January 8, 2015

Minneapolis Park and Recreation Board
2117 West River Road North
Minneapolis, MN 55411
attn: Colleen O’Dell, Strategic Planning

RE: Theodore Wirth Regional Park Plan Master Plan

Dear Ms. O’Dell:

Thank you for the opportunity to comment on the Theodore Wirth Regional Park Master Plan. I am commenting on behalf of the City of Minneapolis Community Planning and Economic Development Department – Long Range Planning Division.

• The master plan maps (pages 1-5, 7-3, 7-5, 7-11, 7-14, 7-15, and 7-16) are difficult to read and would benefit from the addition of street names.

• It would be helpful if the map on page 1-8 had all of the major features listed on it that are mentioned in the plan, so people could know where those features are located. An example is that the Bassett Creek Bridge is mentioned in the recommendations, but it is difficult to find where it is located in the park on any of the maps.

• The plan has very little mention of the proposed Bottineau (Blue Line extension) LRT and station area planning (and the Wirth Park Forum) other than a comment on pages 7-12 and 7-13 referencing park connections. We agree that the issue of connecting the park to north Minneapolis is an important issue and would recommend that the plan provide more guidance on these issues to help inform the station area planning. If we want to be able to have pedestrian connections or even pedestrian bridges it would be helpful if the plan would provide guidance to inform those decisions as they relate to the LRT line and stations.

Please let me know if you have any questions.

Sincerely,

Jim Voll, AICP, LEED-AP
Principal City Planner
City of Minneapolis
Community Planning and Economic Development
Long Range Planning Division
(612) 673-3887
james.voll@minneapolismn.gov
Q1: Please insert the information you would like to share in the box below.

The City would appreciate if the MPRB continues to inform and coordinate all planning and construction activities and projects with the City of Golden Valley and its staff.

MPRB must also coordinate with the Bassett Creek Watershed Management Commission on all projects and activities requiring review by the Commission. All projects must be designed and constructed in accordance with the policies of the Bassett Creek Watershed Management Plan.

City staff is curious about the plans for the off-leash dog park area adjacent to the Animal Humane Society in Golden Valley. We request that we be notified of any plans as they move forward.

Thank you for the opportunity to comment.

Q2: Please include your contact information if you would like to receive future emails or mailings on this project.

Name: golden valley engineering
Address: 7800 golden valley road
City/Town: golden valley
State: MN
ZIP: 55427
Email Address: eeckman@goldenvalleymn.gov
Thank you for the opportunity to review and provide comments on the Theodore Wirth Park (TWP) Draft Master Plan. Staff would like to acknowledge and thank the Minneapolis Park and Recreation Board (MPRB) for considering and incorporating our comments submitted during the draft review process. We have prepared the following high level comments:

The Bottineau/Metro Blue Line Extension Light Rail Project is now steadily moving towards becoming a long term asset to the region, and more specifically in this case, to Wirth Park. With the park Master Plan still in draft review, we would like to suggest including references to how the park might best utilize the LRT station designs to maximize general park accessibility and greatly improve non-motorized access to the park.

Although the plan briefly mentions connectivity to the surrounding community, it could go farther to address the issue, perhaps by identifying potential improvements outside the park that would improve access and connectivity.

There is a mention in the plan of the need for expanded vehicle parking. Much like the 46th Street and 50th Street Stations on the existing Metro Blue Line LRT, the planned Plymouth Avenue and Golden Valley Road LRT Stations will offer both high quality connections to the park and the potential to minimize the need to use park land for additional parking space. We suggest that this option should be noted in the draft plan.

The plan should also consider the parkway and its trail connections in the Golden Valley Road LRT station area. Integration of the TWP plan elements with the Three Rivers Park District Bassett Creek trail will develop better north-south trail connectivity with the Mary Hills Nature Area, Rice Lake Natural Area and Sochacki Park, and improve the concept for a northern gateway to TWP. Similarly, the potential for intersection improvements along Golden Valley Road (including a roundabout concept) and the potential nexus of multiple trails and trailhead amenities in the LRT station area at Golden
Valley Road are important considerations with potential implications on TWP Master Plan recommendations.

