WestVirginiaUniversity
Office of Sponsored Programs

August 30, 2010

Department of Administration
Purchasing Division
Building 15
2019 Washington Street, East
Charleston, WV 25305-0130

RE: "Ecology of Black Bears in Suburban/Urban Environments"

Dear Reader:

Transmitted herewith and recommended for your consideration are the appropriate number of copies of the referenced application as prepared by John Edwards, PhD, of the Davis College of Agriculture, Natural Resources and Design.

Questions of a programmatic nature should be directed to Dr. John Edwards while administrative or financial matters should be addressed to Kristen McKain in our Office of Sponsored Programs at (304) 293-3998 or e-mail ***Kristen.McKain@mail.wvu.edu***

Cordially,

Janet Boyles
Manager Sponsored Programs
Pre-Award

JB/lw
Enclosure

cc: Dr. John Edwards (w/enclosure)
File #11-117

Phone: 304-293-7398 or
304-293-3998
Fax: 304-293-7435

Office of the Director
PO Box 6845
Morgantown, WV 26506-6845

CONTACT INFORMATION

Requesting Agency

Request for Bid Quotes: 2011 – 2013 Ph.D. Student in Wildlife Management
West Virginia Division of Natural Resources
Wildlife Resources Section

Signed bid submitted to:

Department of Administration
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Building 15
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The bid should contain this information on the face of the envelope or the bid may not be considered:

Sealed Bid
Buyer: 44
RFQ No.: DNR211002
Bid Opening Date: 8/31/2010
Bid Opening Time: 1:30 PM

Vendor

West Virginia University
886 Chestnut Ridge Road
Morgantown, WV 26506
Assistant VP for Research Administration for WVU
Phone: 304-293-3998
Email: alan.martin@mail.wvu.edu

Primary Investigator:
John Edwards, Division of Forestry and Natural Resources, West Virginia University, Morgantown, WV 26506. Phone: 304.293.3796. Fax 304.293.2441.
Email: jedwards@wvu.edu

Co-investigator:
Michael P. Strager, Division of Resource Management, West Virginia University, Morgantown, WV 26506

INVESTIGATOR QUALIFICATIONS

1. Summaries and references of published studies of black bears in eastern United States – J. W. Edwards will be the major advisor of the Ph.D. student

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Abstract: American black bear (Ursus americanus) hunting has come under close scrutiny over the past decade. As black bear populations have increased and expanded, wildlife agencies have been faced with new challenges on how to set population and harvest goals. Wildlife agencies have altered proposed regulations or have had seasons entirely stopped because of public opposition, necessitating a proactive approach to wildlife management based on a scientific understanding of public opinion rather than reactive decision-making in response to public resistance. In November–December 2006, we conducted a telephone survey of 1,206 West Virginia residents to determine their opinions and attitudes toward black bear populations and hunting seasons and to help strengthen the state's black bear management strategies. Although the majority of West Virginians, nearly 3 of 4 respondents in this study, indicated they know at least something about black bears in West Virginia, there were significant regional differences in the public's assessment of their knowledge of the species. Although most respondents thought the black bear population size was "about right," again, there were regional differences among respondents. In general, most respondents supported black bear hunting if the population was carefully monitored, if they knew the population was stable, or both; however, a number of regional and sociodemographic characteristics appeared to influence public opinion on black bear hunting and hunting seasons in the state, and support for specific seasons varied considerably according to hunting method. Interestingly, our study found that even among hunters, public opposition exceeded support for the current, year-round training season of black bear hunting dogs without harvesting animals in the state. Although it is important for wildlife managers to consider human dimensions and public opinion data in conjunction with biological data when making management decisions, we demonstrate that it also is important for managers to consider regional and sociodemographic differences with respect to attitudes and opinions when making management decisions and population objectives.

