

**Incidental Take Submittal
For the State Threatened Species
Blanding's Turtle (*Emydoidea blandingii*)**

Conservation Plan

1) Description of the Impact

A) Introduction and Legal Description

The subject project is the construction of a north-south 12.5-mile multi-lane, divided highway designated as Interstate-355 (I-355) South (FAP 340) from Interstate Route 55 (I-55) to Interstate Route 80 (I-80). The constructing agency is the Illinois State Toll Highway Authority (Tollway) with the project primarily in Will County, with the northern portion in DuPage and Cook Counties (See Figures in Attached INHS Report). The primary interest location of the Blanding's turtle is in Will County, just west of the Cook County line on property owned by the Forest Preserve District of Will County (Keepataw Forest Preserve). The legal description of the primary disturbance is the SE ¼ Sec 24, R10E, T37N and SW ¼ Sec19, R9E, T37N.

The proposed project has undergone the Environmental Impact Statement (EIS) process following NEPA procedures. The 1996 Final Environmental Impact Statement (FEIS), the Draft Supplemental Final Environmental Impact Statement (Draft SEIS), and the Final SEIS should all be referred to for the detailed alternative analysis, social and economic studies, and environmental studies. The studies also included several threatened and endangered species investigations. It was determined that the proposed project will not jeopardize the continued existence of any plant or animal species currently listed.

Input from many federal, state, and local agencies was considered in the alternatives analysis. In addition, a series of three public information meetings (1987, 1988, and 1990) and Public Hearings (1994, 1996 and 2001) were held in the project area. A Draft EIS was issued in July, 1994. A Supplemental to the Environmental Impact Statement (SEIS) was issued in June, 1995. The project was reevaluated from 1999 to 2001. A new Draft SEIS was issued in December of 2000, with the Final SEIS being approved in August of 2001. The Record of Decision was signed on February 25, 2002. Through these various studies along with public, local, and resource and regulatory agency input, an alternative was recommended which is based on the recorded centerline as modified to minimize environmental impacts. The location of the recommended alignment is the result of efforts to minimize impacts to wetlands and sensitive habitats.

B) Biological Data on the Species

Blanding's turtle (*Emydoidea blandingii*) was listed as a State Threatened Species by the Illinois Department of Natural Resources in 1998. The turtle typically inhabits marshes,

bogs, fens, prairie wetlands, sedge meadows, and vegetated regions of shallow lakes and ponds (Phillips et al. 1999, Dreslik and Phillips 2006). Of the threatened and endangered turtles in Illinois, the Blanding's turtle probably has the broadest distribution (Dreslik and Phillips 2006). Populations in northeastern Illinois are in jeopardy due to urbanization and habitat loss (Ludwig et al. 1992, Redmer and Kruse 1988). The life history characteristics of the turtle also potentially exacerbate the decline of the species including delayed sexual maturity (Congdon et al. 1993), the requirement of high temperature for hatchling success (Gutzke and Packard 1987), high rates of nest predation (Congdon et al. 1993, Ross and Anderson 1990), small population sizes (Rubin 2000, Rubin et al. 2001), low rates of juvenile recruitment (Rubin 2000, Rubin et al. 2001), and the reluctance of individuals to migrate between habitat patches (Rubin 2000, Rubin et al. 2001).

The current range of Blanding's turtle in Illinois is primarily the northern half of the state, with populations following the Illinois River southward (Phillips 1999). They have recently been documented in Carroll, Cook, Grundy, Henderson, Henry, Jasper (Olson and Louis 1999), Kane, Kankakee, Lake, LaSalle, Lee, McHenry, McClean, Will and Whiteside counties (Dreslik and Phillips 2006).

The NEPA studies for the South Extension of I-355 documented Blanding's turtles in the Des Plaines River Valley, however they were not documented as utilizing habitat directly under the alignment for the bridge. Studies by the INHS in the summer of 2005 further documented the species in the vicinity, but again not directly under the alignment of the bridge (Dreslik and Phillips 2006). However, in the summer of 2006, one radio tagged Blanding's turtle was documented as crossing the alignment, and another one was observed crossing the alignment. Consequently, the species has now been documented as utilizing habitat directly under and adjacent to the bridge alignment.