We appreciate seeing the plan references to obesity, active living and “nature deficit disorder.” The park’s unique and high-quality resources offer great opportunities for nature-based physical activity. This project has the possibility to greatly expand access to the numerous activities TWP has to offer. These not only offer health benefits, but also enrich the quality of life in our region.

We hope the MPRB will continue to participate in the planning efforts for the Metro Blue Line Extension LRT project and associated station area planning. The Metro Blue Line Extension project may need to mitigate some impacts which could potentially be done in a way which would also achieve some of the goals identified in the Master Plan. By working together we are more likely to achieve our common goals. Let’s continue to collaborate in a positive way to maximize the benefits achieved by these projects.

Thank you again for the opportunity to comment.

Sincerely,

David Jaeger
Manager, Environmental Policy
Hi Colleen-

Happy New Year! I hope you enjoyed your vacation and got some time to relax--much deserved (and needed, I'm sure).

Thanks for sending us the draft master plan. Please note that this does not constitute official review of the plan; Council staff conducted a courtesy review to identify potential issues that should be addressed before you bring the plan to your Board, most notably, any impacts to the Council's four systems (transportation, aviation, wastewater, and regional parks). A more detailed review will be conducted once the master plan is officially sent to the Metropolitan Council.

With regard to the Council's systems, the Park Boundary and Acquisition Possibilities section of the master plan (page 8-2 and 8-3) presents a potential impact on the regional transportation system, specifically the Bottineau LRT (BLRT) project. Four inholdings identified in the master plan are parcels that are planned for the BLRT corridor. Please remove the inholdings identified as 1c, 1f, 2b and 2c from the master plan. If these parcels become available for uses other than freight or transit in the future, a master plan amendment could be considered by the Council. Please add the estimated acquisition costs for the remaining inholdings.

Page 4-6: Please note that the 2008 Metropolitan Council Regional Parks and Trail Survey was designed to gather information to be representative at a regional and implementing agency scale. The sample size was not large enough to draw conclusions for an individual regional park. The information specific to Theodore Wirth Regional Park shown on this page reflect the individuals surveyed, but are not representative of the total park visitor demographics.

Page 7-8: The description for Wirth Beach states that "Aside from a small, 30-person non-reservable space, the major capital investments contemplated by the master plan at Wirth Beach are complete." The master plan should provide more detail regarding what a "30-person non-reservable space" entails and its general location in the park.

Page 9-7 and 9-8: Figure 124 includes the estimated development costs for the master plan, and additional information is provided regarding priority phasing by funding source. Please provide a table that depicts the phasing lists by priority, funding source, and estimated costs.

Page 9-8: Please include the existing operations and maintenance costs for the regional park (not including the golf course) as well as the estimated increase in O&M costs associated with the proposed development.

Page 10-3: This page references a website project page where the public comments can be viewed. Please include a hyperlink or a web address for these comments.

Please note that the master plan must be presented to affected local units of government (City of Minneapolis and Golden Valley) for comment, and the master plan must address their concerns prior to submitting the plan to the Council.

Thanks again for the opportunity to see the draft master plan. Please feel free to contact me if you have any questions or if you need more information.

Thanks-
Jan

Jan Youngquist, AICP
Manager  |  Regional Parks and Natural Resources
651-602-1029
Ms. O’Dell,

The Minnesota DNR has reviewed the Theodore Wirth Regional Park Draft Master Plan, specifically Chapters VI – VIII. We find that these chapters deal comprehensively with the landscape context and land use history that have influenced the plant communities and waters of park lands. They also appropriately address vegetation and water management issues and strategies.

However, there are two areas that could use more attention in this document, and we offer the following comments for your consideration.