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Dr. Michael P. Strager is an Assistant Professor of Spatial Analysis in the Division of Resource Management and Adjunct Assistant Professor in the Division of Forestry and Natural Resources at West Virginia University. His main responsibility in these positions is to enhance the teaching and research abilities of the Davis College of Agriculture, Natural Resources and Design by integrating geospatial technologies into the curriculum for students and to collaborate with faculty that have spatial data project needs. He teaches classes in all of the geospatial technologies including courses titled "Remote Sensing of the Environment", "Advanced Spatial Analysis", "GPS Use and

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3. Summaries and references from at least 2 prior studies evaluating home range, movements, or habitat-related analysis of a wide-ranging wildlife species in eastern United States deciduous forest habitats – J. W. Edwards will be the major advisor of the Ph.D. student

Published Papers

Whitaker, D. M., D. F. Stauffer, G. W. Norman, P. K. Devers, J. Edwards, W. M. Giuliano, C. Harper, W. Igo, J. Sole, H. Spiker, and B. Tefft. 2007. Factors associated with variation in home-range size of Appalachian Ruffed Grouse (*Bonasa umbellus*). The Auk 124: 1407–1424.

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Edwards, J. W., D. G. Heckel, and D. C. Guynn, Jr. 1998. Niche overlap in sympatric populations of fox and gray squirrels. Journal of Wildlife Management 62:354-363.

Abstract.—Resource overlap between fox squirrels (Sciurus niger) and gray squirrels (S. carolinensis) has been reported, but quantitative measures of niche overlap in sympatric populations are unavailable. We examined niche breadth and niche overlap in habitat and nest characteristics among sympatric fox and gray squirrels in central Georgia during 1989-90. We used radiocollared squirrels to locate nests and record locations within forested stands. We classified habitat and nest characteristics into 12 niche dimensions: 2 nest and 10 habitat. On several dimensions, fox squirrels occupied narrower niches relative to gray squirrels. Gray squirrels nested in a greater variety of tree species and selected stands with broader ranges in midstory pine (Pinus spp.) stems per hectare and overstory species. Intraspecific niche overlap between species was greater ($P < 0.05$) than interspecific overlap on 9 of 12 dimensions. Intraspecific and interspecific niche overlap did not differ ($P > 0.05$) on overstory hardwood stems per hectare, overstory pine per hectare, and midstory tree species. These findings suggest that coexistence between fox and gray squirrels was maintained, in part, through niche partitioning on several dimensions.

Student Dissertations and Thesis under my direction

Ryan C.W. 2009. Population ecology, residents' attitudes, hunter success, economic impact, modeling management options and retention time of Telazol of West Virginia black bears. Ph.D. Dissertation

Owen, S.F. 2003. Ecology and management of raccoons within an intensively managed forest in the central Appalachians. Ph.D. Dissertation

Menzel, M. A. 2003. An examination of factors influencing the spatial distribution of foraging bats in pine stands in the southeastern United States. Ph.D. Dissertation

Crimmins, S.M. 2008. Ecology of a central Appalachian white-tailed deer herd at low density. M.S. Thesis

Johnson, J.B. 2002. Spatial and predictive foraging models for gray bats in northwest Georgia and a comparison of two acoustical bat survey techniques. M.S. Thesis

PROJECT DESIGN AND TIMELINE

The project design and timeline are acceptable to the vendor.

SPECIFIC REQUIREMENTS

The travel to meetings, committee member and co-author requirements are acceptable to the vendor.

REPORTING REQUIREMENTS

The reporting requirements are acceptable to the vendor.

BID REQUIREMENTS AND PAYMENT

Project Dates: January 2011 – October 1, 2013

Item		**Direct Cost**
2011	***January – December***	
Ph.D. Tuition (Cost is waived for students on assistantship)	Resident = $6670 Non-resident =$18,376	0
Ph.D. Stipend	$1500 per month / $18,000 annual	18,000
Fringe 6.6%	$99 per month / $1188 annual	1188
Travel to Mid-App Meeting		150
PI salary 0.5 month		4261
Fringe 25%		1065

