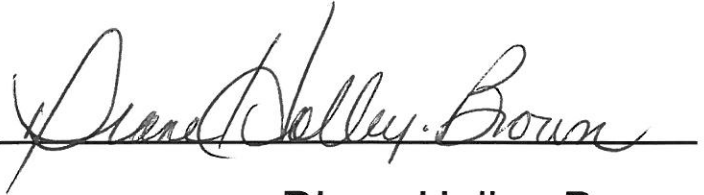


# NOTICE

Please note that this bid from Environmental Solutions & Innovation for CRFQ ADJ16\*20 was received at the Purchasing Division office prior to the established bid opening date and time on April 21, 2016 as noted on the coversheet, but was unable to load properly through wvOASIS at the public bid opening. This bid has since been loaded and is now posted.

A handwritten signature in cursive script, reading "Diane Holley-Brown", is written over a horizontal line.

Diane Holley-Brown  
Assistant Purchasing Director



April 22, 2016

## April 21, 2016 1:30 PM Electronic Solicitation Responses (ESRs)

### ISSUE

On Thursday, April 21, 2016 1:52 PM, the Purchasing Division contacted the wvOASIS Finance Team because five centralized solicitations closed at 1:30 PM, but no electronic solicitation responses (or “ESRs”) were received. At that time, a Finance Team member observed that the 1:30 PM sync cycle was complete and successful (See Exhibit 1). The team member also found one decentralized ESR that interfaced successfully during the 1:30 PM sync cycle (SR 0211 ESR0420160000005077; see Exhibit 2). Based on this information, the team member advised the Purchasing Division that everything appeared to be in order.

At 3:19, the Purchasing Division contacted wvOASIS again after noticing ESRs in the system relating to the five centralized solicitations: CRFQs ADJ160000020, CPR160000001, DOT160000083, DOT160000086, and DNR160000028.

### Exhibit 1

Job ID	Item Type	Catalog Id	Catalog Name	Job Name	User ID	Start Time	End Time	Run Status	Return Code	
446257	System Batch	127	Load to Advantage	DAFN012701_Load_to_Advantage_127	batch	04-21-2016 16:31:49	04-21-2016 16:31:56	Complete	Successful	<a href="#">View Log</a>
446206	System Batch	127	Load to Advantage	DAFN012701_Load_to_Advantage_127	batch	04-21-2016 15:31:29	04-21-2016 15:31:32	Complete	Successful	<a href="#">View Log</a>
446129	System Batch	127	Load to Advantage	DAFN012701_Load_to_Advantage_127	batch	04-21-2016 14:29:59	04-21-2016 14:30:13	Complete	Successful	<a href="#">View Log</a>
446108	System Batch	127	Load to Advantage	DAFN012701_Load_to_Advantage_127	batch	04-21-2016 13:29:59	04-21-2016 13:30:03	Complete	Successful	<a href="#">View Log</a>
446063	System Batch	127	Load to Advantage	DAFN012701_Load_to_Advantage_127	batch	04-21-2016 12:29:49	04-21-2016 12:29:53	Complete	Successful	<a href="#">View Log</a>
445986	System Batch	127	Load to Advantage	DAFN012701_Load_to_Advantage_127	batch	04-21-2016 11:29:59	04-21-2016 11:30:01	Complete	Successful	<a href="#">View Log</a>
445963	System Batch	127	Load to Advantage	DAFN012701_Load_to_Advantage_127	batch	04-21-2016 10:29:59	04-21-2016 10:30:01	Complete	Successful	<a href="#">View Log</a>
445914	System Batch	127	Load to Advantage	DAFN012701_Load_to_Advantage_127	batch	04-21-2016 09:29:49	04-21-2016 09:29:54	Complete	Successful	<a href="#">View Log</a>
445824	System Batch	127	Load to Advantage	DAFN012701_Load_to_Advantage_127	batch	04-21-2016 08:29:49	04-21-2016 08:29:53	Complete	Successful	<a href="#">View Log</a>
445719	System Batch	127	Load to Advantage	DAFN012701_Load_to_Advantage_127	batch	04-21-2016 07:30:19	04-21-2016 07:30:40	Complete	Successful	<a href="#">View Log</a>

## Exhibit 2

The screenshot displays a web-based procurement system interface. At the top, a header bar contains the text: "Solicitation Response(SR) Dept: 0211 ID: ESR04201600000005077 Ver.: 1 Function: New Phase: Final Modified by batch\_04/21/2016". Below the header, there are several tabs: "General Information", "Contact", "Default Values", "Discount", and "Document Information". The "General Information" tab is active, showing the following details:

- Procurement Folder: 209322
- Procurement Type: Agency Purchase Order
- Vendor ID: 000000199924
- Legal Name: F M PLE HARDWARE CO INC
- Alias/DBA:
- Total Bid: \$1,000.00
- Response Date: 04/20/2016
- Response Time: 15:46

On the right side of the interface, additional information is displayed:

- SO Doc Code: ARFQ
- SO Dept: 0211
- SO Doc ID: GSD1600000162
- Published Date: 4/15/16
- Close Date: 4/21/16 (highlighted with a red box)
- Close Time: 13:00 (highlighted with a red box)
- Status: Closed
- Solicitation Description: Toro Lawn Mower Parts

## **BACKGROUND**

The wvOASIS system is a web-based, enterprise-wide financial application that runs on multiple servers. When a vendor submits a Solicitation Response document in the Vendor Self Service (VSS) portal, the document remains sealed in the VSS electronic lockbox until the solicitation closing date and time are reached. Then, the responses are copied from the lockbox to the procurement folder by a synchronizing interface. The Purchasing Division is not able to access electronic solicitation responses until they are exported from the lockbox to the procurement folder. The synchronizing interfaces, or sync cycle, run every hour at the bottom of the hour, from 7:30 AM to 5:30 PM weekdays.

## **ANALYSIS**

Members of the wvOASIS Technical Team identified the cause of the issue relating to the April 21, 2016 1:30 PM ESR documents. The system clocks on two wvOASIS servers were out of sync by a matter of seconds. This caused the 1:30 PM sync cycle to begin at 1:29 PM. Because the ESRs relating to the five centralized solicitations were not eligible to be interfaced until after their 1:30 PM closing time, they were not copied to their respective procurement folders until the completion of the 2:30 PM sync cycle. It should be noted that the decentralized ESR shown in Exhibit 2 had a closing time of 1:00 PM, making it eligible to be interfaced at 1:29 PM.

## **CONCLUSION**

After careful review, it is our conclusion that the ESR documents relating the five centralized solicitations were received in the wvOASIS system prior to the 1:30 PM closing time and should be considered valid bids by the Purchasing Division. The specific ESR documents are:

### **CRFQ 0603 ADJ1600000020**

Solicitation Response SR,0603,ESR04061600000004696,1  
Solicitation Response SR,0603,ESR04191600000005013,1  
Solicitation Response SR,0603,ESR04191600000005025,1  
Solicitation Response SR,0603,ESR04201600000005072,1  
Solicitation Response SR,0603,ESR04201600000005074,1  
Solicitation Response SR,0603,ESR04201600000005079,1

**CRFQ 0203 CPR1600000001**

No solicitation responses received

**CRFQ 0803 DOT1600000083**

Solicitation Response SR,0803,ESR03281600000004481,1

**CRFQ DOT1600000086**

Solicitation Response SR,0803,ESR04201600000005078,1

Solicitation Response SR,0803,ESR04201600000005081,1

**CRFQ DNR1600000028**

Solicitation Response SR,0310,ESR04211600000005085,1

Solicitation Response SR,0310,ESR04211600000005092,1



# West Virginia Purchasing Division

2019 Washington Street, East  
Charleston, WV 25305  
Telephone: 304-558-2306  
General Fax: 304-558-6026  
Bid Fax: 304-558-3970

The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

## Header

List View

**General Information** | Contact | Default Values | Discount | Document Information

Procurement Folder: 203105

SO Doc Code: CRFQ

Procurement Type: Central Purchase Order

SO Dept: 0603

Vendor ID:

SO Doc ID: ADJ1600000020

Legal Name: ENVIRONMENTAL SOLUTIONS & INNO

Published Date: 4/14/16

Alias/DBA:

Close Date: 4/21/16

Total Bid: \$135,000.00

Close Time: 13:30

Response Date:

Status: Closed

Response Time:

Solicitation Description:

Total of Header Attachments: 0

Total of All Attachments: 0



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

**State of West Virginia  
 Solicitation Response**

**Proc Folder :** 203105  
**Solicitation Description :** ADDENDUM 1 BAT SURVEY-CAMP DAWSON  
**Proc Type :** Central Purchase Order

Date issued	Solicitation Closes	Solicitation No	Version
	2016-04-21 13:30:00	SR 0603 ESR04201600000005074	1