1) The management of invasive species is referenced throughout the document as a challenge of this urban park. The construction of additional foot and bike trails through park lands will create new corridors vulnerable to the spread of invasive species, and increased traffic will accelerate spread and introduction to new areas. Please consider these recommendations during the design and construction phases:

   - The value of canopy tree retention was referenced in the document. This will be especially important along new wooded trail corridors. Canopy openings created along trails allow more light to reach exposed soils, encouraging the proliferation of invasives already present.
   - Strict attention to construction BMPs (such as rapid soil stabilization and re-seeding, equipment cleaning, and winter seasonal work) will be very important during construction.
   - BWSR-approved native seed mixes should be used, with seeding to take place as soon as possible following project completion, in all appropriate trail margins.
   - We encourage you to improve public awareness regarding human transport of weed seed by providing informational signage and cleaning stations at all trail heads.

2) The Plan does not address wildlife and nongame species as a specific management concern. We have the following recommendations regarding wildlife:

   - Bike traffic is a frequent cause of mortality to small nongame species. We encourage you to improve public awareness of the potential for wildlife encounters with cautionary signage at all trail heads.
   - The Blanding’s turtle is listened among the rare species within or near the Park. We encourage you to make all contractors working on trails aware of the potential to encounter this state-threatened species. If turtles are encountered during construction, they should be moved by hand out of harm’s way. Please see the attached factsheet that should be distributed to contractors.
   - We request the use of wildlife friend erosion control materials (natural materials, non-
plastic, non-welded) on all Park projects. Traditional erosion control mesh is known to cause injury and may be fatal to wildlife, particularly reptiles and amphibians. In addition, mowing over plastic mesh causes fragmentation that can enter waters and wetlands, entangling aquatic species.

- If water or wetland drawdowns are considered as management practices for aquatic invasive species, we request that you contact regional DNR nongame staff for seasonal timing recommendations. Traditional practices suggest drawdowns in the winter to kill invasive plants and consolidate sediments. However, this practice has very high collateral damage throughout the aquatic community, and therefore is not recommended in natural park areas.

- In the design of new parking and road areas, please consider surmountable curbs and horizontal storm sewers that help herpetofauna negotiate roadways. Please see attached factsheet. If you would like more information on wildlife friendly designs, please contact area DNR nongame staff.

Thank you for the opportunity to review this document. Please contact me if you have any questions.

Brooke Haworth  
Environmental Assessment Ecologist, Central Region  
MnDNR Division of Ecological and Water Resources  
1200 Warner Road, St. Paul, MN 55106  
Phone: 651-259-5755  
Email: Brooke.haworth@state.mn.us
Wildlife-friendly Erosion Control

Wildlife entanglement in, and death from, plastic netting and other man-made plastic materials has been documented in birds (Johnson, 1990; Fuller-Perrine and Tobin, 1993), fish (Johnson, 1990), mammals (Derraik, 2002), and reptiles (Barton and Kinkead, 2005; Kapfer and Paloski, 2011). Unfortunately, the use of these materials for erosion control continues in many cases, often without consideration for wildlife impact. This plastic netting is frequently used for erosion control during construction and landscape projects and can negatively impact terrestrial and aquatic wildlife populations as well as snag in maintenance machinery, resulting in costly repairs and delays. However, erosion-control materials that are wildlife friendly do exist and are sold by several large companies. Below are a few key considerations before starting a project.

Know Your Options
- Remember to consult with local natural resource agencies (DNR, USFWS, etc.) before starting a project. They can help you identify sensitive areas and rare species.
- When erosion control is necessary, select products with biodegradable netting (natural fiber, biodegradable polyesters, etc.).
- DO NOT use products that require UV-light to biodegrade (also called “photodegradable”) as they do not biodegrade properly when shaded by vegetation.
- Use netting with rectangular-shaped mesh (not square mesh).
- Use netting with flexible (non-welded) mesh.