GIS faculty salary 0.5 month		3812
Fringe 25%		953
Travel for student to scientific meeting		1000
Miscellaneous supplies		500
Subtotal		**30,929**
2012	***January – December***	
Ph.D. Tuition (Cost is waived for students on assistantship)	Resident = $6670 Non-resident =$18,376	0
Ph.D. Stipend	$1500 per month / $18,000 annual	18,000
Fringe 6.6%	$99 per month / $1188 annual	1188
Travel to Mid-App Meeting		150
PI salary 0.5 month		4261
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Travel for student to scientific meeting		1000
Miscellaneous supplies		500
Subtotal		
2013	***January – October***	**30,929**
Ph.D. Tuition (Cost is waived for students on assistantship)	Resident = $6670 Non-resident =$18,376	0
Ph.D. Stipend	$1500 per month / $18,000 annual	13,500
Fringe 6.6%	$99 per month / $1188 annual	891
Travel to Mid-App Meeting		150
PI salary 0.5 month		4261
Fringe 25%		1065
GIS faculty salary 0.5 month		3812
Fringe 25%		953
Travel for student to scientific meeting		1000
Miscellaneous supplies		500
Subtotal		**26,132**
TOTAL		**87,990**
26% overhead	$22,877	0
GRAND TOTAL		**$87,990**

ANNUAL TUITION AND STIPEND AND BID SCENERIO COMBINED TOTAL:$30,929

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Primary Investigator:
John Edwards, Division of Forestry and Natural Resources, West Virginia University, Morgantown, WV 26506. Phone: 304.293.3796. Fax 304.293.2441.
Email: jedwards@wvu.edu

Co-investigator:
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Abstract.—Ruffed grouse (Bonasa umbellus; hereafter, grouse) populations in the central and southern Appalachians are experiencing declines, which may be linked to deteriorating recruitment. Because nest success is an important component of recruitment, understanding the influence of habitat on nest success is important for developing regional grouse management strategies. Therefore, our objectives were to determine grouse nest success rates, characterize nest site selection, and identify habitat characteristics associated with successful nests in this region. From 1995 to 2002, we located 234 nests, of which 147 (63%) were successful (_1 egg hatched). We characterized habitat at 167 of these nests and compared successful and unsuccessful nests using logistic regression and Akaike's Information Criterion (AIC). Similarly, we characterized nest site selection by pairing 73 nests with 1–8 nearby systematic sites and conducting a matched-pairs logistic regression followed by AIC. Eleven of 25 candidate models of nest success were supported; distance to a road or opening, ground cover, deciduous canopy cover, coarse woody debris, and basal area were increasingly important predictors of nest success. Increases in basal area, coarse woody debris, and deciduous canopy cover improved the odds of nest success. Alternatively, greater amounts of ground cover and increased distance to a road or opening decreased the odds of a nest being successful. The two supported models of habitat selection were basal area with coarse woody debris and basal area alone. Odds of a habitat being selected increased with both variables. Selection of these habitat elements likely reflects the tendency for females to nest at the base of large trees, stumps, or logs, which can reduce their exposure to predators and seems to improve nest success. Increased ground cover may reduce the female's ability to detect a predator and increase the susceptibility of a nest. We recommend managers ensure coarse woody debris is available for nest sites, particularly when logging operations (e.g., clearcuts, thinnings) remove a high proportion of the standing basal area.

Edwards, J. W., D. G. Heckel, and D. C. Guynn, Jr. 1998. Niche overlap in sympatric populations of fox and gray squirrels. Journal of Wildlife Management 62:354-363.

Abstract.—Resource overlap between fox squirrels (Sciurus niger) and gray squirrels (S. carolinensis) has been reported, but quantitative measures of niche overlap in sympatric populations are unavailable. We examined niche breadth and niche overlap in habitat and nest characteristics among sympatric fox and gray squirrels in central Georgia during 1989-90. We used radiocollared squirrels to locate nests and record locations within forested stands. We classified habitat and nest characteristics into 12 niche dimensions: 2 nest and 10 habitat. On several dimensions, fox squirrels occupied narrower niches relative to gray squirrels. Gray squirrels nested in a greater variety of tree species and selected stands with broader ranges in midstory pine (Pinus spp.) stems per hectare and overstory species. Intraspecific niche overlap between species was greater ($P < 0.05$) than interspecific overlap on 9 of 12 dimensions. Intraspecific and interspecific niche overlap did not differ ($P > 0.05$) on overstory hardwood stems per hectare, overstory pine per hectare, and midstory tree species. These findings suggest that coexistence between fox and gray squirrels was maintained, in part, through niche partitioning on several dimensions.

