

MANAGEMENT PLAN FOR THE STATE-LISTED BLANDING'S TURTLE

PREPARED FOR: City of McHenry Parks & Recreation Department
Pete Merkel, Director of Parks and Recreation
333 South Green Street
McHenry, IL 60050
(815) 363-2100

INTRODUCTION

This document serves to describe a conservation and management plan for the state-listed Blanding's Turtles (*Emydoidea blandingii*) in northeastern Illinois. Portions of the Plan have been adopted from Mosca (2001) and IDNR Endangered Species Consultation agency action reports.

Blanding's Turtles are listed as a state-threatened species in Illinois, and therefore warrant special consideration for management and protection. The turtle is known from only 59 sites statewide, representing 13 counties in northern Illinois (IDNR, BCD database, 2001). The species was listed due to its declining population numbers, threats to existing habitat, and vulnerability to extirpation. Any form of habitat alteration to wetlands and associated upland buffer, can have both direct and indirect deleterious impacts on this species. Development of suitable habitat not only impacts individual animals, but it also can influence local population viability through degradation of potential nesting sites and changes in plant communities that provide food resources.

Sedge meadows, cattail marshes, and shallow-water impoundments of Boone Creek and its associated wetlands, offer suitable habitat for Blanding's Turtles. Therefore, the IDNR requests that measures be taken to protect and manage for extant population of Blanding's Turtles during and after proposed construction activities. This plan establishes the protocol for minimizing risk of impacts to the turtles when they are found on-site during construction, and subsequently, how to manage the nearby critical habitat to maintain viable populations.

GENERAL SPECIES BACKGROUND

In Illinois, Blanding's Turtles are found sporadically in appropriate wetland habitat from the Illinois River northward to the Wisconsin state line (Illinois Natural History Survey, 2001). Although records indicate the species has been recorded from numerous counties, the most significant populations are known to inhabit Lake, McHenry, and Kane Counties. The species is restricted to wetland areas that include shallow lakes, ponds, sedge meadows, marshes, and streams with soft bottom substrate and dense aquatic vegetation (National Audubon Society, 1994). Adult turtles range in size from 8 to 10 inches and may weigh up to three pounds (Wisconsin DNR, 2001). While primarily aquatic, Blanding's Turtles frequently come on land to forage for food or to bask in the sun. Seasonally, they are found in uplands adjacent to wetlands as the females emerge from the wetlands in search of suitable nesting substrate. During winter, they hibernate buried in the soft muddy bottoms of ponds and streams.

Blanding's Turtles are considered omnivorous. While in water, they typically feed upon crustaceans, snails, insects, frogs, and fish (Wisconsin DNR, 2001). Crayfish appear to be a preferred food when available. On land, they consume worms, slugs, berries, and succulent vegetation.

SPECIES STATUS

Blanding's Turtles are not yet federally listed, but they are considered a threatened species in Illinois. Threatened species refer to any breeding species that is likely to become endangered within the foreseeable future. Under Illinois law, the taking, possession, transportation, sale, or disposal of any listed species is prohibited without a permit issued by the IDNR. Habitat destruction and fragmentation are the principal threat to Blandings's Turtles, and maintenance of both aquatic and terrestrial environments is critical to species survival. In addition to wetlands, upland nesting areas near wetlands are critical if Blanding's Turtles are to complete their life cycle.

The turtles' reproductive characteristics limit the species' ability to maintain itself. Blanding's Turtles are not prolific breeders, and individuals require 15 to 20 years to sexually mature. Only about 50 percent of the female population breeds in any given year. Nests are created in sandy upland soil, and individuals may travel up to 1.5 miles overland to reach nesting sites. The turtles have been found to nest successfully on low-density residential property, golf courses, farm fields, in power line easements, and along road shoulders. Historically, nests were located under open savanna canopies and dry hill prairies. The same nesting site is usually favored each breeding year, so it is important to keep known nest sites protected and available for gravid females. Clutches usually consist of only 3 to 17 eggs, and between 65 to 90 days are required before hatchlings emerge. With most nesting initiated in June and July, this means that hatchlings typically appear in August and September. Nest predation is widespread and a major reason for decline of the species. Nests are not guarded and are extremely vulnerable to attacks from crows, skunks, and especially raccoons.

Other threats to turtles of all species are posed by increased vehicular traffic resulting in greater mortality. Breeding females are extremely vulnerable to cars and trucks as the turtles attempt to cross roadways to reach nesting sites. Illegal collection also poses a problem, and Blanding's Turtles have been a sought-after species among collectors.