Know the Landscape
- It is especially important to use wildlife-friendly erosion control around:
  - Areas with threatened or endangered species.
  - Wetlands, rivers, lakes, and other watercourses.
  - Habitat-transition zones (prairie – woodland edges, rocky outcrop – woodland edges, steep rocky slopes, etc.).
- Use erosion mesh wisely; not all areas with disturbed ground necessitate its use. Do not use plastic mesh unless it is specifically required. Other erosion-control options exist (open weave textile (OWT), rolled erosion control products (RECPs) with woven, natural fiber netting).
Protect Wildlife

- Avoid photodegradable erosion-control materials where possible.
- Use only biodegradable materials (typically made from natural fibers), preferably those that will biodegrade under a variety of conditions.
- The cost of erosion-control material that is wildlife friendly is often comparable to conventional plastic netting.

![Plains Gartersnake trapped and killed by welded-plastic square erosion-control mesh placed along a newly installed cement culvert in southern Minnesota. ©MN DNR, Carol Hall](image)

**Literature Referenced**


This year conservation groups around the country are partnering to raise awareness of the plight of turtles. The Minnesota Department of Natural Resources (DNR) has joined in this effort. There are many threats to turtles; roads are just one of the obstacles that they encounter. This flyer offers some practical ideas on how road authorities can minimize the negative impacts of roads on turtles and other wildlife. They are recommendations and a call to action; not requirements. Minnesota’s “Toward Zero Deaths” effort has made tremendous progress in saving human lives. The science of Road Ecology challenges us further to provide safe passage for wildlife and reduce wildlife-vehicle collisions.

The following suggestions will also help safeguard water quality, increase road safety, and may also save you time and money. Incorporating just one recommendation into your road program may be enough to improve turtle conservation in your area. It is possible to balance habitat and transportation safety issues through cooperation, collaboration and coordination.

Curb and Gutter

• Areas near lakes, rivers, streams and wetlands (typical turtle habitat) should have rural shoulders and vegetated swale road ditches, not typical curb and gutter stormwater systems. If a curb and gutter stormwater system must be installed, curbs that turtles can traverse should be used (Type D or Type S curb).

• Traditional curb and gutter can inadvertently trap turtles within the road and also direct small mammals and reptiles into the storm sewer, often with fatal results.

• Where traditional curb and gutter is to be installed, a design without the side box inlet gives the animals a better chance of moving past the storm sewer as they search for an exit route.

• If a type D or S type curb is not desired, install a few feet of it on either side of the storm water drain to allow animals to exit prior to the storm sewer drop structure.

• Stormwater ponds that discharge to natural areas should not have outlets that block turtle movement.

For More Information

This information is from the Best Practices for Meeting DNR General Public Water Permit by Peter Leete, Transportation Hydrologist with the DNR Division of Ecological and Water Resources. The complete manual with additional information can be found at: http://www.dnr.state.mn.us/waters/watermgnt_section/pwpermits/gp_2004_0001_manual.html

And from The DNR Environmental Review Fact Sheet Series: Blanding’s Turtle: http://files.dnr.state.mn.us/natural_resources/animals/reptiles_amphibians/turtles/blandings_turtle/factsheet.pdf

For additional information on Minnesota’s turtles, see the poster Protect Our Turtles.

Roadside Maintenance

• Gravel shoulders and inslopes near lakes and wetlands are favorable nesting sites for some turtle species. Whenever possible, avoid or minimize grading road shoulders near lakes and wetlands from mid-May to August; this will increase the chance of a successful hatch.
- Turtles which are in imminent danger should be moved, by hand, out of harm’s way. Turtles which are not in imminent danger should be left undisturbed.
- Spot mow or spot spray invasive species rather than broadcast spray pesticides on roadsides.
- Roadside mowing should be done as infrequently as possible.
- Brush removal should occur in the fall through early spring.
- Temporary turtle crossing signs can be installed to increase public awareness, reduce road kills, and increase road safety.
- Systematic record keeping of turtle mortality on Minnesota roads does not exist. You can help by identifying where turtles are found (dead or alive). Contact your DNR Nongame Wildlife Specialist for technical assistance. http://www.dnr.state.mn.us/eco/nongame/index.html