Student Dissertations and Thesis under my direction

Ryan C.W. 2009. Population ecology, residents' attitudes, hunter success, economic impact, modeling management options and retention time of Telazol of West Virginia black bears. Ph.D. Dissertation

Owen, S.F. 2003. Ecology and management of raccoons within an intensively managed forest in the central Appalachians. Ph.D. Dissertation

Menzel, M. A. 2003. An examination of factors influencing the spatial distribution of foraging bats in pine stands in the southeastern United States. Ph.D. Dissertation

Crimmins, S.M. 2008. Ecology of a central Appalachian white-tailed deer herd at low density. M.S. Thesis

Johnson, J.B. 2002. Spatial and predictive foraging models for gray bats in northwest Georgia and a comparison of two acoustical bat survey techniques. M.S. Thesis

PROJECT DESIGN AND TIMELINE

The project design and timeline are acceptable to the vendor.

SPECIFIC REQUIREMENTS

The travel to meetings, committee member and co-author requirements are acceptable to the vendor.

REPORTING REQUIREMENTS

The reporting requirements are acceptable to the vendor.

BID REQUIREMENTS AND PAYMENT

Project Dates: January 2011 – October 1, 2013

Item		Direct Cost
2011	***January – December***	
Ph.D. Tuition (Cost is waived for students on assistantship)	Resident = $6670 Non-resident =$18,376	0
Ph.D. Stipend	$1500 per month / $18,000 annual	18,000
Fringe 6.6%	$99 per month / $1188 annual	1188
Travel to Mid-App Meeting		150
PI salary 0.5 month		4261
Fringe 25%		1065

GIS faculty salary 0.5 month		3812
Fringe 25%		953
Travel for student to scientific meeting		1000
Miscellaneous supplies		500
Subtotal		**30,929**
2012	***January – December***	
Ph.D. Tuition (Cost is waived for students on assistantship)	Resident = $6670 Non-resident =$18,376	0
Ph.D. Stipend	$1500 per month / $18,000 annual	18,000
Fringe 6.6%	$99 per month / $1188 annual	1188
Travel to Mid-App Meeting		150
PI salary 0.5 month		4261
Fringe 25%		1065
GIS faculty salary 0.5 month		3812
Fringe 25%		953
Travel for student to scientific meeting		1000
Miscellaneous supplies		500
Subtotal		
2013	***January – October***	**30,929**
Ph.D. Tuition (Cost is waived for students on assistantship)	Resident = $6670 Non-resident =$18,376	0
Ph.D. Stipend	$1500 per month / $18,000 annual	13,500
Fringe 6.6%	$99 per month / $1188 annual	891
Travel to Mid-App Meeting		150
PI salary 0.5 month		4261
Fringe 25%		1065
GIS faculty salary 0.5 month		3812
Fringe 25%		953
Travel for student to scientific meeting		1000
Miscellaneous supplies		500
Subtotal		**26,132**
TOTAL		**87,990**
26% overhead	$22.877	0
GRAND TOTAL		**$87,990**

ANNUAL TUITION AND STIPEND AND BID SCENERIO COMBINED TOTAL:$30,929

Rev. 09/08

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 Resident Vendor Preference, if applicable.

1. ____ **Application is made for 2.5% resident 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% resident 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% resident 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. X **Application is made for 5% resident 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% resident 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% resident 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.

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: West Virginia University Signed: _____

Date: 8/30/10 Title: Assistant Vice President

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

RFQ No. DNR211002

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: 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 the debt owed is an amount greater than one thousand dollars in the aggregate.

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.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "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 exceed five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this 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.

Under penalty of law for false swearing (*West Virginia Code* §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: West Virginia University

Authorized Signature: [signature] Date: 8/30/10

State of WV

County of MONONGALIA, to-wit:

Taken, subscribed, and sworn to before me this 30 day of AUGUST, 2010

My Commission expires September 27, 2012

AFFIX SEAL HERE

NOTARY PUBLIC [signature]

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
MOLLY A. SUPERFESKY
886 Chestnut Ridge Rd.
Morgantown, WV 26506
My Commission Expires Sept. 27, 2012

Rev. 09/08

State of West Virginia

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Date: 8/30/10 Title: Assistant Vice President

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RFQ No. DNR211002

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STATE OF WEST VIRGINIA
MOLLY A. SUPERFESKY
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Morgantown, WV 26506
My Commission Expires Sept. 27, 2012