

State of Maine Procurement Justification Form

This form must accompany all contract requests and sole source requisitions (RQS) over \$5,000 submitted to the Division of Procurement Services.

INSTRUCTIONS: Please provide the requested information in the white spaces below. All responses (except signatures) must be typed; no hand-written forms will be accepted. See the guidance document posted with this form on the Division of Procurement Services website (Forms page) for additional instructions.

PART I: OVERVIEW				
Department Office/Division/Program:	Inland Fisheries and Wildlife/Wildlife Resource Assessment Section			
Department Contract Administrator or Grant Coordinator:	Brenda Lord, Wildlife Secretary			
(If applicable) Department Reference #:				
Amount: (Contract/Amendment/Grant)	\$ 15,000	Advantage CT / RQS #:		
CONTRACT	Proposed Start Date:	March 1, 2020	Proposed End Date:	September 30, 2020
AMENDMENT	Original Start Date:		Effective Date:	
	Previous End Date:		New End Date:	
GRANT	Project Start Date:		Grant Start Date:	
	Project End Date:		Grant End Date:	
Vendor/Provider/Grantee Name, City, State:	W. Mark Ford, Virginia Polytechnic Institute and State University, Blacksburg, VA			
Brief Description of Goods/Services/Grant:	Use baseline survey data to (1) determine coarse-scale habitat relationships, occurrence, and distribution trends of Maine's 8 bat species and (2) use survey data to inform the development of a long-term survey protocol to monitor and assess the status of bats in Maine.			

PART II: JUSTIFICATION FOR VENDOR SELECTION			
Mark an "X" before the justification(s) that applies to this request. (Check all that apply.)			
	A. Competitive Process		G. Grant
	B. Amendment		H. State Statute/Agency Directed
X	C. Single Source/Unique Vendor		I. Federal Agency Directed
	D. Proprietary/Copyright/Patents		J. Willing and Qualified
	E. Emergency		K. Client Choice
	F. University Cooperative Project		L. Other Authorization

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PART III: SUPPLEMENTAL INFORMATION

Please respond to ALL of the following:

1. Provide a more detailed description and explain the need for the goods, services or grant to supplement the response in Part I.

Of the eight species of bats that occur in Maine, three *Myotis* species are afforded special protection under Maine's Endangered Species Act: the little brown bat (*M. lucifugus*, State Endangered); northern long-eared bat (*M. septentrionalis*, State Endangered, Federally Threatened); and eastern small-footed bat (*M. leibii*, State Threatened). The five remaining bat species are designated as Species of Special Concern: eastern red bat (*Lasiurus borealis*), hoary bat (*L. cinereus*), silver-haired bat (*Lasionycteris noctivagans*), tri-colored bat (*Perimyotis subflavus*), and big brown bat (*Eptesicus fuscus*). Prior to the spread of white nose syndrome (WNS) beginning in 2010, Maine enjoyed statewide distributions of little brown bats and northern long-eared bats, as well as frequent occurrences and sizable distributions of the six other bat species that are indigenous to Maine. Since then, however, bat populations have declined dramatically, some species by more than 90%.

There have been several studies that have conducted acoustic surveys over the past 5 years to gain a better understanding of the status of the bat population. MDOT conducted acoustic surveys at approximately 200 sites statewide in 2015. There was a separate acoustic survey effort to detect *Myotis* species near talus slopes during summer of 2016 and 2017 and tri-colored bat surveys during summer of 2018. Our Department attempted NABat by conducting stationary and mobile surveys in random priority grid cells in 2015 and 2016. Although we had equipment failures, we also discovered that the surveys were particularly challenging in the northern half of our state given the remoteness, large amounts of private industrial land ownership, and limited distribution of gravel logging roads. In 2017 and 2018, our Department switched to conducting 2 mobile transects per region (14 transects total) across the state following the New York protocol for mobile surveys. In general, the mobile surveys required high effort and resulted in low bat activity with results biased towards the bigger, louder and more common bat species being detected. As a result, we are proposing to shift to stationary acoustic surveys that balance efficient use of staff time, while increasing likelihood of recording the full bat species assemblage in Maine, including those species most affected by WNS.

During the summer of 2019, we conducted stationary surveys on conserved lands across the state (i.e., Wildlife Management Areas, Bureau of Public Lands) to collect a large dataset of baseline acoustic data. The goals are to (1) use survey data to calculate species occupancy and detections rates to determine level of effort needed to detect population changes, (2) determine coarse scale habitat trends, (3) develop recommendations on efficient processing of bat survey data, and (4) evaluate tri-colored occurrences to determine changes in distribution over time. With limited resources, we want to ensure that our surveys are ecologically meaningful and sustainable to accomplish in the long term. The survey recommendations will be used to develop a standardized protocol that will inform site selection and efficient data processing, analysis, and reporting. The protocol will be shared with conservation partners ranging from Tribes, Federal agencies, and NGOs who could help expand our long-term survey effort in a consistent way across the state. Instituting a standardized survey protocol will allow the Department to monitor long-term trends in bat species affected by WNS, climate change, and wind power, as well as addressing immediate data deficiencies to determine whether tri-colored bats warrant state listing as Threatened or Endangered.