**Road Design**

- New road alignments should avoid bisecting wetlands. When they do, crossings should be bridged.
- On existing roads, where there are turtle hot spots, fencing should be considered to prevent turtles from attempting to cross them. Fencing should lead turtles to a nearby culvert or bridge. This is more important on roads with higher average daily traffic, than on low volume roads.
- Maintenance people are often knowledgeable about the likelihood of wildlife on roads; involve them in planning reconstruction projects or new road projects.
- Traditional curb and gutter should be avoided (see Curb and Gutter section).
- Roads should be kept to minimum standards on widths and lanes (this reduces road kills by slowing traffic and reducing the distance turtles need to cross).

![Turtles, snakes, ducklings and other wildlife can get tangled in welded plastic mesh. Use woven or unwelded mesh instead.](image)

A likely turtle hot spot is where a road bisects a wetland or waterway.

**Construction**

- Silt fencing should be set up to keep turtles out of construction areas during the nesting season. This is often required in areas of known threatened or endangered species in order to prevent nesting within the work area. This fencing should be removed when the area in no longer undergoing active construction.
- Avoid using erosion control products that are made with welded plastic mesh or webbing. Turtles, and other wildlife, can become entangled in the mesh. Products with woven or unwelded material allow flexibility of the openings and can be utilized.
- Use biodegradable material in all components of erosion control blanket and biologs (fiber rolls) that are to be left on site as part of final stabilization.

![Level passage benches make bridge inspection easier and benefit wildlife.](image)

**Passage Structures**

- In Minnesota, turtles use rivers and streams as travel corridors as well as for core habitat. Most, if not all turtles can pass under bridges while in the water, however there are typical designs that can aid other species movement along our waterways. Incorporating a passage bench into riprap design is a cost effective solution. See Chap. 1 pg. 16 at the link: http://www.dnr.state.mn.us/waters/watermgnt_section/pwpermits/gp_2004_0001_manual.html
- Existing structures may only need small modifications such as filling in riprap with gravel so turtles and other wildlife can pass safely.

- Exclusion fencing to prevent turtles from reaching the roadway may be the best option in areas where turtles have been known to cause traffic problems.
- Culverts between wetland areas, or between wetlands and nesting areas, should be sized accordingly, with a minimum diameter of 36 inches for dry culverts and bankfull width in diameter for culverts on perennially flowing waters. A flat-bottomed or arched culvert with the shortest possible length is preferred.

**Fencing**

- For permanent fencing, standard Mn/DOT right-of-way chain-link fencing installed tight to the ground is adequate to guide turtles toward underpasses.
- It is critical that the fence endposts fit tightly to abutments or railings.
- The fences are most successful if they do not deflect turtle movements by more than 60 degrees.
- Methods to allow animals off the roadway also need to be incorporated into wildlife exclusion methods.
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Level passage benches make bridge inspection easier and benefit wildlife.

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For more information, see the following links:

Passage Structures:\nhttp://www.dnr.state.mn.us/waters/watermgnt_section/pwpermits/gp_2004_0001_manual.html

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Contact:
Identifying where turtles are found (dead or alive).

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### Roadside Maintenance
- Gravel shoulders and inslopes near lakes and wetlands are favorable nesting sites for some turtle species. Whenever possible, avoid or minimize grading road shoulders near lakes and wetlands from mid-May to August; this will increase the chance of a successful hatch.

### Roadways and Turtles

#### Solutions for Safety

**Curb and Gutter**
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And from The DNR Environmental Review Fact Sheet Series: Blanding’s Turtle: http://files.dnr.state.mn.us/natural_resources/animals/reptiles_amphibians/turtles/blandings_turtle/factsheet.pdf
For additional information on Minnesota’s turtles, see the poster Protect Our Turtles.
The unique and rare Blanding’s turtle has been found in this area. Blanding’s turtles are state-listed as Threatened and are protected under Minnesota Statute 84.095, Protection of Threatened and Endangered Species. Please be careful of turtles on roads and in construction sites. For additional information on turtles, or to report a Blanding’s turtle sighting, contact the DNR Nongame Specialist nearest you: Bemidji (218-308-2641); Grand Rapids (218-327-4518); New Ulm (507-359-6033); Rochester (507-280-5070); or St. Paul (651-259-5764).

