



**Missouri's
Local
Program**
*for community
development*

COVER SHEET

(This must accompany your firm's letter of interest and does not count in the page limit)

Firm's Full Legal
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Work Category:

- Roadway Design
- Trails & Sidewalks
- Construction Inspection
- Traffic Engineering & TEAP
- Structures
- Environmental
- Historic Preservation
- Multimodal Planning / Systems and Facilities Design
- Transportation Planning – **NEW CATEGORY**



Missouri State

U N I V E R S I T Y

December 8, 2025

TO: Missouri's Local Program

FROM: Ozarks Environmental and Water Resources Institute at Missouri State University

RE: Letter of Interest for Work Category Environmental

The Missouri's Local Program has requested a letter of interest from consultants interested in performing professional services with the purpose of developing Master Agreements for on-call services. The purpose of this letter is to request consideration for the pre-qualification list for Local Public Agencies (LPAs) specifically for work category Environmental. Located in Springfield, the Ozarks Environmental and Water Resources Institute (OEWRI) at Missouri State University (MSU) has a strong record of providing technical expertise, analytical capability, and performing applied environmental research across Missouri since 2005. This letter is intended to support OEWRI's consideration for the above opportunity by describing the qualifications and experiences of staff, listing potential faculty collaborators, and providing examples of past projects.

OEWRI's technical team includes three full-time professional staff members, all with advanced degrees. OEWRI operates under the direction of Marc Owen (M.S. Resource Planning, Missouri State University, 2003) who has over 20 years of technical experience in fluvial geomorphology, hydrology, and water quality. Field operations and geospatial technical services are coordinated by Josh Hess (M.S. Geospatial Science, Missouri State University, 2019) who has been at OEWRI since 2020. Brianne Edwards (M.S. Biology, Missouri State University, 2023) is the laboratory manager and has completed wetland delineation training and has worked at OEWRI since 2023. Additionally, OEWRI often utilizes the expertise of faculty within the College of Natural and Applied Sciences here at MSU. These specialty areas include, but are not limited to aquatic ecology, wildlife biology, microbiology, environmental geochemistry, geophysics, karst geology, and geospatial science. The university provides central administration for externally funded projects including grant and contract administration, grant budgets and accounting services, and human resources.

OEWRI has a strong record of receiving federal, state, and local grant projects for water resources research in the Ozarks. Over the last 20 years, OEWRI has completed federally funded projects through research and by providing technical support for regulatory compliance, endangered species impact assessment, pollution control effectiveness, pollutant loads monitoring and modeling, contaminated sediment and soil remediation assessments, stream stabilization and restoration. OEWRI provides technical assistance to local nonprofit agencies to support watershed management planning and implementation projects through the Section 319 Program administered by the Missouri Department of Natural Resources. Finally, OEWRI provides water quality and hydrological monitoring to the City of Springfield, City of Nixa, and

Greene County, Missouri to support regulatory compliance for their Municipal Separate Storm Sewer Systems (MS4) permit and to meet Total Maximum Daily Load (TMDL) targets in the James River Basin.

OEWR has been involved in numerous projects that were funded by federal grants from the Environmental Protection Agency, Fish and Wildlife Service, the Department of Defense, and the Department of Agriculture. Three of our recent projects relevant to this submission are highlighted below.

1) Missouri Agricultural Watershed Assessments

Funding Agency: Natural Resources Conservation Service (NRCS) Department of Agriculture

Budget: approximately \$75,000 annually

Project Description:

The purpose of this assessment is to provide NRCS field staff with the necessary information on locations within designated HUC-12 watersheds where soil, slope, and land use have the highest pollution potential and to identify conservation practices that can be the most beneficial to improve water quality. The specific objectives of this assessment are to; 1) complete a comprehensive inventory of existing data in each watershed including information related to geology, soils, hydrology, climate, land use, and any existing water quality monitoring data available; 2) Perform a resource assessment of each watershed that includes analysis of the data gathered in the watershed inventory that includes identification of nonpoint source pollutants, water quality impairments, rainfall-runoff characteristics, and analysis of stream bank conditions; and 3) Provide NRCS staff with information on the resource concerns within each watershed, specific field conditions that contribute the most to the water quality impairment, and what conservation practices should be implemented for the existing conditions to get the most water quality benefit. The final product is a report that describes the methods and results of the assessment along with recommendations on where conservation practices should be implemented that will allow NRCS field staff to plan and target specific areas in the watershed.