C) Description of the Activities That Will Result in Taking

The take would come from activities associated with the construction of the new I-355 South Extension bridge over the Des Plaines River Valley. These activities consist of the placement of bridge piers and adjacent construction pads in the Valley. The locations of some of these piers will require temporary fill and permanent fill in wetlands. Upon the completion of the bridge the temporary construction pads will be removed. Land adjacent to the piers will remain as filled. Also a former mule trail through the Valley has been upgraded to a haul road. This road is being used as access to the construction site and will remain for use as a Forest Preserve District trail.

D) Explanation of the Anticipated Adverse Effects

The anticipated adverse effects include:

- 1) Blanding's turtles may be crushed or entombed by equipment or vehicles.
- 2) Permanent loss of habitat associated with bridge pier bases and fill associated with construction pads.

- 3) Potential degradation of habitat associated with salt spray from the bridge deck.

2) Measures to Minimize and Mitigate Take (Including Funding Commitments)

A) Plans to minimize the area, estimated number of take and the amount of habitat affected.

Throughout the NEPA and Section 404 process, extensive resource and regulatory coordination took place. The findings of the NEPA studies concluded that no adverse impact would occur to the species as a result of the construction of the South Extension. These findings were based upon existing knowledge at the time and the sequencing efforts (avoidance, minimization, and compensatory mitigation) of the alternate analysis. However, since the species was known to inhabit the vicinity along with other sensitive plant and animal species, and in the interest of minimizing wetland impacts, the footprint of fill material in the Valley was reduced.

Bridging wetlands in the Des Plaines River Valley minimizes the area of habitat directly filled and reduces changes in hydrologic characteristics of the affected wetlands. Drainage runoff from the bridge will be conveyed in a closed system to a wet detention basin in the Des Plaines River Valley and then will be conveyed to the River. Also, the mule trail footprint is being utilized as the haul road to minimize introducing new fill and construction impacts and permanent loss of area in the Valley wetlands. In all, there are 3.7 acres of fill placed within the Des Plaines River Valley wetlands.

B) Plans for Management of the Area Affected That Will Enable the Continued Use

The land and habitats of the area in question are under public ownership. The Forest Preserve Districts of Will and Cook Counties own and manage the property in the Valley adjacent to the bridge. Therefore the property is not endangered of secondary impacts due to urban development.

C) Description of All Measures to be Implemented to Minimize or Mitigate the Effects

- 1) Avoidance and minimization efforts were described in Section 2A above, as well as in the NEPA documents and Section 404 permit application. However, the Tollway also provided hydrologic restoration within the Lockport Prairie Nature Preserve and satisfied agreements with the U.S. Fish and Wildlife Service and the Forest Preserve District of Will County for dolomite prairie mitigation. This site is known Blanding's turtle habitat. Exhibit 4-7a from the 1996 FEIS illustrates the location of this site. Since publication of the 1996 FEIS, work on this site has been completed and approved by ACOE, USFWS and FPDWC for the restoration of the Lockport Prairie site. More specifically, the hydrologic restoration consisted of installing three drainage structures under a railroad bed. The railroad bed was believed to have blocked groundwater and surface water from flowing into a 15 acre portion of the Preserve. The work was conducted in 1996 and 1997 and was coordinated with the Illinois Nature Preserve Commission, the US Fish and Wildlife Service and the Forest Preserve District of Will

County. The restoration of historical flows should enhance and restore the existing Blanding's turtle habitat at Lockport Prairie.

2) Vegetation management efforts near the I-355 South Extension are ongoing. Vegetation management would take place at Keepataw Preserve (west of alignment within action area and beyond), Black Partridge and Waterfall Glen Forest Preserves (east of alignment within action area and beyond) or other nearby preserves within the Des Plaines River Valley. This would include removal of invasive woody vegetation, control of invasive species, and controlled burning around wetlands, seeps and rivulets to improve habitat suitability. The Illinois Tollway has established a Hine's emerald dragonfly working group which would include representatives of the Service, USACE, the land managers/owners (Forest Preserve Districts), the Illinois Department of Natural Resources, and others. This group was established under the commitments of the Biological Opinion rendered by the US Fish and Wildlife Service during the Section 7 Consultation for the South Extension of I-355. The commitment is to provide vegetation restoration work on a *minimum* of 56 acres in these preserves over the next five years. Brush clearing and burns are scheduled for the latter half of 2006. Prescribed burns have already taken place near the I-355 corridor in winter 2005/2006 (See Attached Exhibits). These efforts will allow wetland vegetation species to reestablish themselves and provide habitat restoration and enhancement for the Blanding's turtle. In particular, nesting habitat would likely be restored with brush clearing efforts near known Blanding's habitat in Waterfall Glen Forest Preserve in DuPage County. In all, hydrologic restoration and vegetation management is committed to occur on a minimum of 71 acres of public land in the Des Plaines River Valley.