<b>VENDOR</b>
000000174326 ENVIRONMENTAL SOLUTIONS & INNO

**FOR INFORMATION CONTACT THE BUYER**  
 Crystal Rink  
 (304) 558-2402  
 crystal.g.rink@wv.gov

**Signature X** **FEIN #** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Bat Survey-Endangered Species Mgmt Plan-Camp Dawson				\$135,000.00

Comm Code	Manufacturer	Specification	Model #
77111507			

**Extended Description :** Critical Fauna Survey and Endangered Species Management Plan for the Indiana Bat and the Northern Long-Eared Bat



RESPONSE TO REQUEST FOR QUOTE  
CRITICAL FAUNA SURVEY AND ENDANGERED SPECIES PLAN FOR  
INDIANA BATS AND NORTHERN LONG-EARED BATS ON  
CAMP DAWSON ARMY TRAINING SITE  
KINGWOOD, WEST VIRGINIA (PRESTON COUNTY)  
SOLICITATION NUMBER: CRFQ ADJ1600000020

20 April 2016

*Prepared for:*



Ms. Crystal Rink, Senior Buyer  
Department of Administration, Purchasing Division  
2019 Washington Street, East  
Charleston, WV 25305

*Prepared by:*



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### Appendices:

Appendix A: Bid Form

Appendix B: Resumes

Appendix C: Abstracts

Appendix D: Certification and Signature Page, Addendum Acknowledgement Form, Vendor Preference Certificate, and Purchasing Affidavit.

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## 1.0 Introduction

Environmental Solutions & Innovations, Inc. (ESI) is pleased to respond to the West Virginia Purchasing Division's Request for Quote (RFQ) on behalf of the West Virginia Army National Guard's (WVARNG) Camp Dawson Army Training Site's (Camp Dawson) Environmental Office (Solicitation Number CRFQ ADJ160000020). The intent of the RFQ is to establish a contract providing all professional and technical personnel, labor, facilities, equipment, materials, transportation, and supplies needed for a critical fauna survey and development of an Endangered Species Management Plan (ESMP) for Indiana (*Myotis sodalis*) and northern long-eared (*Myotis septentrionalis*) bats. A completed Bid Form is provided in Appendix A.

ESI understands the project has two primary objectives: (1) to determine if Indiana and/or northern long-eared bats occur on site, and (2) to develop an ESMP for both species that incorporates WVARNG management philosophies, practices, and mission requirements of Camp Dawson. These efforts will also provide a better understanding of the bat community of the study area. Our ability to leverage four interlocking components of expertise within our team ensures Camp Dawson will receive professionally executed surveys and an effective and efficient management plan. These areas of expertise encompass:

- Extensive team of recognized bat experts, including leading experts on Indiana and northern long-eared bats;
- Comprehensive experience working on bats in West Virginia and throughout the east;
- Previous experience working on Camp Dawson and on other Department of Defense (DoD) installations;
- Experience preparing and evaluating ESMPs ranging from site specific plans to Habitat Conservation Plans (HCP) that cover multiple species of bats across multiple states.

## 2.0 Qualifications

ESI's 16-year track record of performing hundreds of projects affirms our reputation as *the* bat experts. We boast a large staff of qualified bat biologists who work extensively with protected bats including the federally endangered Indiana bat, the federally threatened northern long-eared bat, and many species of bats considered

endangered or of special concern at state or regional levels. Our staff includes individuals involved in developing and managing some of the largest and most significant projects related to Indiana bats and their habitat including:

- Completing preliminary studies and long-term monitoring associated with the Indiana Department of Transportation's I-69 Expansion;
- Designing, managing, and monitoring conservation properties at the Indianapolis Airport;
- Leading the Indiana Department of Natural Resources' Winter Cave Surveys since 1980;
- Serving as technical lead for an HCP under development by the Pennsylvania Game Commission and the Pennsylvania Department of Conservation and Natural Resources that addresses the effects of forestry on the Indiana and northern long-eared bats;
- Developing the acoustic techniques that are now widely used to survey for bats.

Members of our staff also served on the U.S. Fish and Wildlife Service (USFWS) sponsored Recovery Team for the Indiana bat and are part of a USFWS group working to develop forest management practices for the northern long-eared bat. We are regulatory professionals and routinely conduct presence/absence surveys using mist netting and/or acoustic surveys throughout the range of both target species. In West Virginia, we completed more than 2200 net nights over the past 5 years. In addition, we often collaborate with state National Guard facilities including the WVARNG and Camp Dawson where we completed mist net studies in 2002 and 2006. We frequently publish on the species in the primary literature including a paper entitled "Bats of Camp Dawson, West Virginia: Relative Abundance, Habitat Use, and Periods of Activity" published by the West Virginia Academy of Science.

An overview of our staff's qualifications is provided in Table 1. The following sections provide a more detailed snapshot of the project management team's experience and expertise. Resumes for the management team are presented in Appendix B.

## **2.1 Management Team**

ESI's management team for this project includes senior biologists with a long history of working with the two target species and for the DoD. Each team member holds range-wide permits from USFWS as well as scientific collecting permits from the West Virginia Division of Natural Resources (WVDNR; 2016 permit renewals in review) that allows for the capture and handling of bats, including the federally listed Indiana and northern long-eared bats.

Table 1. Qualifications of ESI Bat Biologists

Staff Member	Permit		Indiana and Northern Long-eared Bat Experience							Highest Level of Education	Experience (Years)
	USFWS Federal Permit	West Virginia Permit	Acoustic Surveys	USFWS Qualified to ID Bat Calls	Mist Net Surveys	Handling and Identification of Bats to Species	Management Plan Preparation	Work on DoD Facilities			
<b>Management Team</b>											
Virgil Brack	✓	✓	✓		✓	✓	✓	✓	✓	Ph.D.	35
Dale Sparks	✓	✓	✓	✓	✓	✓	✓	✓	✓	Ph.D.	25
Daniel Judy	✓	✓	✓		✓	✓	✓	✓	✓	M.S.	10
Lynn Robbins	✓	✓	✓	✓	✓	✓	✓	✓	✓	Ph.D.	35
<b>Field and Staff Support</b>											
Brett Andersen		✓	✓	✓	✓	✓				M.S.	2
Carne Ardito	✓	✓	✓		✓	✓				B.S.	4
Kory Armstrong	✓	✓	✓	✓	✓	✓	✓	✓	✓	M.S.	6
Christopher Boggs	✓	✓	✓		✓	✓				B.S.	7
Justin Boyles	✓	✓	✓	✓	✓	✓	✓	✓	✓	Ph.D.	15
Darwin Brack	✓	✓	✓		✓	✓				M.S.	11
Shane Brodnick	✓	✓	✓		✓	✓		✓		B.S.	7
Megan Caylor	✓	✓	✓		✓	✓	✓	✓	✓	M.S.	8
Valerie Clarkston	✓	✓	✓		✓	✓	✓			M.S.	7
Brian Dennis	✓	✓	✓		✓	✓				B.S.	5
Nick Gikas	✓	✓	✓	✓	✓	✓	✓	✓	✓	M.S.	10
Doug Gilbert					✓		✓			B.S.	7
Michelle Gilley	✓	✓	✓	✓	✓	✓	✓	✓	✓	Ph.D.	20
David Jeffcott	✓	✓	✓	✓	✓	✓		✓		B.S. Course work	15

Staff Member	Permit		Indiana and Northern Long-eared Bat Experience							Highest Level of Education	Experience (Years)
	USFWS Federal Permit	West Virginia Permit	Acoustic Surveys	USFWS Qualified to ID Bat Calls	Mist Net Surveys	Handling and Identification of Bats to Species	Management Plan Preparation	Work on DoD Facilities			
Nate Light	✓		✓		✓	✓				M.S.	2
Shawn McKinley		✓	✓		✓	✓		✓		B.S. Course work	7
Michael Mairose		✓	✓		✓	✓	✓			B.A.	3
Beth Meyer	✓	✓	✓		✓	✓		✓		B.S.	9
Aaron Prewitt			✓		✓	✓				B.S.	2
Tyler Russel		✓	✓		✓	✓				B.A.	2
Jo Salyers	✓	✓			✓	✓				B.S.	25
Jeremy Van Deventer	✓	✓	✓	✓	✓	✓				B.S.	5
Jacques Veilleux	✓	✓	✓		✓	✓	✓	✓		Ph.D.	20
Justin Wilson	✓	✓	✓		✓	✓	✓	✓		M.S.	15

### **2.1.1 Dr. Virgil Brack - Principal Scientist**

As ESI's Chief Executive Officer and Principal Scientist, Dr. Virgil Brack has ultimate responsibility for the success of Camp Dawson's project. Dr. Brack is a Certified Wildlife Biologist (The Wildlife Society) and a Certified Senior Ecologist (Ecological Society of America) with 35 years of experience addressing regulatory issues related to natural resources. He has extensively studied bats and their habitat. His Master's Thesis explored how temperature effects hibernation duration in several species of bats, while his Ph.D. Dissertation provided a new window into the biology of the endangered Indiana bat. He designs, directs, and implements innumerable surveys for bats, studies of bat biology, along with assessments of summer and winter habitat often in collaboration with the Department of Defense (DoD). This includes directing two previous survey efforts at Camp Dawson.