2) Mussel Habitat Survey and Assessment, Fort Leonard Wood, Missouri

Funding Agency: U.S. Army Corps of Engineers (USACE) Department of Defense

Budget: \$50,000

Project Description:

Fort Leonard Wood needed information to help understand the relationships between mussel bed locations and habitat conditions to evaluate the impacts of military operations and sustainable enhancement activities in accordance with Section 7 of the Endangered Species Act to develop programmatic conservation measures for federally listed mussels and species of concern. To meet this requirement, a biological assessment (BA) of freshwater mussels was completed in 2016 on 10 miles of Big Piney River and 9 miles of Roubidoux Creek that flow through FLW. The findings of the BA indicated a substantial decline in mussel abundance and diversity since 2004. The purpose of this study was to complete a Geomorphic Habitat Assessment to describe the physical channel habitat characteristics in Big Piney River and Roubidoux Creek and identify reaches with poor habitat conditions that may limit mussel bed

presence including federally listed species on FLW. Specific objectives include (i) assessment of the impacts of increased flooding, excess sedimentation, and channel instability on physical habitat; (ii) evaluation of the locations and degree of reduced connectivity by barriers to fish migration in the channel; (iii) identify the locations of runoff and sediment inputs from land use activities and drainage systems; and (iv) offer suggestions for improving physical habitat and other ecological factors to help promote mussel recovery.

3) Environmental Assessment and Soil Mapping of Barton Fen, Potosi Ranger District, Mark Twain National Forest, to Support Restoration Planning

Funding Agency: U.S. Forest Service (USFS) Department of Agriculture

Budget: \$30,000

Project Description:

The U.S. Forest Service (USFS) has initiated the planning process to restore Barton Fen, located along Neals Creek, Iron County, Potosi-Fredericktown Ranger District, Mark Twain National Forest (MTNF) in the Missouri Ozarks. Barton Fen is one of the best examples of an Ozarks Fen in the state and is a site that is home to the Hine's Emerald Dragonfly, which is a federally listed endangered species. Site assessments in the past suggest human modifications may have disturbed the site by changing the drainage pattern and reducing the extent of the fen to its current size. Forest ecologists and natural resource managers would like to evaluate the potential of the site for restoration purposes. To help develop a comprehensive assessment of the site, the USFS hired the Ozarks Environmental and Water Resources Institute (OEWRI) at Missouri State University as a project partner. OEWRI has a long history of working with the USFS on projects in the MTNF and has had experience working specifically in the Neals Creek watershed. The purpose of this project is to perform a comprehensive assessment of the Barton Fen site with the goal of restoring the site to the original footprint. The specific objectives are: 1) document the impact of human modifications on the site by literature search, historical aerial photography interpretation, and topographic analysis; 2) investigate the historical footprint of the fen by historical aerial photography interpretation, field-survey, and soil coring/analysis; 3) use these data to inform and participate in mapping the soils at the site collaborating with Forest Service soil scientists; 4) investigate the hydrology of the site and identify potential threats; and 5) evaluate the potential for restoration that may include beaver dam analogs. These findings will be summarized in a final report that will be used to guide future restoration plans.

Thank you for your consideration. Should you require our services, please give us a call at **417-836-3197**, or contact me at **mowen@missouristate.edu**. For more information, please visit our website at www.oewri.missouristate.edu.

Sincerely,

Marc Owen, Director
Ozarks Environmental and Water Resources Institute
Missouri State University

OEWRI's mission is to advance our scientific understanding of water resource quantity, quality, and distribution in Ozarks watersheds.