Maine statute mandates it is the policy of the State to conserve all species of fish and wildlife found in Maine, and to maintain and enhance the numbers of species at risk of extirpation. In order to meet this mandate for the state-Threatened Eastern small-footed bat and state-Endangered Northern long-eared and Little Brown bat, MDIFW needs current data on population size and distribution, and the ability to monitor populations over

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time using a standardized protocol.

2. Provide a brief justification for the selected vendor to supplement the response in Part II.

Dr. W. Mark Ford is an Associate Professor at Virginia Polytechnic Institute and State University and also Unit Leader, Research Wildlife Biologist with the U.S. Geological Survey at Virginia Cooperative Fish and Wildlife Research Unit. Over the past 20 years, Dr. Ford has developed expertise on bat ecology and management using acoustics in the northeast, which along with his research credentials, makes him uniquely qualified to address our study's objectives to develop a long-term bat monitoring protocol in Maine. Dr. Ford supervises graduate students and research associates, which focus on conducting bat surveys at multiple scales and making management recommendations to improve our understanding of bats. Dr. Sabrina Deeley is a research associate in Dr. Ford's lab who would be working on this project because she is an expert on using acoustic monitoring techniques in urban and wild landscapes with skills in large data management relative to acoustic sampling. Dr. Ford has served as an expert consultant to federal and state agencies, non-governmental organizations and private industry in the natural resources sector. He has served as expert consultant to the agency on nationwide wildlife-wind energy research issues and as expert consultant to U.S. Fish and Wildlife Service on endangered species issues. He has led complex multi-party teams of multi-agency and university affiliations working on research, conservation and management issues at local and landscape-scales for endangered bat species. Dr. Ford is familiar with the challenges involving Threatened and Endangered species on private industrial forest land in the northeastern United States. Dr. Ford has an extensive background in research and has been a faculty member at six Universities in the East and mid-west. He has been a Reviewer on over 30 scientific Journals and has published over 200 scholarly articles or book chapters over the past 30 years. Recently, Dr. Ford and his associates have led over 25 bat-related studies and had over 20 publications focused on bat species presence and habitat, relationship of white-nose impacted bat species and forest conditions, cavity characteristics of northern long-eared bat maternity roosts, activity patterns in regional and long-distance migrant bat species during the fall and spring, acoustic activity of bats prior to and 10 years after white-nose syndrome, weather as a proximate explanation for fission-fusion dynamics in female northern long-eared bats, deriving habitat models for northern bats from historical detection data, comparison of radio-telemetric home range analysis and acoustic detection for little brown bat habitat evaluation, bat activity in a working forest landscape, and comparison of passive and active acoustic sampling for monitoring bat communities impacted by white-nose syndrome.

3. Explain how the negotiated costs or rates are fair and reasonable; or how the funding was allocated to grantee.

In 2019, MDIFW was awarded \$15,000 from USFWS White-Nose State Capacity Grant (F19AP00722) to assist with developing a protocol that would aid in monitoring bat population trends. The bulk of the cost will go to staff time to process acoustic data, run habitat models, upload legacy data to NABat, and reporting (\$8,000), miscellaneous equipment and supplies (\$3,500), and administrative overhead (\$3,220). Processing the acoustic data with an expert familiar with working with large datasets and monitoring programs is cost-effective and streamlines the process. MDIFW has compared these rates to similar environmental consulting services and Dr. Ford's staff hourly rate is at least 50% lower.

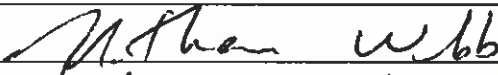

4. Describe the plan for future competition for the goods or services.

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Staff resources at MDIFW are limited and this expertise is not available from any other in-state governmental agency. Unless other local environmental consulting companies, academic, or private contractors hire staff who specialize in bat research techniques, processing and vetting calls, study design, occupancy modelling and habitat analysis, and demonstrate an equal or higher level of proficiency and expertise with developing monitoring programs for bats in the northeast, there will be few potential opportunities for future competition.

PART IV: APPROVALS

Signature of requesting Department's Commissioner (or designee):	<i>By signing below, I signify that I approve of this procurement request.</i>		
			
Printed Name:	Nathan Webb	Date:	2/13/2020
Signature of DAFS Procurement Official:	<small>DocuSigned by:</small> 		
Printed Name:	Debbie Jacques	Date:	2/14/2020