Dr. Brack was a member of the USFWS Recovery Team for the federally endangered Indiana bat. He directed technical development of a "Habitat Suitability Index Model" for components of the summer habitat of the Indiana bat. The habitat model, based on the USFWS Habitat Evaluation Procedures, has been used to provide baseline analysis for many Biological Assessments (BA) and Biological Opinions (BO) completed under the Endangered Species Act (ESA). Dr. Brack's publications on endangered bats number well into the hundreds and include professional scientific journal articles, book sections. He is co-author of *Bats of Ohio*, *Bats of Indiana*, and "Bats of Camp Dawson, West Virginia: Relative Abundance, Habitat Use, and Periods of Activity".

### **2.1.2 Dr. Dale Sparks - Senior Project Manager**

Dr. Sparks is also a Certified Wildlife Biologist and a Certified Senior Ecologist. As ESI's Senior Project Manager, he brings 25 years of experience to the team. Many projects he manages concern federal and state listed bats within the central Appalachians of Virginia and West Virginia. His work also focuses on mitigation and conservation planning. He directed long term studies in support of a BA and Habitat Conservation Plan (HCP) which served as the first large-scale mitigation for loss of summer habitat for the Indiana bat. These studies also produced some of the most definitive research on the interaction of the Indiana bat and other bats with human developments, with many resulting publications bearing the name of Dr. Sparks.

In many respects, Dr. Sparks bridges the gap between more traditional wildlife biologists and ecological modelers. He champions the use of mathematical techniques to develop distribution models that assess the number of bats likely to occur in a given area, and thus, with other data, a way to extrapolate impacts at three regulatory scales (direct, indirect, and cumulative). His modeling is the primary source for the 2-million acre Pennsylvania Bats and Forestry HCP. In addition, Dr. Sparks serves as a technical advisor to USFWS for summer habitat conservation and population characteristics of the Indiana bat, and recently joined a USFWS group

working to develop forest management practices for the northern long-eared bat. He is author or co-author of numerous papers, poster and oral presentations, book chapters, and books including *Bats of Kansas*, *Bats of Ohio* and *Bats of Indiana*.

### **2.1.3 Daniel Judy - Project Manager**

Mr. Judy is a trained wildlife biologist and provides ecological and environmental consulting services, frequently as project manager, for endangered species surveys. He is experienced with bat survey techniques and exclusions, mammal and reptile trapping, avian banding and identification, habitat and stream mapping, biological stream monitoring, and mammal and fish identifications. His specialty is in bat ecology and he is proficient with mist netting, radio telemetry, habitat surveys, harp trapping, and acoustic monitoring and analysis. Mr. Judy is a native of West Virginia and brings extensive local experience to the project team.

Mr. Judy's project management experience includes directing multi-taxa surveys along the Mountain Valley Pipeline (MVP). MVP is a proposed 300-mile interstate natural gas pipeline traversing 17 counties in Virginia and West Virginia, including portions of the Jefferson National Forest. These surveys include mist netting at 372 sites totaling over 2100 net nights and yielding 1485 bats of 9 species, including 74 northern long-eared bats. Fifty-six northern long-eared bats were radio tagged, 43 were tracked to 68 roosts, and 267 bats were observed emerging from the roosts. Mr. Judy also authored the MVP Biological Evaluation (BE) for threatened, endangered, and forest sensitive species on Jefferson National Forest. Mr. Judy's DoD experience includes completing bat habitat and mist net surveys at Fort Drum and an acoustic bat species inventory for Patrick Air Force Base in Florida.

### **2.1.4 Dr. Lynn Robbins – Senior Scientist**

Dr. Lynn Robbins is ESI's Senior Scientist and serves as our final authority on bat call identification for acoustic studies. Dr. Robbins comes to ESI following a 35-year career as an academic biologist at Missouri State University where he trained many of the regulatory biologists currently active in the Midwest. Many acoustic techniques currently used to survey for protected bats are attributed to Dr. Robbins. All three software packages currently approved by the regulatory agencies for use in filtering calls trace their origins to Dr. Robbins lab. In addition, he often assists the Missouri Army National Guard on Land Condition Trend Analysis projects. Dr. Robbins is author or co-author of numerous publications including: *Bats of Missouri*, and contributor to "Mammals of Fort Leavenworth, Kansas: a 60-year follow-up to Brumwell (1951)" and "Bats of Fort Leavenworth Military Reservation and nearby areas of eastern Kansas and western Missouri".

## **2.2 Field and Support Staff**

With more than 20 qualified biologists on staff (Table 1), ESI has the capacity to complete this study in a timely, efficient manner. ESI typically staffs a project such as this with one or more two-person teams. Each team includes a Team Leader and a



Biological Assistant. The Team Leader is a qualified biologist, trained to complete both acoustic and netting surveys. All Team leaders are WVDNR permitted to capture and handle Indiana and northern long-eared bats. A junior member of staff serves on the field team as Biological Assistant and provides safety and support for the Team Leader. Many Biological Assistants are accomplished and experienced biologists in their own right—including meeting USFWS qualifications to complete acoustic surveys and conduct radio-telemetry. ESI's local presence expands early this summer with our opening of a new West Virginia office—allowing us to mobilize rapidly and efficiently to supplement any field activities, such as telemetry or emergence.

Upon arrival at a sampling site, the Team Leader selects the specific location and orientation for bat detectors and/or nets and completes an assessment of habitat at the site. During acoustic surveys, detectors are typically serviced each day and acoustic data are regularly downloaded, analyzed using a USFWS approved acoustic bat ID program, and visually reviewed by an in-house, recognized acoustic expert.

ESI will begin netting as soon as possible if calls consistent with Indiana or northern long-eared bat are recorded and positively identified, mist netting is initiated as soon as possible. The Team Leader ensures captured bats are properly removed from the net and all appropriate data are collected, including identification to species, body measurements, and white-nose syndrome damage assessment. Upon completion of survey efforts, Team Leaders coordinate with ESI's senior staff to ensure that data are accurately and completely recorded for each site.

## **3.0 Experience**

### **3.1 Experience in West Virginia and Central Appalachians**

Since its inception, 16 years ago, ESI has continuously completed various projects in West Virginia including nearly 70 bat-related projects over the last five years. Combined, 21 mist netting projects were completed at 434 sites yielding a total of 2279 net nights and capture of 2983 bats, including 694 northern long-eared bats. Sixteen projects included avoidance and minimization studies, mitigation evaluation, or preparation of Myotis Bat Conservation Plans (MBCP). Numerous projects completed involved acoustic monitoring. For a single project in Virginia and North Carolina in 2015, ESI completed acoustic surveys at nearly 300 sites. ESI's work in West Virginia covers a substantial portion of the state and this summer we are opening a new office, centrally located and dedicated to continue providing high quality environmental services in the state.

### 3.2 Experience on DoD Facilities

ESI's project experience on multiple DoD facilities includes habitat assessments, mist netting, and acoustic surveys. Projects were completed for the U.S. Army, U.S. Air Force, and National Guard at ten facilities including two separate surveys at Camp Dawson in 2002 and 2006. We currently hold a two-year Indefinite Delivery, Indefinite Quantity (IDIQ) contract with the Kansas National Guard to provide environmental services.

Table 2. Projects Managed by ESI for DoD

DoD Facility	Branch	Location	Survey Focus	Year
Fort Leonard Wood	U.S. Army	Missouri	Bat Acoustic Survey and BA	2016
Fort Leavenworth	U.S. Army	Kansas	Bat Acoustic Survey and BA	2016
Camp Ashland	National Guard	Nebraska	Bat Acoustic Analysis	2015, 2016
Fort Leonard Wood	U.S. Army	Missouri	Bat Habitat Assessment	2015
Patrick Air Force Base	U.S. Air Force	Florida	Bat Acoustic Survey	2013
West Point Garrison	U.S. Army	New York	Environmental Analysis	2012
Fort Drum	U.S. Army	New York	Bat Mist Net Survey	2007, 2009-2010
Wright-Patterson	U.S. Air Force	Ohio	Bat Habitat Assessment	2006
Camp Dawson	National Guard	West Virginia	Bat Mist Net Survey	2006
Camp Ravenna	National Guard	Ohio	Bat Mist Net Survey	2004
Camp Dawson	National Guard	West Virginia	Bat Mist Net Survey	2002, 2006
Fort McClellan	National Guard	Alabama	Bat Mist Net Survey	2002

We understand the constraints associated with completing natural resources studies on a facility with a dedicated military mission, as well as working on facilities training personnel for a variety of combat situations. We further understand the need for an EMSP consistent with USFWS guidelines that incorporates an installation's management philosophies, practices, and mission requirements.