**DESCRIPTION:** The Blanding’s turtle is a medium to large turtle (5 to 10 inches) with a black or dark blue, dome-shaped shell with muted yellow spots and bars. The bottom of the shell is hinged across the front third, enabling the turtle to pull the front edge of the lower shell firmly against the top shell to provide additional protection when threatened. The head, legs, and tail are dark brown or blue-gray with small dots of light brown or yellow. A distinctive field mark is the bright yellow chin and neck.

**BLANDING’S TURTLES DO NOT MAKE GOOD PETS**
**IT IS ILLEGAL TO KEEP THIS THREATENED SPECIES IN CAPTIVITY**
Endangered, Threatened, and Special Concern Species of Minnesota

Blanding’s Turtle
(*Emydoidea blandingii*)

- Minnesota Status: Threatened
- Federal Status: none
- Global Rank: G4

**HABITAT USE**

Blanding’s turtles need both wetland and upland habitats to complete their life cycle. The types of wetlands used include ponds, marshes, shrub swamps, bogs, and ditches and streams with slow-moving water. In Minnesota, Blanding’s turtles are primarily marsh and pond inhabitants. Calm, shallow water bodies (Type 1-3 wetlands) with mud bottoms and abundant aquatic vegetation (e.g., cattails, water lilies) are preferred, and extensive marshes bordering rivers provide excellent habitat. Small temporary wetlands (those that dry up in the late summer or fall) are frequently used in spring and summer -- these fishless pools are amphibian and invertebrate breeding habitat, which provides an important food source for Blanding’s turtles. Also, the warmer water of these shallower areas probably aids in the development of eggs within the female turtle. Nesting occurs in open (grassy or brushy) sandy uplands, often some distance from water bodies. Frequently, nesting occurs in traditional nesting grounds on undeveloped land. Blanding’s turtles have also been known to nest successfully on residential property (especially in low density housing situations), and to utilize disturbed areas such as farm fields, gardens, under power lines, and road shoulders (especially of dirt roads). Although Blanding’s turtles may travel through woodlots during their seasonal movements, shady areas (including forests and lawns with shade trees) are not used for nesting. Wetlands with deeper water are needed in times of drought, and during the winter. Blanding’s turtles overwinter in the muddy bottoms of deeper marshes and ponds, or other water bodies where they are protected from freezing.

**LIFE HISTORY**

Individuals emerge from overwintering and begin basking in late March or early April on warm, sunny days. The increase in body temperature which occurs during basking is necessary for egg development within the female turtle. Nesting in Minnesota typically occurs during June, and females are most active in late afternoon and at dusk. Nesting can occur as much as a mile from wetlands. The nest is dug by the female in an open sandy area and 6-15 eggs are laid. The female turtle returns to the marsh within 24 hours of laying eggs. After a development period of approximately two months, hatchlings leave the nest from mid-August through early-October. Nesting females and hatchlings are often at risk of being killed while crossing roads between wetlands and nesting areas. In addition to movements associated with nesting, all ages and both sexes move between wetlands from April through November. These movements peak in June and July and again in September and October as turtles move to and from overwintering sites. In late autumn (typically November), Blanding’s turtles bury themselves in the substrate (the mud at the bottom) of deeper wetlands to overwinter.