3) A research-oriented attempt would be made to create or restore rivulet habitat to replace the larval/breeding habitat of the Hine's emerald dragonfly adversely affected by bridge construction and operation. The intent of this effort would be to determine whether it is feasible to create or restore Hine's emerald breeding habitat in areas that are currently unsuitable. An evaluation of the degree of success would be part of this effort. At least three separate streamlet systems of at least 125m in length at three distinct locations and with characteristics most closely resembling the best known occupied habitat are to be established through hydrologic manipulation and other measures in areas of the Des Plaines River Valley that do not currently contain suitable habitat, and monitored for at least 5 years after establishment. The Hine's working group would also guide this rivulet restoration and monitoring effort. Currently one rivulet creation site is planned for Waterfall Glen Forest Preserve, approximately 1.5 east of the I-355 alignment, one is planned for approximately 500 west of the alignment, and the third site is not yet known. The restoration or creation of these sites may enhance existing Blanding's turtle habitat, especially that used by juveniles of the species (Pappas and Breck. 1992. Habitat selection of juvenile Blanding's turtles. *Journal of Herpetology* 26: 233-234).

4) The Illinois Tollway has dedicated project funding as part of the Planning Department budget to provide for the monitoring and research of Blanding's turtle populations. This work is being conducted by the Illinois Natural History Survey. By

having scientists from the INHS on-site, additional grant funding has been secured. The presence of existing research in the Des Plaines River Valley has given the program leverage to successfully obtain these funds. The additional grant funding recently received by INHS staff supported by Tollway funding has provided for x-raying of female turtles to determine the amount of eggs they were carrying. This will provide valuable reproductive data.

5) By funding a full-time project scientist and field assistants, the Illinois Tollway has been able to facilitate other Blanding's turtle research in the Valley. For example, the Illinois Tollway has also been able to partially fund radio-telemetry efforts at Goose Lake Prairie State Park, within the Des Plaines River Valley. Research at this site has established long-distance movement by the Blanding's turtle previously undocumented for the species in the Valley. Additional efforts at Lockport Prairie have been enhanced by the local presence of Tollway-funded scientists.

6) Illinois Tollway has funded Blanding's turtle trapping and collection efforts in Lake and northern Cook Counties associated with improvements to I-94/294. This has provided valuable occupational data for that geographic area.

In summary, there has been a strong level of support for Blanding's turtle research that is not specifically assigned to key habitat adjacent to the I-355 corridor. The efforts at Lockport Prairie and Goose Lake Prairie confirm the Illinois Tollway's commitment to conservation measures for the species. Additionally there is a future commitment to fund post-construction research on Blanding's turtles in the vicinity of the I-355 bridge and research at Waterfall Glen.

To further minimize construction impacts, the Tollway's Erosion and Sediment Control, Landscape Design Criteria Manual is being used. This Manual utilizes the latest techniques in sediment and erosion control design and implementation. No-intrusion signs and super silt fence has been installed and diligently maintained within the construction area. Also, the contractor for the bridge was required to hire an environmental consultant to be on-site and inspect areas as well as provide assistance and advice whenever problems arise.

D) Plans for Monitoring the Effects of Measures Implemented

The Illinois Natural History Survey has been contracted to supply Blanding's Turtle monitoring and research prior to, during and after the construction of the I-355 South Extension Bridge. Annual Reports are to be provided that describe the year's efforts. The first of the Annual Reports is available now and entitled "Monitoring Results for the Threatened Blanding's Turtle (*Emydoidea Blandingii*) in the Interstate 355 South Extension (FAP 340) Corridor" by Michael J Dreslik and Christopher A. Phillips dated 25 January 2006.