### 3.3 Experience Preparing Endangered Species Management Plans

Helping clients address endangered species issues is a core component of our business and our approach to ESMPs is designed to accommodate the needs of the client and protect the imperiled resource. These plans range from single-site plans for clients such as the Consol Pennsylvania Coal Company's Bailey Mine to multi-state HCPs. We participated in preparation and/or evaluation of four of the largest HCPs undertaken including the NiSource HCP and the Pennsylvania Bats and Forestry HCP.

We develop and update large-scale management plans including Forest Management Plans for USFS and Integrated Natural Resource Management Plans (INRMP) for DoD facilities. Such plans must be comprehensive and easy to interpret while also functioning as stand-alone documents that address a myriad of regulatory

requirements such as NEPA, ESA, and the Migratory Bird Treaty Act. ESI understands the delicate nature of such documents and how to comply with the various regulatory requirements without compromising the primary military mission. Abstracts further detailing our experience are presented in Appendix C.

## **4.0 Proposed Scope of Work**

### **4.1 Critical Fauna Survey for Indiana and Northern Long-eared Bats**

In order to meet the objectives of this project, ESI proposes a combination of survey techniques based on the 2016 Range-Wide Indiana Bat Summer Survey Guidelines.

#### **4.1.1 Phase 1 – Initial Project Screening**

ESI will draft and submit a Study Plan to the USFWS and WVDNR. The Study Plan will outline the proposed survey methods, identify potentially suitable habitat through a desktop assessment, and determine level of effort for this project. Additionally, submittal and approval of the Study Plan is a condition of our permits. This document will not be submitted without prior approval from the WVARNG.

#### **4.1.2 Phase 2 – Presence / Absence Surveys**

USFWS guidelines allow presence/absence surveys to be completed by placing either mist nets or bat detectors (i.e., an acoustic survey) throughout the area. ESI recommends the use of acoustic surveys for Camp Dawson. The required level of effort is determined by the amount of suitable habitat equal to one sampling unit for each 123 acres of forest.

Addendum 1 to the RFQ indicates that Camp Dawson contains 2,955.84 acres (ac) of forest, distributed as follows: Pringle Tract, 1,459.16 ac.; Briery Tract, 1,150.10 ac; Volkstone Tract, 346.58 ac). Thus, Camp Dawson contains 24 units of suitable habitat. The most cost-effective way to sample this amount of habitat is to complete acoustic surveys at 48 stations yielding 96 detector nights of effort.

ESI's method of conducting acoustic surveys for larger projects, such as Camp Dawson, divides effort among staff that are on site and those in the office. The field staff places, monitors, and removes bat detectors which store the data electronically. These data (bat calls) are then downloaded to a laptop computer in the field, and remotely provided to ESI's technical staff in the office. Staff in the office are then able to process the bat calls through a USFWS-approved program which provides a preliminary identification for each call file. Unfortunately, the calls of many bats are similar enough to easily fool the software. ESI has multiple biologists accepted and

approved by USFWS as qualified to complete a visual review of the calls and render a final determination.

By dividing our efforts, ESI is able to quickly recognize and distinguish among cases when 1) software erroneously detects protected bats, 2) protected bats are clearly present, and 3) the results of the acoustic survey are ambiguous. This allows ESI to make a decision immediately regarding the necessity to implement Phase 3 of the guidelines. Because bats change their foraging and commuting areas over time, rapid implementation of Phase 3, affords a much improved opportunity to catch the protected bat if it is present.

#### **4.1.3 Phase 3 – Conduct Mist-Netting Surveys to Capture Indiana Bats**

Based on our experience working in the region in summer 2015 and spring 2016, ESI anticipates calls consistent with northern long-eared and Indiana bats will be detected within 75 percent (18 of the 24 sampling units). As such, ESI will complete a minimum of 72 additional net nights near these 18 sites in an effort to capture and radio-tag Indiana and northern long-eared bats.

#### **4.1.4 Phase 4 – Conduct Radio-tracking and Emergence Surveys**

Capture records from the 2013 Camp Dawson report indicate 3 northern long-eared and 0 Indiana bats were captured. For this quote, ESI will estimate a similar rate of capture and radio-tag and track up to three of the captured bats for up to 7 days each. Tags will be placed on captured Indiana and northern long-eared bats with priority on reproductive females as well as tagging at least one bat per tract. Diurnal radio-telemetry searches for roosts will be conducted until the roost is located or for a minimum of 4 hours of ground-searching per day. When a roost tree is found, it will be flagged and an emergence count conducted for at least 2 nights. Emergence counts will begin before dusk and continue until all bats have left the tree.

### **4.2 Endangered Species Management Plan**

Upon completion of field surveys, ESI will draft an ESMP for the Indiana and northern long-eared bat. The ESMP takes into account survey results and site observations and is completed in accordance with Army Policy, ESA, and NEPA. The life history and ecology of both species will also be included, as well as management strategies and actions, and a review of available data sources. Data gaps will be identified as will any consultation and coordination pertaining to the project. This draft will be submitted by 15 October 2016.

Upon WVARNG review and comment on the draft document, ESI will finalize and submit the WVARNG by 15 November 2016.

## **5.0 Cost and Assumptions**

### **5.1 Costs**

ESI proposes a budget of \$135,000.00 for this project as detailed in Appendix A. This cost includes the following items:

- Completion of Study Plan for submittal to the USFWS and WVDNR;
- Completion of 96 detector nights at 48 stations to cover 24 sampling units of habitat based on Addendum 1 of the RFQ and current USFWS guidelines
- Acoustic analysis using USFWS approved software
- Expert visual review;
- Completion of 18 mist-net sites across the three tracts on Camp Dawson;
- Radio-telemetry and emergence counts for up to three captured Indiana and/or northern long-eared bats;
- Completion of Draft and Final Survey Report;
- Completion of Draft and Final Endangered Species Management Plan.

ESI believes this is the most thorough and efficient strategy for meeting the WVARNG's goal for this project.

### **5.2 Assumptions**

#### **5.2.1 Acoustic Surveys**

The level of effort for acoustic surveys will follow the 2016 USFWS Guidelines. According to the acreages provided in the 2013 Camp Dawson report, ESI estimates 24, 18, and 6 acoustic stations will be completed at the Pringle, Briery, and Volkstone Tracts, respectively. Each station will be sampled for 2 nights of acceptable weather yielding a total sampling effort of 96 detector nights.

#### **5.2.2 Mist-Netting**

Current USFWS guidelines do not specify a level of effort needed to follow positive acoustic detections. ESI plans to cap this level of effort based on the predicted detection of protected bats in 75 percent of the sampling units, and two field nights (multiple nets each night) of sampling at each of the resulting 18 sites.

Additional mist-net sites or nights of effort may be completed at the discretion of the WVARNG for an additional fee.

### 5.2.3 Telemetry of Captured Bats

ESI will radio-tag and track up to three captured Indiana and/or northern long-eared bats for up to seven days. Additional captured bats may be tagged and tracked at the discretion of the WVARNG for an additional fee.

## 6.0 Addenda

In fulfillment of the Request for Quote, the following items can be found in Appendix D: Certification and Signature Page, Addendum Acknowledgement Form, Vendor Preference Certificate, and Purchasing Affidavit.

## 7.0 Contacts at ESI

ESI appreciates the opportunity to propose on this project. Please do not hesitate to contact us if you have any questions. All communications should be directed to:

Mr. Daniel Judy

Environmental Solutions & Innovations, Inc.  
4525 Este Avenue  
Cincinnati, OH 45232

Phone: (513) 451-1777

Fax: (513) 451-3321

Cell: (407) 269-7492

E-mail: DJudy@ENVSI.com

If he is unavailable, please contact:

Dr. Dale Sparks

Environmental Solutions & Innovations, Inc.  
4525 Este Avenue  
Cincinnati, OH 45232

Phone: (513) 451-1777

Fax: (513) 451-3321

Cell: (513) 503-2667

E-mail: DSparks@ENVSI.com

**APPENDIX A  
BID FORM**



**EXHIBIT A**  
**CRFQ ADJ1600000020**

ALL LABOR, MATERIALS, EQUIPMENT, AND SUPPLIES NECESSARY TO CONDUCT CRITICAL FAUNA  
SURVEY AND ENDANGERED SPECIES MANAGEMENT PLAN FOR THE INDIANA BAT AND  
NORTHERN LONG-EARED BAT, ON CAMP DAWSON ARMY TRAINING SITE AT KINGWOOD, WV

**BID FORM**

The undersigned, hereafter called the Bidder, being familiar with and understanding the bidding documents; and being familiar with the required qualifications and the mandatory requirements of the Project with regards to the deliverables and associated timelines, hereby proposes to furnish labor, material, equipment, supplies, and transportation to perform the work as described in the bidding documents

BIDDERS COMPANY NAME: Environmental Solutions & Innovations, Inc.

