Wisconsin Department of Transportation
Policy Research Program

Request for Proposal
Wildlife Crossing Hotspot Analysis

Project Duration: 12 months, starting August 2024
Project Budget Limit: $95,000

Questions submitted to research@dot.wi.gov regarding the content of this
Request for Proposal are due no later than 04:30 PM (CST) on April 11, 2024

Responses to questions will be posted to the WisDOT Research and Library website
https://wisconsindot.gov/Pages/about-wisdot/research/researchers.aspx
by 04:30 PM (CST) on April 25, 2024

Proposal Deadline

Proposers must submit a PDF version of their proposal no later than
4:30 PM (CST) on May 9, 2024, to research@dot.wi.gov.

I. Definitions

The following definitions are used throughout the RFP:
- WisDOT – Wisconsin Department of Transportation
- POC – Project Oversight Committee
- GIS – Geographic Information Systems
- RFP – Request for Proposal
- Proposer - A company or individual submitting a proposal in response to this RFP
- Researcher - The party (from the field of proposers) who is awarded the contract

II. Overview

The Wisconsin Department of Transportation (WisDOT) is committed to finding solutions that minimize the number of deaths, injuries, and crashes on our roadways and reduce impacts to wildlife. Vehicle collisions with deer accounted for an average of 13 percent of all crashes between 2018-2022, with 2 percent of collisions resulting in injury or death. While deer collisions are well-documented, there is significantly less data on other wildlife-vehicle collisions as those are less likely to result in reported crashes. Wildlife road mortality can increase when habitats are bisected by roadways.

This project seeks to improve safety for motorists and wildlife in Wisconsin by identifying wildlife crossing hot spots and identifying scalable, cost-effective solutions to reduce wildlife-vehicle collisions. Research is expected to be conducted with existing data sources and through collaboration with stakeholders. Research generated from this project may be used to apply for implementation grants and to generate additional studies.

III. Objectives

The department is seeking research proposals to identify and model wildlife crossing hotspots and develop Wisconsin specific solutions and decision support tools.

1. Conduct a desktop geospatial analysis using existing datasets and information gained from stakeholder collaboration to identify wildlife crossing hotspots on WisDOT's highway system.
2. Conduct a literature review to identify mitigation strategies and solutions to address wildlife-vehicle collisions from regions with species and habitats similar to those found in Wisconsin.
3. Synthesize literature review results to identify practical and cost-effective solutions and decision support tools that could be integrated into WisDOT's program and projects, with consideration of the results from the hotspot analysis.

IV. Scope of work

While the full research approach will be negotiated with the selected researcher, the WisDOT project managers, the Project Oversight Committee (POC) and the Policy Research Program, proposers should base their submissions on the following general tasks:

Task 1 – Identify and model occurrences of wildlife-vehicle collisions on WisDOT's highway system.

Obtain and model existing data to determine wildlife-vehicle collision hot spots on WisDOT's statewide highway system. Analysis should include crashes that result in motorist injury/fatality, and vehicle damage, as well as wildlife road mortality data that may not have resulted in a reported vehicle crash. Collaboration with stakeholders will be necessary to obtain available wildlife road mortality data.

Task 2 – Identify and model wildlife habitats/corridors that intersect WisDOT's statewide highway system.

Obtain wildlife habitat, corridor and landscape data and model intersections with WisDOT's statewide highway system. Data should include prominent animal species that pose a potential crash hazard to motorists. Additional consideration should be given to habitat and landscapes that support state/federally protected or at-risk species. Modeled data should minimally include a description of the intersecting habitat, primary species supported, description of the highway facility with consideration of motorist and wildlife safety, and existing wildlife crossing mitigation strategies (if any). Collaboration with stakeholders will be necessary to obtain available wildlife habitat, corridor and landscape data.

Task 3 – Synthesize modeled data into a wildlife crossing hot spot data layer and GIS-based web map.

