



# Research Project Statement 24-093 FY 2024 Annual Program

<b>Title:</b>	Evaluating the Risks that Erosion Control Products Pose to Protected Species and other Wildlife
<b>The Problem:</b>	<p>Erosion control products, specifically channel liners and roll-on soil retention blankets can pose a significant risk of entanglement to animals that travel across and live within TxDOT rights-of-way, including reptiles, amphibians, birds, small mammals, and invertebrates. There are 226 state-listed and 109 federally listed species and several more species under review for listing by the U.S. Fish and Wildlife Service, affecting all 25 TxDOT districts. These products also impact hundreds of the 1,300 species of greatest conservation need that Texas Parks and Wildlife has recognized as rare and declining and warranting conservation action. When a protected species is entangled and dies on a TxDOT project, it must be reported to the appropriate agency. Over time this can degrade relationships and trust with regulatory agencies and put TxDOT out of compliance with permit requirements, resulting in violations, fines, and construction delays, which impact project delivery.</p> <p>There are effective, wildlife friendly erosion control products that can reduce animal entanglement while providing soil stabilization, but they are not commonly used or sourced because they are untested. TxDOT does not currently have a method to test and designate wildlife friendly erosion control products. The current interactive Approved Products List (APL) has attempted to categorize wildlife friendly controls based only on manufacturer claims. Testing for efficacy of soil stabilization for these products began in 2022 at the Texas Transportation Institute (TTI), but these products have not undergone testing to determine their efficacy at preventing wildlife entanglement. Both types of testing are necessary as TxDOT divisions and districts, and contractors need tested and approved wildlife friendly erosion control options to meet the expectations of regulatory agencies to prevent wildlife impacts from these products. Without testing and approval protocols for wildlife friendly products, TxDOT is essentially placing our compliance with the federal and state requirements on untested efficacy claims.</p>
<b>Technical Objectives:</b>	<p>This research will evaluate erosion control products on the APL to determine the the validity of wildlife friendly claims made by manufacturers, to evaluate entanglement risks to different types of wildlife, and to establish efficacy ratings based on the best available technology to establish realistic expectations with the regulatory agencies.</p> <p>The research team will develop performance standards to be incorporated into the current APL testing methods by:</p> <ul style="list-style-type: none"><li>• Determining entanglement potential for different sizes and categories of animals in different products currently on the APL.</li><li>• Evaluating the temporal window in which an erosion control blanket poses a risk to wildlife entanglement from pre-vegetative growth through post-vegetative growth.</li><li>• Testing which types of materials pose greater and lesser risks.</li><li>• Determining if weaving type or mesh size impacts entanglement.</li><li>• Identifying which products contain non-biodegradable materials.</li></ul> <p>In addition to testing products currently listed on the APL, the research team will test a variety of other erosion control products constructed of a variety of materials to gather a wider data set on best available technology. The research team will use these data to develop a performance standard for the risk that erosion control products pose to wildlife that can be utilized during the testing of products proposed for inclusion in the APL.</p> <p>The expected technology readiness level (TRL) for this project is 8.</p>

<b>Anticipated Deliverables:</b>	<ol style="list-style-type: none"> <li>1. Technical memorandum for each activity completed.</li> <li>2. Monthly progress reports.</li> <li>3. Value of Research (VoR) that includes both qualitative and economic benefits, to be included in the final research report. This is not a stand-alone deliverable.</li> <li>4. Product P1: Manual that describes the tool.</li> <li>5. Research report documenting the findings of the research, including an assessment of the risk of different erosion control products and which materials pose to different species of wildlife, evaluating the temporal window in which an erosion control blanket poses a risk to wildlife entanglement, a list of products and material types and the respective risks they pose to wildlife entanglement, and proposed performance standards for potential incorporation into the APL.</li> <li>6. Project Summary Report.</li> </ol>
<b>Proposal Requirements:</b>	<ol style="list-style-type: none"> <li>1. Proposal Deadline: 12:00 p.m. Central Time, <b>Monday, March 6, 2023.</b></li> <li>2. RFP#1 Q&amp;A Deadline: 12:00 p.m. Central Time, <b>Wednesday, February 1, 2023.</b></li> <li>3. Use the current “ProjAgre” and “PA Forms” templates located at the <a href="#">RTI Forms webpage</a>.</li> <li>4. Proposals will be considered non-responsive and will not be accepted for technical evaluation if they are not received by the deadline or do not meet the requirements stated in RTI's <a href="#">University Handbook</a>.</li> <li>5. Proposals should be submitted in PDF format; (1) PDF file per proposal. File name should include project name and university abbreviation.</li> <li>6. This project will be tracked during the life of the project using the Technology Readiness Level (<a href="#">TRL</a>) scale.</li> <li>7. The 2021 Texas Legislative Session requires that universities be in compliance with Senate Bill 475 by submitting a completed and signed TxDOT Security Questionnaire (TSQ) to <a href="mailto:RTIMAIN@txdot.gov">RTIMAIN@txdot.gov</a> in advance of a proposal submission. Universities found to not submit a completed and signed TSQ in advance of proposal submitting will be held in non-compliance and unable to participate in the Program.</li> </ol>