VENDOR ADDRESS: 4525 Este Avenue  
Cincinnati, OH 45232

TELEPHONE: 513-451-1777

FAX NUMBER: 513-451-3321

E-MAIL ADDRESS: dsparks@envsi.com

**CONTRACT TOTAL BID:**

One Hundred Thirty Five Thousand Dollars and Zero Cents

(\$ 135,000.00 ) \*\*\* (Contract bid to be written in words and numbers.)

The contract will be awarded to the Bidder with the lowest contract total bid meeting all of the specifications. Bidder understands that to the extent allowed by the West Virginia Code, the OWNER reserves the right to waive any informality or irregularity in any bid, or bids, and to reject any and all bids in whole or in part; to reject a bid not accompanied by the required bid security or by other data required by the bidding documents; to reject any conditions of the bid by the Bidder that is any way inconsistent with the requirements, terms, and conditions of the bidding documents; or to reject a bid that is in any way incomplete or irregular.

Failure to use this bid form may result in bid disqualification.

SIGNATURE:  DATE: 04-20-2016

NAME: Dale Sparks  
(Please Print)

TITLE: Senior Project Manager



**APPENDIX B  
MANAGEMENT TEAM RESUMES**





# ENVIRONMENTAL SOLUTIONS & INNOVATIONS, INC.

## Résumé

### Virgil Brack, Jr., Ph.D.

#### EDUCATION

Ph.D., Wildlife Ecology, 1983, Purdue University. Dissertation: "The Nonhibernating Ecology of Bats in Indiana with Emphasis on the Endangered Indiana Bat, *Myotis sodalis*."

M.S., Physiological Ecology, 1979, University of Missouri-Columbia. Thesis: "The Duration of the Period of Hibernation in *Eptesicus fuscus*, *Myotis lucifugus*, and *Pipistrellus subflavus* under Natural Conditions."

B.S., Wildlife Sciences, 1975, University of Missouri-Columbia

MBA 1998, Xavier University (Beta Gamma Sigma Honor Society)



#### TRAINING

INDOT/FHWA NEPA and Transportation Decision Making (June 2013)

INDOT/FHWA NEPA Categorical Exclusions (March 2011)

Habitat Conservation Planning for Endangered Species (USFWS 2002)

Advanced and Emerging Techniques for Improving NEPA Assessment (USEPA/Colorado State University, 1995)

The Endangered Species Act (USFWS/CLE International, 1993)

#### PROFESSIONAL CERTIFICATIONS

Certified Wildlife Biologist: The Wildlife Society, 1999

Certified Senior Ecologist: Ecological Society of America, 2007



#### QUALIFICATIONS AND EXPERIENCE

Dr. Brack has been assisting clients meet their environmental compliance requirements for nearly 35 years. He is experienced with many aspects of the natural environment and the regulations that affect them. He completes studies and surveys for bats, small mammals, birds, and a variety of species. In particular, Dr. Brack extensively studies bats and their habitat. His Master's Thesis was on aspects of winter ecology (hibernation) of bats, and his Ph.D. Dissertation was on the ecology and biology of the endangered Indiana bat. He continues to design, direct, and participate in numerous surveys for bats, studies of bat biology, and assessments of summer and winter habitat throughout the mid-western and eastern U.S. For 30 years, Dr. Brack has monitored wintering populations of Indiana bats in Indiana; and has conducted similar winter cave surveys in several other states.

Dr. Brack was a member of the U.S. Fish and Wildlife Service Recovery Team for the federally endangered Indiana bat. He also works extensively with the federally endangered gray and Virginia big-eared bats and the federally threatened northern long-eared bat. In addition, he works with many species of bats considered endangered or of special concern at state or regional levels. He publishes many articles in peer-reviewed scientific journals on threatened and endangered bats, and authored the books "Bats of Ohio" and "Bats of Indiana". He further directed technical development of a "Habitat Suitability Index Model" for components of the summer habitat of the Indiana bat. The habitat model, based on the USFWS Habitat Evaluation Procedures (HEP), is used to provide baseline analysis for many Biological Assessments (BA) and Biological Opinions (BO) completed under the Endangered Species Act (ESA).

Dr. Brack works extensively with the ESA, from completion of field studies through requirements of regulatory compliance, such as informal and formal consultation under Section 7 for production of BAs and under Section 10 for Habitat Conservation Plans (HCP), implementation of conservation and mitigation measures, and formulation and implementation monitoring to

determine both compliance and success of mitigation. For 35 years, Dr. Brack has played a role on hundreds of projects completed under the National Environmental Policy Act (NEPA). He has managed, directed, and participated in large, multidisciplinary Environmental Impact Statements (EIS), smaller Environmental Assessments (EA), and simple Categorical Exclusions (CE). Dr. Brack is also very active assisting numerous clients in the natural gas and electrical power industry meet requirements of NEPA under FERC.

Recent projects of note include:

- Department of Defense, Camp Dawson Collective Training Facility. Principal scientist overseeing summer mist net survey at Army National Guard installation located in north-central West Virginia.
- Department of Defense, Fort Drum. Principal scientist on installation-wide bat survey focusing on Indiana bat capture and radio-telemetry.
- Department of Defense. Principal scientist for production of BA and development of conservation measures for Indiana and gray bats on major DOD facilities. BAs were supported by field research as required.
- Department of Defense. Principal scientist providing EIS support for BRAC actions and closure at Fort McClellan, Alabama and Fort Leonard Wood, Missouri.
- American Electric Power, Wyoming-Jacksons Ferry 765 kV Transmission Project. Completed endangered species studies and multi-species BA (Indiana and Virginia big-eared bats, bald eagle, and four species of plants) for 90-mile transmission line in Virginia and West Virginia. Additionally provided support for EIS.
- Ohio Department of Transportation, Route 33 Nelsonville Bypass. Responsible for field studies, including 3 years of presence/absence summer mist net and habitat suitability surveys for endangered Indiana bats; senior author of multi-species BA and three Biological Evaluations for Forest Sensitive Species where project traversed Wayne National Forest; and contributed to endangered species and ecological resource sections of project EIS.
- Pennsylvania Game Commission. Environmental Setting and Biological Resources portion of Pennsylvania state forest lands HCP and EIS for Indiana and northern bats.
- Natural Gas Developments. Conservation Plan for 69 natural gas developments to Avoid Take and Minimize Impacts to known Indiana bat maternity colony, and potential occurrences of northern long-eared bats in Pennsylvania.
- Indianapolis International Airport. Production of a BA and support of an EIS for the first large-scale mitigation for loss of summer habitat for the Indiana bat.
- Indiana Department of Transportation, I-69 Extension. Completed Tier 1 and 2 multi-species BAs, Tier 2 multi-species (bats, mussels, birds, fish, herps, and plant) field studies and ESA reporting for preconstruction impact assessment, and post-construction conservation monitoring.
- Indiana Department of Natural Resources Division of Forestry. Multispecies HCP and EIS (with emphasis on endangered Indiana bat) on State-owned forest lands.
- Huron-Manistee National Forest. Responsible for multi-species Programmatic BA for the Forest Service Management Plan. Species considered included listed, candidate, and petitioned species: Indiana bat, piping plover and its Critical Habitat, cerulean warbler, Massasauga rattlesnake, Karner blue butterfly, American burying beetle, Hungerford's water beetle, and three species of plants.



# ENVIRONMENTAL SOLUTIONS & INNOVATIONS, INC.

## Résumé

### Dale W. Sparks, Ph.D.

#### EDUCATION

Ph.D., Biology, Indiana State University, 2003. Dissertation: "How does urbanization impact bats?"

M.S., Biology, Fort Hays State University, 1996. Thesis: "Distribution, Natural History, Conservation Status, and Biogeography of Bats in Kansas"

B.S., Biology, Murray State University, 1993.

#### PROFESSIONAL CERTIFICATIONS

Certified Wildlife Biologist: The Wildlife Society, 2012

Certified Senior Ecologist: Ecological Society of America, 2012

Qualified Indiana Bat Surveyor: Commonwealth of Pennsylvania

ODOT Ecological Training, 2013



#### QUALIFICATIONS AND EXPERIENCE

Dr. Sparks is a wildlife biologist involved in a variety of terrestrial ecology research positions involving herpetology, ornithology, and mammalogy and has extensively studied bats and their habitat. Many of Dr. Sparks' projects concern federally endangered Indiana bats (*Myotis sodalis*) and federally threatened northern long-eared bats (*M. septentrionalis*). He is experienced in many ecological field techniques, including: species identification, habitat assessment, trapping, netting, radio-telemetry and tracking, guano analysis, and GPS/GIS, mapping and orientation. Dr. Sparks has extensive experience conducting acoustic sampling including assisting in the collection of reference calls, site selection, and identification of recorded calls.

