Proposal to install noise monitoring devices at Warner Park – summer 2025

Proposed by Brenna Marsicek, director of outreach, Southern Wisconsin Bird Alliance and Scott Pigg, volunteer citizen scientist

Background:

In 2024, Southern Wisconsin Bird Alliance (SoWBA) launched a pilot study called “Fireworks & Wildlife at Warner Park” (swibirds.org/fireworks) to explore methods of studying sound at Warner Park during the fireworks season. Our organization and volunteers wanted to look more closely at whether the eagles that nest nearby and other wildlife showed detectable responses to the fireworks.

Volunteers collected sound data through a cell phone app and identified all wildlife they could see and hear during their surveys before, during, and after fireworks shows. The main finding of the pilot study is we need rigorous, automated noise meters (not hand-held cell phone decibel apps) to collect more reliable sound data.

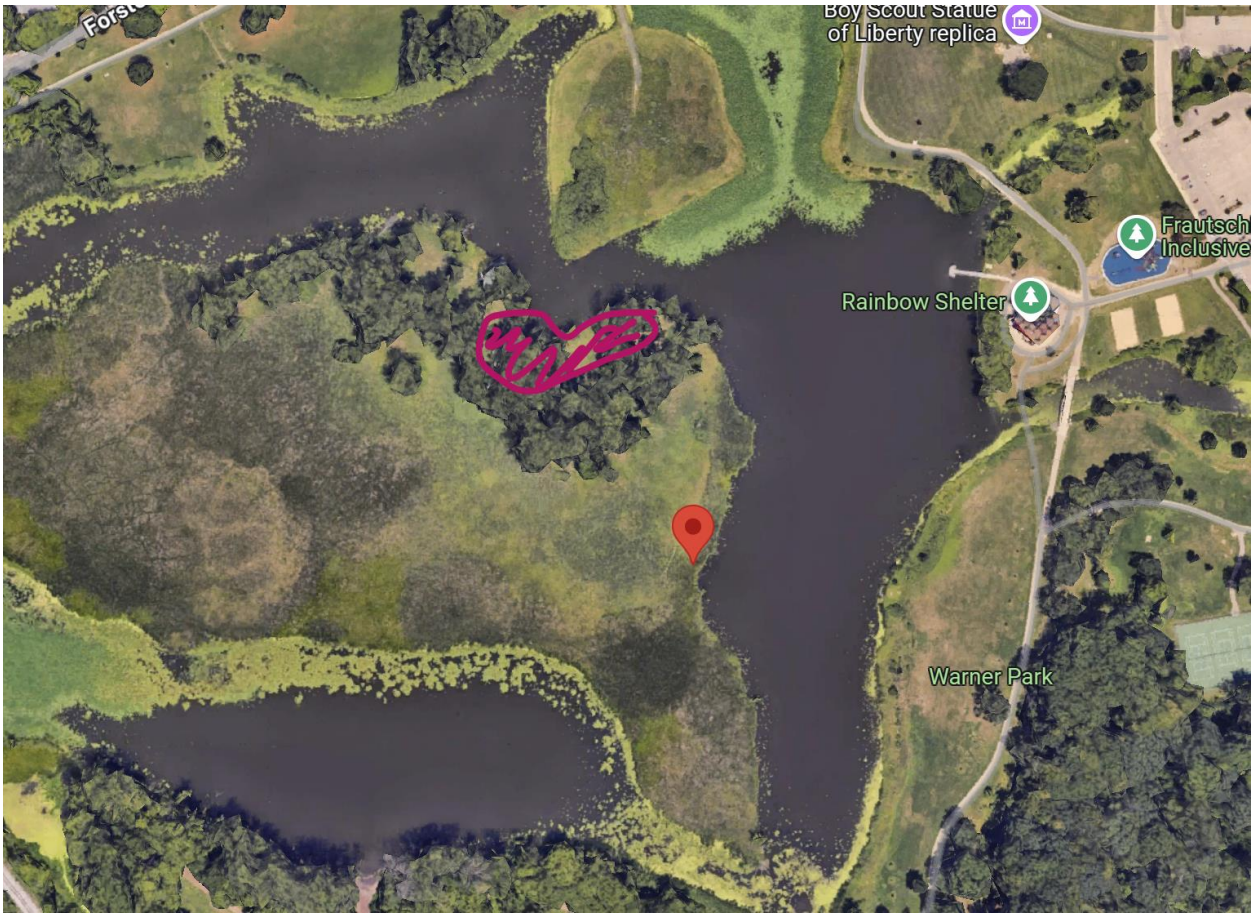
Proposal:

Scott Pigg is a citizen scientist who specializes in sound data (he runs a network of decibel meters - msnsound.com) that measure the fighter jet noise levels). He has created a set-up of temporary sound collection devices: a decibel reader (about 10 inches tall, 4 inches wide), a bioacoustic reader (birds, frogs, insects, etc.; 4 inches tall and wide), and an ultrasonic reader (bats; 4 inches tall and wide). They're small devices that can be mounted to a tree or post.

We propose attaching them to a tree or post on the island where the eagle nest is, in the proposed area below. The exact location would need to be determined once we're out there, but somewhere in the area colored pink (heart-shaped). This location is near the nest and where wildlife are, but inaccessible for a passerby to mess with it, and has trees to block the nesting eagles from seeing much of the activity. SoWBA would work with Parks to ensure the location also minimizes possible privacy issues, and irrelevant audio captured by the devices (e.g., conversations) would be deleted and not used.

The units will be battery powered and the data stored on an SD card. Once the units are in place, Scott and a volunteer will use a canoe to paddle to the units every 7-10 days to replace the batteries and replace the SD cards. We have the volunteers, canoe, and equipment all arranged. SoWBA carries insurance for our volunteers. The only thing the city/parks would need to do is give approval for placement!

We'd like to install the units in early-June, and will remove them after the final fireworks show in August. Once the data are collected, they'll be analyzed and summarized, and results shared with the city and Mallards. We seek to be partners in understanding the situation and provide ideas for solutions, if needed.



Map showing the proposed location of the sound meters on the island (area marked in pink). Additional bat sound readers could be installed in other locations in the park, if allowable and desired by the Parks Commission.