MANAGEMENT PLAN

The following constitutes a management plan for Blanding's Turtles in the Boone Creek watershed during and after proposed construction:

- Excavating and landscaping contractors working on-site will be informed of the possible presence of Blanding's Turtles. An informational handout (Exhibit 1) will be distributed to the developer, contractors, and others who might be expected to encounter turtles in order to improve individuals' turtle identification and awareness skills. During the construction phase, foreman and heavy equipment operators will be instructed to halt excavation and grading operations if Blanding's Turtles are found. Work areas (including open excavations) will be inspected prior to start of work daily from June to November to locate any adult turtles or hatchlings that may have become trapped or to locate any nests that may have been constructed overnight. If turtles or turtle nests are encountered, the IDNR's Region 2 office will be notified immediately (815/675-2385).

- Silt fencing will be liberally used to create barriers to keep turtles out of grading or construction work areas.
- Following construction, the informal handout (Exhibit 1) will be made available to homeowners, prospective purchasers, visitors, and others who might come upon turtles while visiting or residing in construction area and nearby subdivision. Other periodic public education efforts will be conducted as appropriate, especially if turtles are confirmed to be present at this site.
- Staff and homeowners will be advised that they are not authorized to handle Blanding's Turtles. However, selected staff and a core group of interested homeowners will be instructed on appropriate methods and techniques for rescuing individuals when life-threatening by traffic or other hazards.
- Signs will be erected at select points near this site to inform people of the possible presence of Blanding's Turtles and advising that turtles be left alone and not captured or harassed. The attached handout (Exhibit 1) can be used to develop this informational material.
- "Mountable" or molded curbs will be used on streets and parking areas lying between the wetland and potential upland nest sites. Mold curbs facilitate the overland movement of reptiles and amphibians. Given the close proximity of Boone Creek and its associated wetlands, the presence of significant populations of amphibians (such as salamanders) and reptiles (such as Blanding's Turtles) which use terrestrial habitats for a crucial part of their life cycle is likely. Recent research has shown that these species are unlikely to use culverts or storm sewers to pass beneath streets. They tend to become trapped by vertical curbs which they cannot surmount and they are unlikely to find their way out of storm sewers should they fall in. "Turtle Crossing" informational signage will also be considered in these locations if turtles are found in the proposed park.
- If any Blanding's Turtle nests are discovered, steps will be taken to protect the nest following notification of and in consultation with the IDNR. If determined to be practicable and beneficial by IDNR, it is possible that nest/egg relocation would be conducted under IDNR guidance.
- Critical in maintaining a viable population of turtles in the Boone Creek corridor is the management of wetlands for native plant communities. Wetlands should be managed to enhance their biotic diversity and provide sufficient habitat for populations of the turtle and other wetland-dependent fauna. Stands of exotic glossy buckthorn, common buckthorn, and phragmites should be removed, as well as invasive stands of sandbar willow, poplar, and red osier dogwood. Prescribed burns should be initiated to enhance and maintain native plant communities.

- Wetland buffers should be established in accordance with existing Watershed Development Ordinances. Any storm water detention basins that are designed for construction in the wetland buffer along Boone Creek will be designed as wet bottom basins with naturalized side slopes, which should be beneficial for Blanding's Turtles. In addition, attempts will be made to secure upland buffer along the Creek to provide suitable nesting and foraging habitat. Informational signage also will be posted along the ball fields to heighten public awareness and appreciation of Blanding's Turtles.
- The Department recommends the establishment of "conservancy easements" to protect and buffer wetlands from residential and development impacts; appropriate restrictive covenants which allow the city to enforce buffer zones and appropriate management also should be imposed.
- Uplands adjacent to the Boone Creek corridor should be planted with native vegetation and managed as open space consistent with nesting requirements of the Blanding's turtle.

REFERENCES

Congdon, Justin D., Arthur E. Dunham, and R. C. Van Loven Sels. 1983. "Delayed Sexual Maturity and Demographics of Blanding's Turtles (*Emydoidea blandingii*): Implications for Conservation and Management of Long-Lived Organisms." *Herpetologica* 39(4): 417- 429. The Herpetologists' League Inc.

Congdon, Justin D., Donald W. Tinkle, Gary L. Breitenbach, and Richard C. Van Loben Sels. 1993. "Nesting Ecology and Hatching Success in the Turtle *Emydoidea blandingii*." *Conservation Biology*. Volume 7, No. 4.

