Guidelines for Forestry Activities within High Priority Blanding’s Turtle Sites in the Northeastern United States

Eastern Blanding’s Turtle Technical Committee (http://blandingsturtle.org) DRAFT

Summary.—This document provides an overview of recommended forestry management practices within “High Priority Sites” for Blanding’s turtle conservation in the northeastern United States, based on literature and unpublished data. Blanding’s turtles rely on a diversity of wetland types within broad forested regions of the northeastern United States. Active forestry is a prominent component of land management activities within a majority of High Priority Sites for Blanding’s turtles. Forestry activities can pose clear threats to the persistence of Blanding’s turtle populations primarily by 1.) exposing all age classes to elevated mortality caused by machinery; 2.) changing hydrology of overwintering wetlands; 3.) creating new access points for people into sites otherwise protected by their isolation; 4.) providing vectors for invasive plant species that can reduce upland and wetland habitat quality. However, in certain instances, forestry activities can improve local habitat quality by: 1.) creating new openings for nesting, and 2.) improving the habitat quality of forests surrounding wetlands used by Blanding’s turtle in the spring by increasing the ratio of deciduous to coniferous tree species.

Background.—The majority of freshwater turtle species in New England, New York, and Pennsylvania are of regional conservation concern. Many populations are expected to decline in abundance and distributional extent as a result of habitat fragmentation and degradation (NEPARC 2010), and localized extirpations have been documented. In the eastern United States, Blanding’s turtle (Emydoidea blandingii) is restricted to small, isolated populations in eastern New England, New York, and Pennsylvania, where populations are often found where high-quality scrub-shrub, emergent, riverine, and vernal pool systems are closely juxtaposed with suitable nesting areas in relatively intact forested regions. Most High Priority Sites for Blanding’s turtle in the Northeast Region support some level of forestry activities. Mechanized forestry activities can pose clear threats to the persistence of Blanding’s turtle populations primarily by: 1.) exposing all age classes to elevated mortality caused by machinery; 2.) changing hydrology of overwintering wetlands; 3.) creating new access points for people into sites otherwise protected by their isolation; 4.) providing vectors for invasive plant species that can reduce upland and wetland habitat quality. However, in certain instances, forestry activities can improve local habitat quality by: 1.) creating new openings for nesting, and 2.) improving the habitat quality of forests surrounding wetlands used by Blanding’s turtle in the spring by increasing the ratio of deciduous to coniferous tree species. Forestry Conservation Management Practices (CMPs) for Blanding’s turtle were developed for Massachusetts by Bol and Erb (2007). In this document, we expand and clarify their recommendations and adapt them to a broader geographic scope using a similar Objective / Rationale / Recommendations approach. Recommended guidelines for forestry activities in High Priority Blanding’s Turtle Sites follow.

Blanding’s Turtle Active Season: 1 March to 15 September in most years, may vary depending on weather
Blanding’s Turtle Dormant Season: 1 November to 28 February in most years, may vary depending on weather2

Objectives and Guidelines for Forestry Activities in High Priority Blanding’s Turtle Sites
(1) Prevent direct adult mortality caused by machinery, skidders, trucks, etc.

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2 Bol and Erb (2007) recommend a 600’ buffer restriction on motorized vehicles between March 16 and September 15th; we have extended this window based on several instances of early emergence and basking (e.g., in 2002 and 2012). The window from September 16th to October 31 is variable annually and in warm years there may be frequent inter-wetland movements.
Elevated adult mortality is the leading cause of population decline at most Priority Sites, and it is necessary to minimize the risk of crushing adults during regular activities associated with forestry. To avoid crushing adult turtles during the early spring basking season (Figure 1) or during inter-wetland movements during the summer activity season, avoid all motorized vehicle use within 100 m (328') of vernal pools, potential vernal pools, scrub-shrub swamps, and emergent wetlands, or other wetlands (Figure 2) known or predicted to be used by Blanding’s turtles, during the active season from 1 March to 15 September, unless snow and ice cover remains by 1 March. Where vernal pools occur within 200 m of permanent waterbodies, and where permanent wetlands are within 200 m of one another, avoid active-season motor vehicle use within the connecting area between the wetlands and the vernal pools (Figure 3). Where possible, schedule forestry activities during the winter inactive season between November 1st and February 28th, during which period the Blanding’s turtles will be overwintering underwater. As recommended by Bol and Erb (2007), wetlands should be crossed only when frozen solid. Active-season crossings should be minimized to the greatest extent possible and temporarily bridged. Harvesting trees within wetlands should be conducted in winter by hand-felling trees and winching them beyond the margin of the wetland.

(2) Minimize mortality of nests, hatchlings, and juvenile turtles.
Do not stage heavy equipment or use motor vehicles between 15 May and 15 September in known or likely nesting areas such as gravel pits or powerlines with stable, coarse, sand- or sand/gravel substrates and sparse or scrubby vegetation (see Guidelines for Nest Site Management, EBTTC 2014a). Where such
staging is necessary within known nesting areas, establish a secure perimeter with silt fence and conduct morning sweeps of the site prior to beginning daily work.

(3) Improve, expand, or create new nesting habitat.
In coordination with High Priority Site Leaders and State Coordinators, identify potential new nesting areas within the interior of the site more than several hundred meters from roads and residences (see Guidelines for Nest Site Management, EBTTC 2014) and within 200 m of known or predicted high-use wetlands.

(4) Avoid changes to wetland hydrology during overwintering season (October to April).
Blanding’s turtles overwinter in deep, emergent or scrub-shrub wetlands from October to April. Forestry activities must not alter the hydrology of known or suspected overwintering wetlands during the dormant period. For example, it is necessary that beaver dams be left in place during the dormant season.
(5) *Avoid disturbance to vernal pool habitats year-round.*
All vernal pools and potential vernal pools (as determined by state-specific guidelines) must be avoided completely year-round.

(6) *Avoid introducing aquatic or terrestrial invasive plant species.*
Do not bring offsite fill onto High Priority Blanding’s Turtle Sites.
Literature Cited


