set up and adjusted, binoculars removed from case). Also setup **at least 10 m away** from actual turtles to avoid disturbing them and stay on **established trails and roads** if possible.

Turtle Observation Instructions

- **Scan the area** as you quietly approach to detect any movement, particularly around or on basking structures or shorelines.
- **Start the timer**
 - Record first 5 minute observation.
 - **Scan** basking structures, shore lines, and water surface for turtle heads, noses, or exposed carapaces using eyes, binoculars, and then spotting scope.
 - As soon as you think you've located a turtle, **observe closely** (scope) to confirm species & approximate age (based on size).
 - **Document** the number of Northwestern Pond Turtle and size/age class of each using Survey123.
 - Also record the number of other turtle species observed.
 - Before conclusion of survey period, **re-scan** prominent basking perches for turtles that may have emerged during the survey period.
 - **Repeat** 5-minute observation period 5 more times for a total of 30 minutes of observation.
- **Additional observation tips:**
 - Wakes and moving vegetation can alert the observer that a turtle may be beneath the surface, but the **turtle must be seen** to confirm the sighting and species identification.
 - A small amount of movement around an observation point (10-20 m) may be necessary to see around obstructions; this should be done **quietly**, and while watching for signs of disturbance to animals.

Post-Observation Data Collection

- Use this time to fill out the remaining fields on the Survey123 form including:
 - Environmental variables (air temperature, weather)
 - Habitat variables (presence of basking structures and other habitat features)
 - Disturbance variables (bullfrogs, warm water fish, human, natural, etc.)

** If for whatever reason you are unable to collect data in the field using the Survey123 app on your smartphone, you will need to collect data on the paper data collection sheets and enter the information into Survey123 from your computer as soon as you are able. Please take extra care to identify the proper location of the survey observation point in the location map section of the Survey123 form.*

Contact Information

Any questions or concerns please email or call: leslie@samarapdx.com, 503-481-6753

ESRI's Survey123



To access the online data entry form, please download the Survey123 App onto your smartphone device. Then scan the QR code or search in the Survey123 app for the project “Northwestern Pond Turtle Survey 2020” to access the project.

You can also upload data into Survey123 from your computer using this link:
<https://arcg.is/9bXWS>

If you are unable to submit your survey online, please contact Leslie Bliss-Ketchum (Leslie@samarapdx.com) for assistance.

Surveys must be completed by September 15, 2020. All survey data must be entered into the Survey123 system or received via email or mail by **October 1st, 2020.*

Incidental observations: iNaturalist



To record turtle observations in additional locations outside of assigned cogs and observation points please use the “Western Pond Turtles in Oregon” iNaturalist project. Access the project using your smartphone device and the QR code or this link: <https://www.inaturalist.org/projects/western-pond-turtles-in-oregon>

Survey FAQs

Q: What to do if I'm not sure what species of turtle I see?

A: Keep watching it to see if it moves and you can get more detail. If the survey ends and you are still uncertain, mark it as unknown (UNK). Do not guess or assume. If possible, take a photo and include it with your data.

Q: What if a turtle is spooked before I can identify it?

A: Keep watching the immediate area. They will often emerge and poke their heads back up to try and observe the danger. Remain still and quiet. Turtles will often resume basking after about 15 minutes if they believe it is safe.

Q: I saw a head, should I call it a turtle?

A: Not unless you can positively identify it. Bullfrogs and other aquatic critters may be present and can be misidentified as turtles. Continue to observe the object noting that turtle heads are more pointed and bullfrog heads are more rounded with eyes on top.

Q: What if people approach me during the survey?

A: Quietly, tell them you're performing a scientific survey and will answer their questions afterward.

Q: Are there things I should look for to help me find turtles?

A: A turtle's wet shell may have a glint reflecting sunlight similar to a glass bottle or aluminum can. Turtles typically prefer vegetation (aquatic or emergent) to open water.

Survey Tips

- Keep the scope zoomed all the way out as the default while scanning for turtles. Zoom in only when trying to identify turtles to species or determine what the bump on the log is.
- Use the tripod to scan the pond/river edges smoothly
- Adjust the scope so that it is comfortable. Your survey will be more effective if you are comfortable and able to focus on the task at hand.
- Stay focused on searching for turtles. Make note of the birds, mammals, and dragonflies but remember your purpose.