Dr. Sparks directed long-term studies in support of a Biological Assessment (Sec. 7 of the ESA) and a Habitat Conservation Plan (Sec. 10) associated with developments at the Indianapolis International Airport and the near-by Six-Points highway project, respectively. Studies included mist-net, acoustic monitoring, population estimates using both emergence counts and DNA-based approaches, and radiotelemetry studies, requiring coordination with state, federal, and local agencies. These combined projects were the first large-scale mitigation for loss of summer habitat for the Indiana bat and they have produced some of the most definitive research on the interaction of bats with human developments, with many resulting publications that bear the name of Dr. Sparks.

Dr. Sparks is an experienced public speaker, having taught university-level courses, presented educational lectures to the public, and presented technical papers to professional organizations. Dr. Sparks serves as a technical advisor to U.S. Fish and Wildlife Service (USFWS) for summer habitat conservation and population characteristics of the endangered Indiana bat, and was recently added to a USFWS group working to develop forest management practices for the northern long-eared bat. He is also a member of the Indiana Department of Natural Resources Mammal Technical Advisory Committee and chairs the Legislation and Regulations Committee of the American Society of Mammalogists. Dr. Sparks has authored and co-authored numerous papers, poster and oral presentations, and book chapters. He is also the author of "Bats of Kansas".

Recent projects of note include:

- 2015-Present – EQT, Equitrans Expansion Project. Directed rare, threatened, and endangered species studies along portions of proposed natural gas pipeline traversing Allegheny, Washington, and Greene counties, Pennsylvania and Wetzel County, West Virginia. Efforts included assisting the prime environmental contractor in completing agency correspondence to identify and address natural resource issues. These issues included: surveys for federally protected bats during summer (netting and telemetry) and winter (assessment and trapping of mine portals), surveys for freshwater mussels, and studies of rare plants along the line. Also assisted client in responding to information requests from agencies including FERC. Responsible for all aspects of project management and reporting.
- 2015-Present – Lake States Forest Management Habitat Conservation Plan (HCP) for Bats. Lead Technical Scientist for an HCP designed to allow forest management in the presence of four bat species impacted by White Nose Syndrome (Indiana, northern long-eared, little brown, and tri-colored bats). Responsible for developing landscape-level models of bats and how these species are impacted by forest management practices in the states of Minnesota, Wisconsin, and Michigan.
- 2015-Present – Environmental Impact Statement for the Midwest Wind Energy HCP. Evaluated impacts of developing more than 51,000 Mega Watts of wind energy across an eight-state region. Evaluated potential impacts to three species of bats covered by the HCP, as well as all other bats in the region. This evaluation included development of models to estimate mortality of bats that were used to compare four alternatives. Further managed biologists responsible for completing similar analyses for aquatic macroinvertebrates and surface waters.
- 2015 – Endangered Species Compliance Efforts for Multiple Indiana and Michigan Power Company Projects. Worked closely with I&M's environmental coordinator and the USFWS to avoid take of listed bats for multiple projects in both Indiana and Michigan. Compliance measures ranged from identifying means to avoid impacts to suitable habitat to permitting removal of suitable habitat within areas of known occurrence of the federally threatened northern long-eared bat within weeks of the species listing. Produced multiple reports and coordinated repeated changes in study design across three USFWS offices. Responsible for all aspects of project management and reporting.
- 2013-Present – Pennsylvania Game Commission. Lead Technical Scientist for the Pennsylvania state forest lands HCP and NEPA documentation for Indiana and northern long-eared bats.
- 2012-Present – American Electric Power, Wyoming-Jackson's Ferry 765 kV Transmission Line. Directed monitoring effort associated with upland ponds and artificial roosts as required under a Biological Opinion issued by USFWS. Conducted mist netting, acoustic surveys, and quantitative (using programs) and qualitative (visual) analysis of bat calls collected during the project.
- 2010-Present – Indiana Department of Transportation, Interstate 69 Pre- and Post-construction Surveys. Conducted long-term monitoring of bat responses to highway development as well as additional studies aimed at pre-construction compliance efforts. Completed summer mist net surveys for federally endangered Indiana bat along final ROW for Sections 1, 2, 3, 5, and 6, and tracked multiple bats to roosts. Conducted quantitative (using programs) and qualitative (visual) analysis of bat calls collected during the project.



## ENVIRONMENTAL SOLUTIONS & INNOVATIONS, INC.

### Résumé

### Daniel J. Judy

#### EDUCATION

M.S., Ecology and Organismal Biology, Indiana State University, 2007

Thesis: *Seasonal Changes in Thermal Conductance of Bat Pelage with Emphasis on the Eastern Red Bat (*Lasiurus borealis*)*

B.S., Biology, University of Charleston, 2005

#### CERTIFICATIONS AND TRAINING

Gopher Tortoise Authorized Agent (Florida)

Qualified Indiana Bat Surveyor (Pennsylvania)

MSHA 24-hour Surface Mining Certification

OSHA 10-Hour Hazard Recognition Training for General Industry

Loss Prevention System Training

Open Water SCUBA Certified

Emergency First Responder Certification

NASBLA Boating Safety Certification

#### QUALIFICATIONS AND EXPERIENCE

Mr. Judy is a trained wildlife biologist and provides ecological and environmental consulting services, frequently as project manager, for endangered species surveys, environmental assessments, permitting, wetland delineations, and hydrological/water quality monitoring. He is experienced with bat survey techniques and exclusions, mammal and reptile trapping, avian banding and identification, habitat and stream mapping, biological stream monitoring, and mammal and fish identifications. His specialty is in bat ecology and he is proficient with mist netting, radio telemetry, habitat surveys, harp trapping, and acoustic monitoring and analysis. Mr. Judy is also an experienced public speaker having taught in both elementary and college settings and presented numerous papers to professional scientific organizations. He authors technical reports and has published peer-reviewed journal articles.

Recent projects of note include:

- 2014-Ongoing – MVP, Mountain Valley Pipeline. Managing project involving surveys for multiple terrestrial and aquatic species along a 300-mile long natural gas pipeline in Braxton, Doddridge, Fayette, Greenbrier, Harrison, Lewis, Monroe, Nicholas, Summers, Upshur, Webster, and Wetzel counties, West Virginia and Franklin, Giles, Montgomery, Pittsylvania, and Roanoke counties, Virginia.
- 2015 – Confidential Client, Natural Gas Pipeline. Completed assessment of 3 portals / caves along portion of 26-mile natural gas pipeline in Polk County, North Carolina. Study was completed to determine potential suitability of features for use by bats, specifically federally listed Indiana, gray, and northern long-eared bats.
- 2015 – Vulcan Materials Company, East Naples Mine. Completed acoustic sampling for federally endangered Florida bonneted bat at 31 sites for total of 177 detector night within approximately 345-acre area proposed for mining in Collier County, Florida. Over 5,000 calls were recorded and subsequently analyzed.