OEWRI's mission has three main goals:

- 1.** Conduct applied and basic research to understand the influence of natural processes and human activities on watershed health, water resources, and aquatic habitats;
- 2.** Establish regional partnerships, disseminate information, and provide educational and training opportunities related to scientific monitoring and management of water resources;
- 3.** With our partners, help develop policy alternatives to address water resources questions raised by decision-makers based on scientific sampling and analytical protocols.



Ozarks Environmental and Water Resources Institute

Centrally located in Springfield, Missouri, OEWRI provides technical expertise, analytical capability, and student training to support environmental research, watershed monitoring programs, and watershed group activities in the Ozarks. It directs and collaborates on research projects aimed at solving runoff, channel network, and water quality and supply problems by working in partnership and cooperation with university researchers, environmental groups, local communities, and government agencies.

Environmental Assessments / Wetland Assessments / GIS Mapping / Hydrology / Geomorphology / Water Quality Monitoring / Sediment Analysis

Our Projects

Gasconade River Watershed Study

Assessed 264 miles of stream channel morphology and historical channel evolution through a combination of geospatial and field surveying methods. The goal of this project was to understand how the Gasconade River responds to land use, climate, and human impacts.

Barton Fen - Environmental Assessment and Soil Mapping

Performed a comprehensive assessment of the Barton Fen (a groundwater fed wetland with endangered species habitat) site with the goal of restoring the site to its historic extent. This was completed through historical aerial photo analysis, field surveying, and soil and hydrologic analyses.

Mississippi River Basin Healthy Watersheds Initiative (MRBI) Watershed Assessments

Completed 17 MRBI watershed assessments in Missouri. The goal of these assessments is to provide a conservation practice implementation plan that will most effectively improve water quality while supporting agricultural viability.

Aquatic Organism Passage (AOP) and Barrier Assessment

Worked to identify, prioritize, and assess stream/road crossings to locate and evaluate barriers to aquatic organism passage, stream discontinuity, and dangerous road crossings. This was completed through a geospatial inventory of stream and road data and field assessments following the National Aquatic Barrier Inventory and Prioritization Tool protocol.

Geomorphic Habitat Assessment of the Big Piney River and Roubidoux Creek

Worked to identify and evaluate the causes of physical stream habitat degradation in relationship to freshwater mussel abundance and diversity, including endangered and threatened species.



Project Partners

- *National Park Service*
- *US Army Corps of Engineers*
- *US Department of Agriculture*
- *Natural Resource Conservation Service*
- *US Forest Service*
- *US Department of Defense*
- *US Environmental Protection Agency*
- *US Fish and Wildlife Service*
- *US Geological Survey*
- *Missouri Department of Natural Resources*
- *Missouri Department of Conservation*
- *City of: Springfield, Nixa, Battlefield, Branson, MO*
- *Greene and Christian County, MO*
- *H2Ozarks*
- *The Nature Conservancy*
- *Watershed committee of the Ozarks*
- *James River Basin Partnership*
- *Missouri Coalition for the Environment*



Associated Expertise

- Fluvial Geomorphology
- Karst Geology and Hydrology
- Biogeomorphology
- Geophysics
- Environmental Geochemistry
- Geotechnical Engineering
- Environmental Microbiology
- Aquatic Biology
- Stream Ecology
- Wetland Biology
- Plant Physiology
- Wildlife Biology
- Geospatial Science
- Spatial Statistics



OEWRI has been completing environmental assessments for 20 years, with expertise in water and sediment quality and monitoring, geospatial sciences, and stream stability and sedimentation. Our staff are well versed in performing environmental assessments ranging from topographic surveying, geomorphic assessments, and soil and water sampling and analysis. Our experience and interdisciplinary connections with faculty at Missouri State University set us up for success to complete diverse environmental assessments and protocols.

Our Team

Our team is composed of three full time staff members, several graduate and undergraduate students and Missouri State University faculty in the School of Earth, Environment, and Sustainability and the Department of Biology.



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