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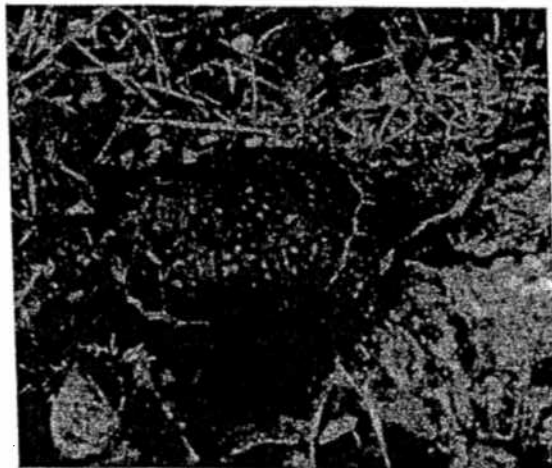
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Wisconsin Department of Natural Resources. 2001. *Factsheet - Blanding's Turtle*. (www.dnr.state.wi.us/org)

Blanding's Turtles In Boone Creek - How You Can Help

Blanding's Turtles (*Emydoidea blandingii*) are considered a threatened species in Illinois, and are thus protected by state law. They are known to inhabit wetlands in northeastern Illinois, including Boone Creek and nearby ponds and sedge meadows. Blanding's Turtles spend most of their lives in shallow lakes, ponds, wetlands and streams, but also are found on land as they forage for food or travel to construct nests. Adult Blanding's Turtles are 8-10" long and weigh about 3 pounds. They have a long neck with a characteristic bright yellow throat. The tops of their shells are usually black with yellow specks. Young Blanding's Turtles may be encountered, especially in August and September, when new hatchlings typically emerge from nests located in the uplands adjacent to Boone Creek. Juveniles are paler in color than adults but their spots and markings are more conspicuous. The City of McHenry has committed to conserving and protecting Blanding's Turtles residing within wetlands of the Boone Creek corridor. All members of our community including contractors, residents, and guests are encouraged to assist in this effort. Your assistance will help implement the *Management Plan for Blanding's Turtles* that has been prepared and submitted to the Illinois Department of Natural Resources (IDNR). Here's what you can do to help.

- Increased traffic on streets and roadways is a major cause of turtle mortality, especially during nesting season. Be alert for turtles heading off to nest sites in late spring and early summer. Female turtles traveling to nests are most active in later afternoon and at dusk. Be alert for vulnerable, slow-moving turtles on Dartmoor Road as well as on other subdivision streets and try to avoid running them over. This applies to all turtle species, including the painted and snapping turtles that also live in Boone Creek and nearby wetlands.
- Don't harass Blanding's or other turtles or capture them and keep them (illegally) as pets. Wild turtles are an integral part of the natural community and should be left where they are found. If you are fortunate enough to encounter a Blanding's Turtle, be happy for the experience and let it go on its way. If you should meet up with a turtle you think is in a location that could result in injury or death, move it to the edge of the wetland where it can continue on its journey more safely. Contact the IDNR's Region 2 office in Spring Grove (Phone 815-675-2385) if you come in contact with a Blanding's Turtle so that biologists can monitor the abundance and distribution of the local population.
- If you should locate a turtle nest or suspect a turtle nest (typically in sandy areas in late spring or early summer) notify the IDNR Region 2 office. The IDNR may institute a nest protection or egg recovery protocol depending upon circumstances.



Thank you for your help in protecting
this threatened species!

LOG OF ATTACHED CORRESPONDENCE

<u>Date</u>	<u>Agency/Author</u>	<u>Comment</u>
2/5/01	City of McHenry/P. Merkel	Illinois First Grant Initiative Survey for Proj. #HD1231
5/4/01	Ill. Historic Preservation Agency	Archaeological Survey Request
5/24/01	IDNA/M. Branham	Endangered Species Consultation
6/21/01	City of McHenry/P. Merkel	Endangered Species Consultation – Response
7/18/01	IDNR/M. Branham	IDNR Letter to DCAA
8/24/01	Mars, Inc./S. Kinzer	Phase I Archaeological Survey
11/29/01	IDNR/B. Semel	Draft of Turtle Management Plan
11/30/01	City of McHenry/P. Merkel	Grant Agreement Submission
12/28/01	Ill. Historic Preservation Agency	Archaeological Survey Approval
1/8/02	Department of Army Corp	Dartmoor Drive Wetland Mitigation Approval
1/21/02	City of McHenry/P. Merkel	Request for Final Turtle Management Plan
3/4/02	IDNR/B. Semel	Final Turtle Management Plan
11/25/02	City of McHenry/P. Merkel	Turtle Management Plan Follow Up
12/23/02	IDNR/M. Branham	Request for ITA
1/7/03	IDNR/G. Kruse	ITA Documents