Northwestern Pond Turtle Survey Data Sheets 2020

*Please be sure to return all paper data sheets to Samara Group before **October 1st, 2020**

Observer 1 Name and Email: _____

Observer 2 Name and Email: _____

**Please include supervisor's contact information under "Observer 2" if you are in a temporary, seasonal position.*

| Survey and Site Information | | |
|-----------------------------|---|----------|
| CATEGORY | VARIABLE | RESPONSE |
| SURVEY & SITE INFORMATION | Site Name (Please take note of the site name used and be sure it is consistent for each observation conducted at this site) | |
| | Name of Waterbody (if known) | |
| | Site description (Please provide a verbal description with landmarks or other information that indicate the spatial location of your actual survey point.) | |
| | Access notes (Include vehicle parking location and specific description from vehicle to observation point. Include additional notes as needed to access other observation points or if unable to access the site and why.) | |
| | Cog ID (###H) | |
| | Survey Date (mm/dd/yy) | |
| | GPS coordinates (lat/long) | |

| | | |
|--|--|---|
| | Are you able to proceed with your survey at this location? If Yes please continue with the form. If No please provide the reason you are unable to conduct your survey and submit the data sheet. | If No, why? 1) Lack of habitat within 250m of historic location 2) Challenges accessing location 3) Other: |
| | Percent of survey site observed | _____ % |
| | Survey Start Time (hh:mm) | |
| | Photo of viewshed from observation point | (attach and email to m.hepner@samarapdx.com along with completed observation sheet) |

| Turtle Observations | | |
|-------------------------------|---|--|
| Observation Start Time: _____ | | |
| Observation Period | Number of Turtles Observed | Northwestern Pond Turtle Age Class |
| 0 - 5 min | # ___ Northwestern Pond Turtle # ___ Western Painted Turtle # ___ Red-eared Slider # ___ Other non-native aquatic turtle: _____ # ___ Unknown aquatic turtle: _____ | # ___ Adult # ___ Juvenile # ___ Hatchling |
| 6 - 10 min | # ___ Northwestern Pond Turtle # ___ Western Painted Turtle # ___ Red-eared Slider # ___ Other non-native aquatic turtle: _____ # ___ Unknown aquatic turtle: _____ | # ___ Adult # ___ Juvenile # ___ Hatchling |
| 11 - 15 min | # ___ Northwestern Pond Turtle # ___ Western Painted Turtle # ___ Red-eared Slider # ___ Other non-native aquatic turtle: _____ # ___ Unknown aquatic turtle: _____ | # ___ Adult # ___ Juvenile # ___ Hatchling |
| 16 - 20 min | # ___ Northwestern Pond Turtle # ___ Western Painted Turtle | # ___ Adult # ___ Juvenile |

| | | |
|---|---|--|
| | # ___ Red-eared Slider # ___ Other non-native aquatic turtle: _____ # ___ Unknown aquatic turtle: _____ | # ___ Hatchling |
| 21 - 25 min | # ___ Northwestern Pond Turtle # ___ Western Painted Turtle # ___ Red-eared Slider # ___ Other non-native aquatic turtle: _____ # ___ Unknown aquatic turtle: _____ | # ___ Adult # ___ Juvenile # ___ Hatchling |
| 26 - 30 min | # ___ Northwestern Pond Turtle # ___ Western Painted Turtle # ___ Red-eared Slider # ___ Other non-native aquatic turtle: _____ # ___ Unknown aquatic turtle: _____ | # ___ Adult # ___ Juvenile # ___ Hatchling |
| Please include photos of observed turtles when possible and submit through email with your data form. | | |

| Environmental Variables | | |
|-------------------------|--|----------|
| CATEGORY | VARIABLE | RESPONSE |
| WEATHER | Sky (select one): Clear, few clouds, mostly cloudy, stormy, overcast, smoky | |
| | Precipitation (select one): Dry, fog, drizzle, light rain, heavy rain, hail, sleet, snow | |
| | Wind: 1-10 (Beaufort Wind Scale values [see below*]) | |
| TEMPERATURE | Air Temperature °C (Sun at 10 cm above ground) | _____ °C |
| | Water Temp °C* (If accessible, collect 4 cm below the water surface. Full sun and no aquatic vegetation/obstructions. Water column depth = approx. 45 cm) *if accessible | _____ °C |

Habitat Variables

| CATEGORY | VARIABLE | RESPONSE |
|-------------------------------|--|---|
| WATER BODY | Wetland, marsh, pond, lake, reservoir, creek, stream, river | |
| HABITAT SUITABILITY | Number of Basking structures present (At least 6" wide, 1 ft long, and less than 50% decomposed) | # ___ Wood # ___ Rock # ___ Vegetation # ___ Other: _____ |
| | Presence of bare ground or vegetation <1 ft tall and without canopy cover | Yes/No If yes, describe area: Include distance from water and location relative to the survey site (e.g. 50m from SW corner) |
| HABITAT SUITABILITY Continued | Presence of floating or emergent vegetation within approximately 2 ft along shoreline | Yes/No If yes, describe vegetation: Describe vegetation (e.g. overhanging willows, aquatic vegetation, etc.) |
| | Presence of aquatic vegetation? | Yes/No If yes, describe approximate percent vegetation cover: |

