

## BOG TURTLE TRAPPING SURVEY PROTOCOL (= Phase 3 survey)

Recent trapping studies have indicated that phase 2 bog turtle surveys sometimes fail to detect bog turtles in large wetland complexes, areas of dense vegetation, and/or when populations are at low density (Mansfield-Jones and Somers in prep., Rocco 2003, Somers 2000). Additionally, trapping and telemetry studies have documented some seasonal use of forested and other non-typical habitats by bog turtles (Amitrone pers. comm., Farrell and Zappalorti 2002, Eichelberger 2005, Herman pers. comm., Rocco 2003, Smith pers. comm., Tesauro pers. comm., Torroco pers. comm., Whitlock 2002). The following trapping protocol (phase 3 survey) is intended to augment detection of bog turtles, particularly in these areas.

### Phase 3 survey requirements:

1. Trapping can only be conducted by recognized qualified phase 3 surveyors (see list) and their permitted assistants (see 2 below).
2. Trappers and assistant trappers must be listed on the scientific collector's permit for the state where surveys are conducted. In some states, trapping for bog turtles cannot be conducted unless this activity is specifically authorized in the state permit. If a bog turtle is captured while only an assistant is present, a qualified phase 3 surveyor must be notified immediately to process the turtle.
3. In wetlands with designated survey areas totaling > 2 acres, a minimum of two phase 2 surveys should be completed by May 15. If no bog turtles have been found by then (May 15), consider trapping concurrently with the remaining phase 2 surveys. Commence trapping no later than May 27 and continue for a minimum of 20 consecutive days, to be completed no later than June 30.
4. Effort spent conducting phase 2 and phase 3 surveys must be calculated separately. Time spent checking traps cannot count towards required phase 2 survey hours.
5. Trap density is determined by wetland and trap type:
  - a. PEM/PSS (designated survey areas only) – minimum of 20 traps per hectare, as per Somers (2000) or equivalent density for other appropriate trap types and trapping methods.
  - b. PFO (designated survey areas only) – minimum of 10 traps per hectare or equivalent density for other appropriate trap types and trapping methods.
6. All traps will bear a label with qualified phase 3 surveyor's name and contact information including phone number(s).
7. All traps will bear a unique identifying number.
8. All traps will be checked at least once daily.
9. Individual trap locations will be GPS'ed.
10. Traps should be placed in appropriate bog turtle habitat including travel corridors, rivulets, near spring heads, at hibernacula and nesting areas, between tussocks, etc.

11. Traps must be covered to protect potentially captured bog turtles from heat stress and placed in shallow water or mud.
12. Traps should be closed during or immediately following rain events that could harm trapped bog turtles (*e.g.*, >1 inch) due to flooding.
13. All traps will be removed and accounted for immediately following the trapping effort.
14. Bog turtles are difficult to detect using phase 2 surveys in dense stands of phragmites, cattail, purple loosestrife, sweetflag, and/or reed canary grass, regardless of wetland size. Therefore, if the PEM portion of the designated survey area is  $\geq 50\%$  cover of these species, trapping may be conducted in addition to the required phase 2 surveys. Trapping may begin as early as May 1 for this special habitat type and should continue for at least 20 consecutive days.
15. Because this is solely a presence/absence survey, trapping efforts may cease once a bog turtle has been found.
16. The appropriate State wildlife agency and the Service will be contacted within 48 hours of discovery of any state and federally listed species.

In addition to reporting requirements for Phase 2 surveys, the Phase 3 survey final report will include:

- Site map delineating wetland type, designated survey areas, special habitat areas, and uplands; and project location information (*e.g.* state, county, municipality)
- Trap locations on site map
- Trap coordinates reported in latitude/longitude decimal degrees (datum NAD 83)
- # traps, # trap days, results/day/trap, including non-target catch
- Names of surveyors and assistants
- Trap results by PEM, PSS, PFO and special habitat areas (dense vegetation, see No. 13 above).
- A list of non-target captures and capture frequency
- An appendix including all completed field data sheets

Results of all phase 2 and 3 surveys are valid for 3 years from the date last survey was concluded.