**IMPACTS / THREATS / CAUSES OF DECLINE**

- loss of wetland habitat through drainage or flooding (converting wetlands into ponds or lakes)
- loss of upland habitat through development or conversion to agriculture
- human disturbance, including collection for the pet trade* and road kills during seasonal movements
- increase in predator populations (skunks, raccoons, etc.) which prey on nests and young

*It is illegal to possess this threatened species.
RECOMMENDATIONS FOR AVOIDING AND MINIMIZING IMPACTS

These recommendations apply to typical construction projects and general land use within Blanding’s turtle habitat, and are provided to help local governments, developers, contractors, and homeowners minimize or avoid detrimental impacts to Blanding’s turtle populations. **List 1** describes minimum measures which we recommend to prevent harm to Blanding’s turtles during construction or other work within Blanding’s turtle habitat. **List 2** contains recommendations which offer even greater protection for Blanding’s turtles populations; this list should be used in addition to the first list in areas which are known to be of state-wide importance to Blanding’s turtles (contact the DNR’s Natural Heritage and Nongame Research Program if you wish to determine if your project or home is in one of these areas), or in any other area where greater protection for Blanding’s turtles is desired.

<table>
<thead>
<tr>
<th>List 1. Recommendations for all areas inhabited by Blanding’s turtles.</th>
<th>List 2. Additional recommendations for areas known to be of state-wide importance to Blanding’s turtles.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL</strong></td>
<td></td>
</tr>
<tr>
<td>A flyer with an illustration of a Blanding’s turtle should be given to all contractors working in the area. Homeowners should also be informed of the presence of Blanding’s turtles in the area.</td>
<td>Turtle crossing signs can be installed adjacent to road-crossing areas used by Blanding’s turtles to increase public awareness and reduce road kills.</td>
</tr>
<tr>
<td>Turtles which are in imminent danger should be moved, by hand, out of harms way. Turtles which are not in imminent danger should be left undisturbed.</td>
<td>Workers in the area should be aware that Blanding’s turtles nest in June, generally after 4pm, and should be advised to minimize disturbance if turtles are seen.</td>
</tr>
<tr>
<td>If a Blanding’s turtle nests in your yard, do not disturb the nest.</td>
<td>If you would like to provide more protection for a Blanding’s turtle nest on your property, see “Protecting Blanding’s Turtle Nests” on page 3 of this fact sheet.</td>
</tr>
<tr>
<td>Silt fencing should be set up to keep turtles out of construction areas. It is critical that silt fencing be removed after the area has been revegetated.</td>
<td>Construction in potential nesting areas should be limited to the period between September 15 and June 1 (this is the time when activity of adults and hatchlings in upland areas is at a minimum).</td>
</tr>
<tr>
<td><strong>WETLANDS</strong></td>
<td></td>
</tr>
<tr>
<td>Small, vegetated temporary wetlands (Types 2 &amp; 3) should not be dredged, deepened, filled, or converted to storm water retention basins (these wetlands provide important habitat during spring and summer).</td>
<td>Shallow portions of wetlands should not be disturbed during prime basking time (mid morning to mid-afternoon in May and June). A wide buffer should be left along the shore to minimize human activity near wetlands (basking Blanding’s turtles are more easily disturbed than other turtle species).</td>
</tr>
<tr>
<td>Wetlands should be protected from pollution; use of fertilizers and pesticides should be avoided, and run-off from lawns and streets should be controlled. Erosion should be prevented to keep sediment from reaching wetlands and lakes.</td>
<td>Wetlands should be protected from road, lawn, and other chemical run-off by a vegetated buffer strip at least 50’ wide. This area should be left unmowed and in a natural condition.</td>
</tr>
<tr>
<td><strong>ROADS</strong></td>
<td></td>
</tr>
<tr>
<td>Roads should be kept to minimum standards on widths and lanes (this reduces road kills by slowing traffic and reducing the distance turtles need to cross).</td>
<td>Tunnels should be considered in areas with concentrations of turtle crossings (more than 10 turtles per year per 100 meters of road), and in areas of lower density if the level of road use would make a safe crossing impossible for turtles. Contact your DNR Regional Nongame Specialist for further information on wildlife tunnels.</td>
</tr>
<tr>
<td>Roads should be ditched, not curbed or below grade. If curbs must be used, 4 inch high curbs at a 3:1 slope are preferred (Blanding’s turtles have great difficulty climbing traditional curbs; curbs and below grade roads trap turtles on the road and can cause road kills).</td>
<td>Roads should be ditched, not curbed or below grade.</td>
</tr>
</tbody>
</table>
### ROADS cont.