Disturbance Factors

| CATEGORY | VARIABLE | RESPONSE |
|------------------|---------------------------|----------|
| INVASIVE SPECIES | Bullfrogs observed? | Yes / No |
| | Warm water fish observed? | Yes / No |

| | | |
|---------------------------------------|--|--|
| SURVEY SITE DISTURBANCE FACTORS | Human aquatic recreation? | Yes / No If yes, indicate type (circle all that apply): Motorized/non-motorized watercraft, fishing from a boat/shore, swimming, waterskiing, other: |
| | Human land traffic seen or heard from the observation point? | Yes / No If yes, indicate type (circle all that apply): Hiking, cycling, boating, motorized vehicles, horse riding, other: |
| | Domestic animals? | Yes/No If yes, indicate type: |
| | Natural/other disturbance? | Yes/No If yes, indicate type: |

| |
|--------------------------|
| End Survey Visit |
| Survey End Time (hh:mm): |

*Please be sure to return this data **before October 1st 2020**. Scanned copies and photos can be emailed to m.hepner@samarapdx.com

For Wind Conditions, use this Beaufort Scale

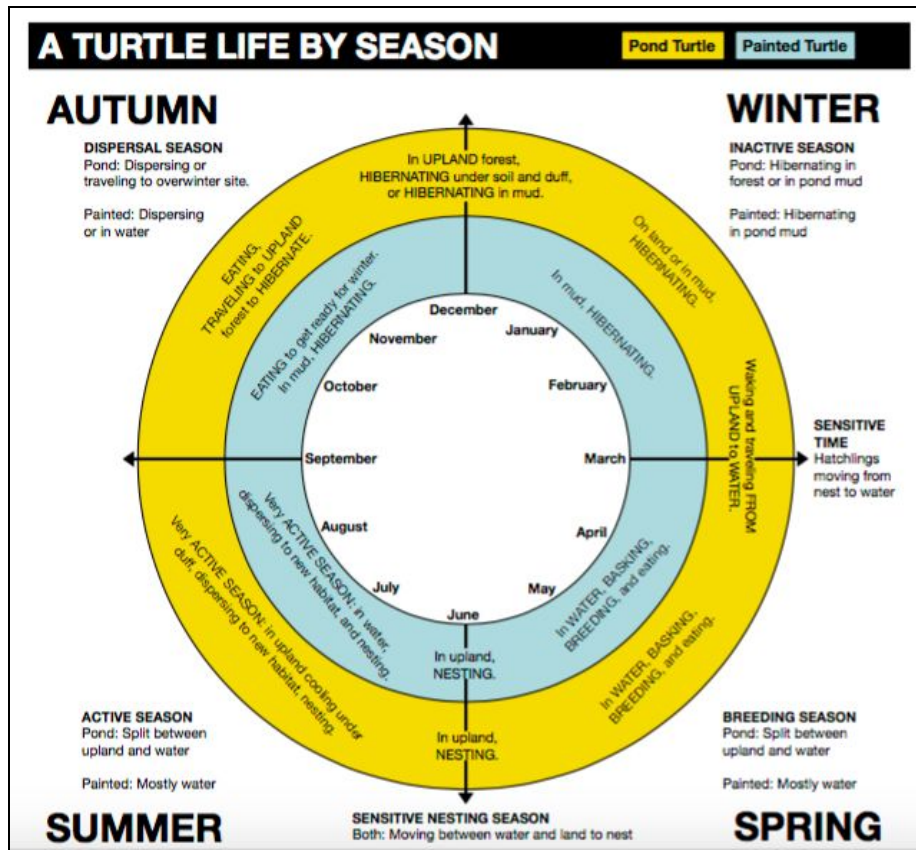
(source: <http://www.unc.edu/~rowlett/units/scales/beaufort.html>)

Beaufort Scale

| FORCE | NAME | Miles/hr | WIND CONDITIONS |
|-------|-----------------|----------|--|
| 0 | Calm | < 1 | Smoke rises vertically. |
| 1 | Light Air | 1-4 | Smoke drifts and leaves rustle. |
| 2 | Light Breeze | 5-7 | Wind felt on face. |
| 3 | Gentle Breeze | 5-11 | Flags extended, leaves move. |
| 4 | Moderate Breeze | 12-18 | Dust and small branches move. |
| 5 | Fresh Breeze | 19-24 | Small trees begin to sway. |
| 6 | Strong Breeze | 25-31 | Large branches move, wires whistle. |
| 7 | Near gale | 32-38 | Whole trees in motion, inconvenience in walking. |
| 8 | Gale | 39-46 | Difficult to walk against wind. Twigs blown off trees. |
| 9 | Strong Gale | 47-54 | Minor structural damage occurs (shingles blown off) |
| 10 | Storm | 55-63 | Trees uprooted, structural damage likely. |

Annual Activity Cycle of Oregon's Native Turtles

Note pond turtle details in yellow and painted turtle information in blue.



Source: https://www.dfw.state.or.us/wildlife/living_with/docs/ODFW_Turtle_BMPs_March_2015.pdf