- 2015 –Vulcan Materials Company, Ft. Myers Mine 2 Quarry. Managed acoustic survey for federally endangered Florida bonneted bat on ±2,317-acre area in Lee County, Florida.
- 2014 – Transource Missouri, Sibley to Nebraska City 345kV-Transmission Line. Completed endangered bat mist net surveys along 132-mile long transmission line crossing eight counties in Missouri.
- 2014 – Tuscarora Lateral Pipeline. Prepared biological assessment to evaluate effects of project on northern long-eared bat in New York.
- 2013 – Patrick Air Force Base. Completed habitat assessments and acoustic surveys on approximate 630-acre test annex site in Florida.
- 2013 – Confidential Client, Natural Gas Pipelines. Completed habitat assessments and mist net surveys on 44 sites associated with pipelines and well connects in Ohio and West Virginia.
- 2011 – Confidential Client, Coal Mine Expansions. Completed habitat assessments and mist net surveys on five project areas associated with coal mine expansions in Ohio and West Virginia.
- 2011 – Confidential Client, Harbor Construction. Completed habitat assessments and mist net surveys on project area associated with harbor construction in West Virginia.
- 2010 – Equitrans, Sunrise Pipeline. Completed Indiana bat summer mist net survey in Greene County, Pennsylvania and Doddridge, Marion, Harrison, Taylor, and Wetzel counties, West Virginia. Responsible for mist net site set up and habitat assessment, bat identification, morphometric processing, and implementation of White Nose Syndrome protocols.
- 2010 – Wells Prairie Wind. Completed summer mist netting and associated acoustic studies for endangered bats on 61,256-acre, 300-megawatt wind energy generation facility in Wells, Adams, Blackford, and Jay counties, Indiana. Responsible for mist net site set up and habitat assessment, bat identification, morphometric processing, and implementation of White Nose Syndrome protocols.
- 2009 and 2010 – Department of Defense, Fort Drum Army Installation. Completed Indiana bat habitat and mist net surveys in Jefferson and Lewis counties, New York. Responsible for mist net site set up and habitat assessment, bat identification, morphometric processing, and implementation of White Nose Syndrome protocols.
- 2009 – Tennessee Gas Pipeline Company, 300 Line. Completed Indiana bat habitat and mist net surveys in Potter, Tioga, Bradford, Susquehanna, Wayne, Pike, Venango, and McKean counties, Pennsylvania. Responsible for mist net site set up and habitat assessment, bat identification, morphometric processing, and implementation of White Nose Syndrome protocols.
- 2008 – Allegheny Power TrAILCo. Led field team to conduct endangered bat survey for 500kV transmission line project in Pennsylvania, West Virginia, and Virginia. Responsibilities included mist net site reconnaissance and data management. Completed associated reporting and data compilation.
- 2007 – Indianapolis International Airport. Assisted with Indiana bat demographic project completed by Indiana State University. Performed mist netting, bat capture, and radio-transmitter attachment assistance. Also completed emergence counts on the federally endangered Indiana bat. Assisted with team coordination and supervising telemetry crews. Completed associated reporting and data compilation.



## ENVIRONMENTAL SOLUTIONS & INNOVATIONS, INC.

### Résumé

### Lynn W. Robbins, Ph.D.

#### EDUCATION

Ph.D., Biology, Texas Tech University, 1983. Dissertation: "Evolutionary Relationships in the Family Emballonuridae (*Chiroptera*)"

M.S., Biology, Fort Hays State University, 1978. Thesis: "Nongeographic and Interspecific Variation in Four Species of *Hylomyscus* (*Rodentia: Muridae*) in Southern Cameroon"

B.S., Zoology, Long Beach State University, 1967.

#### QUALIFICATIONS AND EXPERIENCE

Dr. Robbins is a wildlife biologist involved in a variety of terrestrial ecology research positions and has extensively studied bats and their habitat. Many of Dr. Robbins' projects concern federally endangered Indiana bats (*Myotis sodalis*) and the federally threatened northern long-eared bat (*M. septentrionalis*). He is experienced in many ecological field techniques, including: species identification, habitat assessment, trapping, netting, radio-telemetry and tracking, guano analysis, and GPS/GIS, mapping and orientation. Dr. Robbins is an expert in acoustic sampling analysis and has hosted Robbins Invitational Workshop that includes topics on recognition of false-positives during presence/probable absence surveys, comparison of error rates and types among three candidate software packages, addressing problem identifications, simultaneous comparison of multiple acoustic monitoring instruments, and ethical considerations of biological consulting.

Dr. Robbins is an experienced public speaker, having taught university-level courses, presented educational lectures to the public, and presented technical papers to professional organizations. He also authored and co-authored numerous papers and presentations.

Recent projects of note include:

- 2015-2017 – U.S. Fish and Wildlife Service, Ozark Plateau National Wildlife Refuge. Supervised mist net and harp trap surveys of three portal entrances as an ongoing two-year study during fall swarming and spring emergence periods for Ozark big-eared, northern long-eared, and gray bats.
- 2015 – Nebraska National Guard. Completed quantitative and qualitative acoustic analysis of data from multiple sites to determine presence/probable absence of northern long-eared bat.
- 2015 – U.S. Army Corp of Engineers, Fort Leonard Wood Machine Gun Range. Completed habitat surveys for Indiana and northern long-eared bats to determine potential affects from tree and brush clearing within 172-acre former Machine Gun Range Munitions Response Site at Fort Leonard Wood, Missouri.
- 2015 – Atlantic Cost Pipeline. Conducted qualitative review of potential Indiana and northern long-eared bat calls at numerous sites in North Carolina and Virginia.
- 2015 – Clean Line, Plains & Eastern Transmission Line. Provided consultation to identify mitigation options for Indiana and northern long-eared bats for proposed 720-mile, 600 kV transmission line extending across Oklahoma, Arkansas, and portion of western Tennessee.



- 2015 – Kinder Morgan, Pad L & Pad G Pipelines. Completed acoustic surveys to determine presence/absence of federally threatened northern long-eared bat within project area of two proposed pipelines in Pittsburg County, Oklahoma. To meet client's timeline constraints, all data were processed, analyzed (both qualitatively and quantitatively), and submitted to client within hours of completion of fieldwork.
- 2015 – Kansas Department of Transportation (KDOT), Five Projects. Assisted KDOT in understanding regulatory requirements under the Endangered Species Act as it related to northern long-eared bat, newly-listed as a threatened species. Supervised rapid collection and analysis of acoustic data in five different counties within 7-day period to ensure survey completion within USFWS-mandated survey window.
- 2015 – Arkansas Highway Transportation Department, Bridge Replacements along Highway 7. Supervised and conducted summer mist net and acoustic surveys for federally endangered Indiana, federally endangered gray, and federally threatened northern long-eared bats at two bridge sites in Perry County. Captured three northern long-eared bats and tracked one to roosting area. Coordinated with client and multiple other state and federal agencies including Arkansas Game and Fish Commission, U.S. Fish and Wildlife Service, and U.S. Forest Service.
- 2015 – Confidential Client, Kansas Expressway Expansion. Assisted client in understanding regulatory requirements under the Endangered Species Act relative to highway expansion project. Supervised collection and analysis of acoustic data at sites near Springfield, Missouri.
- 2015 – Virginia Department of Transportation & Parks Acoustic Surveys. Completed acoustic surveys and analysis for federally and state listed bats on various VDOT transportation improvement projects.
- 2015 – Kansas Department of Health and Environment (KDHE). Assisted with regulatory compliance under Section 7 of the Endangered Species Act related to gray and northern long-eared bats. Collected and analyzed acoustic data at sites in southeast Kansas.
- 2015 – NYCO Minerals, Seventy Road Mine Expansion. Completed acoustic surveys and analysis for federally and state listed bats at proposed expansion of mining facility in Essex County, New York. Concluded some calls were consistent with federally endangered Indiana bat and federally threatened northern long-eared bat, as well as New York Species of Concern small footed bat.
- 2015 – Rice Energy, Odin Pipeline. Contributed to Biological Assessment (BA) for Indiana and northern long-eared bats within 109.5-acre project area for proposed 7.5-mile dual natural gas pipeline system in Monroe County, Ohio. BA was completed within a short timeframe to accommodate the project's tight schedule and need to obtain permission for tree removal before winter clearing.
- 2010 – Missouri National Guard. Completed acoustic monitoring and mist-net survey for endangered bats at Wappapello Training Site in Benton County, Missouri.
- 2010 – Missouri National Guard. Completed acoustic monitoring and mist-net surveys for endangered bats at Macon Training Site in Macon County, Missouri.
- 2006 – Missouri National Guard. Completed acoustic surveys for bats with emphasis on endangered bats at Camp Crowder and Camp Clark in Newton and Vernon counties, Missouri.
- 2002-2003 – DOD through Kansas Biological Survey. Completed bat survey with emphasis on rare and endangered species at Fort Leavenworth in Kansas.

**APPENDIX C  
ABSTRACTS**



## STUDIES FOR LISTED BATS ON THE PROPOSED ATLANTIC COAST PIPELINE PROJECT IN VIRGINIA AND NORTH CAROLINA

<b>Owner:</b>	Atlantic Coast Pipeline, LLC
<b>Client:</b>	Natural Resource Group, LLC
<b>Project Location:</b>	Virginia and North Carolina
<b>Period of Performance:</b>	2015
<b>Contract Effort:</b>	Habitat Assessments, Acoustic and Mist Net Surveys
<b>Reference(s):</b>	Ms. Sara Thronson 80 South 8 <sup>th</sup> Street Minneapolis, MN 55402 (651) 225-4554

Atlantic Coast Pipeline, LLC proposes to develop a 558.4-mile interstate natural gas transmission pipeline system designed to bring natural gas produced in West Virginia to market in Virginia and North Carolina. ESI was retained to conduct multi-taxa field studies for the project requiring both extensive and intensive coordination with the U.S. Fish and Wildlife Service, U.S. Forest Service, state agencies, and the client.

Studies included surveys for rare, threatened, and endangered bats, predominantly via acoustic monitoring, aimed at detecting the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*) along portions of the project in North Carolina and Virginia. ESI completed surveys over nine weeks at nearly 300 sites covering approximately 190 miles of project corridor. Calls recorded were visually vetted in-house and the results submitted to the client in real-time, generally within 48 hours. GIS shapefiles and site habitat information were also provided to the client for report preparation.