Use data from tasks 1 and 2 to create a prioritized wildlife crossing hot spot data layer. This layer should give highest priority (score) to crash prone locations and motorist safety. Ecological importance of the crossing location and synergies for multiple species should also be factored into the prioritization scheme. This process and methodology should be able to be replicated for future updates to the datasets.

Create a GIS-based web map that will be hosted on WisDOT's ArcGIS Online Maps Portal. Provide WisDOT with all necessary map/data layers utilized and created through this effort.

Task 4 – Conduct a literature review of existing wildlife crossing/mitigation strategies.

Literature review should focus on existing wildlife crossing/mitigation strategies for wildlife species and habitats in Wisconsin. The researcher will review data on topics including but not limited to average cost (installation, maintenance), effectiveness rate, advantages/disadvantages from multiple perspectives (e.g., human, ecological), and maintenance/replacement schedule.

Identify and review statewide, regional and location-specific strategies and approaches used by other transportation agencies, focused on midwestern states. Information may be gathered from transportation agency websites, NCHRP research and other sources as needed.

Task 5 – Identify solutions and develop decision support tools.

Propose a suite of practical, cost-effective, Wisconsin-appropriate solutions to reduce wildlife-vehicle collisions. Potential solutions should include new construction and retrofit options, and approaches that promote habitat connectivity when appropriate.

Develop decision support tools, including a geospatial/GIS tool, and a support guide, to help WisDOT understand selection decision points among potential solutions. This tool should help estimate cost-benefit of implementing mitigation solutions and will be used for planning and project scoping efforts.

V.   Proposal requirements

The proposer should list any relevant experience and qualifications for the principal investigator(s) and all other key project team members, including subcontractors, with a focus on how the experience and qualifications relate to the project.

VI.   Deliverables and review points

Although final details will be negotiated between the department and the selected contractor, any proposals should at a minimum account for these deliverables and points of review. Proposals should identify likely methods (meetings, conference calls) needed for these steps.

- GIS-based hot spot model/map, including support data and layers with information sources, and technical reference guide (Tasks 1, 2, and 3)
- Decision support tool, including supporting data with information sources (Task 5)
- Literature review summary and fact sheet(s) (Task 4)
- Summary report (all Tasks)

VII.   Schedule and budget

Project duration – The contract shall be effective on the date indicated and shall continue for twelve (12) months from that date. Proposers should include a detailed schedule showing the placement of the tasks, meetings and expected review periods. Based on the date of this request for proposal, WisDOT expects that the start date of this contract to be effective on or after August 2, 2024.

Project budget – Proposals cannot exceed **$95,000.** Any proposal that exceeds this amount will be considered non-responsive to the RFP requirements and will not be accepted. All proposed budgets should detail the activities of research personnel as well as other direct cost factors (e.g., survey mailing costs).

VIII.   Proposal submission deadlines and guidelines

The issue date for this RFP is March 27, 2024. Proposers may direct any questions, noted errors, discrepancies, ambiguities or deficiencies concerning this proposal via e-mail to research@dot.wi.gov by 4:30 PM Central time on April 11, 2024. WisDOT will collectively post all questions and answers to http://wisconsindot.gov/Pages/about-wisdot/research/researchers.aspx by 4:30 PM Central time on April 25, 2024. Proposers must direct questions, etc. about this RFP only to this designated e-mail and not to any other staff or agent of WisDOT.

Proposal Preparation Guidelines can be found at the Proposal Preparation Guidelines at https://wisconsindot.gov/Pages/about-wisdot/research/researchers.aspx For more information regarding this RFP, contact the WisDOT Research & Library Services Unit at research@dot.wi.gov.

Proposers must submit an electronic version of a proposal (Adobe PDF preferred) by 4:30 PM Central time on May 9, 2024 via e-mail to research@dot.wi.gov. Proposals submitted after the deadline will not be accepted for evaluation. Proposers will be notified no later than June 28, 2024.