E) Adaptive Management Practices That Will Be Used to Deal With the Changed or Unforeseen Circumstances That Affect the Effectiveness of Measures Instituted to Minimize or Mitigate the Effects of the Proposed Action

In addition to items described in Section 2A and 2C above, the Record of Decision by the Federal Highway Administration provides commitments to the monitoring efforts. The following quote from that document sums up the commitment requirements. "Regarding the Spotted turtle (*Clemmys guttata*) and Blandings turtle (*Emydoidea blandingii*), a herpetologist will be employed to determine if the primary range of the spotted turtle and Blanding's turtle is outside the construction limits before construction begins. If spotted turtles are found within the construction limits, then appropriate action would be taken based on the herpetologist's recommendations. In addition, a biologist, botanist, and ornithologist will be retained by the Constructing Agency to observe construction startup activities adjacent to and within local forest preserves. The scientists will visit the site periodically and report all findings directly to the Constructing Agency."

F) Verification That Adequate Funding Exists to Support and Implement All Mitigation Activities Described In the Conservation Plan.

The Illinois Natural History Survey has been contracted by the Illinois Tollway to complete the studies. Also, the construction measures and minimization measures described above are all funded within existing Tollway contracts with the contractors and consultants and backed by "AAA" Bonds.

The Tollway has dedicated project funding as part of the Planning Department budget. At the conclusion of the 2006 monitoring and survey season, the Tollway will work with the Illinois Natural History Survey to determine the necessary efforts for the years 2007 and 2008. All of the efforts are committed to in the Record of Decision, the Biological Opinion, and/or the Section 404 requirements for the South Extension of I-355.

3) A description of alternative actions the applicant considered that that would not result in take and the reasons that each of those alternatives was not selected. A "no-action" alternative shall be included in this description of alternatives.

The proposed project has undergone the Environmental Impact Statement (EIS) process following NEPA procedures. The 1996 Final Environmental Impact Statement (FEIS), the Draft Supplemental Final Environmental Impact Statement (Draft SEIS), and the Final SEIS should all be referred to for the detailed alternative analysis (including a no-action analysis), social and economic studies, and environmental studies. The studies also included several threatened and endangered species investigations. It was determined that the proposed project will not jeopardize the continued existence of any plant or animal species currently listed.

Input from many federal, state, and local agencies was considered in the alternatives analysis. In addition, a series of three public information meetings (1987, 1988, and 1990) and Public Hearings (1994, 1996 and 2001) were held in the project area. A Draft EIS was issued in July, 1994. A Supplemental to the Environmental Impact Statement (SEIS) was issued in June, 1995. The project was reevaluated from 1999 to 2001. A new Draft SEIS was issued in December of 2000, with the Final SEIS being approved in August of 2001. The Record of Decision was signed on February 25, 2002. Through these various studies along with public, local, and resource and regulatory agency input,

an alternative was recommended which is based on the recorded centerline as modified to minimize environmental impacts. The location of the recommended alignment is the result of efforts to minimize impacts to wetlands and sensitive habitats.

4) Data and information to indicate that the proposed taking will not reduce the likelihood of the survival in the wild, the biotic community of which the species is part of or the habitat essential to the existence in Illinois.

This data and conclusion is contained in all of the INHS and NEPA documents for the Environmental Impact Statements for the project. Of the threatened and endangered turtles in Illinois, the Blanding's turtle probably has the broadest distribution (Dreslik and Phillips 2006). The current range of Blanding's turtle in Illinois is primarily the northern half of the state, with populations following the Illinois River southward (Phillips 1999). They have recently been documented in Carroll, Cook, Grundy, Henderson, Henry, Jasper (Olson and Louis 1999), Kane, Kankakee, Lake, LaSalle, Lee, McHenry, McClean, Will and Whiteside counties (Dreslik and Phillips 2006). The habitat restoration, management and monitoring efforts committed to by the Illinois Tollway should provide more than adequate conservation measures to facilitate the continued existence of the Blanding's turtle. Therefore, it is unlikely that the temporary and permanent corridor impacts to the wetland habitats will jeopardize the continued existence of the species in Illinois.

5) An implementing agreement, which shall include, but not be limited to:

The existing agreement with the Illinois Natural History Survey is attached for your use as well as the Monitoring Results for the Threatened Blandings turtle in the Interstate 355 South Extension Corridor. The Illinois Tollway will continue to utilize the expertise of the Illinois Natural History Survey, throughout the remainder of construction and post-construction activities.