ESI was further retained to conduct studies for Rafinesque's big-eared (*Corynorhinus rafinesquii macrotis*) and the southeastern myotis (*Myotis austroriparius*) bats. Rafinesque's big-eared bats are listed as endangered in Virginia, and both species are considered species of concern in North Carolina. Studies were divided into three components: 1) desktop analysis of habitat, 2) field verification of habitat, and 3) exploratory mist-net surveys at four sites.

Although no Rafinesque's big-eared bats were captured during the netting survey, 30 to 40 Rafinesque's big-eared bats were observed roosting under a highway bridge (pictured at left) within the survey corridor in Southampton County, Virginia. The bridge was positioned within a patch of habitat rated highly suitable during both the desktop and field assessment.



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## LISTED BAT STUDIES ALONG MVP'S PROPOSED MOUNTAIN VALLEY PIPELINE IN VIRGINIA AND WEST VIRGINIA




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<b>Owner:</b>	EQT Midstream, LLC, a subsidiary of NextEra Energy, Inc., WGL Holdings, Inc., Vega Energy Partners, Ltd., and RGC Midstream, LLC.
<b>Client:</b>	Tetra Tech
<b>Project Location:</b>	Virginia and West Virginia
<b>Period of Performance:</b>	2015 - Ongoing
<b>Contract Effort:</b>	Listed Bat Studies
<b>Reference(s):</b>	Mr. Sean Sparks 160 Federal Street, 3rd Floor Boston, MA 02110 (617) 443-7565

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The Mountain Valley Pipeline (MVP) is an approximately 301-mile, 42-inch diameter interstate natural gas pipeline originating in Wetzel County, West Virginia and extending to Pittsylvania County, Virginia. The proposed route is within the known range and crosses multiple capture, roost, and hibernacula buffers of the northern long-eared and Indiana bat. As a result, ESI was contracted to conduct the following studies to determine impacts to listed bats.

**Detailed Habitat Assessment:** Combined desktop analysis and detailed field habitat assessments were completed to identify and document potential roost trees. These data were collected to provide information and assist in the decision-making process regarding pipeline design and routing in an effort to avoid and minimize impacts to areas of potential Indiana and northern long-eared bat habitat. ESI biologists identified 10,978 potential roost trees within the project area of interest.

**Summer Mist Net Surveys:** ESI, in collaboration with the client, developed a cost-effective study plan to satisfy regulatory requirements and maintain compliance with the Endangered Species Act. Mist netting was completed at 372 sites totaling 2169 complete net nights. Netting yielded 1485 bats of 9 species, including 74 northern long-eared bats. Fifty-six northern long-eared bats were radio tagged and 43 were tracked to 68 roosts. Two hundred sixty-seven bats were observed emerging from the roosts.

**Spring / Fall Hibernacula Surveys:** Following desktop analysis and field pedestrian searches, 36 portals were identified as potential hibernacula for Indiana and northern long-eared bats. Fifteen were characterized as suitable based on USFWS guidance and five were sampled via harp trapping. A single adult male northern long-eared bat was captured at one portal. The remaining suitable portals are scheduled for sampling in spring 2016.

**Biological Assessment (BA) / Biological Evaluation (BE):** In preparation of the BA, ESI developed a complex model to estimate Take based on harm and harassment to federally listed terrestrial and aquatic species potentially present along the entire line. The model incorporated detailed sedimentation modeling at all streams crossed by project that potentially harbored federally listed aquatic species. In addition, ESI prepared a BE for the portion of the pipeline crossing Jefferson National Forest lands.

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## FIELD SURVEYS ON CAMP DAWSON COLLECTIVE TRAINING FACILITY

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<b>Client / Owner:</b>	State of West Virginia Army National Guard
<b>Project Location:</b>	Preston County, West Virginia
<b>Period of Performance:</b>	2002, 2006
<b>Contract Effort:</b>	Critical Fauna Surveys
<b>Reference(s):</b>	Mr. Ladd Williams Camp Dawson Environmental Office 240 Army Road, Building 414 Kingwood, WV 26537 (304) 791-4135

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In 2002, ESI completed surveys for the federally endangered Indiana bat and federally threatened flat-spined three-toothed land snail. Based on exemplary performance on the project, ESI was retained to complete a second round of surveys for Indiana bats in 2006.

The 2002 Indiana bat mist net surveys were completed following the U.S. Fish and Wildlife Service Recovery Team netting guidelines. Sites were netted based upon a sampling design developed for the Camp and selected via a combination of two criteria, areal extent and streams that may provide suitable corridors for sampling. Though slight variations in net position occurred, in 2006, the same sites were netted to collect data associated with capture comparability and species diversity between the two studies.

The 2002 and 2006 surveys yielded 6 of 13 and 8 of 13 species, respectively, known from West Virginia. Three eastern small-footed bats, including one reproductive female, were captured during both survey events representing the only species designated "rare" in West Virginia. The remaining species captured are designated as "common" or "uncommon." Netting efforts provided no evidence that endangered Indiana bats use these areas during summer months.

The 2002 survey for the flat-spined three-toothed land snail was initiated by reviewing USGS topographic maps of the project area to identify areas exhibiting steep slopes and potential for large sandstone outcrops to occur. These features typically occur in canyon "rim" areas and places where tributary valleys enter the canyon. A preliminary field survey was completed on the facility to identify suitable habitat areas and the areas identified were revisited during peak snail activity, in May and June. Rock surfaces and crevices were located and the top layer of leaf litter was brushed away to reveal any snails present. Snails found were processed and data recorded included: snail diameter and height measurements, behavior, distance to rock, slope, aspect, GPS coordinates, and site characteristics such as overstory and understory vegetation. Live snails were left unharmed in the field; empty shells were collected. When possible, field surveys were completed after a rain event when the ground was wet and humidity high.

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**APPENDIX D  
CERTIFICATION AND SIGNATURE PAGE, ADDENDUM ACKNOWLEDGEMENT  
FORM, VENDOR PREFERENCE CERTIFICATE, AND PURCHASING AFFIDAVIT.**



**CERTIFICATION AND SIGNATURE PAGE**

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Environmental Solutions & Innovations, Inc.

(Company)



Dale Sparks, Sr. Project Manager

(Authorized Signature) (Representative Name, Title)

P: 513-451-1777, F: 513-451-3321, 04-20-2016

(Phone Number) (Fax Number) (Date)

ADDENDUM ACKNOWLEDGEMENT FORM  
SOLICITATION NO.: CRF-Q ADJ1600000020

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.


Addendum Numbers Received:  
(Check the box next to each addendum received)

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2            | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3            | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4            | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5            | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Environmental Solutions & Innovations, Inc.

Company

  
\_\_\_\_\_  
Authorized Signature

04-20-2016

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.



State of West Virginia  
**VENDOR PREFERENCE CERTIFICATE**

Certification and application\* is hereby made for Preference in accordance with *West Virginia Code*, §5A-3-37. (Does not apply to construction contracts). *West Virginia Code*, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the *West Virginia Code*. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

**1. Application is made for 2.5% vendor preference for the reason checked:**

\_\_\_\_\_ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

\_\_\_\_\_ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

\_\_\_\_\_ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**

**2. Application is made for 2.5% vendor preference for the reason checked:**

\_\_\_\_\_ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

**3. Application is made for 2.5% vendor preference for the reason checked:**

\_\_\_\_\_ Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

**4. Application is made for 5% vendor preference for the reason checked:**

\_\_\_\_\_ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**

**5. Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

\_\_\_\_\_ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**

**6. Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

\_\_\_\_\_ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

**7. Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code* §5A-3-59 and *West Virginia Code of State Rules*.**

\_\_\_\_\_ Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

**Under penalty of law for false swearing (*West Virginia Code*, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.**

Bidder: Environmental Solutions & Innovations, Inc. Signed: Dale Sparks

Date: 04-20-2016 Title: Sr. Project Manager

Environmental Solutions & Innovations, Inc. is not applying for Preference.

STATE OF WEST VIRGINIA  
Purchasing Division

# PURCHASING AFFIDAVIT

**MANDATE:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

**"Debt"** means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: Environmental Solutions & Innovations, Inc.

Authorized Signature:  Date: 04-20-2016

State of Kentucky

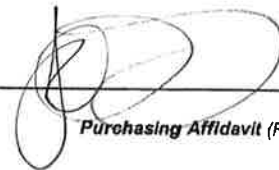
County of Statewide, to-wit:

Taken, subscribed, and sworn to before me this 20 day of April, 2016.

My Commission expires 09-September, 2017.

**AFFIX SEAL HERE**

**NOTARY PUBLIC**



*Purchasing Affidavit (Revised 07/01/2012)*