<table>
<thead>
<tr>
<th>Road Feature</th>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culverts between wetland areas, or between wetland areas and nesting areas, should be 36 inches or greater in diameter, and elliptical or flat-bottomed.</td>
<td>Road placement should avoid separating wetlands from adjacent upland nesting sites, or these roads should be fenced to prevent turtles from attempting to cross them (contact your DNR Nongame Specialist for details).</td>
</tr>
<tr>
<td>Wetland crossings should be bridged, or include raised roadways with culverts which are 36 in or greater in diameter and flat-bottomed or elliptical (raised roadways discourage turtles from leaving the wetland to bask on roads).</td>
<td>Road placement should avoid bisecting wetlands, or these roads should be fenced to prevent turtles from attempting to cross them (contact your DNR Nongame Specialist for details). This is especially important for roads with more than 2 lanes.</td>
</tr>
<tr>
<td>Culverts under roads crossing streams should be oversized (at least twice as wide as the normal width of open water) and flat-bottomed or elliptical.</td>
<td>Roads crossing streams should be bridged.</td>
</tr>
</tbody>
</table>

### UTILITIES

<table>
<thead>
<tr>
<th>Utility Access and Maintenance Roads</th>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility access and maintenance roads should be kept to a minimum (this reduces road-kill potential).</td>
<td>Because trenches can trap turtles, trenches should be checked for turtles prior to being backfilled and the sites should be returned to original grade.</td>
</tr>
</tbody>
</table>

### LANDSCAPING AND VEGETATION MANAGEMENT

<table>
<thead>
<tr>
<th>Terrain Management</th>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terrain should be left with as much natural contour as possible.</td>
<td>As much natural landscape as possible should be preserved (installation of sod or wood chips, paving, and planting of trees within nesting habitat can make that habitat unusable to nesting Blanding’s turtles).</td>
</tr>
<tr>
<td>Graded areas should be revegetated with native grasses and forbs (some non-natives form dense patches through which it is difficult for turtles to travel).</td>
<td>Open space should include some areas at higher elevations for nesting. These areas should be retained in native vegetation, and should be connected to wetlands by a wide corridor of native vegetation.</td>
</tr>
<tr>
<td>Vegetation management in infrequently mowed areas -- such as in ditches, along utility access roads, and under power lines -- should be done mechanically (chemicals should not be used). Work should occur fall through spring (after October 1st and before June 1st ).</td>
<td>Ditches and utility access roads should not be mowed or managed through use of chemicals. If vegetation management is required, it should be done mechanically, as infrequently as possible, and fall through spring (mowing can kill turtles present during mowing, and makes it easier for predators to locate turtles crossing roads).</td>
</tr>
</tbody>
</table>

**Protecting Blanding’s Turtle Nests:** Most predation on turtle nests occurs within 48 hours after the eggs are laid. After this time, the scent is gone from the nest and it is more difficult for predators to locate the nest. Nests more than a week old probably do not need additional protection, unless they are in a particularly vulnerable spot, such as a yard where pets may disturb the nest. Turtle nests can be protected from predators and other disturbance by covering them with a piece of wire fencing (such as chicken wire), secured to the ground with stakes or rocks. The piece of fencing should measure at least 2 ft. x 2 ft., and should be of medium sized mesh (openings should be about 2 in. x 2 in.). It is **very important** that the fencing be removed before August 1st so the young turtles can escape from the nest when they hatch!

**REFERENCES**


REFERENCES (cont.)
Q1: Please insert the information you would like to share in the box below.

After reviewing the report, there are no potential impacts identified on state highway routes on TH 55 and I-394.

Q2: Please include your contact information if you would like to receive future emails or mailings on this project.

Name: Andrew Lutaya
Address: MnDOT- Metro
City/Town: Roseville
State: MN
ZIP: 55113
Email Address: andrew.lutaya@state.mn.us