

February 14, 2024

**To: City of Madison Board of Park Commissioners**

**From: Dr. David Drake, University of Wisconsin Department of Forest and Wildlife Ecology**

**Subject: Proposed Plan for Wildlife Inventory at Olbrich North and Hartmeyer Roth**

**Wildlife Inventory at Olbrich North and Hartmeyer Roth**

The University of Wisconsin Department of Forest and Wildlife Ecology is requesting permission to conduct wildlife studies on two park owned parcels located at Olbrich North and Hartmeyer Roth. Studies will include small mammals, medium to large mammals, avian species, along with amphibian and reptile species. The proposed plan below outlines methods that will be used by scientists to conduct studies of each species.

***Mammal Inventory***

*Small Mammals*

We will establish small-mammal traps on each property. We will use a trap density approach, with a density of approximately 50 traps per acre. We will select up to 25% of each site to trap, and base our trap placement on areas of each site with the best small mammal habitat. We'd prefer to use mouse and rat snap (kill) traps to gain an understanding of relative abundance of small mammals. Although snap traps would kill the small mammals, we would not harm population sizes because the mammals we expect to catch are common. In addition, we would save all small mammals using this method for use in other analyses (e.g., monitoring for anticoagulant rodenticides, ectoparasites like ticks, etc.). If snap traps were not permitted, we would use Sherman small mammal live traps. While live traps would not kill the animal, this method would not provide us species-specific abundance information without marking or tagging each caught animal. Regardless of trap type used, we would set out each trap with bait for two nights prior to opening traps in order for small mammals to acclimate to the traps. We would open the traps for at least 3 nights, and possibly 4 to 8 nights depending on our trap success. Traps will be baited with sunflower seeds and will be deployed during April and October. Captured small mammals will be identified to species.

If the public has access to the sites while traps are activated, we will place signs around the perimeter of where traps are located to notify the public and ask them to not enter the area.

In addition to small mammal trapping, we will reach out to the Wisconsin Dept. of Natural Resources to see if we can have citizen scientists monitor bat presence/absence on each property - <https://wiatri.net/inventory/bats/volunteer/acoustic.cfm>

*Medium to Large Mammals*

We will establish at least two wildlife cameras at each site to detect primarily medium (e.g., skunk, raccoon, fox, coyotes) to large mammals (e.g. deer), although we have the potential to capture small mammals and some birds on the cameras. Cameras will be located at areas of

wildlife activity (e.g., trails, scat piles, tracks, etc) and locked to a fixed object to prevent theft and vandalism. We will deploy the cameras for the months of January, April, July, and October, and replace the batteries and SD card every two weeks while the cameras are deployed. Animals caught on camera will be identified to species. It is unlikely we will capture recognizable images of people because we will locate the cameras about 3-4 feet above ground level and angle them downward. If an adult or child walks in front of the camera it is unlikely we would capture an image of their face. In the unlikely event we captured a person's face, we would delete that image from our collection of images.

### ***Avian Inventory***

We will evaluate avian abundance and diversity using point counts. Counting the number of birds seen and heard from a fixed point is an established and common methodology for inventorying avian species (Ralph et al. 1997). We will establish fixed points in order to monitor birds across the entirety of each site. Each point will be marked by a center point surrounded by a 50 meter radius. All center points will be located at least 50 meters inside each site's boundary to ensure the birds detected and identified have breeding territories at least partially on the site being monitored. Distance between center points will be spaced at least 300 meters apart to avoid double counting birds. Once point count locations are established at each site, we will visit each point count 3 times between April 15 and June 30. We will vary the order of visit each round of point counts to avoid time of day bias. Weather conditions permitting, we'll conduct point counts each morning 30 minutes before sunrise until mid-morning. While the focus of the avian inventory will be during breeding season because that is when the most number of avian species are present in Wisconsin, we will conduct point counts during the winter months in order to evaluate resident bird diversity and abundance at each site.

### ***Herpetological Inventory***

During the spring, summer, and fall, we will conduct periodic surveys on each site using standardized methods for aquatic and terrestrial habitats to inventory amphibians and reptiles. At wetlands that serve as potential habitat for breeding amphibians, we will use visual encounter surveys, frog and toad call surveys, dip netting from shore, and seine netting in the deeper water to detect amphibians. The specific timing of the surveys will coincide with the spring, summer and fall breeding period for native species (roughly spring through early fall). To detect terrestrial reptiles (and some amphibians), we will use pitfall traps with drift fences and cover board surveys in the upland habitats.

All of our methods will be approved by the University of Wisconsin-Madison's Institutional Animal Care and Use Committee. We will also secure the necessary permits from the Wisconsin Department of Natural resources.

### ***Reporting***

We will conduct our inventory over at least a 1 year period in order to survey wildlife across seasons. I will draft a summary report every 6 months detailing the species found on each site, and will draft a final report at the end of our monitoring period identifying the total number of species found and offer considerations for managing each site to support wildlife diversity.